

Takoma/Langley Crossroads

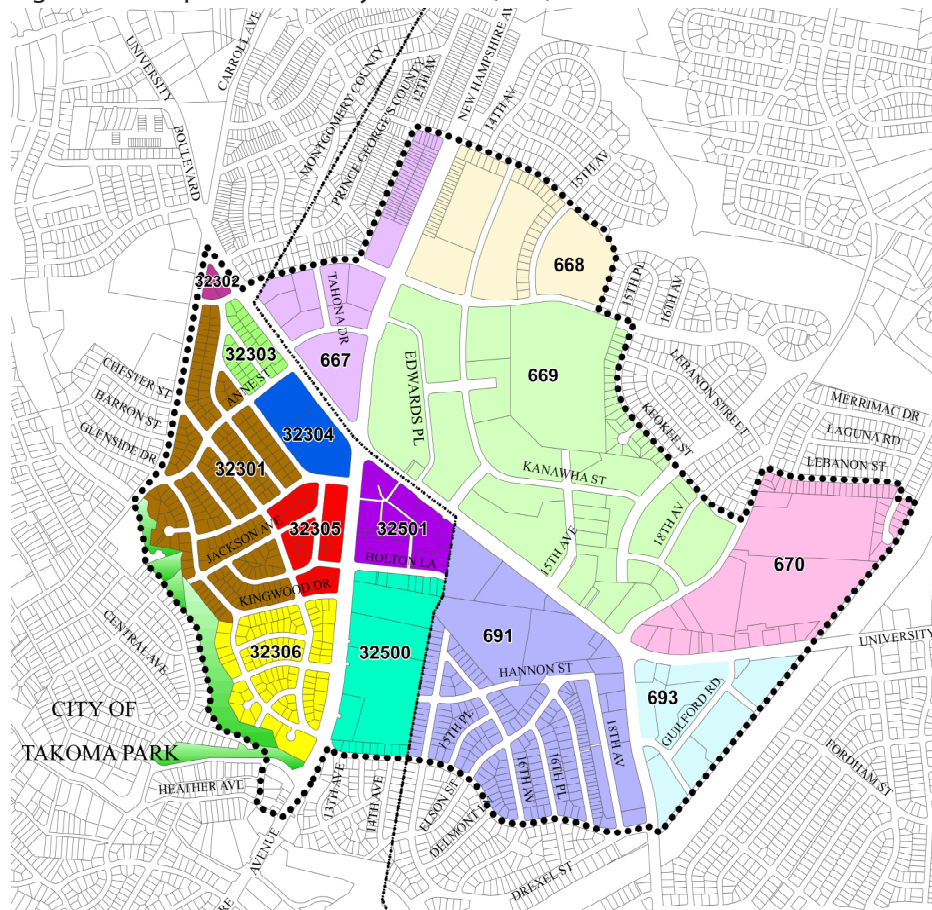
sector plan



Appendix 6 Connectivity

The *Takoma/Langley Crossroads Sector Plan* area supports various types of transportation. It is located at the intersection of major highways and is supported by public transportation, bicycle facilities, and sidewalks that facilitate travel across the study area. These travel options provide mobility and access for the area, and shape the community’s character in conjunction with land use pattern and its urban design.

Figure 1. Transportation Analysis Zones (TAZ) used in the LAM.



Mobility Analysis

The roadway system was analyzed first for the current conditions—specifically its ability to serve the area’s travel desires based on existing and forecasted travel patterns.

The system was examined for future conditions using two different analyses. The Council of Governments (COG) regional model (Round 7.1) was used to analyze the Plan area transportation network at a regional level to develop baseline conditions reflecting planned land use and transportation changes outside of the area.

A Local Area Model (LAM) was also developed and used to create a fine-grain analysis based on land uses specific to the Plan area with a more refined road network. The land use scenario was allocated into smaller traffic analysis zones (Figure 1). The LAM was used to analyze both the existing conditions in the Plan area and a year 2030 land use scenario created by planners and the community.

The land use scenario is used to generate trip productions and attractions (where people start a trip and where they go) from both within and outside of the Plan area. The trips within this area are assigned to roadways using the Local Area Transportation Review (LATR) Guidelines recommendations. The trips assigned to the roads allow planners to determine how much congestion occurs at intersections.

As would be expected, the 2030 scenario generally results in more traffic volume from the existing conditions.

