December 2009

Arlington County Commercial Building Research Summary Report

Prepared For
Arlington County Commuter Services

Prepared By

LDA Consulting
Outline of Presentation

- Study, Background & Objectives
- Study Methodology
- Detailed Findings
- Key Take-A-Ways
Study
Background & Objectives
Study Background

• This project is a component of the 2006-2008 ACCS Program Research and Evaluation Plan.

• This research was directed at ACCS’ employer and employee customer markets.

• The research collected and analyzed data from property managers, employers, and employees.
Study Objectives

- To study the relative roles of various factors on business location decisions and on employees’ travel choices in Arlington:
  - Location factors - e.g., “urban-ness”
  - Transportation facilities - e.g., public transit, pedestrian facilities, parking, other transportation services
  - Commuter assistance services
  - Other factors - e.g., proximity to retail and business services, lease cost
Additional Research Objectives

• Employers
  - Estimate availability of employer-sponsored commuter assistance services
  - Examine employers’ perceptions of potential benefits of offering commuter assistance services
  - Assess employers’ awareness and use of transportation-assistance services available in Arlington County

• Employees
  - Assess employees’ awareness and use of employer-sponsored commuter assistance services
  - Examine employees’ awareness and use of transportation-assistance services available in Arlington County
Study Methodology
Methodology

• Collected data for 19 office buildings in various parts of the County:
  - Rosslyn-Ballston corridor (10 buildings)
  - Crystal City (6 buildings)
  - Other areas of the County (3 buildings)

• Buildings were selected to provide a mix of location, transit, and other characteristics.

• Three survey components:
  - In-person interviews with property managers
  - Telephone survey of employers
  - On-line survey of employees

• Employer and employee surveys conducted between September 2007 and March 2008
Methodology - Building Recruitment

- Identified candidate buildings
- Contacted property managers in selected buildings to solicit participation
- Conducted in-person property manager interviews at site
- Requested assistance with reaching employer tenants
  - Asked for list of tenant contacts
  - Asked property managers to inform tenants about the project and encourage them to participate in employer survey
Methodology - Employer Recruitment

- Telephoned employers in selected buildings to request participation
  - Asked employers with fewer than 15 employees to complete employer survey only
  - Asked employers with 15 or more employees to complete employer survey and assist with employee survey
- Sent info and survey materials to all employers that were contacted
- Conducted telephone survey with willing employers
Methodology - Employee Recruitment

- Sent employers sample survey materials - employee survey link and reminder emails and customized poster
- Employees were offered $5 Starbuck’s coupon and chance in $200 gift card drawing
- Employers sent email invitation to employees
- One week later, employers sent reminder email
- Employees completed online survey
- ACCS sent Starbuck’s coupons as requested
Methodology - Analysis

Analysis examined results overall and by six sub-groups:

- **Distance to Metrorail** -
  - Less than 2 blocks, 3-5 blocks, 6-10 blocks, More than 10 blocks / not in Metrorail corridor

- **Area of the County (e.g., Crystal City)**

- **Level of “urban-ness”**
  - Low, medium, high, very high

- **Availability of commuter services**
  - Low = No transit subsidy, 0 - 2 support services
  - Medium = Subsidy, plus 0 - 2 support services
  - High = Subsidy plus 3+ support services

- **Parking availability**

- **Parking charge**
Employer Survey Sample

- 219 eligible employers in the 19 buildings (employer has 6 or more employees):
  - 159 employers were reached
  - 125 completed employer survey (78% of those reached)
  - 35 refused
  - 59 could not be reached after 10 or more attempts

- Surveyed employers closely represented distribution of employers by size, so no weighting was performed
Employee Survey Sample

- 146 eligible employers (employer has 15 or more employees):
  - 101 employers reached
  - 50 refused
  - 45 could not be reached after 10 or more attempts
  - 51 employers sent employee survey emails (51% of those reached) and about 40% sent reminder email

- About 4,900 employees received email

- 1,520 usable responses (31% response)

- Site response rates ranged from 5% to 78%
  - 21 sites (41%) with <25% response
  - 12 sites (24%) with 26-39% response
  - 10 sites (20%) with 40-59% response
  - 8 sites (16%) with 60+% response
Employee Survey Sample (cont)

- Distribution of survey data was compared to distribution of all employees in the buildings on employer size classification

- Large worksites were over-represented and small worksites were under-represented in the employee sample

- So data were weighted by employer sizes to adjust the sampled employees to represent the total employee population:
  - 1 - 30 employees - weight of 15
  - 31 - 149 employees - weight of 8
  - 150 + employees - weight of 7
Detailed Findings
Employer Survey
Employer Survey

- Sample Characteristics
- Location Selection Factors
- Transportation System Satisfaction
- Commute and Parking Services
- Awareness and Use of Commute Programs

Sample Characteristics

Location Selection Factors

Transportation System Satisfaction

Commute and Parking Services

Awareness and Use of Commute Programs
Employer Sample Characteristics
Employer Sample by County Location

57% of employers surveyed were in Rosslyn-Ballston corridor, 32% in Crystal City, and 11% in “other” areas.

43% of employers also had another location in the Washington metro area.
62% of employers surveyed were in high or very high urban areas and 75% were within 5 blocks of Metro.
Sample was dominated by small, private employers, but 30% were government or non-profits and 27% had 50 or more employees.
Employer Sample by Industry

Employers represented varied industry types, but all were “office-type” employers. Note, non-office-oriented sites were excluded to minimize influence of non-transportation, non-location variables on the research results.

- Professional services, 41%
- Government, 14%
- Non-profit, 10%
- Bank/finance, 7%
- Manufacturing, 6%
- Business services, 13%
- Other, 9%

N = 125
Location Selection Factors
Employers represented a balanced mix of experience at location - 43% had been at their current location fewer than 5 years, but 26% had been at this location more than 10 years.

Q 10 How long has your organization been located in this building?
Previous Business Location

More than half of the employers surveyed moved from another Arlington location and 9% said this was the only location the company has ever had. About 17% moved from Washington DC and 10% moved from Fairfax.

Q11 In what county was your organization located prior to moving to this building?
Other Locations Considered for Move

Half of the employers said Arlington was the only jurisdiction they considered when moving. Fairfax was an alternative choice for 15% of employers and 13% considered DC.

Q 12. When you were making the move to this building, what counties in the Washington metropolitan region did you consider, in addition to Arlington County? (multiple response permitted)
Locations Considered by Previous Location

63% of employers that were located in Arlington before the move considered **only** Arlington for the new location. But Arlington was also the only choice for 38% of those that were located elsewhere before.

Q 12 When you were making the move to this building, what counties in the Washington metropolitan region did you consider, in addition to Arlington County?
Importance of Factors in Neighborhood Choice
Top 2 Box Ratings

Cost per sq/ft topped list of important factors in neighborhood selection - 84% rated it as 4 or 5. Ease of customer access, commute options available, and ease of commute were also rated 4 or 5 by 77% or more of the employers.

Q 13  Now I’m going to ask about factors <ORGANIZATION NAME> might have considered when moving to this location. How important was each of the following factors in considering in which neighborhood or area to locate?
Importance of Factors in Neighborhood Choice
Top 2 Box Ratings by Area

Employers in different neighborhoods rated neighborhood factors differently. Crystal City employers rated customer access and highway access higher than did employers in other areas. Rosslyn employers were very concerned about ease of commute and employees’ willingness to move, but not concerned about parking.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Ballston</th>
<th>CryCity</th>
<th>Rosslyn</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per sq/ft</td>
<td>93%</td>
<td>79%</td>
<td>82%</td>
<td>92%</td>
</tr>
<tr>
<td>Customer access</td>
<td>85%</td>
<td>90%</td>
<td>67%</td>
<td>77%</td>
</tr>
<tr>
<td>Commute options</td>
<td>85%</td>
<td>78%</td>
<td>91%</td>
<td>46%</td>
</tr>
<tr>
<td>Ease of commute</td>
<td>78%</td>
<td>75%</td>
<td>85%</td>
<td>69%</td>
</tr>
<tr>
<td>Highway access</td>
<td>56%</td>
<td>73%</td>
<td>64%</td>
<td>69%</td>
</tr>
<tr>
<td>Empl willing to move</td>
<td>42%</td>
<td>50%</td>
<td>69%</td>
<td>45%</td>
</tr>
<tr>
<td>Parking available</td>
<td>67%</td>
<td>63%</td>
<td>47%</td>
<td>69%</td>
</tr>
<tr>
<td>Shops in area</td>
<td>48%</td>
<td>38%</td>
<td>30%</td>
<td>38%</td>
</tr>
</tbody>
</table>
Importance of Factors in Neighborhood Choice
Top 2 Box Ratings by Urban Level

Urban level also had an influence on employers’ neighborhood ratings. Customer access was an issue for Low-Moderate and High urban areas. Commute options was a concern in High and Very High urban areas. Other factors rated differently were highway access, shops in the area, and employees’ willingness to move.

