



Washington Metropolitan Area Transit Authority

2012 Metrorail Passenger Survey

Office of Planning

January 25, 2013



Purpose

- Update ridership by jurisdiction of residence for use in Metrorail's operating subsidy allocation
 - Last survey conducted in 2007
- Collect demographic, travel and access data for Title VI compliance, system planning and operations analyses
- Not a customer opinion survey, focus on ridership and travel characteristics



Key Findings

- Overall, ridership grew by 3% since 2007 survey
 - 9% growth in the evening time period
- Mode of Access: The number of passengers walking and biking to Metrorail is up by 15% and 54% respectively. Access by Park & Ride and Metrobus declined
 - Walk access declines with more cars in household and with age
- Trip Purpose: Work trips make up 92% of the AM peak and 50% of the midday period



Key Findings: New Data

- Demographic data (weekday trips):
 - Race: 61% White, 26% Black or African American, 6% Asian
 - Hispanic Origin: 7%
 - Income Levels: 11% with household incomes <\$30K, 22% with household incomes >\$150K
- Friday late-nights and Saturdays
 - Primary purpose for planning and Title VI compliance, not determination of residence
 - Recreation/ personal trips make up 54% of Friday late-night, 34% on Saturday



Survey Methodology

- Similar to 2007: intercept survey with mail back & drop-box return options
 - + on-line option in 2012
- Rolling survey at 3 to 4 stations a day between April 13 and May 25, 2012
 - Follow-up surveys in June 2012 at low response stations
- Statistically controlled on a system-wide, jurisdictional and station level



Survey Implementation

- Weekday Return Rates
Similar to 2007
- Two New Survey Periods
 - Friday late-night service
 - 30 mezzanines on Saturday

| Weekday Comparison | | |
|---------------------------|---------|---------|
| | 2007 | 2012 |
| Weighted Survey Total | 717,754 | 739,324 |
| Forms Distributed | 261,009 | 292,525 |
| Overall Distribution Rate | 36% | 40% |
| Valid Responses | 66,321 | 68,353 |
| Response Rate | 25% | 23% |



Changes Between 2007 and 2012- Questionnaire Design

- New Questions
 - Demographics: Race, Hispanic Origin, Income, Age
 - Transfers
- Some Revisions to Existing Questions
 - Mode of Access, Type of Transit Subsidy
- Spanish Translation



Trips Made by Time of Day

| Time Period | Weekday Trips | | 2007 - 2012 % Change |
|-------------|---------------|---------|-------------------------|
| | 2007 | 2012 | |
| AM Peak | 240,512 | 243,253 | 1% |
| Midday | 137,886 | 144,042 | 4% |
| PM Peak | 257,038 | 262,665 | 2% |
| Evening | 82,318 | 89,364 | 9% |
| Total | 717,754 | 739,324 | 3% |



Mode of Access – AM Peak

| AM Peak Mode of Access | Weekday Trips | | 2007 - 2012 % Change |
|---|----------------|----------------|-------------------------|
| | 2007 | 2012 | |
| Walk | 78,460 | 89,860 | 15% |
| Park & Ride | 68,969 | 61,559 | -11% |
| Metrobus | 34,952 | 32,672 | -7% |
| Other Bus | 17,620 | 19,994 | 13% |
| Shuttle | N/A | 4,905 | N/A |
| Dropped Off | 21,911 | 18,723 | -15% |
| Commuter Train | 9,002 | 8,328 | -7% |
| Ride Sharing | 2,463 | 2,085 | -15% |
| Bicycle | 1,550 | 2,384 | 54% |
| Total AM Peak Trips Reported | 240,512 | 243,253 | 1% |



2012 Mode of Access – AM Peak

| Mode | System | DC | Mont-gomery | Prince George's | Fairfax County | Arling-ton | Alexan-dria | Fairfax City | Falls Church | Non Compact |
|------------------------|---------|--------|-------------|-----------------|----------------|------------|-------------|--------------|--------------|-------------|
| Walk | 37% | 70% | 32% | 11% | 12% | 71% | 37% | 8% | 30% | 7% |
| Park & Ride | 26% | 5% | 32% | 48% | 44% | 5% | 7% | 54% | 29% | 32% |
| Metrobus | 14% | 19% | 6% | 22% | 9% | 12% | 19% | 5% | 13% | 3% |
| Other Bus | 8% | 1% | 14% | 2% | 18% | 3% | 14% | 21% | 1% | 17% |
| Shuttle | 2% | 0.4% | 1% | 1% | 3% | 3% | 15% | 1% | 4% | 1% |
| Dropped Off | 8% | 3% | 10% | 12% | 10% | 4% | 7% | 10% | 17% | 8% |
| Commuter Train | 3% | 0.1% | 1% | 1% | 1% | 0.0% | 0.0% | 0.0% | 0.0% | 29% |
| Ride Sharing | 1% | 0.2% | 1% | 1% | 2% | 0.2% | 0.3% | 1% | 1% | 2% |
| Bicycle | 1% | 1% | 2% | 1% | 1% | 1% | 1% | 1% | 6% | 0% |
| AM Peak Trips Reported | 243,253 | 62,123 | 42,118 | 40,562 | 34,582 | 25,866 | 10,687 | 1,135 | 1,162 | 25,018 |



