

MD 589 CORRIDOR FEASIBILITY STUDY

RECONNAISSANCE SURVEY

MARYLAND STATE HIGHWAY ADMINISTRATION

**707 North Calvert Street
Baltimore, Maryland 21202**

Office of Planning and Preliminary Engineering

Project Management Division

October 2009

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Project Overview

Introduction

The Maryland State Highway Administration (SHA) is conducting a feasibility study for MD 589 (Racetrack Road) Corridor that will focus on the transportation network and surrounding corridor along MD 589 from US 50 to US 113 located in Worcester County, Maryland (See Figure 1). The study limits along MD 589 are US 113 to the north and US 50 to the south. The analysis of the corridor will consider the property between US 113 in the west and the Isle of Wight Bay on the east as it currently exists and potentially develops in the future as well as access and circulation systems for multiple modes. The study will analyze the corridor's land uses and future development plans and determine how each will affect the transportation network. The study will provide a "blueprint" to help guide local and statewide agencies as they plan and implement development and transportation improvement projects in the corridor. The study will provide guidance to Worcester County to assist in their development review and approval process regarding access and connectivity to the roadway network. It will also provide recommendations for transportation improvements that can be implemented when funding is available and the need is present.

The Reconnaissance Survey is the first phase of the feasibility study that will ultimately result in a Corridor Vision Document. The purpose of this Reconnaissance Survey is to establish goals and objectives for the feasibility study and perform an assessment of the existing conditions in the corridor. Some of the topics included in this survey are:

- Land Use and Zoning
- Planned Development
- Existing Transportation System
- Roadway Conditions
- Planned Transportation Projects
- Existing/Future Traffic
- Safety and Crash Data
- Environmental Overview

The Study Team consists of representatives from Worcester County, staff from SHA including District 1, Office of Planning and Preliminary Engineering (OPPE), Engineering Access Permits Division (EAPD), Office of Environmental Design (OED), and Office of Highway Development (OHD). The study is being managed by the SHA Project Management Division (PMD). Since the beginning of the study in January 7, 2008, the team has held regular meetings with the environmental resource agencies to update them on the progress of the study and to obtain their comments and feedback. As the project progresses, the team will continue to coordinate with these agencies. These meetings will occur at key project milestones via formal presentations.

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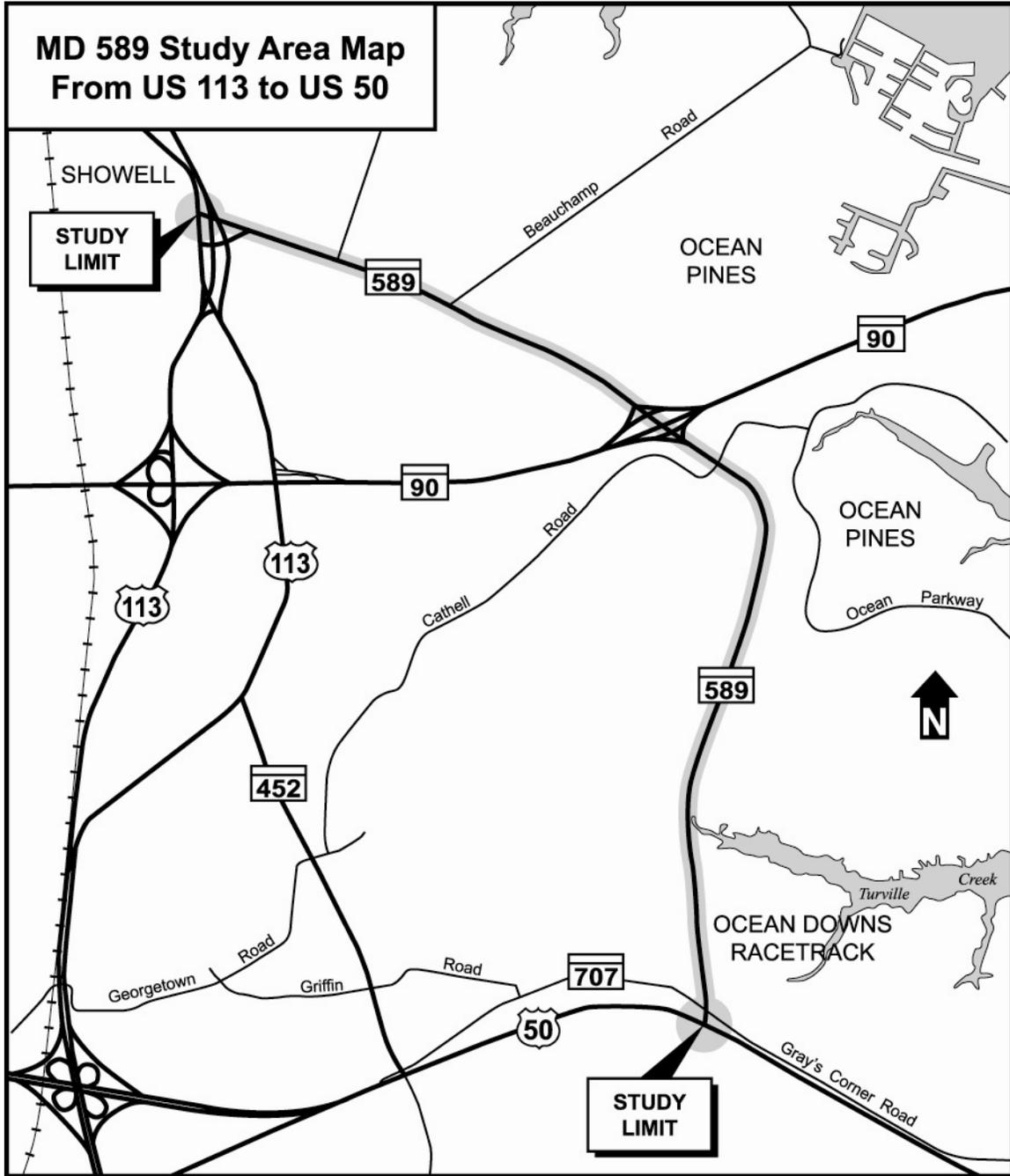


Figure 1 - MD 589 Study Area

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Following the Reconnaissance Survey, an Issues and Opportunities Review will be performed, which will result in a Guiding Principles Document. This document will be used in the Corridor Alternatives Development Process. The Study Team will develop and evaluate options for future transportation improvements and land use policies. The team will consider access management, capacity expansion, streetscape/landscape, bicycle/pedestrian facilities, land use/zoning recommendations, and State, County, and private initiatives.

All of these efforts will culminate into a Corridor Vision Document. The Corridor Vision Document will include a physical improvement plan that describes the future transportation system elements and identifies an implementation plan that require critical, near-term, and long-term actions by either Worcester County or SHA. The Vision Document would be adopted by the County to guide their development review process and will be used by both SHA and the County to inform; access permits review, private contributions towards roadway improvements, and state/local projects.

Background

As part of the Worcester County Comprehensive Plan, adopted in March 2006, MD 589, from a traffic standpoint, was identified as impacted. The plan cites a 112 percent¹ increase in traffic from 1990 to 2003 resulting in an unsatisfactory Level of Service (LOS). LOS is a measure of the congestion experienced by drivers and ranges from LOS A (free flow with little or no congestion) to LOS F (failure with stop and go conditions). As a result the plan calls for less intense development until roadway capacity can be improved.

Existing Zoning

The MD 589 corridor zoning designations are largely divided by the roadway itself. The majority of properties east of MD 589 are zoned residential, with several different densities. The majority of properties west of MD 589 are zoned agricultural with a few residential pockets. The commercially zoned properties generally front along MD 589 or US 50 to serve the existing residential communities. The existing zoning is shown in Figure 2.

Previous Study

In September of 1997, the Worcester County Commissioners adopted the “MD Route 589 Transportation Corridor Plan”. This plan was the result of a study conducted by the Worcester County Department of Planning, Permits and Inspections. The stated goal of the plan was the following:

- To provide for the creation and maintenance of a safe and efficient transportation network within the affected area, including the preservation of necessary right-of-way for future widening of the collector highway, and to

¹ State Highway Administration Website, Average Daily Traffic Studies Statistics, Annapolis, Maryland, 2004.

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thus protect the integrity of the MD Route 589 and nearby highways and to observe the directives of the Comprehensive Development Plan.

The study area of this plan was from US 113 in the north to US 50 in the south, including all property fronting on MD 589 or within 100 feet of MD 589. The Plan was originated in part as a response to the Worcester County 1989 Comprehensive Development Plan which called for a proactive approach “in the planning and programming of future highway improvements ...” to provide for safe and efficient movement of goods and people throughout the County. The Comprehensive Development Plan also recognized the deteriorating traffic conditions in the corridor especially during the Summer peak travel season. The Comprehensive Development Plan also had a general recommendation for improved access control throughout the county.

Some of the objectives of the MD Route 589 Transportation Corridor Plan were:

- To protect the integrity of MD Route 589 corridor
- To ensure that the flow of traffic through the corridor and to and from adjacent and nearby residential and commercial area is not unduly impaired by future development within the corridor
- To reduce existing traffic congestion, improve circulation deficiencies, decrease accidents, and develop a transportation system with sufficient capacity to accommodate the additional traffic generated by future population increases and land use development
- To maintain the design capacity and traffic flow efficiency of both existing and future roadways by preserving right-of-way, controlling access, and providing adequate setbacks and separation distances.

The Plan concluded that the MD 589 corridor had several transportation related problems. First, increased tourism related trips, local population growths, and continued commercial development along the roadway have contributed to increased traffic volumes and congested intersections. Second, the fact the MD 589 is not a “denied access” highway made access controls harder to apply to the roadway. Lastly, preservation of right-of-way for future improvements was not acquired for the rapidly growing corridor.

The Plan recommended several transportation solutions to provide service to the future population, employment centers and commercial developments.

- Select a future alignment of MD 589 with State participation to preserve necessary right-of-way
- Make all applications for building/zoning permits, site plan applications or subdivision plats subject to the goals, objectives and intent of the plan
- Preserve future right-of-way by requiring specified setbacks for structures and/or uses of land be located as measured from future proposed right-of-way line as opposed to current right-of-way line

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As a result of the Plan, Worcester County and SHA developed a right-of-way setback area roughly 100 feet wide along the entire MD 589 corridor. Working with a group of citizens and business owners along the corridor, a setback area was identified that weaves along and off the roadway to take advantage of open land and to avoid existing development close to the roadway. Since that time, the County and SHA have been enforcing the setback requirements on all new development fronting along MD 589. The Corridor Feasibility Study currently being undertaken will look to this plan as a starting point in developing goals and objectives and in eventually making recommendations.

Slots Machines

In November 2008, a statewide referendum vote was passed authorizing the approval of video gaming terminals (slot machines) at several locations throughout the state. Ocean Downs Racetrack was one of the potential locations approved as eligible for slot machines. The implementation of slot machines at the Ocean Downs site could have wide ranging effects on local circulation patterns, traffic volumes, zoning, and overall development conditions.

Part of this study will include an examination of different scenarios that take into account slot machines at Ocean Downs and the possible future traffic and development conditions. SHA Travel Forecasting Division has developed a methodology to project future traffic conditions due to slot machines based on research on similar facilities in other states.

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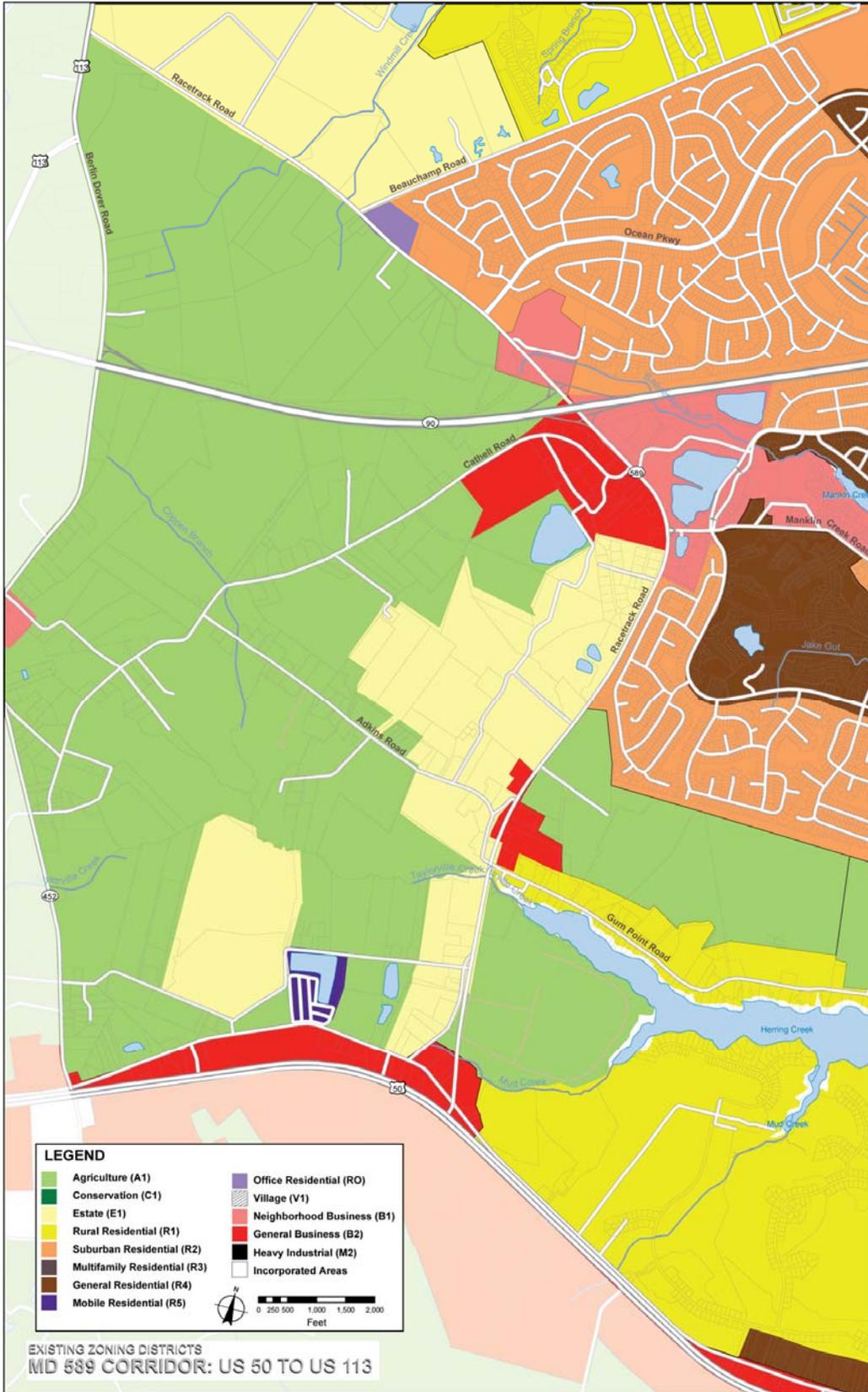


Figure 2 - Existing Zoning Districts

Land Use and Development Patterns

Survey Approach

The following description of land uses, the transportation network and development patterns, is intended to serve as a basis for the development of goals and objectives for the feasibility study and as an existing conditions inventory. It begins with an overall description of the transportation network, property access, connectivity, and land uses. The corridor was divided into three main segments for discussion purposes. Each segment also has a description of land uses and zoning, barriers to connectivity, activity centers, and access points. Figures 3 thru 6 that follow the next section include maps of the features described above.

Examples of activity centers include residential developments, shopping centers, and civic uses such as schools, parks, and religious facilities. Barriers to connectivity could include natural features, lack of pedestrian or bicycle facilities, or the parts of roadway network itself. This information along with the access points provides a picture of where people are traveling to and through the corridor and how they get there.

As this inventory was collected, the information was shared with various user groups to determine if the information was accurate to the actual conditions present. The Study Team had opportunities to review the information with local agencies and various SHA divisions. The Study Team also gathered input from the Stakeholders Group, which is a group made up of people that represents the different interests in the community, that was convened to get a better idea of how various everyday users operate within and access the corridor. Finally, the community provided input at a Public Open House that was held on September 18, 2008 at Stephen Decatur Middle School.

Photographic Inventory

The Photographic Inventory of the MD 589 corridor, located in Appendix A, highlights existing conditions, problem areas, and opportunities for improvements. The photographs were collected during several site visits at different times of the year and during different times of the day. The inventory also highlights the roadway character and aesthetics that could be an area for improvement as the study progresses.

Overall Land Use and Development Patterns

Transportation Network

MD 589 bisects a large wedge of land that is bounded by US 113 to the west and north, US 50 to the south, and natural features including Turville Creek, Manklin Creek, Isle of Wight Bay, and the St. Martin River. The interchanges at US 50, MD 90, and US 113 provide the main access points from outside the corridor with many intermediate access points along MD 589 from within the corridor. MD 90 runs perpendicular to MD 589 effectively dividing the corridor into north and south sections.

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Several smaller roadways connect with MD 589 providing some alternate or parallel access in the corridor. However, these roadways mainly serve as collector or feeder routes to MD 589. Due to the relative lack of alternate routes to MD 589, most trips are forced onto MD 589 to access points both within and outside of the corridor. The access provided by the interchanges at US 113, MD 90 and US 50 create a situation where motorist travelling to and from Ocean City and the other beach resorts use MD 589 as a “cut-through” route to avoid stretches of US 50 or US 113.

As a part of this study, the overall roadway network will be examined to determine the feasibility of reducing the number of “cut-through” trips that use MD 589. A variety of design improvements and policy decisions will be analyzed to determine their effectiveness of meeting the study’s goals and objectives.

