8. TRANSPORTATION

This section discusses Wayland's transportation network, including existing road conditions, alternative forms of transportation, and an analysis of the transportation issues associated with new development.

Transportation and land use are inextricably linked. Land use activities, such as residential or retail developments, can have a large impact on the demand for transportation facilities. Similarly, transportation access and services are a major consideration in evaluating potential sites for new development, especially commercial or retail projects. A well-focused master plan can be an important tool for maintaining and improving accessibility and ensuring that existing and future land uses do not overwhelm a community's transportation system, both its external regional links and its internal local networks.

Summary of Transportation Themes in Wayland	
Assets	**Liabilities**
• Commuter rail service is available in adjacent communities. • Many of Wayland's roads still retain their scenic appearance. • Sidewalks are provided in Cochituate village and walkways and trails are available in many outlying areas. • The four main routes (*i.e.*, Routes 30, 20, 27, and 126) that traverse Wayland have path/walkways on at least one side of the roadway.	• Through traffic to and from surrounding communities continues to create traffic congestion on Wayland's roads. • The road layout in Wayland tends to funnel traffic toward bottleneck locations. • Traffic cutting through residential neighborhoods creates safety, noise, and speed problems. • New residential and commercial growth will add congestion to Wayland's roadways. • There are no or few sidewalks, walkways, and trails in some sections of the community. • The availability of public transportation in and near Wayland is very limited, and there are few viable transportation alternatives to private vehicles.

8.1 Regional Highway System and Commuting Patterns

The regional highway system is one of the most important infrastructure elements influencing a community's development pattern. The accessibility provided by regional highways not only stimulates new development, but allows residents greater flexibility in making decisions that are affected by locational factors such as where to work, where to live, and where to shop.

Wayland is located about 15 miles west of Boston. Regional transportation access is provided primarily by Interstate 90 (the Massachusetts Turnpike), which runs east–west at the southern edge of the Town. The nearest Turnpike entrance/exit is located just southwest of Lake Cochituate in neighboring Framingham. Wayland also has easy access to Boston's inner and outer circumferential highways, with I-95/Route 128 located approximately two miles east of Wayland and I-495 located about ten miles west. For more local travel, Boston Post Road (Route 20) runs east-west through the center of Town and Routes 27 and 126 (which overlap for a stretch in the center of Town) provide north-south access. Route 30 provides access to the east and is often used as a bypass of the Mass Pike to points east and to Interstate 95.

8.1.1 Residence Locations and Workplace Destinations

The Journey-to-Work data shown in **Table 8-1** is based on the 2000 U.S. Census. In 2000, 24.0% of people working in Wayland also resided in the Town. Many of the people working in Wayland commuted from nearby communities such as Framingham (8.9%), Boston (6.2%), Natick (4.9%), Marlborough (3.8%), Sudbury (3.7%), Waltham (2.5%), and Newton (2.0%). In addition, 42.4% of Wayland's employees come from other Massachusetts communities while a small number (1.2%) commuted in from other New England states, including New Hampshire, Rhode Island, and Connecticut. Another 0.4% identified their primary residence as other states, including New York.

A large proportion of the Town's resident labor force worked in Boston (19.1%) in 2000 while another 17.0% worked in Wayland. Many individuals worked in nearby communities, including Framingham (7.3%), Waltham (7.0%), Cambridge (4.8%), Natick (4.2%), Newton (3.1%), and Sudbury (2.8%). Another 32.0% of the resident labor force commuted to other Massachusetts communities. Of the 2.7% of the Town's population that did not work in Massachusetts, 1.3% worked in other New England states, including New Hampshire and Rhode Island, while 1.3% identified their place of work as being in other states, including Ohio, New York, New Jersey, Minnesota, Maryland, and Illinois. In addition, 0.1% of Wayland residents worked abroad.

Table 8-1
Town of Wayland
Employee and Resident Commuter Patterns, 2000

Place of Residence of Wayland Employees	# of Persons	%	Workplace of Wayland Residents	# of Persons	%
Wayland	1,089	24.0	Boston	1,220	19.1
Framingham	403	8.9	Wayland	1,089	17.0
Boston	281	6.2	Framingham	465	7.3
Natick	224	4.9	Waltham	450	7.0
Marlborough	171	3.8	Cambridge	309	4.8
Sudbury	170	3.7	Natick	267	4.2
Waltham	115	2.5	Newton	198	3.1
Newton	91	2.0	Sudbury	178	2.8
Other MA communities	1,925	42.4	Other MA communities	2,048	32.0
Other New England	55	1.2	Other New England	83	1.3
Other States	19	0.4	Other States	83	1.3
Abroad	0	0.0	Abroad	8	0.1
Total	**4,543**	**100.0**	**Total**	**6,398**	**100.0**

Source: U.S. Census Bureau, Census 2000. These files were compiled from Census 2000 responses to the long-form (sample) questions on where people worked. If the respondent worked from home and listed his employment location as the Town of Wayland it should be recorded in the figure presented in the above table.

8.1.2 Mode of Travel

In 1990, 83.1% of all employed Wayland residents drove alone to their workplaces. Another 6.1% of workers traveled to work via carpool. Approximately 3.6% took public transportation while 1.3% walked to work and 5.4% worked at home. In 2000, the share of employed residents that drove single-occupied vehicles decreased by 2.5 percentage points from the 1990 number. The percentage of employed residents carpooling to work

increased from 6.1% to 7.1% during the 1990s, while the share of residents working at home increased during that time from 5.4% to 7.3%. The percentage of Town residents that walked to work decreased from 1.3% to 0.6%. See **Table 8-2** for additional information, including a comparison of mode of travel for Wayland residents and Middlesex County residents.

