

# Land Use & Transportation Analysis Of Ballston's Western Edge

February 26<sup>th</sup> 2007



ARLINGTON  
VIRGINIA

## Key Issues

- **Transportation Planning Terms**
- **By Right Or Site Plan?**
- **Site Generated Traffic VS. Background Traffic**
- **Road or No Road?**

# Urban Transportation Planning Definitions

**Trip Generation:** Determines the frequency of origins or destinations of trips in each zone by trip purpose, as a function of land uses and household demographics, and other socio-economic factors

**Trip Distribution:** Matches origins with destinations to determine the percentage of traffic that approaches a site from each direction

**Mode Split:** Computes the proportion of trips between each origin and destination that use a particular transportation mode

**Background Traffic:** Trips generated by existing and proposed uses and developments in the region. Development from Arlington, Alexandria, Fairfax, and outlying areas generate traffic adjacent to this site.

# Urban Transportation Planning Definitions

Site Generated Traffic: Trips generated by a particular development

Total Projected Traffic: Background traffic plus site generated traffic

TDM:

Transportation Demand Management is a series of measures to reduce single occupant vehicle trips to and from a particular development.

- Including or improving pedestrian oriented design elements, such as short pedestrian crossings, wide sidewalks, and street trees
- Including and improving transit infrastructure, such as bus stops, shelters, etc.
- Subsidizing transit costs for employees or residents
- Bicycle-friendly facilities, including secure bike storage areas and showers

# Site Plan vs By Right Development Transportation Benefits

## Site Plan

- Trip Reductions And Trip Management (TDM)
- Wider Sidewalks
- Street Trees
- Utility Undergrounding
- Off Site Streetscape Improvements
- Upgraded Pedestrian Crossings
- Decorative Street Lights
- Traffic Signals
- Ability To Limit Curb Cuts
- Control Locations Of Curb Cuts
- Control Delivery & Loading Locations
- Ability To Improve Adjacent Roadways
- Contributions For Off Site Utility Undergrounding