- Cost per sq/ft
  - L-Mod: 81%
  - High: 90%
  - V High: 88%
- Customer access
  - L-Mod: 88%
  - High: 85%
  - V High: 65%
- Commute options
  - L-Mod: 62%
  - High: 88%
  - V High: 88%
- Ease of commute
  - L-Mod: 67%
  - High: 83%
  - V High: 83%
- Highway access
  - L-Mod: 67%
  - High: 78%
  - V High: 50%
- Empl willing to move
  - L-Mod: 38%
  - High: 56%
  - V High: 69%
- Parking available
  - L-Mod: 64%
  - High: 63%
  - V High: 48%
- Shops in area
  - L-Mod: 36%
  - High: 55%
  - V High: 28%
Importance of Factors in Neighborhood Choice

Top 2 Box Ratings by Metrorail Distance

Availability of commute options and employees’ willingness to move to the new location were greater concerns to employers located close to Metrorail than to those located farther away. But customer access and parking seemed less important.

<table>
<thead>
<tr>
<th>Factor</th>
<th>0-2 blk</th>
<th>3-5 blk</th>
<th>&gt;5 blk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per sq/ft</td>
<td>87%</td>
<td>82%</td>
<td>87%</td>
</tr>
<tr>
<td>Commute options</td>
<td>90%</td>
<td>79%</td>
<td>63%</td>
</tr>
<tr>
<td>Ease of commute</td>
<td>86%</td>
<td>71%</td>
<td>71%</td>
</tr>
<tr>
<td>Customer access</td>
<td>69%</td>
<td>88%</td>
<td>87%</td>
</tr>
<tr>
<td>Highway access</td>
<td>59%</td>
<td>73%</td>
<td>66%</td>
</tr>
<tr>
<td>Empl willing to move</td>
<td>73%</td>
<td>36%</td>
<td>46%</td>
</tr>
<tr>
<td>Parking available</td>
<td>51%</td>
<td>53%</td>
<td>74%</td>
</tr>
<tr>
<td>Shops in area</td>
<td>29%</td>
<td>58%</td>
<td>34%</td>
</tr>
</tbody>
</table>
Importance of Factors in Neighborhood Choice
Top 2 Box Ratings by Previous Location

Ratings on neighborhood choice factors appeared to vary by employers’ location prior to moving to their current location, but **none of the differences** were statistically significant.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Arl</th>
<th>MD-VA</th>
<th>DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per sq/ft</td>
<td>89%</td>
<td>82%</td>
<td>95%</td>
</tr>
<tr>
<td>Customer access</td>
<td>83%</td>
<td>71%</td>
<td>72%</td>
</tr>
<tr>
<td>Commute options</td>
<td>76%</td>
<td>76%</td>
<td>89%</td>
</tr>
<tr>
<td>Ease of commute</td>
<td>75%</td>
<td>88%</td>
<td>84%</td>
</tr>
<tr>
<td>Highway access</td>
<td>65%</td>
<td>65%</td>
<td>56%</td>
</tr>
<tr>
<td>Empl willing to move</td>
<td>58%</td>
<td>65%</td>
<td>47%</td>
</tr>
<tr>
<td>Parking available</td>
<td>63%</td>
<td>47%</td>
<td>58%</td>
</tr>
<tr>
<td>Shops in area</td>
<td>40%</td>
<td>41%</td>
<td>28%</td>
</tr>
</tbody>
</table>

Previously in Arlington
n = 64

Previously in MD - VA
n = 17

Previously in DC
n = 19
Importance of Factors in Building Choice
Top 2 Box Ratings

Cost per sq/ft also topped the list of important factors in building selection - 88% rated it as 4 or 5. Other important building considerations: lease duration, distance to Metrorail, and parking availability - each rated 4-5 by 60% or more of employers.

Q 14 How important were the following factors in considering which specific building to select?
Importance of Factors in Building Choice

Top 2 Box Ratings by Urban Level

Ratings for importance of transit access increased as urban level increased. Employers in High urban areas also were more concerned about tech services and building amenities than were employers in other areas.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Low-Moderate</th>
<th>High</th>
<th>Very High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per sq/ft</td>
<td>88%</td>
<td>85%</td>
<td>89%</td>
</tr>
<tr>
<td>Distance to Metrorail</td>
<td>44%</td>
<td>77%</td>
<td>90%</td>
</tr>
<tr>
<td>Lease duration</td>
<td>70%</td>
<td>76%</td>
<td>79%</td>
</tr>
<tr>
<td>Parking available</td>
<td>67%</td>
<td>62%</td>
<td>56%</td>
</tr>
<tr>
<td>Technology services</td>
<td>33%</td>
<td>64%</td>
<td>49%</td>
</tr>
<tr>
<td>Distance to bus stop</td>
<td>28%</td>
<td>49%</td>
<td>62%</td>
</tr>
<tr>
<td>Tenant mix</td>
<td>27%</td>
<td>24%</td>
<td>13%</td>
</tr>
<tr>
<td>Building amenities</td>
<td>16%</td>
<td>36%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Results in red/blue in boxes are significant at 95% level.
## Importance of Factors in Building Choice

Top 2 Box Ratings by Metrorail Distance

Employers rated importance of both distance to Metrorail and distance to bus in inverse proportion to their distance from Metrorail - 90% of employers located within 2 blocks of Metrorail rated Metrorail distance a 4 of 5 in importance.

<table>
<thead>
<tr>
<th>Factor</th>
<th>0-2 blk</th>
<th>3-5 blk</th>
<th>&gt;5 blk</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Tenant mix</td>
<td>15%</td>
<td>34%</td>
<td>19%</td>
</tr>
<tr>
<td>Building amenities</td>
<td>14%</td>
<td>39%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Results in red/blue in boxes are significant at 95% level.
Role of Transportation and Urban-ness in Location Choice

- Employers select locations for various reasons - transportation enters into the consideration both for access to customers and access to employees.

- **Urban qualities and transit access**
  - Not as important as cost for most employers, but among the top factors they consider.
  - Employers that locate very close to Metro appear to do so deliberately, for access to wider range of travel options.

- **Arlington neighborhoods** appear to attract employers with different transportation concerns and needs.
  - Crystal City - customer access and highway access
  - Rosslyn - ease of commute and employees’ willingness to move, not concerned about parking.
Satisfaction with Transportation System
Satisfaction with County’s Transportation System and Impact on Business

Two Questions

Question - How satisfied you are with the transportation system in Arlington County? “Transportation system” means “transportation services and options that make it possible to travel around the County, as well as the quality of those services.” This would include such things as bus and train routes and stops, the quality of the buses, the quality of the roads, support services for transit, bicycling, walking, carpooling, and so forth. (1 - 5 scale)

Question - Next, I’ll read ways in which the availability or quality of the transportation system in Arlington County might affect your organization. Please use a scale of 1 to 5, where 1 means the transportation system affects your business “very negatively” in this way and 5 means it affects your business “very positively.” A rating of 3 would mean transportation does not affect your organization in this way.
Overall Satisfaction with Arlington County’s Transportation System

More than three-fourths of employers rated their satisfaction with the County’s transportation system as a 4 or 5. Only 7% gave a rating of 1 or 2.

Q. 15 How satisfied you are with the transportation system in Arlington County?
Satisfaction with Transportation System by Urban Level

There was no significant difference in ratings for transportation system satisfaction given by employers located in the three urban levels - more than three-quarters in each area rated it a 4 or 5.

Q 15  How satisfied you are with the transportation system in Arlington County?
Satisfaction with Transportation System by Metrorail Distance

Employers located closer to Metrorail were much more satisfied with the transportation system than were employers located farther away.

Q 15 How satisfied you are with the transportation system in Arlington County?
Satisfaction with Transportation System by Previous Location

Employers previously located in District of Columbia or another Arlington location gave higher ratings for transportation satisfaction than did employers previously in MD or other VA.

Q 15 How satisfied you are with the transportation system in Arlington County?
Transportation Impact on Business Operation

Employers felt Arlington County’s transportation system had a positive impact on business operations - especially employees’ ability to travel for work-related meetings, clients’ ability to reach the business location, and employee recruitment.

Q 17  Next, I’ll read ways in which the availability or quality of the transportation system in Arlington County might affect your organization. (Scale of 1 to 5 - 1 and 2 very negative and somewhat negative, 3 is neutral/no impact, 4 and 5 - somewhat positive and very positive).
Transportation Impact on Business Operation by Urban Level

Transportation had a generally positive impact on business operations at all urban levels. Recruitment was particularly enhanced in Very High urban areas. Differences in ratings for other business operations by urban level were not statistically significant.

