

ROAD SAFETY AUDIT

For

South Avenue (Route 27)/Franklin Street/Pleasant Street Intersection Whitman, MA

December 2014



Prepared by:

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1.0 Introduction

This Road Safety Audit (RSA) was conducted for the intersection of South Avenue (Route 27)/Franklin Street/Pleasant Street by the Old Colony Planning Council (OCPC) at the request of the Town of Whitman. The intersection of South Avenue (Route 27)/Franklin Street/Pleasant Street was the subject of a previous local assistance planning study completed by OCPC in 2008, also at the request of the town, due to a high number of cross movement crashes involving serious injuries. The location of the intersection is shown in Figure 1.

2.0 The Road Safety Audit

A Road Safety Audit (RSA) is defined by the Federal Highway Administration (FHWA) *Road Safety Audits Guidelines* as; “A formal safety performance examination of an existing or future road or intersection by an independent audit team.” The RSA is a way of doing business to identify road safety issues as well as opportunities for safety improvements for all road users. The RSA includes the following elements:

- It is performed by an independent team
- It is performed by a multi-disciplined team
- It considers all potential road users
- It accounts for road user capabilities and limitations
- It generates a formal report
- It requires a response from the project owner (in this case the Town of Whitman)

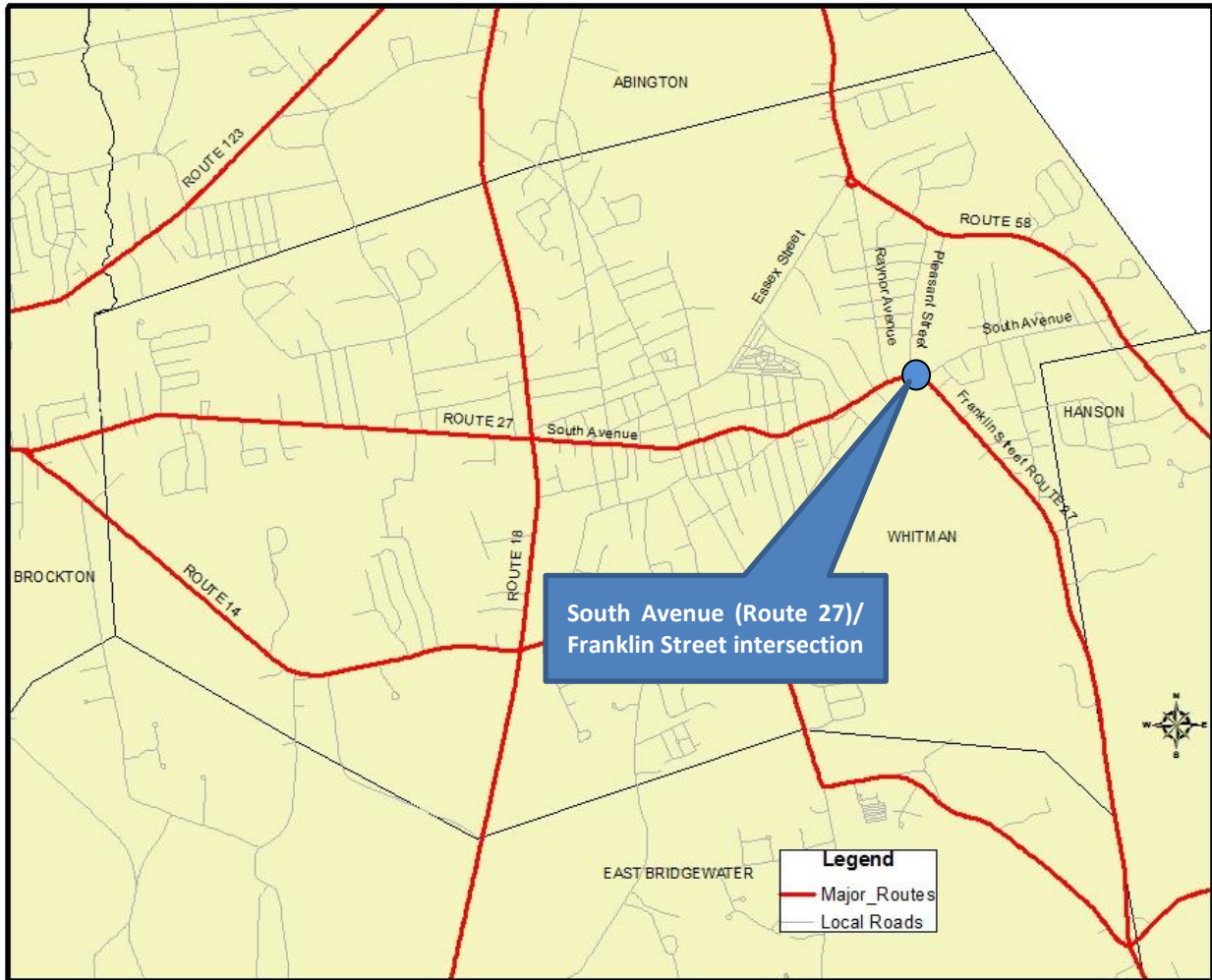
In summary, the RSA is a proactive, formal examination that focuses on road safety, which is conducted by a multi-disciplinary team independent of the project owner (or the requester of the study). The audit team must be adequately qualified individually and as a team. The RSA is qualitative in nature, although crash data, traffic data, and analyses are necessary, and the safety of all road users and facilities are considered. This report includes average daily traffic volume counts, manual turning movement counts and level-of-service analysis, crash data compilation and analyses, and intersection warrant analyses for traffic signal and multi-way stop control implementation.

It is important for participants to understand the roles and responsibilities of organizations involved in the RSA. OCPC is the manager and facilitator of the process, responsible for data collection and compilation, analysis, grant support, and facilitator of the meetings and field visit. The Town of Whitman will take the initiative for action and implementation of the proposed recommendations made by the support team. The recommendations will consist of a number of alternatives (or combination of actions) including short term, less expensive actions and long term, more costly alternatives.



OCPC is available to assist with acquiring state and federal grants and funding for projects, as projects draw on a combination of funding sources.

Figure 1 - Intersection Location





2.1 Choosing the Road Safety Audit Team

The main objective in selecting an RSA team, according to the Federal Highway Administration's (FHWA) *Road Safety Audits Guidelines* is to choose an independent, qualified, and multi-disciplinary team of experts. The recommendations were to include individuals with the following backgrounds:

- Road Safety Specialist - With expertise in causal factors that lead to crashes and effective treatments that address the occurrence of such crashes.
- Traffic Operations Engineer – Qualified in the field of traffic operations and understand the principles of traffic flow, the causes of congestion, and the proper placement and uses of signs, pavement markings, and traffic signal operations.
- Road Design Engineer – With extensive road design experience and familiarity with federal, state, and local standards.
- Local Contact Person – With familiarity with the area under review and the traffic safety issues experienced there.
- Other Areas of Specialties – These include specialists in human factors, maintenance, law enforcement, first response, pedestrian and bicycle use, and transit use.

The FHWA guidelines recommend that the best practice regarding the size of the team is to limit its size. The team should consult with other individuals if other skill sets are necessary. Those participating in the RSA on August 21, 2014 included:

Aaron Richardson, Superintendent of Water and Sewer, Whitman DPW
Bruce Martin, Superintendent of Highways and Parks, Whitman DPW
Dan Salvucci, Vice Chairman of Board of Selectmen, Town of Whitman
Gregory Enos, Assistant Town Administrator, Town of Whitman
Timothy Grenno, Fire Chief, Town of Whitman
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Tracy Seely, Editor, Whitman-Hanson Express
Rich Oliveira, MassDOT District 5
Thomas Rebello, MassDOT District 5
Michael Martin, MassDOT District 5
Kyle Mowatt, Transportation Planner, OCPC
Ray Guarino, Senior Transportation Planner, OCPC

A copy of the attendance sheet for the pre-audit meeting and the field audit is included in the appendix to this report.



2.2 The RSA Procedure

After receiving a request from the Town of Whitman, regarding safety at the South Avenue (Route 27)/Franklin Street/Pleasant Street intersection, OCPC, acting as the RSA manager, scheduled the RSA with the assistance of the Assistant Town Administrator, and the RSA participants were contacted to bring together the independent audit team. The RSA was scheduled for August 21, 2014 at 10:00 AM at the Selectmen's conference room at Whitman Town Hall. OCPC compiled background traffic and crash data for the intersection, as well as the data from the previous study, and presented the information to the RSA participants. The 24-hour traffic counts and the peak hour intersection turning movement counts were updated in September of 2014. The crash data was updated with the help of the Whitman Police Department.

3.0 Background Data

3.1 Physical Attributes

Based on the Massachusetts Department of Transportation (MassDOT) road inventory file, South Avenue (Route 27), west of Franklin Street, is classified as an urban principal arterial road under the jurisdiction of the Town of Whitman. East of Franklin Street, South Avenue is classified as a minor arterial road under the jurisdiction of the town. Franklin Street (Route 27) is classified as an urban principal arterial road under the jurisdiction of the Town of Whitman, and Pleasant Street is classified as a local road under local town jurisdiction. Although the roads are under the jurisdiction of the Town of Whitman, the intersection is eligible for federal funding under the Surface Transportation Program (STP). The intersection of South Avenue (Route 27)/Franklin Street/Pleasant Street is located approximately 800 feet east of the Whitman MBTA Passenger Rail Station and the at-grade train crossing across South Avenue (Route 27).

Route 27 is an important regional highway in Whitman that connects to Brockton to the west and Hanson, Kingston, and Plymouth to the east. South Avenue is designated as Route 27 east of the intersection, and Route 27 continues southward from the intersection into Hanson as Franklin Street. Both South Avenue and Pleasant Street connect to Route 58, with South Avenue providing access to Route 58 (east of the intersection), and Pleasant Street providing access north to Route 58 to Abington to Weymouth and Route 18 to the north.

The South Avenue (Route 27)/Franklin Street/Pleasant Street intersection in Whitman is un-signalized with a stop control on the northbound Route 27 Franklin Street approach and the southbound Pleasant Street approach. The intersection alignment is such that the southbound Pleasant Street approach is not directly lined up with Route 27 Franklin Street. The northbound Franklin Street approach provides two lanes, including an exclusive left turn lane and a through lane. The right turn northbound is channeled with a raised island off of the through lane. Figure 2 shows the alignment of the intersection and the approach lanes as shown by aerial photography. The lane use on South Avenue eastbound and westbound approaches consists of a single shared right/through/left



lane with no lane markings. The major turning movements are along Route 27, which consist of heavy right turns from South Avenue (Route 27) eastbound to Franklin Street (Route 27) southbound, and heavy left turn movements from Franklin Street (Route 27) northbound to South Avenue (Route 27) westbound. In addition, there are heavy straight movements on the South Avenue (Route 27) eastbound approach and on the South Avenue westbound approach.

Figure 2



The speed limit on South Avenue (Route 27) is posted at 30 miles per hour, west of Franklin Street, and 25 miles per hour as the road approaches the intersection. The speed limit on Franklin Street south of the intersection is posted at 40 miles per hour and 25 miles per hour on the Franklin Street approach to the intersection. The prevailing speeds (85th Percentile Speeds), based on field studies documented in the OCPC 2008 study for this intersection, are 35 miles per hour (MPH) on Route 27 South Avenue west of the intersection, 45 MPH on Route 27 Franklin Street south of the intersection, 44 MPH on South Avenue east of the intersection, and 32 MPH on Pleasant Street north of the intersection is 32 miles per hour.

3.2 Average Daily Traffic

OCPC conducted traffic counts using automatic traffic recorders in May of 2007 on the study area roads. These traffic counts were updated in September of 2014. The average daily traffic (total traffic within a 24-hour period) was determined based on these counts. In addition, the automatic traffic counters collected speed data (85th percentile speeds) as well as the percentage of truck traffic in the traffic stream. Table



1 summarizes the traffic volume data collected utilizing the automatic traffic recorders at the study area locations for an average weekday (24-hour period).

Table 1 Average Daily Traffic Vehicles Per Day (VPD)

Traffic Count Location	2007 East Bound	2007 West bound	2007 Total	2014 East bound	2014 West bound	2014 Total
1. South Avenue (Route 27) west of Pleasant Street and Franklin Street	5,706	5,405	11,111	5,296	5,064	10,360
2. South Avenue east of Pleasant Street and Franklin Street	2,712	2,644	5,356	3,008	3,200	6,208
	2007 North Bound	2007 South bound	2007 Total	2014 North bound	2014 South bound	2014 Total
3. Pleasant Street north of South Avenue	1,040	604	1,734	1,431	1,028	2,459
4. Franklin Street (Route 27) south of South Avenue	2,545	2,724	5,269	2,819	2,978	5,797

As shown in Table 1, South Avenue (Route 27) west of Franklin Street had 11,111 VPD in 2007 and 10,360 VPD in 2014. This location was the highest traffic count location. The South Avenue location east of Franklin Street had 5,356 VPD in 2007 and 6,208 VPD in 2014. The Pleasant Street location north of South Avenue had 1,734 VPD in 2007 and 2,459 VPD in 2014. The Franklin Street count location south of South Avenue had 5,269 VPD in 2007 and 5,797 VPD in 2014. None of these traffic counts were adjusted for seasonal variations, and school was in session during the 2007 count in May and the 2014 count in September. The traffic volumes were higher in 2014 than in 2007 except at the South Avenue (Route 27) location west of the intersection, which saw a 6.8 percent drop from 2007 to 2014.

3.3 Heavy Vehicles and Vehicle Speeds

The automatic traffic recorders on the study area roads also recorded the percentage of heavy vehicles and the prevailing speeds in the traffic stream, in addition to recording the traffic volumes. The heavy vehicle data is classified into categories based on the Federal Highway Administration (FHWA) classification system. Any vehicle with a minimum of two axles and six tires is considered a heavy vehicle. The traffic recorders measured the 85th percentile speed, which is the speed that 85 percent of traffic is travelling at or below. The results of the vehicle classification indicated that 8.7 percent of the vehicles on South Avenue (Route 27) at the count location west of Franklin Street consisted of heavy vehicles. The 85th percentile speed at this location was 28 miles per hour. At the count location on South Avenue east of Franklin Street, the percent of



heavy vehicles in the traffic flow was at 8 percent, and the 85th percentile speed was 33 miles per hour. At the Franklin Street (Route 27) count location south of South Avenue, the automatic traffic recorder recorded 7.9 percent heavy vehicles in the traffic flow and an 85th percentile speed of 39 miles per hour. The percentage of heavy vehicles at the Pleasant Street location, north of South Avenue, the percentage of heavy vehicles in the traffic flow was 15.6 percent, and the 85th percentile speed was 34 miles per hour,

3.4 Intersection Volumes and Levels-of-Service

Manual turning movement counts were conducted in September 2014 at the South Avenue (Route 27)/Franklin Street/Pleasant Street intersection during the morning, 7:00 AM to 9:00 AM and afternoon, 4:00 PM to 6:00 PM periods to determine the morning and afternoon peak hours (the highest one-hour volumes.) The morning and afternoon peak hour volume summaries are shown in the appendix. Table 2 compares the 2014 turning movement counts to the 2007 volumes used in the 2008 OCPC South Avenue (Route 27)/Franklin Street/Pleasant Street Intersection Study.

Table 2 Peak Hour Traffic (total entering the South Avenue (Route 27)/Franklin Street/Pleasant Street intersection)

2007 AM Peak	2007 PM Peak	2014 AM Peak	2014 PM Peak
797	1,212	838	1,081

Table 2 shows that the PM peak hour experiences the most traffic during the day. There were 1,212 vehicles entering the intersection in 2007 during the PM peak hour, and 1,080 in the 2014 count. During the AM peak hour, there were 797 vehicles entering the intersection in the 2007 count and 835 in 2014.

The level-of-service helps to discern the existing traffic operating conditions at an intersection. Level-of-service analyses are a qualitative and quantitative measure based on the techniques published in the Highway Capacity Manual by the Transportation Research Board. Level-of-service is a general measure that summarizes the overall operation of an intersection or transportation facility. It is based upon the operational conditions of a facility including lane use, traffic control, and lane width, and takes into account such factors as operating speeds, traffic interruptions, and freedom to maneuver.

Level-of-service represents a range of operating conditions and is summarized with letter grades from “A” to “F”, with “A” being the most desirable. Level-of-service “E” represents the maximum flow rate or the capacity on a facility. The following describes the characteristics of each level-of-service:

- LOS "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.



- LOS "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is still relatively unaffected.
- LOS "C" is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. Occasional backups occur behind turning vehicles.
- LOS "D" represents high-density, but stable, flow. Speed and freedom to maneuver are restricted, and the driver experiences a below average level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.
- LOS "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform level. Freedom to maneuver within the traffic stream is extremely limited, and generally requires forcing other vehicles to give way. Congestion levels and delay are very high.
- LOS "F" is representative of forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount that can traverse the point, resulting in lengthy queues and delay.

The LOS definitions describe conditions based on a number of operational parameters. There are certain parameters utilized as measures of effectiveness for specific facilities. In the case for intersections, two-lane highways, and arterials, which represent the physical conditions that typify the study area corridors, time delay, average stop delay, and average travel speed are used as measures of operational effectiveness to which levels of service are assigned.

The South Avenue (Route 27)/Franklin Street/South Avenue intersection is classified as a two-way stop controlled intersection (TWSC) as the traffic northbound on Franklin Street and southbound on Pleasant Street must stop to allow South Avenue traffic the right of way. Level-of-service analysis was conducted for the intersection in the OCPC 2008 study. The results of the 2008 analysis showed that left turns northbound on Franklin Street during the morning and afternoon peak hours, experienced forced flow (Level-of-service "F") with very long delays upon entering the intersection. The level-of-service analysis was also performed utilizing the 2014 turning movement volumes. The update of the turning movement count showed a slight decrease in PM peak hour traffic; however, the analysis showed that the traffic flow on the northbound left turn is still problematic at the LOS "E" level, which denotes capacity level operations with congestion and very long delays. Table 3 compares the peak hour level-of-service analysis from the 2008 study with the updated 2014 analysis.



Table 3 Peak Hour Level-of-Service Analysis (LOS)

South Avenue (Route 27)/Franklin Street/Pleasant Street Intersection	2007 LOS AM Peak	2007 LOS PM Peak	2014 LOS AM Peak	2014 LOS PM Peak
Franklin Street Northbound Left Turn	C	F	C	E
Franklin Street Northbound Through and Right Turns	B	C	C	C
Pleasant Street Southbound Left/Through/Right	B	D	B	C

3.5 Available Stopping Sight Distance

The available sight distance on a roadway should be sufficient to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path. Sight distance is affected by road conditions, such as grades, curves, and roadside vegetation or other objects (signs, stone walls, fences, etc.). According to the American Association of State Highway and Transportation Officials (AASHTO) – 2011 Geometric Design of Highways and Streets, sight distance is the length of the roadway ahead that is visible to the driver.

Field measurements were conducted by OCPC staff for the OCPC 2008 study for the South Avenue (Route 27)/Franklin Street/Pleasant Street intersection. The study concluded that the Stopping Sight Distance (SSD) is approximately 150 feet along the South Avenue (Route 27) eastbound approach, which is not adequate for vehicles traveling at the prevailing speed to stop in time to avoid an object on the northbound Franklin Street approach. There is a sign along South Avenue that blocks sight lines as well as a change in grade that contributes to the poor stopping sight distance. Vehicles on the Franklin Street northbound approach move up beyond the stop line into the path of eastbound South Avenue through traffic to gain sight lines along South Avenue. Often, the sight lines on the Franklin Street northbound approach are further hampered because this approach has two lanes, a northbound exclusive left turn lane and a through lane. A vehicle in the left lane turning left to South Avenue will have its sight line looking right toward South Avenue westbound traffic blocked by a vehicle in the northbound through lane, and a vehicle in the Franklin Street northbound lane will have its sight lines looking west toward South Avenue eastbound traffic blocked by vehicles in the left turn lane.

In addition, the study concluded that the Stopping Sight Distance (SSD) is approximately 200 feet along the South Avenue westbound approach, which is not adequate for vehicles traveling at the prevailing South Avenue speed to stop in time to avoid an object on the southbound Pleasant Street approach. Traffic approaching the intersection from this direction experiences a sharp curve and a raise in elevation.