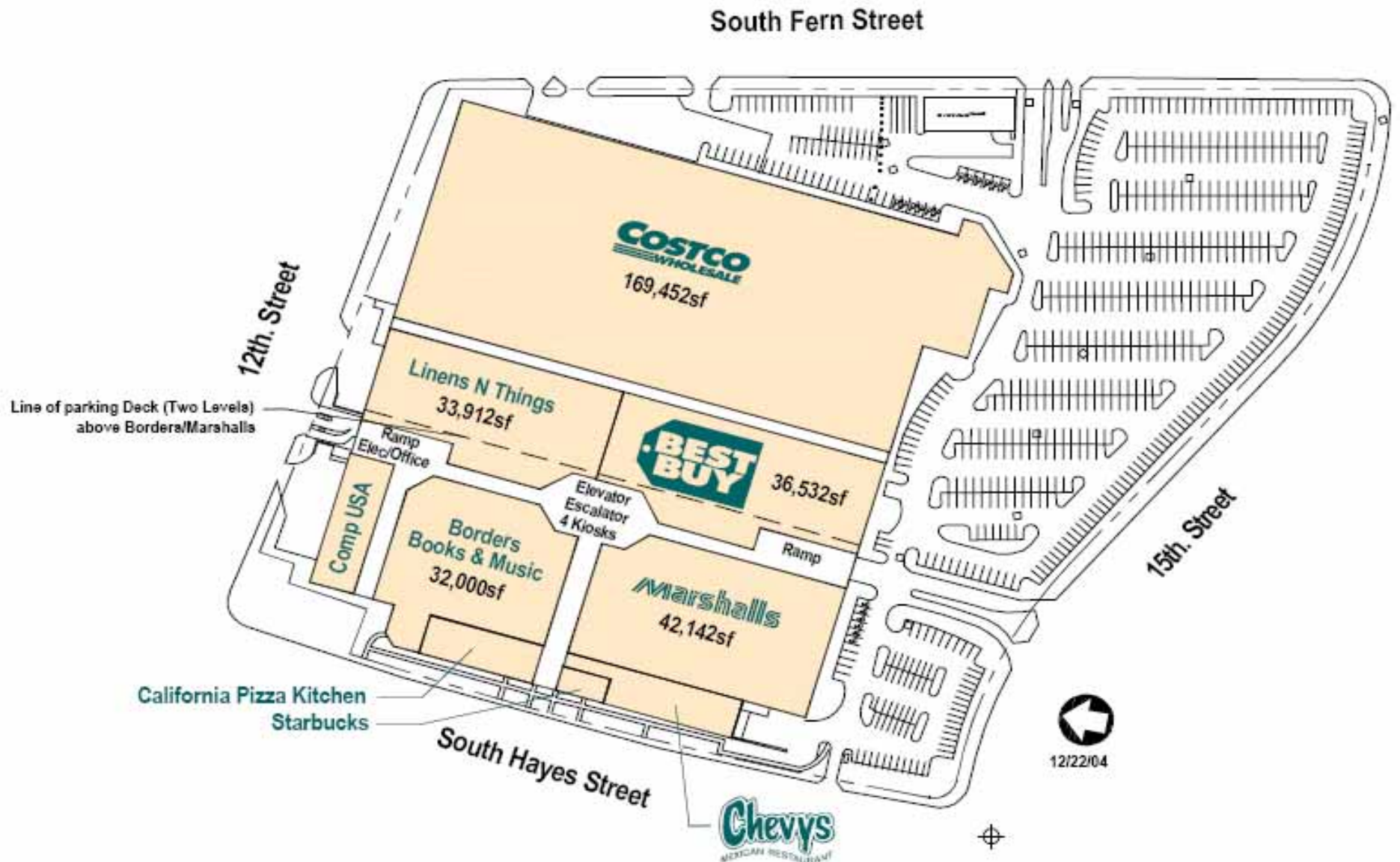
## By Right

- Reconstruct Existing Sidewalks
- Request To Developer But Not Required:
  - Street Lights
  - Fewer Or Narrower Curb Cuts