<table>
<thead>
<tr>
<th></th>
<th>L-Mod</th>
<th>High</th>
<th>V High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client access to site</td>
<td>4.2</td>
<td>4.0</td>
<td>4.1</td>
</tr>
<tr>
<td>Work-related travel</td>
<td>4.1</td>
<td>3.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Recruitment</td>
<td>3.9</td>
<td><strong>3.6</strong></td>
<td><strong>4.2</strong></td>
</tr>
<tr>
<td>Morale/productivity</td>
<td>3.6</td>
<td>3.8</td>
<td>3.9</td>
</tr>
<tr>
<td>Attendance</td>
<td>3.7</td>
<td>3.7</td>
<td>4.0</td>
</tr>
<tr>
<td>Delivery cost/time</td>
<td>3.6</td>
<td>3.6</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Arlington County Commercial Building Research
December 2009
Transportation had a generally **positive** impact on business operations at all Metro distances. Differences in ratings for impacts other than recruitment and attendance were not statistically significant.

<table>
<thead>
<tr>
<th></th>
<th>0-2 bl</th>
<th>3-5 bl</th>
<th>&gt; 5 bl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client access to site</td>
<td>4.1</td>
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<td>3.7</td>
<td>3.7</td>
</tr>
<tr>
<td>Attendance</td>
<td>4.0</td>
<td>3.4</td>
<td>3.8</td>
</tr>
<tr>
<td>Delivery cost/time</td>
<td>3.4</td>
<td>3.3</td>
<td>3.7</td>
</tr>
</tbody>
</table>
Transportation Impact on Business Operation by Area

Employers in different areas rated operations impacts of transportation similarly. Only delivery cost/time was rated differently - employers in Crystal City said transportation enhanced their delivery cost/time more than did employers in other areas.

<table>
<thead>
<tr>
<th></th>
<th>Ballston</th>
<th>CryCity</th>
<th>Rosslyn</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client access to site</td>
<td>4.0</td>
<td>4.2</td>
<td>4.0</td>
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<td>3.9</td>
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<td>Recruitment</td>
<td>3.7</td>
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<td>3.7</td>
<td>3.6</td>
</tr>
<tr>
<td>Delivery cost/time</td>
<td>3.3</td>
<td>3.8</td>
<td>3.2</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Employers located at Court House are not included in Other.

Results in boxes are significant at 95% level.
Transportation System Satisfaction

- Employers throughout the County were generally satisfied with the County’s transportation system - 79% rated it a 4 or 5.

- No significant differences by urban level

- Employers located closer to Metrorail were much more satisfied than were employers located farther away.

- Employers felt Arlington County’s transportation system had a positive impact on business operations - especially employees’ ability to travel for work-related meetings, clients’ ability to reach the business location, and employee recruitment. This positive image crossed over urban levels and Metro distances.
Commute Assistance Services
Commute Services Offered at the Worksite and Interest in Services

Two Questions

Question - Q21  Next I’ll read a list of commute information services or benefits that <ORGANIZATION NAME> or another organization might make available to your employees to help with their travel to work. For each service that I mention, please tell me if <ORGANIZATION NAME> offers this to employees, if another organization offers it, or if it is not available.

Question - Q 22  How interested have employees been in these services? Please use a scale of 1 to 5, where 1 means employees have been “not at all interested” and 5 means they have been “very interested.”
Alternative Work Arrangements Offered

A large proportion of employers offered telework and flextime, generally as “informal” arrangements offered to small numbers of employees at the site. A quarter of employers offered compressed schedules, but 80% of these employers said that fewer than 25% of their employees worked CWS.

Q21 … For each service that I mention, please tell me if <ORGANIZATION NAME> offers this to employees, if another organization offers it, or if it is not available.
Most employers offered at least one commute assistance service. 58% offered transit subsidies, often through a pre-tax account. Other common services - transit information, showers/lockers, and carpool subsidy, each offered by at least 10% of employers.
Commute Services Offered - Any Organization

When services offered by “other organizations” are included, bike racks, bus/train information, and showers/lockers also became available to 40+% of employees. Most employers said the “other organization” was the building management.
Total TDM - Employer + Other Organization

48% of the employers offered a moderate level of TDM services and 24% offered a high level.

But additional services provided by other organizations raised the TDM level of 5% of worksites from a Moderate to High level. These services (primarily info/support) were not sufficient to raise Low TDM programs to Moderate levels.
Total TDM Level by Urban Level

60% of worksites in Low-Moderate urban areas offered a Moderate to High level of TDM services, compared to 78% of worksites in High-Very High urban areas.

But programs in Very High urban areas were more likely to be Moderate (56%), while programs in High urban areas were more likely to be High.

TDM Level includes both employer-provided services and services provided by other organizations at the site.
Total TDM by Metro Distance

Worksites near Metrorail were more likely to offer at least a Moderate TDM level than were worksites located farther away. But worksites farther from Metro were more likely to offer High TDM levels, while worksites closer to Metro were more likely to offer Moderate levels of services.

TDM Level includes both employer-provided services and services provided by other organizations at the site.
Employers that moved from another Arlington location were more likely to offer Moderate or High TDM services (80%) than were employers that moved from DC (68%) and much more likely to do so than employers that moved from MD or other VA areas (47%). This might reflect longer Arlington tenure or greater contact with Arlington commuter service programs.
The incidence of financial incentives increased as urban-ness increased - 66% of employers in High urban and 56% of employers in Very High urban areas offered transit subsidies. But even in Low-Moderate urban areas, more than half of the employers offered a transit subsidy.
Support Services by Urban Level

Employers in High urban areas were more likely to offer commute support services, such as bike racks, showers/lockers, GRH, and preferential parking than were employers in either Low-Moderate or Very High urban areas. The exception to this rule was bus/train information, which was more commonly offered by Low-Moderate urban area employers.
Transit subsidies were much more common among employers located close to Metrorail than for those located farther away - more than six in ten employers within 5 blocks of Metro offered a transit subsidy, compared to 44% of employers located 5 or more blocks away.
Support Services by Metro Distance

Employers located within 2 blocks of Metro were less likely to offer commute support services than were employers located farther away. Employers located 3-5 blocks cited the greatest availability of most services. But bus/train information was offered by a larger percentage of employers located more than 5 blocks from Metro than by employers closer to the train.

<table>
<thead>
<tr>
<th>Service</th>
<th>0-2 blocks</th>
<th>3-5 blocks</th>
<th>&gt; 5 blocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike racks</td>
<td>37%</td>
<td>50%</td>
<td>45%</td>
</tr>
<tr>
<td>Showers/lockers</td>
<td>25%</td>
<td>28%</td>
<td>35%</td>
</tr>
<tr>
<td>Bus/train info</td>
<td>35%</td>
<td>38%</td>
<td>49%</td>
</tr>
<tr>
<td>GRH</td>
<td>16%</td>
<td>19%</td>
<td>11%</td>
</tr>
<tr>
<td>Preferential parking</td>
<td>10%</td>
<td>24%</td>
<td>10%</td>
</tr>
</tbody>
</table>

n = 52
n = 34
n = 39
Employees’ Interest in Services Offered

Employers that offered commute services felt employees were most interested in subsidies and pre-tax accounts.

Q 22. How interested have employees been in these services? Please use a scale of 1 to 5, where 1 means employees have been “not at all interested” and 5 means they have been “very interested.”
More than half of the employers that reported offering commute services said they began offering them at least 4 years ago. 29% began offering services within the past three years. About 14% did not know how long services were first offered.
Why Commute Services Were Offered

Most employers cited “business benefit” reasons for offering commute services, such as to provide a new employee benefit or to recruit/retain employees. Some employers gave a “social conscience” reason: be a good neighbor, environmental concern, traffic concern. About two in ten did not know, perhaps because the program pre-dates their involvement.
A third of employers that offered commute services said they received assistance to plan or implement the services - 18% received assistance from Metro/WMATA and 10% said ATP provided the assistance.

25% of employers that received assistance said they would have been unlikely or very unlikely to implement the services without the assistance.
Benefits from Offering Commute Services

About half of employers that offered commute services said they had received a benefit or great benefit in enhancing morale, enhancing recruitment, increasing productivity, and/or attracting more qualified employees.

- Enhance morale: 31% benefit, 33% great deal of benefit
- Enhance recruitment: 31% benefit, 29% great deal of benefit
- Increase productivity: 29% benefit, 28% great deal of benefit
- Attract more qualified employees: 22% benefit, 29% great deal of benefit
- Reducing parking cost: 20% benefit, 27% great deal of benefit
- Reduce absenteeism: 25% benefit, 22% great deal of benefit
- Fulfil lease obligation: 12% benefit, 20% great deal of benefit
- Reduce office space: 14% benefit, 13% great deal of benefit
- Reduce operating cost: 10% benefit, 19% great deal of benefit

Q 28 Now I’m going to read a list of benefits employers might receive from offering commute services to employees. How much has <ORGANIZATION NAME> benefited in <FIRST RESPONSE> from offering commute services?
Commute Service Profile

- Most of the employers interviewed offered at least one commute assistance service. Additional services provided by building management and other organizations raised the TDM level of a small number of worksites. With these services, 43% of sites offer moderate TDM and 29% offer high TDM.

- TDM program levels generally increased with increasing urban-ness and decreased with increasing distance from Metrorail.