System Linkages

The 4.6 mile length of MD 589 serves as both a local road and as a connector between the heavily traveled US 113, MD 90 and US 50. As such, it carries vehicular traffic from the adjacent residential development of Ocean Pines and other communities within the vicinity as well as more transient traffic.

US 50 and MD 90 link Ocean City to the Baltimore/Washington metropolitan areas. US 113 provides linkage to Norfolk, VA and Wilmington, DE and points north via I-95. The widening of US 113 is Worcester County’s top transportation priority. The road will be widened from the existing two-lane roadway to a four-lane roadway from south of the Snow Hill Bypass to the divided highway south of Berlin. In addition to the expansion, SHA has plans to acquire access controls along all of US 113.

According to the Highway Needs Inventory (HNI), MD 90 is also expected to be widened to a four-lane road with full access controls from US 50 to MD 528 in Ocean City. SHA is also planning to implement access controls along US 50 from MD 346 to Herring Creek. The HNI is a technical reference and planning document which identifies highway improvements to serve existing and projected population and economic activity in the State as well as address safety and structural problems that warrant major construction or reconstruction. The projects identified in this document represent only an acknowledgment of need based on technical analysis and adopted local and regional transportation plans. The HNI is not a construction program, and inclusion of a project does not represent a commitment of implementation.

The 2009-2014 Consolidated Transportation Program (CTP) lists a study to replace the US 50 bridge over Sinepuxent Bay. The CTP presents the capital projects that are proposed for construction, or for development and evaluation during the next six-year program period. The US 50 Bridge at Sinepuxent Bay project is funded for project planning only.

Property Access

Property access on MD 589 is largely varied depending on location along the roadway. Many of the older developed areas have a large number of curb cuts with multiple access

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points to frontage parcels. However, some of the newer developments have consolidated access points for larger parcels and provided some parcel interconnectivity. A desired outcome of this study is to develop an access management plan that can be implemented to guide future development and redevelopment as it occurs. The access management plan would allow for improved parcel access and connectivity, pedestrian safety and greater aesthetic appeal for the corridor.

Pedestrian and Bicycle Connectivity

The overall corridor is largely deficient in pedestrian and bicycle facilities except for near the Ocean Pines development and at some of the newly developed residential and commercial areas. However, most of the facilities are largely isolated and lack interconnectivity to other destinations and activity centers in the corridor. As part of this study, opportunities to increase pedestrian and bicycle connectivity and improved linkages between activity centers will be examined.

Land Use Context

The character of land uses in the MD 589 corridor is marked by large areas of residential communities and commercial development carved out of previously agricultural and natural environments. The Ocean Pines community dominates the east side of the corridor with a multitude of housing units bounded by natural features to the east and a relatively small number of access point onto MD 589. Two commercial shopping centers currently serve Ocean Pines and the larger corridor. Pines Plaza along Cathell Road is an older strip shopping center which remains largely vacant. The newer shopping center has a grocery store, drug store, and restaurants.

On the west side of MD 589, there are pockets of residential uses along the corridor of varying ages with some supporting commercial uses. Ocean Downs Racetrack and its associated barns, practice track, and parking lots front along the east side of MD 589 and is bounded by Turville Creek to the north. West of MD 589 is largely undeveloped except for some small agricultural and residential areas. The north end of the corridor contains several civic uses including a park, schools, and churches.

The mix of land uses, the lack of parallel routes to MD 589, and destinations within and just outside the corridor forces most drivers to utilize MD 589 for the majority of their trips. As land use in the corridor develops and intensifies, it will be a challenge to balance the level of driver's demand for access onto MD 589 and its capacity to accommodate this demand.

The next section begins the discussion of the corridor elements in three main segments:

- US 50 to Turville Creek
- Turville Creek to MD 90
- MD 90 to US 113

These segments were selected because Turville Creek and MD 90 represent the two major physical barriers that divide the corridor.

Corridor Segments

US 50 to Turville Creek

Land Use/Zoning

The land uses in this section of the corridor are a mix of commercial, residential and agricultural designations. The areas directly fronting US 50 at the MD 589 intersection are zoned General Business (B2), with several parcels developed and several parcels undeveloped. There are existing businesses at the intersection of MD 589 and MD 707 (Grays Corner Road). A flea market is located on the northwest quadrant of the intersection, while a Citgo Gas Station and Crab Shack are located in the southeast corner. The gas station and crab shack have access from both MD 707 and US 50. The areas along Griffin and McAlister Roads have Estate Residential zoning (E1), with a mix of single family dwellings. The Ocean Downs Racetrack and its associated parcels are zoned Agricultural (A1). Lake Haven Mobile Home Park is located west of MD 589 along Griffin Road and is zoned Mobile Home Residential (R5).

Barriers

Turville Creek acts as a barrier to connectivity in the north end of this section. With MD 589 serving as the only crossing and no pedestrian facilities located on MD 589 in this section, there is no opportunity for alternate or parallel connectivity.

Existing Activity Centers

There are two main centers of activity in this section of the MD 589 corridor. The Ocean Landings I retail area is located south of US 50 just east of the MD 589 intersection. Currently there is a Wal-Mart and Home Depot located there. Worcester County has recently approved the development of Ocean Landings II, a 126,000 square-foot retail center adjacent to the Ocean Landings I site. The new development is slated for “big box” retail such as a Marshall’s or Bed Bath and Beyond. This serves as a major destination for through traffic in the MD 589 corridor.

The second main activity center is the Ocean Downs Racetrack. The racetrack currently operates with live harness racing four days per week during June, July and August. They offer live simulcast racing year round and operate a bar and restaurant. Ocean Downs is also a potential location for video gaming terminals (slot machines) based on the outcome a referendum vote in the November 2008 election. The placement of slot machines at the track could increase the level and type of activity at Ocean Downs and could potentially add pressure to rezone the areas adjacent to the racetrack.

Transportation Network

The existing roadway network in this section of the corridor is primarily focused on MD 589. There are only three public road connections onto MD 589 in this section: at Griffin Road, at McAlister Road (opposite Ocean Downs entrance), and at Gray’s

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Corner Road (MD 707). Griffin Road provides access to residential areas adjacent to the corridor and connects to Friendship Road near its intersection with US 50. Gray's Corner Road runs parallel to US 50 from Friendship Road crossing over MD 589 to Riddle Lane at the Glenriddle Community entrance. It does provide some alternate parallel access to US 50 in this section.

Within this section of the MD 589 corridor, there is no alternate or parallel access to MD 589. Most of the trips to destinations on or beyond this section require the use of MD 589. The pedestrian and bicycle connections are non-existent in this section of the corridor.

Access Points

Access onto MD 589 from US 50 is via an at-grade intersection controlled by a traffic signal. Worcester County and SHA District 1 have developed a conceptual plan for an interchange in this area that would connect to a service road on the south side of US 50 currently being designed by Worcester County. Ocean Downs has four access points onto MD 589. The main entrance and stable entrance are paved roads and two additional gravel driveways enter into the parking lots. The small residential communities to the west of MD 589 have access from Griffin Road and McAlister Road.

Turville Creek to MD 90

Land Use/Zoning

Just north of Turville Creek there is commercial area fronting on MD 589 and a residential area along Gum Point Road. Several undeveloped areas with agricultural designations exist as well with the potential for future development. There is a new residential community, Pennington Estates, with Estate Residential zoning (E1) being developed on the west side of MD 589 just prior to the entrance into Ocean Pines.

The Ocean Pines community is divided by MD 90 into north and south areas. Ocean Pines south is a mix of residential uses with neighborhood commercial areas inside the community and other commercial areas on the west side of MD 589. Ocean Pines north has a similar mix of residential and neighborhood commercial uses. Residential zoning designations in these areas include Suburban Residential (R2) and General Residential (R4). Within the residential areas of Ocean Pines there are several park areas, recreation areas, and community open space.

Two large commercial areas are located south of MD 90 and across MD 589 from Ocean Pines. Both areas are zoned General Business (B2) with a mix of retail and service business. Within Ocean Pines, at the Manklin Creek Road entrance, there is Neighborhood Business (B1) zoning with restaurants, retail, and professional offices.

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Barriers

Similar to the previous segment, this area is bounded by natural features and roadways that force all access onto MD 589. Turville Creek, Manklin Creek, and Isle of Wight Bay prevent access further east. MD 90 acts as a significant barrier to north-south travel other than on MD 589. It bisects Ocean Pines with a box culvert under the highway, the only access between the two areas. The culvert is only large enough for cars to travel through. All trucks, emergency vehicles and other large vehicles must exit onto MD 589 and enter through another Ocean Pines entrance. MD 90 acts as a barrier to pedestrian access as well. With no crossings of MD 90, pedestrians are forced to use a make-shift trail and cross the roadway itself or walk along the shoulder of MD 589. Both of these options are unsafe and create hazards for pedestrians who would like to travel from Ocean Pines North to the commercial area or the library and pool areas.

Existing Activity Centers

There are several existing activity centers along this section of the corridor. These include the commercial area in Taylorville at the intersection of MD 589 and Gum Point Road which has a service station, marine repair center, restaurant, and professional offices. The Taylorville United Methodist Church is located in this section of the corridor. The shopping centers at MD 589 and Manklin Creek Road have a grocery store, drug store, professional offices and restaurants. Ocean Pines, with approximately 15,000 full-time residents and several non-residential destinations within the community, is the major activity center in this section. Pines Plaza is a strip style shopping center with several retail uses. Directly fronting on MD 589, at the Cathell Road intersection, is another major activity area with a convenience store, gas station, and bank which all have access onto MD 589. At the intersection of MD 589 and Cathell Road, there is a range of commercial uses including service stations, banks, fast food restaurants, and other retail uses. There are civic uses including the Ocean Pines Post Office, Worcester County Library as well as the community pool. Access and connectivity in and around Ocean Pines will be a major focus of the study in this section.

Transportation Network

In this section, the existing roadway network allows for north-south and east-west travel via MD 589 and MD 90. MD 90 is a limited access roadway providing connections eastward to Ocean City and to US 113 to the west. These connections encourage many drivers to utilize MD 589 as a “cut through” to MD 90 and Ocean City destinations. Connectivity and access to the activity centers and other land uses is primarily provided through MD 589. With little or no parallel or alternate routes all trips destined for inside or outside the corridor utilize MD 589. Several roadways connect onto MD 589 however very few penetrate beyond the natural barriers or connect outside the roadway network in the corridor. More locally, Cathell Road does connect the main MD 589 corridor westward to US 113 and US 50. Many locals utilize Cathell Road and its connections to avoid MD 589 even though it is mainly a two-lane road with several curves.

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There are very few pedestrian facilities in this stretch of the corridor. There is a path that connects the Worcester County Veterans Memorial and Ocean Pines Pool to MD 589 at Cathell Road. There also is a sidewalk connecting the Food Lion Shopping Center and Pennington Estates. There are no pedestrian facilities including sidewalks, crosswalks, refuge areas or pedestrian signals connecting Ocean Pines to the commercial area on the west side of MD 589.

Access Points

The commercial area in Taylorville has many curb cuts providing access onto MD 589. At Pennington Estates, there is right-in/right-out access to southbound MD 589. However there is a connection through the Food Lion shopping center to the Manklin Creek Road intersection with MD 589. The study team learned from members of the stakeholders group that vehicles make an illegal left into Pennington Estates from northbound MD 589 to access the shopping area. They make this illegal turn to avoid the intersection of MD 589 and Manklin Creek Road. Manklin Creek Road and Cathell Road serve as the only direct access points to Ocean Pines South. In the commercial area just south of the MD 90 interchange, there are several curb cuts accessing the business area. Cathell Road intersects MD 589 at a traffic signal and MD 90 is a diamond interchange with traffic signals at the ramp termini.

MD 90 to US 113

Land Use/Zoning

Similar to other sections in the corridor, the land uses in this area are a mix of commercial, residential, and agricultural. North of MD 90, on the east side of MD 589, the Ocean Pines community continues with mainly single family residences. Northwest of the MD 90 interchange is predominately agriculturally zoned, however, some recent development has occurred including a service station, medical offices, and a bank. North of Ocean Parkway the corridor remains relatively undeveloped with only several pockets of activity. The west side of MD 589 is predominately zoned agricultural with only a few residences, a church, a garden center and a miniature golf course and driving range. On the east side, Beauchamp Road connects to River Run, a residential golf course community. At the intersection of Beauchamp Road and MD 589 there are two churches and a private school. Further north is the Showell Elementary School. Showell Park is located on the westside of MD 589 across from Showell Elementary School. The US 113 interchange is the northern limit to the corridor study area.

Barriers

MD 90 again acts as a major barrier to north-south connectivity. Ocean Pines North is separated from the south side except for the box culvert connection. The entrance to Ocean Pines North at Ocean Parkway has a wooden gateway bridge over a pond. The bridge has a vehicle weight limit forcing trucks and other large vehicles to utilize Beauchamp Road and Saint Martins Lane to enter the community.

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Connectivity north of Ocean Parkway is limited due to natural, transportation, and land use barriers. To the east, the St. Martin River dead ends Showell School Road and Beauchamp Road. There is little or no connectivity or parallel roadways to the west of MD 589. US 113, a four lane interstate, cuts off all non-automobile access to Showell and the Berlin-Dover Road area.

Existing Activity Centers

Similar to the previous section, Ocean Pines with its large number of residents is the major activity center in this section. The churches, schools and park located near the Beauchamp Road and MD 589 intersection are also major existing activity centers for this section.

Transportation Network

In this section, the existing roadway network allows for north-south and east-west travel via MD 589 and MD 90. MD 90 is a limited access roadway providing connections eastward to Ocean City and to US 113 to the west. These connections encourage many drivers to utilize MD 589 as a “cut through” to MD 90 and Ocean City destinations. US 113 is a major north-south interstate facility bringing people to and from Delaware, Maryland and other destinations in the Mid-Atlantic Region. MD 589 is used as a “cut-through” to access MD 90 and US 50 from US 113. Examining ways to discourage the “cut-through” traffic will be a priority of the feasibility study.

Again there are no pedestrian facilities in the section of the corridor. All children attending either Showell Elementary School or Most Blessed Sacrament Catholic School are either bused or dropped off by parents in vehicles. There are no pedestrian or bicycle connections to Showell Park as well.

Access Points

Ocean Parkway serves as the main ingress and egress to Ocean Pines North. Beauchamp Road accesses MD 589 at a signalized intersection. It serves as the only access point for the River Run community and as an alternate access point for Ocean Pines North. All other frontage parcels access MD 589 directly through driveways and curb cuts. The US 113 interchange is a half-diamond interchange with a collector-distributor road on the west side of US 113.

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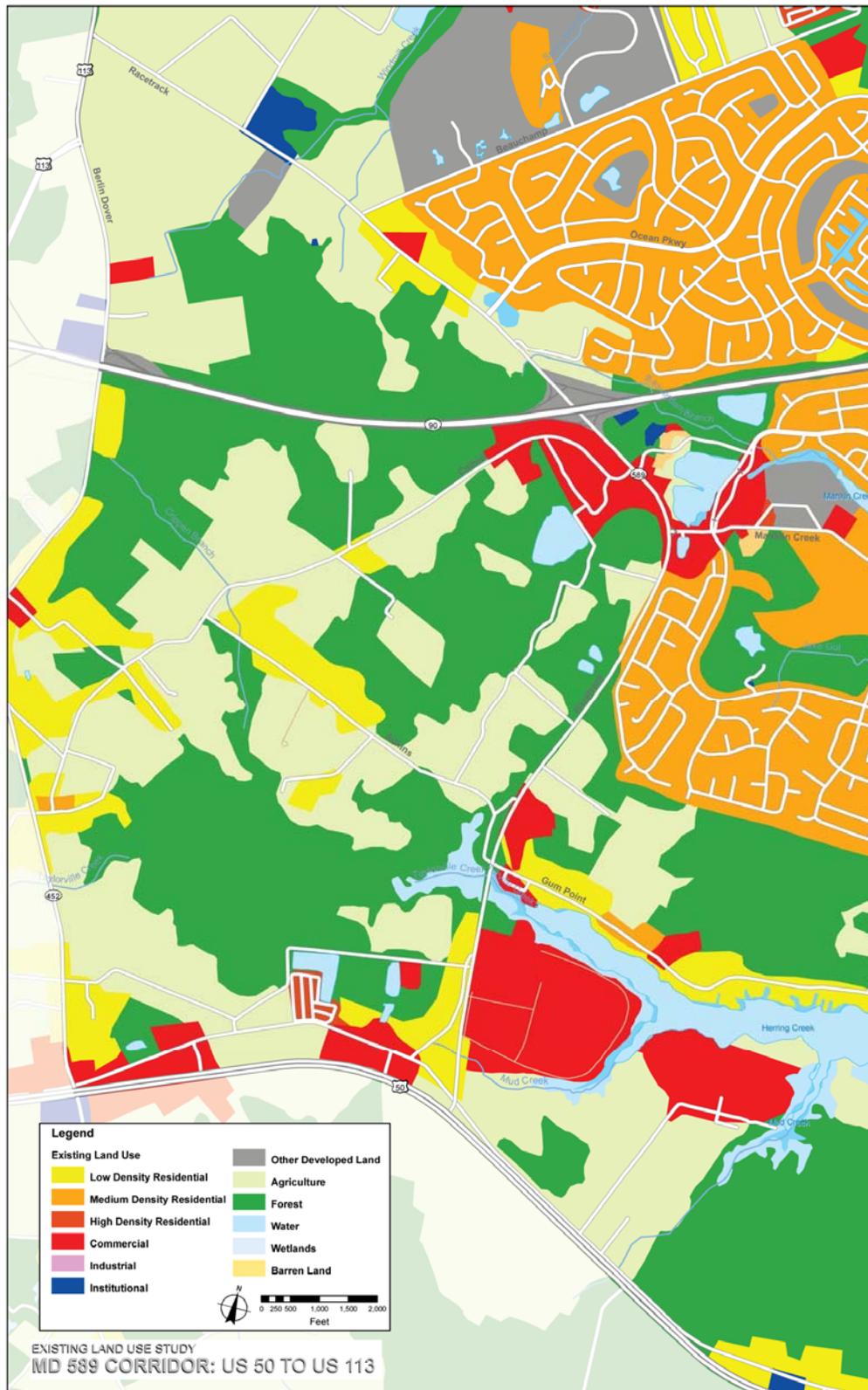