Table 8-2
Town of Wayland and Middlesex County
Journey-to-Work Mode of Travel, 1990 and 2000

	Wayland			Middlesex County		
Mode of Travel	**1990 %**	**2000 %**	**Change**	**1990 %**	**2000 %**	**Change**
Drove Alone	83.1	80.7	-2.5	71.8	72.1	0.3
Carpooled	6.1	7.1	1.0	9.9	8.2	-1.7
Public Transit	3.6	3.8	0.2	9.5	10.3	0.8
Walked	1.3	0.6	-0.7	5.3	4.6	-0.7
Other means	0.5	0.2	0.1	1.0	0.5	0.2
Worked at home	5.4	7.3	1.9	2.6	3.6	1.0
Total Number	**6,282**	**6,398**	**1.8**	**747,096**	**763,636**	**2.2**

Source: U.S. Census Bureau, Census 1990 and 2000.

8.1.3 Commuting Times

Commuting times for Wayland residents in 2000 were longer than the Middlesex County and state averages.[1] For example, whereas about 43.1% of Middlesex County residents and 39.5% of state residents commuted 30 minutes or more one-way, 50.9% of Wayland residents had 30-minute plus one-way commutes. This statistic is due to the fact that most Wayland residents commute to such a wide range of places for work. See **Table 8-3** for the detailed breakdown.

Table 8-3
Town of Wayland, Middlesex County, and the State of Massachusetts
Average One-Way Commuting Time for Wayland Residents, 2000

Commuting Time	**Wayland Number**	**Wayland %**	**Middlesex County %**	**Massachusetts %**
Less than fifteen minutes	964	16.3	23.5	27.2
Fifteen to twenty-nine minutes	1,947	32.8	33.4	33.3
Thirty to forty-four minutes	1,653	27.9	25.1	21.1
Forty-five minutes and more	1,366	23.0	18.0	18.4
Total	**5,930**	**100.0**	**100.0**	100.0

Source: U.S. Census Bureau, Census 2000.

8.2 Existing Road System in Wayland

Wayland's road system consists of several different types and patterns of roads. The Cochituate area has a relatively tight grid of residential streets, which is reflective of street layout patterns and development densities

[1] These statistics are determined for resident workers age 16 and over who do not work at home.

at the time that this area was developed. However, Dudley Pond and Lake Cochituate limit the connectivity of roads in the area. With the exception of Wayland Center, the remaining areas of Town are characterized by a more radial road pattern and less dense development. Routes 20, 27, 30, and 126 are the main routes that traverse Wayland and connect to surrounding communities. Each of these routes has paths/walkways on at least one side of the roadway. These main routes provide access to smaller rural roads and residential streets throughout the rest of the Town. Many of the residential roads are interconnected to other residential roads in a meandering fashion. A substantial number of roads terminate in cul-de-sacs and dead-ends. The configuration of Wayland's local road system is shown on **Figure 8-1**.

To better understand the existing road system, an inventory of conditions on Wayland roads was obtained from the Massachusetts Highway Department (MassHighway). This Road Inventory File identifies the administrative bodies with jurisdiction over each road, the functional use of each road, and a host of other physical and operating characteristics.[2] The inventory indicates that there are presently about 95 miles of roadway in the Town.

8.2.1 Jurisdictional Classification of Wayland Roads

The jurisdictional and functional classifications of Wayland's roads are important to understanding how the streets relate to one another, how they are used, and who exercises control over them. The Town of Wayland assumes primary responsibility for the ongoing maintenance and safe operation of all Town-accepted roads, while Mass Highway and other state agencies assume responsibility for the conditions of roads under their jurisdiction. There also are a number of privately maintained roads within the Town's borders.