# Comparable By Right Development

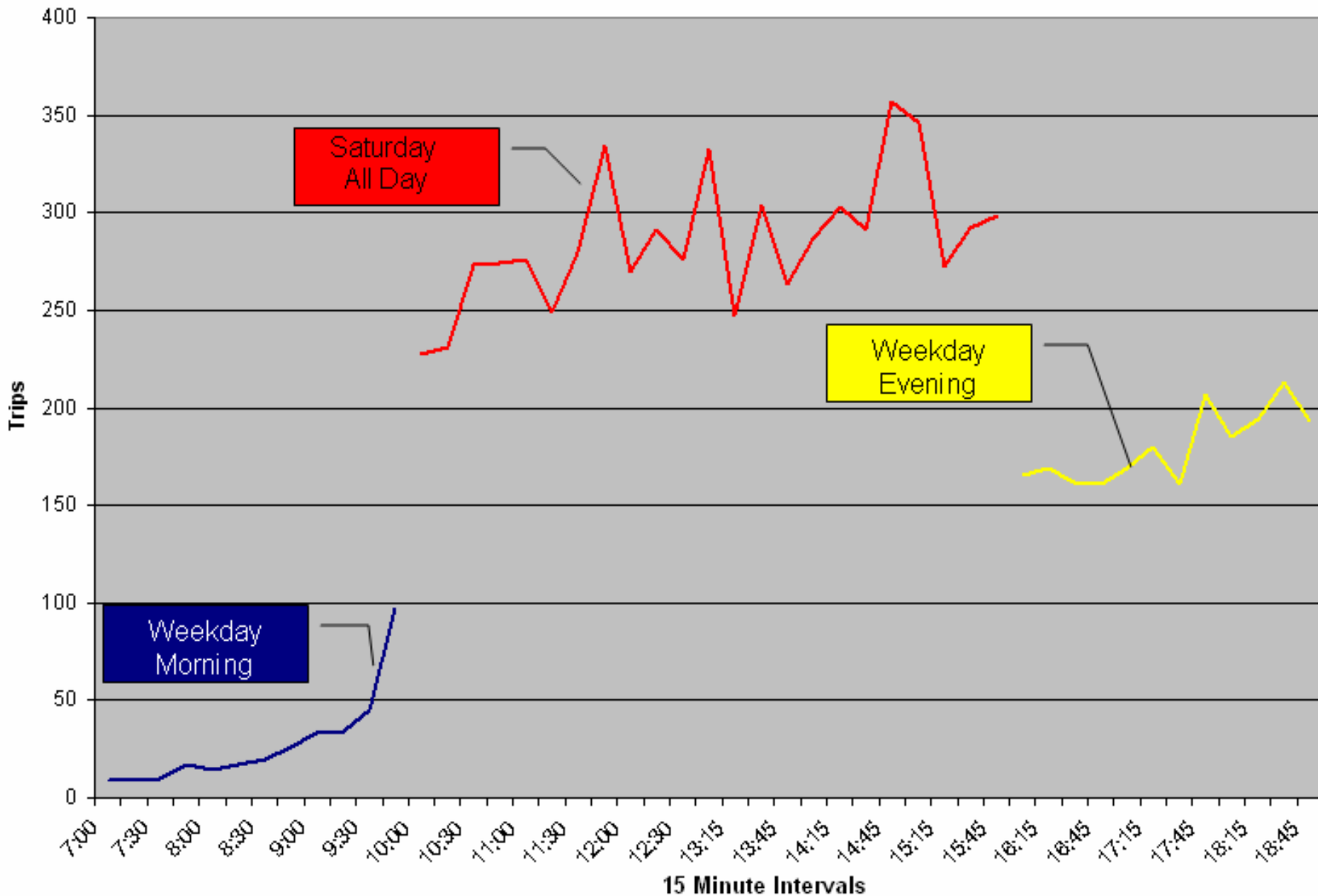
Pentagon Centre - 337,429 sq ft. on 16 acres (0.48 FAR)

Peck/ Staples - 195,727 sq ft. on 4 acres (1.5 FAR)

