



County of Fairfax, Virginia

MEMORANDUM

DATE: January 31, 2008

TO: Sterling Wheeler, Chief
Department of Planning and Zoning

FROM: Assistant Chief Daryl L. Louder
Fire and Rescue Department

SUBJECT: Analysis of the Tysons Development Alternatives

The Fire and Rescue Department (FRD) has reviewed the two advanced alternatives for future development of the Tysons area. Based on the total development estimates of building square feet, number of housing units, and increases in residential and commercial population, the following is a summary of the FRD's needs to support the future growth of Tysons.

Current Fire and Rescue Service Delivery

Emergency services to the Tysons area which consists of 16,112 residents and a workforce of approximately 106,871 is currently provided by Tysons Fire and Rescue Station 29 and Dunn Loring Fire and Rescue Station 13 with support from the surrounding stations such as McLean Fire and Rescue Station 1 and Vienna Fire and Rescue Station 2.

Construction and staffing of Wolftrap Fire and Rescue Station 42 located on Leesburg Pike will provide additional emergency service support to the Tysons area.

Impact of Tysons Development Advanced Alternatives A and B

After analyzing the two alternatives with projected development of 96-127 million square feet including 36,000-50,000 housing units and a population growth of 230,000-300,000, the FRD estimates an increase in call volume of about 92-152 percent in the Tysons area. The high density development combined with multiple high rise buildings greatly increases the risk level and complexity to deliver emergency services. Additionally, we are concerned by the impact of traffic congestion and the additional vertical response time required with high rise buildings.

The FRD recommends the following facilities and resources to support the future Tysons development. Failure to provide additional emergency service facilities and resources will overwhelm the surrounding stations responding to calls in the Tysons area and would negatively impact their response times and service delivery in their coverage areas.

Two Additional Fire and Rescue Stations:

The FRD has identified the need for two additional fire and rescue stations in the Tysons area to maintain response goals and service delivery. Each station would be a minimum of 24,000 square feet with 5-6 bays to accommodate the following apparatus: two engines, two medics, one specialty unit (truck or rescue), and one support unit. In addition, one of the stations in



Tysons will need to include a battalion management team which includes a battalion chief and an EMS supervisor to oversee all emergency service delivery throughout Tysons.

The design and construction of the new fire and rescue stations should be based on an "urban" model which is typically located at the base of a commercial or residential building. The urban fire station design is anticipated to be 2-3 levels with the ground level dedicated to the apparatus bays for access to the road network. The second or third levels of the station would incorporate other FRD needs such as classroom training facilities, battalion management offices, and offices for fire prevention and support personnel.

The FRD has identified two preferred locations or areas for the new stations. Reference maps attachments #1 through #3. In addition, the existing Tysons Fire and Rescue Station 29 located at 1560 Spring Hill Road will need to be relocated and expanded to accommodate additional operational units and staffing. A proposed site for relocating Station 29 which has been discussed within the county is the bus transfer station located at 8300 Jones Branch Drive.

Fire and Rescue Staffing and Other Needs:

- Emergency services personnel to staff the two new Tysons fire and rescue stations and the additional units at Station 29 to provide 24/7 coverage to the service area will be needed. The staffing levels should incorporate the National Fire Protection Association (NFPA) 1710 guidelines for high occupancy, high density, and high hazard jurisdictions.
- Additional building inspectors, plans reviewers, and support personnel will be required to accommodate the increase in workload related to the design and construction of all new commercial and residential buildings.
- Additional training and specialized equipment related to subterranean and heavy construction rescue for the Technical Rescue Operations Team will be required throughout the construction of the four additional Metrorail stations in Tysons.
- The construction and staffing of Wolfrap Fire and Rescue Station 42 is critical to provide additional back-up emergency service units to the area.

Capital Costs and Funding Options:

The estimated capital costs including site work, station design and construction, and apparatus for each new fire and rescue station is \$11-12 million. Reference attachment #4 on capital costs.

