

# TRANSPORTATION AND CIRCULATION

## *History of Transportation*

According to the 2008 Hanover Open Space Plan conducted by Beals and Thomas, from 1864 to 1938, the Hanover Branch Railroad provided transportation through several neighborhoods within Hanover as well as to Rockland, Abington, and Boston. West Hanover had freight services until the late 1970s and early 1980s. Furthermore, North Hanover received trolley service until 1921. This trolley was a popular commuting option for workers, and also provided a connection to Nantucket for summer travelers.

Construction of Route 53 began in 1930, and today, Hanover remains a car-oriented community. While the corridor initially functioned as the main connector between Boston and Cape Cod, today it serves as the primary commercial corridor in Hanover.

## Roads

Given that most Hanover residents drive for their primary mode of transit, ensuring that roadways are connected, well maintained, and safe for all users is crucial. The ability to travel by vehicle not only facilitates transportation within Hanover, but helps connect Hanover residents to the larger South Shore community and the Boston region as a whole. Investments in transportation support economic development efforts by linking residents to jobs, and facilitating mobility can lead to overall quality of life improvements.

Route 3, which is a limited-access highway that passes through the northeastern corner of the Town, connects Hanover with Boston and Cape Cod. This is the primary corridor that provides regional access to and from Hanover.

Route 53, which provides access to Route 3, runs north-south and serves as the Town's primary commercial corridor. This corridor is also the site of some of the main traffic safety concerns in town due to high traffic volumes, high speeds, and limited pedestrian infrastructure.

Other major corridors in Hanover include Routes 123 and 139. Both run east-west across town and provide access nearby communities, including Rockland, Norwell, and Pembroke.

## *Functional Classification of Roadways*

There are about 85 miles of roadway in Hanover. The functional classification of the roadways demonstrates that while the majority of the roadways in Hanover are local roads, there are several corridors in the Town that provide key inter-municipal connections.