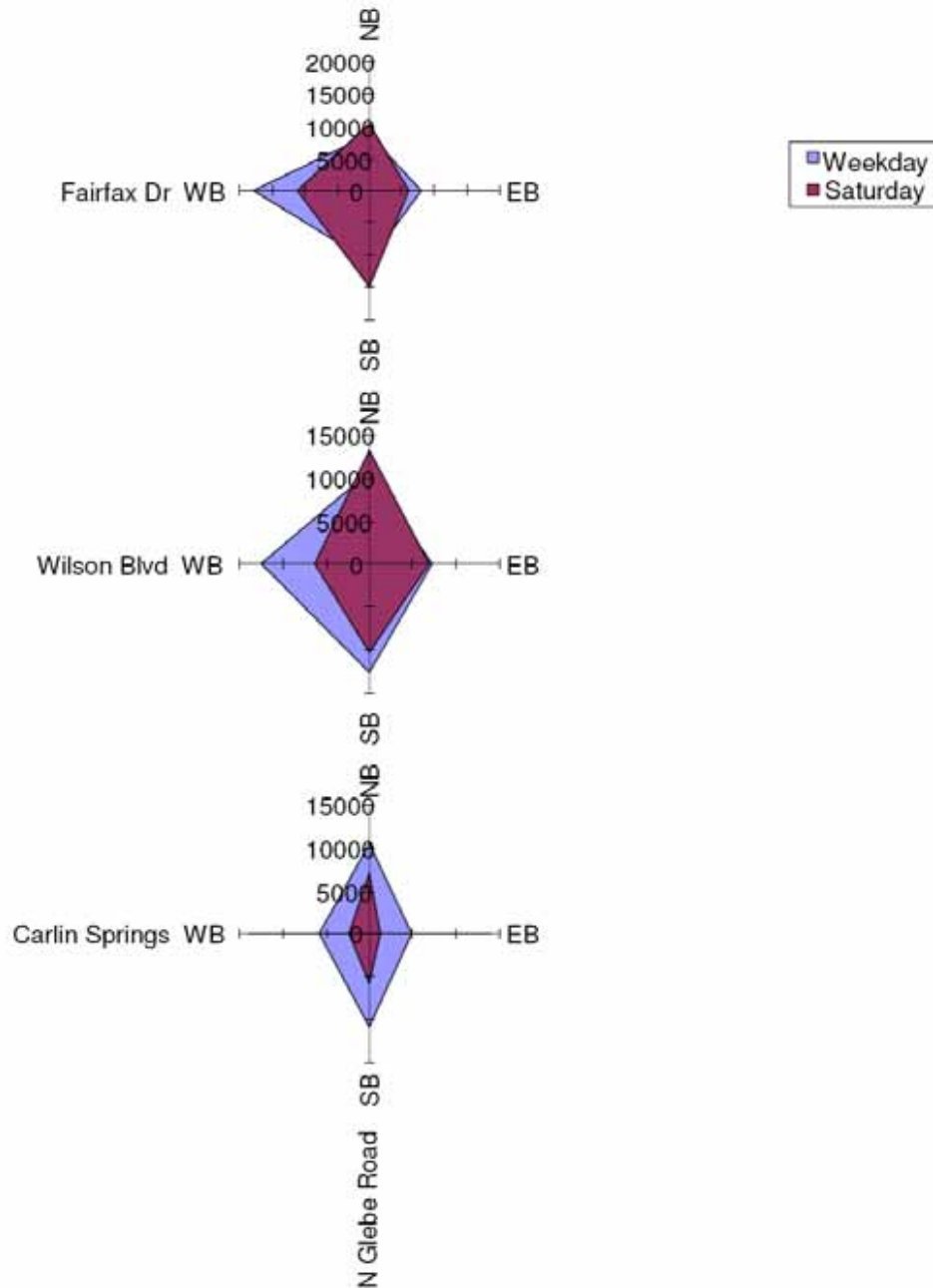


# Driveway Traffic Counts From Pentagon Centre (Costco Site)

Source: Wells and Associates; November 2005



North Glebe Road – Carlin Springs to Fairfax Drive