3.6 Crash Data and Analyses

The Institute of Transportation Engineers (ITE) Handbook, Manual of Traffic Engineering Studies recommends that three years of crash data be compiled for safety analysis. For analysis purposes, the crash data from the 2008 OCPC study included the latest available



data from the years 2004, 2005, and 2006. The crash data was updated using information supplied by the Whitman Police Department for the years 2011 (6 months), 2012, 2013, and 2014 (6 months). Table 4 summarizes the 2004, 2005, and 2006 crash data. Table 5 summarizes the 2011, 2012, 2013, and 2014 crash data.

Table 4 2004, 2005, 2006 Crash Summary for South Avenue (Route 27)/Pleasant Street/Franklin Street

	2004	2005	2006	Total
Personal Injury	5	3	3	11
Property Damage Only	2	2	7	11
Severity unknown	1	2	1	4
Total	8	7	11	26
Angle - Cross Movement	4	4	8	16
Side-Swipe	1	1	3	5
Head-On	1	0	0	1
Rear-End	0	2	0	2
Ran off road	2	0	0	2
Total	8	7	11	26

Data source, MassDOT

Table 5 2011, 2012, 2013, 2014 Crash Summary for South Avenue (Route 27)/Pleasant Street/Franklin Street

	2011	2012	2013	2014	Total
Personal Injury	1	0	0	2	3
Property Damage Only	0	6	8	3	17
Severity unknown	0	0	0	0	0
Total	1	6	8	5	20
Angle - Cross Movement	0	3	7	5	15
Side-Swipe	0	0	0	0	0
Head-On	0	0	0	0	0
Rear-End	0	1	0	0	1
Ran off road	0	2	1	0	3
Bicycle	1	0	0	0	1
Total	1	6	8	5	20

Data source Whitman Police Department, 2011 and 2014 are partial years with six months, 2011 July through December, 2014 January through July



A comparison of Table 4 and Table 5 shows that there were more crashes (26) between 2004 and 2006 than between 2011 and 2014 (20). The number of cross movement crashes were high during both three year study periods with 16 occurring between 2004 and 2006 (this represents 62 percent of crashes), and 15 occurring between 2011 and 2014 (this represents 75 percent of crashes). Personal injury crashes were higher between 2003 and 2006 (11 crashes or 42 percent of crashes), with only three injury related crashes between 2011 and 2014 (representing 15 percent of crashes).

The crash rate was calculated for the South Avenue (Route 27)/Franklin Street/Pleasant Street intersection. The crash rate indicates the frequency of crashes at intersections and measures the crash exposure. It is based on the number of crashes per million entering vehicles (MEV). The crash rates calculated for intersections in this study are based upon the ITE equation in the Manual of Traffic Engineering Studies. The crash rate per million entering vehicles is the number of accidents in a year (averaged over three years) times one million, divided by the number of vehicles entering the intersection in a year. The crash rate for the intersection was calculated to be 1.71 crashes per million entering vehicles for the 2004, 2005, 2006 time period. The average crash rate for un-signalized intersections in MassDOT District 5 is 0.58 MEV. The average crash rate for un-signalized intersections in Massachusetts is 0.60 MEV. The crash rate for this intersection is more than double both the MassDOT District 5 average and the Massachusetts average. The crash rate for the intersection was also calculated for the 2011, 2012, 2013, 2014 time period. This crash rate is 1.50 crashes per million entering vehicles, which is also well above the MassDOT District 5 average and the Massachusetts average. Collision diagrams were also developed for the intersection for both the 2004, through 2006 time period and the 2011 through 2014 time period. The crash rate calculations and collision diagrams are included in the appendix to this report.

4.0 Safety Challenges and Observed Deficiencies

4.1.1 Pre-Audit Meeting and Discussion

OCPC held a pre-field visit meeting and discussion with the RSA team regarding traffic and safety issues on August 24, 2014 at the Whitman Town Hall. OCPC presented the background traffic and crash data to the team and reviewed the purpose, procedures, and timeline for the RSA.

At the meeting, the participants discussed the existing conditions and the history of crashes. These included:

- Limited sight distances on South Avenue for vehicles approaching the intersection eastbound and westbound.
- A lack of visibility on the Franklin Street northbound approach due to limited sight lines looking east and west. Vehicles on the northbound approach have to move up beyond the stop line encroaching into the patch of South Avenue through moving vehicles.



- The lane configuration on the northbound approach, with an exclusive left turn lane and a through lane creates visibility problems as the sight line for left turning vehicles are blocked by vehicles in the lane next to them waiting to go through, and the through vehicles have their view blocked in turn by vehicles in the left lane waiting to go left.
- There is a high percentage of cross-movement crashes at the intersection.
- There is a high percentage of personal injury crashes (although the crash data from 2011, 2012, 2013, and 2014 did not have the high percentage of injuries as data from the years 2004, 2005, 2006).
- Speeding through the intersection is problematic especially on the South Avenue approaches.
- Although the stop sign on the Franklin Street northbound approach was moved from the corner of the intersection to the right turn island, visibility, especially at night, is still a problem.
- There is a lack of advanced warning signs on the intersection approaches.
- The intersection is misaligned; the southbound approach is not directly opposite the northbound approach, which comes into the intersection on a skew.
- The heavy peak hour movements through the intersection include heavy right turns from South Avenue (Route 27) eastbound to Franklin Street (Route 27) southbound, through movements from South Avenue (Route 27) eastbound to South Avenue, heavy left turn volumes from Franklin Street (Route 27) northbound to South Avenue (Route 27) westbound, and heavy through movements from South Avenue westbound to South Avenue (Route 27).

4.2 Recommendations and Countermeasures for Consideration

The participants discussed a number of potential improvements and projects to improve safety, and the potential impacts, positive and negative, which could result from improvements. These included the potential improvements that were included in the 2008 study as well as others.

The recommendations and countermeasures developed by the RSA participants have been categorized as short-term, mid-term or long-term based on the definitions shown in Table 6. Additionally, a cost category has been assigned to each improvement based on the parameters in Table 6.

Table 6 Time Frame and Cost Categories

Time Frame		Costs	
Short-term	<1 year	Low	<\$10,000
Mid-term	1–3 years	Medium	\$10,000–\$50,000
Long-term	>3 years	High	>\$50,000

Table 7 summarizes the potential measures discussed and recommended by the RSA team. Included are both the estimated time frame and costs associated with the recommended safety measures.



Table 7 RSA Recommendations

POTENTIAL RECOMMENDATIONS	ESTIMATED TIME FRAME AND COSTS
Upgrade advanced warning signs on the South Avenue and Franklin Street approaches, and add flashing “Stop Ahead” (solar powered) to the Franklin Street northbound approach.	Short-term, low cost
Add flashing lights to the stop signs on the northbound and southbound approaches.	Short-term, low cost
Upgrade retro-reflectivity, sign positioning, and sign size consistency on all signs.	Short-term, low cost
Traffic Calming through use of speed trailers and/or police enforcement and visibility.	Short-term, low cost
Reduce the northbound approach from an exclusive left turn lane and separate through lane to a single left turn/through shared lane, and add an island to channel traffic to that lane.	Mid-term, medium cost
Add flashing beacons to intersection, flashing yellow on South Avenue and flashing red on side streets, Franklin Street and Pleasant Street, and reduce the northbound approach from two lanes (exclusive left and separate through lane) to a single shared left/through lane.	Mid-term, medium cost
Add stop signs on all approaches making the intersection an all-way stop controlled intersection (intersection meets MUTCD multi-way stop warrant), add overhead flashing red beacons on all approaches to improve intersection visibility, and reduce the northbound approach from two lanes (exclusive left and separate through lane) to a single shared left/through lane.	Mid-term, medium cost
Reconstruct and re-align the intersection, add traffic signals.	Long-term, high cost
Reconstruct and re-align the intersection, add a roundabout.	Long-term, high cost

The volumes at the intersection from the 2008 study and the updated 2014 data do not satisfy the MUTCD warrants for the installation of a traffic signal for Warrant 1 Minimum Vehicular Volume, Warrant 2 Four Hour Vehicular Volume, and Warrant 3 Peak Hour Volume; however, these warrants are met for the 70 percent value used when the prevailing speed (85th Percentile Speed) is at least 40 miles per hour. The 40 mile per hour speed threshold was recorded by OCPC traffic recorders on South Avenue in 2007, but that 85th Percentile Speed was not reached in the 2014 traffic recorder update. The intersection does satisfy MUTCD Warrant 7, Crash Experience, where five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage (for both the 2008 Study crash data and the updated crash data). The results of the warrant analyses are included in the appendix to this report. The MUTCD recommends that an engineering study be completed prior to the installation of an all way stop or the installation of traffic signals at an intersection in order to verify that the MUTCD criteria have been met.



4.2.1 Build Level-of-Service Analyses

Peak Hour level-of-service analyses were performed assuming that the potential improvements were in place. The Build peak hour level-of-service analyses for the intersection were performed utilizing the 2014 turning movement volumes for five potential build alternatives; 1) assuming that the northbound left turn lane and the through lane are combined into one shared left/through lane, 2) assuming an all way stop was in place with existing lane configuration, 3) assuming an all way stop with single shared left/through northbound lane was in place, 4) assuming the intersection was signalized, 5) and assuming that a roundabout was in place. Table 8 summarizes the Build peak hour levels-of-service.

Table 8 Build Peak Hour Levels-of-Service (LOS) for the South Avenue (Route 27)/Franklin Street/Pleasant Street Intersection

Build Alternative	AM Peak	PM Peak
1) Consolidate Franklin Street northbound lanes to a shared through/left lane Franklin Street northbound shared left/through lane Franklin Street northbound right turn Pleasant Street southbound all movements	D D B	F B C
2) All-Way Stop Sign Existing Lane Configuration South Avenue (Route 27) eastbound all movements South Avenue westbound all movements Franklin Street northbound left movements Franklin Street northbound through movements Franklin Street northbound right turns Pleasant Street southbound all movements	B B B A A A	D B B A A B
3) All-Way Stop Sign Consolidate Franklin Street Northbound Left and Through Lanes into One Shared Lane South Avenue (Route 27) eastbound all movements South Avenue westbound all movements Franklin Street northbound left and through movements Franklin Street northbound right turns Pleasant Street southbound all movements	B B B A A	D B B A B
4) Signalization (Overall LOS)	A	B
5) Roundabout (Overall LOS)	A	A

Table 8 shows that the alternative 1 improvement, which calls for the consolidation of the left turn and through lane on the northbound approach, results in failed PM peak level-of-service on the Franklin Street northbound approach. The level-of-service for this alternative is similar to that of the existing intersection control and lane use, which also experiences LOS “F” for Franklin Street northbound left turns during the PM peak hour.

Table 8 shows that the signalization and roundabout alternatives (alternatives 4 and 5) achieve the better levels of service (LOS “A” and “B”) for the AM and PM operations. The all way stop alternative with existing lane configuration (alternative 2) results in acceptable peak hour levels-of-service. The South Avenue (Route 27) eastbound



approach is expected to experience LOS “D” conditions under this alternative. This approach is a high volume approach with heavy through movements and right turns during the AM and PM peak hours. In addition, the potential for long queues on this approach exist under this alternative, possibly stretching back beyond the at-grade railroad crossing on South Avenue (Route 27), which could create a new potential hazard to motorists. The all-way stop alternative with the consolidation of the left turn and through lane on the northbound approach (alternative 3) results in LOS “D” for the eastbound approach; however, the potential for long queues still exists on this approach

4.2.2 Field Audit Findings

After reviewing the background crash data, traffic volumes, speed data, heavy vehicle data, and discussing the issues, the participants re-convened the audit in the field at the South Avenue (Route 27)/Franklin Street/Pleasant Street intersection (some of the participants were not able to join the field audit due to time constraints). The team inspected sight lines, the condition and placement of signs along the road, channelization islands, and the road alignment. The team noted a number of deficiencies including the limited sight distances on South Avenue due to the curve on the South Avenue westbound approach and the grade on the eastbound South Avenue (Route 27) approach. The participants noticed the ascending grade toward Pleasant Street and the old Whitman Fire station building on the northeast quadrant. This grade, along with the skewed northbound approach presents design constraints for creating a roundabout. In addition, the participants noticed the culvert beneath the intersection, which would add greatly to the cost of reconstructing the intersection. Other important elements noted were that vehicles approaching on the northbound Franklin Street approach (stop signed approach) were encroaching on the travel path of vehicles traveling on South Avenue through the intersection. The South Avenue eastbound approach narrows as it intersects Franklin Street, leaving inadequate width to add an exclusive right turn lane. If right of way were to be taken to widen this approach, it would be over the culvert. The close proximity of the railroad tracks to the intersection (approximately 800 feet) was also noted. If a four way stop were installed, the queue could potentially back up to the railroad tracks, which could endanger motorists if they stopped on the tracks.

4.2.3 Alternative Recommendation Analysis

Install Flashing Beacons - Flashing beacons (red for the stop controlled approaches and yellow for the approaches with the right of way) can be used at this intersection to emphasize the existing traffic controls and provide greater visibility for vehicles approaching the intersection. Improved pavement markings to properly channel vehicles, show lane use, and emphasize the stop control on the northbound and southbound approaches, should be implemented in concert with the flashing beacons. The collision diagram showed that the majority of the cross-movement crashes involved northbound traffic. According to FHWA guidelines, intersection control beacons may be used at intersections where traffic or physical conditions do not justify conventional traffic control signals but crash rates indicate the possibility of a special need. The



intersection flashing control beacon should be installed over the center of the intersection for greater visibility. The installation of the flashing beacons can be done with the combining of the Franklin Street northbound left and through lanes to improve visibility on this approach. The downside to this treatment is that the yellow flashing beacon does not have a profound enough effect on some motorists who do not slow down and take caution through the intersection.

Install Stop Signs on all approaches, combine the Northbound Left and Through Lanes, and Add Overhead Flashing Red Beacons - The intersection satisfies the MUTCD warrant for installing a stop sign (multi-way stop) on all four approaches. The results of the LOS analyses for alternative 2 show that the South Avenue (Route 27) eastbound approach will be at LOS "D" and long queues are expected. This all-way stop alternative analysis was run with the lane configuration on all approaches the same as under existing conditions. The queues on this approach have the potential to back up over the railroad tracks, which presents a safety hazard to motorists. The build analysis for alternative 3, which assumes an all-way stop with the Franklin Street northbound left turn and northbound through movements combined into a single lane, shows LOS "D" also. The Road Safety Audit Participants discussed the possibility of installing an all-way stop, and installing signage in place prohibiting motorists from stopping on the railroad tracks (see Figure 3). The multi-way recommendation was discounted by some of the participants because of the concern that the back-ups from the intersection would result in vehicles stopped on the tracks and the hazard that this would place on motorists, despite the use of the sign.

Figure 3



Install traffic signals and reconstruct and re-align the intersection to reduce or eliminate the intersection skew for safe, efficient traffic flow - A traffic signal installation project, with reconstruction and re-alignment, will bring higher costs and a longer period of implementation in order to obtain programming of federal and state funds. Local funds



for design and state funds are needed as a 20 percent match in order to leverage federal-aid grants through the Transportation Improvement Program (TIP). In order to commence the TIP process, the town must complete and submit a Project Need Form (PNF) to MassDOT District 5. Upon review and concurrence from MassDOT District 5, the town then prepares and submits a Project Information Form (PIF). Subsequently, the submitted PIF will be reviewed and considered by the Project Review Committee (PRC). The process is contained in Chapter 2 of the MassDOT Project Development and Design Guidebook. An alternative to the TIP process is for the town to use local funds for both the design and construction of the traffic signal system and other associated improvements. The LOS analyses indicates that signals will provide LOS “B” operating conditions during the peak hours and will help eliminate cross-movement type crashes, which are the type of crashes that result the most in injuries and fatalities. The installation of signals does not always result in a reduction in the number of crashes because sometimes the rear-end type of crashes increase with a signal; however, signals do reduce significantly the cross-movement type crashes. Signals at this location should be coordinated with the train signals at the at-grade crossing so that South Street eastbound approach to the intersections gets a green light to clear out any back-ups on this approach that could potentially back up 800 feet to the train crossing. This will help prevent from cars stopping on the train tracks due to a red light at the eastbound approach to the intersection.

Re-construct, re-align the intersection and add a modern roundabout - Modern roundabouts significantly reduce crashes, especially crashes that cause fatalities and injuries. Roundabouts have a traffic calming effect that forces vehicles to traverse the intersection at speeds of about 20 miles per hour. Studies show that roundabouts reduce the overall crash experience at stop controlled intersections by 70 percent and by 40 percent over signalized intersections. Overall, roundabouts reduce injury related crashes by 70 percent over conventional intersections. Preliminary analyses of the peak hour operations show that a roundabout will operate with the same efficiency of a signal at this intersection location. However, the installation of a roundabout at this location presents serious layout issues due to the grade, the culvert beneath the intersection, and the skewed nature of the intersection.

Safety Improvements - Safety improvements at the intersection require improvements in sight distances, upgrades in pavement markings, and upgrades in signing for proper speeds and advance warning for traffic. These improvements will be needed with all recommended options (all-way stop, traffic signal, and/or roundabout.)

Speed and Traffic Control Enforcement - Regardless of which short and long term traffic control options are selected by the town, it is recommended that immediate and strict enforcement of the posted speed limits be implemented in an effort to reduce approach speeds. The town should provide targeted enforcement to reduce speeding and stop sign violations.



5.0 Conclusions and Next Steps

5.1 Next Steps

The Road Safety Audit process will conclude with a review and finalization of the findings and recommendations by the RSA participants, and a response should be prepared by the Town that includes a plan for implementation of improvements.



6.0 Appendix

6.1 Audit Meeting Agenda

6.2 Safety Audit and Meeting Sign-up Sheet

6.3 Morning and Afternoon Intersection Peak Hour Turning Movement Data

6.4 Automatic Traffic Recorder Vehicle Volumes, Speeds, and Vehicle Classifications

6.5 AM and PM Intersection Peak Hour Levels-of-Service

6.6 Signal Warrant and Multi-Way Stop Analyses Summaries

6.7 Crash Rate Work Sheets and Collision Diagrams

APPENDICES

ROAD SAFETY AUDIT

South Avenue (Route 27)/Franklin Street/Pleasant Street Intersection Whitman, MA

December 2014



Prepared by:

Old Colony Planning Council
70 School Street
Brockton, MA. 02301
(508) 583-1833
www.ocpcrpa.org
MassDOT Contract # 69649





6.1 Audit Meeting Agenda

Agenda

Road Safety Audit

Whitman, MA

South Avenue (Route 27) at Franklin Street

Meeting Location: Whitman Town Hall
54 South Avenue
Whitman, MA 02382
Thursday, August 21, 2014
10:00 AM – 12:00 PM

Type of meeting: Road Safety Audit
Attendees: Invited Participants to Comprise a Multidisciplinary Team
Please bring: Thoughts and Enthusiasm

10:00 AM Welcome and Introductions

10:05 AM Review of Site Specific Material – Brief PowerPoint

- Crash Data, Turning Movement Volumes, Level-of-Service, Speed Summaries
- Traffic Control, Existing Geometries, Sight Distances, and Physical Conditions

10:25 AM Discussion

- Discuss and document deficiencies
- Discuss and document potential fixes

11:00 AM Field Visit and Discussion

- Optional field visit to further discuss observations and findings
- Discuss potential improvements and finalize recommendations

12:00 PM Adjourn for the Day

Instructions for Participants:

- Before attending the RSA participants are encouraged to drive through the intersection and complete/consider elements on the RSA Prompt List with a focus on safety.
- All participants will be actively involved in the process throughout.
- After the RSA meeting, participants will be asked to comment and respond to the document materials to assure it is reflective of the RSA completed by the multidisciplinary team.
- Please direct questions regarding this RSA to Ray Guarino, OCPC, (508) 583-1833, Ext 212, rguarino@ocpcrpa.org.