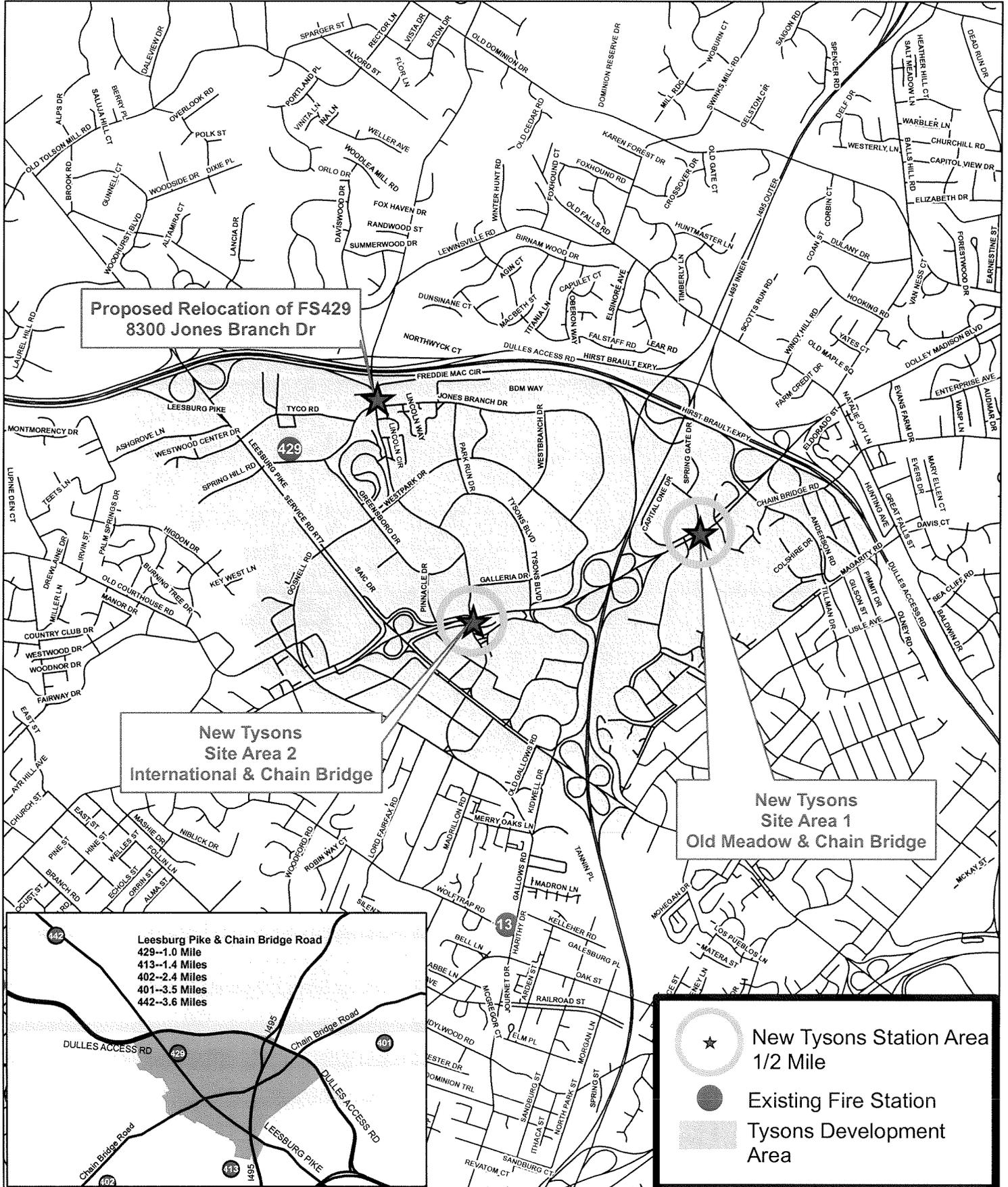
The recommended funding sources for the two new Tysons fire and rescue stations should be either a public/private partnership or development proffer for public safety facilities. The development agreements with either commercial or residential developers could include provisions for land and funding for the design and construction of a new fire and rescue station as well as all apparatus and equipment.

If you need more information, please contact Laurie Stone, Strategic Planner, at 703-246-3889.

cc: Chief Ronald L. Mastin
Assistant Chief David L. Rohr, Operations Bureau
Assistant Chief John J. Caussin Jr., Personnel Services Bureau
Laurie Stone, Strategic Planner