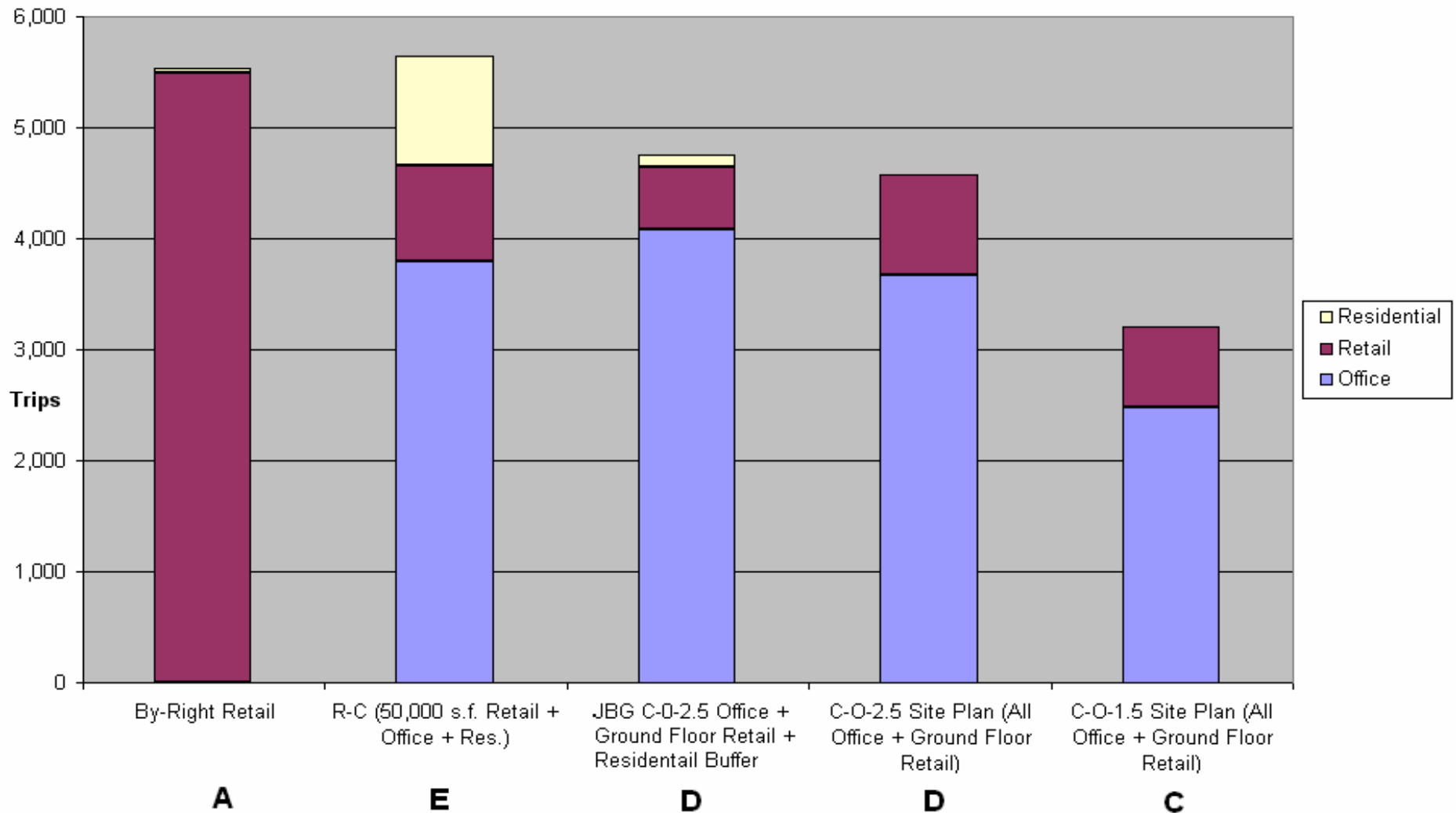
# 24 Hour Traffic Directional Volumes

## Existing Traffic Along Glebe Road between Carlin Spring and Fairfax Drive

(Recorded Between October – December 2004)