Old Colony Planning Council
70 School Street
Brockton, MA 02301



6.2 Safety Audit and Meeting Sign-up Sheet



6.3 Morning and Afternoon Intersection Peak Hour Turning Movement Data

Intersection Turning Movement Data Whitman, MA

Washington Street

185 (373)

14 (19)

116 (290)

55 (64)



Whitman Center

Temple Street

11 (21)

229 (355)

180 (268)

38 (66)

Route 27

86 (109)

253 (246)

36 (57)

375 (412)

Total Entering Vehicles

1,276 (1,461) March 14, 2007 (March 14, 2007)

7:00 to 8:00 AM

(4:45 to 5:45 PM)

68 (45)

372 (206)

47 (70)

487 (321)

26 (73)

2 (5)

20 (61)

4 (7)



South Avenue

250 (540)

2 (2)

171 (301)

77 (237)

15 (14)

290 (246)

8 (5)

313 (265)

Total Entering Vehicles

838 (1,081) Sept. 9, 2014 (Sept. 10, 2014)

7:00 to 8:00 AM

(4:45 to 5:45 PM)

155 (139)

88 (63)

6 (1)

249 (203)

Route 27

Franklin Street

Peak Period Trains At Whitman MBTA Stations:

Morning Inbound (Mon through Fri)

5:52 AM – 6:39 AM – 7:31 AM – 7:57 AM – 8:57 AM

Morning Outbound (Mon through Fri)

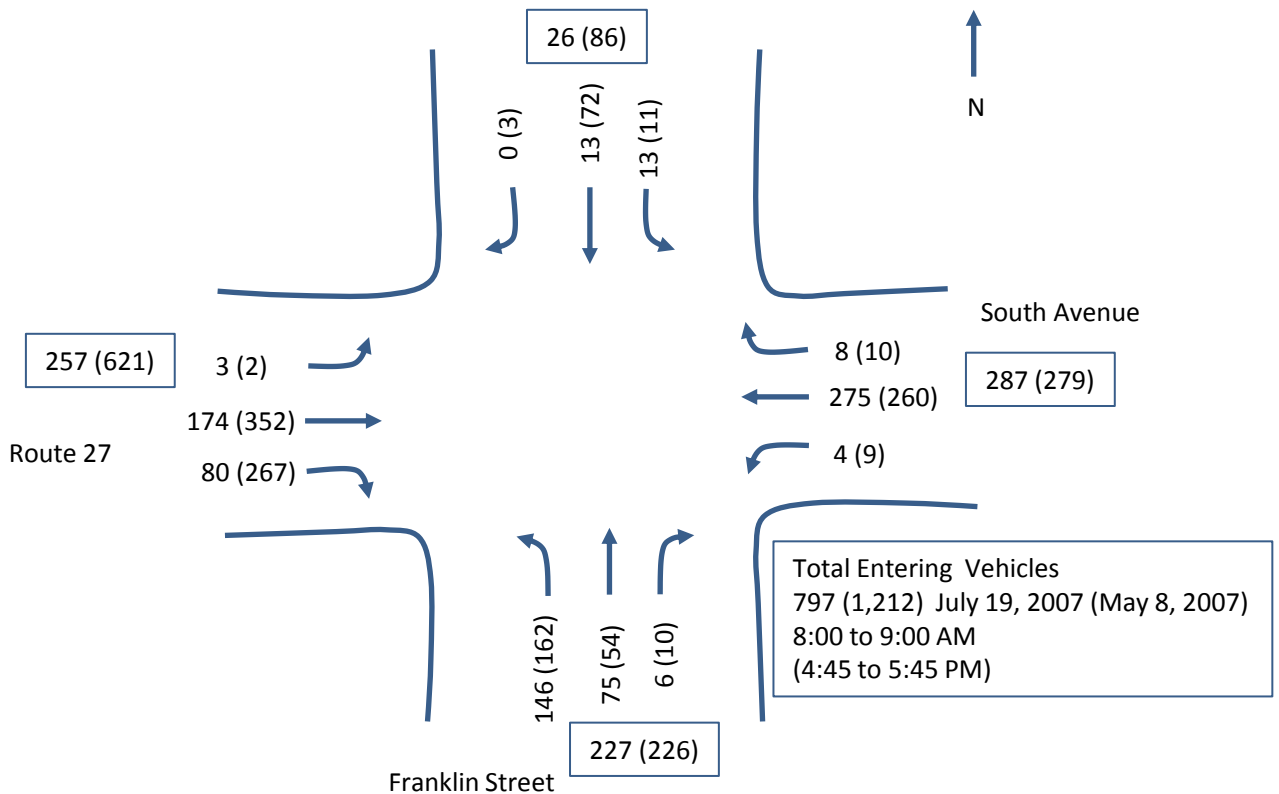
7:47 AM

Afternoon Inbound (Mon through Fri)

4:42 PM

Afternoon Outbound (Mon through Fri)

4:56 PM – 5:35 PM – 6:13 PM





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Community: Whitman
 Weather: Clear
 Board # & Staff: DB-400 (6) / RG
 Traffic Control: Stop Sign

File Name : South Avenue (27) & Franklin Steet (27)_Pleasant Street_PM
 Site Code : 338
 Start Date : 9/9/2014
 Page No : 1

Groups Printed- Cars - Buses - Trucks

Start Time	Pleasant Street Southbound					South Avenue Westbound					Franklin Street (Route 27) Northbound					South Avenue (Route 27) Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	19	0	2	21	3	50	5	0	58	0	10	27	0	37	72	69	1	0	142	258
04:15 PM	0	24	2	0	26	1	37	5	0	43	1	12	40	0	53	56	51	0	0	107	229
04:30 PM	0	20	5	1	26	3	68	1	0	72	0	13	37	0	50	49	53	0	0	102	250
04:45 PM	0	4	1	0	5	5	57	2	0	64	1	14	34	0	49	65	74	0	0	139	257
Total	0	67	8	3	78	12	212	13	0	237	2	49	138	0	189	242	247	1	0	490	994
05:00 PM	3	10	1	3	17	6	56	1	0	63	0	14	43	0	57	65	87	0	0	152	289
05:15 PM	1	26	1	0	28	2	66	2	0	70	0	19	40	3	62	56	51	0	0	107	267
05:30 PM	1	21	4	0	26	1	67	0	0	68	0	16	22	4	42	51	89	2	0	142	278
05:45 PM	0	15	3	0	18	0	47	1	0	48	1	8	28	0	37	69	58	0	0	127	230
Total	5	72	9	3	89	9	236	4	0	249	1	57	133	7	198	241	285	2	0	528	1064
Grand Total	5	139	17	6	167	21	448	17	0	486	3	106	271	7	387	483	532	3	0	1018	2058
Apprch %	3	83.2	10.2	3.6		4.3	92.2	3.5	0		0.8	27.4	70	1.8		47.4	52.3	0.3	0		
Total %	0.2	6.8	0.8	0.3	8.1	1	21.8	0.8	0	23.6	0.1	5.2	13.2	0.3	18.8	23.5	25.9	0.1	0	49.5	
Cars	5	136	17	2	160	21	446	17	0	484	3	104	265	0	372	477	526	3	0	1006	2022
% Cars	100	97.8	100	33.3	95.8	100	99.6	100	0	99.6	100	98.1	97.8	0	96.1	98.8	98.9	100	0	98.8	98.3
Buses	0	1	0	4	5	0	1	0	0	1	0	0	1	7	8	0	1	0	0	1	15
% Buses	0	0.7	0	66.7	3	0	0.2	0	0	0.2	0	0	0.4	100	2.1	0	0.2	0	0	0.1	0.7
Trucks	0	2	0	0	2	0	1	0	0	1	0	2	5	0	7	6	5	0	0	11	21
% Trucks	0	1.4	0	0	1.2	0	0.2	0	0	0.2	0	1.9	1.8	0	1.8	1.2	0.9	0	0	1.1	1

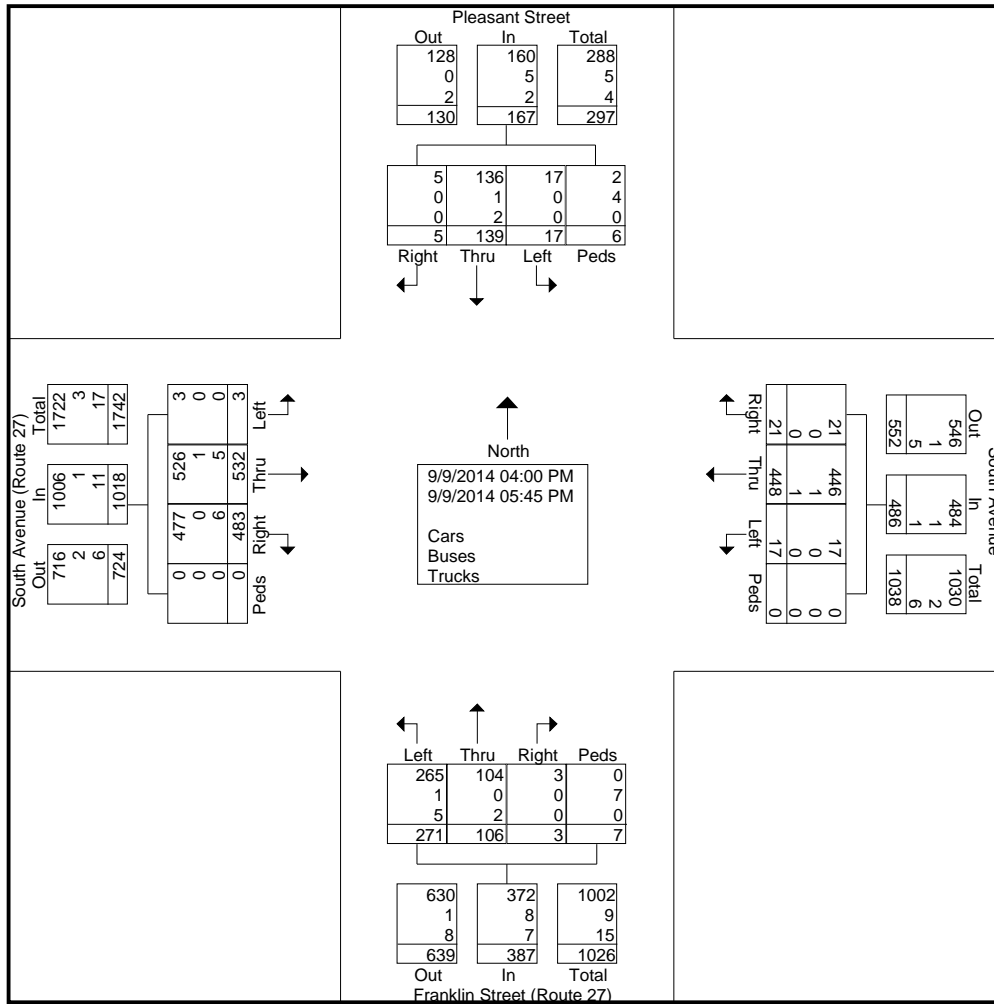


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File Name : South Avenue (27) & Franklin Steet (27)_Pleasant Street_PM
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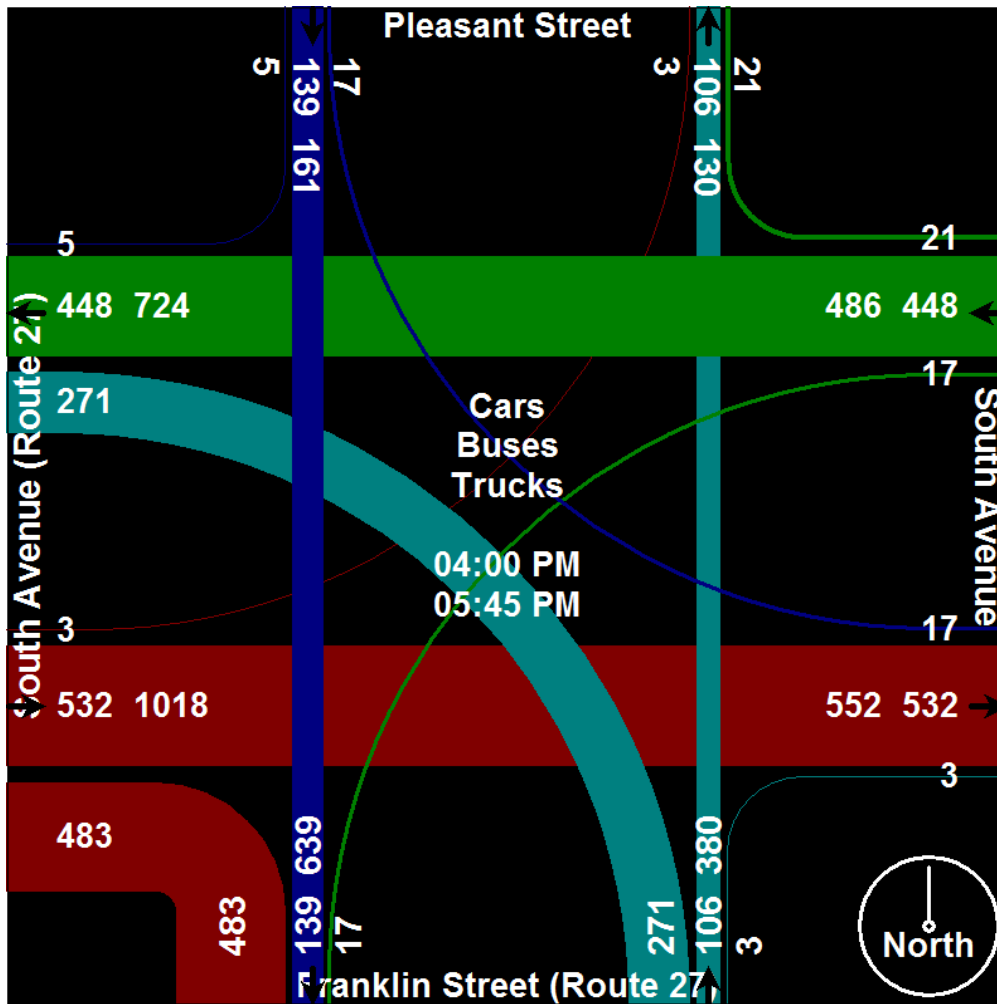


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File Name : South Avenue (27) & Franklin Steet (27)_Pleasant Street_PM
 Site Code : 338
 Start Date : 9/9/2014
 Page No : 4

Start Time	Pleasant Street Southbound					South Avenue Westbound					Franklin Street (Route 27) Northbound					South Avenue (Route 27) Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	4	1	0	5	5	57	2	0	64	1	14	34	0	49	65	74	0	0	139	257
05:00 PM	3	10	1	3	17	6	56	1	0	63	0	14	43	0	57	65	87	0	0	152	289
05:15 PM	1	26	1	0	28	2	66	2	0	70	0	19	40	3	62	56	51	0	0	107	267
05:30 PM	1	21	4	0	26	1	67	0	0	68	0	16	22	4	42	51	89	2	0	142	278
Total Volume	5	61	7	3	76	14	246	5	0	265	1	63	139	7	210	237	301	2	0	540	1091
% App. Total	6.6	80.3	9.2	3.9		5.3	92.8	1.9	0		0.5	30	66.2	3.3		43.9	55.7	0.4	0		
PHF	.417	.587	.438	.250	.679	.583	.918	.625	.000	.946	.250	.829	.808	.438	.847	.912	.846	.250	.000	.888	.944
Cars	5	59	7	0	71	14	246	5	0	265	1	61	138	0	200	234	297	2	0	533	1069
% Cars	100	96.7	100	0	93.4	100	100	100	0	100	100	96.8	99.3	0	95.2	98.7	98.7	100	0	98.7	98.0
Buses	0	0	0	3	3	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	10
% Buses	0	0	0	100	3.9	0	0	0	0	0	0	0	0	100	3.3	0	0	0	0	0	0.9
Trucks	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	3	4	0	0	7	12
% Trucks	0	3.3	0	0	2.6	0	0	0	0	0	0	3.2	0.7	0	1.4	1.3	1.3	0	0	1.3	1.1

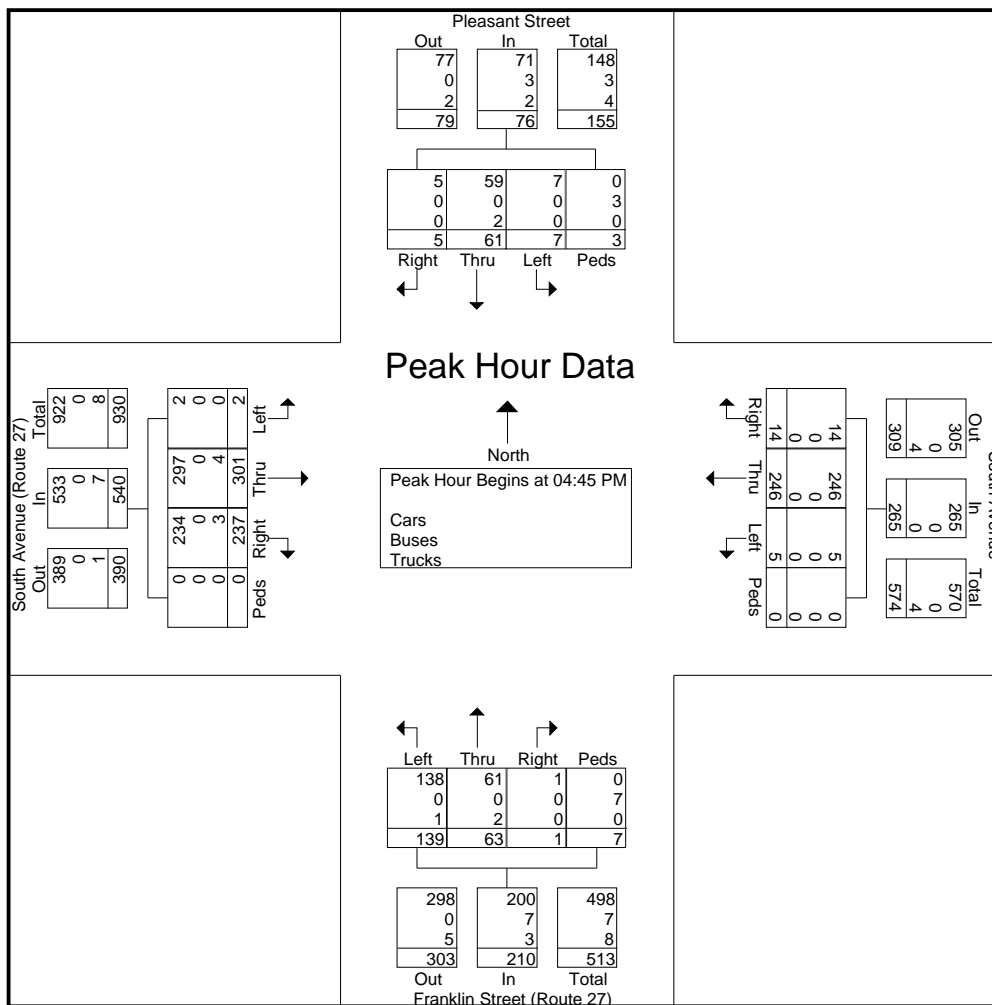


Old Colony Planning Council

70 School Street
 Brockton, MA 02301
 (508) 583-1833
 www.ocpcrpa.org

Community: Whitman
 Weather: Clear
 Board # & Staff: DB-400 (6) / RG
 Traffic Control: Stop Sign

File Name : South Avenue (27) & Franklin Steet (27)_Pleasant Street_PM
 Site Code : 338
 Start Date : 9/9/2014
 Page No : 5