Figure 3 - Existing Land Use

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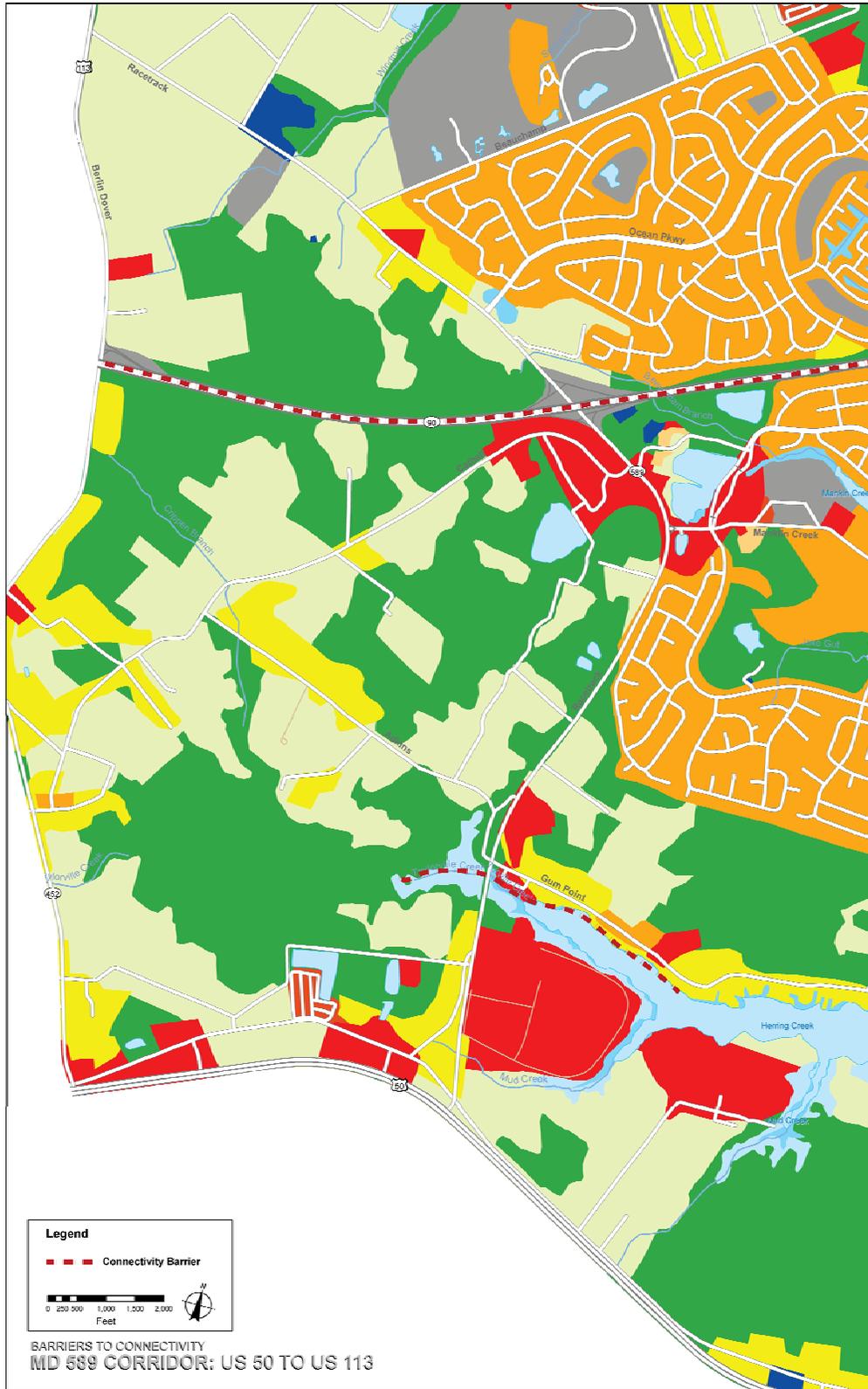


Figure 4 - Barriers to Connectivity

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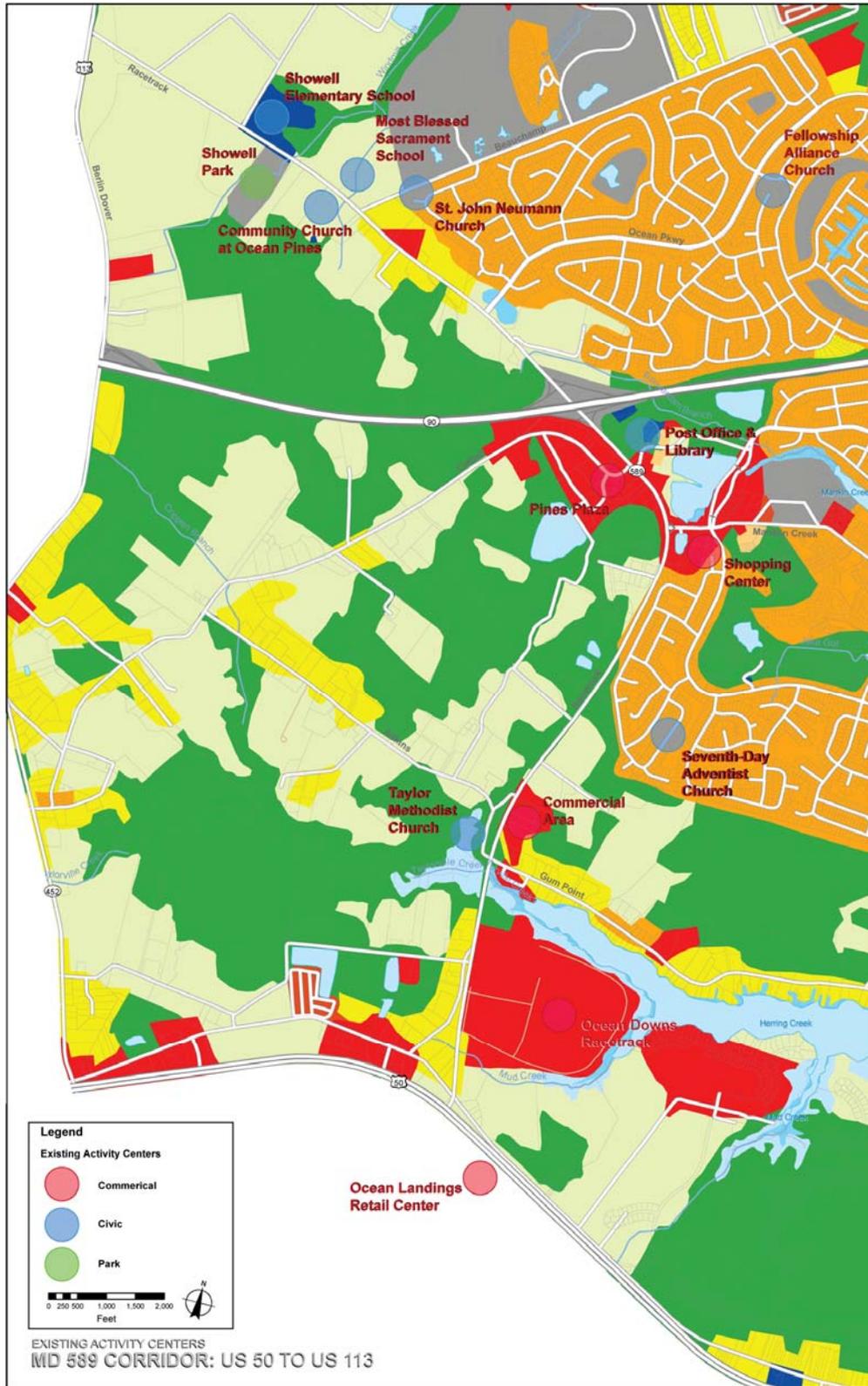


Figure 5 - Existing Activity Centers

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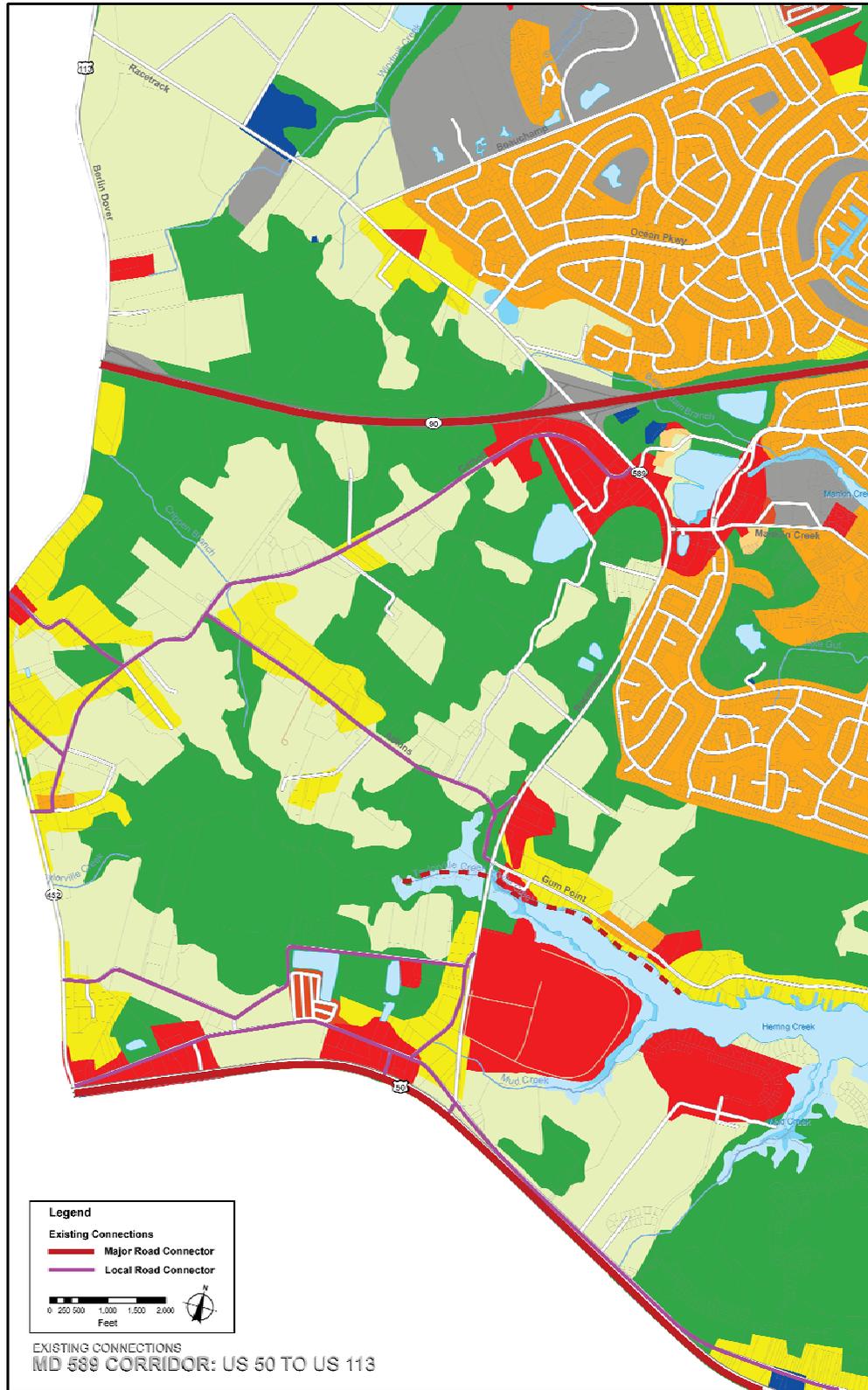


Figure 6 - Existing Connections

Development Activities

Development Review Process in Worcester County

The Worcester County Board of County Commissioners appoints members of the Planning Commission, which serves as the advisory board for the citizens regarding all planning matters within the County. The Planning Commission reviews and approves all major subdivisions and site plans. In addition, the Planning Commission may prepare ordinances and plans for review by the Board of County Commissioners.

Prior to each Planning Commission meeting, the planning staff visits each site and prepares a staff report summarizing the nature of the project, the applicable laws and sections of the comprehensive plan and land use and development code, relevant issues, and comments received from the Technical Review Committee (TRC). This report identifies potential issues and provides recommendations for proposed development projects that the Planning Commission reviews for approval or denial.

The Planning Commission holds its comprehensive planning meetings the last Wednesday of each month.

Technical Review Committee (TRC)

The purpose of the Technical Review Committee (TRC) meetings is to review and gather input on major development projects for the Worcester County's Department of Planning and Zoning and the cooperating agencies prior to presenting to the Planning Commission. Once all of the agencies' comments are addressed, the project is presented to the Planning Commission for review and for either their approval or denial. An applicant may submit a concept for a site plan or a sketch plan for a subdivision plan for comments from the TRC agencies and/or Planning Commission. If the applicant needs Critical Area Growth allocation or an amendment into the Comprehensive Plan for Water and Sewage, the Planning Commission will need to grant concept of sketch plan approval prior to any application being reviewed by the Board of County Commissioners or Sanitary Commission.

A major subdivision or site plan must receive unconditional Planning Commission approval before the applicant may apply for permits. If the project receives subdivision or site plan approval, more detailed plans are developed that eventually lead to a request for an access permit, a building permit, and other permits required according to Worcester County code.

Submitted Development Applications

A mix of development applications are currently in process with Worcester County for the MD 589 corridor. From 2006-2008 there were approximately 35 development applications submitted for the corridor with over a dozen having direct or indirect access onto MD 589. There were several major subdivision applications that have been submitted as well. The location of the development applications is shown in Table 1.

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The southern portion of the MD 589 corridor with its intersection with US 50 has the potential for the most amount of growth. The Ocean Landings developments on the south side of US 50 have over 300,000 square feet of retail space already built or approved for development. This coupled with possible redevelopment of the Ocean Downs racetrack site if slot machines are approved, has the potential for a large increase in traffic volumes.

The Taylorville Center located on the west side of MD 589 near the intersection of Gum Point Road has been constructed with almost 12,000 square feet of office space and 2,400 square feet of retail use. Farther north on the west side of MD 589, the former driving range and miniature golf course has been administratively approved for redevelopment.

There are several residential developments in the application process throughout the corridor. The Glen Riddle community, located along Gray’s Corner Road and east of MD 589, is currently under development with additional residential units slated. Ocean Pines, located east of MD 589 and north and south of MD 90, is nearing build-out and will see the remaining 500 vacant lots in-filled.

A possible development scenario is the redevelopment of some of the older commercial areas located along the corridor. With many vacant storefronts and buildings in Pines Plaza and some of the commercial area immediately adjacent to it, the opportunity for redevelopment is possible. Worcester County is currently planning to provide public water and sewer service to the shopping center which could lead to a higher density of development.

New homes continue to be constructed within River Run, a residential planned community located on Beauchamp Road, and an existing golf course along that county road is proposed for conversion to residential use. Furthermore, site evaluations are underway to develop two large farms located at the northern terminus of MD 589 which will most likely result in several hundred new homes. The section between US 113 and Windmill Creek is currently agricultural. All of these projects will add to the traffic on MD 589.

Table 1 - Submitted Development Applications

Project Name	Status	Use Types	Size
Taylorville Center	Approved/Completed	Office/Retail	11,800 sq. ft./2,400 sq. ft.
Pennington Commons	Approved	Commercial	78,940 sq. ft.
589 Driving Range	Admin. Approved	Commercial	TBD
Ocean Mini Warehouses	Approved	Commercial	1 additional storage building
River Run	Plat Submitted	Residential	38 SFD, 68 TH, 204 slip marina
Ocean Pines Community Center	Approved (withdrawn)	Recreation	30,000 sq. ft.
Ocean Landings II	Approved	Commercial	
Holland Point	Approved	Major Subdivision	43 SFD
Albatross	Approved	Subdivision Conversion	22 SFD
Nelson Lynch Property	Approved	Minor Subdivision	3 SFD

SFD = Single Family Detached
TH = Town House

Transportation Facilities

Roadway Network

Roadway Classification and Characteristics

According to the Federal Highway Administration (FHWA) guidelines, functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. The classification process recognizes that individual roads and streets do not serve travel in an independent manner. Rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a highway network².

According to the Federal Functional Classification System, MD 589 north of Windmill Creek is in a rural area and is classified as a Rural Major Collector. The portion of the road south of Windmill Creek is in the Ocean City Urban area and is classified as Urban Minor Arterial. Rural Major Collector roads provide service to any county seat not on an arterial route and link these places with nearby larger towns or cities or with routes of higher classification, and serve intra-county travel corridors. The Urban Minor Arterial street system interconnects with and augments the Urban Principal Arterial system and provides service to trips of moderate length at a lower level of travel mobility than principal arterials. The State Functional Classification System classifies MD 589 as a Major Collector, but this system has not been revised since 1980. There are several intersecting roads along MD 589 that have Functional Classifications above local classifications. US 50 and MD 90 are classified as Urban Other Principal Arterials and US 113 is classified as Rural Freeway or Expressway. Beauchamp Road, Ocean Parkway and Manklin Creek Road are all classified as Urban Collectors.