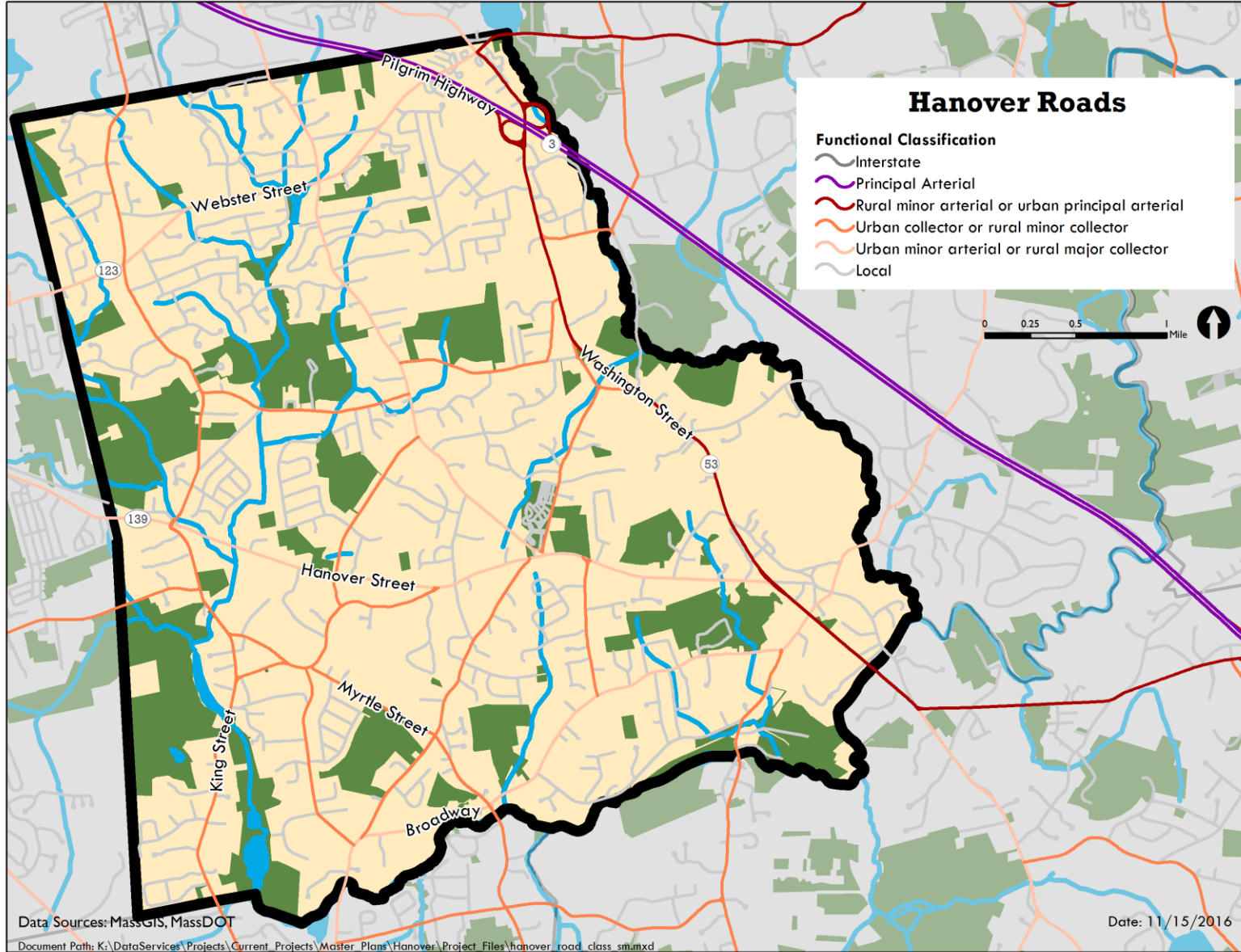


Figure 1: Functional Classification of Hanover Roads

## Traffic Volumes

Unsurprisingly, Route 53 is the most heavily traveled corridor in Hanover, in part due to the access the corridor provides to Route 3. Not only is this corridor convenient for those traveling in to and out of Hanover, but the Hanover Mall and other retail destinations along the corridor likely generate additional traffic.

Though not on the same scale, Hanover Street (Route 139) is also a relatively heavily-trafficked corridor. This may be due in part to residents who commute via the Commuter Rail driving to the Abington Commuter Rail station, which is about a 12 minute drive from Hanover Town Hall.

Location	Average Daily Traffic Volume	Year
Washington St. (Route 53) south Route 3	28,848	2006
Washington St. (Route 53), north of Route 3	23,760	2006
Rockland St. (Route 139), west of Columbia Rd. (Rte. 53)	13,940	2016
Route 53 & 123 ramp: Exit 13 Hanover Norwell (southbound)	12,393	2014
Hanover St. (Route 139), east of Pleasant St.	11,456	2014
On ramp from Rte. 53 to Rte. 3 N	11,314	2014
Whiting St., north of Cedar St.	9,683	2015
Pleasant St, south of Cedar St.	8,000	2015
Route 53 & 123 ramp: Exit 13 Hanover Norwell (northbound)	5,624	2014
On ramp from Rte. 53 to Rte. 3 S	4,837	2015
Cedar St., east of Whiting St.	2,107	2015

Table 1: Average Daily Traffic Volume for Selected Roadways (source: MassDOT Transportation Data Management System)

## Traffic Safety

The Route 53 Corridor Study completed by VHB in March 2015 reveals several traffic safety concerns. Route 53 at Rockland Street (Route 139) and Route 53 at Broadway were both identified as having crash rates greater than the average crash rates in MassDOT's District 5. The majority of the crashes at both of these locations were identified as angle and rear-end collisions.

At the Community Growth Open House, residents also identified Route 53 as being a top safety concern. In addition to the intersections highlighted in the VHB study, the entrance to the University Sports Complex, or the U, is another safety concern, given the amount of young people that frequent the facility. Furthermore, just south of the U is the Cardinal Cushing Center. It was noted that some residents of Cardinal Cushing work at

the Shaw's across the street. The high vehicle speeds and lack of pedestrian infrastructure do not make for an accommodating commute for these workers. In addition to concerns regarding Route 53, Main Street was also highlighted by several residents as a dangerous corridor. Main Street provides direct access to Cedar Street, which is where Hanover High School and Cedar Elementary School are located. Several residents noted the limited sidewalks on the Main Street corridor coupled with the fast moving traffic make for an unsafe environment for students who are walking to school.

Finally, at the southern end of Main Street is a complex five-point intersection in front of Town Hall. Several residents noted similar safety concerns at this intersection, not only due to the limited pedestrian infrastructure and the fast moving traffic, but also due to the complex turning movements.

## Public Transit

Although Hanover is within the Massachusetts Bay Transportation Authority's Service Area, the Town does not directly receive service. Hanover residents that make use of the nearby public transit options, including the Commuter Rail and the Plymouth and Brockton bus, often have to drive or carpool to the nearest station. About 7% of Hanover residents commute via public transit.

### Commuter Rail

The nearest Commuter Rail stations are located in Abington and Whitman. These stations are located on the Kingston/Plymouth line, which provide access to points north including South Weymouth, Braintree, JFK/UMass, and South Station. Points south of Abington and Whitman include Hanson, Halifax, Kingston, and Plymouth. On weekdays, the Commuter Rail runs 12 inbound and 12 outbound trains on this line. On weekends, 8 trains are run in both directions.