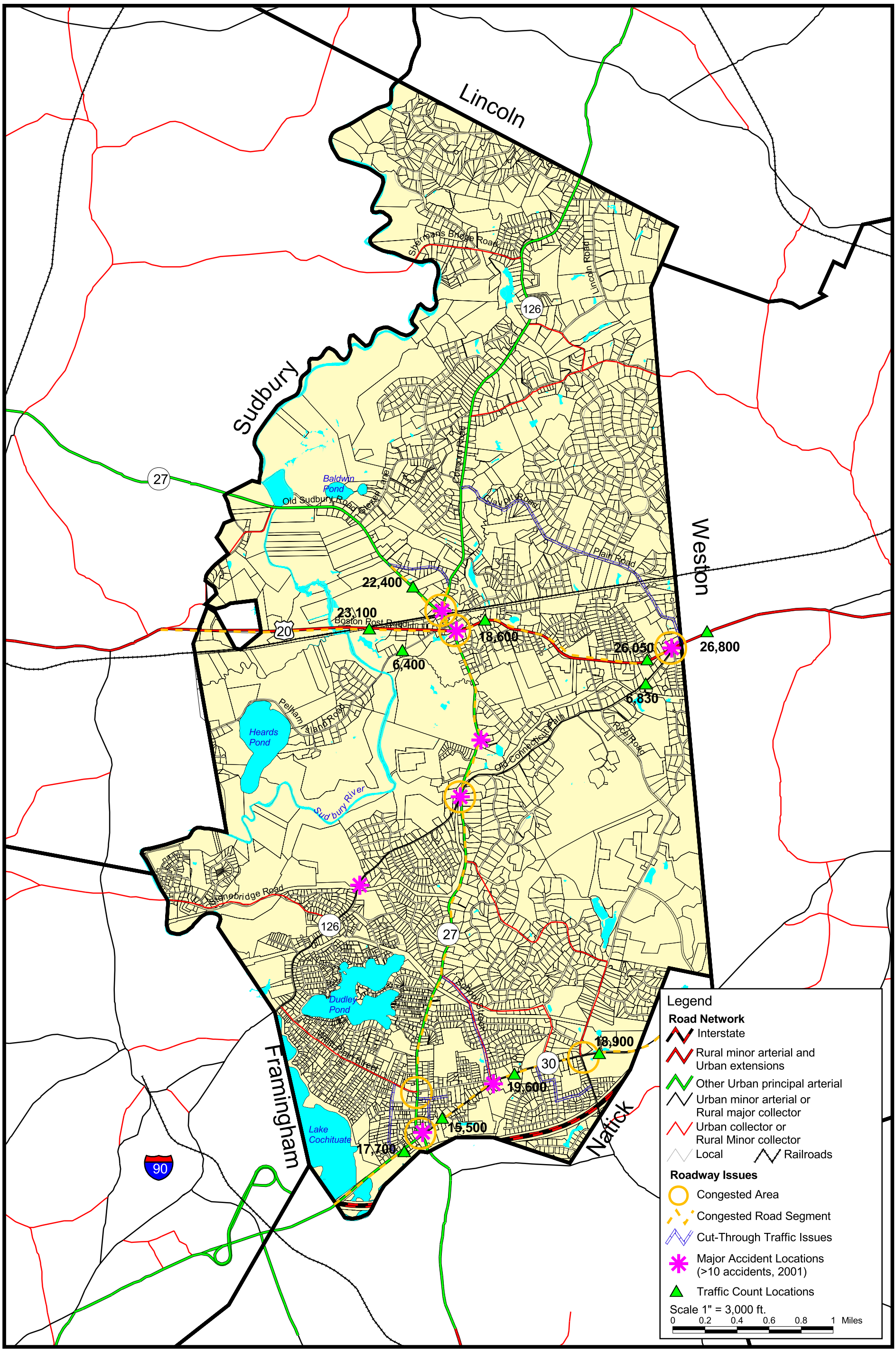
Table 8-4 lists the agencies that have jurisdiction over the use and maintenance of the roads in Wayland. As shown in this table, most (92%) of the roads in Wayland are Town-owned. Only Boston Post Road (Route 20) and the Massachusetts Turnpike are state-controlled. The other state-numbered roads in Wayland belong to the Town. Approximately 4% of the Town's roadways (3.93 miles) are classified as unaccepted roadways (private ways). In general, these unaccepted roads are short, tend to branch off of main roads, and primarily provide access to residences. The majority of these private roads are located in Cochituate, although others are scattered throughout the Town.

Table 8-4
Town of Wayland
Jurisdictional Classification of Roads

Controlling Agency	Location	Mileage
Town of Wayland	Throughout Town	87.03
Massachusetts Highway Dept.	Route 20 (Boston Post Road)	2.93
Massachusetts Turnpike Authority	Massachusetts Turnpike (Interstate 90)	1.13
Unaccepted but open to public travel	Throughout Town; concentrated in Cochituate	3.93
Total Roadway Mileage		**95.02**

Source: MassHighway Road Inventory File, 2002.

[2] The Road Inventory File is maintained by the MassHighway, Bureau of Transportation Planning and Development. It contains information on roadway mileage, conditions, and numerous other characteristics. The Road Inventory File is updated periodically, but does not always include the most recent roadway information.



Daylor Consulting Group Inc.
Ten Forbes Road Braintree, MA 02184 781-849-7070

Transportation Existing Conditions

Wayland Master Plan

Source: MassGIS, Town of Wayland

Figure 8-1

WaylandEO418Submittal.apr

8.2.2 Functional Use Classification of Wayland Roads

Roadways can serve two basic functions: they can provide access to individual parcels of land, or they facilitate *movement* of vehicles between various locations. A roadway that primarily provides access will likely have several driveways that connect to private residences or businesses. Parking and loading may also occur on such roadways. Roadways that are principally intended to facilitate movement often limit access with grade-separated crossings and restrictions on curb cuts. For example, interstates exist only to provide for high-speed travel, and access is mainly limited to on-and-off ramps. When a roadway experiences high demand for both access and through movement, the road tends to perform neither function efficiently. Vehicles attempting to gain access must navigate turns amidst heavy through traffic, while through traffic is often stalled behind turning vehicles. Commonwealth Road (Route 30) is one example of a roadway with high volumes of both traffic accessing local destinations and through traffic.

The U.S. Department of Transportation and MassHighway classify roads according to function and location. Roads in urban cities and urban Towns are classified as "urban" while roads in rural Towns are classified as "rural." Wayland is considered an urban Town (according to the classifying agencies), thus, all of its roads are classified as "urban" roads, even though some of them may be rural in character. The following is the hierarchy of function by which U.S. roads are classified. As shown in this list, roads of the same function have a different name depending on whether they are located in urban or rural communities.

