

# Fairfax County TDM Proffer Study Project Update #3

*presented to*

**Fairfax County TDM Proffer Study Steering Committee**

*presented by*

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*With*

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**Transportation leadership you can trust.**

# Agenda

- **Review of Study Process and Activities to Date**
- **Findings from Commercial and Residential Surveys**
- **Findings from Traffic Counts**
- **Data from Other Sources**
- **Recommendations for Trip Reduction Goals and Parking Requirements**
- **Next Steps**

# Study Objectives

- **Develop a TDM Manual and process to provide Fairfax County and the development community a clear and consistent application of TDM within the development review process**
  - **Flowchart of development approval process showing points for TDM review and coordination**
  - **Requirements for TDM plan development and approval**
  - **Trip reduction goals for new development, and a process for monitoring and enforcing compliance with goals**
- **Recommend changes to parking requirements for TOD locations**

# Activities to Date

- National review of TDM best practices
- Review of parking requirements near transit
- Development community interviews
- Outline of TDM Manual
- Surveys and traffic counts at Fairfax County commercial and residential properties



# TDM Triggers for New Development

- **Zoning approval needed**
- **Tiered requirements**
  - Large projects – full TDM plan, implementation and monitoring requirements
  - Smaller/mid-size projects – More limited requirements
- **Determine consistent size thresholds by use type, e.g.,**
  - >100,000 sq. ft.
  - >100 residential units
- **Office, residential, and mixed-use with office or residential meeting thresholds**

# TDM Planning and Implementation Responsibilities

## ● Developer

- Trip generation estimates and trip reduction goals
- Establish TDM plan, account, program manager
- Initial monitoring

## ● Property owner

- Implement TDM plan
- Monitor and report

## ● Office tenant

- Help Implement TDM strategies

## ● County

- Assist with TDM plan and goal-setting; review reporting; enforcement



# Framework for Setting Trip Reduction Goals

- Transit service
  - Metro, good bus, other



- Urban accessibility – Density, diversity, design

# Commercial and Residential Property Surveys

- **12 commercial properties**

- Property manager interviews (in-person)
- HR staff interviews with commercial tenants (telephone)
- Employee survey (web-based)

- **3 residential properties**

- Property manager interviews (in-person)
- Resident surveys (telephone)



# Survey Topics/Objectives

- **PM's – Site characteristics, transportation info/services offered**
- **Commercial tenants – Transportation conditions, info/services offered**
- **Employees – Commute patterns/mode use, mid-day trip making, awareness and use of transportation info/services and interest in services not currently offered**
- **Residents – Trip frequency by mode (all purposes), awareness and use of transportation info/services and interest in services not currently offered**

# Survey Process

## ● Challenges

- Difficulty recruiting properties
- Difficulty getting contact information for commercial tenants
- Most phone numbers for residential tenants not available
- Low employee and resident response rates

## ● Responses

- Offered \$5 gift card
- Site visits and Internet research to identify contacts
- Flyers and emails at residential properties
- Numerous phone calls

# Commercial Responses by Place Type Category

*# of properties (# of employer and employee surveys)*

Transit	Urban Accessibility	
	Yes	No
High	0	3 (7, 23)
Mod	2 (27, 102)	3 (10, 366)
Low	2 (10, 129)	2 (15, 33)

## ● Transit level of service:

- High  $\leq$  1/2 mile of Metrorail
- Moderate = Peak hour bus headways  $\leq$  20 min and all-day service
- Low = other

## ● Urban accessibility:

- Yes = 8+ retail/service opportunities within 1/4 mile walk
- No = Other

# Survey Findings: Property Managers – Factors Attracting Tenants (Top 2 box)

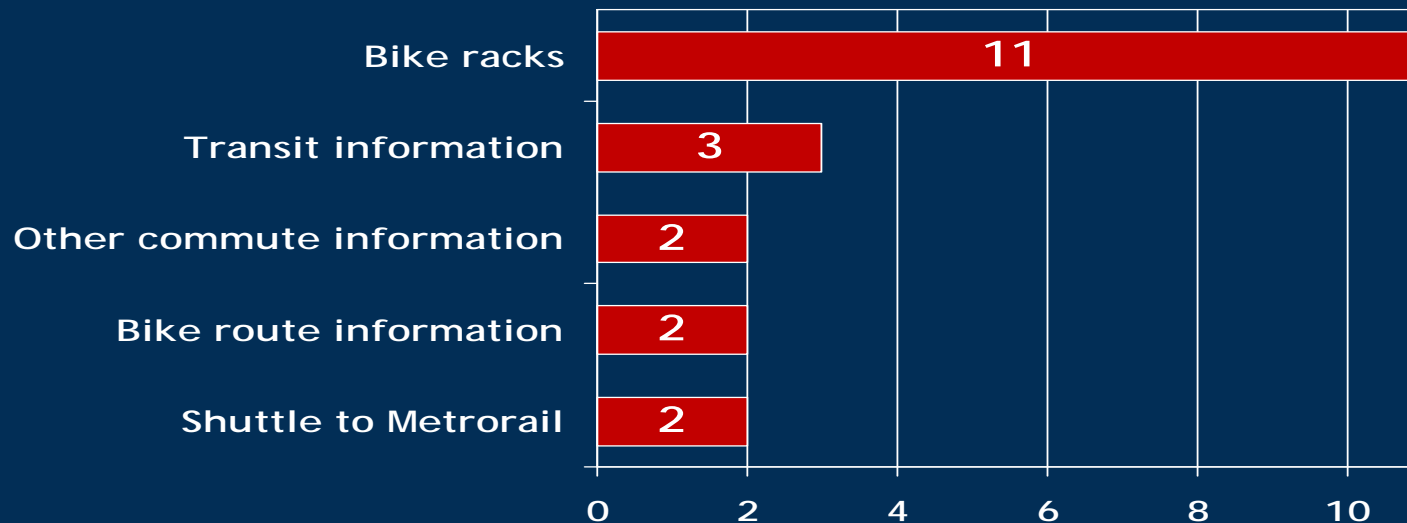
Parking topped the list of factors that were important in attracting tenants – all of the property managers rated this factor as important or very important. Six of 10 PMs cited proximity to highways and four in 10 said transit availability was an important factor.



# Survey Findings: Property Managers – TDM Services Available from Building Management

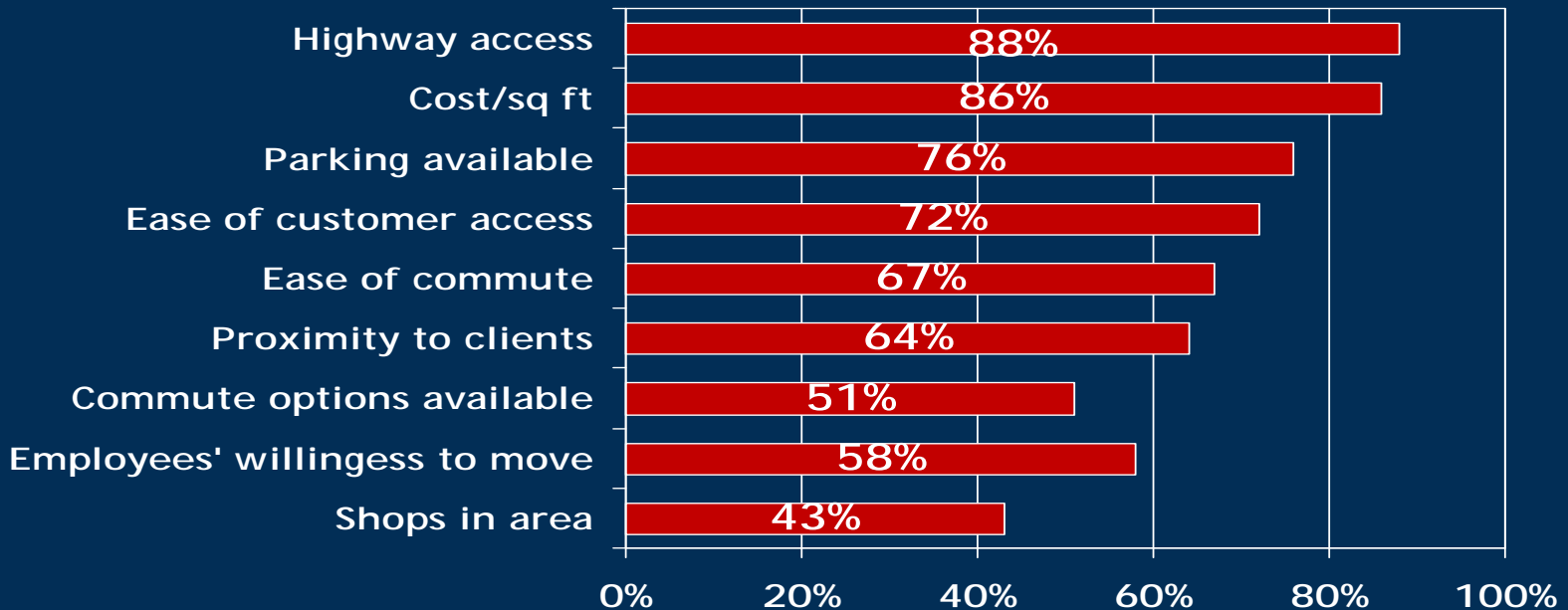
All 11 buildings were equipped with bicycle racks or lockers, but only a few PMs reported offering other commute assistance services and this assistance was generally limited to information.