Federal Systems

The National Highway System (NHS), which includes Interstates, is the only national system that is designated by the federal government. MD 589 is not a NHS route but is eligible for federal funding because of its Federal Functional category. US 113, US 50 and MD 90 are NHS routes.

State Systems

The state system designations apply to all 5,235 center lane miles of Maryland's roads maintained by the State Highway Administration. For the purpose of funding allocation, roads are divided into two categories, Primary and Secondary. The State Primary Highway System serves Maryland in the same manner that the nation is served by the Federal Interstate System. According to the Maryland Department of Transportation policy, the 1,300-mile Primary System should have the maximum practical degree of

² FHWA *Functional Classification Guideline*, Washington, D.C., 1989.

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access control to provide the highest level of motorist safety. The Secondary System consists of the remaining SHA maintained roads that serve intraregional and local traffic. The State Secondary Highway System provides feeder and support functions for the Primary System as well as complementing county highway systems. MD 589 is on the State Secondary Highway System. US 113, US 50, and MD 90 are on the State Primary Highway System.

County Systems

Worcester County has a five-tier road system with Federal, State, County, municipalities and private bodies having ownership and/or maintenance responsibility. According to the Worcester County Comprehensive Plan, the County maintains 577 miles of County roads. County road improvements and maintenance are funded through the County's share of the state's gas tax. With the exception of the State maintained routes listed above, all of the roads in the corridor are either County or privately maintained.

One of the concepts this study will explore is the competing interests in uses of MD 589. While it functions as an arterial roadway providing through mobility to the larger corridor, it also acts as a local collector for residents and people doing business along MD 589. The balancing of these interests with the ultimate roadway function and roadway design will be explored.

Typical Section

MD 589 is currently a two-lane facility with a 24-foot roadway and varying shoulder widths. There are turning lanes provided at the approaches to intersections and interchanges (See Figure 7).

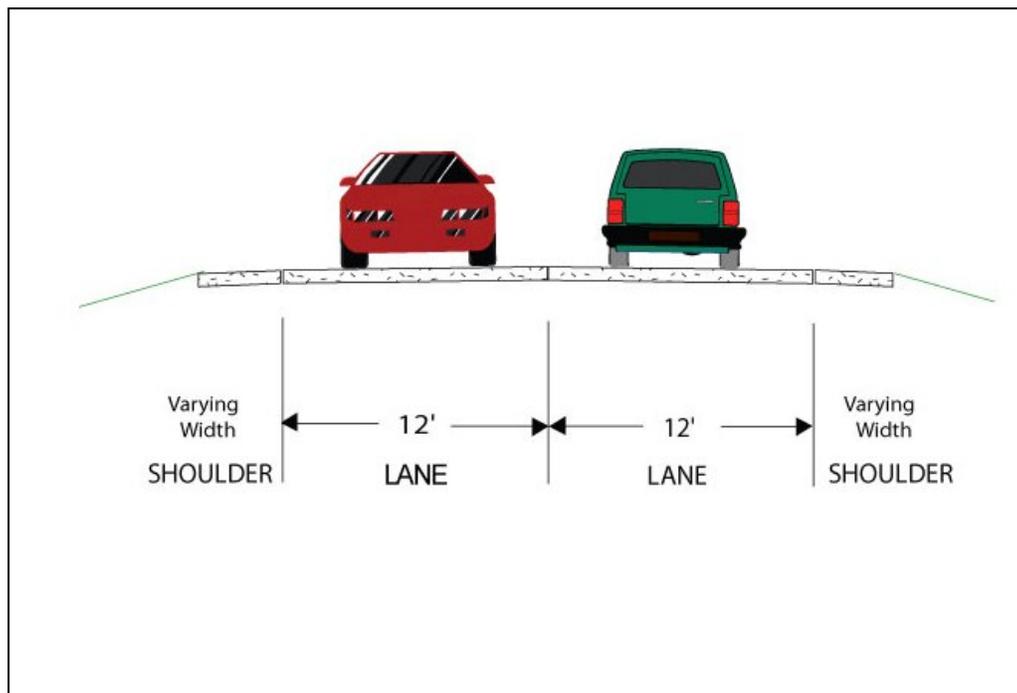


Figure 7 - MD 589 Existing Typical Section

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There are eight traffic signals located along MD 589:

- US 50
- Manklin Creek Road
- Cathell Road
- MD 90 Ramps (two)
- Ocean Parkway
- Beauchamp Road
- US 113

There is a single span, pre-stressed concrete girder bridge carrying US 113 across MD 589 (# 23042), a multi-span, steel girder bridge carrying MD 90 across MD 589 (# 23026), a 12'x 36'x 9' concrete box culvert carrying Turville Creek under MD 589 near Gum Point Road, and a 36" corrugated metal pipe carrying Windmill Creek under MD 589 near Showell Elementary School. There are no major grade changes within the corridor. At this time there are no structural problems, outfalls, or drainage issues, however, the ditches around the road are subject to tidal flooding in certain areas. There are no guardrail problems. The pavement condition on MD 589 is considered fair and is close to adequate in terms of friction.

Table 2 - Summary of Roadway Characteristics

Cross Street	Roadway Ownership	State Roadway Classification	Roadway Cross Section		
			Total Number of Lanes	Sidewalk	Bike Lanes
US 113	State	Rural Freeway	4	No	No
MD 575	State	Rural Local	2	No	No
Showell School Road	County	Local Road	2	No	No
Beauchamp Road	County	Urban Collector	2	No	No
Ocean Parkway	County	Urban Collector	2	No	No
MD 90	State	Urban Other Principal Arterial	2	No	No
Cathell Road	County	Local Road	2	No	No
Manklin Creek	County	Urban Collector	2	No	No
Nicholas Lane	County	Local Road	2	No	No
Gum Point Road	County	Local Road	2	No	No
Griffin Road	County	Local Road	2	No	No
MD 707	State	Urban Local	2	No	No
US 50	State	Urban Other Principal Arterial	4	No	No

Pedestrian, Bicycle, and Transit Conditions

The overall corridor is largely deficient in pedestrian and bicycle facilities outside of the Ocean Pines development and some of the newly developed residential and commercial areas. Sidewalks are intermittent and disconnected. Most of the facilities are largely isolated and lack interconnectivity to other destinations and activity centers in the

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corridor. As part of this study, opportunities to increase pedestrian and bicycle connectivity and improved linkages between activity centers will be examined.

Transit Conditions

Transit service within the corridor is provided by Shore Transit, which provides fixed-route service in Somerset, Wicomico and Worcester Counties. Route 11 and Route 21 provide service along MD 589 with a stop at Pines Plaza/Food Lion. Both routes operate seven days a week running from Salisbury to Ocean City to Pocomoke and then returning back to Salisbury. There is morning and afternoon service with limited trips midday and evenings. Shore Transit also operates on-demand service where transit service can be arranged prior to your trip with door to door service.

Traffic Volumes and Analysis

As part of the “Worcester County Comprehensive Plan”, adopted in March 2006, MD 589 was identified as impacted from a traffic standpoint. The plan cites a 112 percent³ increase in traffic from 1990 to 2003 resulting in unsatisfactory level-of-service. A goal of this study is to analyze the land uses and development patterns in the corridor to determine their effect on the current and future roadway network.

There are several overall patterns that affect the current traffic volumes along the MD 589 corridor and could impact future conditions. Due to the corridor’s proximity to beach resort areas in Maryland and Delaware, the corridor experiences seasonal fluctuations in traffic volume patterns. Typically, the summer season shows higher volumes and higher congestion levels as a result of motorists travelling to vacation destinations in and near the corridor. The Off-Season traffic volumes and congestion generally reverts to a more acceptable level. For the purposes of this analysis, traffic data and traffic projections were analyzed for an Off-Season period (September to May) and Summer Season period (June to August).

A second overall pattern that could potentially affect future traffic conditions in the corridor is the approval of video gaming terminals (slot machines) at Ocean Downs Racetrack. The locating of slot machines at the Ocean Downs site is expected to have some effect on local circulation patterns, traffic volumes, and overall development conditions. SHA Travel Forecasting has developed a methodology to project future traffic conditions due to slot machines based on research on similar facilities in other states. Both time periods (off-season and summer season) were analyzed with and without the inclusion of slot machines at Ocean Downs Racetrack.

A Level of Service (LOS) analysis for 16 locations along MD 589 was conducted for the Off-Season period and Summer Season period. LOS is the measure of the congestion by drivers, and ranges from ‘A’ (free flow with little or no congestion) to ‘F’ (failure with stop-and-go conditions). LOS is normally computed for the peak periods of the typical day, with LOS ‘D’ (approaching unstable flow) or better generally considered acceptable.

³ State Highway Administration Website, Average Daily Traffic Studies Statistics, Annapolis, Maryland, 2004.

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At LOS 'E', volumes are near or at capacity of the highway. LOS 'F' represents conditions in which there are operational breakdowns with stop-and-go traffic and extremely long delays at signalized intersections. For signalized intersections a Critical Lane Volume (CLV) methodology was used. For un-signalized intersections, Highway Capacity Software (HCS) was used. Results of traffic volume and Level of Service (LOS) analysis for various locations along MD 589 are included in Tables 3 thru 5. (See Appendix B for existing and future traffic operations.)

Off-Season Traffic Analysis

The 2007 Average Daily Traffic (ADT) volume for MD 589 from US 50 to US 113 is 18,600 during the off-season period (September to May). This ADT is expected to grow to 29,300 in the year 2030. Under existing average off-season traffic conditions, all intersections of MD 589 currently operate at LOS A.

By 2030, under a no slots condition, several intersections are expected to see a decline in LOS. The MD 589/MD 575 intersection is expected to worsen to LOS C for the AM peak and LOS D for the PM peaks. The MD 589/Showell School Road intersection is expected to worsen to LOS C for the AM and PM peaks. The MD 589/Westbound MD 90 ramp intersection is expected to worsen to LOS D for the AM peak and LOS C for the PM peak. The MD 589/Eastbound MD 90 ramp intersection is expected to worsen to LOS C for the AM peak and LOS D for the PM peak. The MD 589/Cathell Road intersection is expected to worsen to LOS C for the AM peak and LOS D for the PM peak. The MD 589/Manklin Road intersection is expected to have LOS C in the PM peak. Both the MD 589/Grays Corner and the MD 589/US 50 intersections are expected to decline to LOS C or LOS D, respectively, by the year 2030 during the PM peak. While experiencing a decline in LOS, all intersections would remain at an acceptable LOS.

By 2030, if slot machines were added at Ocean Downs, LOS at several intersections is expected to worsen as well. The intersections immediately around the racetrack are expected to see the most increase in congestion. The MD 589/US 50 intersection is expected to decline to LOS F during the PM peak, a failing condition. The MD 589/Grays Corner Road intersection is expected to decline to a LOS E in the PM peak. The intersection of MD 589 at the main access gate to Ocean Downs is expected to operate a LOS D in the PM peak. The MD 589/Cathell Road intersection is expected to worsen to LOS C for the AM peak and LOS E for the PM peak. The MD 589/Eastbound MD 90 ramp intersection is expected to worsen to LOS C for the AM peak and LOS D for the PM peak. The MD 589/Westbound MD 90 ramp intersection is expected to worsen to LOS D for the AM and PM peaks. The MD 589/Showell School Road and the MD 589/MD 575 intersection are expected to worsen to LOS C for the AM peak and LOS D for the PM peak.

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Table 3 - Off Season Level of Service (LOS) Analysis

Intersection	Intersection Control	Existing (2007)	Future (2030)			
			W/O slots	V/C	With slots	V/C
MD 589 @ US 113	Unsignalized	A/A	B/A	.67/.58	B/A	.67/.60
MD 589 @ MD 575	Unsignalized	A/A	C/D	.77/.87	C/D	.77/.88
MD 589 @ Mapleton Development	Unsignalized	-	B/B	.65/.64	B/B	.65/.66
MD 589 @ Showell School Road	Unsignalized	A/A	C/C	.72/.87	C/D	.72/.88
MD 589 @ Beauchamp Road	Signalized	A/A	A/A	.53/.55	A/A	.53/.57
MD 589 @ Ocean Parkway	Signalized	A/A	C/B	.73/.69	C/B	.73/.70
MD 589 @ WB MD 90 Ramp	Signalized	A/A	D/C	.87/.80	D/D	.87/.82
MD 589 @ EB MD 90 Ramp	Signalized	A/A	C/D	.80/.88	C/D	.80/.90
MD 589 @ Cathell Road	Signalized	A/A	C/D	.80/.89	C/E	.80/.92
MD 589 @ Manklin Creek	Signalized	A/A	A/C	.63/.79	A/C	.63/.81
MD 589 @ Nicholas Lane	Unsignalized	A/A	A/B	.57/.69	A/B	.57/.72
MD 589 @ Gum Point	Unsignalized	A/A	A/B	.59/.71	A/C	.59/.75
MD 589 @ Griffin Road	Unsignalized	A/A	A/B	.56/.68	A/B	.56/.71
MD 589 @ Ocean Downs*	Signalized	-	-	-	A/D	.51/.84
MD 589 @ Grays Corner Road	Unsignalized	A/A	B/C	.65/.76	B/E	.65/.94
MD 589 @ US 50	Signalized	A/A	B/D	.69/.89	B/F	.69/1.09

Legend: X/X = AM/PM LOS

* Assuming a signalized entrance would be required if Ocean Downs adds slot machines

Summer Season Traffic Analysis

As expected, summer season shows higher traffic volumes and lower levels of service at intersections along the corridor. The 2007 Average Daily Traffic (ADT) volume for MD 589 from US 50 to US 113 is 24,800 during the summer season between June and August. This ADT is expected to grow to 43,650 in the year 2030. Results from the Level of Service (LOS) analysis for various locations along MD 589 during the summer season are shown below. The intersections were analyzed for both weekday and weekend and with and without potential slots at Ocean Downs.

Under existing summer season weekday traffic conditions, all the intersections of MD 589 currently operate at LOS A or B except the westbound MD 90 ramp in the AM and PM and Manklin Creek Road in the PM which operate at LOS C. By 2030, most intersections are expected to see a decline in LOS during the weekday under a no slots condition. All of the intersections between Ocean Parkway and Manklin Creek Road are expected to worsen to LOS F for the AM and PM peaks. The intersections south of Manklin Creek Road are expected to drop to LOS C or lower during the AM peak and are expected to have LOS F in the PM peak. By 2030, with the inclusion of slots during the weekdays, all of the intersections between Ocean Parkway and Manklin Creek Road are expected to worsen to LOS F for the AM and PM peaks. The intersections south of Manklin Creek Road are expected to drop to LOS C or lower during the AM peak and are expected to have LOS F in the PM peak.

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Table 4 - Summer Season Weekday Level of Service (LOS)

Intersection	Intersection Control	Existing (2007)	Future (2030)			
			W/O slots	V/C	With slots	V/C
MD 589 @ US 113	Unsignalized	A/A	B/C	.71/.75	B/C	.71/.78
MD 589 @ MD 575	Unsignalized	A/A	C/F	.77/1.01	C/F	.77/1.04
MD 589 @ Mapleton Development	Unsignalized	-	B/C	.65/.79	B/D	.65/.83
MD 589 @ Showell School Road	Unsignalized	A/A	C/E	.73/.96	C/E	.73/.98
MD 589 @ Beauchamp Road	Signalized	A/A	A/C	.60/.72	A/C	.60/.74
MD 589 @ Ocean Parkway	Signalized	B/B	F/F	1.17/1.56	F/F	1.17/1.57
MD 589 @ WB MD 90 Ramp	Signalized	C/C	F/F	1.43/1.53	F/F	1.43/1.57
MD 589 @ EB MD 90 Ramp	Signalized	A/B	F/F	1.11/1.30	F/F	1.11/1.35
MD 589 @ Cathell Road	Signalized	B/B	F/F	1.13/1.24	F/F	1.13/1.31
MD 589 @ Manklin Creek	Signalized	A/C	F/F	1.09/1.35	F/F	1.09/1.41
MD 589 @ Nicholas Lane	Unsignalized	A/A	D/F	.87/1.13	D/F	.87/1.21
MD 589 @ Gum Point	Unsignalized	A/B	E/F	.91/1.22	E/F	.91/1.28
MD 589 @ Griffin Road	Unsignalized	A/A	C/F	.81/1.09	D/F	.82/1.15
MD 589 @ Ocean Downs*	Signalized	-	-	-	C/C	.81/.76
MD 589 @ Grays Corner Road	Unsignalized	A/B	E/F	.96/1.18	E/F	.96/1.32
MD 589 @ US 50	Signalized	A/B	E/F	.93/1.40	E/F	.93/1.55

Legend: X/X = AM/PM LOS

* Assuming a signalized entrance would be required if Ocean Downs adds slot machines

Under existing summer season weekend traffic conditions, most of the intersections of MD 589 operate at LOS A or B. The exceptions include MD 589 and MD 575 in AM, the westbound MD 90 ramp in the AM and PM, MD 589 and Cathell Road in the PM, Manklin Creek Road in the AM and PM and MD 589 and US 50 in the morning which operate at LOS C. By 2030, most intersections are expected to see a decline in LOS during the weekend under a no slots condition. All intersections from Ocean Parkway to US 50 are expected to experience LOS F for both the AM and PM peaks. During the weekends with slots, the deteriorating LOS at intersections is expected to continue. By 2030 on the weekends with slots, all intersections from Ocean Parkway to US 50 are expected to experience LOS F for both the AM and PM peaks as well.