1. Interstates
2. Rural principal arterials or Urban extensions of principal arterials
3. Rural minor arterials or Urban extensions of minor arterials
4. Other urban principal arterials
5. Urban minor arterials or Rural major collectors
6. Urban collectors or Rural minor collectors
7. Local streets

Table 8-5 identifies the functional classification of major roads in Wayland. The Massachusetts Turnpike (I-90) is the only interstate in Wayland, while Boston Post Road (Route 20) is the only Urban Extension of a Minor Arterial roadway. Most of the state highways function as Other Urban Principal Arterials, including: Concord Road (Route 126); part of Commonwealth Road (Route 30); and Main Street, Cochituate Road, and Old Sudbury Road (all parts of Route 27). Several road segments function as Urban Minor Arterials, including: Oak Street; Old Connecticut Path East; Old Connecticut Path/Route 126; and part of Commonwealth Road (Route 30). The arterial roads together provide east-west access to Framingham, Sudbury and Weston, and north-south access to Framingham and Lincoln. All of these roadways are major commuting roads.

Finally, there are more than 10 miles of Urban Collectors located throughout Wayland that provide access to local residential roads, including dead-end roads and cul-de-sacs. The majority of roads in Wayland—66.5 miles or roughly 70% of the Town's total roadway mileage—function as local or residential roads or streets designed primarily to provide access to individual residential parcels or neighborhoods.

Table 8-5
Town of Wayland
Functional Classification of Road System

Functional Classification	Road Name	Mileage
Interstate	Massachusetts Turnpike/Interstate-90	0.86
Interstate Total		**0.86**
Urban Extension of Minor Arterial	Boston Post Road (Route 20)	2.93
Urban Extension of Minor Arterial Total		**2.93**
Other Urban Principal Arterial	Cochituate Road	2.37
Other Urban Principal Arterial	Commonwealth Road	0.68
Other Urban Principal Arterial	Concord Road	3.10
Other Urban Principal Arterial	Main Street	1.16
Other Urban Principal Arterial	Old Sudbury Road	1.64
Other Urban Principal Arterial Total		**8.95**
Urban Minor Arterial	Oak Street	0.43
Urban Minor Arterial	Old Connecticut Path	1.66
Urban Minor Arterial	Old Connecticut Path/Route 126	1.94
Urban Minor Arterial	Commonwealth Road	1.5
Urban Minor Arterial Total		**5.53**
Urban Collector	East Plain Street	0.03
Urban Collector	Glezen Lane	2.37
Urban Collector	Hazelbrook Road	0.32
Urban Collector	Lincoln Road	0.22
Urban Collector	Loker Street	0.88
Urban Collector	Rice Road	0.61
Urban Collector	River Road	0.66
Urban Collector	School Street	0.75
Urban Collector	Sherman Bridge Road	0.74
Urban Collector	Stonebridge Road	1.14
Urban Collector	West Plain Street	1.02
Urban Collector	Woodbridge Road	1.50
Urban Collector Total		**10.24**
Local Roads	**Throughout Town**	**66.51**
Total		**95.02**

Source: MassHighway Road Inventory File, 2002.

8.2.3 Traffic Conditions on Wayland Roads

MassHighway periodically conducts traffic counts on Boston Post Road (Route 20), Route 27, and other roadways. The results of these counts, conducted in 1991 and 1999, are shown in **Table 8-6**. These totals represent 24-hour average daily traffic volumes, adjusted to reflect monthly variations. Boston Post Road (Route 20) and its adjacent arterials are subject to relatively high volumes of commuter traffic. These counts

indicate that traffic volume drops off considerably as one moves further west along Boston Post Road (Route 20), although the volume remains relatively high even west of Route 27.

Table 8-6
Town of Wayland
Average Daily Traffic on Roads

Major Roadway	Crossing Street	Year	Average Daily Traffic
Old Connecticut Path	South of Boston Post Road (Route 20)	1991	6,830
Pelham Island Road	West of Route 27	1999	6,400
Boston Post Road	East of Old Connecticut Path East	1991	26,800
Boston Post Road	West of Old Connecticut Path East	1991	26,050
Boston Post Road	East of Route 27	1999	23,100
Boston Post Road	West of Route 27	1999	18,600
Route 27	North of Pelham Island Road	1999	22,400
Commonwealth Road*	West of Main Street	1997	17,700
Commonwealth Road*	East of Main Street	1997	15,500
Commonwealth Road*	East of School Street	1997	19,600
Commonwealth Road*	East of Rice Road	1997	18,900

Source: MassHighway 1991 and 1999, and 1997 Wayland Traffic Study for the Commonwealth Road (Route 30) Corridor. Traffic counts identified with a (*) are from the 1997 Wayland Traffic Study, while the other counts are from MassHighway. Notes: ADT refers to the average daily traffic volume (without regard to direction) recorded on the street over a 24-hour period on a typical weekday during the indicated month/year.

Despite the fact that its population has grown relatively slowly, Wayland has witnessed increased congestion from both resident and non-resident commuter traffic. This congestion is due to regional factors such as burgeoning commercial and industrial development within the I-95 (Route 128) and I-495 corridors, a spread-out development pattern that caters to the automobile, and a lack of adequate non-auto travel options. While several solutions have been suggested for dealing with the growing congestion in Wayland, the Town has a few intrinsic characteristics that make simple fixes impossible. First, the Town has extensive wetlands, which makes the construction of new roads or even substantial road widening projects unlikely given current environment regulations. Second, the regional road network tends to funnel traffic through Wayland. For example, Routes 20, 27, and 126 all converge in Wayland Center, while Routes 27 and 30 converge in Cochituate Center. Finally, many roadways are formally designated scenic roads, meaning that widening may have a significant impact on their scenic characteristics and generally requires hearings under the Scenic Roads Act and the Shade Tree Act. Examples of problematic road changes can be seen on Old Connecticut Path East where widening would require the partial excavation of an adjacent hill or placement of large amounts of fill or on Concord Road where sidewalk reconstruction would undoubtedly prompt drainage-related issues because the roadway runs through wetlands. It also should be noted that many Town residents do not want the Town's traditionally narrow roadways to be altered. (*See* Code of Wayland Section 158-3 requiring a public hearing before placing pavement where no pavement exists at the time.). Congested roadway segment and intersections have been noted on Figure 8-1. These areas were identified using traffic data provided by MassHighway and verified through discussions with the Master Plan Committee.