As of November 2016, for Hanover residents commuting to Boston from Abington, the cost of a single ride is \$8.25, and monthly commuter rail pass is \$263.00. For residents commuting from Whitman, the single ride costs \$9.25 and it costs \$291.50 for a monthly pass. At both stations, the daily parking fee is \$4.00. As of April 2013, the Abington station saw an average of 625 weekday inbound boardings, whereas Whitman saw 563.<sup>1</sup>

### Bus

Like the Commuter Rail, there is no direct bus service in Hanover. The Plymouth and Brockton (P and B) bus provides weekday service from Marshfield to South Station in Boston, and some Hanover residents utilize the park-and-ride stop in Rockland. As of June 18, 2016, the P & B bus makes seven trips from Rockland to Boston from 5:30 am to 8:10 am, and eight trips from Boston to Rockland from 3:10 pm to 6:30 pm. A 10-ride commuter pass from Rockland to Boston costs \$60.00 as of November 2016.

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<sup>1</sup> Massachusetts Bay Transportation Authority Ridership and Service Statistics, Fourteenth Edition 2014.

The Greater Attleboro Taunton Regional Transit Authority (GATRA) has an agreement with the Town of Hanover to provide shuttle services to seniors through the Council on Aging. The vans, which provide service on weekdays, transport seniors to a range of destinations throughout Hanover. In the afternoons, there are regular trips to the grocery store, and the vans have scheduled trips to Pembroke every Tuesday and Thursday. For other errands or medical appointments, the seniors can call the shuttle at-will. There is interest in expanding this service to weekend and extending the hours of operations. This service is free to seniors, and is funded jointly by GATRA and the Town.

The Town is also working with GATRA to extend bus service along Route 53. The proposed stops along the corridor include the Hanover Mall, the YMCA, the U, Cardinal Cushing, the Legion Housing Complex, and the Planet Fitness Plaza. Once implemented, this extended bus service will greatly expand local public transit options in Hanover.

## Pedestrian and Bicycle Facilities

### ***On-road infrastructure***

One of the most common concerns related to transportation articulated by Hanover residents is the lack of sidewalks. Gaps in the sidewalk network deter walking as a form of transportation, and jeopardize the safety of those who do choose to walk. Some residents who walk do so on the shoulder of the road. Sidewalks serve as a crucial buffer to keep pedestrians away from traffic, which is especially important on corridors with fast-moving traffic and lots of destinations that would attract greater pedestrian traffic.

Robust pedestrian infrastructure is key areas where there may be vulnerable populations walking, such as schools, day care facilities, and senior centers. As noted, several residents have expressed interest in more sidewalks on Route 53 and Main Street, which experiences fast moving vehicular traffic as well as a relatively high volume of pedestrian traffic.

The lack of bicycling infrastructure in Hanover also jeopardizes the safety of cyclists. The Town does not have any bike lanes, although there are several roads wide enough that could potentially accommodate the addition. Like sidewalks, bike lanes would be most beneficial in areas most trafficked by cyclists, particularly near schools.