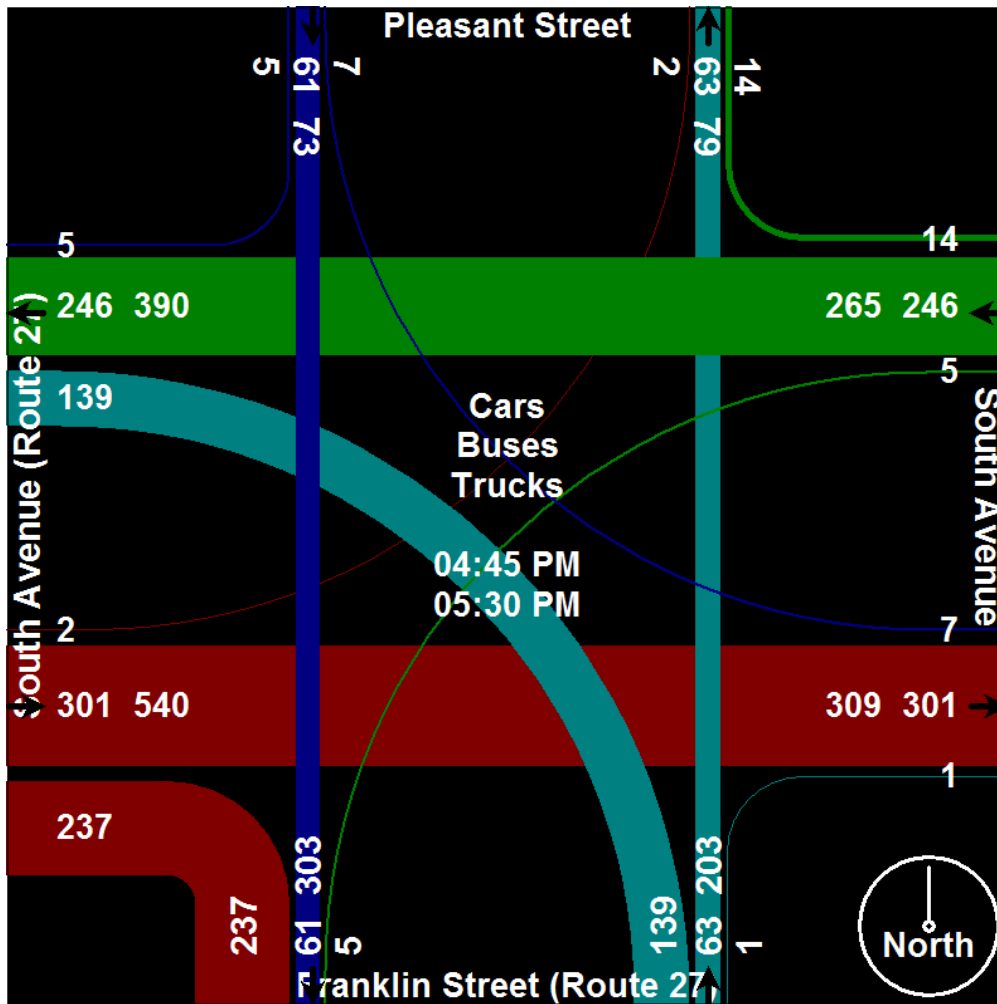


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File Name : South Avenue (27) & Franklin Steet (27)_Pleasant Street_PM
Site Code : 338
Start Date : 9/9/2014
Page No : 7

Image 1





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Community: Whitman
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 Board # & Staff: DB-400 (6) / RG
 Traffic Control: Stop Sign

File Name : South Avenue (27) & Franklin Steet (27)_Pleasant Street_AM
 Site Code : 338
 Start Date : 9/10/2014
 Page No : 1

Groups Printed- Cars - Buses - Trucks

Start Time	Pleasant Street Southbound					South Avenue Westbound					Franklin Street (Route 27) Northbound					South Avenue (Route 27) Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	2	0	0	2	3	56	1	0	60	2	25	45	1	73	15	42	0	0	57	192
07:15 AM	0	4	0	0	4	2	92	0	0	94	1	21	37	0	59	20	37	1	0	58	215
07:30 AM	1	5	1	1	8	7	67	3	1	78	1	27	34	1	63	17	54	1	0	72	221
07:45 AM	1	9	3	1	14	3	75	4	0	82	2	15	39	1	57	25	38	0	0	63	216
Total	2	20	4	2	28	15	290	8	1	314	6	88	155	3	252	77	171	2	0	250	844
08:00 AM	0	5	0	0	5	3	43	0	0	46	1	16	31	0	48	21	35	0	0	56	155
08:15 AM	0	3	0	0	3	2	47	0	0	49	2	20	31	1	54	29	41	1	0	71	177
08:30 AM	0	4	3	0	7	5	44	0	0	49	1	18	28	1	48	22	36	0	0	58	162
08:45 AM	0	2	3	0	5	1	54	1	0	56	1	15	33	1	50	27	53	0	0	80	191
Total	0	14	6	0	20	11	188	1	0	200	5	69	123	3	200	99	165	1	0	265	685
Grand Total	2	34	10	2	48	26	478	9	1	514	11	157	278	6	452	176	336	3	0	515	1529
Apprch %	4.2	70.8	20.8	4.2		5.1	93	1.8	0.2		2.4	34.7	61.5	1.3		34.2	65.2	0.6	0		
Total %	0.1	2.2	0.7	0.1	3.1	1.7	31.3	0.6	0.1	33.6	0.7	10.3	18.2	0.4	29.6	11.5	22	0.2	0	33.7	
Cars	2	32	10	1	45	26	470	5	1	502	11	153	269	5	438	155	325	3	0	483	1468
% Cars	100	94.1	100	50	93.8	100	98.3	55.6	100	97.7	100	97.5	96.8	83.3	96.9	88.1	96.7	100	0	93.8	96
Buses	0	0	0	1	1	0	3	1	0	4	0	0	3	1	4	3	2	0	0	5	14
% Buses	0	0	0	50	2.1	0	0.6	11.1	0	0.8	0	0	1.1	16.7	0.9	1.7	0.6	0	0	1	0.9
Trucks	0	2	0	0	2	0	5	3	0	8	0	4	6	0	10	18	9	0	0	27	47
% Trucks	0	5.9	0	0	4.2	0	1	33.3	0	1.6	0	2.5	2.2	0	2.2	10.2	2.7	0	0	5.2	3.1

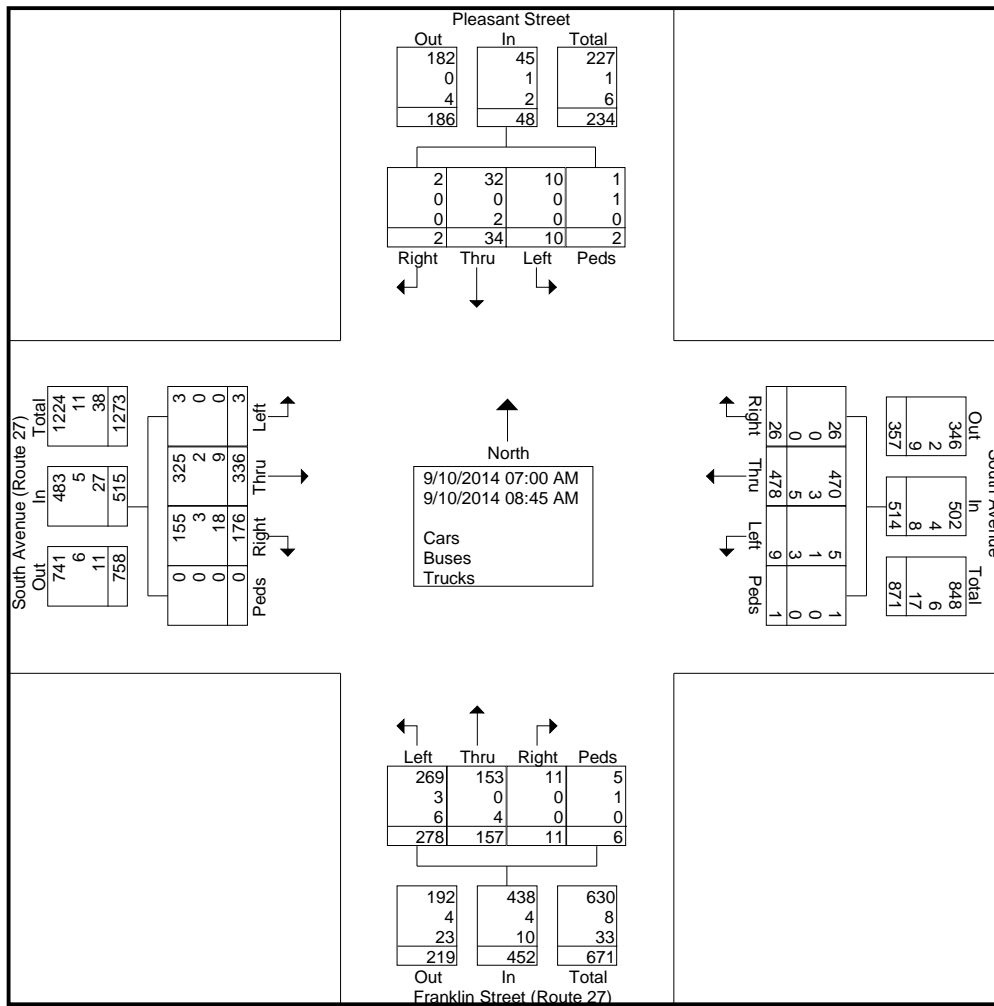


Old Colony Planning Council

70 School Street
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 www.ocpcrpa.org

Community: Whitman
 Weather: Clear
 Board # & Staff: DB-400 (6) / RG
 Traffic Control: Stop Sign

File Name : South Avenue (27) & Franklin Steet (27)_Pleasant Street_AM
 Site Code : 338
 Start Date : 9/10/2014
 Page No : 2



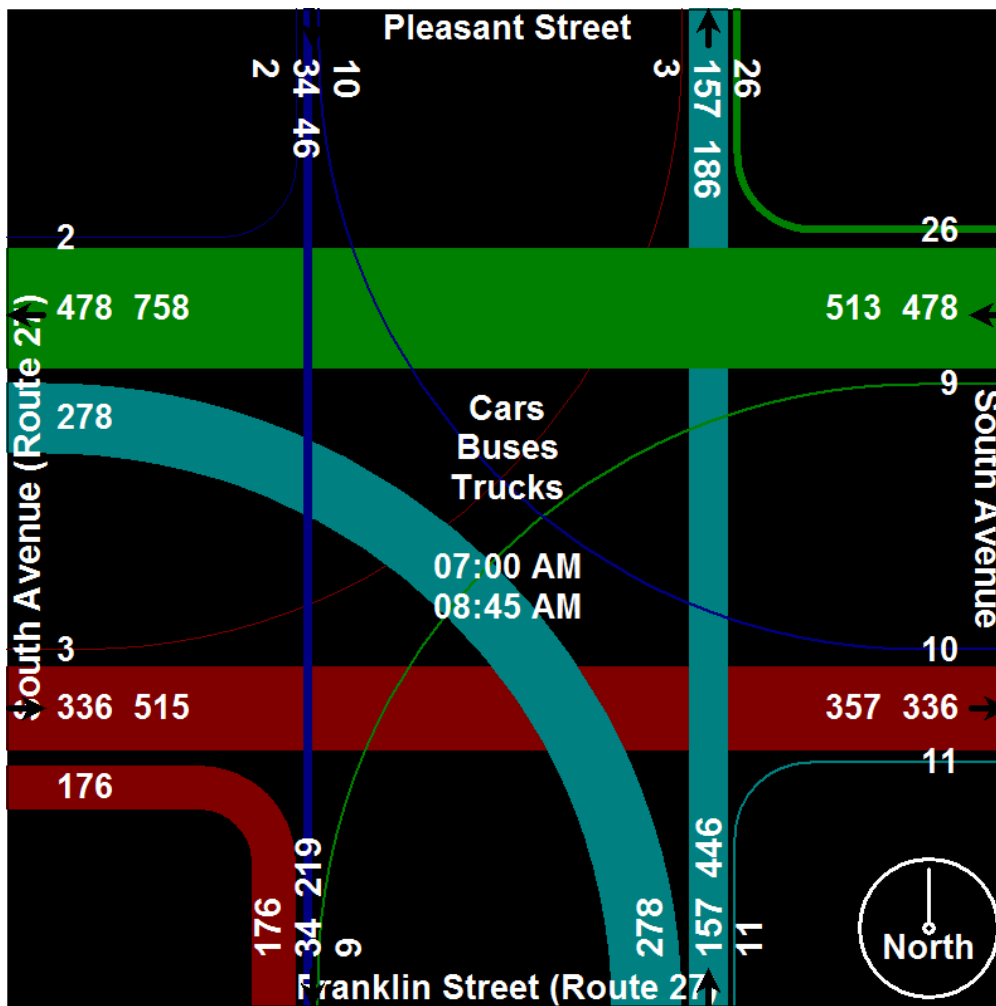


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Page No : 3





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Community: Whitman
 Weather: Clear
 Board # & Staff: DB-400 (6) / RG
 Traffic Control: Stop Sign

File Name : South Avenue (27) & Franklin Steet (27)_Pleasant Street_AM
 Site Code : 338
 Start Date : 9/10/2014
 Page No : 4

Start Time	Pleasant Street Southbound					South Avenue Westbound					Franklin Street (Route 27) Northbound					South Avenue (Route 27) Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	2	0	0	2	3	56	1	0	60	2	25	45	1	73	15	42	0	0	57	192
07:15 AM	0	4	0	0	4	2	92	0	0	94	1	21	37	0	59	20	37	1	0	58	215
07:30 AM	1	5	1	1	8	7	67	3	1	78	1	27	34	1	63	17	54	1	0	72	221
07:45 AM	1	9	3	1	14	3	75	4	0	82	2	15	39	1	57	25	38	0	0	63	216
Total Volume	2	20	4	2	28	15	290	8	1	314	6	88	155	3	252	77	171	2	0	250	844
% App. Total	7.1	71.4	14.3	7.1		4.8	92.4	2.5	0.3		2.4	34.9	61.5	1.2		30.8	68.4	0.8	0		
PHF	.500	.556	.333	.500	.500	.536	.788	.500	.250	.835	.750	.815	.861	.750	.863	.770	.792	.500	.000	.868	.955
Cars	2	19	4	1	26	15	285	4	1	305	6	87	150	3	246	69	170	2	0	241	818
% Cars	100	95.0	100	50.0	92.9	100	98.3	50.0	100	97.1	100	98.9	96.8	100	97.6	89.6	99.4	100	0	96.4	96.9
Buses	0	0	0	1	1	0	3	1	0	4	0	0	3	0	3	1	0	0	0	1	9
% Buses	0	0	0	50.0	3.6	0	1.0	12.5	0	1.3	0	0	1.9	0	1.2	1.3	0	0	0	0.4	1.1
Trucks	0	1	0	0	1	0	2	3	0	5	0	1	2	0	3	7	1	0	0	8	17
% Trucks	0	5.0	0	0	3.6	0	0.7	37.5	0	1.6	0	1.1	1.3	0	1.2	9.1	0.6	0	0	3.2	2.0

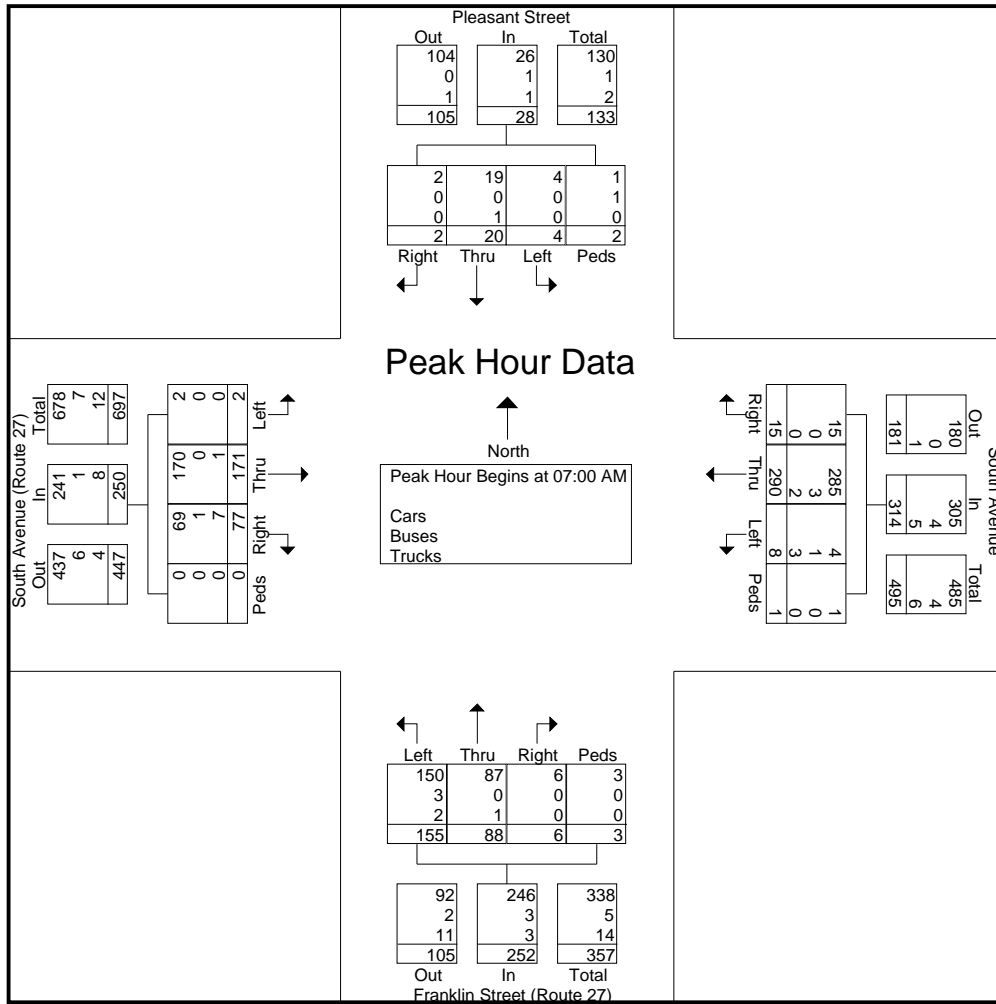


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File Name : South Avenue (27) & Franklin Steet (27)_Pleasant Street_AM
 Site Code : 338
 Start Date : 9/10/2014
 Page No : 5



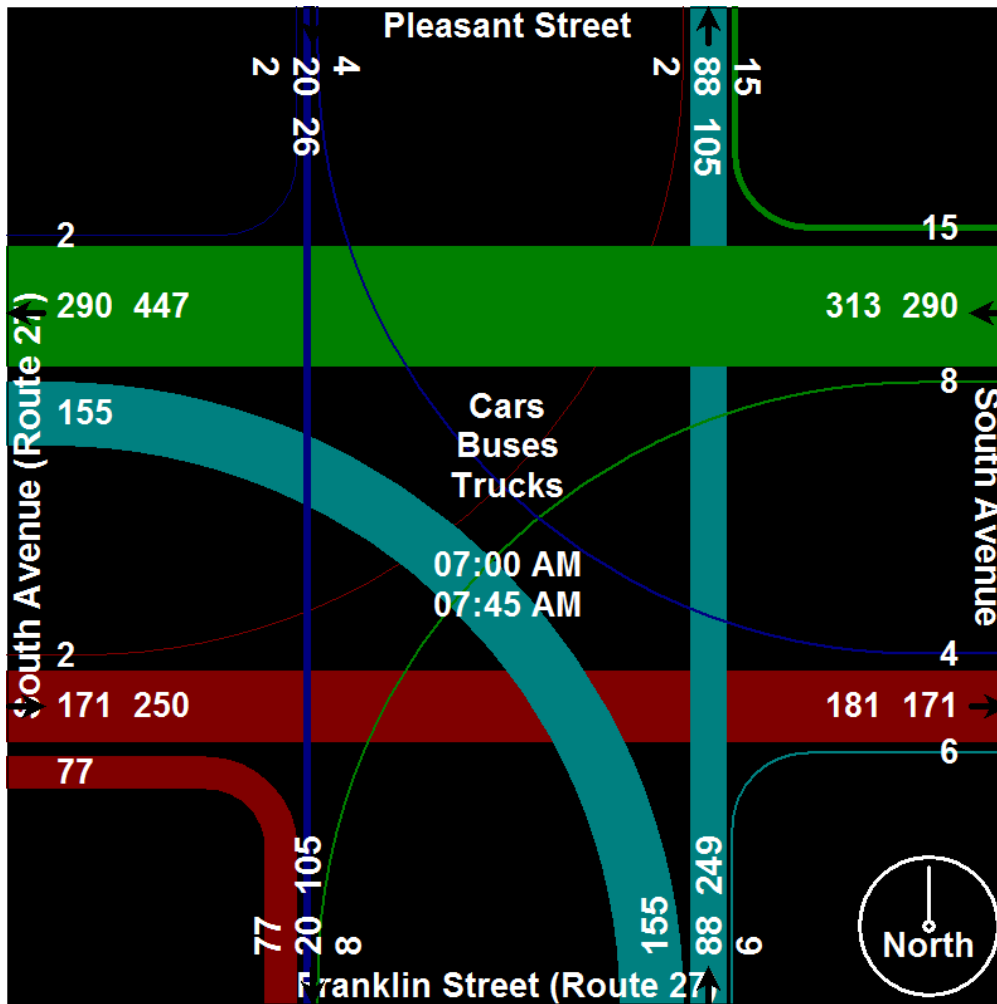


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File Name : South Avenue (27) & Franklin Steet (27)_Pleasant Street_AM
Site Code : 338
Start Date : 9/10/2014
Page No : 6