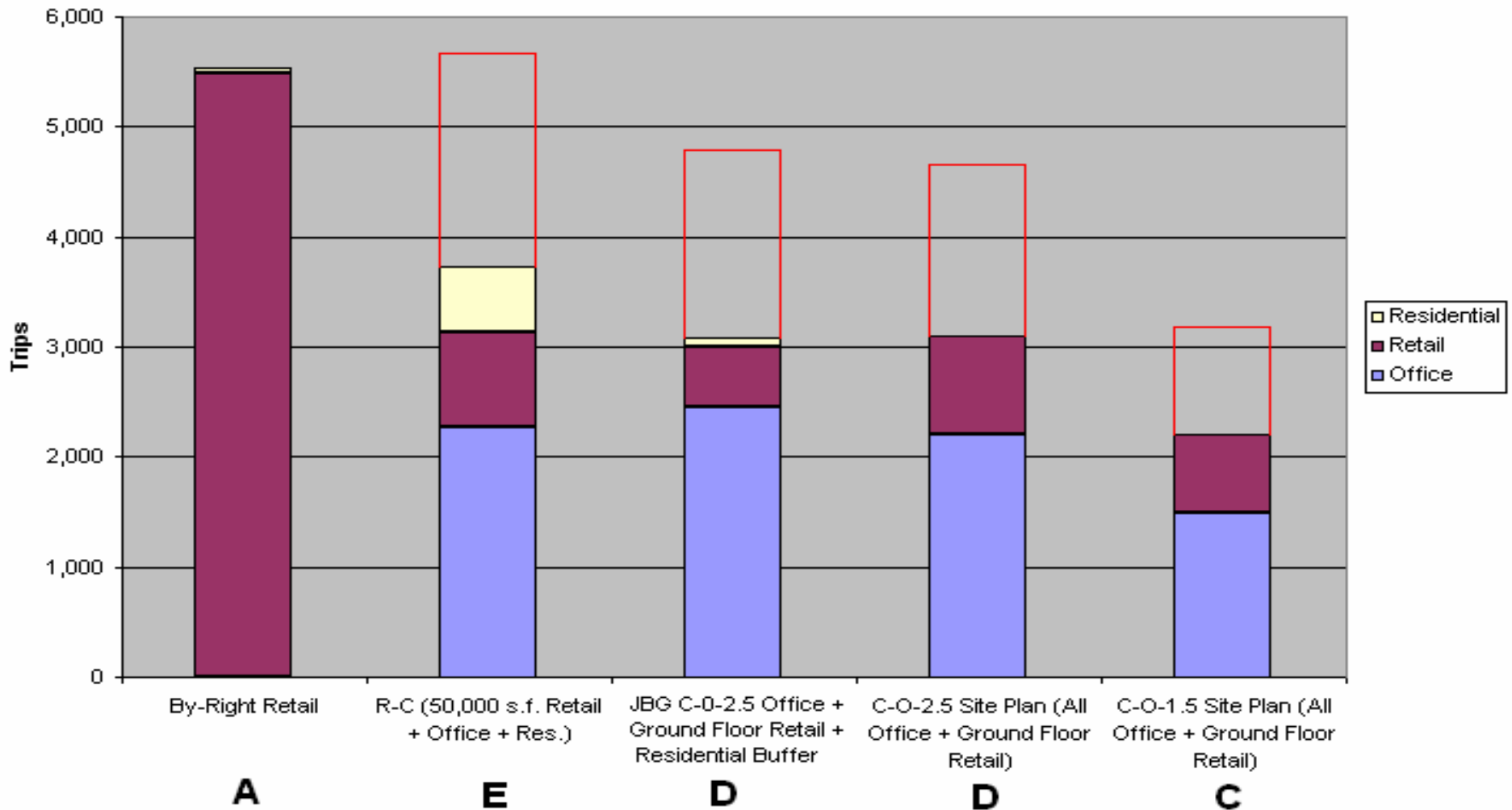
Source: Arlington County

# Trip Generation Patterns Based On Development Scenarios (without TDM)



Source: City of San Diego Trip Generation Manual, May 2003 Centre City Counts (24 Hour Counts)