Figure 2 compares the amount of traffic entering and leaving the study area on a weekday afternoon peak hour.

Figure 2

As shown in Figure 2:

- Traffic volumes will increase between now and 2030.
- Traffic flow will remain relatively balanced. Inbound volumes are slightly higher than outbound volumes due to the fact that there is more residential development than commercial development in the study area; many people are arriving home during this time of day. This trend will continue under the Plan land use scenario.
- Through volume accounts for a majority of the trips and will increase slightly, although not as fast as local traffic generation.

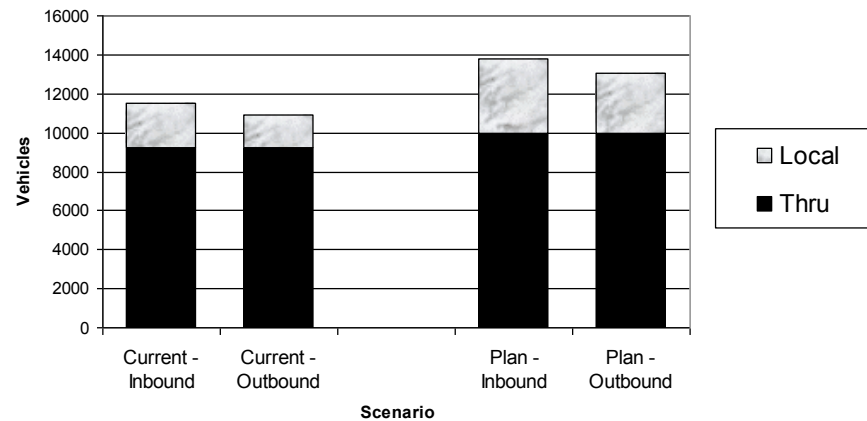
The 2005 Census Update estimate is that 30 percent of the work trips made by individuals residing within the TLC Study Area (not the Plan boundary) are made by transit and two percent are made by walking or biking.

The Purple Line will improve the quality of transit service and is expected to act as the primary catalyst for the introduction of more mixed-use, transit oriented development. Over the entire plan area (including the Prince George's County area and using gross acreage), residential densities are expected to increase by 40 percent by 2030. Job densities are expected to increase by 92 percent over the same time. Increased density along with improved service is expected to increase the percentage of non-auto work trips.

Staff considered potential additional increases in transit mode share that could be realized through applicable Transportation Demand Management (TDM) strategies but felt that no formal Transportation Management District (TMD) is warranted based on:

- the current high level of transit service and transit dependency
- the fact that the Plan area is found to have a balance between land use and transportation without further increases in transit mode share that would require targeted improvements through a TMD
- the fact that traffic generated by office employees in the Plan area, the audience most receptive to changing travel behavior as a result of TMD activities, is a fairly small component of traffic congestion in an area with substantial through traffic and a relatively high proportion of residential development compared to established TMDs
- the small geographic area in Montgomery County and the administrative challenges posed by the introduction of a multi-jurisdictional TMD District.

Takoma Langley Crossroads Sector Plan
Composition of Study Area Vehicle Trips During PM Peak Hour



Parking Strategy

Parking strategies in the Plan area will use study efforts already underway, including the proposed County Council/Department of Transportation/M-NCPPC Parking Study, the Zoning Code rewrite (specifically the creation of a Commercial/Residential District zone), and parking proposals included in the Prince George's County Takoma/Langley Sector Plan.

The Council has included a parking management study in the FY10 budget. The study will address complex shared parking formulas to justify reduced commercial parking requirements and develop business community support for reduced parking consistent with prior recommendations made by the Office of Legislative Oversight and the 2009 Climate Protection Plan.

Parking supply and use is also a focus of the Zoning Code rewrite. The overall approach to parking management is to establish code requirements in mixed-use zones that are consistent with policies known to complement and support transit oriented development.

The Prince George's County Plan includes the following approaches to reducing the cost of parking for developers to encourage redevelopment:

- reduced parking requirements
- parking district
- public parking garage
- payment in lieu of parking
- shared parking.

In general, this Plan supports on-street parking throughout the area to ensure access, reduce vehicular speeds, and provide a pedestrian buffer.