- But the most extensive level of TDM services was offered by employers in the High urban areas and those located 3-5 blocks from Metro. This suggests they felt they need to “try harder” to attract employees to alternative modes. Perhaps employers in the Very High urban areas and those within 2 blocks of Metro could “coast” on their inherent site advantage.
Commuter Service Profile (cont)

- Employers that moved from within Arlington were more likely to offer Moderate to High TDM services than were employers that moved from outside the County. This might reflect longer Arlington tenure or greater contact with ATP/ACCS - 10% of employers said ATP helped them start their program.

- Most employers cited “business benefit” reasons for offering commute services - this is consistent with other employer TDM research. But some mentioned a “social conscience” reason.

- About half of employers that offered commute services said they had received a benefit or great benefit in enhancing morale, enhancing recruitment, increasing productivity, and/or attracting more qualified employees.
Parking Services
Parking Availability - Defined by Employer

80% of employers surveyed said they owned or leased some parking for employees. 20% said they provided no parking. 49% provided parking for at least half the employees at the site. 30% provided one or more space per each employee at the site.

Q 30 Does your organization own or lease parking in the building for employees’ use?
Q 31 How many parking spaces are available in this building for your employees’ use?
Parking Spaces by Urban Level

Employers in Low-Moderate urban areas were much more likely to offer parking than were employers in more urban areas - 63% said they provided parking for at least half of their employees and 46% offered parking to all employees, while only 27% of employers in High urban and 13% of employers in Very High urban areas offer parking to all employees.
Parking Spaces by Metro Distance

A third of employers located within 2 blocks of Metro offered no employee parking and only 12% offered parking for all employees. By contrast, 36% of employers located 3-5 blocks away and 46% of those more than 5 blocks away provided at least one space per employee.
Parking Fees - Defined by Employer

Over half of the employers said they offer free parking.

One in ten employers said employees would pay $100 or less to park and another 11% said employees would pay over $100 per month.

But 21% of employers said they did not offer any parking at all. Employees at these sites likely also would pay for parking in a public or private garage.

Q 35 Do employees pay to park at any of the parking that your organization owns or leases?
Q 35a What amount do employees pay (per month)?
When parking was offered, most employers said they offered it at no charge to employees. Only in the Ballston/Courthouse area was parking not typically offered for free - 59% of these employers said they charged employees for parking. But note that in most locations, parking was not offered to all employees, so employees that wanted parking might still have to pay.

### Parking Fees by Area - Employer Defined

<table>
<thead>
<tr>
<th>Area</th>
<th>n</th>
<th>Fee Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballston/Courthouse</td>
<td>27</td>
<td>$0 - free, $1 - $100/mth, $101/mth or more</td>
</tr>
<tr>
<td>Crystal City</td>
<td>29</td>
<td>$0 - free</td>
</tr>
<tr>
<td>Rosslyn</td>
<td>22</td>
<td>$1 - $100/mth, $101/mth or more</td>
</tr>
<tr>
<td>Other areas</td>
<td>14</td>
<td>$0 - free</td>
</tr>
</tbody>
</table>

Q 35 Do employees pay to park at any of the parking that your organization owns or leases?
Q 35a What amount do employees pay?
Parking Fees by Urban Level - Employer Defined

Free parking was far more common in Low-Moderate urban areas - 78% of employers in these areas said they provided free parking, while fewer than half of employers in High urban and Very High urban areas said they offered free parking.

<table>
<thead>
<tr>
<th>Urban Level</th>
<th>n</th>
<th>Free parking</th>
<th>$0 / month</th>
<th>$1 - $100 / month</th>
<th>$101+ / month</th>
<th>No parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Moderate</td>
<td>41</td>
<td>78%</td>
<td>10%</td>
<td>12%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>High Urban</td>
<td>37</td>
<td>49%</td>
<td>19%</td>
<td>13%</td>
<td>19%</td>
<td>0%</td>
</tr>
<tr>
<td>Very High Urban</td>
<td>39</td>
<td>41%</td>
<td>15%</td>
<td>11%</td>
<td>33%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Parking Fees by Metro Distance - Employer Defined

78% of employers located more than 5 blocks from Metrorail said they did not charge employees for parking. By contrast, fewer than half of employers within 5 blocks of Metrorail said they offered free parking.
Other Parking Details

- Parking spaces vs lease allocation
  - 66% of employers said the parking available for employees was equal to the number of spaces allocated to the employer in the lease agreement.
  - 7% said the available parking was more than the allocation.
  - 27% said there was no parking limit defined in lease.

- 85% of employers said their parking spaces were leased separately and they could buy less than the allocated spaces.

- 80% of employers said the available parking was adequate to meet the demand.

Q 31a  Is this also the number of spaces allocated to your organization in your lease agreement?
Q 32a  Is the cost of this parking included in the building space lease or can your organization pay for fewer parking spaces than allocated in the lease?
Q 32b  Is the parking that is available in this building adequate to meet employees’ parking needs?
Awareness and Use of Commute Info Programs
Employers reported very high name recognition for ART (86%) and Commuter Store (74%).

39% had heard of ATP and 37% had heard of ACCS.
Employers that moved to their current location from another Arlington location were more aware of most Arlington commute services than were employers that moved from DC or MD-VA.

- **Commuter Store**: 77% (n = 64), 68% (n = 17), 59% (n = 19)
- **ATP**: 50% (n = 64), 26% (n = 17), 24% (n = 19)
- **ACCS**: 45% (n = 64), 42% (n = 17), 24% (n = 19)
- **CommuterPage.com**: 33% (n = 64), 21% (n = 17), 12% (n = 19)
- **CommuterDirect.com**: 23% (n = 64), 32% (n = 17), 29% (n = 19)
Use of Arlington Commute Organizations (of those Aware)

61% of employers who knew The Commuter Store had either used or referred employees to a Store. About four in ten said they had used or referred employees to ATP and/or to CommuterPage.com.

Q 40  Now I’ll read names of several organizations and programs that provide transportation information and assistance in Arlington. For each, please indicate if you have heard of the organization or program and if you have used services provided by the organization.
Perceptions of ATP - Top 2 Boxes

15 of the employers sampled said they had used ATP services.
- **87%** rated their satisfaction as 4 of 5
- **93%** rated the usefulness of ATP services a 4 or 5
- **73%** said they would be likely or very likely to recommend ATP’s services to another employer.

Q 42  How satisfied have you been with the services you have received from ATP?
Q 43  How **useful** have ATP’s services been to your organization?
Q 44  How likely are you to recommend ATP services to other companies?
Detailed Findings
Employee Survey
Employee Sample Characteristics
Employee Sample by County Location

58% of employers surveyed were in Rosslyn-Ballston corridor, 34% in Crystal City, and 8% in “other” areas.

n = 1,520
Employee Sample by Urban Level and Metro Distance

65% of employers surveyed were in High or Very High urban areas and 80% were within 5 blocks of Metro.

### Urban Level

- **Low**: 5%
- **Moderate**: 30%
- **High**: 44%
- **Very High**: 21%

### Metro Access Distance

- **<2 blocks**: 28%
- **3-5 blocks**: 52%
- **6-10 blocks**: 12%
- **>10 blocks**: 8%
Employee Travel Patterns
Work Schedules/Arrangements

- Average work days / wk 4.9 4.9
- Average days at site 4.5 N/A

- Alternative Work Schedules
  - Work CWS 3% 5%
  - Flextime N/A 19%
  - Telecommute 24% 13%
  - Telecommute 1+ day/wk 6% 7%
Only 49% of weekly commute trips made by respondents were drive alone, compared to 63% of all work trips made to Arlington. Train use by commercial bldg survey employees was much higher than for Arlington workers overall, but CP/VP use was lower.

Q 3 How many weekdays would you typically use each of the following types of transportation to get to [street address]?
Use or Trial of Other Modes Since Beginning to Work at this Location

46% of survey respondents said they had used or tried another type of transportation since moving to their current work location. The most common modes tried were Metrorail (28%), bus (13%), and driving alone (15%).

Q 22  Since you started working in this building, have you used or tried any other type of transportation for your trip to work, that you are not using now?
The average travel distance of commercial building survey employees (15.7 mi) was very close to that of all regional commuters (16.3 mi)
- 44% of commercial bldg survey respondents traveled less than 10 miles, 31% traveled 20 miles or more

Q 7 About how many miles is it from your home to this work location?
Commute Time (minutes)

But commercial building survey employees had longer commute times (41 min) than the regional average (35 min):
- 26% of commercial bldg survey respondents traveled 20 min or less, 40% traveled 21-45 min and 34% traveled 45+ min

Q 8  And how many minutes does your trip to work usually take you?
Length of Time Using Current Mode

57% of employees who drove alone to work had used this mode 3 or more years. By contrast, only 45% of transit riders and 24% of employees who walked/biked had used their modes 3 years.

Q 19  You said you typically <PRIMARY MODE> to work. How long have you been using this type of transportation?
Travel Patterns by Location Characteristics
Test Relationship of Location Characteristics to Travel Patterns

- An important element of the site plan analysis was to determine if and how much work location factors influenced travel mode.