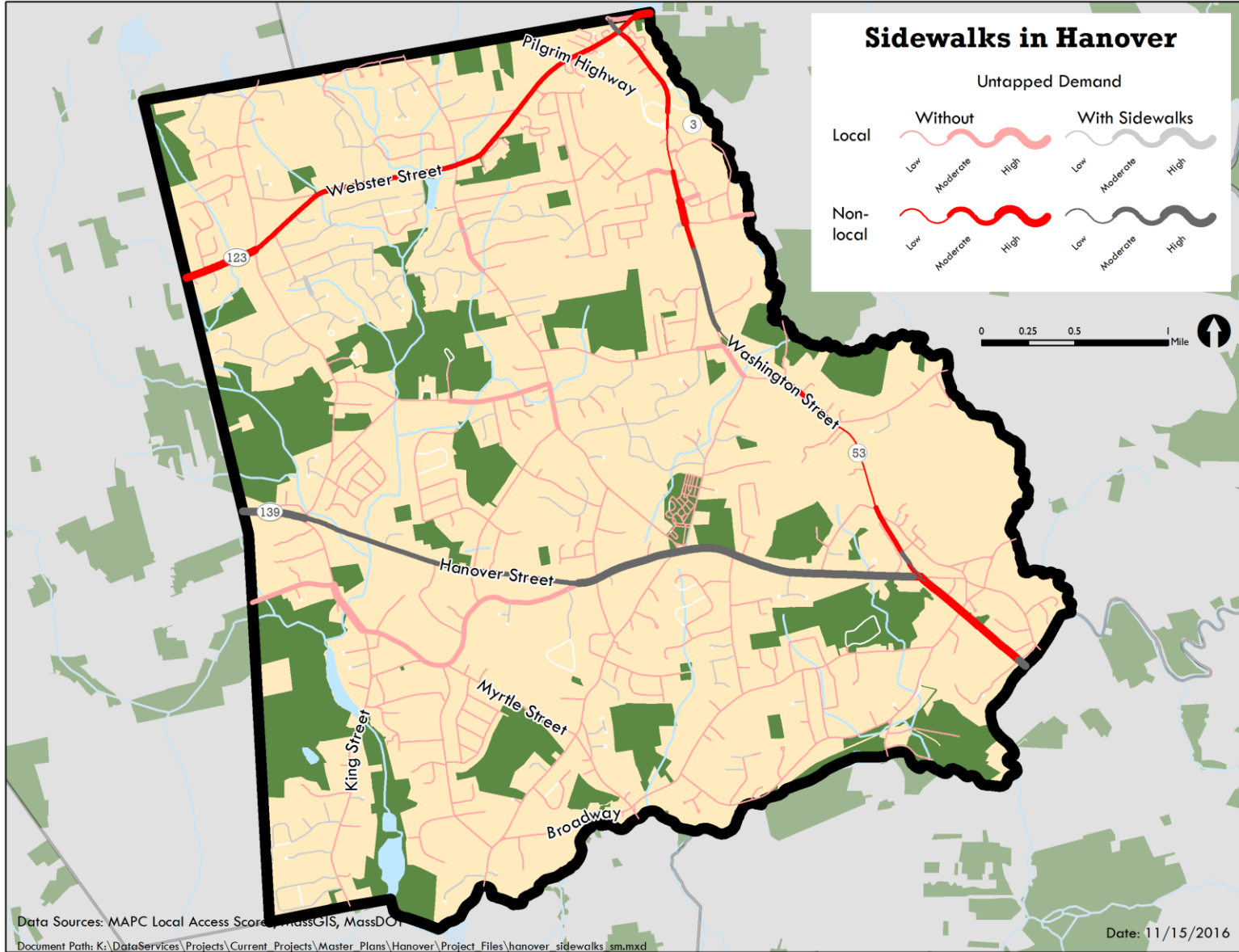


Figure 2: Hanover Sidewalk Gap Analysis

### **Off-road infrastructure**

One way to improve biking infrastructure in Hanover would be to extend the rail trail that passes through Rockland. The existing trail in Rockland is part of the LandLine Greenway Network, which was developed by MAPC in an effort to improve the connectivity of the region's bike and rail trails. The trail in Rockland ends at the Colby-Phillips property in West Hanover, and building on this connection could better link Hanover with neighboring municipalities.

The recently redeveloped Forge Pond Park also provides off-road walking and biking facilities for residents and visitors alike. The wooded area offers certain amenities, such as designated walking trails and benches, for those who frequent the park. While there are other smaller walking trails in Hanover, Forge Pond Park is one of the most popular.

### **Parking**

Given that Hanover is predominantly a car-oriented community, parking is plentiful. On-street parking is permitted, except for on major roadways. At the Community Growth Open House, few, if any, concerns about parking were articulated.

### **Commuting Characteristics**

#### **Vehicle Ownership**

Most Hanover residents drive as their primary form of transportation. 93.7% of households own at least one vehicle, and there is an average of 2 vehicles per household. Given the limited transit options in Hanover, it is not surprising that most residents rely on a car to get around. According to MAPC's vehicle census data, the average passenger car registered in Hanover travelled 31 miles per day in 2014.

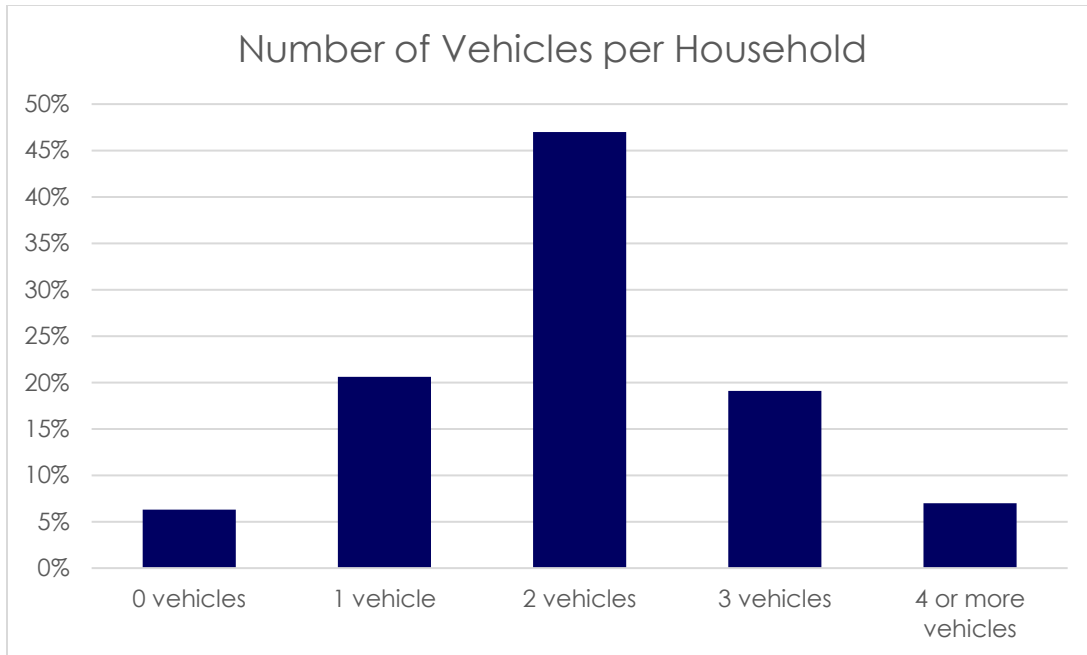


Figure 3: Number of vehicles per household in the Town of Hanover. Source: American Community Survey 2010-2014