The approaches identified in the Prince George's Plan are consistent with Transit Oriented Development and therefore generally consistent with Montgomery County's objectives. Montgomery County has mechanisms for reduced parking requirements in transit station areas, including parking districts, public parking garages, and the ability to encourage and regulate shared parking. The Plan supports establishing a working group to address issues related to implementing these parking initiatives.

Staff has developed a concept to replace a large amount of the existing surface parking in favor of shared structured parking with fewer overall spaces, potentially as a public parking garage on the 11101 University Boulevard or University Boulevard and New Hampshire Avenue properties. A parking lot district or other parking management authority would likely not occur until plan build-out.

The specifics of a coordinated approach and implementation of a TOD-supportive parking policy will need to be finalized but it is clear both jurisdictions share the same overall objective.

Capacity Considerations

The LAM is a tool that allows planners to examine the potential impact on intersection performance – given the proposed changes in the land use and roadway improvements. The result of this analysis are presented in Table 2. It is important to note the following with the respect to assumptions about the recommended transportation network for 2030:

- The Purple Line is operational along University Boulevard.
- Left turns are prohibited at the intersection of University Boulevard and New Hampshire Avenue.
- Additional left turn lanes are assumed at the following intersections:
 - Riggs Road and University Boulevard
 - 15th Avenue and University Boulevard
 - New Hampshire Avenue and Piney Branch Road
- Further coordination between the Counties, the City of Takoma Park, and the Maryland Transit Administration and State Highway Administration is needed to address compatibility of the short-range and long-range future local street networks envisioned by each agency. The existing inconsistencies at time of appendix publication are limited in number but need to be resolved in advance of final plan adoption.

The capacity standard employed is a Montgomery County policy. It does not apply to Prince George’s County (other than as an evaluation tool). The results indicate that Riggs Road and University Boulevard is an intersection where the level of service is less than desired. All other intersections are anticipated to operate at or near acceptable standards.

The capacity analyses show that under existing conditions two intersections have CLVs that approach or exceed the area’s current congestion standard. The 2030 Sector Plan column represents CLVs with future year traffic volumes on roads which include new road connections, extra travel lanes, and turn lanes at the intersections. The results indicate that CLVs at three intersections will approach the current congestion standard.

Implementing the roadway network and circulation concepts will require design coordination with Montgomery and Prince George’s County DOTs, the City of Takoma Park, the Maryland Transit Administration. The concepts ultimately require approval from the State Highway Administration.

From a Policy Area Mobility Review (PAMR) perspective, the end-state land use alternative analysis shows that the proposed land use and transportation system can be found to be in balance, due in large part to implementation of planned regional facilities including the Purple Line. Figure 4 shows the results of the PAMR analysis, comparing conditions for 2005, 2011, and 2030 future land use scenarios. (Table 2 and Figure 3)

Because of the priority on pedestrian safety for the Plan area, full pedestrian accommodations are recommended within any proposed reconstruction or intersection improvements. Travel demand management measures should also be considered a priority for addressing congestion. Intersection widening should be considered as a last resort.

Table 2 Intersection Volume to Capacity (v/c) Ratios

	County	Intersection	Existing	2030 Projections
Intersections Below Montgomery County Policy Standards	Prince George’s County	Hampshire Langley Shopping Center and University Blvd	.54	.49
	Prince George’s County	Langley Park Plaza and University Blvd	.70	.67
	Prince George’s County	23rd Ave and University Blvd	.65	.71
	Prince George’s County	New Hampshire Ave and Merrimac Dr	.62	.74
	Montgomery County	Southeast Quadrant and University Blvd	N/A	.79
	Prince George’s County	Lebanon St and University Blvd	N/A	.79
Intersections Approaching Montgomery County Policy Standards	Montgomery County	Carroll Ave and University Blvd	.79	.82
	Montgomery County	New Hampshire Ave and southeast quadrant	N/A	.83
	Prince George’s County	New Hampshire Ave and Lebanon St	N/A	.85
	Montgomery County	New Hampshire Ave and Erskine St	.69	.86
	Montgomery County	New Hampshire Ave and Sligo Creek Pkwy	.81	.92
Intersections at or Above Montgomery County Policy Standards	Both Counties	New Hampshire Ave and University Blvd	.94	1.00
	Prince George’s County	Shopping Center/15th Ave/University Blvd	.86	1.01
	Prince George’s County	Riggs Rd and University Blvd	1.17	1.11

Changes to the 2000 Master Plan of Highways

The following paragraphs summarize this Plan’s recommended changes to the 2000 Takoma Park Master Plan.