8.2.4 Structural Condition of Wayland Roads

MassHighway regularly identifies the structural condition of the state's roadways. The condition is assessed as good, fair, deficient, or intolerable. According to MassHighway's database obtained in June 2002, most roads

in Wayland are in either good or fair condition. Many of the roadways evaluated as "deficient" are private ways. Two exceptions to this are Lincoln Road and Hazelbrook Road, which are public roads, maintained by the Town, and have been listed as deficient because they retain their dirt surfaces. Private roadways are often short and most exist primarily to provide access to a limited number of residences or are recently constructed roads that have not been accepted by the Town. For many of these private ways, the homeowners living on them want the ways to remain unimproved. The total mileage of these unimproved road segments, both public and private, is 9.41 miles or just under 10% of the Town's roadways.

8.2.5 Safety on Wayland Roads

Not surprisingly, the most heavily traveled roads are those subject to the highest frequency of motor vehicle accidents. Roads with the highest frequency of accidents (along the entire length of the road corridor located in Wayland) include Boston Post Road (Route 20), which tops the list with 124 accidents during 2002. As it is the only roadway providing east-west access through Wayland Center, Boston Post Road (Route 20) is a very heavily traveled roadway. Commonwealth Road had 104 accidents during 2002, while Old Connecticut Path had 83 accidents. There were 65 accidents on Cochituate Road in 2002, while Main Street experienced 62 accidents during that time period. **Table 8-7** identifies those **intersections** with the highest frequency of accidents in 2002.

Table 8-7
Town of Wayland
Top Accident Intersections, 2002

Intersection	Accidents
Boston Post Road (Route 20)/Cochituate Road	28
Main Street/Commonwealth Road	21
Commonwealth Road/East Plain Street/School Street	18
Boston Post Road (Route 20)/Cochituate Road	15
Cochituate Road/Old Connecticut Path	12
Oak Street/Commonwealth Road	7
Boston Post Road (Route 20)/Pelham Island Extension	5
Cochituate Road/Pelham Island Extension	4
Stonebridge/Old Connecticut Path	2
Concord/Old Sudbury/Cochituate Road	2

Source: Wayland Police Department, 2002.

Another growing concern among Town residents is traffic speed. While traffic calming measures, such as speed humps, have been suggested, such measures are looked upon unfavorably by the Highway Department, whose job it is to plow the Town's roads during winter and by the Police and Fire Departments who need to safely deploy emergency vehicles. One attempt to address the Town's concern with speeding traffic was initiated by the Wayland Police Department through a new program, Operation Safer Neighborhood. The program's two goals are to encourage safer motor vehicle speeds by strictly enforcing the speed limit on selected neighborhood streets and to educate the motoring public and residents of the necessity of taking responsibility to keep the Town's streets and neighborhoods safer.

Several of the Town's intersections have been identified as problematic from the standpoint of traffic safety as well as congestion. Three of the major problem intersections include the intersection of Routes 20, 126, and 27 in Wayland Center; Cochituate Road (Route 27) and Old Connecticut Path (Five Paths); and Main Street

(Route 27) and Commonwealth Road (Route 30) in Cochituate Center. Work at the Wayland Center intersection is planned by MassHighway and the Town is studying ways to improve the Cochituate Center intersection. No changes are currently proposed for the Five Paths intersection.

8.3 Scenic Roadways

The Town has adopted a Scenic Road Bylaw pursuant to Chapter 40, Section 15C of the Massachusetts General Laws. The bylaw (Code of Wayland § 158-5 through 158-12) requires the Planning Board to hold a public hearing and review all work proposed within and along any designated Scenic Road. Projects that are subject to review include any changes such as road widening, the addition of a sidewalk, or the construction of a new curb cut or driveway, as they affect alteration of trees and stone walls. The bylaw allows for emergency repairs without requiring the ordinary review process. It is noted that state numbered routes cannot be designated as Scenic Roads, and that Scenic Road provisions only apply to work within the road right-of-way. The bylaw also establishes driveway requirements that:

- Allow only one curb cut for lots on scenic roads and limit the driveway width to 12 feet;
- Allow the removal of no more than 14 feet of existing stone wall to build a driveway.
- Prohibit the removal of large trees and tree clusters for the construction of driveways unless the curb cut cannot be safely located elsewhere.

Designated Scenic Road segments in Wayland include part or all of the following roads:

Bow Road	0.4 miles	Pelham Island Road	2.1 miles
Claypit Hill Road	1.1 miles	Pemberton Road	0.5 miles
Draper Road	1.4 miles	Pinebrook Road	0.4 miles
Glezen Road	2.3 miles	Plain Road	2.0 miles
Hazelbrook Road	0.3 miles	Rice Road	2.5 miles
Lincoln Road	1.4 miles	River Road	0.7 miles
Millbrook Road	0.4 miles	Sherman Bridge Road	0.7 miles
Old Connecticut Path (East)	1.7 miles	Water Row	0.3 miles
Oxbow Road	1.7 miles	West Plain Street	1.1 miles

8.4 Alternative Transportation Options in Wayland

Wayland residents, like those of many other Massachusetts communities, are heavily dependent on private automobiles for transportation. However, some alternatives are available. This section describes transportation alternatives including public transportation available in nearby communities, biking, and walking.