### **Journey to Work Data**

Based on the vehicle ownership data, it is no surprise that the vast majority of commuters (87%) drive to work. 7% utilize public transit, which could include the Commuter Rail, P & B bus, or another mode. The remaining 6% work from home, walk or bike to work, or utilize another form of transportation. The data also demonstrates that the majority (53%) of Hanover residents who work have a commute of under 30 minutes. However, a sizeable amount (one in five) have a commute that is one hour or longer.



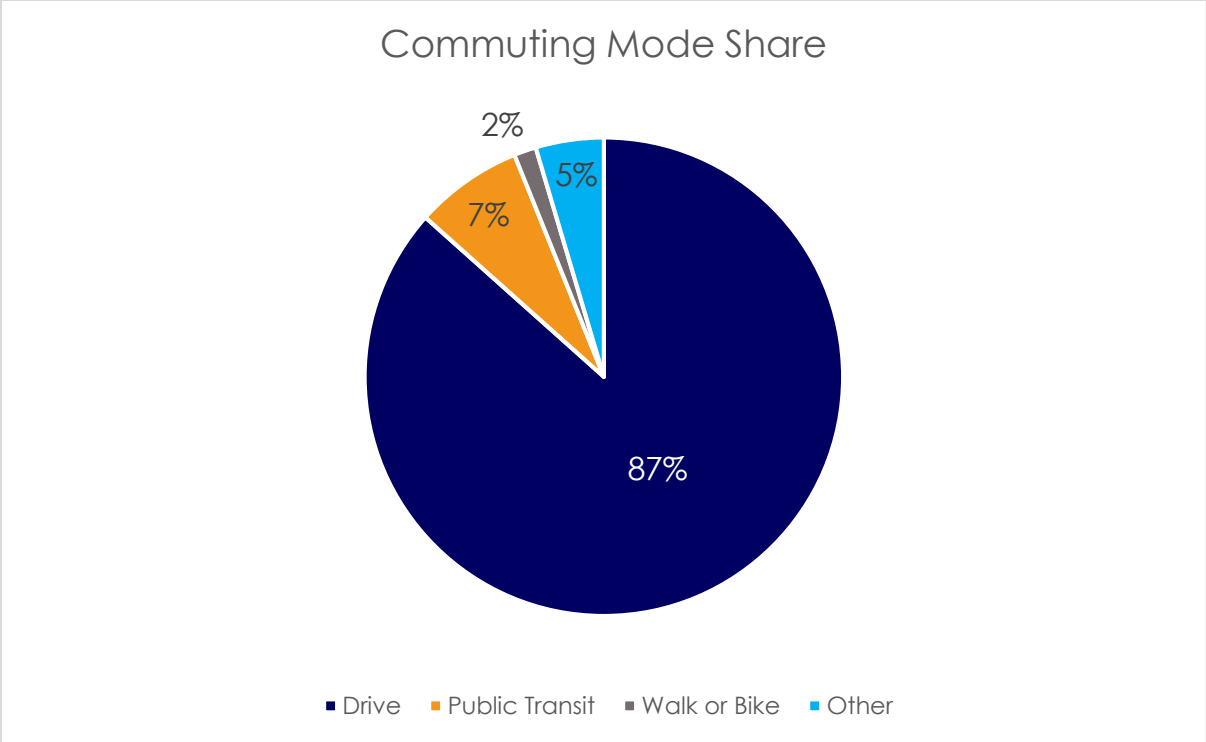


Figure 4: Commute by transit mode (source: American Community Survey 2010-2014)