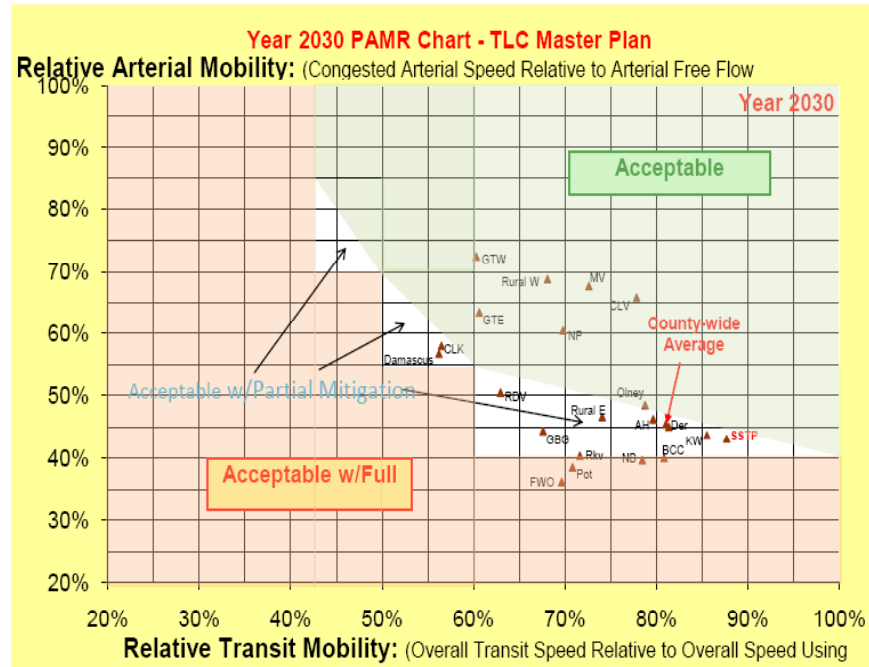
Target Speeds

The Takoma/Langley Crossroads Sector Plan identifies target speeds for non-residential roadways classified in the Plan, following the guidance in County Code and recently approved Executive Regulation 31-08.

Road Network

Existing and new roads, as well as road extensions for the entire planning area are summarized in the Plan's Roadway Facilities Table. The proposed lanes include through travel lanes only and do not include turning, parking, or acceleration lanes.

Figure 3 Future Congested Locations



Public Transportation

The Plan area is served by Ride On and Metrobus today, and is recommended for other forms of public transportation in the future. There are twelve bus routes serving the area with eight going through the New Hampshire Avenue and University Boulevard intersection. According to the Takoma/Langley Crossroads Pedestrian Access and Mobility Study, there are 10,000 to 13,000 daily bus passengers throughout the area.

The Purple Line (Figure 4) is a planned transitway (either light rail or bus rapid transit) between Bethesda and New Carrollton by way of Silver Spring, Takoma/Langley Crossroads, and the University of Maryland.

The MTA's Purple Line Draft Environmental Impact Statement and Alternative Analysis (DEIS/AA) was reviewed by the local area governments and agencies. The next step is the State's selection of a Locally Preferred Alternative that will designate the line's mode and alignment. The Planning Board, County Council, and the County Executive have recommended to the MTA light rail as the preferred mode. All of the light rail alternatives under consideration would operate in the median of University Boulevard and will require a right-of-way along University Boulevard that would vary from 110 to 130 feet, depending upon the location.

The Purple Line is proposed to include a stop at the planned Transit Center for the Takoma/Langley Crossroads Sector Plan (Figure 5). The Plan's recommended Transit Center will consolidate about seven stops and will be constructed separate from the Purple Line.