8.4.1 Rail Transportation

While there is not a commuter rail station in Wayland, there are stations in neighboring communities. MBTA commuter rail service is available to Boston's North Station via the Fitchburg Line (in Weston and Lincoln) and to Boston's South Station via the Worcester Line (in Framingham, Natick, and Wellesley). Weston stations include Kendal Green, Hastings, and Silver Hill. The Kendal Green station has a Town-owned lot that

accommodates 57 vehicles; the Hastings station has a six-vehicle, Town-owned parking lot; and the Silver Hill station has no parking spaces. The Lincoln Road station in Lincoln has a Town-owned parking lot that accommodates 161 cars. Travel time from Kendal Green to North Station is approximately 30 minutes. On the Worcester Line, the Framingham commuter station has 161 parking spaces; the West Natick station has 178 spaces; and the Natick station has a 71-space, Town-owned parking lot. All the Wellesley commuter stations have Town-owned parking lots. The Wellesley Square station has 260 spaces; Wellesley Hills has 50 spaces; and Wellesley Farms has 135 spaces.

8.4.2 Bus and Van Services

Wayland is a member of the Massachusetts Bay Transportation Authority (MBTA), but there are currently no MBTA bus or rail services provided in the Town. Cavalier Coach Corp. operates a commuter bus from Northborough to four locations in Boston, with a stop in Wayland Center. The route offers one trip in each direction in the morning and the evening. Travel time to Boston is approximately 40-65 minutes depending on which Boston stop one chooses. Big W Transportation also offers service to Boston from Wayland.

Bus services are available in Natick and Framingham to serve Shopper's World and the Framingham Industrial Park. However, there is no bus service on Commonwealth Road (Route 30) or other streets in Wayland.

8.4.3 Pedestrian and Bicycle Access

In order to help protect its rural character, many of Wayland's pedestrian accommodations have been built as meandering walkways and trails along major roads. While these trails are technically bike paths, they are not adequately designed to accommodate bicycle traffic and are generally used as walkways. They provide a sheltered or off-road route for pedestrians while at the same time preserving the road's scenic character. There is a bicycle path that begins at the Natick Town Line, proceeds through Cochituate Center and Wayland Center, and ends at the Lincoln Town line.

Some sections of Town do have formal sidewalks, most of which are four to five feet wide. For example, the area near Cochituate Village, and in between the four school facilities in the southern section of Town, has a significant number of sidewalks connecting local neighborhoods to the business district and school and play areas. In several other distinct areas of Town, sidewalks enhance pedestrian access to scenic areas. While many of the roads in Wayland Center have sidewalks on at least one side, high traffic volumes and the lack of adequate buffering make walking in these areas uncomfortable. Several of the Town's sidewalk segments are also very narrow (sidewalks on Sherman Bridge Road and Oak Hill Road, for example, are identified by MassHighway as being only two feet wide). A recent Enhancement Grant from MassHighway will allow for the reconstruction of some of the sidewalks in Wayland Center and along Boston Post Road (Route 20) at the time of the intersection reconstruction scheduled for 2004.

The Town's subdivision regulations require that sidewalks be built on both sides of any newly created subdivision roadway only if the new roadway connects to an existing sidewalk network. In many cases, the Town will waive the requirement for one of the two sidewalks.

Most of Wayland's bike paths are too narrow for comfortable cycling, as noted above, therefore, cyclists generally ride on the road. Many roads in Wayland are signed with Share the Road signs which encourage vehicles and bicycles to use the road together. In 1996, the MetroWest Growth Management Committee along with local bicycle enthusiast groups produced a map identifying the best routes for cyclists in the region.

Several Wayland roads are recommended for bicycling, including:

- Oxbow Road/Sherman's Bridge Road
- Glezen Lane
- Draper Road
- Claypit Hill Road/Plain Road
- Plain Road/Millbrook Road/Pelham Island Road
- Pinebrook Road/Rice Road
- Woodbridge Road
- Malden Lane/Pequot Road/School Street/Loker Street/Thompson Street
- Rice Road

In addition, the following roads are identified as suitable for experienced cyclists:

- Concord Road
- Old Sudbury Road/Cochituate Road
- Old Connecticut Path/Old Connecticut Path West/Stonebridge Road
- East and West Plain Street

Roads not recommended for bicycling by MetroWest include:

- Boston Post Road (Route 20)
- Commonwealth Road (Route 30)
- Main Street (Route 27)

An attempt is currently underway to create a continuous rail trail through central Massachusetts, including a stretch in Wayland. Advocates of the so-called Mass Central Rail Trail are promoting the re-use of a 104-mile right-of-way that runs from Boston to Williamsburg, Massachusetts (just west of Northampton). Much of the right-of-way is now passable by hikers, although in some locations, adjacent landowners have built over the tracks. In Wayland, the trail would pass through Wayland Center and roughly parallel to Boston Post Road (Route 20), connecting to Weston and Sudbury.

8.5 Future Transportation Considerations

This section discusses factors that may affect Wayland's transportation decisions in the upcoming years, including development trends and infrastructure investments. The next section discusses the recommendations of previous transportation studies, and how they may be applied to the current situation in Wayland.