6.4 Automatic Traffic Recorder Vehicle Volumes, Speeds, and Vehicle Classifications

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

Start Time	08-Sep-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	12	8	16	12	*	*	*	*	*	*	14	10
01:00	*	*	*	*	9	3	4	5	*	*	*	*	*	*	6	4
02:00	*	*	*	*	5	0	1	5	*	*	*	*	*	*	3	2
03:00	*	*	*	*	3	2	4	7	*	*	*	*	*	*	4	4
04:00	*	*	*	*	15	15	20	16	*	*	*	*	*	*	18	16
05:00	*	*	*	*	23	73	27	74	*	*	*	*	*	*	25	74
06:00	*	*	*	*	90	181	96	182	*	*	*	*	*	*	93	182
07:00	*	*	*	*	184	301	162	314	*	*	*	*	*	*	173	308
08:00	*	*	*	*	176	186	175	214	*	*	*	*	*	*	176	200
09:00	*	*	*	*	142	221	152	247	*	*	*	*	*	*	147	234
10:00	*	*	*	*	125	139	123	134	*	*	*	*	*	*	124	136
11:00	*	*	*	*	155	136	137	129	*	*	*	*	*	*	146	132
12:00 PM	*	*	*	*	131	159	145	151	*	*	*	*	*	*	138	155
01:00	*	*	*	*	165	146	162	156	*	*	*	*	*	*	164	151
02:00	*	*	*	*	200	174	231	182	*	*	*	*	*	*	216	178
03:00	*	*	*	*	237	263	239	271	*	*	*	*	*	*	238	267
04:00	*	*	*	*	279	285	243	241	*	*	*	*	*	*	261	263
05:00	*	*	*	*	289	261	310	266	*	*	*	*	*	*	300	264
06:00	*	*	*	*	269	199	240	197	*	*	*	*	*	*	254	198
07:00	*	*	*	*	172	168	181	165	*	*	*	*	*	*	176	166
08:00	*	*	*	*	145	98	147	115	*	*	*	*	*	*	146	106
09:00	*	*	*	*	79	65	97	83	*	*	*	*	*	*	88	74
10:00	*	*	*	*	58	51	67	52	*	*	*	*	*	*	62	52
11:00	*	*	*	*	34	23	39	26	*	*	*	*	*	*	36	24
Total Day	0	0	0	0	2997	3157	3018	3244	0	0	0	0	0	0	3008	3200
AM Peak	-	-	-	-	07:00	07:00	08:00	07:00	-	-	-	-	-	-	08:00	07:00
Vol.	-	-	-	-	184	301	175	314	-	-	-	-	-	-	176	308
PM Peak	-	-	-	-	17:00	16:00	17:00	15:00	-	-	-	-	-	-	17:00	15:00
Vol.	-	-	-	-	289	285	310	271	-	-	-	-	-	-	300	267

Comb. Total	0	0	6154	6262	0	0	0	6208
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Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

Start Time	10-Sep-14		EB		WB		Combined		11-Sep		EB		WB		Combined	
	Wed		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Thu		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00			5	40	4	29	9	69			6	39	4	37	10	76
12:15			1	31	2	49	3	80			5	43	2	28	7	71
12:30			2	30	1	43	3	73			2	35	3	36	5	71
12:45			4	30	1	38	5	68			3	28	3	50	6	78
01:00			3	35	1	43	4	78			1	36	2	41	3	77
01:15			2	46	1	34	3	80			0	42	1	40	1	82
01:30			1	45	0	30	1	75			1	39	0	45	1	84
01:45			3	39	1	39	4	78			2	45	2	30	4	75
02:00			1	45	0	32	1	77			0	41	1	44	1	85
02:15			2	38	0	50	2	88			0	56	3	32	3	88
02:30			0	54	0	53	0	107			1	59	0	56	1	115
02:45			2	63	0	39	2	102			0	75	1	50	1	125
03:00			1	75	0	68	1	143			2	72	2	66	4	138
03:15			0	50	0	76	0	126			0	53	1	63	1	116
03:30			0	51	1	61	1	112			2	58	4	65	6	123
03:45			2	61	1	58	3	119			0	56	0	77	0	133
04:00			0	67	0	70	0	137			1	59	2	49	3	108
04:15			4	57	4	73	8	130			5	57	3	49	8	106
04:30			6	67	5	62	11	129			10	53	5	69	15	122
04:45			5	88	6	80	11	168			4	74	6	74	10	148
05:00			2	82	13	62	15	144			4	92	13	59	17	151
05:15			1	65	19	82	20	147			3	80	19	71	22	151
05:30			10	72	19	59	29	131			9	71	21	83	30	154
05:45			10	70	22	58	32	128			11	67	21	53	32	120
06:00			15	64	25	53	40	117			19	61	29	40	48	101
06:15			20	89	42	38	62	127			19	86	49	61	68	147
06:30			30	56	72	69	102	125			27	45	65	56	92	101
06:45			25	60	42	39	67	99			31	48	39	40	70	88
07:00			46	43	68	42	114	85			31	37	60	42	91	79
07:15			43	44	87	48	130	92			41	46	95	44	136	90
07:30			62	47	75	46	137	93			56	46	95	41	151	87
07:45			33	38	71	32	104	70			34	52	64	38	98	90
08:00			36	48	45	30	81	78			38	52	51	30	89	82
08:15			43	36	44	28	87	64			41	45	50	32	91	77
08:30			41	27	52	15	93	42			41	24	53	28	94	52
08:45			56	34	45	25	101	59			55	26	60	25	115	51
09:00			53	29	98	18	151	47			57	17	103	19	160	36
09:15			41	14	49	25	90	39			28	28	52	25	80	53
09:30			23	15	40	13	63	28			33	28	42	24	75	52
09:45			25	21	34	9	59	30			34	24	50	15	84	39
10:00			30	22	27	18	57	40			27	28	35	21	62	49
10:15			38	15	36	10	74	25			27	16	28	16	55	32
10:30			33	11	41	13	74	24			35	15	35	3	70	18
10:45			24	10	35	10	59	20			34	8	36	12	70	20
11:00			42	6	28	2	70	8			41	12	28	5	69	17
11:15			35	9	35	8	70	17			34	11	33	10	67	21
11:30			40	11	36	6	76	17			27	6	36	3	63	9
11:45			38	8	37	7	75	15			35	10	32	8	67	18
Total			939	2058	1265	1892	2204	3950			917	2101	1339	1905	2256	4006
Day Total			2997		3157		6154				3018		3244		6262	
% Total			15.3%	33.4%	20.6%	30.7%					14.6%	33.6%	21.4%	30.4%		
Peak	-		08:15	04:45	07:00	04:30	07:00	04:45	-		08:15	04:45	07:00	04:45	07:00	04:45
Vol.	-		193	307	301	286	485	590	-		194	317	314	287	476	604
P.H.F.			0.778	0.872	0.865	0.872	0.885	0.878			0.851	0.861	0.826	0.864	0.788	0.981

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

Start Time	08-Sep-14 Mon	09-Sep-14 Tue	10-Sep-14 Wed	11-Sep-14 Thu	12-Sep-14 Fri	13-Sep-14 Sat	14-Sep-14 Sun	Week Average
12:00 AM	*	*	20	28	*	*	*	24
01:00	*	*	12	9	*	*	*	10
02:00	*	*	5	6	*	*	*	6
03:00	*	*	5	11	*	*	*	8
04:00	*	*	30	36	*	*	*	33
05:00	*	*	96	101	*	*	*	98
06:00	*	*	271	278	*	*	*	274
07:00	*	*	485	476	*	*	*	480
08:00	*	*	362	389	*	*	*	376
09:00	*	*	363	399	*	*	*	381
10:00	*	*	264	257	*	*	*	260
11:00	*	*	291	266	*	*	*	278
12:00 PM	*	*	290	296	*	*	*	293
01:00	*	*	311	318	*	*	*	314
02:00	*	*	374	413	*	*	*	394
03:00	*	*	500	510	*	*	*	505
04:00	*	*	564	484	*	*	*	524
05:00	*	*	550	576	*	*	*	563
06:00	*	*	468	437	*	*	*	452
07:00	*	*	340	346	*	*	*	343
08:00	*	*	243	262	*	*	*	252
09:00	*	*	144	180	*	*	*	162
10:00	*	*	109	119	*	*	*	114
11:00	*	*	57	65	*	*	*	61
Total	0	0	6154	6262	0	0	0	6205
Percentage	0.0%	0.0%	99.2%	100.9%	0.0%	0.0%	0.0%	
AM Peak	-	-	07:00	07:00	-	-	-	07:00
Vol.	-	-	485	476	-	-	-	480
PM Peak	-	-	16:00	17:00	-	-	-	17:00
Vol.	-	-	564	576	-	-	-	563

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

EB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/10/14	10	1	1	0	0	0	0	0	0	0	0	0	0	0	12
01:00	7	1	1	0	0	0	0	0	0	0	0	0	0	0	9
02:00	1	4	0	0	0	0	0	0	0	0	0	0	0	0	5
03:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
04:00	9	1	3	2	0	0	0	0	0	0	0	0	0	0	15
05:00	12	10	1	0	0	0	0	0	0	0	0	0	0	0	23
06:00	46	33	10	1	0	0	0	0	0	0	0	0	0	0	90
07:00	106	66	11	1	0	0	0	0	0	0	0	0	0	0	184
08:00	120	47	9	0	0	0	0	0	0	0	0	0	0	0	176
09:00	98	34	9	0	1	0	0	0	0	0	0	0	0	0	142
10:00	83	37	5	0	0	0	0	0	0	0	0	0	0	0	125
11:00	114	35	4	2	0	0	0	0	0	0	0	0	0	0	155
12 PM	92	30	9	0	0	0	0	0	0	0	0	0	0	0	131
13:00	109	49	6	1	0	0	0	0	0	0	0	0	0	0	165
14:00	125	63	10	2	0	0	0	0	0	0	0	0	0	0	200
15:00	163	63	9	2	0	0	0	0	0	0	0	0	0	0	237
16:00	162	105	12	0	0	0	0	0	0	0	0	0	0	0	279
17:00	158	115	16	0	0	0	0	0	0	0	0	0	0	0	289
18:00	147	104	16	2	0	0	0	0	0	0	0	0	0	0	269
19:00	111	53	8	0	0	0	0	0	0	0	0	0	0	0	172
20:00	100	38	7	0	0	0	0	0	0	0	0	0	0	0	145
21:00	49	30	0	0	0	0	0	0	0	0	0	0	0	0	79
22:00	34	20	3	0	1	0	0	0	0	0	0	0	0	0	58
23:00	20	12	2	0	0	0	0	0	0	0	0	0	0	0	34
Total	1876	953	153	13	2	0	0	0	0	0	0	0	0	0	2997

Daily

15th Percentile :	11 MPH
50th Percentile :	21 MPH
85th Percentile :	33 MPH
95th Percentile :	38 MPH

Mean Speed(Average) :	23 MPH
10 MPH Pace Speed :	15-24 MPH
Number in Pace :	1063
Percent in Pace :	35.5%
Number of Vehicles > 35 MPH :	1121
Percent of Vehicles > 35 MPH :	37.4%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

EB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/11/14	4	9	3	0	0	0	0	0	0	0	0	0	0	0	16
01:00	2	1	1	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	4
04:00	5	9	4	2	0	0	0	0	0	0	0	0	0	0	20
05:00	13	11	2	1	0	0	0	0	0	0	0	0	0	0	27
06:00	53	30	9	4	0	0	0	0	0	0	0	0	0	0	96
07:00	83	57	20	2	0	0	0	0	0	0	0	0	0	0	162
08:00	112	54	9	0	0	0	0	0	0	0	0	0	0	0	175
09:00	94	52	6	0	0	0	0	0	0	0	0	0	0	0	152
10:00	80	36	7	0	0	0	0	0	0	0	0	0	0	0	123
11:00	77	51	9	0	0	0	0	0	0	0	0	0	0	0	137
12 PM	79	61	5	0	0	0	0	0	0	0	0	0	0	0	145
13:00	89	57	16	0	0	0	0	0	0	0	0	0	0	0	162
14:00	145	68	16	2	0	0	0	0	0	0	0	0	0	0	231
15:00	150	72	16	1	0	0	0	0	0	0	0	0	0	0	239
16:00	118	106	18	1	0	0	0	0	0	0	0	0	0	0	243
17:00	166	124	19	1	0	0	0	0	0	0	0	0	0	0	310
18:00	142	80	17	0	1	0	0	0	0	0	0	0	0	0	240
19:00	122	52	6	1	0	0	0	0	0	0	0	0	0	0	181
20:00	102	40	4	1	0	0	0	0	0	0	0	0	0	0	147
21:00	60	31	6	0	0	0	0	0	0	0	0	0	0	0	97
22:00	41	22	4	0	0	0	0	0	0	0	0	0	0	0	67
23:00	24	12	2	1	0	0	0	0	0	0	0	0	0	0	39
Total	1763	1035	202	17	1	0	0	0	0	0	0	0	0	0	3018

Daily
 15th Percentile : 11 MPH
 50th Percentile : 22 MPH
 85th Percentile : 34 MPH
 95th Percentile : 38 MPH
 Mean Speed(Average) : 23 MPH
 10 MPH Pace Speed : 16-25 MPH
 Number in Pace : 1036
 Percent in Pace : 34.3%
 Number of Vehicles > 35 MPH : 1255
 Percent of Vehicles > 35 MPH : 41.6%

Grand Total	3639	1988	355	30	3	0	0	0	0	0	0	0	0	0	6015
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Overall
 15th Percentile : 11 MPH
 50th Percentile : 21 MPH
 85th Percentile : 33 MPH
 95th Percentile : 38 MPH
 Mean Speed(Average) : 23 MPH
 10 MPH Pace Speed : 16-25 MPH
 Number in Pace : 2099
 Percent in Pace : 34.9%
 Number of Vehicles > 35 MPH : 2376
 Percent of Vehicles > 35 MPH : 39.5%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

WB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/10/14	5	3	0	0	0	0	0	0	0	0	0	0	0	0	8
01:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
04:00	10	3	2	0	0	0	0	0	0	0	0	0	0	0	15
05:00	37	33	2	1	0	0	0	0	0	0	0	0	0	0	73
06:00	116	56	9	0	0	0	0	0	0	0	0	0	0	0	181
07:00	156	127	17	1	0	0	0	0	0	0	0	0	0	0	301
08:00	99	74	13	0	0	0	0	0	0	0	0	0	0	0	186
09:00	177	38	4	2	0	0	0	0	0	0	0	0	0	0	221
10:00	106	29	4	0	0	0	0	0	0	0	0	0	0	0	139
11:00	88	39	8	1	0	0	0	0	0	0	0	0	0	0	136
12 PM	112	36	9	2	0	0	0	0	0	0	0	0	0	0	159
13:00	90	44	11	0	1	0	0	0	0	0	0	0	0	0	146
14:00	97	67	10	0	0	0	0	0	0	0	0	0	0	0	174
15:00	195	57	11	0	0	0	0	0	0	0	0	0	0	0	263
16:00	185	84	15	1	0	0	0	0	0	0	0	0	0	0	285
17:00	153	96	12	0	0	0	0	0	0	0	0	0	0	0	261
18:00	120	65	14	0	0	0	0	0	0	0	0	0	0	0	199
19:00	108	53	6	1	0	0	0	0	0	0	0	0	0	0	168
20:00	55	38	5	0	0	0	0	0	0	0	0	0	0	0	98
21:00	41	20	4	0	0	0	0	0	0	0	0	0	0	0	65
22:00	28	18	4	1	0	0	0	0	0	0	0	0	0	0	51
23:00	18	5	0	0	0	0	0	0	0	0	0	0	0	0	23
Total	1999	986	161	10	1	0	0	0	0	0	0	0	0	0	3157

Daily

15th Percentile :	11 MPH
50th Percentile :	21 MPH
85th Percentile :	33 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	23 MPH
10 MPH Pace Speed :	15-24 MPH
Number in Pace :	1127
Percent in Pace :	35.7%
Number of Vehicles > 35 MPH :	1158
Percent of Vehicles > 35 MPH :	36.7%

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70 School Street
Brockton, MA 02301
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Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

WB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/11/14	8	4	0	0	0	0	0	0	0	0	0	0	0	0	12
01:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
02:00	1	3	1	0	0	0	0	0	0	0	0	0	0	0	5
03:00	5	1	0	1	0	0	0	0	0	0	0	0	0	0	7
04:00	2	11	3	0	0	0	0	0	0	0	0	0	0	0	16
05:00	43	24	7	0	0	0	0	0	0	0	0	0	0	0	74
06:00	115	59	8	0	0	0	0	0	0	0	0	0	0	0	182
07:00	156	132	23	3	0	0	0	0	0	0	0	0	0	0	314
08:00	141	64	9	0	0	0	0	0	0	0	0	0	0	0	214
09:00	186	50	10	1	0	0	0	0	0	0	0	0	0	0	247
10:00	72	51	10	1	0	0	0	0	0	0	0	0	0	0	134
11:00	87	35	6	1	0	0	0	0	0	0	0	0	0	0	129
12 PM	89	50	12	0	0	0	0	0	0	0	0	0	0	0	151
13:00	100	53	3	0	0	0	0	0	0	0	0	0	0	0	156
14:00	115	61	6	0	0	0	0	0	0	0	0	0	0	0	182
15:00	186	73	12	0	0	0	0	0	0	0	0	0	0	0	271
16:00	154	74	11	2	0	0	0	0	0	0	0	0	0	0	241
17:00	170	86	10	0	0	0	0	0	0	0	0	0	0	0	266
18:00	127	64	5	1	0	0	0	0	0	0	0	0	0	0	197
19:00	110	51	4	0	0	0	0	0	0	0	0	0	0	0	165
20:00	80	29	6	0	0	0	0	0	0	0	0	0	0	0	115
21:00	61	20	2	0	0	0	0	0	0	0	0	0	0	0	83
22:00	35	17	0	0	0	0	0	0	0	0	0	0	0	0	52
23:00	13	10	3	0	0	0	0	0	0	0	0	0	0	0	26
Total	2056	1026	152	10	0	0	0	0	0	0	0	0	0	0	3244

Daily
 15th Percentile : 11 MPH
 50th Percentile : 21 MPH
 85th Percentile : 33 MPH
 95th Percentile : 38 MPH

 Mean Speed(Average) : 23 MPH
 10 MPH Pace Speed : 15-24 MPH
 Number in Pace : 1157
 Percent in Pace : 35.7%
 Number of Vehicles > 35 MPH : 1188
 Percent of Vehicles > 35 MPH : 36.6%

Grand Total	4055	2012	313	20	1	0	0	0	0	0	0	0	0	0	6401
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Overall
 15th Percentile : 11 MPH
 50th Percentile : 21 MPH
 85th Percentile : 33 MPH
 95th Percentile : 38 MPH

 Mean Speed(Average) : 23 MPH
 10 MPH Pace Speed : 15-24 MPH
 Number in Pace : 2284
 Percent in Pace : 35.7%
 Number of Vehicles > 35 MPH : 2346
 Percent of Vehicles > 35 MPH : 36.7%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