Figure 4
Source: MTA, Draft Environmental Impact Statement and Alternative Analysis, October 2008

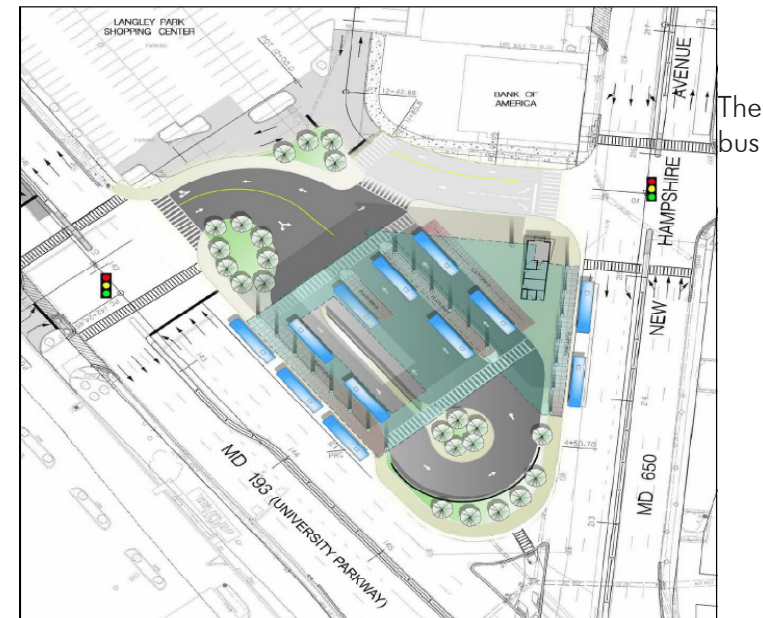
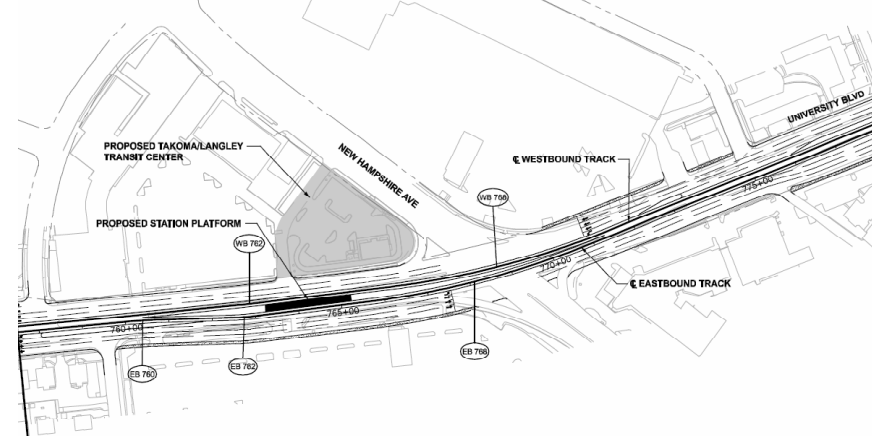


Figure 5
Source: MTA, Draft Environmental Impact Statement and Alternative Analysis, October 2008

Pedestrian Safety

Pedestrian safety has been a concern in the Plan area for a long time. The problem is acute and will likely require on-going attention and resources. Figure 6 records the bicycle and pedestrian crashes in the vicinity of New Hampshire Avenue (MD 650) and University Boulevard (MD 193) from 1995 to 2005.

SHA has undertaken and completed several improvements designed to enhance pedestrian safety. A fence was placed in sections of the median on New Hampshire Avenue (MD 650) and University Boulevard (MD 193) to dissuade pedestrians from crossing the street mid-block. New crosswalks will also be added to the sidewalk network with controlled crossing systems near the proposed Transit Center. Pedestrian refuges will be added in selected locations to aide pedestrians crossing long sections of road.