8.5.1 Development Trends

As discussed previously, land use and development are the major contributors to transportation demand. The development patterns of the past few decades have catered to the automobile. Schools, recreational facilities, employment centers, and commercial centers are often accessible only by automobile. Wayland is significantly impacted by development occurring beyond its border as well. For example, a recently proposed large-scale residential development in Framingham, on the Town line between Wayland and Framingham, is expected to bring 665 new residential units. Traffic from this development will undoubtedly pass through Wayland, resulting in additional congestion problems at several of the area's intersections.

8.5.2 Planned Infrastructure Improvements

The Town annually assesses the condition of its infrastructure and makes plans accordingly to conduct maintenance, replacement, or reconstruction as appropriate. Improvements for which state funding, through MassHighway, will be provided are identified in **Section 8.6.1**.

8.6 Previous Transportation Plans

8.6.1 Transportation Improvement Program (TIP)

The Transportation Improvement Program (TIP) is a federally required planning document produced annually by the Boston Metropolitan Planning Organization (MPO). The document reflects the priorities established in a 25-year plan and lists all transit and highway projects that are anticipated to be constructed and funded with federal aid over a three-year horizon. The TIP goes beyond federal requirements by listing non-federal aid highway projects as well. The TIP is limited to only those projects for which funds are expected to be available. A transit project must be programmed in the TIP in order to receive federal funding, while a roadway project must be programmed in the TIP to be eligible for either federal or state funding.[3] Current MassHighway projects scheduled for Wayland include the following:

- Bridge Rehabilitation, BR#W-11-001 Boston Post Road (Route 20) over the Sudbury River. Project type: Bridge reconstruction/rehabilitation.
- Bridge Replacement, BR#W-11-002 Pelham Island Road over the Sudbury River. Project type: Bridge replacement.
- Signalization and Geometric Improvements: Route 27 (Main Street)/Route 30 (Commonwealth Road) intersection. Project type: traffic signals. (This project is listed as a Supplemental Project in the 2003 TIP.

8.6.2 Route 30 Corridor Study, 1997

In 1997, the Town in conjunction with David J. Friend, a transportation consultant, prepared a traffic study for the Commonwealth Road (Route 30) Corridor. The plan focuses on three main strategies for reducing or mitigating traffic congestion in the Commonwealth Road (Route 30) corridor: traffic calming measures, land-use controls, and traffic demand management. The study was prepared to address concerns related to:

- Congestion on Commonwealth Road (Route 30);
- Vehicle conflicts;
- The use of "short cut" roads in the area;
- Pedestrian and bicycle safety;
- Truck traffic; and
- The erosion of the quality of life associated with increased traffic in Cochituate Village.

The goals of the study were to:

- Maintain the semi-rural and small village quality of life that is so important to the residents and businesses located along Commonwealth Road (Route 30); and
- Provide for safe vehicular, pedestrian, and bicycle movements on all streets in the corridor.

[3] Boston Metropolitan Planning Organization, Transportation Improvement Program (TIP) Process, September 11, 2003.

Commonwealth Road (Route 30) is a two-lane, 2.3-mile long, Town-owned and maintained roadway that extends from the Weston Town line to the Natick Town line. The number of average daily trips (ADT) was more than 20,000 in 1997. During peak morning and evening traffic times, traffic volumes typically approach 2,000 vehicles per hour in both directions, operating at a Level of Service (LOS) D. The majority of Commonwealth Road (Route 30) traffic is generated from outside Wayland from uses such as Shoppers World, the Natick Mall, and other commercial uses along Route 9. Significant through traffic also occurs in other locations such as Old Sudbury Road, Boston Post Road (Route 20), Route 27, and Route 126. With additional development and the growing number of automobiles on the road, this traffic is expected to increase.

In the years prior to the study, very few accidents involving pedestrians or cyclists occurred. The report suggests that pedestrians and cyclists may avoid the corridor due to its dangerous conditions. Vehicular movements between major intersections were also found to be relatively safe. While the layout, alignment, and cross-sections of streets in the corridor were found to be safe, less safe conditions were found to exist at each of the major intersections located along Commonwealth Road (Route 30) including:

- Commonwealth Road (Route 30) /Oak Street/Rice Road;
- Commonwealth Road (Route 30)/Loker Street/Old Tavern Road;
- Commonwealth Road (Route 30)/School Street/East Plain Street; and
- Commonwealth Road (Route 30)/Main Street.

While pedestrian crossing pavement markings were found to be in good condition, the numerous intersections and curb cuts, as well as heavy traffic volumes, were described as creating an unfriendly environment for pedestrians and cyclists. In addition, there are no sidewalks along Commonwealth Road (Route 30) between Loker Street and Oak Street or on Oak Street or Rice Road.

The study also identified a number of roads or streets, known “short cuts” and used by motorists to avoid congestion on the major through roads. These short cuts are used whenever substantial backups occur on Commonwealth Road (Route 30) and include:

- Old Tavern Road (a residential subdivision connecting Commonwealth Road [Route 30] to Oak Street)
- Centre Street/Winter Street (connects Commonwealth Road [Route 30] to Main Street)
- Pemberton Road (Connects Commonwealth Road [Route 30] to West Plain Street)

The report included a recommended action plan that identified a three-prong approach for addressing the Town’s transportation concerns. This program included traffic calming techniques, land use controls, and traffic demand management techniques.