As expected, the inclusion of the potential slots machines at Ocean Downs contributes to some deterioration in LOS throughout the corridor. However, the overall effect is not that great. During the off-season, the MD 589 at eastbound MD 90 ramp goes from a LOS B to C in the PM. At the MD 589 and Grays Corner Road and MD 589 and US 50 intersections in the afternoon the LOS goes from a C to E and D to F respectively with the inclusion of slots. During the summer weekdays, there is a slight deterioration in the LOS at MD 589 and Grays Corner Road in the morning otherwise the LOS remains the same with the inclusion of slots. During the Summer weekends there is more deterioration in LOS throughout the corridor with potential slot machines at Ocean Downs but still not to a great level.

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Table 5 - Summer Season Weekend Level of Service (LOS)

Intersection	Intersection Control	Existing (2007)	Future (2030)			
			W/O slots	V/C	With slots	V/C
MD 589 @ US 113	Unsignalized	A/A	C/C	.80/.74	D/C	.86/.78
MD 589 @ MD 575	Unsignalized	C/A	D/D	.90/.85	E/D	.94/.88
MD 589 @ Mapleton Development	Unsignalized	-	C/C	.72/.77	C/C	.78/.81
MD 589 @ Showell School Road	Unsignalized	A/A	E/C	.95/.78	E/C	.98/.81
MD 589 @ Beauchamp Road	Signalized	A/A	C/A	.75/.60	C/A	.78/.63
MD 589 @ Ocean Parkway	Signalized	B/A	F/F	1.3/1.06	F/F	1.35/1.07
MD 589 @ WB MD 90 Ramp	Signalized	C/C	F/F	1.43/1.34	F/F	1.58/1.43
MD 589 @ EB MD 90 Ramp	Signalized	A/A	F/F	1.23/1.15	F/F	1.27/1.32
MD 589 @ Cathell Road	Signalized	B/C	F/F	1.3/1.29	F/F	1.46/1.37
MD 589 @ Manklin Creek	Signalized	C/C	F/F	1.39/1.32	F/F	1.59/1.38
MD 589 @ Nicholas Lane	Unsignalized	A/A	F/F	1.05/1.03	F/F	1.22/1.09
MD 589 @ Gum Point	Unsignalized	B/B	F/F	1.19/1.18	F/F	1.35/1.23
MD 589 @ Griffin Road	Unsignalized	A/A	F/F	1.01/1.07	F/F	1.18/1.13
MD 589 @ Ocean Downs*	Signalized	-	-	-	F/F	1.21/1.24
MD 589 @ Grays Corner Road	Unsignalized	A/B	F/F	1.09/1.16	F/F	1.23/1.29
MD 589 @ US 50	Signalized	C/B	F/F	1.37/1.32	F/F	1.67/1.47

Legend: X/X = AM/PM LOS

* Assuming a signalized entrance would be required if Ocean Downs adds slot machines

Intersection Safety and Crash History

Historical crash data was collected along the corridor in order to identify areas or intersections where safety issues might exist and where consideration should be taken to help improve the safety conditions through policy or design. Crash summary information for MD 589 within the project area was collected for a three-year period between 2005 and 2007. For purposes of this safety analysis, the project area was divided into six sections based on traffic volumes and adjacent land use.

Candidate Safety Improvement Locations

The US 50/MD 589 intersection was identified as a Priority Candidate Safety Improvement Location in 2005. No other Priority Candidate Safety Improvement Locations within the limits of the project area were identified; however, there were several crash categories significantly higher than the statewide average rate for similarly designed roadways in individual sections. Overall, the types of crashes with higher rates than the statewide averages in the study area may likely be attributed to congestion.

Crash History

The section of MD 589 from the US 113 to Showell School Road experienced a total of 4 police reported crashes between January 2005 and December 2007. This translates to a crash rate of approximately 12.2 crashes per 100 million vehicle miles of travel, which is lower than the statewide rate of 107.5 crashes per 100 million vehicle miles of travel for all similarly designed highways under state maintenance.

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The section of MD 589 from Showell School Road to Ocean Parkway experienced a total of 10 police reported crashes between January 2005 and December 2007. This translates to a crash rate of approximately 32.5 crashes per 100 million vehicle miles of travel, which is lower than the statewide rate of 107.5 crashes per 100 million vehicle miles of travel for all similarly designed highways under state maintenance. The most prevalent probable cause for the crashes was 'failure to give full attention' (3 crashes).

As a result of safety concerns in this section with turning vehicles entering and exiting Showell Elementary School, improvements were made. In 2005, a left-turn lane was added from southbound MD 589 to Showell School Road and an acceleration and deceleration lane was added to northbound MD 589 at the intersection. Feedback received from the public has indicated that safety has been improved in this intersection.

The section of MD 589 from Ocean Parkway to the MD 90 Ramp 4 and Ramp 6 experienced a total of 38 police reported crashes between January 2005 and December 2007. This translates to a crash rate of approximately 93.8 crashes per 100 million vehicle miles of travel, which is lower than the statewide rate of 107.5 crashes per 100 million vehicle miles of travel for all similarly designed highways under state maintenance. The study rates for left-turn and pedestrian crashes were significantly higher than the statewide rate. The most prevalent probable cause for the crashes was 'failure to yield right-of-way' (18 crashes). The large majority of the crashes occurred near the intersection of MD 589 and Ocean Parkway (32 crashes).

The section of MD 589 from the MD 90 Ramp 1 and Ramp 6 to Manklin Creek Road experienced a total of 22 police reported crashes between January 2005 and December 2007. This translates to a crash rate of approximately 67.9 crashes per 100 million vehicle miles of travel, which is lower than the statewide rate of 107.5 crashes per 100 million vehicle miles of travel for all similarly designed highways under state maintenance. There was one reported fatal accident in this section in 2005. The study rate for left-turn crashes was significantly higher than the statewide rates. The most prevalent probable causes for the crashes were 'failure to yield right of way' (8 crashes) and 'failure to give full attention' (7 crashes).

The section of MD 589 from Manklin Creek Road to Gum Point Road experienced a total of 30 police reported crashes between January 2005 and December 2007. This translates to a crash rate of approximately 97.3 crashes per 100 million vehicle miles of travel, which is lower than the statewide rate of 107.5 crashes per 100 million vehicle miles of travel for all similarly designed highways under state maintenance. However, the study rate for this portion of MD 589 for left-turn, pedestrian, parked vehicles and unknown were significantly higher than the statewide rate. The most prevalent probable cause for the crashes was 'failure to give full attention' (6 crashes). More than half of the crashes occurred in the section of MD 589 from Emory Road north to Manklin Creek Road (18 crashes).

The section of MD 589 from Gum Point Road to US 50 experienced a total of 20 police reported crashes between January 2005 and December 2007. This translates to a crash

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rate of approximately 127.7 crashes per 100 million vehicle miles of travel, which is higher than the statewide rate of 107.5 crashes per 100 million vehicle miles of travel for all similarly designed highways under state maintenance. The study rates for property rear end, left-turn and angle crashes were significantly higher than the statewide rates. The most prevalent probable causes for the crashes were 'failure to give full attention' and 'failure to yield right-of-way' (4 crashes each).

The most probable cause for many of these crashes in the overall corridor was due to congestion. As this study progress and alternatives are developed, safety will be a focus. Not only will vehicle safety be studied but also pedestrian and bicyclist safety as well. In developing typical sections that enhance traffic flow and reduce congestion it is likely that safety will increase and crash rates decrease. If a specific segment or location is determined to be a problem location from a safety perspective then a more detailed safety analysis will be performed to determine ways to improve the situation.

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Table 6 - Project Area Crash History (2005-2007)

Type/Year	2005	2006	2007	Total	Study Rate	Statewide Rate
MD 589 from US 113 to Showell School Road						
Fixed Object			1	1	3.1	32.3
Other	1	1	1	3	9.2	4.6
Injury	1	1	2	4	12.2	48.7
Total	1	1	2	4	12.2	107.5
MD 589 from Showell School Road to Ocean Parkway						
Rear End		1	1	2	6.5	20.8
Left Turn	1			1	3.3	4.3
Fixed Object	2	3		5	16.2	32.3
Other	1	1		2	6.5	4.6
Property Damage	4	5	1	10	32.5	57.1
Total	4	5	1	10	32.5	107.5
MD 589 from Ocean Parkway to MD 90 Ramps 4 and 6						
Opposite Direction		1		1	2.5	8.1
Rear End	1	5	2	8	19.7	20.8
Side Swipe			1	1	2.5	2.8
Left Turn	5	3	10	18	44.4*	4.3
Angle	2	2	1	5	12.3	12.9
Pedestrian		1	1	2	4.9*	1.1
Other	1	1	1	3	7.4	4.6
Injury	5	7	6	18	44.4	48.7
Property Damage	4	6	10	20	49.3	57.1
Total	9	13	16	38	93.8	107.5
MD 589 from MD 90 Ramps 1 and 6 to Manklin Creek Road						
Opposite Direction		1		1	3.1	8.1
Rear End	5	3	1	9	27.8	20.8
Left Turn	3		2	5	15.4*	4.3
Angle	1	1	2	4	12.3	12.9
Fixed Object		2		2	6.2	32.3
Other			1	1	3.1	4.6
Fatal	1			1	3.1	1.7
Injury	4	2	3	9	27.8	48.7
Property Damage	4	5	3	12	37.0	57.1
Total	9	7	6	22	67.9	107.5
MD 589 from Manklin Creek Road to Gum Point Road						
Opposite Direction			1	1	3.2	8.1
Rear End	3	3	1	7	22.7	20.8
Side Swipe			1	1	3.2	2.8
Left Turn	2		1	3	9.7*	4.3
Angle			1	1	3.2	12.9
Pedestrian		1	1	2	6.5*	1.1
Parked Vehicle			2	2	6.5*	1.8
Fixed Object		6	1	7	22.7	32.3
Other	1	1	4	6	19.5*	4.6
Injury	4	6	7	17	55.2	48.7
Property Damage	2	5	6	13	42.2	57.1
Total	6	11	13	30	97.3	107.5
MD 589 from Gum Point Road to US 50						
Opposite Direction	1		1	2	12.8	8.1
Rear End	2	4	2	8	51.1*	20.8
Left Turn			2	2	12.8*	4.3
Angle	2	2		4	25.5*	12.9
Fixed Object		2	1	3	19.2	32.3
Injury	3	4	4	11	70.2	48.7
Property Damage	3	4	2	9	57.5	57.1
Total	6	8	6	20	127.7	107.5

*Significantly Higher than Statewide average

Rates are per 100 mvm

Environmental Inventory

Community Resources

MD 589 is a major north/south transportation corridor located in Worcester County that connects the regional arterial highways of US 113, MD 90 and US 50. MD 589 provides access to the populated areas of Ocean Pines, Berlin, West Ocean City, Ocean City and areas in southern Delaware. Due to its proximity to resort areas such as Ocean City, the corridor experiences high volumes of traffic in a seasonal pattern.

Current development within the corridor includes the vacation community of Ocean Pines with the Village Square and Pennington Commons shopping centers at Manklin Creek Road, at approximately the mid-point of the corridor. Future planned land use within the study area includes additional residential development infill as Ocean Pines transitions to a year-round retirement community (from approximately 7,000 to more than 7,500 housing units). Also there is River Run, a growing residential community located on Beauchamp Road. Just outside the project limits to the southeast of the MD 589 and US 50 intersection are two large box stores that draws vehicles regionally from Delaware.

Future commercial development is proposed with the expansion of the Pavilion Project at Beauchamp Road, as well as the expansion of the two existing shopping centers at Manklin Creek Road, and conversion of a store near Gum Point Road to office space. Due to the additional of slot machines, the expansion of the Ocean Downs Racetrack facility will occur in the near future. Approximately 1,000 new residential units for the Showell area are under review with the local planning office.

The proposed transportation improvements are consistent with Worcester County's Comprehensive Development Plans of 1989 and 2005. New development is limited until roadway capacity in the County increases.

There are several community resources located within the study area. Showell Elementary School and the Most Blessed Sacrament Catholic School are located within the project limits. Showell Elementary has seven small playground areas at the rear of the school, and the paved play area to the north of the school play a role in the daily physical education needs of the students. Showell Park, a publicly-owned public park, has tennis courts, softball fields, two playgrounds, and a pavilion. This park is used by both adjacent schools as well as by the County's Park and Recreation programs. It was acquired and developed with Program Open Space funds.



Figure 8 - Environmental Features Map

MD 589 (Racetrack Road) Corridor Feasibility Study

Based on an initial review of census data, one Environmental Justice (EJ) community with a minority population higher than the statewide rate and three EJ communities with low-income populations higher than the statewide rate were identified adjacent to the study area. Further research of the socio-economic resources and characteristics will be conducted during the project planning phase to ensure that these communities are aware of this project and to ensure that this project does not disproportionately or adversely affect any EJ populations.

Cultural Resources

An archeological survey is needed to investigate the intact areas along MD 589 for the presence of prehistoric and historic sites. Soils types, drainage, and nearby estuaries indicate the potential for prehistoric archeological resources while Taylorville, a nineteenth century community, with grist and saw mills, a church and school indicate the potential for historic archeological resources.

Two historic structures are eligible for inclusion on the National Register of Historic Places are located within the study area. One is 1915 farmstead (south side of MD 589/US 50 intersection) and the other is Ocean Downs Racetrack and its associated structures.

Natural Resources

MD 589 bisects a single 100-year floodplain associated with Taylorville Creek to the west and Turville Creek to the east. This area also falls within the 1,000 foot buffer of the Critical Area Commission for the Chesapeake and Atlantic Coastal Bays. Tributaries within the Coastal Drainage Area are classified as Use I streams (Water Contact Recreation and Protection of Non-tidal Warmwater Aquatic Life). Also, there are non-tidal wetlands adjacent to the mainline of MD 589.

Streams within the project area, from south to north, include: Mud Creek, Turville Creek, Beaverdam Branch, and Windmill Creek. All of the tributaries are located within the Coastal Drainage Area are classified as Use I streams with no in-stream work permitted from March 1 through June 15.

Coordination with the USFWS and DNR has indicated that there are no known state or federal endangered or threatened species within the project area. However, the nearby forested areas contain Forest Interior Dwelling Bird Species habitats. Conservation of interior forest habitat is encouraged. Approved techniques include limiting roadway improvements to the outskirts of the forest, and restricting forest and grass impacts during the May-August breeding season.

The Smart Growth Initiatives require the State to direct its growth-related programs and funding to support locally designated growth areas. These designated growth areas or Priority Funding Areas (PFAs) generally include established towns and communities, as well as existing/proposed commercial areas and industrial sites. Most of the project

MD 589 (Racetrack Road) Corridor Feasibility Study

limits is located outside the PFA; only Ocean Pines and Ocean Downs, which cover approximately 30 percent of the project limits and lie to the east of MD 589, are within PFAs.

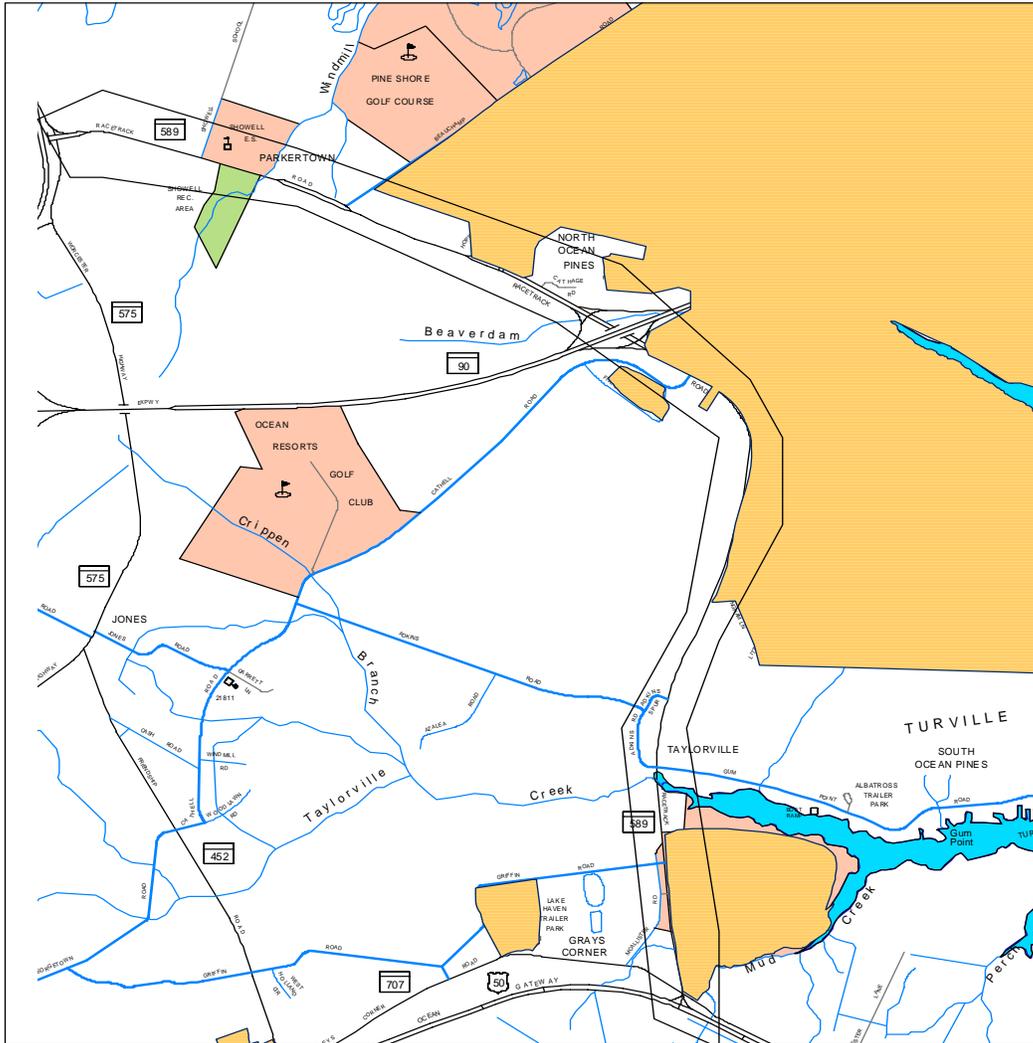


Figure 9 - Priority Funding Areas Map

Summary

The MD 589 (Racetrack Road) Corridor Feasibility Study will focus on the transportation network and surrounding corridor along MD 589 from US 50 to US 113 located in Worcester County. The analysis of MD 589 will consider the property between US 113 in the west and the bay on the east as it currently exists and will potentially develop in the future. It will also consider access and circulation systems for multiple modes.