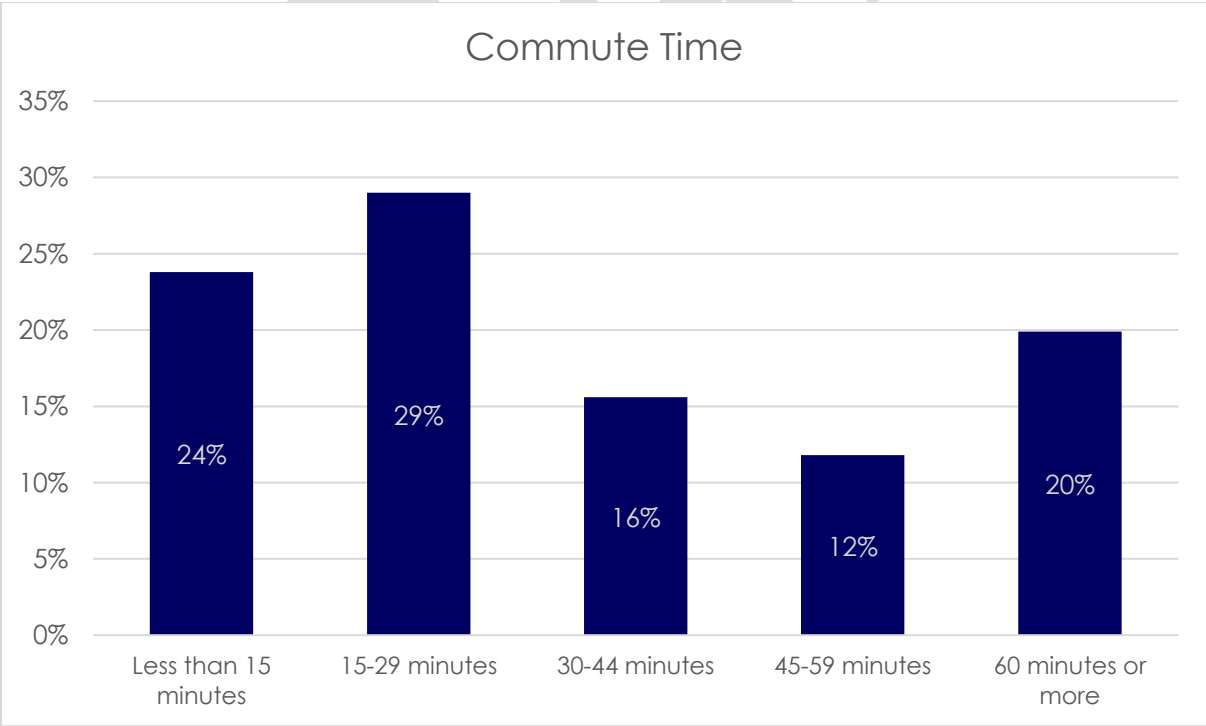


Figure 5: Length of commute (source: American Community Survey 2010-2014)

### ***Employment Concentrations and Connections***

Nearly one in five (19%) of Hanover workers are employed in Hanover. Boston (17%) is also a popular place of employment for Hanover residents. Other common places of employment include several municipalities in between Hanover and Boston, such as Quincy, Braintree, Weymouth, Rockland, and Norwell.

The majority of the Hanover workforce comes from within the South Shore. While 16% are Hanover residents, other popular residential areas for Hanover employees include Pembroke (9%), Marshfield (6%), Weymouth (6%), Rockland (5%), Whitman (5%), and Hanson (5%).

It is worth noting that even though 17% of Hanover workers are employed in Boston, only 7% commute via public transit. The limited use of public transit is likely due to several factors, including the fact that the Commuter Rail stations are not in Hanover and the high cost of the monthly passes. If the Town is interested in improving the accessibility of alternative modes of transit to coworkers, it is perhaps worthwhile to determine how partnerships with GATRA or the P & B bus can increase the number of riders commuting by public transit. The proposed additional GATRA bus stops may facilitate this shift.