Buildings that offered services generally did so to recruit or retain tenants. One building was required by proffer to offer the services.



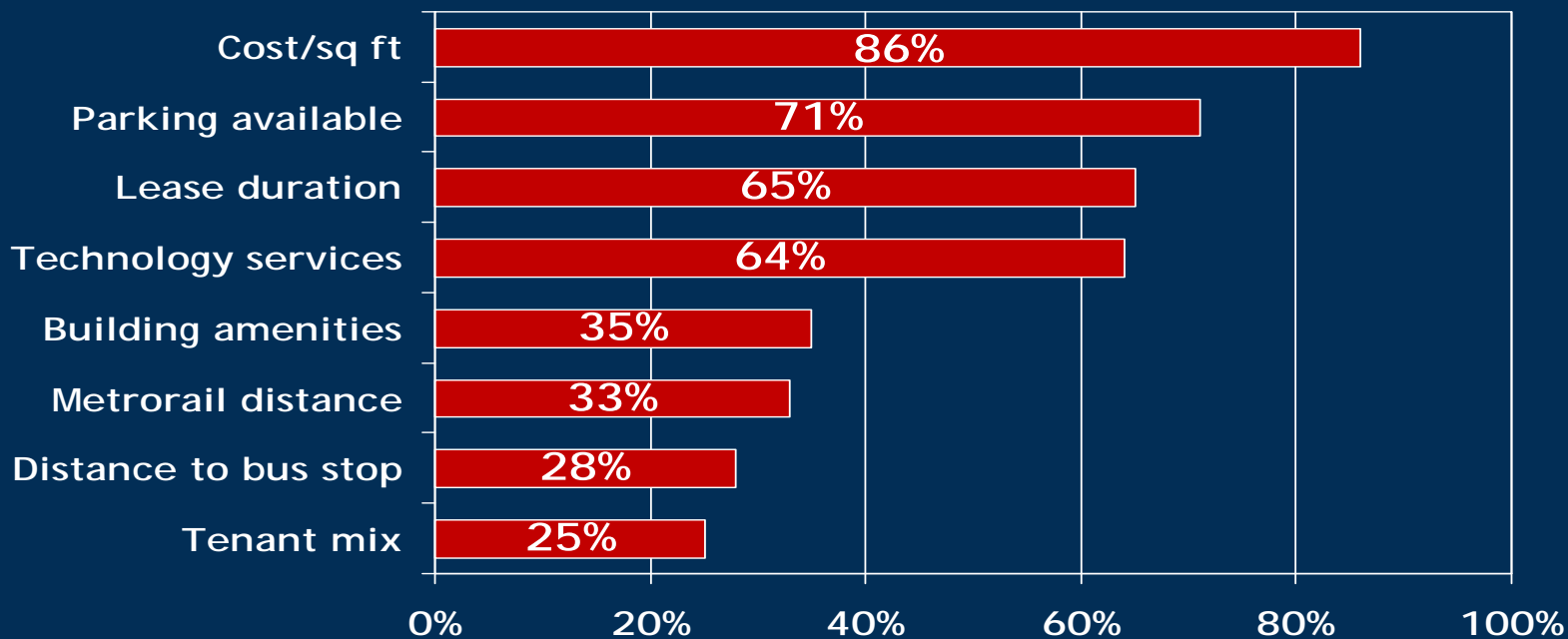
# Survey Findings: Commercial Tenants – Neighborhood Selection Factors (Top 2 box)

Highway access and cost per sq/ft topped list of important factors in neighborhood selection - 86% - 88% rated these as 4 or 5. Parking available, ease of customer access, ease of commute, and proximity to clients were also rated 4 or 5 by 64% or more of employers.



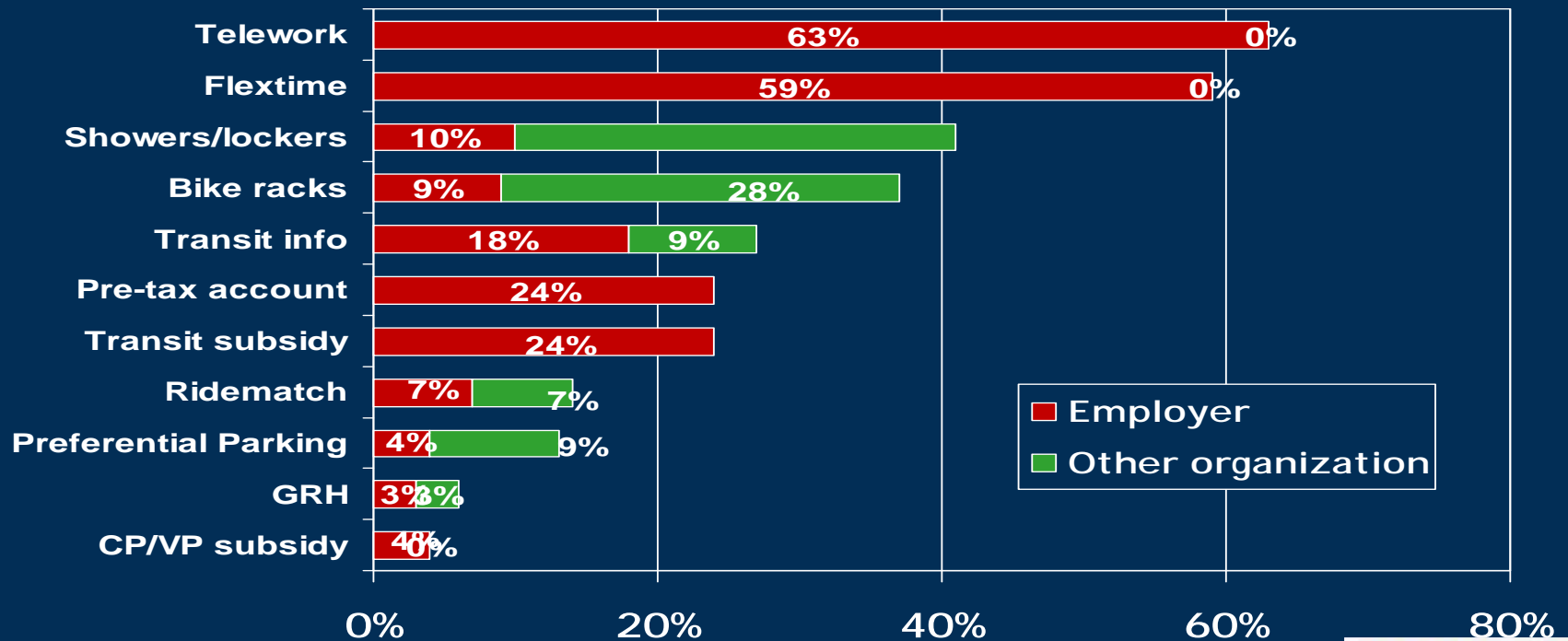
# Survey Findings: Commercial Tenants – Building Selection Factors (Top 2 box)

Cost per sq/ft also topped the list of important factors in building selection – 86% rated it as 4 or 5. Other important building considerations: parking available, lease duration, and technology services – each rated 4-5 by 64% or more of employers.