EB, WB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/10/14	15	4	1	0	0	0	0	0	0	0	0	0	0	0	20
01:00	9	2	1	0	0	0	0	0	0	0	0	0	0	0	12
02:00	1	4	0	0	0	0	0	0	0	0	0	0	0	0	5
03:00	1	2	2	0	0	0	0	0	0	0	0	0	0	0	5
04:00	19	4	5	2	0	0	0	0	0	0	0	0	0	0	30
05:00	49	43	3	1	0	0	0	0	0	0	0	0	0	0	96
06:00	162	89	19	1	0	0	0	0	0	0	0	0	0	0	271
07:00	262	193	28	2	0	0	0	0	0	0	0	0	0	0	485
08:00	219	121	22	0	0	0	0	0	0	0	0	0	0	0	362
09:00	275	72	13	2	1	0	0	0	0	0	0	0	0	0	363
10:00	189	66	9	0	0	0	0	0	0	0	0	0	0	0	264
11:00	202	74	12	3	0	0	0	0	0	0	0	0	0	0	291
12 PM	204	66	18	2	0	0	0	0	0	0	0	0	0	0	290
13:00	199	93	17	1	1	0	0	0	0	0	0	0	0	0	311
14:00	222	130	20	2	0	0	0	0	0	0	0	0	0	0	374
15:00	358	120	20	2	0	0	0	0	0	0	0	0	0	0	500
16:00	347	189	27	1	0	0	0	0	0	0	0	0	0	0	564
17:00	311	211	28	0	0	0	0	0	0	0	0	0	0	0	550
18:00	267	169	30	2	0	0	0	0	0	0	0	0	0	0	468
19:00	219	106	14	1	0	0	0	0	0	0	0	0	0	0	340
20:00	155	76	12	0	0	0	0	0	0	0	0	0	0	0	243
21:00	90	50	4	0	0	0	0	0	0	0	0	0	0	0	144
22:00	62	38	7	1	1	0	0	0	0	0	0	0	0	0	109
23:00	38	17	2	0	0	0	0	0	0	0	0	0	0	0	57
Total	3875	1939	314	23	3	0	0	0	0	0	0	0	0	0	6154

Daily

15th Percentile :	11 MPH
50th Percentile :	21 MPH
85th Percentile :	33 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	23 MPH
10 MPH Pace Speed :	15-24 MPH
Number in Pace :	2190
Percent in Pace :	35.6%
Number of Vehicles > 35 MPH :	2279
Percent of Vehicles > 35 MPH :	37.0%

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Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

EB, WB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/11/14	12	13	3	0	0	0	0	0	0	0	0	0	0	0	28
01:00	2	5	2	0	0	0	0	0	0	0	0	0	0	0	9
02:00	1	3	2	0	0	0	0	0	0	0	0	0	0	0	6
03:00	7	1	2	1	0	0	0	0	0	0	0	0	0	0	11
04:00	7	20	7	2	0	0	0	0	0	0	0	0	0	0	36
05:00	56	35	9	1	0	0	0	0	0	0	0	0	0	0	101
06:00	168	89	17	4	0	0	0	0	0	0	0	0	0	0	278
07:00	239	189	43	5	0	0	0	0	0	0	0	0	0	0	476
08:00	253	118	18	0	0	0	0	0	0	0	0	0	0	0	389
09:00	280	102	16	1	0	0	0	0	0	0	0	0	0	0	399
10:00	152	87	17	1	0	0	0	0	0	0	0	0	0	0	257
11:00	164	86	15	1	0	0	0	0	0	0	0	0	0	0	266
12 PM	168	111	17	0	0	0	0	0	0	0	0	0	0	0	296
13:00	189	110	19	0	0	0	0	0	0	0	0	0	0	0	318
14:00	260	129	22	2	0	0	0	0	0	0	0	0	0	0	413
15:00	336	145	28	1	0	0	0	0	0	0	0	0	0	0	510
16:00	272	180	29	3	0	0	0	0	0	0	0	0	0	0	484
17:00	336	210	29	1	0	0	0	0	0	0	0	0	0	0	576
18:00	269	144	22	1	1	0	0	0	0	0	0	0	0	0	437
19:00	232	103	10	1	0	0	0	0	0	0	0	0	0	0	346
20:00	182	69	10	1	0	0	0	0	0	0	0	0	0	0	262
21:00	121	51	8	0	0	0	0	0	0	0	0	0	0	0	180
22:00	76	39	4	0	0	0	0	0	0	0	0	0	0	0	119
23:00	37	22	5	1	0	0	0	0	0	0	0	0	0	0	65
Total	3819	2061	354	27	1	0	0	0	0	0	0	0	0	0	6262

Daily
 15th Percentile : 11 MPH
 50th Percentile : 21 MPH
 85th Percentile : 33 MPH
 95th Percentile : 38 MPH

 Mean Speed(Average) : 23 MPH
 10 MPH Pace Speed : 16-25 MPH
 Number in Pace : 2192
 Percent in Pace : 35.0%
 Number of Vehicles > 35 MPH : 2443
 Percent of Vehicles > 35 MPH : 39.0%

Grand Total	7694	4000	668	50	4	0	0	0	0	0	0	0	0	0	12416
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Overall
 15th Percentile : 11 MPH
 50th Percentile : 21 MPH
 85th Percentile : 33 MPH
 95th Percentile : 38 MPH

 Mean Speed(Average) : 23 MPH
 10 MPH Pace Speed : 15-24 MPH
 Number in Pace : 4381
 Percent in Pace : 35.3%
 Number of Vehicles > 35 MPH : 4722
 Percent of Vehicles > 35 MPH : 38.0%

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Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

EB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/10/14	0	9	1	0	2	0	0	0	0	0	0	0	0	12	2
01:00	0	6	2	0	1	0	0	0	0	0	0	0	0	9	1
02:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5	0
03:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0
04:00	0	9	4	0	1	1	0	0	0	0	0	0	0	15	2
05:00	1	12	9	0	1	0	0	0	0	0	0	0	0	23	1
06:00	0	59	18	3	9	0	0	1	0	0	0	0	0	90	13
07:00	2	122	42	0	13	0	0	1	0	0	0	0	0	180	14
08:00	2	117	37	2	17	1	0	0	0	0	0	0	0	176	20
09:00	1	81	38	6	15	1	0	0	0	0	0	0	0	142	22
10:00	0	76	35	0	8	4	0	1	0	0	0	0	0	124	13
11:00	2	100	39	2	12	0	0	0	0	0	0	0	0	155	14
12 PM	2	92	26	2	9	0	0	0	0	0	0	0	0	131	11
13:00	2	103	43	1	15	0	0	0	1	0	0	0	0	165	17
14:00	1	140	46	3	7	3	0	0	0	0	0	0	0	200	13
15:00	1	170	47	7	12	0	0	0	0	0	0	0	0	237	19
16:00	0	183	77	0	17	0	0	1	1	0	0	0	0	279	19
17:00	2	202	64	0	20	0	0	0	0	0	0	0	0	288	20
18:00	4	186	62	0	15	0	0	1	0	0	0	0	0	268	16
19:00	0	126	36	0	9	0	0	1	0	0	0	0	0	172	10
20:00	1	113	20	0	10	0	0	0	0	0	0	0	0	144	10
21:00	1	64	11	0	3	0	0	0	0	0	0	0	0	79	3
22:00	0	47	10	0	1	0	0	0	0	0	0	0	0	58	1
23:00	0	25	7	0	2	0	0	0	0	0	0	0	0	34	2
Total	22	2050	674	26	199	10	0	6	2	0	0	0	0	2989	243
Percent	0.7%	68.6%	22.5%	0.9%	6.7%	0.3%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%		8.1%
AM Peak Vol.	07:00	07:00	07:00	09:00	08:00	10:00		06:00						07:00	09:00
PM Peak Vol.	18:00	17:00	16:00	15:00	17:00	14:00		16:00	13:00					17:00	17:00

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

EB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/11/14	0	12	2	0	2	0	0	0	0	0	0	0	0	16	2
01:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4	0
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
03:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0
04:00	0	10	6	0	4	0	0	0	0	0	0	0	0	20	4
05:00	1	12	14	0	0	0	0	0	0	0	0	0	0	27	0
06:00	1	58	22	5	9	0	0	0	0	0	0	0	0	95	14
07:00	1	110	40	0	7	4	0	0	0	0	0	0	0	162	11
08:00	0	117	32	3	17	0	2	2	1	0	0	0	0	174	25
09:00	1	89	37	5	13	3	0	4	0	0	0	0	0	152	25
10:00	3	75	31	0	11	1	0	1	1	0	0	0	0	123	14
11:00	0	89	36	1	7	3	0	1	0	0	0	0	0	137	12
12 PM	0	91	37	2	12	2	0	1	0	0	0	0	0	145	17
13:00	4	110	36	1	9	1	0	1	0	0	0	0	0	162	12
14:00	1	162	56	2	6	2	0	1	0	0	0	0	0	230	11
15:00	1	159	60	7	10	0	0	0	0	0	0	0	0	237	17
16:00	1	163	61	0	15	1	0	0	0	0	0	0	0	241	16
17:00	2	228	60	0	18	0	0	1	0	0	0	0	0	309	19
18:00	3	176	45	0	13	2	0	0	0	0	0	0	0	239	15
19:00	0	141	30	0	9	0	0	0	0	0	0	0	0	180	9
20:00	0	108	26	0	13	0	0	0	0	0	0	0	0	147	13
21:00	1	68	23	0	5	0	0	0	0	0	0	0	0	97	5
22:00	1	53	10	0	3	0	0	0	0	0	0	0	0	67	3
23:00	0	29	8	0	2	0	0	0	0	0	0	0	0	39	2
Total	21	2068	673	26	185	19	2	12	2	0	0	0	0	3008	246
Percent	0.7%	68.8%	22.4%	0.9%	6.2%	0.6%	0.1%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%		8.2%
AM Peak	10:00	08:00	07:00	06:00	08:00	07:00	08:00	09:00	08:00					08:00	08:00
Vol.	3	117	40	5	17	4	2	4	1					174	25
PM Peak	13:00	17:00	16:00	15:00	17:00	12:00		12:00						17:00	17:00
Vol.	4	228	61	7	18	2		1						309	19
Grand Total	43	4118	1347	52	384	29	2	18	4	0	0	0	0	5997	489
Percent	0.7%	68.7%	22.5%	0.9%	6.4%	0.5%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%		8.2%

Old Colony Planning Council
70 School Street
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Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

WB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/10/14	0	6	2	0	0	0	0	0	0	0	0	0	0	8	0
01:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0
04:00	0	10	3	0	2	0	0	0	0	0	0	0	0	15	2
05:00	0	43	23	0	7	0	0	0	0	0	0	0	0	73	7
06:00	1	124	42	1	11	1	0	0	0	0	0	0	0	180	13
07:00	2	201	69	5	21	0	1	1	0	0	0	0	0	300	28
08:00	0	139	38	1	8	0	0	0	0	0	0	0	0	186	9
09:00	0	145	53	12	9	1	0	0	0	0	0	0	0	220	22
10:00	1	91	36	0	8	2	0	1	0	0	0	0	0	139	11
11:00	2	89	27	0	14	3	0	1	0	0	0	0	0	136	18
12 PM	0	111	31	6	8	2	0	1	0	0	0	0	0	159	17
13:00	0	99	30	1	15	0	0	1	0	0	0	0	0	146	17
14:00	0	110	47	3	12	0	0	2	0	0	0	0	0	174	17
15:00	2	171	61	12	15	1	0	0	0	0	0	0	0	262	28
16:00	2	191	75	3	12	1	0	0	0	0	0	0	0	284	16
17:00	2	186	58	0	14	0	0	0	0	0	0	0	0	260	14
18:00	1	146	39	1	12	0	0	0	0	0	0	0	0	199	13
19:00	0	130	31	0	6	0	0	0	0	0	0	0	0	167	6
20:00	1	80	10	0	7	0	0	0	0	0	0	0	0	98	7
21:00	0	51	12	0	2	0	0	0	0	0	0	0	0	65	2
22:00	1	36	11	0	3	0	0	0	0	0	0	0	0	51	3
23:00	0	19	4	0	0	0	0	0	0	0	0	0	0	23	0
Total	15	2182	703	45	186	11	1	7	0	0	0	0	0	3150	250
Percent	0.5%	69.3%	22.3%	1.4%	5.9%	0.3%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%		7.9%
AM Peak	07:00	07:00	07:00	09:00	07:00	11:00	07:00	07:00						07:00	07:00
Vol.	2	201	69	12	21	3	1	1						300	28
PM Peak	15:00	16:00	16:00	15:00	13:00	12:00		14:00						16:00	15:00
Vol.	2	191	75	12	15	2		2						284	28

Old Colony Planning Council
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Community: Whitman
 Com#_UR/FC: 338_U5
 Recorder #: 22926
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave, east of Franklin St (27)

EB, WB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/10/14	0	15	3	0	2	0	0	0	0	0	0	0	0	20	2
01:00	0	8	3	0	1	0	0	0	0	0	0	0	0	12	1
02:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5	0
03:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5	0
04:00	0	19	7	0	3	1	0	0	0	0	0	0	0	30	4
05:00	1	55	32	0	8	0	0	0	0	0	0	0	0	96	8
06:00	1	183	60	4	20	1	0	1	0	0	0	0	0	270	26
07:00	4	323	111	5	34	0	1	2	0	0	0	0	0	480	42
08:00	2	256	75	3	25	1	0	0	0	0	0	0	0	362	29
09:00	1	226	91	18	24	2	0	0	0	0	0	0	0	362	44
10:00	1	167	71	0	16	6	0	2	0	0	0	0	0	263	24
11:00	4	189	66	2	26	3	0	1	0	0	0	0	0	291	32
12 PM	2	203	57	8	17	2	0	1	0	0	0	0	0	290	28
13:00	2	202	73	2	30	0	0	1	1	0	0	0	0	311	34
14:00	1	250	93	6	19	3	0	2	0	0	0	0	0	374	30
15:00	3	341	108	19	27	1	0	0	0	0	0	0	0	499	47
16:00	2	374	152	3	29	1	0	1	1	0	0	0	0	563	35
17:00	4	388	122	0	34	0	0	0	0	0	0	0	0	548	34
18:00	5	332	101	1	27	0	0	1	0	0	0	0	0	467	29
19:00	0	256	67	0	15	0	0	1	0	0	0	0	0	339	16
20:00	2	193	30	0	17	0	0	0	0	0	0	0	0	242	17
21:00	1	115	23	0	5	0	0	0	0	0	0	0	0	144	5
22:00	1	83	21	0	4	0	0	0	0	0	0	0	0	109	4
23:00	0	44	11	0	2	0	0	0	0	0	0	0	0	57	2
Total	37	4232	1377	71	385	21	1	13	2	0	0	0	0	6139	493
Percent	0.6%	68.9%	22.4%	1.2%	6.3%	0.3%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%		8.0%
AM Peak	07:00	07:00	07:00	09:00	07:00	10:00	07:00	07:00						07:00	09:00
Vol.	4	323	111	18	34	6	1	2						480	44
PM Peak	18:00	17:00	16:00	15:00	17:00	14:00		14:00	13:00					16:00	15:00
Vol.	5	388	152	19	34	3		2	1					563	47

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
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Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

Start Time	08-Sep-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	23	11	26	17	*	*	*	*	*	*	24	14
01:00	*	*	*	*	17	7	14	8	*	*	*	*	*	*	16	8
02:00	*	*	*	*	9	3	8	7	*	*	*	*	*	*	8	5
03:00	*	*	*	*	8	7	9	12	*	*	*	*	*	*	8	10
04:00	*	*	*	*	18	37	28	40	*	*	*	*	*	*	23	38
05:00	*	*	*	*	45	131	43	135	*	*	*	*	*	*	44	133
06:00	*	*	*	*	265	327	264	331	*	*	*	*	*	*	264	329
07:00	*	*	*	*	225	445	220	463	*	*	*	*	*	*	222	454
08:00	*	*	*	*	287	315	267	339	*	*	*	*	*	*	277	327
09:00	*	*	*	*	230	295	249	328	*	*	*	*	*	*	240	312
10:00	*	*	*	*	209	216	222	224	*	*	*	*	*	*	216	220
11:00	*	*	*	*	237	215	239	213	*	*	*	*	*	*	238	214
12:00 PM	*	*	*	*	242	245	260	242	*	*	*	*	*	*	251	244
01:00	*	*	*	*	323	288	326	311	*	*	*	*	*	*	324	300
02:00	*	*	*	*	360	302	393	311	*	*	*	*	*	*	376	306
03:00	*	*	*	*	412	369	427	365	*	*	*	*	*	*	420	367
04:00	*	*	*	*	516	437	472	407	*	*	*	*	*	*	494	422
05:00	*	*	*	*	500	343	511	384	*	*	*	*	*	*	506	364
06:00	*	*	*	*	451	282	484	296	*	*	*	*	*	*	468	289
07:00	*	*	*	*	292	234	322	242	*	*	*	*	*	*	307	238
08:00	*	*	*	*	239	161	254	253	*	*	*	*	*	*	246	207
09:00	*	*	*	*	148	130	161	159	*	*	*	*	*	*	154	144
10:00	*	*	*	*	100	72	121	89	*	*	*	*	*	*	110	80
11:00	*	*	*	*	55	32	65	46	*	*	*	*	*	*	60	39
Total Day	0	0	0	0	5211	4904	5385	5222	0	0	0	0	0	0	5296	5064
AM Peak Vol.	-	-	-	-	08:00	07:00	08:00	07:00	-	-	-	-	-	-	08:00	07:00
PM Peak Vol.	-	-	-	-	16:00	16:00	17:00	16:00	-	-	-	-	-	-	17:00	16:00
Comb. Total	0	0	0	0	10115	10607	10607	10607	0	0	0	0	0	0	10360	10360

Comb. Total 0 0 10115 10607 0 0 0 10360

Old Colony Planning Council
70 School Street
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Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

Start Time	10-Sep-14		EB		WB		Combined		11-Sep		EB		WB		Combined	
	Wed		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Thu		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00			9	68	6	51	15	119			10	71	8	61	18	132
12:15			5	67	3	72	8	139			7	71	2	46	9	117
12:30			2	53	1	60	3	113			5	68	3	61	8	129
12:45			7	54	1	62	8	116			4	50	4	74	8	124
01:00			7	80	2	63	9	143			5	79	4	60	9	139
01:15			3	99	2	48	5	147			2	92	1	61	3	153
01:30			3	71	0	89	3	160			4	77	1	101	5	178
01:45			4	73	3	88	7	161			3	78	2	89	5	167
02:00			2	82	0	65	2	147			2	79	1	77	3	156
02:15			3	94	0	78	3	172			1	87	3	72	4	159
02:30			2	88	1	84	3	172			2	103	0	81	2	184
02:45			2	96	2	75	4	171			3	124	3	81	6	205
03:00			3	118	1	101	4	219			2	100	4	93	6	193
03:15			2	97	1	94	3	191			2	92	3	86	5	178
03:30			0	97	4	78	4	175			4	126	5	85	9	211
03:45			3	100	1	96	4	196			1	109	0	101	1	210
04:00			0	135	2	92	2	227			2	127	3	91	5	218
04:15			6	109	9	103	15	212			8	123	4	105	12	228
04:30			7	126	13	125	20	251			10	92	11	102	21	194
04:45			5	146	13	117	18	263			8	130	22	109	30	239
05:00			7	146	22	78	29	224			5	140	22	96	27	236
05:15			6	112	30	104	36	216			8	124	29	100	37	224
05:30			13	125	36	77	49	202			13	128	42	109	55	237
05:45			19	117	43	84	62	201			17	119	42	79	59	198
06:00			28	104	45	70	73	174			27	118	50	69	77	187
06:15			49	137	81	61	130	198			56	158	83	78	139	236
06:30			114	101	110	87	224	188			112	104	103	86	215	190
06:45			74	109	91	64	165	173			69	104	95	63	164	167
07:00			55	85	112	63	167	148			48	83	101	59	149	142
07:15			53	67	134	62	187	129			54	83	141	70	195	153
07:30			68	71	96	60	164	131			67	79	130	64	197	143
07:45			49	69	103	49	152	118			51	77	91	49	142	126
08:00			66	80	82	40	148	120			61	99	90	48	151	147
08:15			67	59	74	49	141	108			63	59	88	69	151	128
08:30			67	47	76	30	143	77			64	45	75	78	139	123
08:45			87	53	83	42	170	95			79	51	86	58	165	109
09:00			77	51	109	33	186	84			82	33	126	37	208	70
09:15			65	36	71	44	136	80			50	51	78	39	128	90
09:30			45	31	67	26	112	57			62	46	57	57	119	103
09:45			43	30	48	27	91	57			55	31	67	26	122	57
10:00			44	32	47	25	91	57			51	46	58	32	109	78
10:15			50	24	56	15	106	39			48	28	50	27	98	55
10:30			56	24	62	13	118	37			63	28	57	11	120	39
10:45			59	20	51	19	110	39			60	19	59	19	119	38
11:00			55	13	52	6	107	19			62	19	53	6	115	25
11:15			54	14	45	7	99	21			65	19	53	16	118	35
11:30			68	15	61	11	129	26			49	17	58	14	107	31
11:45			60	13	57	8	117	21			63	10	49	10	112	20
Total			1573	3638	2009	2895	3582	6533			1589	3796	2117	3105	3706	6901
Day Total			5211		4904		10115				5385		5222		10607	
% Total			15.6%	36.0%	19.9%	28.6%					15.0%	35.8%	20.0%	29.3%		
Peak	-		08:15	04:30	06:30	04:00	06:30	04:30	-		08:15	05:30	06:45	04:45	06:30	04:45
Vol.	-		298	530	447	437	743	954	-		288	523	467	414	723	936
P.H.F.			0.856	0.908	0.834	0.874	0.829	0.907			0.643	0.828	0.828	0.950	0.841	0.979