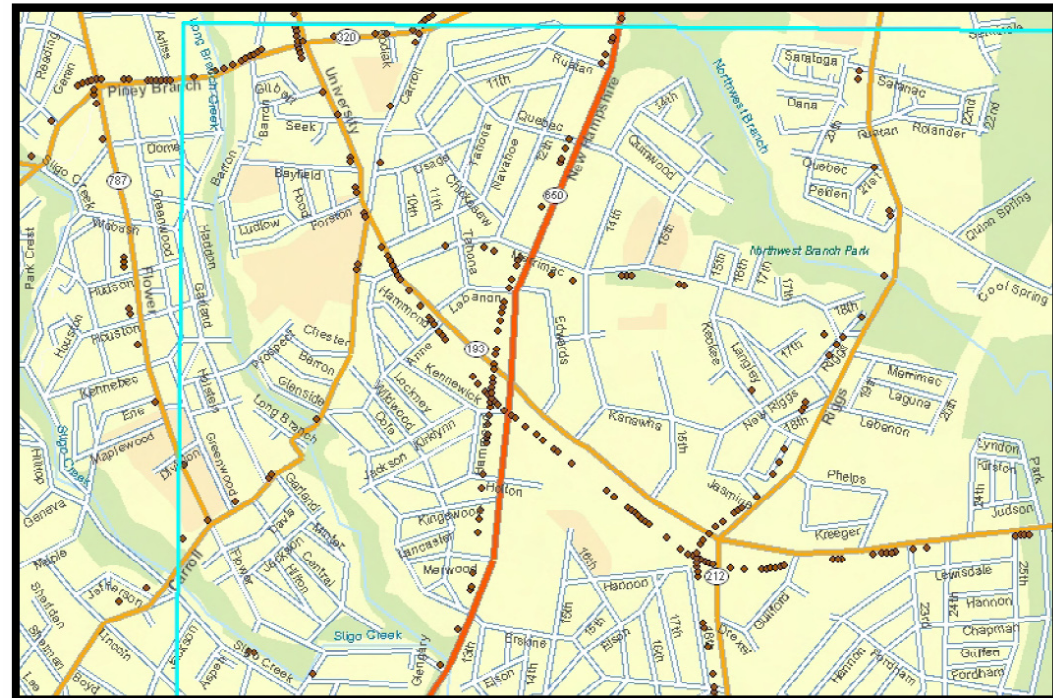
In 2007, the National Capital Region Transportation Planning Board awarded Takoma/Langley Crossroads a grant to examine transportation and land use connections. A consultant, Toole Design, analyzed the existing network of sidewalks, pedestrian connections, and flow within a half mile radius of the intersection of University Boulevard and New Hampshire Avenue.

The *Takoma/Langley Crossroads Pedestrian Access and Mobility Study*, July 2007, summarizes the recommendations, which include a long-term vision for the area, short-term safety improvements, and mid-term capital intensive improvements.

Proposed enhancements include:

- promoting distance between pedestrian and automobile spaces
- reducing pedestrian crossing distances
- promoting green-way connections.

Figure 6
Source: SHA Crash data, 1995-2005, provided by National Study Center for Trauma and EMS, University of Maryland-Baltimore



Glossary of Transportation Terms

Bicycle Route - A bikeway that features appropriate directional and informational signage.

Bikeway - A transportation or recreational facility designed to accommodate bicycling, including shared use paths, bike lanes, and shared roadways.

Bike Lanes - Sometimes referred to as a Class II Bikeway. A portion of a roadway designated by striping and pavement markings for the preferential or exclusive use of bicyclists. Consists of a four to six-foot lane in each direction with traffic flow.

County Wide Bikeways - Bikeways of County wide significance that connect to major destinations: municipalities, central business districts, town centers, employment centers, transit centers, and regional parks and trails. They are the skeleton of the County's bikeway network.

Shared Use Path - An eight to 10-foot asphalt or concrete path separated from motorized traffic either by barrier or a minimum five-foot landscaped panel. These facilities may be located within a roadway right-of-way or within an independent right-of-way. They can also be designed for use by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users.

Shared Roadway - A roadway open to both bicycle and motor vehicle travel that may be an existing roadway, road with curb lanes, or road with paved shoulders, including wide outside curb lane (14 to 16 feet), bikeable shoulder (four to six feet), or low volume, low speed streets.

Signed Shared Roadway - A shared roadway designated as a preferred bicycle route using warning, directional, and informational signage.

Major Highway - A road providing less speed and mobility than freeways but more access via at-grade intersections. Driveway access is acceptable in urban and dense suburban settings.

Arterial Road - A road connecting major highways and providing more access points than a major highway while moving traffic at lower speeds.

Minor Arterial - A road functioning as an arterial but with adjacent land uses that make traffic calming appropriate.

Business District Road - A road within a business district that is neither a major highway or arterial and that is primarily used to provide access to commercial establishments.

Primary Residential Road - A road used primarily to provide access to residential property.

Modal Split - The percent of persons arriving at a destination by one of the available transportation modes. For example, the percent of persons who arrive at a destination by private automobile is called the "auto mode split" and includes both drivers and passengers.

Light Rail Transit (LRT) - An electric railway system characterized by its capability to operate single cars or short trains along exclusive rights-of-way at ground level, on aerial structures, in subways, or in streets.