# Survey Findings: TDM Services at Sites

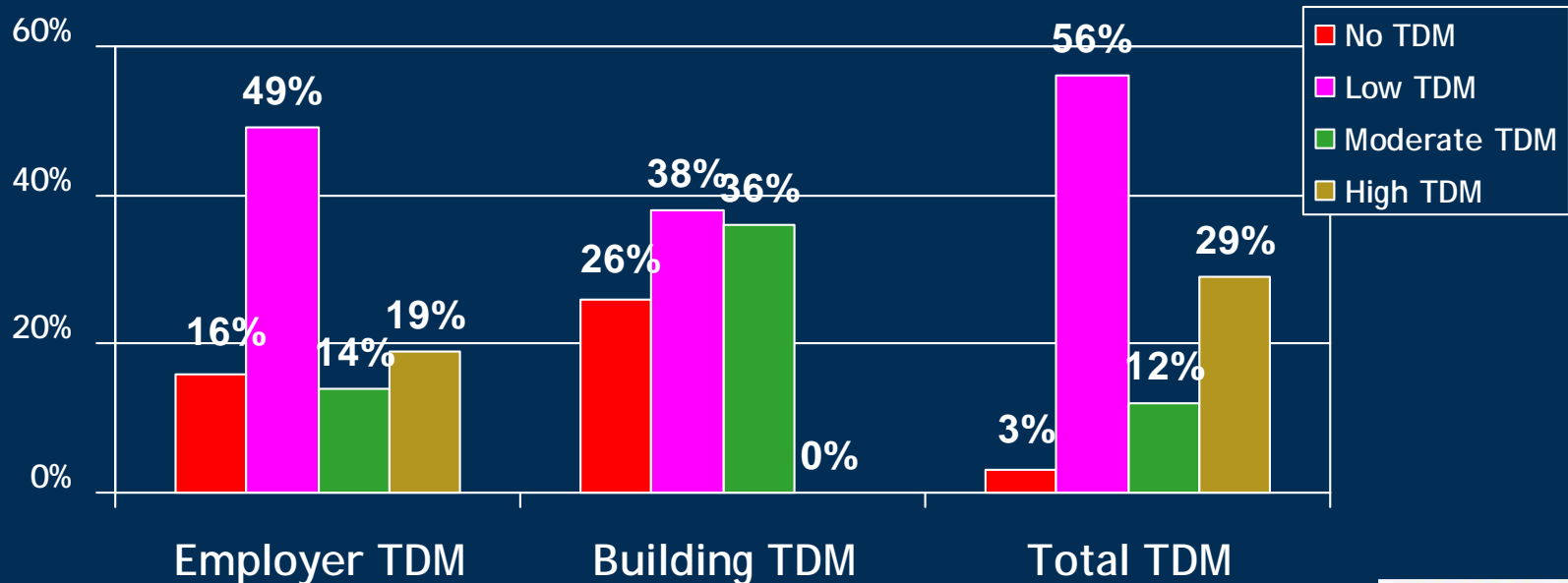
Many employers offered at least one commute assistance service – most common: telework and flextime, pre-tax accounts and transit subsidies. When services by “other organizations” are included, showers/lockers, bike racks, and transit information also became available to a third or more of employees.



# Survey Findings: Total TDM Level

About a third of employees offered a moderate or high level of TDM services. About half had a low level of service and 16% offered no TDM services at all.

High levels of TDM assistance were less common among building managements, but when building TDM services were combined with employer services, the overall level of TDM rose for many sites.



# Survey Findings: Employees' Travel Patterns

- Work days – 4.9 days per week, 4.2 days traveling to site
- Arrival and departure time:
  - 63% arrival between 6 am and 8:59 am
  - 72% depart between 3:30 pm and 6:30 pm
- Telework: 36% TW at least occasionally, 9% TW at least one day per week
- Parking - 98% park on-site; 99% have free parking

# Survey Findings: Employee Mode Share

- Most employees drove alone to work – about 87% of weekly commute trips were made by DA and 10% were made by non-SOV mode. 3% were eliminated by use of TW

	<u>DA</u>	<u>TR</u>	<u>CPVP</u>	<u>BW</u>	<u>TW</u>
• Overall (n=651)	87%	4%	4%	2%	3%

- 20% tried another mode in the past year
  - Bus – 11%
  - Metrorail – 8%
  - Carpool/vanpool – 7%
  - Bike / walk – 4%

# Survey Findings: Employee Survey Mode Share by Transit / Urban

## Transit Availability and Urban Combinations

	<u>DA</u>	<u>TR</u>	<u>CPVP</u>	<u>BW</u>	<u>TW</u>
● High TR (23)	56%	16%	29%	0%	0%
● Mod TR – Urban (102)	85%	6%	4%	1%	4%
● Mod TR – N-Urban (366)	92%	2%	4%	1%	1%
● Low TR (162)	92%	3%	2%	2%	1%

# Survey Findings: Mode Share by TDM

	<u>DA</u>	<u>TR</u>	<u>CPVP</u>	<u>BW</u>	<u>TW</u>
<b>● Total TDM *</b>					
• Low (136)	90%	3%	2%	1%	2%
• Mod (34)	76%	9%	16%	0%	0%
• High (483)	87%	5%	3%	2%	3%
<b>● Perceived TDM **</b>					
• Low (443)	88%	4%	4%	2%	2%
• Mod (140)	86%	6%	4%	0%	3%
• High (70)	86%	7%	2%	2%	2%

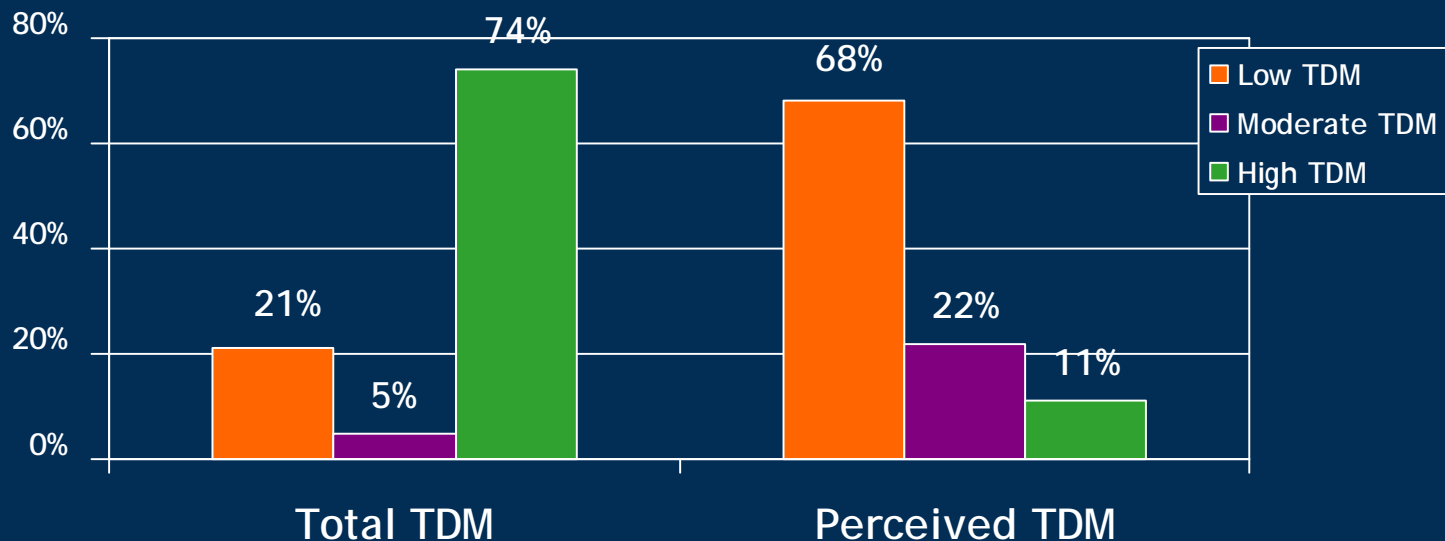
\* Total TDM – services reported by employer and property manager