AM Peak Mode of Access – By Car Ownership and Age

| Mode of Access | System Total | None | One | Two | Three or more |
|----------------|--------------|------|-----|-----|---------------|
| Walk | 37% | 62% | 46% | 21% | 13% |
| Park & Ride | 26% | 2% | 18% | 41% | 49% |
| Bus | 22% | 30% | 21% | 19% | 17% |
| Dropped Off | 8% | 2% | 7% | 11% | 11% |
| Bicycle | 1% | 1% | 1% | 1% | 1% |

- Walk declines with more cars in household, Park & Ride goes up

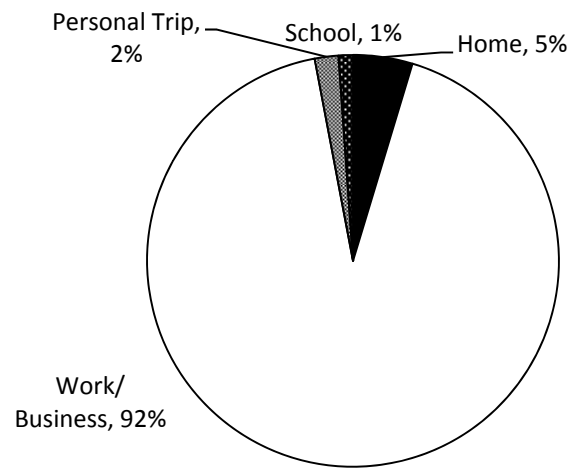
| Mode of Access | System Total | 18-24 | 25-34 | 35-54 | 55-64 | 65 or older |
|----------------|--------------|-------|-------|-------|-------|-------------|
| Walk | 37% | 58% | 57% | 29% | 25% | 30% |
| Park & Ride | 26% | 9% | 13% | 31% | 34% | 30% |
| Bus | 22% | 19% | 17% | 23% | 25% | 25% |
| Dropped Off | 8% | 9% | 6% | 8% | 9% | 9% |
| Bicycle | 1% | 1% | 1% | 1% | 1% | 1% |

- Walk declines starting at 35, Park & Ride begins to increase

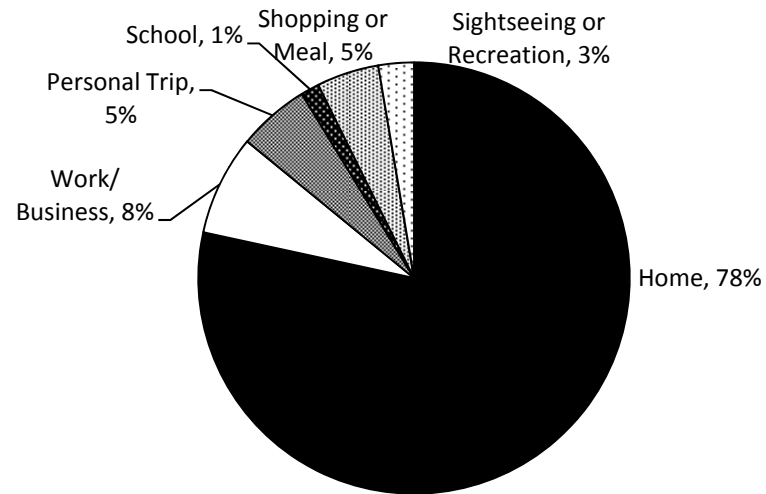


Trip Purpose by Time of Day – Peak Periods

Trip Purpose – AM Peak



Trip Purpose – PM Peak

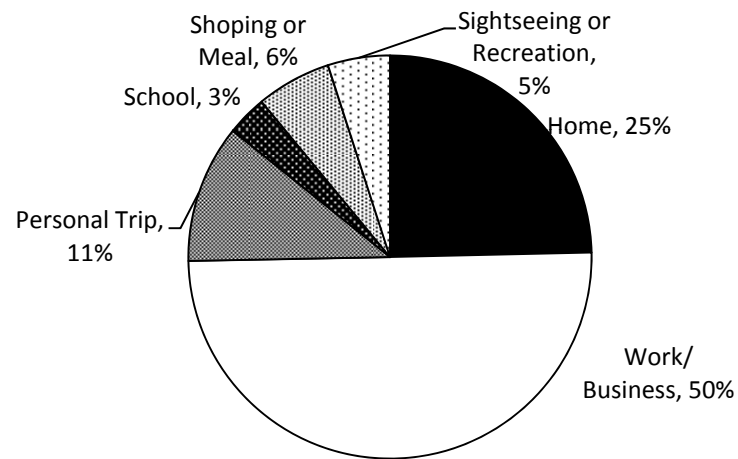


- AM Peak = 92% work trips
- PM Peak = 78% home trips, more personal and shopping trips than AM Peak