Recommended traffic calming techniques included active controls such as traffic signals, rumble strips along rural segments of Commonwealth Road (Route 30), and, potentially, if traffic increases to such an extent to warrant it, the conversion of Pemberton Road to a one-way street. Passive controls included the placement of access control signs such as those identifying “Local Access Only,” installation of a School Zone sign with flashing beacons, and the use of gateway treatments such as signs on Commonwealth Road (Route 30) announcing “Slow – Entering Village” at the eastern and western ends of Cochituate. Additional measures include infrastructure improvements aimed at improving safety at the Commonwealth Road (Route 30)/Main Street (Route 27) intersection by providing turning lanes, replacing existing light poles with overhead signals,

and increasing the turning radius. Other recommended measures included improving the visibility of pedestrian crosswalk markings; installing sidewalks on Commonwealth Road (Route 30) between Loker Street and Rice Road to improve the continuity of sidewalks in the area (this action alone would permit pedestrian and bicycle travel along virtually the entire length of Route 30); and providing a pedestrian light and crosswalk from the west side of Main Street to Hannah Williams Park.

Recommended land use controls included acquisition of strategic parcels (such as the Dow Chemical property—which has since been acquired—and the Cochituate Motors site) for conservation, open space or recreational purposes. In fact, the report explicitly identified the acquisition of Commonwealth Road (Route 30) parcels as the single action that would have the greatest impact on future traffic volumes in the Commonwealth Road (Route 30) corridor. The report also recommended rezoning properties along Commonwealth Road (Route 30) to less intensive uses; restricting high trip generation uses such as fast food restaurants and drive-through uses; discouraging residential subdivision by modifying frontage requirements; adopting a trip reduction ordinance that requires developers to minimize the traffic impacts of their projects; and establishing an interim planning overlay district that requires site plan approval for new developments with the longer range goal of adopting a "Village Zoning" bylaw.

Recommended traffic demand management techniques included improving the availability and accessibility of public transit in the Commonwealth Road (Route 30) corridor. Other measures included promoting ride-sharing by encouraging the formation of car pools and vanpools and providing subsidized parking at major employment centers and reducing peak period congestion by encouraging staggered work hours at major employment centers. In addition, it was recommended that off-street parking requirements be adopted that would promote ride-sharing and walking while meeting the needs of business establishments.

As a result of this study, the Town has initiated a number of steps including:

- Initiating the design process for traffic improvements to the intersection of Commonwealth Road (Route 30) and Route 27 and the intersection of Commonwealth Road (Route 30)/East Plain Street/School Street;
- Purchasing the 33-acre Dow property located on Commonwealth Road (Route 30) in 2000 for conservation and recreation purposes; and
- Adopting the Cochituate Interim Planning District to limit the impact of future development on the corridor.

In 2002, signalization and the installation of a raised median were completed at the intersection of Commonwealth Road (Route 30) and Oak Street/Rice Road.

8.6.3 Schematic Design Alternatives Study, 1999

In response to the 1997 Traffic Study for the Commonwealth Road (Route 30) corridor, the Town, in conjunction with Bruce Campbell & Associates and the Cecil Group, prepared schematic design alternatives for the Commonwealth Road (Route 30)/Route 27 intersection and the Commonwealth Road (Route 30)/East Plain Street/School Street intersection.

Commonwealth Road (Route 30)/Route 27 Intersection

Three alternatives were identified ranging from the installation of state-of-the-art traffic signals to full signalization and intersection widening. The first alternative only included the signalization of the intersection. The second alternative included signalization and minor pavement marking alterations. Under both of these alternatives, the intersection would continue to operate at a LOS F (the worst LOS, with long delays). The third alternative included the signalization of the intersection, improved pavement markings, and widening of Commonwealth Road (Route 30) to two lanes in each direction as well as the addition of a left turn lane on Route 27 southbound. Under this alternative the intersection would operate at a LOS C (delays considered acceptable) during the morning and evening peak periods. The report acknowledges that widening the intersection would greatly impact the general village character.

Based on the alternatives analysis, the Town hired Camp, Dresser and McKee to prepare conceptual intersection improvement plans that may include signalization, improved pavement markings, and some road widening. The Route 30/27 Intersection Committee held a series of public meetings over the summer and fall of 2002. The Committee recommended to the Planning Board an intersection design that included designated turn lanes for each leg of the intersection. Funding for the design of the intersection was requested at the 2003 Annual Town Meeting but the article failed. The Planning Board and Board of Road Commissioners will continue to pursue funding for improvements to the intersection.

Commonwealth Road (Route 30)/East Plain Street/School Street

This area includes three closely-spaced intersections: Commonwealth Road (Route 30)/East Plain Street, Commonwealth Road (Route 30)/School Street, and East Plain Street/School Street. Again, three alternatives were presented to the Town. The first alternative involved making the segment of East Plain Street between Commonwealth Road (Route 30) and School Street one-way in the westbound direction and installing a four way stop sign at the intersection of East Plain Street and School Street. The second alternative included closing a segment of East Plain Street between Commonwealth Road (Route 30) and School Street, widening School Street to accommodate a separate southbound left/through lane and right turn lane, and providing a westbound right turn lane on Commonwealth Road (Route 30). Under both of these alternatives, the intersection would operate at a deficient LOS. The third alternative included making all of the improvements noted in the second alternative plus signalizing the intersection of Commonwealth Road (Route 30) with School Street. The signalized intersection would operate at a LOS C during the peak morning hour and a LOS B during the peak afternoon hour. The Town plans to consider intersection improvement in this area after the Commonwealth Road (Route 30)/Route 27 intersection improvements are addressed.