\*\* Perceived TDM – employees' awareness of TDM services

# Survey Findings: Total TDM vs Perceived TDM

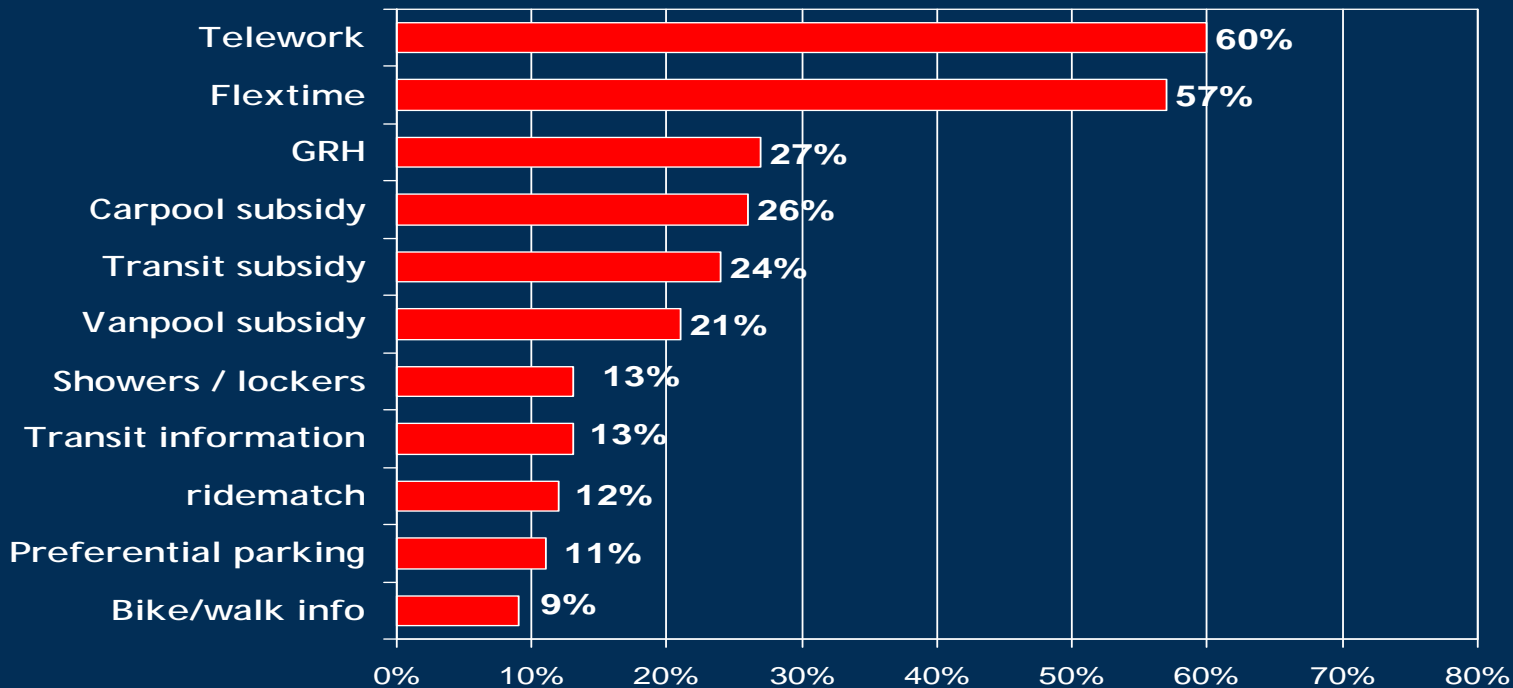
79% of employees actually had a moderate or high level of TDM services, when employer and building TDM services were combined.

But employees were largely unaware of the transit subsidies that employers said were available, thus the level of services “Perceived” by employees was much lower - only 33% reported a moderate or high level of service.



# Survey Findings: Employee Survey – Interest in TDM Services at Work

Employees who were driving alone said they were most likely to shift away from DA if they could telework or use flextime. About a quarter of respondents said they were likely to try non-DA modes if they had GRH or financial incentives.



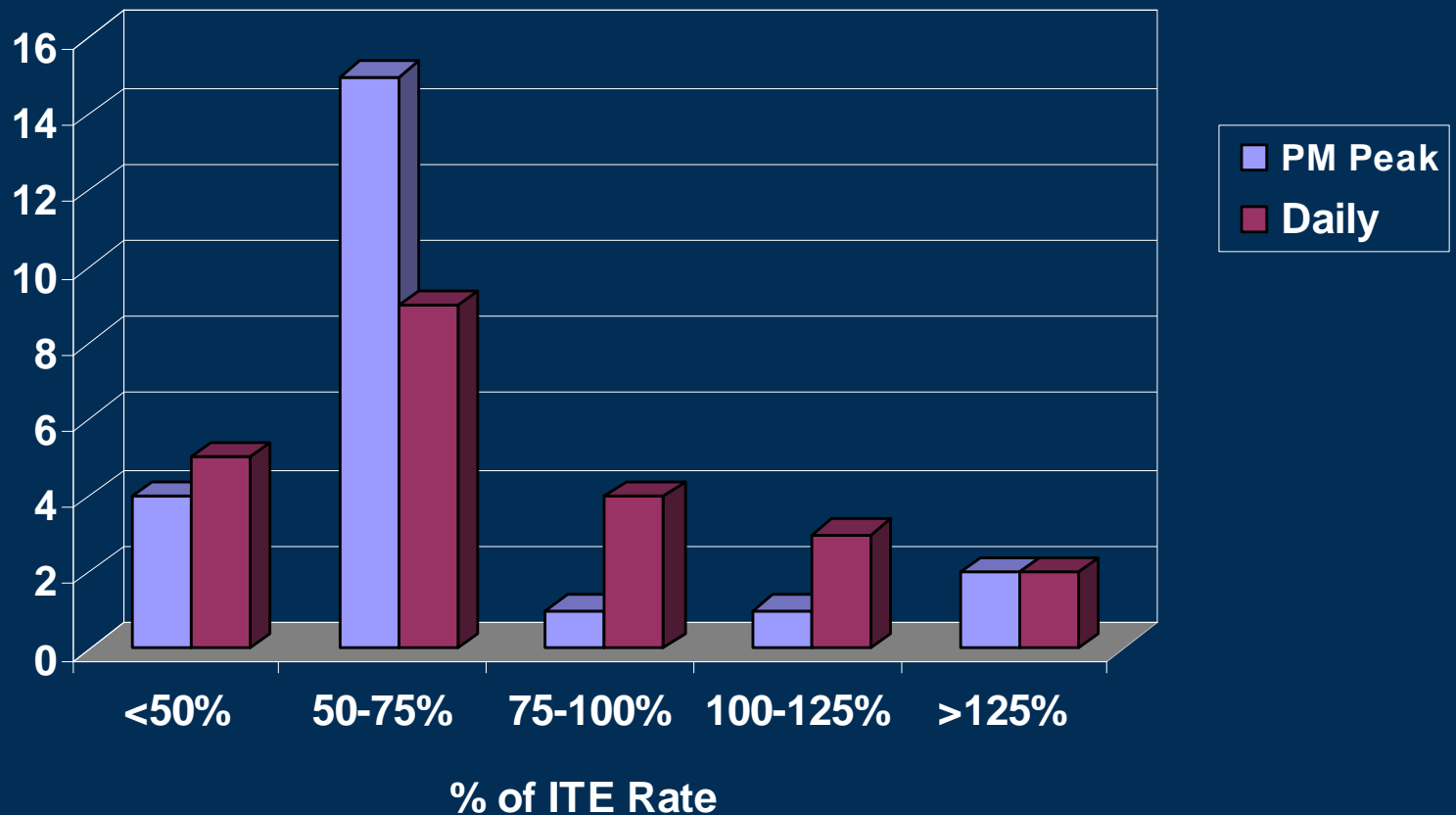
# Traffic Counts: Commercial Buildings

- 23 commercial properties (Fairfax)
- 7 properties in Arlington (High/Yes category)