The study will analyze how the corridor's land uses and development patterns feed into the transportation network and how future development scenarios will affect the network. The study will provide a "blueprint" to guide local and statewide agencies as they plan and implement development and transportation improvement projects in the corridor. The study will provide guidance for Worcester County and SHA to use in their development review and approval process regarding access and connectivity to the roadway network. It will provide recommendations for transportation improvements that can be implemented when funding is available and the need is present.

MD 589 bisects a large wedge that is bounded by US 113 to the west and US 50 to the south, as well as natural features including Turville Creek, Manklin Creek, Isle of Wight Bay and the St. Martin River to the east. The interchanges at US 50, MD 90, and US 113 provide the main access points from outside the corridor and has many intermediate access points along MD 589 from within the corridor. MD 90 runs perpendicular to MD 589 effectively dividing the corridor into north and south sections.

The 4.6 mile length of MD 589 serves as both a local road and as a connector between the heavily traveled US 113 and US 50. As such, it carries vehicular traffic from the adjacent residential development of Ocean Pines and others within the vicinity as well as more transient traffic.

Property access on MD 589 is largely varied depending on location along the roadway. Many of the older developed areas have a large number of curb cuts with multiple access points to frontage parcels. However, some of the newer developments have consolidated access points for larger parcels and provided some parcel interconnectivity. A desired outcome of this study is to develop an access management plan that can be implemented to guide future development and redevelopment as it occurs. The access management plan would allow for improved parcel access, pedestrian safety, and greater aesthetic appeal for the corridor.

The overall corridor is largely deficient in pedestrian and bicycle facilities outside of the Ocean Pines development and also in some of the newly developed residential and commercial areas. However, most of the facilities are largely isolated and lack interconnectivity to other destinations and activity centers in the corridor. As part of this study, opportunities to increase pedestrian and bicycle connectivity and improved linkages between activity centers will be examined.

MD 589 (Racetrack Road) Corridor Feasibility Study

The character of land uses in the MD 589 corridor is marked by large areas of residential communities along with commercial development carved out of previously agricultural and natural environments. The Ocean Pines community dominates the east side of the corridor with a multitude of housing units bounded by natural features and a relatively small number of access point onto MD 589. Two commercial shopping centers currently serve Ocean Pines and the larger corridor.

On the west side of MD 589 there are pockets of residential uses along the corridor of varying ages with some supporting commercial uses. Ocean Downs Racetrack and its associated barns, practice track, and parking lots front along MD 589 and is bounded by Turville Creek to the north. West of MD 589 is largely undeveloped, except for some small agricultural and residential areas. The north end of the corridor contains several civic uses including a park, schools, and churches.

The mix of land uses, the lack of parallel routes to MD 589, and destinations within and just outside the corridor forces most drivers to utilize MD 589 for the majority of their trips. As land use in the corridor develops and intensifies, it will be a challenge to balance the level of driver's demand for access onto MD 589 and its capacity to accommodate this demand.

There are several overall patterns that affect the current traffic volumes along the MD 589 Corridor and could impact future conditions. Due to the corridor's proximity to beach resort areas in Maryland and Delaware the corridor experiences seasonal fluctuations in traffic volume patterns. Typically, the summer season shows higher volumes and higher congestion levels as a result of motorists travelling to vacation destinations in and near the corridor. The Off-Season traffic volumes and congestion generally reverts to a more acceptable level.

A second overall pattern that could potentially affect future traffic conditions in the corridor is the approval of video gaming terminals (slot machines) which could be located at Ocean Downs Racetrack. The locating of slot machines at the Ocean Downs site could have wide ranging effects on local circulation patterns, traffic volumes, and overall development conditions. SHA Travel Forecasting has developed a methodology to project future traffic conditions due to slot machines based on research on similar facilities in other states.

Historical crash data was collected along the corridor in order to identify areas or intersections where safety issues exist and where consideration should be taken to help improve the safety conditions through policy or design. Crash summary information for MD 589 within the project area was collected for a three-year period between 2003 and 2005. The MD 589 and US 50 intersection was identified as a Candidate Safety Improvement Location in 2004 and a Priority Safety Improvement Location in 2005. Several locations also experienced crash rates significantly higher than the statewide average for similar roadways. All of these locations will be examined to determine what safety improvements can be made.

MD 589 (Racetrack Road) Corridor Feasibility Study

Next Steps

The end result of the Corridor Feasibility study is a vision that the state, Worcester County, and the local stakeholders can and will establish what the MD 589 corridor will look like and how it will operate. The Corridor Improvement Document will detail a physical improvement plan that describes the future transportation system elements and identifies implementation actions that require critical, near-term, and long-term agency actions. The document will also identify potential changes to local policy and procedures that will be needed to implement the overall vision.

The next step in the process is to develop the Guiding Principles document. This document will set the study's goals and objectives based on the information gathered in the Reconnaissance Survey, the Public Workshop, Stakeholders Meetings, and other study team meetings. The Guiding Principles Document will also further identify issues and opportunities so the project team can begin the alternatives development phase of the study.

Once the goals and objectives of the study are agreed upon, the Project Team will develop and evaluate options for future transportation improvements and land use policies. Some of the options or alternatives that will be considered include:

- Widening Capacity Improvements
- Intersection Improvements
- Access Management
- Pedestrian and Bicycle Access and Connectivity
- Broader Transportation Network improvements
- Landscaping
- Land Use and Zoning recommendations
- Interchange concepts at MD 589 and US 50

Appendix A – Photographic Inventory

Element	Existing Conditions, Issues & Opportunities	Photos
<p>Driveway Access</p>	<ul style="list-style-type: none"> • Multiple driveway access points in commercial area between Manklin Creek Road and Cathell Road • Safety issue with turning cars; multiple trips onto MD 589 for multi-stop shopping • Opportunity for cross-parcel connectors or access road behind commercial area 	
<p>MD 589 Typical Section</p>	<ul style="list-style-type: none"> • MD 589 currently has two 12-foot lanes in each direction with limited or no shoulders in most sections • Safety issues with turning vehicles • Capacity issues during peak traffic conditions • Opportunity for increased capacity, turn lanes, and medians • Opportunity to improve emergency access capability 	
<p>Sidewalk and Pedestrian Facilities</p>	<ul style="list-style-type: none"> • Limited or non-existent pedestrian facilities at major activity centers • No sidewalks throughout corridor • Issues with coordination with Ocean Pines regarding pedestrian connections • Opportunity for sidewalks, crosswalks, pedestrian signals, and medians for pedestrian refuge throughout corridor 	

Element	Existing Conditions, Issues & Opportunities	Photos
<p>Turville Creek</p>	<ul style="list-style-type: none"> • Associated wetlands and floodplains • Acts as a barrier between northern and southern sections of MD 589 • Issues with environmental impacts for build alternatives 	
<p>MD 90</p>	<ul style="list-style-type: none"> • Acts as barrier between Ocean Pines North and South • Safety and emergency access issues with box culvert connection under MD 90 • Lack of pedestrian access across MD 90 • Opportunity to improve connections and safety across MD 90 	
<p>Future Development Opportunities</p>	<ul style="list-style-type: none"> • Several parcels with possibilities of development • Increase in residential and commercial • Issues with additional development in conjunction with the potential for slots at Ocean Downs • Opportunity to work with SHA, Worcester County to guide development and adhere to corridor “vision” 	

Appendix B – Traffic Operations

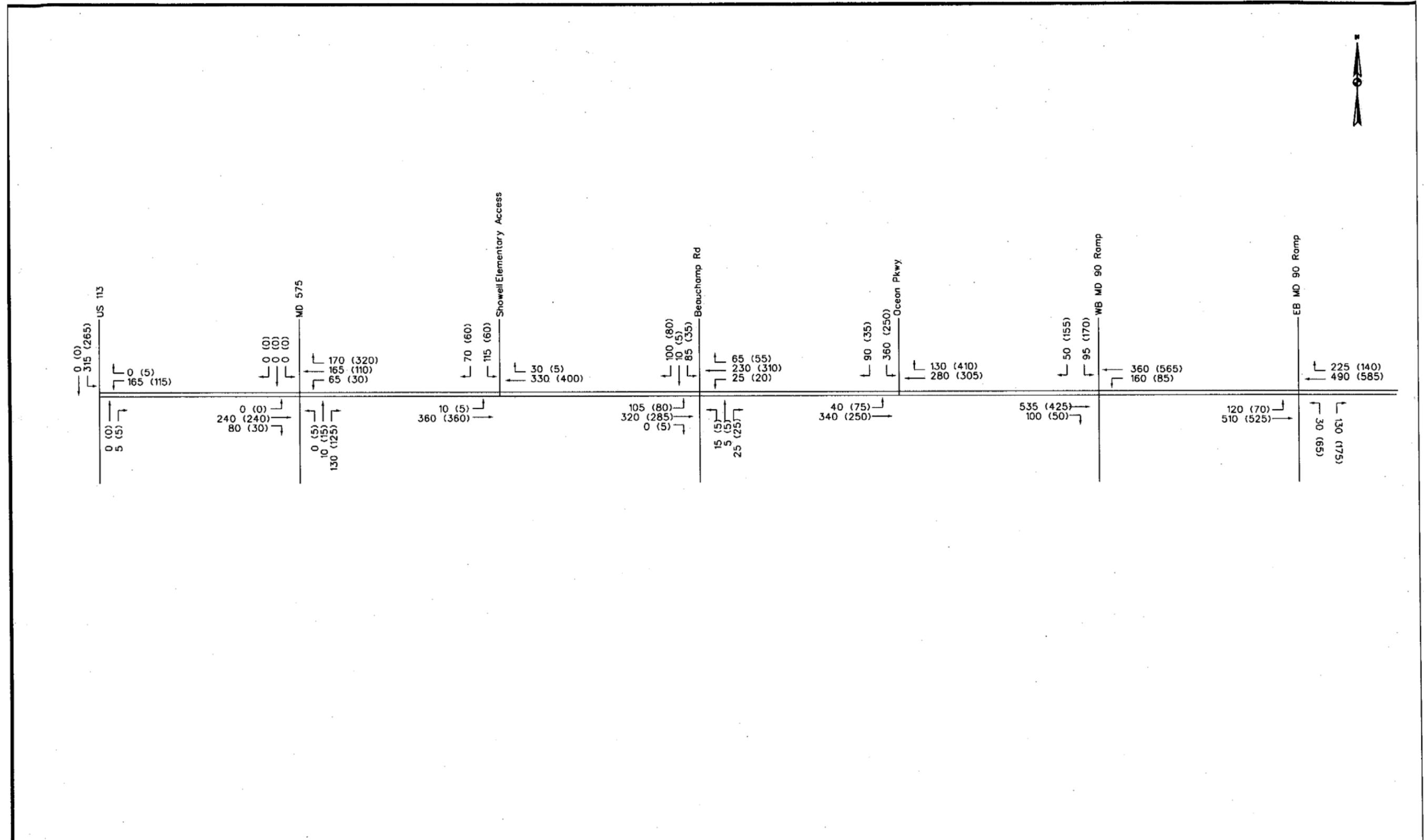
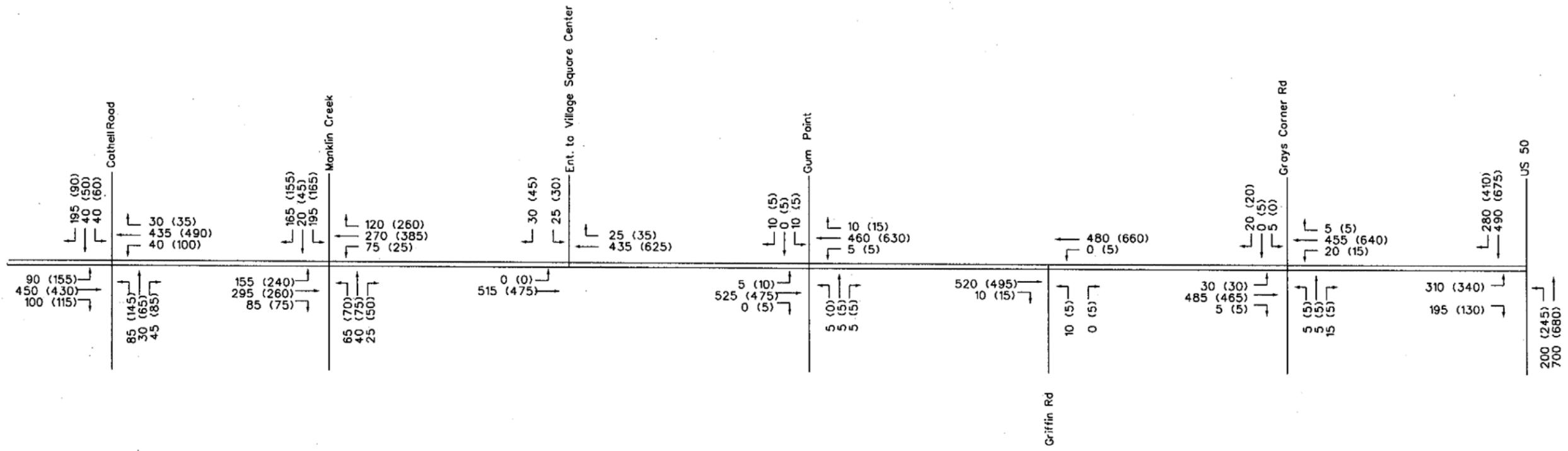
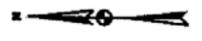


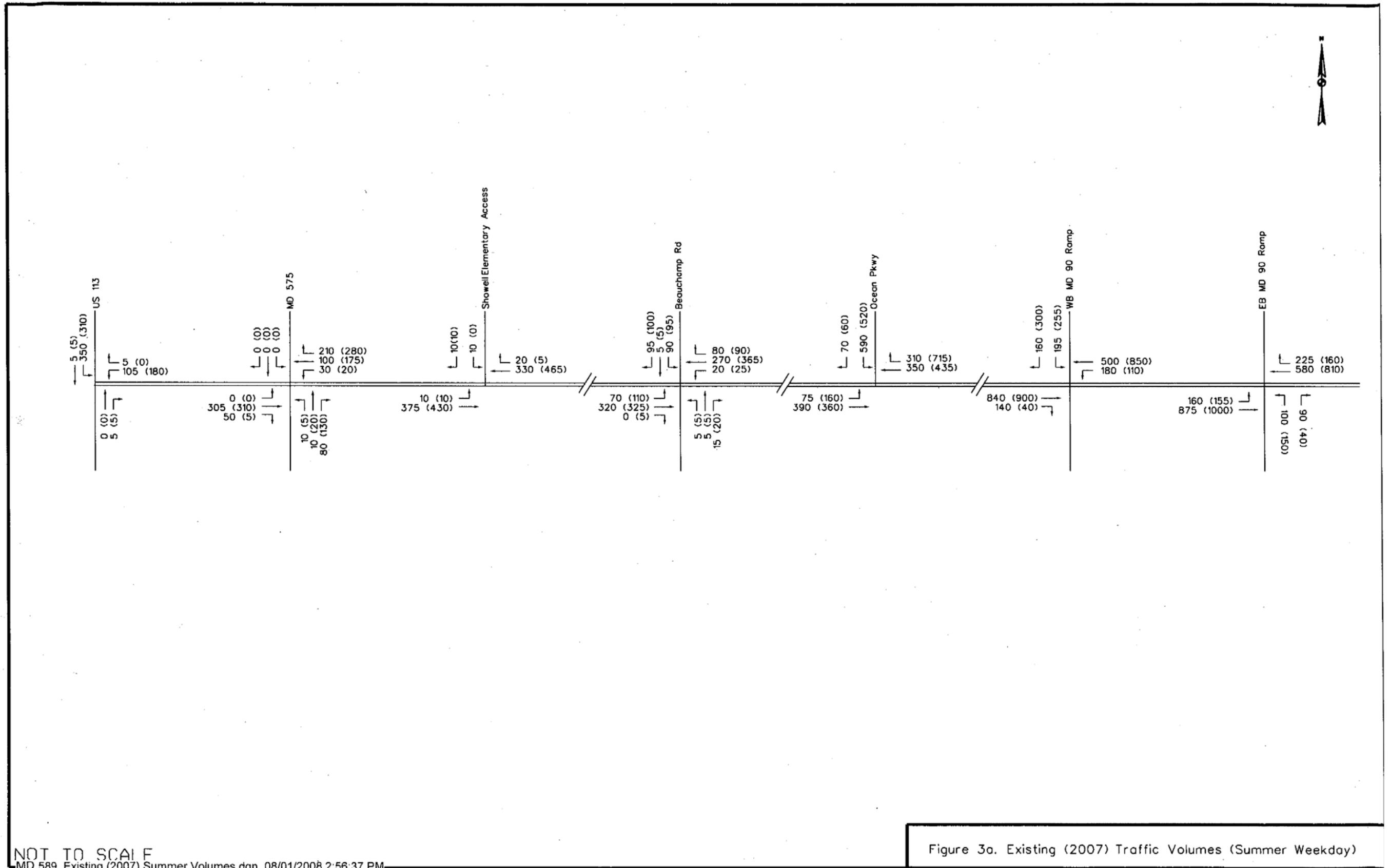
Figure 1a. Existing (2007) Traffic Volumes (Non-Summer)