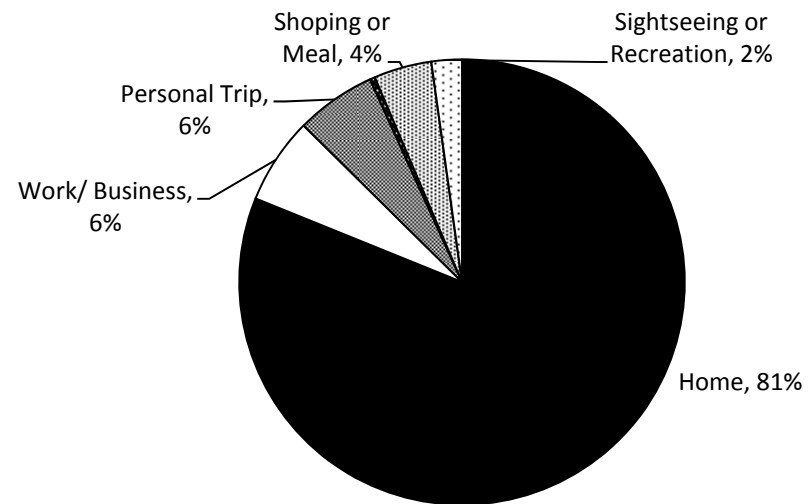


Trip Purpose by Time of Day- Off-Peak Periods

Trip Purpose – Midday



Trip Purpose – Evening



- Midday = 50% work trips, 25% home, 25% other reasons
- Evening = 81% home trips



Demographic Data: Race & Ethnicity

| Race | Ridership | % |
|----------------------------------|-----------|------|
| White | 430,708 | 61% |
| Black or African American | 183,168 | 26% |
| Asian or Pacific Islander | 41,145 | 6% |
| American Indian or Alaska Native | 3,768 | 1% |
| Mixed Race | 18,568 | 3% |
| Other | 34,288 | 5% |
| Valid Total | 711,644 | 100% |
| Survey Total | 739,324 | |

- New questions: race, ethnicity and income
- 96% response rate for race
- Used for Title VI Reporting
- Approximately 7% Hispanic
- **Minority % = 43.2% (Non-white or Hispanic)**



Demographic Data: Income

| Household Income | Ridership | % |
|------------------------|----------------|-------------|
| Less than \$30,000 | 75,953 | 11% |
| \$30,000 to \$50,000 | 85,673 | 12% |
| \$50,000 to \$75,000 | 117,955 | 17% |
| \$75,000 to \$100,000 | 103,991 | 15% |
| \$100,000 to \$150,000 | 149,666 | 22% |
| \$150,000 to \$200,000 | 81,930 | 12% |
| \$200,000 or More | 73,494 | 11% |
| Valid Total | 688,663 | 100% |
| Survey Total | 739,324 | |

- Approximately 11% “Low Income” at less than \$30K
- More than 22% with a household income greater than \$150K



Other Survey Findings (Weekday)

- More than 22% of trips from households with no car
- 35% by Federal employees all day
 - 42% during the AM Peak
- 56% by someone who receives a transit benefit (pre-tax deduction or employer subsidy)
 - 67% in the AM Peak



Late-Night Friday Survey Results

- Primary purpose for planning and Title VI compliance
- 12 AM to 3 AM on Friday late-nights at all open mezzanines with significant ridership
- Relatively low response rates, 750 surveys returned
- Trip Purpose: Returning home from work (24%) or recreation/ personal destinations (54%)
- Race: 58% White, 26% African American, 5% Asian, 11% Hispanic
- Income: 25% low income, 9% greater than \$150K



Saturday Survey Results

- 30 of the system's 112 mezzanines representing 1/3 of typical Sat. ridership.
- 5,300 surveys returned with 51,000 distributed
- Primary purpose for planning and Title VI compliance
- Trip Purpose: Recreation/ personal trips 34%, compared to 14% work trips
- Race: 59% White, 24% African American, 7% Asian, 8% Hispanic
- Income: 24% low income, 12% greater than \$150K



Thank You

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