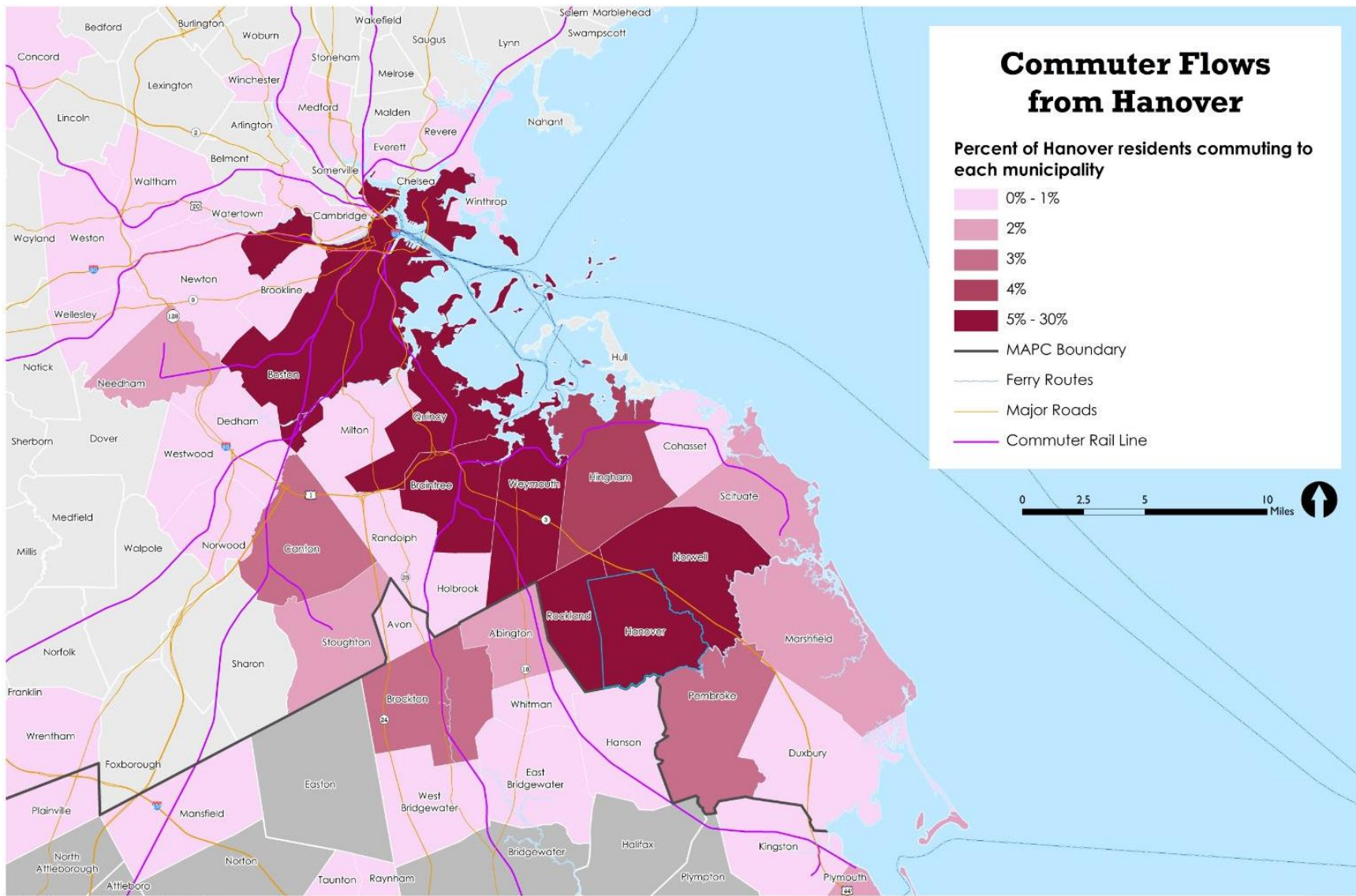


Figure 6: Percent of Hanover Residents Commuting to Each Municipality (source: ACS 2010-2014)