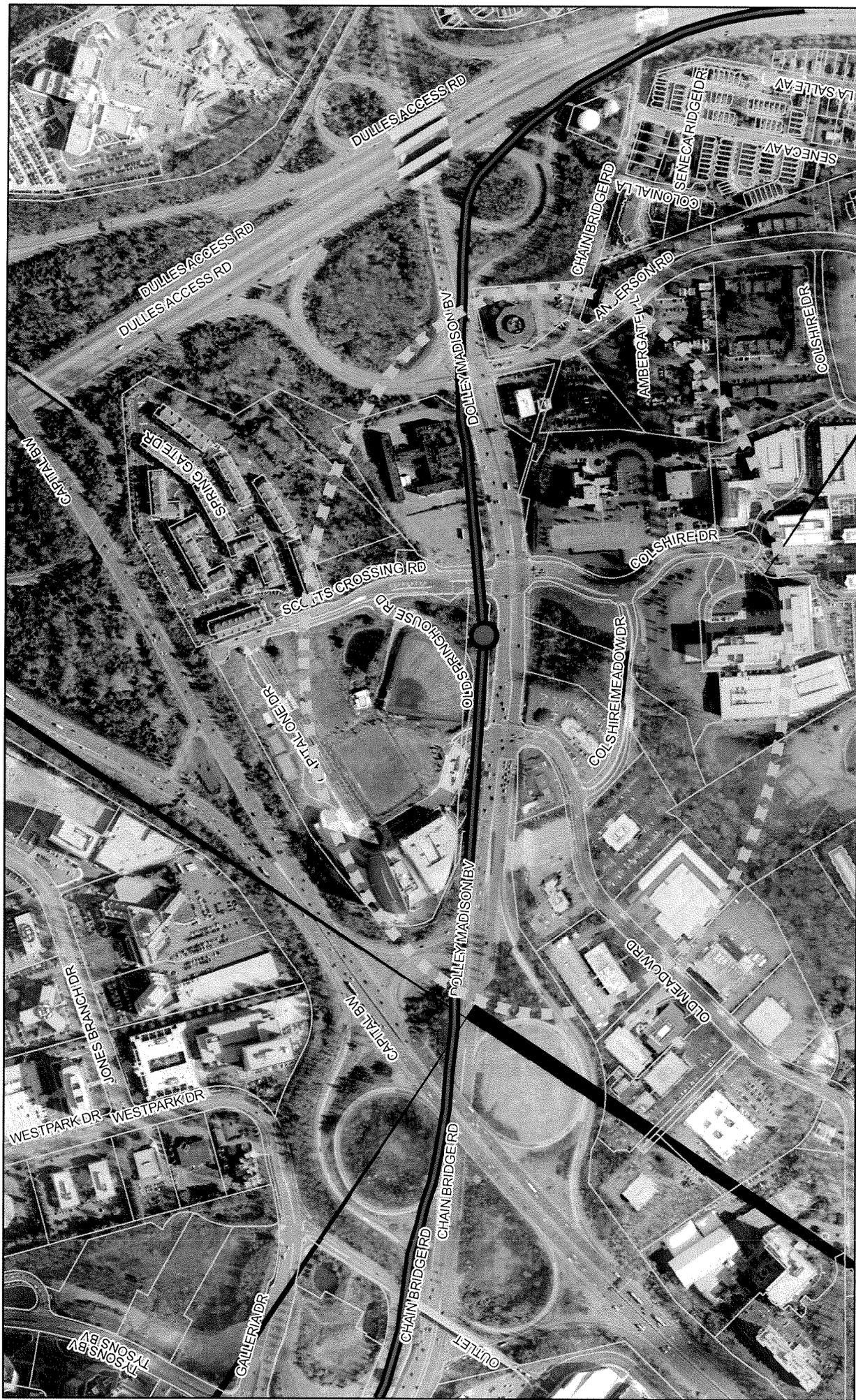
Attachment #1 - Proposed Fire Station Locations Existing-Relocation-New Site Areas



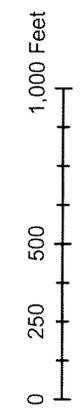
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Attachment #2 - Site Area 1 for New Tysons Fire Station (Vicinity of Old Meadow Road & Chain Bridge Road)