- Examined travel characteristics by
  - Area of County
  - Urban level of work location
  - Distance from Metrorail
The DA rate was similar for Ballston, Rosslyn, and Crystal City, but **dramatically** higher (79%) for areas outside Metro corridors. Crystal City had the highest transit share, but Ballston had much higher bike/walk use. CP/VP use was similar in the three Metro corridors and lower in “Other” areas.

Q 3 How many weekdays would you typically use each of the following types of transportation to get to [street address]?
The DA rate was much higher for Low Urban areas than for areas of higher “urban-ness.” The very low DA rate for the Moderate Urban likely reflects the large role of Crystal City in this group.

### Primary Mode by Urban Level

<table>
<thead>
<tr>
<th>Urban Level</th>
<th>n</th>
<th>Drive alone</th>
<th>Transit</th>
<th>Bike/walk</th>
<th>Carpool/vanpool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low urban</td>
<td>84</td>
<td>42%</td>
<td>2%</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Moderate urban</td>
<td>454</td>
<td>41%</td>
<td>46%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>High urban</td>
<td>705</td>
<td>50%</td>
<td>33%</td>
<td>6%</td>
<td>11%</td>
</tr>
<tr>
<td>Very high urban</td>
<td>277</td>
<td>43%</td>
<td>41%</td>
<td>12%</td>
<td>4%</td>
</tr>
</tbody>
</table>

**Q 3** How many weekdays would you typically use each of the following types of transportation to get to [street address]?
Primary Mode by Metro Distance

DA rates were much lower and transit use was considerably higher for respondents who worked within 5 blocks of a Metrorail stations than for respondents who worked farther away from Metrorail. But there was little difference in DA and transit use for 0-2 blocks and 3-5 blocks from Metro.

Q 3 How many weekdays would you typically use each of the following types of transportation to get to [street address]?
Use/Trial of Other Modes by Urban Level

Half of respondents who worked in Very High Urban locations said they used or tried another type of transportation since they started working at their current location, compared to 39% of respondents who worked in Low Urban settings.

Q 22 Since you started working in this building, have you used or tried any other type of transportation for your trip to work, that you are not using now?
Other Modes Tried by Primary Mode

51% of respondents who primarily drive alone to work said they had used or tried another mode and 44% of DA respondents tried transit. Four in ten respondents who primarily used an alternative mode other than transit had tried transit.

Q 22  Since you started working in this building, have you used or tried any other type of transportation for your trip to work, that you are not using now?
Use/Trial of Other Modes by Urban Level

Half of respondents who worked in Very High Urban locations said they used or tried another type of transportation since they started working at their current location, compared to 39% of respondents who worked in Low Urban settings.

Q 22 Since you started working in this building, have you used or tried any other type of transportation for your trip to work, that you are not using now?

3 in 10 tried transit

<table>
<thead>
<tr>
<th>Urban Level</th>
<th>No. of Respondents</th>
<th>Tried any other mode</th>
<th>Tried transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low urban</td>
<td>78</td>
<td>39%</td>
<td>25%</td>
</tr>
<tr>
<td>Moderate urban</td>
<td>423</td>
<td>45%</td>
<td>29%</td>
</tr>
<tr>
<td>High urban</td>
<td>650</td>
<td>47%</td>
<td>36%</td>
</tr>
<tr>
<td>Very high urban</td>
<td>256</td>
<td>50%</td>
<td>33%</td>
</tr>
</tbody>
</table>
Use/Trial of Other Modes by Metro Distance

Respondents who worked near Metrorail were more likely to try another mode than were respondents who worked farther from Metrorail. They also were more likely to use/try transit.

Q 22 Since you started working in this building, have you used or tried any other type of transportation for your trip to work, that you are not using now?
Location and Mode Split Connections

- The DA rate was much higher for Low Urban areas than for areas of higher “urban-ness.” 80% of employees in Low Urban areas drove alone, compared with 40-50% of employees in Moderate to Very High Urban locations. There was little difference in mode split once urban-ness was at least Moderate level. This could suggest that the Moderate, High, and Very High urban levels were not dramatically different.

- A strong connection also was found between DA rates and transit access. The DA share was much lower and transit use was considerably higher for respondents who worked within 5 blocks of a Metrorail stations compared with those who worked farther away. But there was little difference in DA or transit rates for 0-2 blocks and 3-5 blocks from Metro.

- Urban-ness and Metro access also appear to influence higher rate of trial for new modes, in particular trial use of transit.
Non-work Travel Around Worksite
Midday Non-Work Trips Around Site

• The survey also asked about trips made around the worksite during the workday for purposes other than travel to work and the modes used to make these trips:

  Q10 “In a typical week, how many days do you make trips in the neighborhood or area around your work location at lunch or other times during your workday?”

  Q 11 “How often do you use each of the following types of transportation for these trips?”

• 85% of respondents said they make trips around the worksite neighborhood in an average week.
  - 43% make trips 1-2 days per week
  - 43% make trips 3-5 days per week
The most common mode for trips around the site was walking - 70% of respondents made a walk trip at least one day per week and 29% made walk trips 3+ days per week. About a quarter said they made a DA trip at least once per week and one in five respondents used Metrorail 1+ day per week for a non-commute trip around the area.
Non-work trips around the worksite area were common at all urban levels. Respondents who worked in Low urban and Very High urban areas were slightly more likely than were other respondents to make frequent trips; 90+% made trips 1 or more days per week and half made trips 3 or more days per week.
The frequency of walk trips around the site increased as urban-ness increased. Only 58% of respondents who worked in Low urban areas made walk trips around the site at least once per week, compared with 82% of respondents in Very High urban areas.

**Frequency of Walk Trips by Urban Area**

<table>
<thead>
<tr>
<th>Urban Area</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low urban</td>
<td>74</td>
</tr>
<tr>
<td>Moderate urban</td>
<td>403</td>
</tr>
<tr>
<td>High urban</td>
<td>648</td>
</tr>
<tr>
<td>Very high urban</td>
<td>257</td>
</tr>
</tbody>
</table>

**Walk trips 1 or more days per week**

- **Low urban**: 58%
- **Very High urban**: 82%

<table>
<thead>
<tr>
<th>Urban Area</th>
<th>0 times per week</th>
<th>1 - 2 times per week</th>
<th>3+ times per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low urban</td>
<td>24%</td>
<td>34%</td>
<td>42%</td>
</tr>
<tr>
<td>Moderate urban</td>
<td>32%</td>
<td>29%</td>
<td>39%</td>
</tr>
<tr>
<td>High urban</td>
<td>32%</td>
<td>26%</td>
<td>42%</td>
</tr>
<tr>
<td>Very high urban</td>
<td>18%</td>
<td>36%</td>
<td>46%</td>
</tr>
</tbody>
</table>
Use of transit for midday trips also rose with increasing urban-ness of respondents’ worksite. Only two in ten Low urban respondents made midday transit trips in a typical week, compared with four in ten respondents in Moderate, High, and Very High urban areas.

Frequency of Transit Trips by Urban Area

Arlington County Commercial Building Research
December 2009
Driving alone was used for midday trips around the worksite only in **Low Urban areas**. About six in ten of these respondents said they made DA trips 1 or more days per week, while less than a quarter of respondents who worked in Moderate, High, or Very High Urban areas said they ever drove alone around the site during midday.

![Bar chart showing frequency of DA trips by urban area](chart.png)

- **Low urban**: 38% made 0 trips, 20% made 1-2 trips, 12% made 3+ trips.
- **Moderate urban**: 42% made 0 trips, 14% made 1-2 trips, 8% made 3+ trips.
- **High urban**: 42% made 0 trips, 18% made 1-2 trips, 6% made 3+ trips.
- **Very high urban**: 42% made 0 trips, 19% made 1-2 trips, 4% made 3+ trips.

**3 in 4 made no DA trips during the week around the site.**
Non-work Trips by Metro Distance

Respondents whose worksites were farther from Metro made more frequent midday trips than did respondents whose work locations were closer to Metro stations.
The frequency of midday walk trips declined as distance to Metrorail rose. About eight in ten respondents who worked within 2 blocks of Metrorail made a midday trip at least 1 day per week, while only 58% of respondents who worked more than 10 blocks from Metrorail made at least 1 walk trip per week.
Proximity to Metrorail seemed to support use of transit for midday non-work trips. 46% of respondents who worked with 2 blocks of Metrorail made a midday transit trip at least once per week, compared to only 18% of respondents who worked more than 10 blocks from a Metrorail station.
The frequency of driving alone for midday trips also was related to distance from Metrorail, but DA did not increase until the distance exceeded 5 blocks to Metrorail. Below that point, drive alone frequency was about the same - only 20% of respondents drove alone for a midday trip. But 59% of respondents who worked more than 10 blocks from Metro made a DA trip at least once per week.
Employees were about equally like to make non-work trips around their worksite areas regardless of the primary mode they used for commuting.