	Urban Accessibility	
Transit	Yes	No
High	7	2
Mod	5	4
Low	5	7

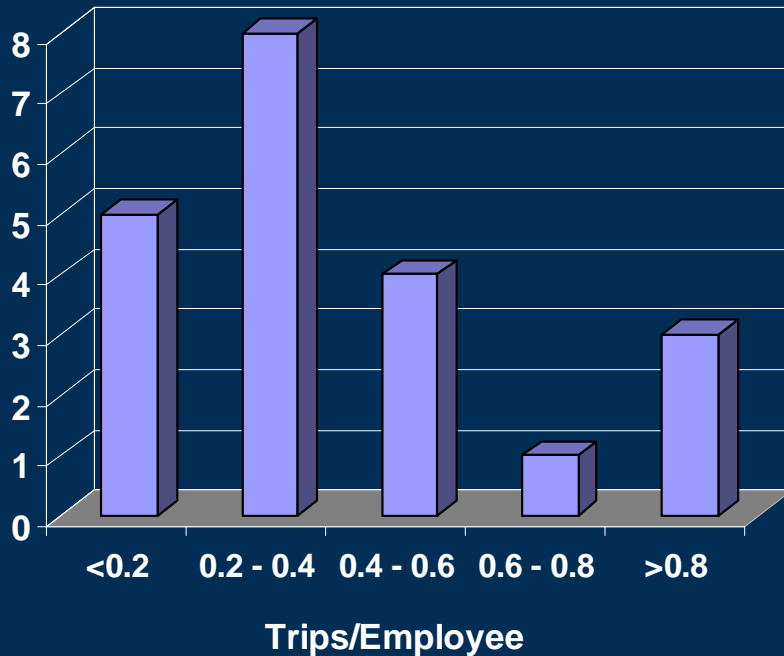
# Traffic Counts: Commercial Buildings

## Number of Buildings by % of ITE Rate (Fairfax Only)

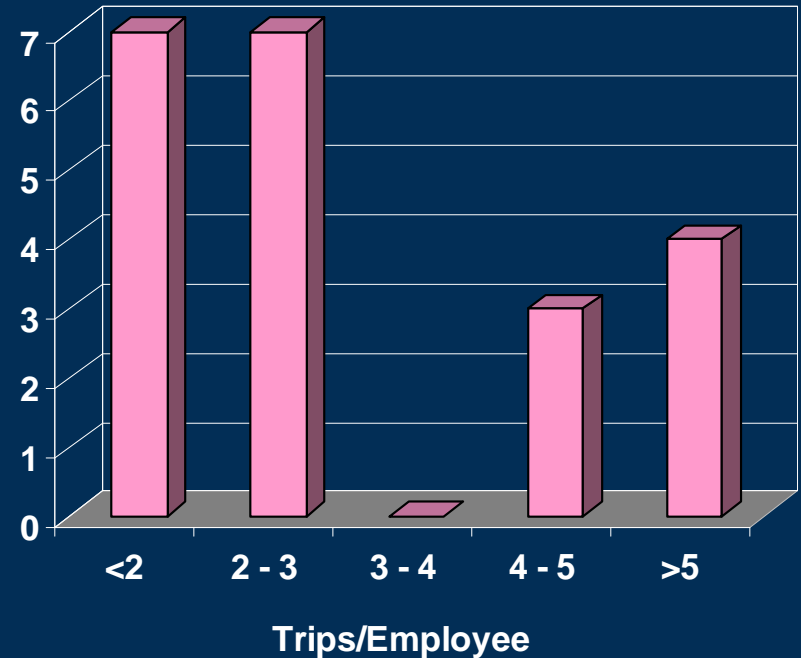


# Traffic Counts: Commercial Buildings

Number of Buildings by Trips/Employee (PM Peak Hour)

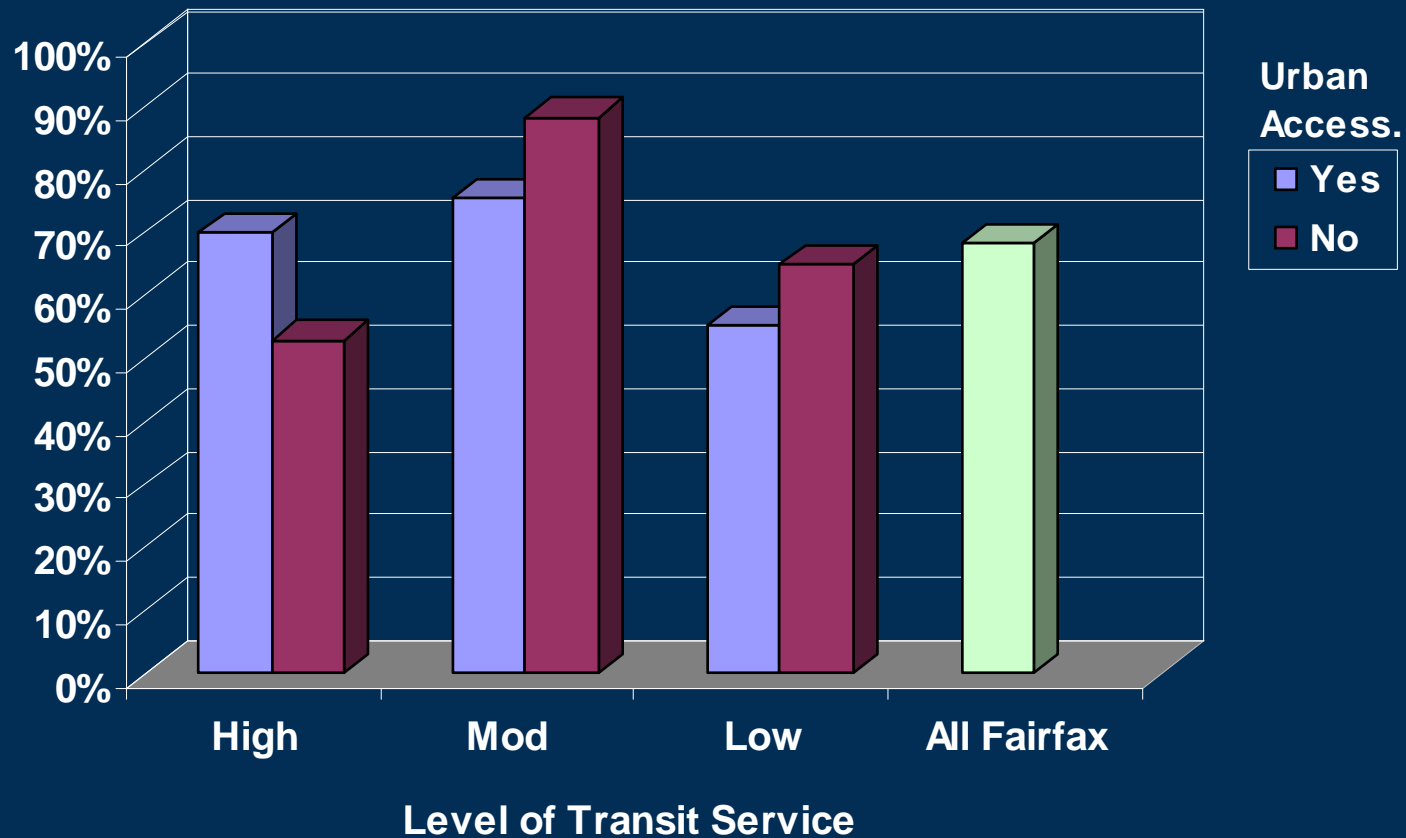


Number of Buildings by Trips/Employee (Daily)