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

Start Time	08-Sep-14 Mon	09-Sep-14 Tue	10-Sep-14 Wed	11-Sep-14 Thu	12-Sep-14 Fri	13-Sep-14 Sat	14-Sep-14 Sun	Week Average
12:00 AM	*	*	34	43	*	*	*	38
01:00	*	*	24	22	*	*	*	23
02:00	*	*	12	15	*	*	*	14
03:00	*	*	15	21	*	*	*	18
04:00	*	*	55	68	*	*	*	62
05:00	*	*	176	178	*	*	*	177
06:00	*	*	592	595	*	*	*	594
07:00	*	*	670	683	*	*	*	676
08:00	*	*	602	606	*	*	*	604
09:00	*	*	525	577	*	*	*	551
10:00	*	*	425	446	*	*	*	436
11:00	*	*	452	452	*	*	*	452
12:00 PM	*	*	487	502	*	*	*	494
01:00	*	*	611	637	*	*	*	624
02:00	*	*	662	704	*	*	*	683
03:00	*	*	781	792	*	*	*	786
04:00	*	*	953	879	*	*	*	916
05:00	*	*	843	895	*	*	*	869
06:00	*	*	733	780	*	*	*	756
07:00	*	*	526	564	*	*	*	545
08:00	*	*	400	507	*	*	*	454
09:00	*	*	278	320	*	*	*	299
10:00	*	*	172	210	*	*	*	191
11:00	*	*	87	111	*	*	*	99
Total	0	0	10115	10607	0	0	0	10361
Percentage	0.0%	0.0%	97.6%	102.4%	0.0%	0.0%	0.0%	
AM Peak	-	-	07:00	07:00	-	-	-	07:00
Vol.	-	-	670	683	-	-	-	676
PM Peak	-	-	16:00	17:00	-	-	-	16:00
Vol.	-	-	953	895	-	-	-	916

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Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

EB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	999	Total
09/10/14	22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	23
01:00	15	2	0	0	0	0	0	0	0	0	0	0	0	0	0	17
02:00	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9
03:00	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8
04:00	13	2	3	0	0	0	0	0	0	0	0	0	0	0	0	18
05:00	40	5	0	0	0	0	0	0	0	0	0	0	0	0	0	45
06:00	253	9	3	0	0	0	0	0	0	0	0	0	0	0	0	265
07:00	206	18	1	0	0	0	0	0	0	0	0	0	0	0	0	225
08:00	266	19	2	0	0	0	0	0	0	0	0	0	0	0	0	287
09:00	211	19	0	0	0	0	0	0	0	0	0	0	0	0	0	230
10:00	186	22	1	0	0	0	0	0	0	0	0	0	0	0	0	209
11:00	218	17	2	0	0	0	0	0	0	0	0	0	0	0	0	237
12 PM	229	13	0	0	0	0	0	0	0	0	0	0	0	0	0	242
13:00	308	14	1	0	0	0	0	0	0	0	0	0	0	0	0	323
14:00	340	19	1	0	0	0	0	0	0	0	0	0	0	0	0	360
15:00	399	13	0	0	0	0	0	0	0	0	0	0	0	0	0	412
16:00	481	32	2	0	0	1	0	0	0	0	0	0	0	0	0	516
17:00	454	45	1	0	0	0	0	0	0	0	0	0	0	0	0	500
18:00	424	25	1	1	0	0	0	0	0	0	0	0	0	0	0	451
19:00	274	18	0	0	0	0	0	0	0	0	0	0	0	0	0	292
20:00	221	17	1	0	0	0	0	0	0	0	0	0	0	0	0	239
21:00	135	13	0	0	0	0	0	0	0	0	0	0	0	0	0	148
22:00	87	13	0	0	0	0	0	0	0	0	0	0	0	0	0	100
23:00	48	5	1	0	1	0	0	0	0	0	0	0	0	0	0	55
Total	4845	343	20	1	1	1	0	0	0	0	0	0	0	0	0	5211

Daily

15th Percentile :	9 MPH
50th Percentile :	18 MPH
85th Percentile :	27 MPH
95th Percentile :	32 MPH
Mean Speed(Average) :	19 MPH
10 MPH Pace Speed :	14-23 MPH
Number in Pace :	2290
Percent in Pace :	43.9%
Number of Vehicles > 25 MPH :	1463
Percent of Vehicles > 25 MPH :	28.1%

Old Colony Planning Council
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Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

EB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/11/14	18	7	1	0	0	0	0	0	0	0	0	0	0	0	26
01:00	13	1	0	0	0	0	0	0	0	0	0	0	0	0	14
02:00	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
03:00	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
04:00	18	9	1	0	0	0	0	0	0	0	0	0	0	0	28
05:00	38	4	1	0	0	0	0	0	0	0	0	0	0	0	43
06:00	253	10	1	0	0	0	0	0	0	0	0	0	0	0	264
07:00	200	20	0	0	0	0	0	0	0	0	0	0	0	0	220
08:00	249	17	1	0	0	0	0	0	0	0	0	0	0	0	267
09:00	229	20	0	0	0	0	0	0	0	0	0	0	0	0	249
10:00	205	15	2	0	0	0	0	0	0	0	0	0	0	0	222
11:00	223	16	0	0	0	0	0	0	0	0	0	0	0	0	239
12 PM	237	20	2	1	0	0	0	0	0	0	0	0	0	0	260
13:00	302	23	1	0	0	0	0	0	0	0	0	0	0	0	326
14:00	363	28	2	0	0	0	0	0	0	0	0	0	0	0	393
15:00	404	23	0	0	0	0	0	0	0	0	0	0	0	0	427
16:00	439	32	1	0	0	0	0	0	0	0	0	0	0	0	472
17:00	474	36	1	0	0	0	0	0	0	0	0	0	0	0	511
18:00	468	15	1	0	0	0	0	0	0	0	0	0	0	0	484
19:00	308	14	0	0	0	0	0	0	0	0	0	0	0	0	322
20:00	244	10	0	0	0	0	0	0	0	0	0	0	0	0	254
21:00	152	9	0	0	0	0	0	0	0	0	0	0	0	0	161
22:00	110	9	2	0	0	0	0	0	0	0	0	0	0	0	121
23:00	54	11	0	0	0	0	0	0	0	0	0	0	0	0	65
Total	5015	352	17	1	0	0	0	0	0	0	0	0	0	0	5385

Daily
 15th Percentile : 9 MPH
 50th Percentile : 18 MPH
 85th Percentile : 27 MPH
 95th Percentile : 32 MPH
 Mean Speed(Average) : 19 MPH
 10 MPH Pace Speed : 14-23 MPH
 Number in Pace : 2368
 Percent in Pace : 44.0%
 Number of Vehicles > 25 MPH : 1504
 Percent of Vehicles > 25 MPH : 27.9%

Grand Total	9860	695	37	2	1	1	0	0	0	0	0	0	0	0	10596
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Overall
 15th Percentile : 9 MPH
 50th Percentile : 18 MPH
 85th Percentile : 27 MPH
 95th Percentile : 32 MPH
 Mean Speed(Average) : 19 MPH
 10 MPH Pace Speed : 14-23 MPH
 Number in Pace : 4657
 Percent in Pace : 44.0%
 Number of Vehicles > 25 MPH : 2967
 Percent of Vehicles > 25 MPH : 28.0%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

WB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	999	Total
09/10/14	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	11
01:00	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
02:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:00	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
04:00	31	4	2	0	0	0	0	0	0	0	0	0	0	0	0	37
05:00	105	22	4	0	0	0	0	0	0	0	0	0	0	0	0	131
06:00	304	23	0	0	0	0	0	0	0	0	0	0	0	0	0	327
07:00	395	46	2	2	0	0	0	0	0	0	0	0	0	0	0	445
08:00	268	41	6	0	0	0	0	0	0	0	0	0	0	0	0	315
09:00	274	18	3	0	0	0	0	0	0	0	0	0	0	0	0	295
10:00	203	12	1	0	0	0	0	0	0	0	0	0	0	0	0	216
11:00	188	26	1	0	0	0	0	0	0	0	0	0	0	0	0	215
12 PM	221	21	2	1	0	0	0	0	0	0	0	0	0	0	0	245
13:00	259	24	5	0	0	0	0	0	0	0	0	0	0	0	0	288
14:00	262	36	4	0	0	0	0	0	0	0	0	0	0	0	0	302
15:00	347	20	2	0	0	0	0	0	0	0	0	0	0	0	0	369
16:00	403	31	3	0	0	0	0	0	0	0	0	0	0	0	0	437
17:00	308	34	1	0	0	0	0	0	0	0	0	0	0	0	0	343
18:00	257	23	2	0	0	0	0	0	0	0	0	0	0	0	0	282
19:00	213	19	2	0	0	0	0	0	0	0	0	0	0	0	0	234
20:00	142	19	0	0	0	0	0	0	0	0	0	0	0	0	0	161
21:00	115	15	0	0	0	0	0	0	0	0	0	0	0	0	0	130
22:00	62	9	1	0	0	0	0	0	0	0	0	0	0	0	0	72
23:00	27	4	1	0	0	0	0	0	0	0	0	0	0	0	0	32
Total	4408	451	42	3	0	0	0	0	0	0	0	0	0	0	0	4904

Daily

15th Percentile :	9 MPH
50th Percentile :	18 MPH
85th Percentile :	28 MPH
95th Percentile :	33 MPH
Mean Speed(Average) :	20 MPH
10 MPH Pace Speed :	14-23 MPH
Number in Pace :	2116
Percent in Pace :	43.1%
Number of Vehicles > 25 MPH :	1555
Percent of Vehicles > 25 MPH :	31.7%

Old Colony Planning Council
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Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

WB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/11/14	16	1	0	0	0	0	0	0	0	0	0	0	0	0	17
01:00	4	3	1	0	0	0	0	0	0	0	0	0	0	0	8
02:00	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
03:00	10	1	1	0	0	0	0	0	0	0	0	0	0	0	12
04:00	29	10	1	0	0	0	0	0	0	0	0	0	0	0	40
05:00	103	29	3	0	0	0	0	0	0	0	0	0	0	0	135
06:00	305	25	1	0	0	0	0	0	0	0	0	0	0	0	331
07:00	429	33	1	0	0	0	0	0	0	0	0	0	0	0	463
08:00	302	33	4	0	0	0	0	0	0	0	0	0	0	0	339
09:00	306	19	2	1	0	0	0	0	0	0	0	0	0	0	328
10:00	200	23	1	0	0	0	0	0	0	0	0	0	0	0	224
11:00	200	11	2	0	0	0	0	0	0	0	0	0	0	0	213
12 PM	214	26	2	0	0	0	0	0	0	0	0	0	0	0	242
13:00	279	31	1	0	0	0	0	0	0	0	0	0	0	0	311
14:00	276	33	2	0	0	0	0	0	0	0	0	0	0	0	311
15:00	347	16	2	0	0	0	0	0	0	0	0	0	0	0	365
16:00	371	31	5	0	0	0	0	0	0	0	0	0	0	0	407
17:00	356	25	3	0	0	0	0	0	0	0	0	0	0	0	384
18:00	274	22	0	0	0	0	0	0	0	0	0	0	0	0	296
19:00	218	23	1	0	0	0	0	0	0	0	0	0	0	0	242
20:00	232	20	1	0	0	0	0	0	0	0	0	0	0	0	253
21:00	144	15	0	0	0	0	0	0	0	0	0	0	0	0	159
22:00	81	6	2	0	0	0	0	0	0	0	0	0	0	0	89
23:00	34	12	0	0	0	0	0	0	0	0	0	0	0	0	46
Total	4736	449	36	1	0	0	0	0	0	0	0	0	0	0	5222

Daily
 15th Percentile : 9 MPH
 50th Percentile : 18 MPH
 85th Percentile : 28 MPH
 95th Percentile : 33 MPH

 Mean Speed(Average) : 20 MPH
 10 MPH Pace Speed : 14-23 MPH
 Number in Pace : 2263
 Percent in Pace : 43.3%
 Number of Vehicles > 25 MPH : 1607
 Percent of Vehicles > 25 MPH : 30.8%

Grand Total	9144	900	78	4	0	0	0	0	0	0	0	0	0	0	10126
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Overall
 15th Percentile : 9 MPH
 50th Percentile : 18 MPH
 85th Percentile : 28 MPH
 95th Percentile : 33 MPH

 Mean Speed(Average) : 20 MPH
 10 MPH Pace Speed : 14-23 MPH
 Number in Pace : 4379
 Percent in Pace : 43.2%
 Number of Vehicles > 25 MPH : 3162
 Percent of Vehicles > 25 MPH : 31.2%

Old Colony Planning Council
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Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

EB, WB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/10/14	31	3	0	0	0	0	0	0	0	0	0	0	0	0	34
01:00	21	3	0	0	0	0	0	0	0	0	0	0	0	0	24
02:00	11	1	0	0	0	0	0	0	0	0	0	0	0	0	12
03:00	13	2	0	0	0	0	0	0	0	0	0	0	0	0	15
04:00	44	6	5	0	0	0	0	0	0	0	0	0	0	0	55
05:00	145	27	4	0	0	0	0	0	0	0	0	0	0	0	176
06:00	557	32	3	0	0	0	0	0	0	0	0	0	0	0	592
07:00	601	64	3	2	0	0	0	0	0	0	0	0	0	0	670
08:00	534	60	8	0	0	0	0	0	0	0	0	0	0	0	602
09:00	485	37	3	0	0	0	0	0	0	0	0	0	0	0	525
10:00	389	34	2	0	0	0	0	0	0	0	0	0	0	0	425
11:00	406	43	3	0	0	0	0	0	0	0	0	0	0	0	452
12 PM	450	34	2	1	0	0	0	0	0	0	0	0	0	0	487
13:00	567	38	6	0	0	0	0	0	0	0	0	0	0	0	611
14:00	602	55	5	0	0	0	0	0	0	0	0	0	0	0	662
15:00	746	33	2	0	0	0	0	0	0	0	0	0	0	0	781
16:00	884	63	5	0	0	1	0	0	0	0	0	0	0	0	953
17:00	762	79	2	0	0	0	0	0	0	0	0	0	0	0	843
18:00	681	48	3	1	0	0	0	0	0	0	0	0	0	0	733
19:00	487	37	2	0	0	0	0	0	0	0	0	0	0	0	526
20:00	363	36	1	0	0	0	0	0	0	0	0	0	0	0	400
21:00	250	28	0	0	0	0	0	0	0	0	0	0	0	0	278
22:00	149	22	1	0	0	0	0	0	0	0	0	0	0	0	172
23:00	75	9	2	0	1	0	0	0	0	0	0	0	0	0	87
Total	9253	794	62	4	1	1	0	0	0	0	0	0	0	0	10115

Daily

15th Percentile :	9 MPH
50th Percentile :	18 MPH
85th Percentile :	28 MPH
95th Percentile :	33 MPH
Mean Speed(Average) :	19 MPH
10 MPH Pace Speed :	14-23 MPH
Number in Pace :	4406
Percent in Pace :	43.6%
Number of Vehicles > 25 MPH :	3018
Percent of Vehicles > 25 MPH :	29.8%

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Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

EB, WB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/11/14	34	8	1	0	0	0	0	0	0	0	0	0	0	0	43
01:00	17	4	1	0	0	0	0	0	0	0	0	0	0	0	22
02:00	13	2	0	0	0	0	0	0	0	0	0	0	0	0	15
03:00	17	3	1	0	0	0	0	0	0	0	0	0	0	0	21
04:00	47	19	2	0	0	0	0	0	0	0	0	0	0	0	68
05:00	141	33	4	0	0	0	0	0	0	0	0	0	0	0	178
06:00	558	35	2	0	0	0	0	0	0	0	0	0	0	0	595
07:00	629	53	1	0	0	0	0	0	0	0	0	0	0	0	683
08:00	551	50	5	0	0	0	0	0	0	0	0	0	0	0	606
09:00	535	39	2	1	0	0	0	0	0	0	0	0	0	0	577
10:00	405	38	3	0	0	0	0	0	0	0	0	0	0	0	446
11:00	423	27	2	0	0	0	0	0	0	0	0	0	0	0	452
12 PM	451	46	4	1	0	0	0	0	0	0	0	0	0	0	502
13:00	581	54	2	0	0	0	0	0	0	0	0	0	0	0	637
14:00	639	61	4	0	0	0	0	0	0	0	0	0	0	0	704
15:00	751	39	2	0	0	0	0	0	0	0	0	0	0	0	792
16:00	810	63	6	0	0	0	0	0	0	0	0	0	0	0	879
17:00	830	61	4	0	0	0	0	0	0	0	0	0	0	0	895
18:00	742	37	1	0	0	0	0	0	0	0	0	0	0	0	780
19:00	526	37	1	0	0	0	0	0	0	0	0	0	0	0	564
20:00	476	30	1	0	0	0	0	0	0	0	0	0	0	0	507
21:00	296	24	0	0	0	0	0	0	0	0	0	0	0	0	320
22:00	191	15	4	0	0	0	0	0	0	0	0	0	0	0	210
23:00	88	23	0	0	0	0	0	0	0	0	0	0	0	0	111
Total	9751	801	53	2	0	0	0	0	0	0	0	0	0	0	10607

Daily
 15th Percentile : 9 MPH
 50th Percentile : 18 MPH
 85th Percentile : 28 MPH
 95th Percentile : 33 MPH

 Mean Speed(Average) : 19 MPH
 10 MPH Pace Speed : 14-23 MPH
 Number in Pace : 4631
 Percent in Pace : 43.7%
 Number of Vehicles > 25 MPH : 3111
 Percent of Vehicles > 25 MPH : 29.3%

Grand Total	19004	1595	115	6	1	1	0	0	0	0	0	0	0	0	20722
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Overall
 15th Percentile : 9 MPH
 50th Percentile : 18 MPH
 85th Percentile : 28 MPH
 95th Percentile : 33 MPH

 Mean Speed(Average) : 19 MPH
 10 MPH Pace Speed : 14-23 MPH
 Number in Pace : 9037
 Percent in Pace : 43.6%
 Number of Vehicles > 25 MPH : 6129
 Percent of Vehicles > 25 MPH : 29.6%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