<table>
<thead>
<tr>
<th>Primary mode</th>
<th>Drive alone</th>
<th>Transit</th>
<th>Other alternative mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>651</td>
<td>530</td>
<td>201</td>
</tr>
<tr>
<td>0 times per week</td>
<td>17%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>1 - 2 times per week</td>
<td>42%</td>
<td>44%</td>
<td>42%</td>
</tr>
<tr>
<td>3+ times per week</td>
<td>41%</td>
<td>43%</td>
<td>45%</td>
</tr>
</tbody>
</table>
But respondents who drove alone to work were less likely to make walk trips than were respondents who used either transit or another alternative mode to work. But this could be in part because they had fewer destinations to which they could walk.
Respondents who traveled to work by transit were more likely than were respondents who commuted by other modes to use transit also for midday trips. About half of transit commuters made a midday transit trip in a typical week, compared with only 31% of drive alone commuters and 39% of respondents who carpooled/vanpooled or biked or walked to work.
As expected, driving alone was used for mid-day trips around the worksite area almost exclusively by respondents who drove to work alone. This is logical since respondents who primarily use transit, bike, or walk would not have a car to make the trips. But some “other alternative mode” users could be carpoolers, thus might have a vehicle available at least some days.

More than eight in ten made no DA trips during the week around the site.
Non-work Trips Around the Site

- Nearly all respondents made some “non-work/non-commute” trips around the worksite during the workday. And the distribution of trip frequency - “never,” “1-2 days per week,” and “3+ days per week” was nearly the same regardless of their work location or how they traveled to work.

- Walking was the most common mode for midday, non-work trips, used by about three-quarters of respondents.

- The modes respondents used for these trips did vary, however, by the urban-ness of the worksite. Respondents in less urban areas drove more often and walked and used transit less often.

- Respondents who drove to work alone also were more likely to drive alone for midday trips, but that could be due in part to fewer services within walking distance of the worksite.
Commute Satisfaction
68% of respondents had been at their current location fewer than 5 years, but 13% had been at this location more than 5 years.

**Time at Current Location**

Q 13 How long have you worked in this building?

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 year</td>
<td>31%</td>
</tr>
<tr>
<td>1-2.9 years</td>
<td>37%</td>
</tr>
<tr>
<td>3-4.9 years</td>
<td>19%</td>
</tr>
<tr>
<td>5-10 years</td>
<td>11%</td>
</tr>
<tr>
<td>&gt;10 years</td>
<td>2%</td>
</tr>
</tbody>
</table>

*68% fewer than 5 years*
Previous Work Location

About two in ten of the employees surveyed moved from another Arlington location. A third moved from Washington DC and 16% previously worked in Fairfax.

Q 14  Before you started working in this building, in what jurisdiction did you work?
Important Factors in Choosing to Work at this Location

Job and income factors topped the list of important factors in choosing to move to this work location. But 42% of respondents mentioned “ease of commute” and 34% said availability of commute options also was a factor in the decision.

Q 15 When you were considering working in this building, what factors were important to your decision?
Satisfaction with Current Commute

Only about half of the employees surveyed said they were “satisfied” or “very satisfied” with their current commute. 29% rated the commute a 3 and 24% rated it a 1 or 2.

Q 17  Overall, how satisfied are you with your trip to work now? Please use a scale of 1 to 5 for your answer, where 1 means “very dissatisfied” and 5 means “very satisfied.”

47% rated satisfaction as 4 or 5
Satisfaction with Commute by Primary Mode

There were no statistical differences in commute satisfaction for employees who drove alone to work and those who used an alternative mode (e.g., transit, carpool, bike/walk).

Q 15 How satisfied you are with the transportation system in Arlington County?
Satisfaction with Commute by Metro Distance

Commuters’ satisfaction with their commute also did not appear to be related to the distance from their work location to Metrorail - There was no clear pattern or trend.

Q 15 How satisfied you are with the transportation system in Arlington County?
Satisfaction with Commute by Urban Level

But commuters’ satisfaction with their commute appeared to rise with higher urban-ness of their work location - 55% of respondents who worked in Very High Urban areas were satisfied, compared to 42% of respondents who worked in Low Urban areas.

<table>
<thead>
<tr>
<th>Urban Level</th>
<th>Low urban</th>
<th>Moderate urban</th>
<th>High urban</th>
<th>Very high urban</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 76</td>
<td>n = 390</td>
<td>n = 627</td>
<td>n = 249</td>
</tr>
</tbody>
</table>

Q 15 How satisfied you are with the transportation system in Arlington County?
Ratings on Commute Features

Seven in ten respondents rated “parking at work” as good or very good and 48% said their commute comfort rated a 4 or 5. Respondents were less satisfied with other commute features – particularly overall cost, parking cost, and lack of parking at train stations.

Q 17 Overall, how satisfied are you with your trip to work now? Please use a scale of 1 to 5 for your answer, where 1 means “very dissatisfied” and 5 means “very satisfied.”
Ratings on Commute Features by Mode

Respondents who primarily drove alone to work were more satisfied than alt mode users with parking at work, parking cost, and comfort. They were less satisfied with their ability to relax and with overall cost. But they were equally satisfied with the commute options available to them.

Q 17  Overall, how satisfied are you with your trip to work now? Please use a scale of 1 to 5 for your answer, where 1 means “very dissatisfied” and 5 means “very satisfied.”
Ratings on Commute Features by Urban Level

Respondents’ ratings on commute characteristics varied by the urban-ness of their work location. Low Urban respondents were more satisfied than other respondents with parking at work, parking cost, and overall cost, but much less satisfied with their ability to relax and with the commute options available to them.

Q 17  Overall, how satisfied are you with your trip to work now? Please use a scale of 1 to 5 for your answer, where 1 means “very dissatisfied” and 5 means “very satisfied.”
Ratings on Commute Features by Metro Distance

And respondents’ ratings for commute features varied by their distance from Metrorail. Commuters who worked close to Metrorail were more satisfied with their commute options and their ability to relax, but less satisfied with their parking at work and parking cost.

Q 17 Overall, how satisfied are you with your trip to work now? Please use a scale of 1 to 5 for your answer, where 1 means “very dissatisfied” and 5 means “very satisfied.”
Awareness and Use of Commute Info Programs
Many Commuters Received Assistance to Start Using Alternative Modes

73% of respondents who used an alternative mode said they received commute information or services that encouraged or helped them start using an alternative mode. The most common service was a transit subsidy, cited by 50%.

Q 21 Did you receive any of the following types of information or services from your employer, from an organization that provides commute information, or any other person or organization that encouraged or helped you <PRIMARY MODE> to work?
Sought Transportation Info

49% of respondents looked for information on transportation they could use to get around Arlington. Those who sought information looked primarily on the internet and WMATA. About 13% of respondents contacted an Arlington service.

Q 25  In the past year, have you sought information on transportation you could use to get to [street address] or around Arlington?
Q 25a  What sources did you use or contact to obtain this information or services?
Q 25  In the past year, have you sought information on transportation you could use to get to [street address] or around Arlington?

More than 80% of respondents who looked for information on transportation sought information on transit schedules. And more than half looked for information on transit fares.
Sought Info by Primary Mode

Respondents who used transit or other alternative modes for their commute were much more likely to seek transportation information than were respondents who primarily drove alone to work. Half of alt mode users sought info, compared to only 37% of drive alone commuters.

Q 25 In the past year, have you sought information on transportation you could use to get to [street address] or around Arlington? 

Q 3 How many weekdays would you typically use each of the following types of transportation to get to [street address]? 

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive alone</td>
<td>37%</td>
</tr>
<tr>
<td>Transit</td>
<td>56%</td>
</tr>
<tr>
<td>Other alt mode</td>
<td>53%</td>
</tr>
</tbody>
</table>

Drive alone n = 630
Transit n = 512
Other alt modes n = 198
Sought Transportation Info by Location Characteristics

- No significant differences in seeking information by urban-ness
  - Low Urban - 50%
  - Moderate Urban - 53%
  - High Urban - 44%
  - Very High Urban - 55%

- No distinct pattern of seeking information by distance to Metro
  - 0 - 2 blocks - 56%
  - 3 - 5 blocks - 46%
  - 6 - 10 blocks - 44%
  - >10 blocks - 53%

Q 25 In the past year, have you sought information on transportation you could use to get to [street address] or around Arlington?
Commute Organizations Known by TDM Level (Commuters’ Perception)

Respondents who said commute services were available to them at work were more likely also to say they knew of commuter information programs.

Q 26 Shown below is a list of organizations and programs that provide transportation information and assistance in employees in Arlington. For each, please indicate if you have heard of the organization or program and if you have used services provided by the organization.
Commute Organizations Known

Very high name recognition for ART and Commuter Store - more than half of respondents knew of these services. But at least 20% of respondents also knew of other Arlington County services.

Q 26 Shown below is a list of organizations and programs that provide transportation information and assistance in employees in Arlington. For each, please indicate if you have heard of the organization or program and if you have used services provided by the organization.

- WMATA: 95%
- ART: 62%
- Commuter Store: 56%
- Commuter Connections: 46%
- BikeArlington: 25%
- CommuterPage: 24%
- ACCS: 21%
- WalkArlington: 20%
- ATP: 16%

n=1,377
Commute Organizations Used

80% of respondents had used WMATA. A quarter of respondents had used the Commuter Store and 12% had used ART.