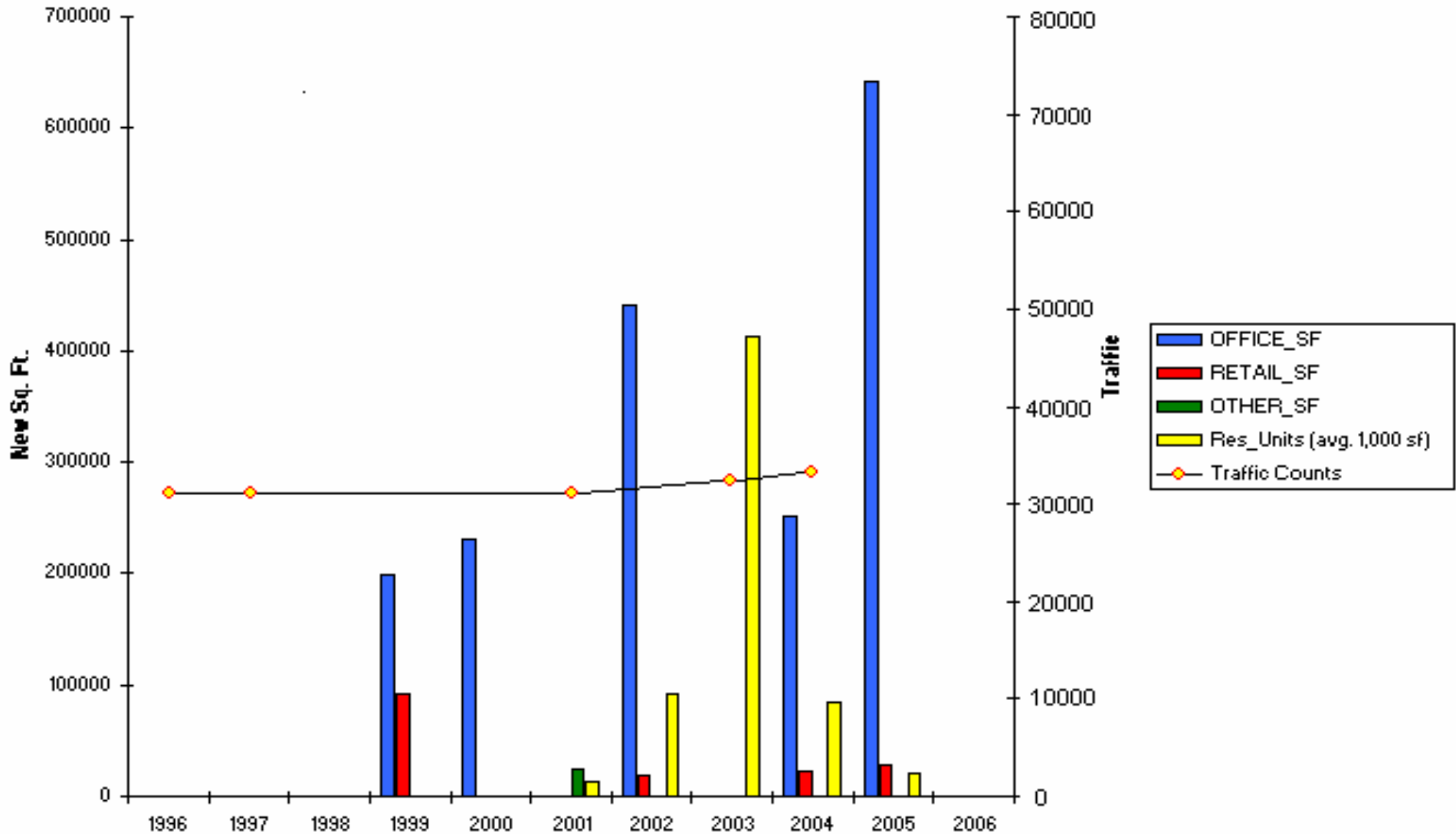
# Trip Generation Patterns Based On Development Scenarios (With TDM)



Source: City of San Diego Trip Generation Manual, May 2003 Centre City Counts (40% Reduction Typical) (24 Hour Counts)

# Glebe Road and Fairfax Drive Traffic Counts Compared to Ballston Development (Regular Traffic Counts Available At This Intersection)

Traffic counts do not take weather, accidents, or other anomalies into consideration



# Peck / Staples Existing Site Access

## **Glebe Road Access:**

- Multiple driveways on Glebe Road present vehicular and pedestrian conflicts
- Right in/right out constraints limit the ability to serve as sole access

## **Wilson Boulevard Access:**

- Creates offset intersection at N. Vermont Street
- Proximity to Glebe Rd. prevents signalization, making left turns into and out of the site difficult
- Driveways present vehicular and pedestrian conflicts

## **N. Wakefield Street Access:**

- No existing commercial access to this site



# Peck / Staples Site Access with New Street

## **Glebe Road Access**

- Facilitates mid-block pedestrian signal, providing pedestrian access between Bluemont and the core of Ballston
- Consolidates multiple driveways into one street intersection
- Would remain right in/right out with no median break

## **Wilson Blvd Access**

- No driveways removes vehicular and pedestrian conflicts along Wilson Blvd.

## **N. Wakefield Street Access**

- Would allow signalization of Wilson Blvd at N. Wakefield Street
- Facilitates left turns from Wakefield onto Wilson
- Creates gaps on Wilson for N. Vermont Street traffic



END OF PRESENTATION