NOT TO SCALE
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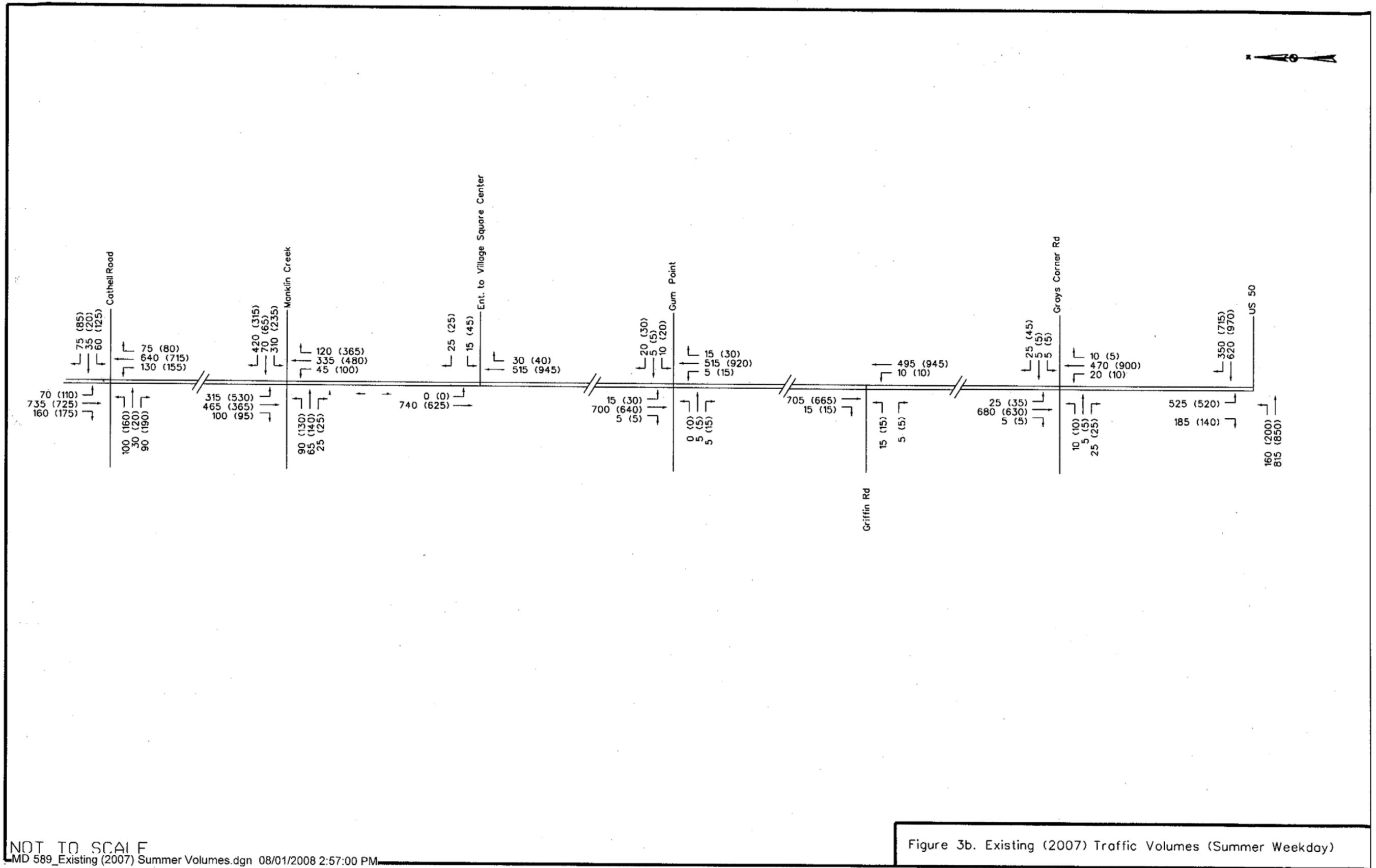
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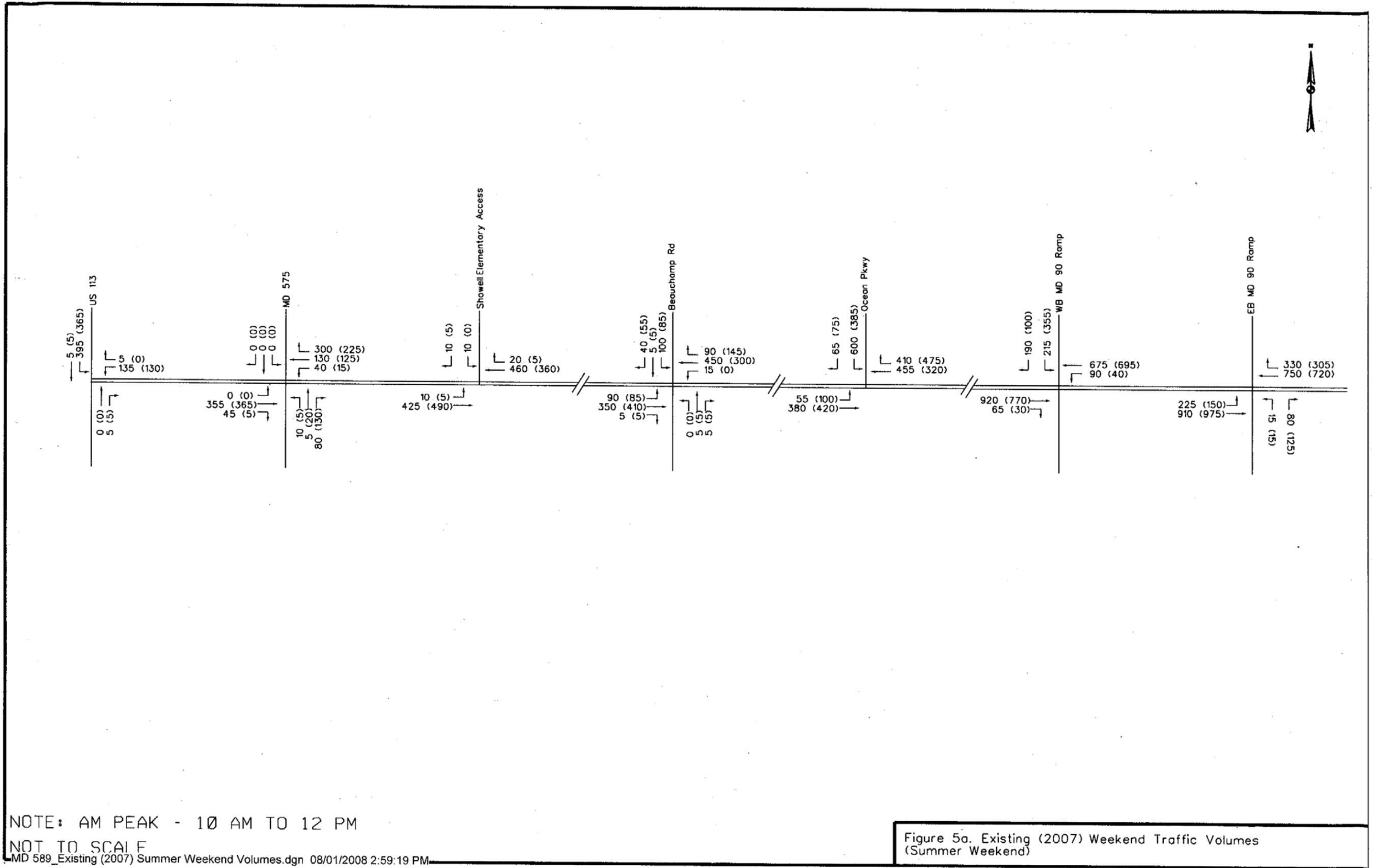
Figure 1b. Existing (2007) Traffic Volumes (Non-Summer)

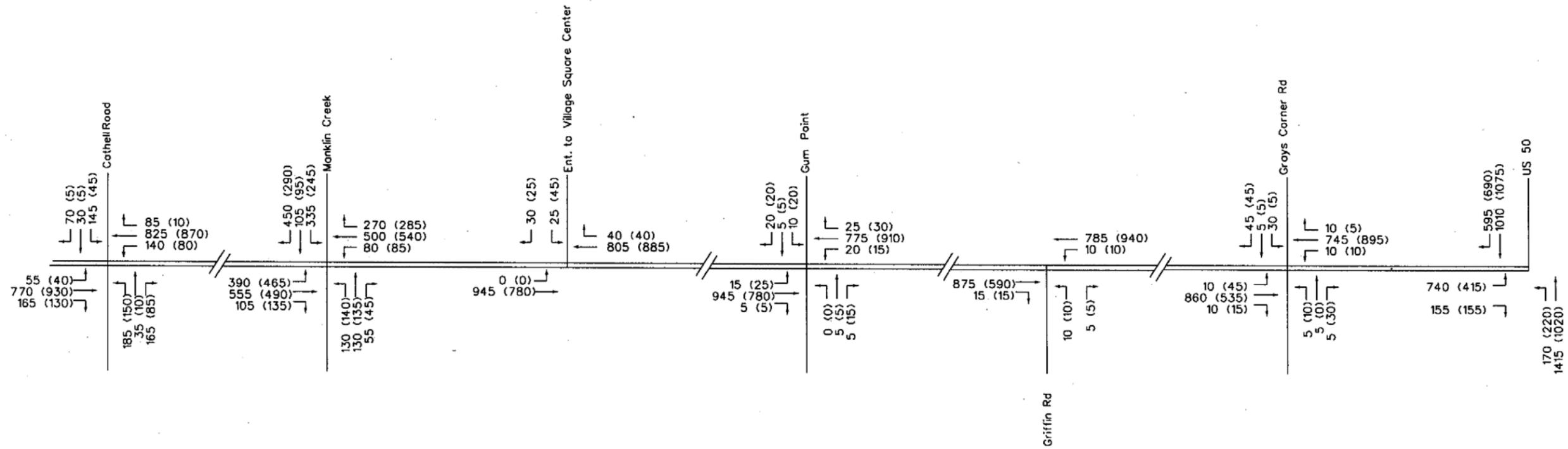


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 MD 589_Existing (2007) Summer Volumes.dgn 08/01/2008 2:56:37 PM

Figure 3a. Existing (2007) Traffic Volumes (Summer Weekday)





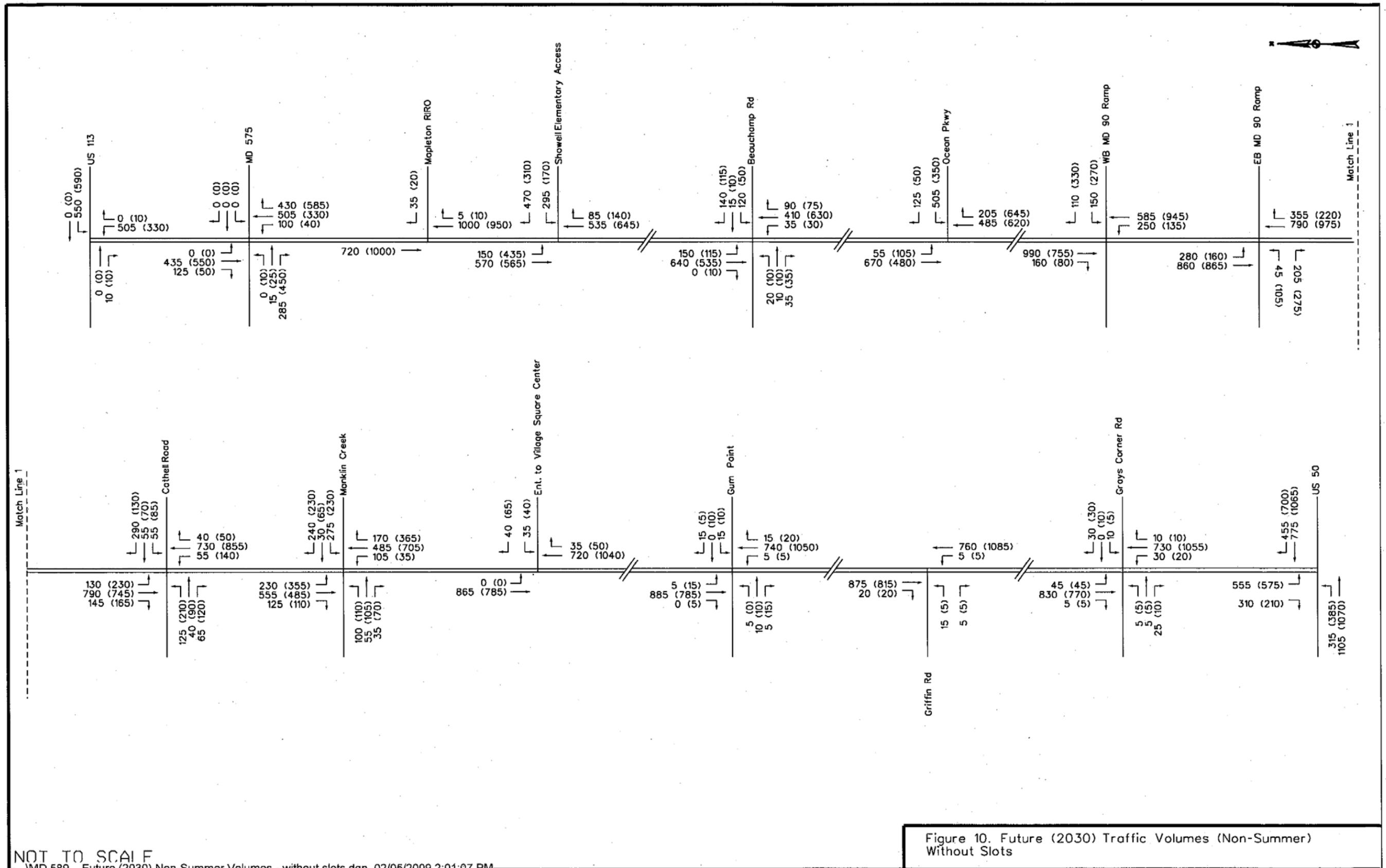


NOTE: AM PEAK - 10 AM TO 12 PM

NOT TO SCALE

MD 589_Existing (2007) Summer Weekend Volumes.dgn 08/01/2008 2:59:49 PM

Figure 5b. Existing (2007) Weekend Traffic Volumes (Summer Weekend)



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...MD 589_Future (2030) Non-Summer Volumes - without slots.dgn 02/05/2009 2:01:07 PM