Q 26 Shown below is a list of organizations and programs that provide transportation information and assistance in employees in Arlington. For each, please indicate if you have heard of the organization or program and if you have used services provided by the organization.

- WMATA
- ART
- Commuter Store
- Commuter Connections
- BikeArlington
- CommuterPage
- CommuterDirect
- ACCS
- WalkArlington
- ATP

n=1,377
Commute Services Used

The most commonly used services from commute organizations were transit-oriented. But information about HOV lanes, P&R lots, and bike/walk options each was used by one in ten employees.

38% of respondents who used services said they had been “useful” and 34% said they had been “very useful”.

Q27 Which of the following services provided by these organizations have you used?
Worksite TDM Services
Employee Sample by Worksite TDM

Four in ten employees worked at a site that provided a high level of commute services - defined as offering a financial incentive and at least three other support services. Half worked at sites with “moderate” services.

Q 24 Listed below are services or benefits that might be available to you at work to help you with your trip to work. They could be offered by your employer, by the company that manages the building you work in, or by another organization. …
Employee survey respondents reported a wide range of commute services. Most common were transit subsidies, transit schedules, and telework information. But carsharing and several bike/walk services were available to at least 30% of respondents.

Respondents noted seven commute services that were more common than free parking, which was available to only 31% of respondents.
Who Provides Commute Services

Respondents said services were provided by their employer, the building management, and other organizations. Employers were most likely to offer subsidies and showers/lockers. Common “other organization” services included ridematch, bike racks, preferential parking, bus/train info, and carshare.
89% of employees worked at sites with moderate to high TDM levels, as defined by employers. But only 60% of employees reported having access to these levels of services. This suggests employees were unaware of many available TDM services.

Q 24 Listed below are services or benefits that might be available to you at work to help you with your trip to work. They could be offered by your employer, by the company that manages the building you work in, or by another organization. ...
Employees’ Awareness of Financial Incentives

89% of employees actually had access to some form of financial incentive, but only 60% of employees said they were aware of financial incentives available to them.

Q 24 Listed below are services or benefits that might be available to you at work to help you with your trip to work. They could be offered by your employer, by the company that manages the building you work in, or by another organization. ...

![Chart showing actual level vs. employees' perception of financial incentives.](chart.png)
Employees’ Perception of Available Services by Primary Mode

Both respondents who primarily drove alone and those who used alt modes believed fewer TDM services were offered to them than was actually the case. But alt mode users were more likely to be aware of TDM services than were DA respondents.

Q 24 Listed below are services or benefits that might be available to you at work to help you with your trip to work. They could be offered by your employer, by the company that manages the building you work in, or by another organization. …
Worksite Parking Conditions
Parking Ratio - **Employer Sample** (recap)

80% of employers surveyed said they owned or leased some parking for employees. 20% said they provided no parking.

49% provided parking for at least half the employees at the site.

30% provided one or more space per each employee at the site.

---

**Q 30** Does your organization own or lease parking in the building for employees’ use?

**Q 31** How many parking spaces are available in this building for your employees’ use?
Parking Ratio - Employee Sample

But large employers were less likely to offer parking to all employees, so the actual parking availability from the employees’ perspective was different than it appeared in the employer survey. 55% of employees worked at locations with spaces for at least half the employees, but only 6% worked at sites with 1 or more spaces per employee. So parking was “moderately” available.

Q 30 Does your organization own or lease parking in the building for employees’ use?
Q 31 How many parking spaces are available in this building for your employees’ use?
Parking by Area - Employee Sample

Parking was least available for Rosslyn employees - only 4% worked at sites where parking was available to more than half of the employees. Employees in “Other” areas were most likely to have parking - 64% worked at sites with parking for at least half of the employees and 44% worked at sites that had parking for all employees.
Parking by Urban Level- Employee Sample

The parking ratio distribution among employees who worked in Low-Moderate Urban areas and High Urban areas was about the same - about half worked at sites where parking was provided to more than half of employees. Parking was less available for employees in Very High Urban areas - 19% worked at sites with no parking at all. 12% worked at sites with ample parking, but this represented only two employers.
Parking by Metro Distance - Employee Survey

Employees located 6 or more blocks from Metro were much more likely to have parking than were employees located closer to Metrorail - three-quarters worked at sites with parking for at least half of the employees, while only about 50% of employees located 5 or fewer blocks from Metro worked at sites with parking for half of the employees.

<table>
<thead>
<tr>
<th>Metro Distance</th>
<th>Number of Employees</th>
<th>Parking for at least half of employees - 50-54%</th>
<th>Parking for at least half of employees - 64-83%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2 blocks</td>
<td>n = 343</td>
<td>15%</td>
<td>31%</td>
</tr>
<tr>
<td>3-5 blocks</td>
<td>n = 742</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>6-10 blocks</td>
<td>n = 156</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>&gt;10 blocks</td>
<td>n = 101</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

0 spaces 0.1 - 0.5 spaces 0.51 - 0.90 spaces 0.91+ spaces
Parking Locations

Three quarters of employees said they park or would park in a garage or lot at the worksite. The remaining respondents said they would park in a public lot/garage (14%), on the street (6%), or in an off-site lot/garage provided by the employer (3%).

Q9: On days that you drive to work, where do you park? If you don’t usually drive to work, please check where you would park, if you needed to drive.
Parking Locations by Area

In all four survey areas, about three-quarters of employees said they park or would park in a garage or lot at the worksite. In Ballston/Courthouse, Crystal City, Rosslyn, the second most likely parking location was a public garage or lot. Only in “Other” areas did street parking seem to be a viable option.
Parking Fees - Defined by Employer (recap)

Over half of the employers said they offer free parking.
One in ten employers said employees would pay $100 or less to park and another 11% said employees would pay over $100 per month. But 21% of employers said they did not offer any parking at all. Employees at these sites likely also would pay for parking in a public or private garage.

Q 35  Do employees pay to park at any of the parking that your organization owns or leases?
Q 35a  What amount do employees pay?
Parking Fees - Employee Defined

But a substantial share of employee survey respondents said they paid to park. Only a quarter said they had free parking.

20% paid $1 to $100 per month, 13% paid $101 to $149, and 16% paid more than $150 per month. 27% said they did not know what they would pay to park, presumably because they never drive to work. But most of these employees probably would have to pay.
Parking Fees by Area - Employee Defined

Parking fees varied by the employees’ work locations. Only in the “Other” areas was free parking truly available to a large share (93%) of employees. In Crystal City, about half of employees said they had free parking, but only 11% of Ballston/Courthouse and 30% of Rosslyn employees had free parking.

球状/大庭

n = 477

克里尔市

n = 351

罗斯林

n = 191

其他地区

n = 89

Arlington County Commercial Building Research
December 2009

Q9a How much do you, or would you, pay to park at this location?
Parking Fees by Urban Level - Employee Defined

Nearly all employees who worked in Low urban areas said they had free parking. But both the incidence and amount of parking fees rose as urban-ness increased. Only about two in ten employees in High and Very High urban areas had free parking and half of employees in Very High urban areas paid $150 or more per month.

[Graph showing parking fees by urban level]

- Low urban: 94% free, 4% $1 - $100, 2% $101+
- Moderate urban: 47% free, 9% $1 - $100, 9% $101+
- High urban: 43% free, 21% $1 - $100, 36% $101+
- Very high urban: 30% free, 18% $1 - $100, 52% $101+

Employee survey
Urban level
Low urban
n = 84
Moderate urban
n = 454
High urban
n = 705
Very high urban
n = 277

Arlington County Commercial Building Research
December 2009
Parking Fees by Metro Distance - Employee Defined

92% of employees located more than 10 blocks from Metrorail said they had free parking. But parking charges were common for employees located closer to Metrorail. Charges of $150 or more per month were especially common for employees who worked within 5 blocks of Metrorail.

<table>
<thead>
<tr>
<th>Metrorail Distance</th>
<th>0 - 2 blocks</th>
<th>3 - 5 blocks</th>
<th>6 - 10 blocks</th>
<th>&gt; 10 blocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>388</td>
<td>837</td>
<td>173</td>
<td>122</td>
</tr>
</tbody>
</table>

- 0 - 2 blocks: 27% $0 / month, 25% $1 - $100 / month, 48% $101+ / month
- 3 - 5 blocks: 28% $0 / month, 29% $1 - $100 / month, 43% $101+ / month
- 6 - 10 blocks: 19% $0 / month, 33% $1 - $100 / month, 48% $101+ / month
- > 10 blocks: 92% $0 / month, 4% $1 - $100 / month, 4% $101+ / month
Travel Mode by TDM and Parking Conditions
Test Relationship of TDM and Parking Services on Travel Patterns

• The analysis also examined if and how much TDM and parking factors influenced travel mode.