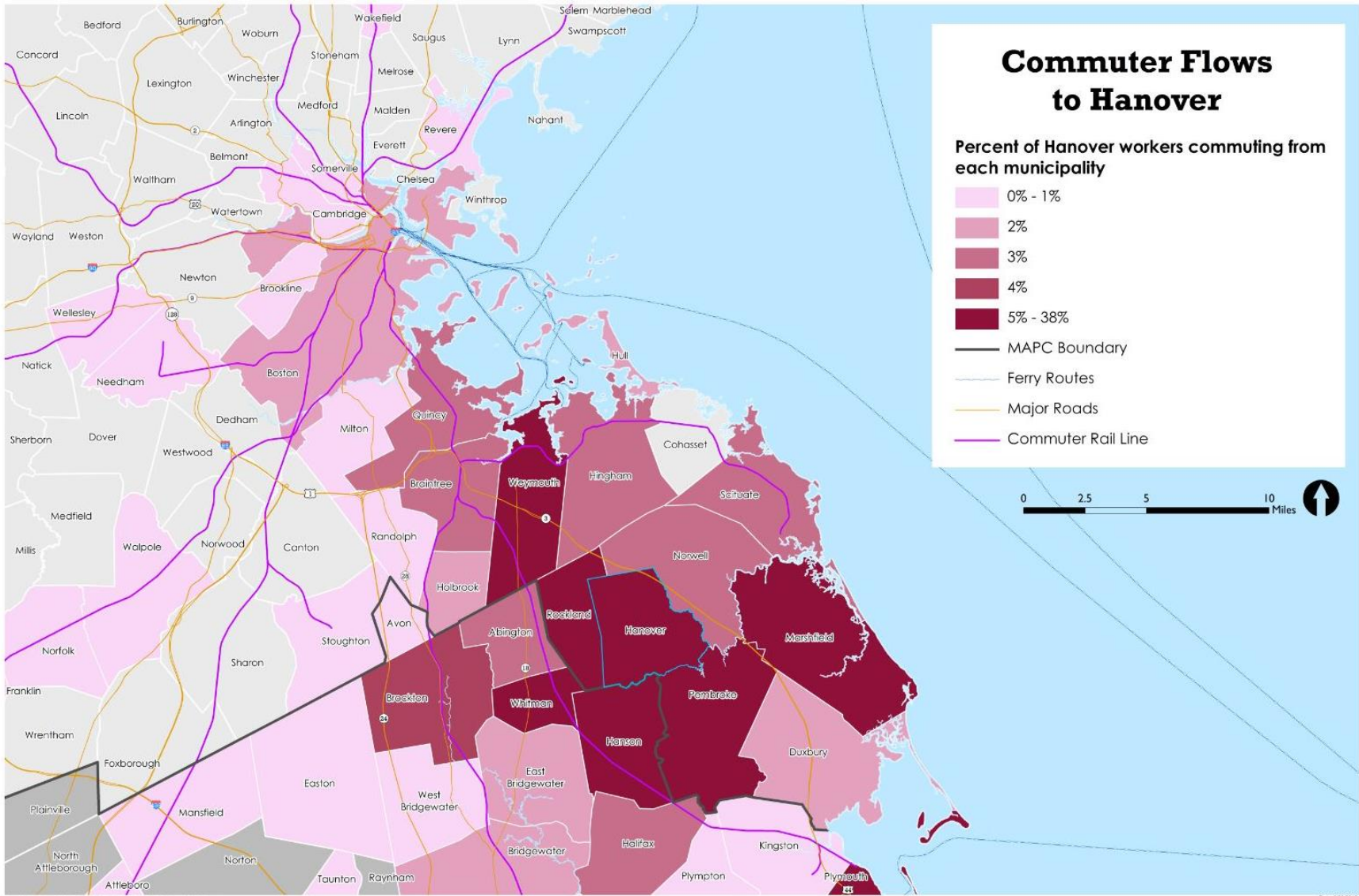


Figure 7: Percent of Hanover Employees Commuting from Each Municipality

# Transportation Planning in Hanover

## **Local Planning**

The Town of Hanover's Planning Department consists of two staff, a planner and associate planner, and the department receives assistance from an intern in the summer. Both the planning staff and the Planning Board are instrumental to successful transportation planning in Hanover. The Planning Board's responsibilities include creating the Zoning Bylaws and facilitating the public meetings necessary to inform such bylaws, acting at the Special Permit Granting Authority, and overseeing site plan review.

Hanover's local transportation planning work is in part supported by state funds. MassDOT's Chapter 90 program provides municipalities with funds for the maintenance, repair, improvement, and construction of roadways, as well as projects that extend the life of the Town's capital facilities. In 2016, Hanover received nearly \$519,000 in Chapter 90 funding.<sup>2</sup>

## **Regional Transportation Organizations**

The Metropolitan Area Planning Council (MAPC) is the regional planning agency for Hanover. The Town is a part of MAPC's South Shore Coalition, which includes nearby municipalities such as Rockford, Norwell, Pembroke, and others. MAPC's mission is to promote smart growth and regional collaboration, and provides communities with technical assistance and other resources to advance local, inter-municipal, and regional planning efforts.

The Boston Region Metropolitan Planning Organization (MPO) is carries out the federally mandated transportation planning processes. The MPO and its staff, the Central Transportation Planning Staff (CTPS) is responsible for allocating federal and state transportation dollars to communities within the region. The process for determining the for funding transportation projects is guided by a vision that informs three key MPO documents—the Long-Range Transportation Plan, The Transportation Improvement Program (TIP), and the Unified Planning Work Program (UPWP).

The MPO and MAPC share a region of 101 communities in the greater Boston area, and work closely together to make the most effective use of the transportation resources available to cities and towns.

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<https://www.massdot.state.ma.us/highway/DoingBusinessWithUs/LocalAidPrograms/Chapter90Program/Chapter90Apportionment.aspx>

## Upcoming Transportation Projects and Maintenance

Much of Hanover's ongoing transportation work involves improvements to the Route 53 corridor. According to the Project Need Form for Washington Street (Route 53) @ the University Sports Complex at Starland, congestion and traffic safety are two of the primary concerns along this corridor. To address some of these concerns, the Town is working with MassDOT to add a two-way center left-turn lane from the northern to the southern Starland Driveways. As of November 2016, the roadway widening project has been proposed to MassDOT and is awaiting final approval.

## Community Growth Open House

At the Community Growth Open House, held on September 14, 2016, participants had the opportunity to articulate transportation-related safety concerns they experience in Hanover, as well as places that would potentially benefit from transportation improvements. Open house attendees identified specific concerns on a map of Hanover. The primary areas in which residents identified as feeling unsafe included:

- The intersection of Main Street, Silver Street, Route 139, and Center Street just outside of Town Hall
- The entrance to the U on Route 53
- The Hanover Mall

And potential ideas for improvement included:

- Sidewalks along Main Street
- Sidewalks and bike lanes along Route 53
- More pedestrian and bicyclist access points to several destinations including: Ellis Field, senior center near Town Hall, schools on Cedar Street, Hanover Mall, and Assinippi Park

Overall, sidewalks emerged as one of the most desired transportation improvements in Hanover. The proposed rail trail linking Hanover to Rockland also received a lot of support. Safety improvements that prioritize the most vulnerable users, particularly children and seniors, were also highly desirable.