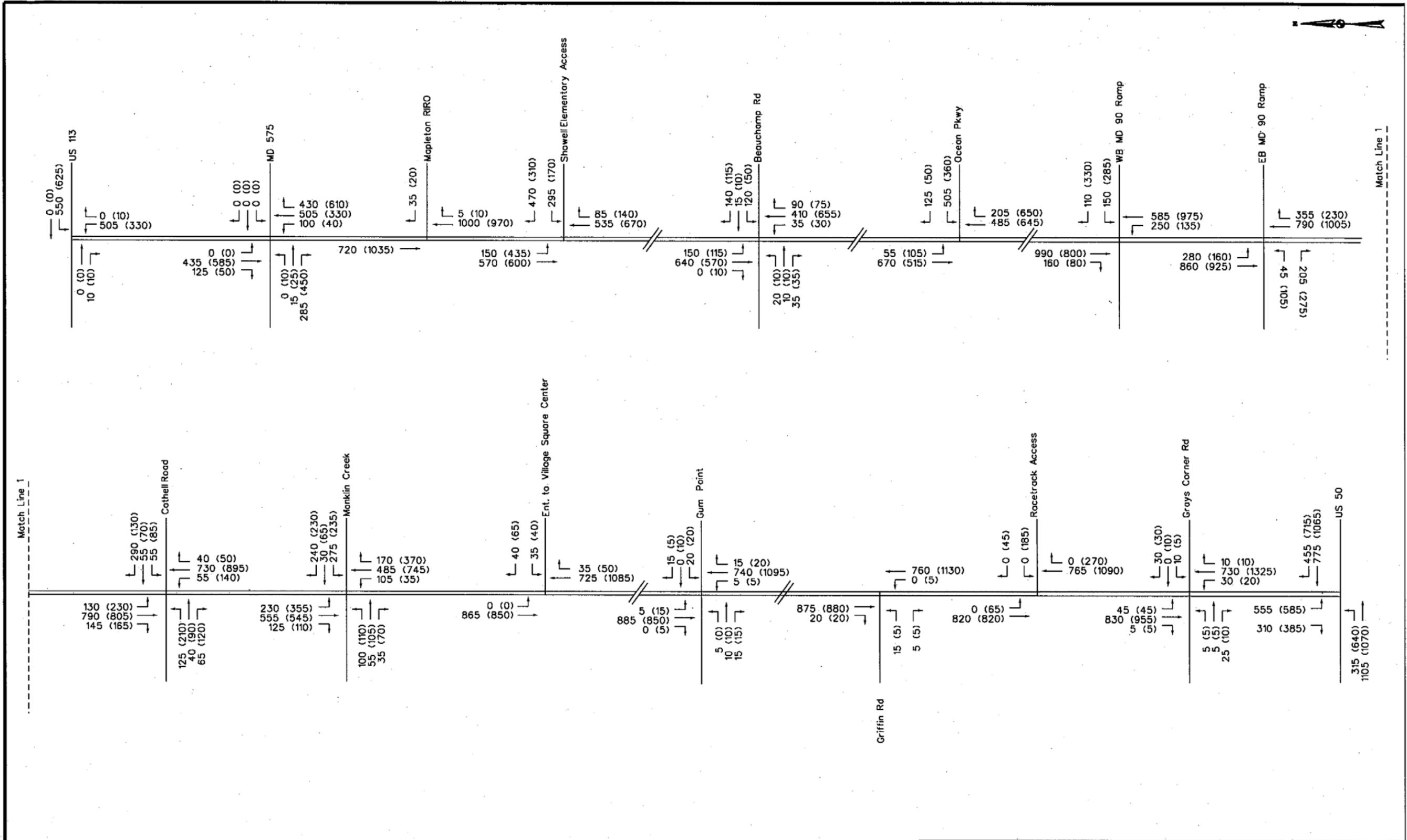
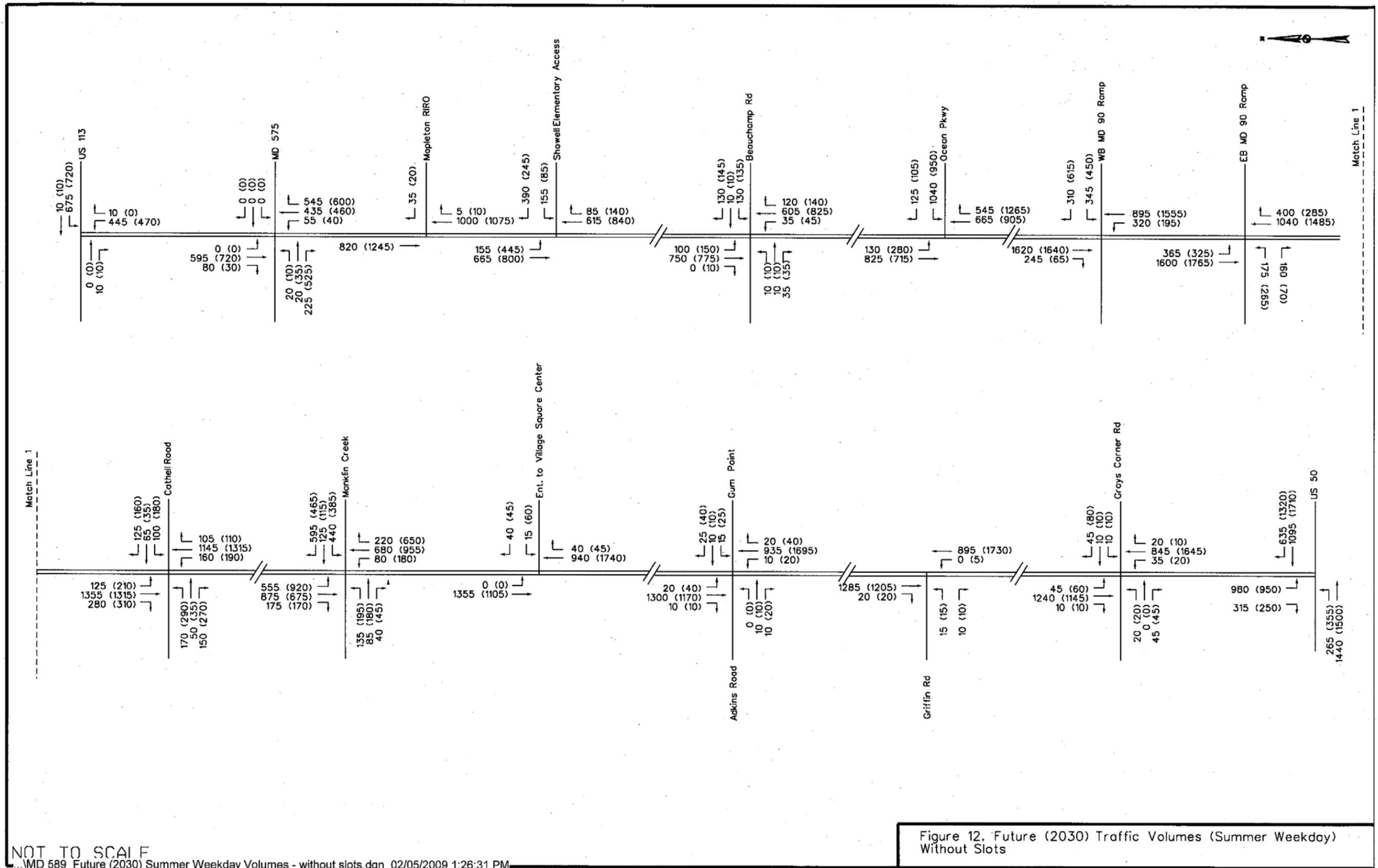


Figure 11. Future (2030) Traffic Volumes (Non-Summer) With Slots

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 ...MD 589_Future (2030) Weekday Non-Summer Volumes - With Slots.dgn 02/05/2009 1:20:09 PM



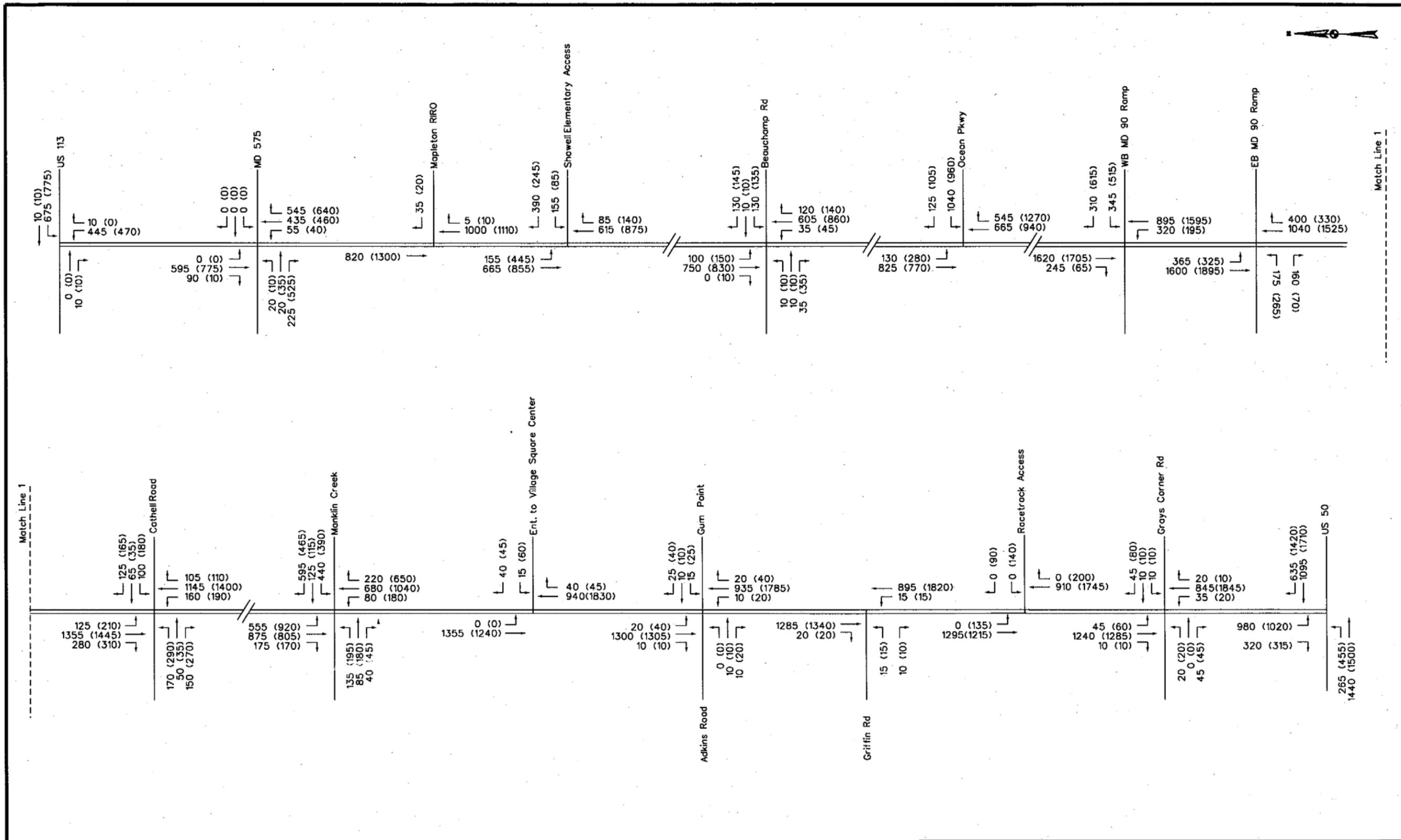


Figure 13. Future (2030) Traffic Volumes (Summer Weekday) With Slots

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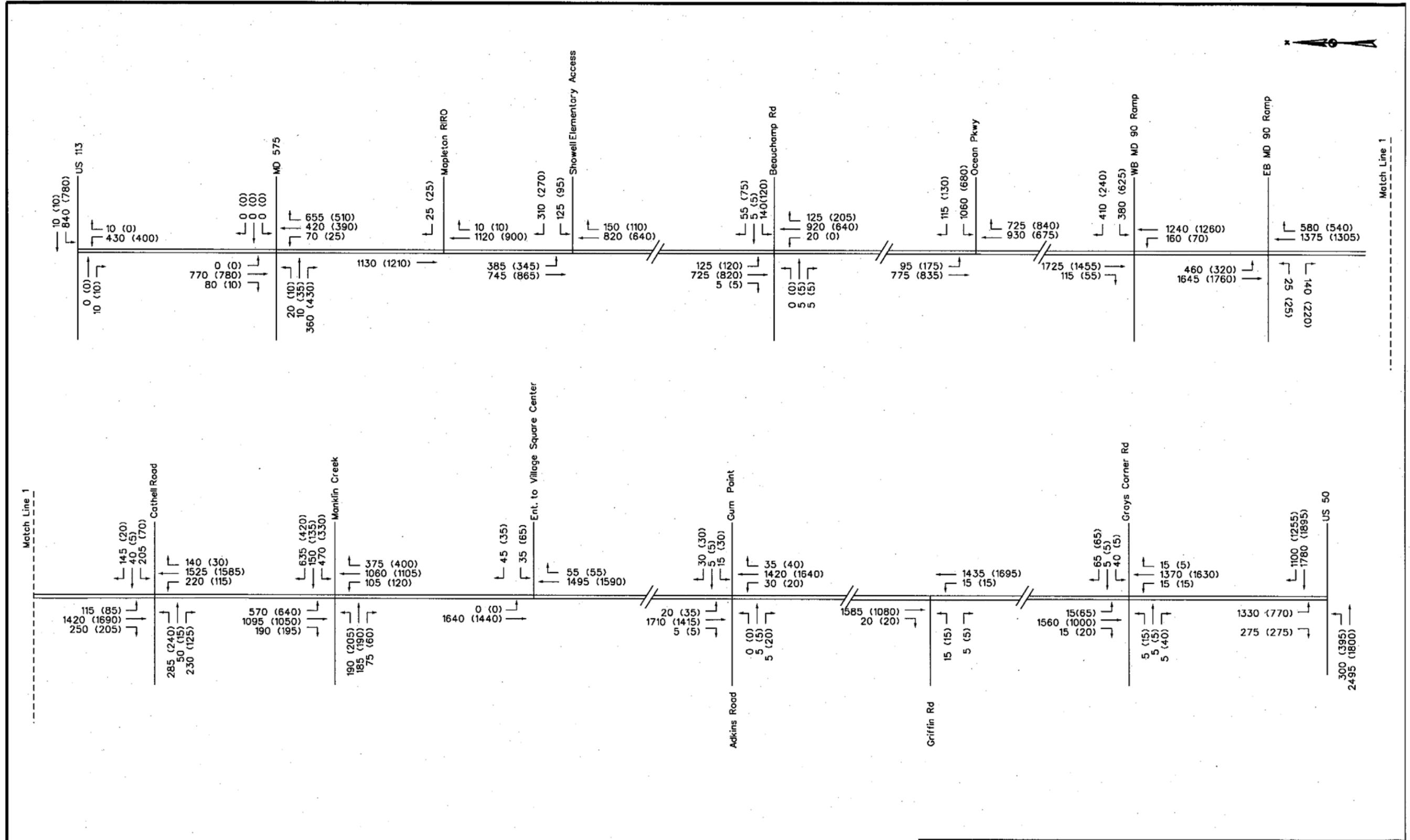
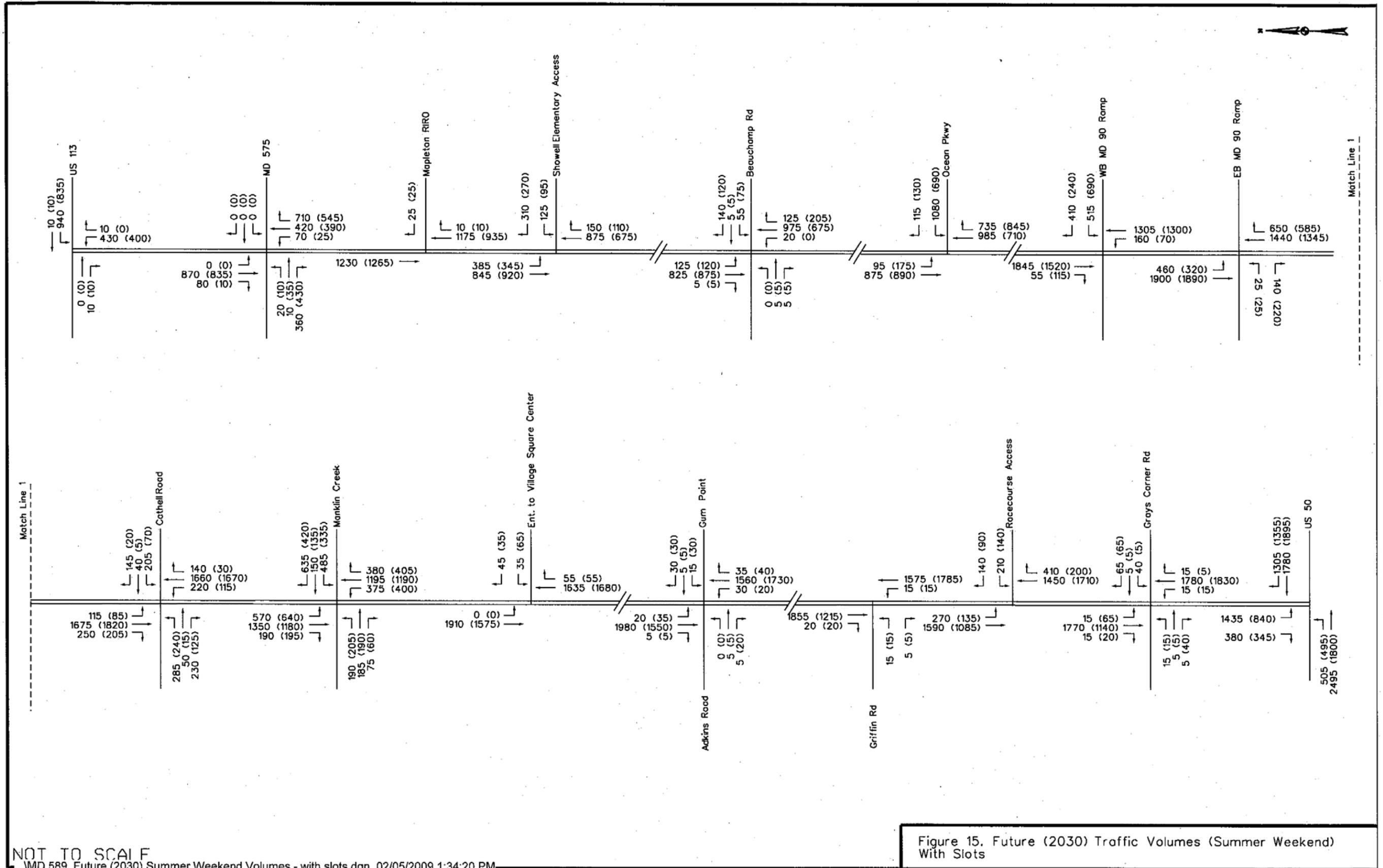


Figure 14. Future (2030) Traffic Volumes (Summer Weekend) Without Slots

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 MD 589_Future (2030) Summer Weekend Volumes - without slots.dgn 02/05/2009 1:32:04 PM



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...MD 589_Future (2030) Summer Weekend Volumes - with slots.dgn 02/05/2009 1:34:20 PM

Figure 15. Future (2030) Traffic Volumes (Summer Weekend) With Slots