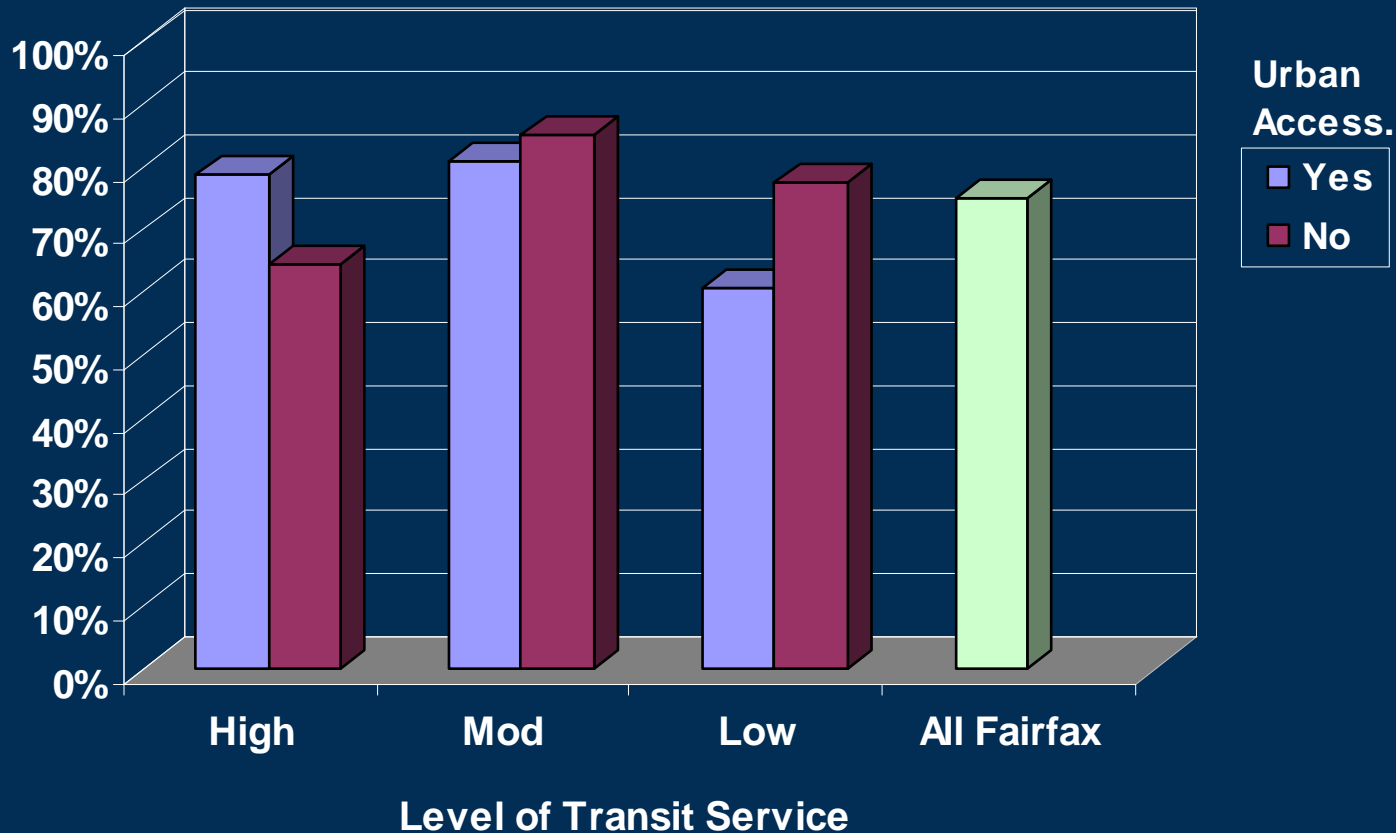
# Traffic Counts: Commercial Buildings

## Percent of ITE Trip Rate, PM Peak Hour



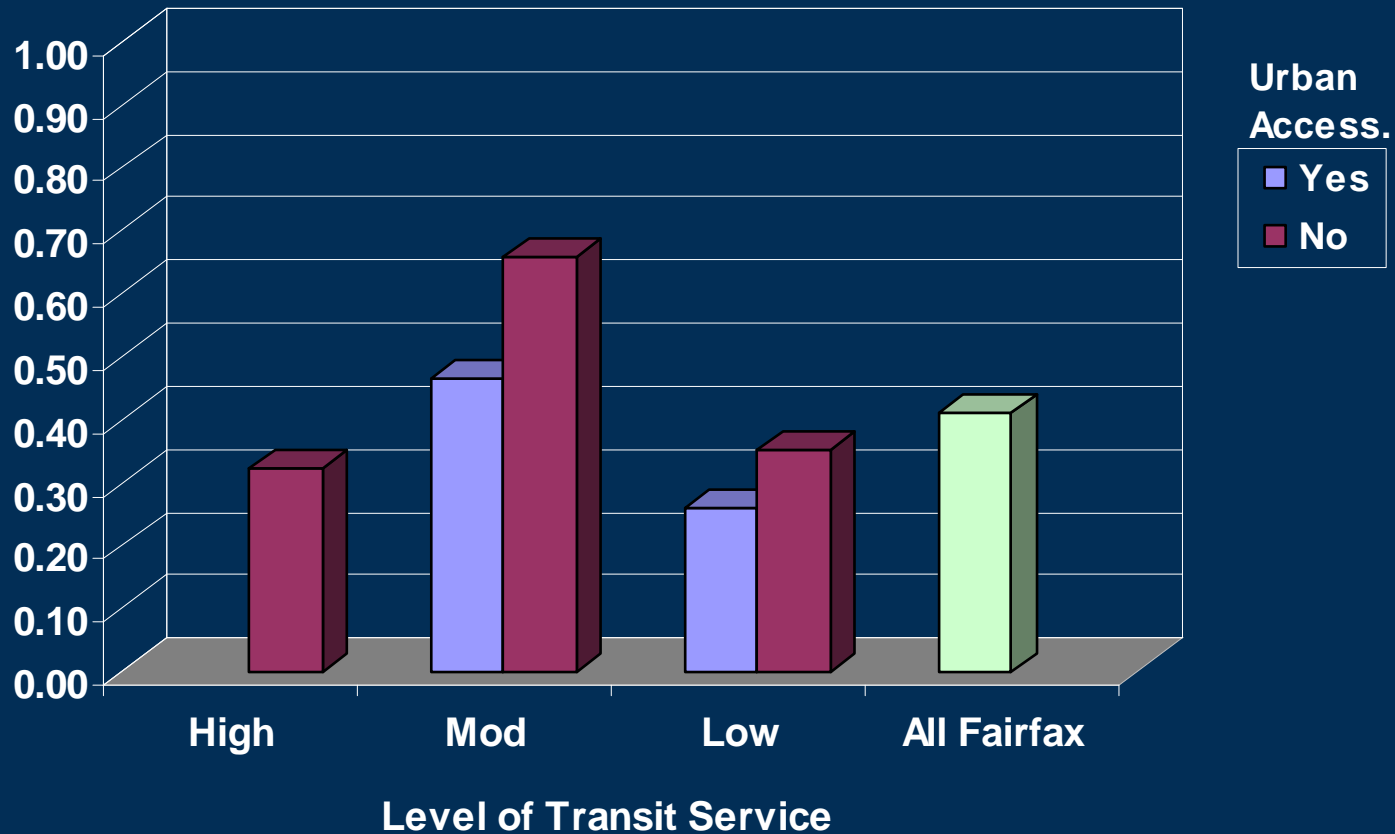
# Traffic Counts: Commercial Buildings

Percent of ITE Trip Rate, Daily



# Traffic Counts: Commercial Buildings

Trips/Employee, PM Peak Hour



# Commercial Buildings – Peak Period Mode Shares from Traffic Counts

	Urban	SOV		HOV		Transit/Bike/Ped	
		Yes	No	Yes	No	Yes	No
<b>Transit</b>	High	n/a	75%	n/a	9%	n/a	16%
	Mod	83%	68%	14%	28%	3%	4%
	Low	76%	90%	16%	8%	8%	2%
	<b>All Fairfax</b>	<b>76%</b>		<b>16%</b>		<b>8%</b>	

# Journey-to-Work Mode Shares (2000)

County	Transit	SOV	Carpool	Transit
Arlington	High	54%	18%	25%
	Moderate	63%	17%	14%
	Low	70%	15%	9%
Fairfax	High	84%	8%	5%
	Moderate	85%	10%	3%
	Low	82%	12%	3%

Source: 2000 Census Transportation Planning Package, by Place of Work TAZ

High = centroids within ½ mile of Metro station

Moderate = centroids within ¼ mile of bus route with <=20 minute peak frequency

# Office Mode Share Data – TODs in Other Areas

*Total auto = drive-alone + carpool*

- **Arlington Co.- 56% (high transit/high urban); 83% (mod transit/low urban) (County survey)**
- **Metrorail - 69% (inside beltway), 89% (outside beltway) (WMATA Development-Related Ridership Survey)**
- **BART - 82% (Lund et al, 2004)**

# Survey Findings: Resident Commute Modes

- At each property, non-DA modes had a notable share of weekly commute trips. DA share was less than 75% at all properties. But the sample size for Market / Low transit property was very small, so these results in particular should be viewed cautiously.