• Examined travel characteristics by
  - Actual TDM level
  - Employees’ perception of TDM level
  - Parking ratio - parking available at the site
  - Parking fee paid by employees

* 2004 State of Commute survey - Survey respondents who worked in Arlington County, regardless of residence jurisdiction
Primary Mode by Total TDM Level

The DA rate dropped substantially as TDM level rose

**Low TDM - 62% DA, Moderate TDM - 47% DA, High TDM - 40% DA**

The different primarily reflects growing transit share with higher TDM levels. Carpool/vanpool rates were essentially the same.

### Employee Survey

**Total TDM Level** (employer defined)

- **Low TDM**  
  n = 121

- **Moderate TDM**  
  n = 676

- **High TDM**  
  n = 530

### Arlington County Commercial Building Research

**December 2009**

**Q 3** How many weekdays would you typically use each of the following types of transportation to get to [street address]?
The DA rate dropped sharply between the Low and Moderate TDM levels, but the DA rates were the same for Moderate and High levels of TDM. Again, the difference between Low and Moderate TDM primarily reflects a large increase in transit share with higher TDM levels.

Q 3 How many weekdays would you typically use each of the following types of transportation to get to [street address]?

<table>
<thead>
<tr>
<th>Transportation Type</th>
<th>Low TDM</th>
<th>Moderate TDM</th>
<th>High TDM</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA</td>
<td>56%</td>
<td>41%</td>
<td>42%</td>
</tr>
<tr>
<td>Transit</td>
<td>31%</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td>Bike/walk</td>
<td>5%</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Carpool/vanpool</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
</tbody>
</table>
Primary Mode by Financial Incentive Perceived by Employee

The DA rate dropped as increasingly significant incentives were offered. When no incentive was offered, the DA rate was 60%. When subsidies were offered, the DA rate dropped below 50% and the transit share rose.

Q 3 How many weekdays would you typically use each of the following types of transportation to get to [street address]?
Primary Mode by Parking Ratio

The DA rate increased as the parking ratio increased - as more parking was available, more employees chose to drive to work. But the most dramatic increase was when parking was available to all employees.

Q 3 How many weekdays would you typically use each of the following types of transportation to get to [street address]?
Parking fee seemed to have little impact on DA rates, until the fee climbed above $100. At that point, DA rates fell sharply.

Q 3 How many weekdays would you typically use each of the following types of transportation to get to [street address]?

Q9a How much do you, or would you, pay to park at this location?
Regression Analysis of Mode Split
Regression Analysis of Mode Split
Influences on Mode Split

- Drive alone and transit rates appeared to be related to various site characteristics:
  - TDM level and services offered
  - Parking availability
  - Parking charges
  - Urban-ness of location
  - Distance to Metrorail

- But how much does each contribute to the decision and what other factors are important in influencing mode split?
Regression Analysis Variables

- **Dependent variables**
  - Drive alone Share - % weekly trips by driving alone
  - Transit Share - % weekly trips by transit
  - Bike/walk Share - % weekly trips by bike / walk

- **Independent variables:**
  - Site / location characteristics
  - TDM program characteristics
  - Parking availability and parking fees
  - Awareness and use of TDM services
  - Travel pattern characteristics
  - Residence characteristics
  - Demographic characteristics
Regression - Independent Variables

- Site / location characteristics
  - Urban-ness
  - Metro distance
  - County area (e.g., Rosslyn)

- TDM level
  - Overall level (low, moderate, high)
  - TDM level perceived by employee
  - Financial incentives offered
  - Number of support services
  - Bike / walk services

- Parking availability - spaces per employee

- Parking fees - reported by employee
Regression - Independent Variables (2)

- Awareness and use of commute info services
  - Aware of any local/regional info service
  - Aware of Arlington info services
  - Used any service
  - Sought transit information
  - Received service/incentive to start mode

- Travel characteristics
  - Distance from home to worksite
  - Travel time from home to worksite
  - Distance from home to bus stop
  - Distance from home to rail station
  - When started mode vs time of move to building
Regression - Independent Variables (3)

- Residence characteristics
  - Home area (Arlington, Alex/DC, Ffx/Mont/PG, Other)
  - Previous work jurisdiction

- Demographic characteristics
  - Age
  - Income
  - Household vehicles
Drive Alone Share - Regression

Coefficients:

- Home to train station distance: 0.235
- Female: 0.107
- Metrorail distance: 0.083
- Annual household income: 0.083
- Sought transit info/service: -0.063
- Home to work distance: -0.065
- Parking fee (employee defined): -0.217
- Used TDM services*: -0.307

*Used TDM services: 1 - no TDM, 2 - support only, 3 - financial only, 4 - financial and support

R squared = 0.30
Drive Alone Regression

Variables associated with higher DA rate:
- Longer distance from home to train station
- Gender - female
- Longer distance from work to Metrorail station
- Higher household income

Variables associated with lower DA rate:
- Employee sought transit information or services
- Longer distance commute
- Employee paid for parking - especially high fee
- Employee had ever used TDM services - especially subsidies
Transit Share - Regression

Coefficients

- Used any TDM service: 0.473
- Parking fee (employee defined): 0.372
- Know any commute program: 0.169
- Transit incentive available: 0.165
- Home to work travel distance: 0.128
- Used current mode before move: 0.048
- Work to Metrorail distance: -0.132
- Home to train station distance: -0.488

R squared = 0.52
Transit Regression

Variables associated with **higher transit** rate:
- Employee has used any TDM service
- Employee has to pay to park
- Employee is aware of regional/local commute services
- Employer offers transit financial incentive
- Long commute distance
- Employee used transit before moving to this site

Variables associated with **lower transit** rate:
- Longer distance from work to Metrorail station
- Longer distance from home to train station

Arlington County Commercial Building Research
December 2009
Bike/Walk Share - Regression

- Number bike services offered: 0.093
- Parking fee (employee defined): -0.087
- Home area: -0.383
- Previous work jurisdiction: -0.116
- When started primary mode: -0.089
- Received benefit to start mode: -0.146

Coefficients

Home area - 1=Arlington, 2=Alexandria/DC, 3=Other Washington metro, 4=Other
Previous work jurisdiction - 1=Arlington, 2=Alexandria/DC, 3=Other Washington metro, 4=Other
When started primary mode - 1=after move, 2=time of move, 3=before move
Bike/Walk Regression

Variables associated with **higher bike/walk** rate:
- Employee has access to bike/walk services (e.g., bike racks, lockers, showers)

Variables associated with **lower bike/walk** rate:
- Employee received benefit to **start using** bike/walk
- Employee lived outside Arlington
- Employee used bike/walk **before** moving to this worksite
- Parking charge - especially high charge
- Employee worked outside Arlington before moving to this worksite
Regression Summary - Urban/Metro

• Impact of urban level
  • Not a significant variable in any of the mode models.
  • This could be due to limited responses from “Low Urban” area employees - mode differences were slight for Moderate to Very High urban-ness.
  • This might also suggest that even the “Moderate” level of urban-ness is substantial.

• Role of Metrorail Distance
  • Increasing distance from Metrorail increased drive alone share and reduced transit share.
  • Coefficient was highly significant but only moderately strong - suggesting gradual impact - e.g., 5 blocks rather than 2 blocks.
Regression Summary - Parking

• Impact of Parking Fee
  • Increasing parking fees reduced drive alone share and increased transit and bike/walk shares.
  • Impact appeared slightly stronger as a deterrent to drive alone, but the variable significance level was higher (greater confidence) for the impact on transit share.

• Impact of Parking Space/Ratio
  • Drive alone share increased as parking ratio increased.
  • But parking ratio was not a significant variable in the transit model - this suggests transit use is as much a choice as an imperative for employees whose employers do not provide parking. Employees who want to drive can obtain parking at a commercial garage/lot.
Regression Summary - TDM

• At least one TDM service variable was significant for each of the three mode models.
  • Drive alone rate was lower for employees who used TDM services and declined in proportion to the level of TDM service used (e.g., financial vs info). Impact was strong and highly significant.
  • Availability of financial incentives for transit increased transit share, but use of service to start mode was even more important.
  • Bike/walk share increased with the number of bike/walk services offered. But bike/walk share declined when employees had received incentives to start mode. Since the primary incentives were for transit, this likely reflects the motivating value of transit subsidies and the part-time use of bike/walk, with the other mode being transit.
Regression Summary - TDM (2)

- Availability of targeted incentives (e.g., transit subsidy, bike/walk services) was a better predictor of alt mode use than was overall TDM level.

- The number of support services offered in addition to financial incentives was not a significant variable in any of the models.

- Awareness of services was not a good predictor of mode use, but awareness is a precursor to use.
Regression Summary - Other Variables

- Many non-site, non-TDM variables entered each of the three models - this indicates the complexity of mode choice decisions - many factors influence behavior.
  - Home area
  - Distance from home to work
  - Distance from home to a train station
  - Previous work jurisdiction
  - Use of mode prior to making move to this location
  - Income
  - Number of household vehicles

- **Caution** - The R-square values for models were modest, suggesting a substantial portion of the variability in the results are “unexplained” through the models. This could be related to data limitations as well as absence of some important variables.