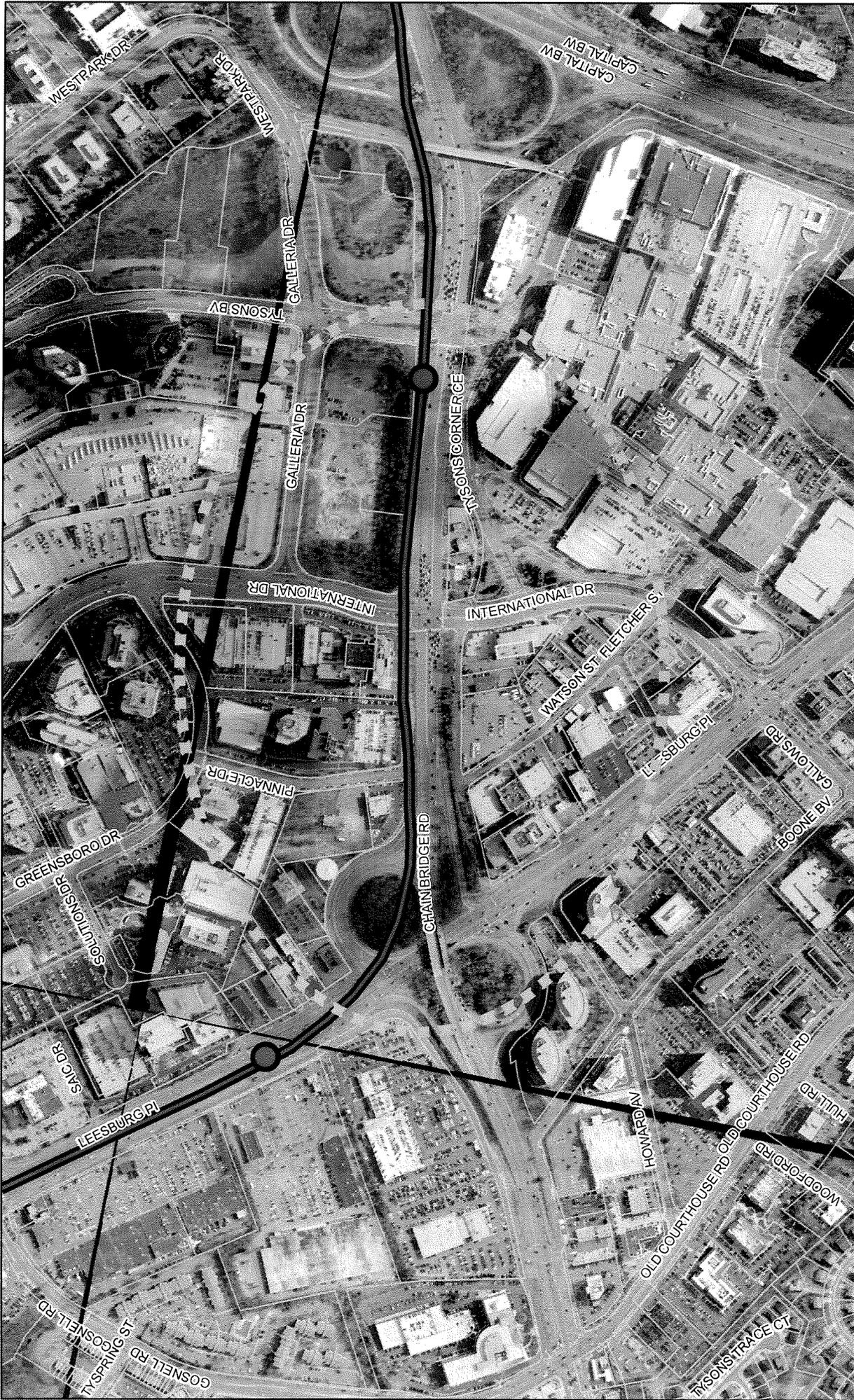


 Proposed Metro Station (Tysons East)
 Proposed Metrorail Route
 Parcels as of 04/20/2007



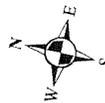
Aerial Photography © 2007 Pictometry International

Attachment #3 - Site Area 2 for New Tysons Fire Station (Vicinity of International Drive & Chain Bridge Road)



Aerial Photography © 2007 Pictometry International

Proposed Metro Station
 Proposed Metrorail Route
 Parcels as of 04/20/2007



Attachment #4

24,000 Square Foot Station

- Up to 25 personnel per shift
- Training/conference room
- 5 to 6 apparatus bays

Construction Costs

- Estimated costs for the building (based on 2007 costs) \$7.0 million
 - Estimated costs for site work (based on 2007 costs) 2.4 million
- Total \$9.4 million

Apparatus Costs

- Engine \$ 500,000
- Medic 200,000
- Truck 1,000,000
- Rescue Squad 550,000
- Light & Air Unit 375,000
- Large Special Units (Foam Unit, Hazmat, POD) 500,000
- Battalion Management Vehicles 100,000