	<u>DA</u>	<u>TR</u>	<u>CPVP</u>	<u>BW</u>	<u>TW</u>
Property					
• Market/Low TR (16)*	67%	26%	1%	0%	6%
• Afford/Mod TR (28)	74%	16%	6%	0%	4%
• Market/ High TR (25)**	63%	35%	1%	0%	1%

\*Transit share = 13% Metrorail and 13% commuter rail

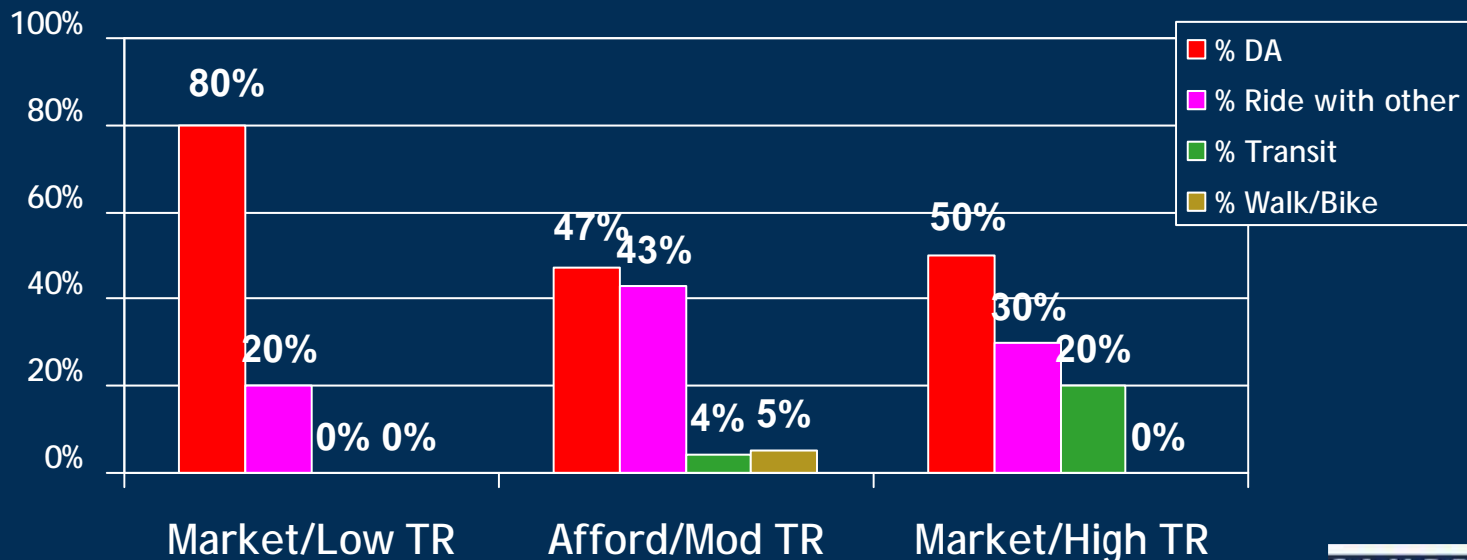
\*\*Transit share = 3% bus and 32% Metrorail

# Survey Findings: Resident Survey

## Non-Work Trips by Mode

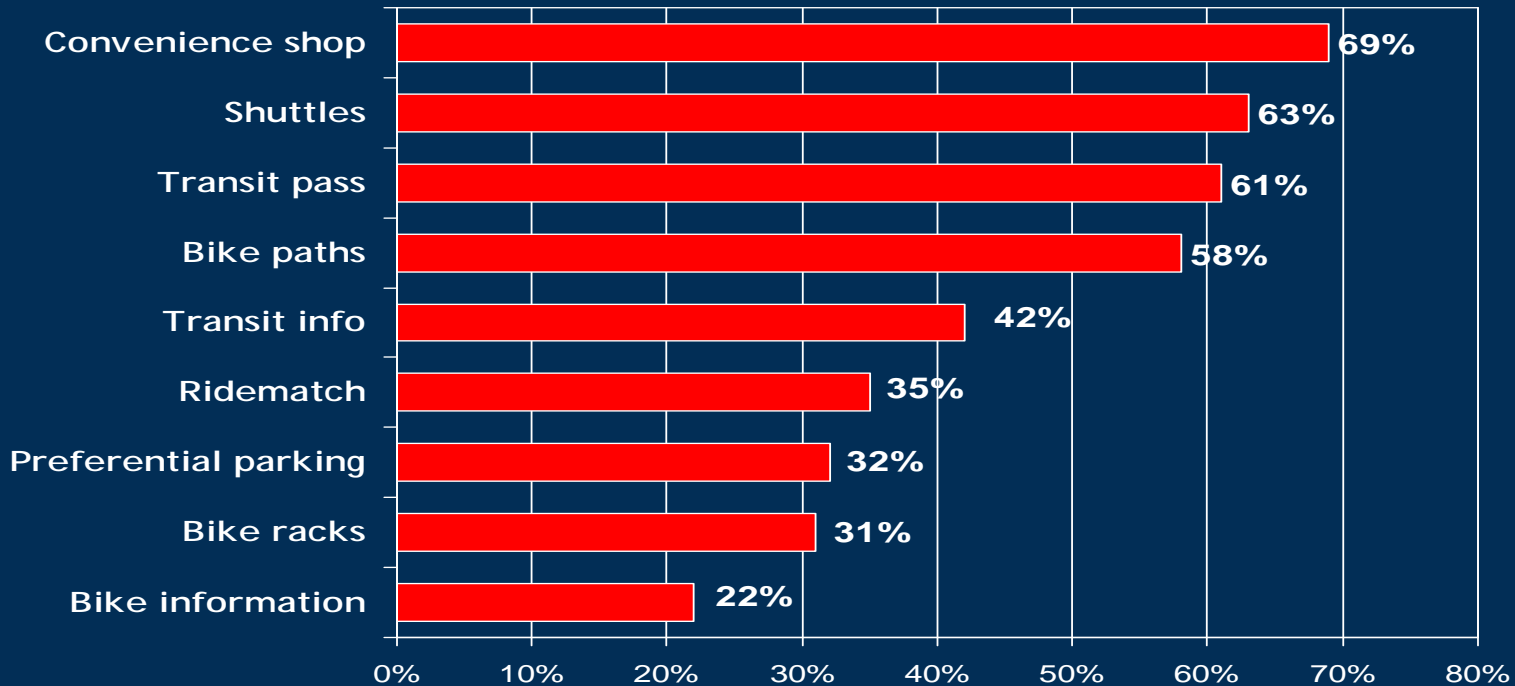
At least half of the residential survey respondents made non-work trips the previous day, with an average of 2.5 - 3.0 trips per day.

Auto use (DA or riding with another person) dominated non-work trips, but the property with High transit accessibility had notably higher transit use, compared to the properties with Low or Moderate transit.



# Survey Findings: Resident Survey – Interest in TDM Services at Home (Top 2 box score)

Residents said they were most likely to increase their use of non-DA modes if they had access to convenience shopping, shuttles, transit passes, and bike paths.

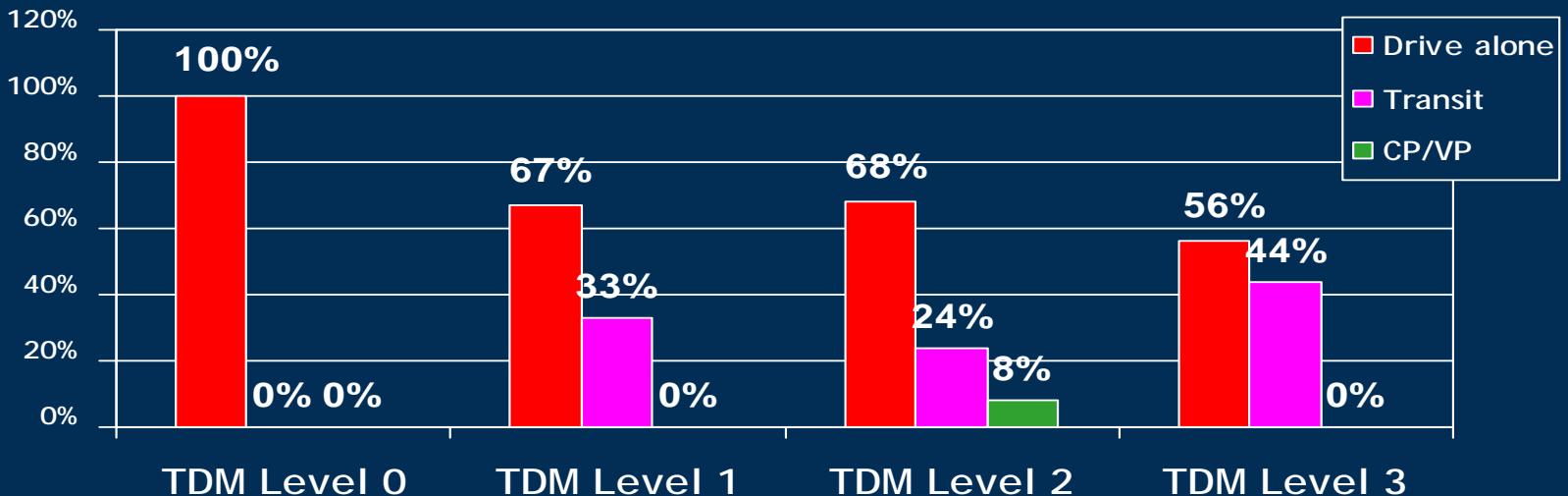


# Survey Findings: Resident Survey

## Commute Mode by TDM / Parking Motivations

The drive alone rate decreased and the non-DA share increased when TDM was offered at work and home and when residents paid to park at work:

- TDM Level 0 = No TDM at work or home, Free parking
- TDM Level 1 = TDM at work, Parking free or LT \$100 / month
- TDM Level 2 = TDM at work AND either TDM at home or \$100+/month to park
- TDM Level 3 = TDM at work AND TDM at home AND \$100+/month to park



# Residential Properties - Traffic Counts

- **3 residential properties**
  - **Market rate/high transit (Springfield)**
  - **Affordable/moderate transit (Merrifield/Lee Highway)**
  - **Market rate/low transit (Fairfax Center)**
- **12-hour tube counts (7 am – 7 pm)**
- **3-hour peak period person counts (7-10 am, 4-7 pm)**

# Residential Traffic Counts

Property/ Area	Transit	Urban	% of ITE Trip Rate		Peak Mode Share		
			AM Peak	PM Peak	SOV	HOV	Trans/ Bike/Ped
(1) Springfield Metro	High	Yes	42%	76%	86%	2%	12%
(2) Merrifield/ Lee Hwy.	Mod	Yes	80%	85%	65%	30%	5%
(3) Fairfax Corner	Low	Yes	31%	33%	88%	6%	6%

- **Wide variation in trip rates**
- **Metro station (#1) shows higher transit/ped mode share**
- **Higher HOV (#2) due to income/demographics?**
- **Low trip rate (#3) due to demographics?**

# Residential Data from Other Sources

	High Transit	
	Yes Urban	No Urban
<i>Auto mode shares</i>		
WMATA	41%	61%
BART	70-75%	
<i>Trip rates vs. ITE</i>		
WMATA	30-37%	72%
BART	47-55%	57-58%

# Questions on Survey Findings?

# Setting Trip Reduction Goals

- **Difference from ITE rates, based on (1) Fairfax conditions (“baseline”) and (2) additional impacts of TDM programs**
- **Challenges**
  - **Fairfax County – limited survey data, no clear trend from traffic count data**
  - **Limited data from other sources – mostly one extreme or the other (TODs vs. auto-oriented)**
  - **No clear trends to distinguish between high vs. low urban accessibility, as distinct from transit level of service**
- **Process**
  - **Combine data from Fairfax County and other sources**
  - **Expert judgment of project team members**

# National Evidence on TDM Program Impacts

TDM Program or Strategy	High Transit	Moderate Transit	Low Transit
Support, Promotion, Information	3-5%	1-3%	<1%
Alternative Commute Services	5-10%	5-10%	1-3%
Financial Incentives	10-20%	5-15%	1-5%
<i>Combined Strategies</i>			
With Free Parking	15-20%	10-15%	3-7%
With Paid Parking	25-30%	15-20%	

Source: professional judgment of project team based on review of TDM literature

# Recommended Vehicle Trip Reduction Goals: Office Developments

Level of Transit Service		High		Moderate		Low	
		High	Low	High	Low	High	Low
<b>Urban Accessibility</b>							
% of ITE Rates (PM Peak Hr)	Baseline	75%		80%			
	With TDM	55-65%		65-75%			
% Reduction from ITE	Baseline	25%		20%			
	With TDM	35-45%		25-35%			

“With TDM” value to be selected from range considering factors such as local environment (e.g., is there a market for parking), specific quality of transit services, urban accessibility, expected tenant characteristics, etc.

# Recommended Vehicle Trip Reduction Goals: Residential Developments

Level of Transit Service		High		Moderate		Low	
		High	Low	High	Low	High	Low
<b>Urban Accessibility</b>		<b>High</b>	<b>Low</b>	<b>High</b>	<b>Low</b>	<b>High</b>	<b>Low</b>
% of ITE Rates (PM Peak Hr)	Baseline	75%	80%	85%	90%	85%	90%
	With TDM	60-70%	70-75%	75-80%	80-85%	75-80%	80-85%
% Reduction from ITE	Baseline	25%	20%	15%	10%	15%	10%
	With TDM	30-40%	25-30%	20-25%	15-20%	20-25%	15-20%

“With TDM” value to be selected from range considering factors such as local environment (e.g., is there a market for parking), specific quality of transit services, urban accessibility, expected tenant characteristics, etc.

# Parking Recommendations

# Parking Requirements Near Transit

- Reductions of 10-25% typically granted
- Maximums established in a few cities (Boston, Charlotte, Pittsburgh, Portland) – typically 100-125% of minimums
- Arlington – certain types of retail exempt if < 1,000' from Metrorail entrance
- Montgomery County – varies by area and Metro proximity

*Office Minimum Requirements, Spaces/1,000 sq. ft.*

Distance to Metrorail	Southern	South Central	Northern Central	Northern
< 800'	1.9	2.3	2.6	N/A
800' to 1,600'	2.1	2.4	2.7	N/A
> 1,600'	2.4	2.7	2.9	3.0

# Comparison with Neighboring Jurisdictions

*Minimum Requirements, Spaces/Unit or Spaces/1,000 sq. ft.*

Use	Fairfax County	Arlington County	Alexandria	Montgomery County	Prince George's County
1 and 2-Family	2.0	1.0	2.0	1.8-2.0	2.0
Townhouses	2.7	2.2	2.0	1.8-2.0	2.0
Multifamily	1.6	1.0-1.3	1.0-2.2	1.1-2.0	1.3-2.0
Office	2.6-3.6	0.8-3.2	1.7-2.2	1.9-2.7	2.5
Retail	5.0-6.0	< 4.0	2.0-6.0	4.3-5.0	5.0-5.5

Note: These figures include reductions and exemptions for proximity to Metro entrances. Numerous simplifying assumptions were made in developing this summary table.

# Parking Recommendations

## TODs/Transit Station Areas - Minimums

*Minimum Requirements, Spaces/Unit or Spaces/1,000 sq. ft. (% reduction)*

Use	Current	Zone A – <1,000' from Metro	Zone B – 1,000-2,000' from Metro
Single-Family Detached	2.0	2.0	2.0
Townhouses	2.75	1.75 (36%)	2.0 (27%)
Multifamily*	1.6	1.0-1.5 (6-38%)	1.1-1.6 (0-31%)
Office	2.6-3.6	2.0-2.4 (23-33%)	2.3-2.7 (12-25%)
Retail	5.0-6.0	< 4.0 (20-33%)	4.5 (10-25%)

Note: Multifamily range based on number of dwelling units; office range based on building square footage

- **Phasing: Use Zone B for all areas near-term (interim) phasing prior to significant transformation in nature of development**

# Parking Recommendations

## TODs/Transit Station Areas - Maximums

*Maximum Requirements, Spaces/Unit or Spaces/1,000 sq. ft. (125% of minimum)*

Use	Current Minimum	Zone A – <1,000' from Metro	Zone B – 1,000-2,000' from Metro
Single-Family Detached	2.0	2.5	2.5
Townhouses	2.75	2.2	2.5
Multifamily	1.6	1.3 – 1.9	1.4 – 2.0
Office	2.6-3.6	2.5 – 3.0	2.9 – 3.4
Retail	5.0-6.0	5.0	5.6

Note: Multifamily range based on number of dwelling units; office range based on building square footage

- Use Zone B for all areas near-term (interim) phasing prior to significant transformation in nature of development

# Parking Recommendations TODs/Transit Station Areas

- Reduce base parking minimums
- Establish parking maximums – 125% of minimum
- Allow for additional site-specific reductions consistent with trip reduction goals and TDM plans
- Establish parking management districts
  - Potential mechanism for TDM implementation as well
- Expand use of off-site parking
- Discourage surface parking

# Parking Recommendations

## General

- **Negotiate parking reductions in conjunction with TDM proffer**
- **Allow on-street to count against off-street requirements and implement in appropriate situations**
- **Establish an explicit method to calculate mixed-use parking requirements**
- **Negotiate developer agreements to support pricing and management**
- **Encourage carpool, vanpool, and car-sharing preferential parking**

# Next Steps

- **Feedback on draft recommendations**
- **Develop draft TDM Manual**
- **Approval by Planning Board and Board of Supervisors**
- **Finalize TDM Manual**
- **Finalize other study products (including survey documentation)**
- **Prepare material to assist in comprehensive plan, zoning ordinance, and public facilities manual amendments**