EB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/10/14	0	16	5	0	1	0	0	0	0	0	0	0	0	22	1
01:00	0	10	5	0	1	1	0	0	0	0	0	0	0	17	2
02:00	0	7	1	0	1	0	0	0	0	0	0	0	0	9	1
03:00	1	3	1	0	3	0	0	0	0	0	0	0	0	8	3
04:00	0	10	7	1	0	0	0	0	0	0	0	0	0	18	1
05:00	1	25	18	0	1	0	0	0	0	0	0	0	0	45	1
06:00	2	183	53	9	11	2	0	3	0	0	0	0	0	263	25
07:00	2	147	53	3	13	6	0	0	1	0	0	0	0	225	23
08:00	5	179	67	7	21	4	0	1	2	0	0	0	0	286	35
09:00	1	144	57	7	12	6	0	2	0	0	0	0	0	229	27
10:00	2	127	55	1	14	6	0	2	1	0	0	0	0	208	24
11:00	1	158	57	2	13	5	0	0	0	0	0	0	0	236	20
12 PM	1	174	48	3	11	2	0	0	1	0	0	0	0	240	17
13:00	5	192	82	9	17	10	0	3	2	0	0	0	0	320	41
14:00	5	248	80	6	14	3	0	2	0	0	0	0	0	358	25
15:00	4	284	86	7	21	7	0	1	1	0	0	0	0	411	37
16:00	2	334	140	2	24	10	0	1	0	1	0	1	0	515	39
17:00	6	355	111	1	24	0	0	1	0	0	0	0	0	498	26
18:00	13	309	94	1	23	5	0	3	0	0	0	0	0	448	32
19:00	6	212	53	0	14	1	0	2	0	0	0	0	0	288	17
20:00	2	186	41	0	7	1	0	0	0	0	0	0	0	237	8
21:00	3	114	26	0	5	0	0	0	0	0	0	0	0	148	5
22:00	5	75	15	0	4	1	0	0	0	0	0	0	0	100	5
23:00	1	40	13	0	1	0	0	0	0	0	0	0	0	55	1
Total	68	3532	1168	59	256	70	0	21	8	1	0	1	0	5184	416
Percent	1.3%	68.1%	22.5%	1.1%	4.9%	1.4%	0.0%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%		8.0%
AM Peak	08:00	06:00	08:00	06:00	08:00	07:00		06:00	08:00					08:00	08:00
Vol.	5	183	67	9	21	6		3	2					286	35
PM Peak	18:00	17:00	16:00	13:00	16:00	13:00		13:00	13:00	16:00		16:00		16:00	13:00
Vol.	13	355	140	9	24	10		3	2	1		1		515	41

Old Colony Planning Council
70 School Street
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508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

EB

Start Time	Cars & Bikes	Trailer	2 Axle Long	2 Axle Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/11/14	0	23	2	0	1	0	0	0	0	0	0	0	0	26	1
01:00	0	12	1	0	1	0	0	0	0	0	0	0	0	14	1
02:00	0	5	2	0	1	0	0	0	0	0	0	0	0	8	1
03:00	1	5	2	0	1	0	0	0	0	0	0	0	0	9	1
04:00	0	14	9	1	4	0	0	0	0	0	0	0	0	28	5
05:00	1	23	19	0	0	0	0	0	0	0	0	0	0	43	0
06:00	4	179	54	9	13	2	0	2	0	0	0	0	0	263	26
07:00	2	145	55	3	8	3	0	1	0	0	0	0	0	217	15
08:00	1	188	48	5	17	1	0	2	0	2	0	0	1	265	28
09:00	3	154	64	3	15	5	0	3	0	0	0	0	0	247	26
10:00	2	144	51	0	17	2	1	2	1	0	0	0	0	220	23
11:00	1	170	56	2	7	1	0	2	0	0	0	0	0	239	12
12 PM	3	158	72	3	16	5	0	1	2	0	0	0	0	260	27
13:00	5	211	74	8	17	5	0	1	2	0	0	0	1	324	34
14:00	2	267	94	4	16	4	0	3	0	0	0	0	0	390	27
15:00	6	281	103	6	23	3	0	2	2	0	0	0	0	426	36
16:00	2	312	125	0	21	9	0	0	0	0	0	0	0	469	30
17:00	5	369	98	1	29	3	0	3	0	0	0	0	0	508	36
18:00	6	351	96	0	19	7	0	3	0	0	0	0	0	482	29
19:00	1	247	64	0	7	3	0	0	0	0	0	0	0	322	10
20:00	1	193	44	0	13	1	0	0	1	0	0	0	0	253	15
21:00	3	119	32	0	7	0	0	0	0	0	0	0	0	161	7
22:00	5	89	22	0	2	1	0	0	0	1	0	0	0	120	4
23:00	0	50	13	0	2	0	0	0	0	0	0	0	0	65	2
Total	54	3709	1200	45	257	55	1	25	8	3	0	0	2	5359	396
Percent	1.0%	69.2%	22.4%	0.8%	4.8%	1.0%	0.0%	0.5%	0.1%	0.1%	0.0%	0.0%	0.0%		7.4%
AM Peak	06:00	08:00	09:00	06:00	08:00	09:00	10:00	09:00	10:00	08:00			08:00	08:00	08:00
Vol.	4	188	64	9	17	5	1	3	1	2			1	265	28
PM Peak	15:00	17:00	16:00	13:00	17:00	16:00		14:00	12:00	22:00			13:00	17:00	15:00
Vol.	6	369	125	8	29	9		3	2	1			1	508	36
Grand Total	122	7241	2368	104	513	125	1	46	16	4	0	1	2	10543	812
Percent	1.2%	68.7%	22.5%	1.0%	4.9%	1.2%	0.0%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%		7.7%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

WB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/10/14	0	10	1	0	0	0	0	0	0	0	0	0	0	11	0
01:00	0	4	1	0	2	0	0	0	0	0	0	0	0	7	2
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0
03:00	0	4	2	0	1	0	0	0	0	0	0	0	0	7	1
04:00	0	17	12	0	8	0	0	0	0	0	0	0	0	37	8
05:00	1	72	40	0	17	0	0	0	1	0	0	0	0	131	18
06:00	2	191	92	7	33	1	0	0	0	0	0	0	0	326	41
07:00	3	276	116	5	40	0	0	1	0	0	0	0	0	441	46
08:00	3	202	80	2	22	1	0	1	0	0	0	0	0	311	26
09:00	0	179	82	13	15	2	0	1	2	0	0	0	0	294	33
10:00	0	130	60	2	16	2	0	5	0	0	0	0	0	215	25
11:00	1	124	60	1	23	4	0	2	0	0	0	0	0	215	30
12 PM	4	153	63	5	17	0	0	1	1	0	0	0	0	244	24
13:00	1	171	77	7	28	1	0	1	1	0	0	0	0	287	38
14:00	1	173	96	2	23	1	0	3	0	0	0	0	0	299	29
15:00	4	203	116	12	22	2	0	6	2	0	0	0	0	367	44
16:00	3	272	126	4	25	1	0	3	0	0	0	0	0	434	33
17:00	4	219	90	2	23	2	0	0	0	0	0	0	0	340	27
18:00	2	195	65	2	14	1	0	0	0	0	0	0	0	279	17
19:00	0	167	49	0	15	1	0	2	0	0	0	0	0	234	18
20:00	1	107	41	0	8	2	0	0	0	0	0	0	0	159	10
21:00	0	94	28	0	8	0	0	0	0	0	0	0	0	130	8
22:00	1	50	17	0	4	0	0	0	0	0	0	0	0	72	4
23:00	0	25	6	0	1	0	0	0	0	0	0	0	0	32	1
Total	31	3041	1320	64	365	21	0	26	7	0	0	0	0	4875	483
Percent	0.6%	62.4%	27.1%	1.3%	7.5%	0.4%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%		9.9%
AM Peak	07:00	07:00	07:00	09:00	07:00	11:00		10:00	09:00					07:00	07:00
Vol.	3	276	116	13	40	4		5	2					441	46
PM Peak	12:00	16:00	16:00	15:00	13:00	15:00		15:00	15:00					16:00	15:00
Vol.	4	272	126	12	28	2		6	2					434	44

Old Colony Planning Council
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Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

WB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/11/14	0	10	7	0	0	0	0	0	0	0	0	0	0	17	0
01:00	0	6	1	0	1	0	0	0	0	0	0	0	0	8	1
02:00	0	4	3	0	0	0	0	0	0	0	0	0	0	7	0
03:00	0	6	4	0	2	0	0	0	0	0	0	0	0	12	2
04:00	1	17	10	1	11	0	0	0	0	0	0	0	0	40	12
05:00	0	68	48	0	19	0	0	0	0	0	0	0	0	135	19
06:00	4	197	90	6	28	3	0	2	0	0	0	0	0	330	39
07:00	0	300	121	4	28	1	0	4	1	0	0	0	0	459	38
08:00	1	227	77	0	25	3	2	1	0	0	0	0	0	336	31
09:00	2	187	89	11	30	3	0	4	1	0	0	0	0	327	49
10:00	1	131	61	2	22	1	1	4	0	0	0	0	0	223	30
11:00	0	137	56	1	12	2	0	3	1	0	0	0	0	212	19
12 PM	1	149	61	5	21	2	0	2	0	0	0	0	0	241	30
13:00	6	202	77	7	14	1	0	0	0	0	0	0	0	307	22
14:00	1	193	90	3	15	1	0	3	0	0	0	0	0	306	22
15:00	4	203	116	11	22	1	0	3	0	0	0	0	0	360	37
16:00	2	258	111	1	27	4	0	1	1	0	0	0	0	405	34
17:00	4	252	91	2	27	2	0	1	0	0	0	0	0	379	32
18:00	2	190	76	3	21	1	0	1	0	0	0	0	0	294	26
19:00	1	168	56	0	17	0	0	0	0	0	0	0	0	242	17
20:00	1	172	61	0	16	0	0	1	0	0	0	0	0	251	17
21:00	1	101	39	1	15	0	0	0	0	0	0	0	0	157	16
22:00	0	58	24	1	6	0	0	0	0	0	0	0	0	89	7
23:00	0	36	6	1	3	0	0	0	0	0	0	0	0	46	4
Total	32	3272	1375	60	382	25	3	30	4	0	0	0	0	5183	504
Percent	0.6%	63.1%	26.5%	1.2%	7.4%	0.5%	0.1%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%		9.7%
AM Peak Vol.	06:00	07:00	07:00	09:00	09:00	06:00	08:00	07:00	07:00					07:00	09:00
PM Peak Vol.	13:00	16:00	15:00	15:00	16:00	16:00		14:00	16:00					16:00	15:00
Grand Total	63	6313	2695	124	747	46	3	56	11	0	0	0	0	10058	987
Percent	0.6%	62.8%	26.8%	1.2%	7.4%	0.5%	0.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%		9.8%

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Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

EB, WB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/10/14	0	26	6	0	1	0	0	0	0	0	0	0	0	33	1
01:00	0	14	6	0	3	1	0	0	0	0	0	0	0	24	4
02:00	0	10	1	0	1	0	0	0	0	0	0	0	0	12	1
03:00	1	7	3	0	4	0	0	0	0	0	0	0	0	15	4
04:00	0	27	19	1	8	0	0	0	0	0	0	0	0	55	9
05:00	2	97	58	0	18	0	0	0	1	0	0	0	0	176	19
06:00	4	374	145	16	44	3	0	3	0	0	0	0	0	589	66
07:00	5	423	169	8	53	6	0	1	1	0	0	0	0	666	69
08:00	8	381	147	9	43	5	0	2	2	0	0	0	0	597	61
09:00	1	323	139	20	27	8	0	3	2	0	0	0	0	523	60
10:00	2	257	115	3	30	8	0	7	1	0	0	0	0	423	49
11:00	2	282	117	3	36	9	0	2	0	0	0	0	0	451	50
12 PM	5	327	111	8	28	2	0	1	2	0	0	0	0	484	41
13:00	6	363	159	16	45	11	0	4	3	0	0	0	0	607	79
14:00	6	421	176	8	37	4	0	5	0	0	0	0	0	657	54
15:00	8	487	202	19	43	9	0	7	3	0	0	0	0	778	81
16:00	5	606	266	6	49	11	0	4	0	1	0	1	0	949	72
17:00	10	574	201	3	47	2	0	1	0	0	0	0	0	838	53
18:00	15	504	159	3	37	6	0	3	0	0	0	0	0	727	49
19:00	6	379	102	0	29	2	0	4	0	0	0	0	0	522	35
20:00	3	293	82	0	15	3	0	0	0	0	0	0	0	396	18
21:00	3	208	54	0	13	0	0	0	0	0	0	0	0	278	13
22:00	6	125	32	0	8	1	0	0	0	0	0	0	0	172	9
23:00	1	65	19	0	2	0	0	0	0	0	0	0	0	87	2
Total	99	6573	2488	123	621	91	0	47	15	1	0	1	0	10059	899
Percent	1.0%	65.3%	24.7%	1.2%	6.2%	0.9%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%		8.9%
AM Peak	08:00	07:00	07:00	09:00	07:00	11:00		10:00	08:00					07:00	07:00
Vol.	8	423	169	20	53	9		7	2					666	69
PM Peak	18:00	16:00	16:00	15:00	16:00	13:00		15:00	13:00	16:00		16:00		16:00	15:00
Vol.	15	606	266	19	49	11		7	3	1		1		949	81

Old Colony Planning Council
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Community: Whitman
 Com#_UR/FC: 338_U3
 Recorder #: 22505
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 South Ave (27), west of Franklin St (27)

EB, WB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/11/14	0	33	9	0	1	0	0	0	0	0	0	0	0	43	1
01:00	0	18	2	0	2	0	0	0	0	0	0	0	0	22	2
02:00	0	9	5	0	1	0	0	0	0	0	0	0	0	15	1
03:00	1	11	6	0	3	0	0	0	0	0	0	0	0	21	3
04:00	1	31	19	2	15	0	0	0	0	0	0	0	0	68	17
05:00	1	91	67	0	19	0	0	0	0	0	0	0	0	178	19
06:00	8	376	144	15	41	5	0	4	0	0	0	0	0	593	65
07:00	2	445	176	7	36	4	0	5	1	0	0	0	0	676	53
08:00	2	415	125	5	42	4	2	3	0	2	0	0	1	601	59
09:00	5	341	153	14	45	8	0	7	1	0	0	0	0	574	75
10:00	3	275	112	2	39	3	2	6	1	0	0	0	0	443	53
11:00	1	307	112	3	19	3	0	5	1	0	0	0	0	451	31
12 PM	4	307	133	8	37	7	0	3	2	0	0	0	0	501	57
13:00	11	413	151	15	31	6	0	1	2	0	0	0	1	631	56
14:00	3	460	184	7	31	5	0	6	0	0	0	0	0	696	49
15:00	10	484	219	17	45	4	0	5	2	0	0	0	0	786	73
16:00	4	570	236	1	48	13	0	1	1	0	0	0	0	874	64
17:00	9	621	189	3	56	5	0	4	0	0	0	0	0	887	68
18:00	8	541	172	3	40	8	0	4	0	0	0	0	0	776	55
19:00	2	415	120	0	24	3	0	0	0	0	0	0	0	564	27
20:00	2	365	105	0	29	1	0	1	1	0	0	0	0	504	32
21:00	4	220	71	1	22	0	0	0	0	0	0	0	0	318	23
22:00	5	147	46	1	8	1	0	0	0	1	0	0	0	209	11
23:00	0	86	19	1	5	0	0	0	0	0	0	0	0	111	6
Total	86	6981	2575	105	639	80	4	55	12	3	0	0	2	10542	900
Percent	0.8%	66.2%	24.4%	1.0%	6.1%	0.8%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%		8.5%
AM Peak	06:00	07:00	07:00	06:00	09:00	09:00	08:00	09:00	07:00	08:00			08:00	07:00	09:00
Vol.	8	445	176	15	45	8	2	7	1	2			1	676	75
PM Peak	13:00	17:00	16:00	15:00	17:00	16:00		14:00	12:00	22:00			13:00	17:00	15:00
Vol.	11	621	236	17	56	13		6	2	1			1	887	73
Grand Total	185	13554	5063	228	1260	171	4	102	27	4	0	1	2	20601	1799
Percent	0.9%	65.8%	24.6%	1.1%	6.1%	0.8%	0.0%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%		8.7%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
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Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

Start Time	08-Sep-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	*	*	6	12	4	5	*	*	*	*	*	*	5	8
01:00	*	*	*	*	3	4	1	2	*	*	*	*	*	*	2	3
02:00	*	*	*	*	3	0	6	5	*	*	*	*	*	*	4	2
03:00	*	*	*	*	6	3	4	3	*	*	*	*	*	*	5	3
04:00	*	*	*	*	18	6	21	3	*	*	*	*	*	*	20	4
05:00	*	*	*	*	49	17	47	18	*	*	*	*	*	*	48	18
06:00	*	*	*	*	102	60	112	56	*	*	*	*	*	*	107	58
07:00	*	*	*	*	111	63	112	55	*	*	*	*	*	*	112	59
08:00	*	*	*	*	95	46	73	58	*	*	*	*	*	*	84	52
09:00	*	*	*	*	83	45	72	41	*	*	*	*	*	*	78	43
10:00	*	*	*	*	60	39	62	53	*	*	*	*	*	*	61	46
11:00	*	*	*	*	55	45	57	40	*	*	*	*	*	*	56	42
12:00 PM	*	*	*	*	67	52	57	52	*	*	*	*	*	*	62	52
01:00	*	*	*	*	80	52	74	53	*	*	*	*	*	*	77	52
02:00	*	*	*	*	77	69	85	76	*	*	*	*	*	*	81	72
03:00	*	*	*	*	105	83	119	87	*	*	*	*	*	*	112	85
04:00	*	*	*	*	111	101	129	105	*	*	*	*	*	*	120	103
05:00	*	*	*	*	112	84	114	104	*	*	*	*	*	*	113	94
06:00	*	*	*	*	85	74	82	70	*	*	*	*	*	*	84	72
07:00	*	*	*	*	68	56	68	45	*	*	*	*	*	*	68	50
08:00	*	*	*	*	56	57	71	38	*	*	*	*	*	*	64	48
09:00	*	*	*	*	29	25	42	36	*	*	*	*	*	*	36	30
10:00	*	*	*	*	17	23	24	21	*	*	*	*	*	*	20	22
11:00	*	*	*	*	13	10	10	11	*	*	*	*	*	*	12	10
Total Day	0	0	0	0	1411	1026	1446	1037	0	0	0	0	0	0	1431	1028
AM Peak	-	-	-	-	07:00	07:00	06:00	08:00	-	-	-	-	-	-	07:00	07:00
Vol.	-	-	-	-	111	63	112	58	-	-	-	-	-	-	112	59
PM Peak	-	-	-	-	17:00	16:00	16:00	16:00	-	-	-	-	-	-	16:00	16:00
Vol.	-	-	-	-	112	101	129	105	-	-	-	-	-	-	120	103

Comb. Total	0	0	2437	2483	0	0	0	0	2459
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Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

Start Time	10-Sep-14		NB		SB		Combined		11-Sep		NB		SB		Combined		
	Wed		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Thu	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00			2	15	2	8	4	23		1	11	1	11	2	22		
12:15			2	19	6	14	8	33		2	16	1	11	3	27		
12:30			1	19	1	15	2	34		0	17	2	24	2	41		
12:45			1	14	3	15	4	29		1	13	1	6	2	19		
01:00			0	14	0	7	0	21		0	14	2	15	2	29		
01:15			1	20	1	11	2	31		0	12	0	9	0	21		
01:30			1	24	1	14	2	38		0	20	0	12	0	32		
01:45			1	22	2	20	3	42		1	28	0	17	1	45		
02:00			2	16	0	12	2	28		1	21	0	14	1	35		
02:15			0	31	0	17	0	48		1	17	1	14	2	31		
02:30			0	16	0	21	0	37		3	20	4	26	7	46		
02:45			1	14	0	19	1	33		1	27	0	22	1	49		
03:00			2	23	0	19	2	42		2	33	0	21	2	54		
03:15			2	34	0	18	2	52		0	30	0	22	0	52		
03:30			1	30	0	19	1	49		2	20	1	22	3	42		
03:45			1	18	3	27	4	45		0	36	2	22	2	58		
04:00			3	26	1	26	4	52		2	38	1	28	3	66		
04:15			3	20	1	22	4	42		3	34	1	27	4	61		
04:30			5	33	2	24	7	57		4	33	1	22	5	55		
04:45			7	32	2	29	9	61		12	24	0	28	12	52		
05:00			14	27	2	20	16	47		8	33	1	27	9	60		
05:15			10	27	5	25	15	52		12	33	4	28	16	61		
05:30			11	37	4	21	15	58		17	26	4	24	21	50		
05:45			14	21	6	18	20	39		10	22	9	25	19	47		
06:00			17	21	8	22	25	43		14	20	7	15	21	35		
06:15			30	16	16	21	46	37		34	28	19	19	53	47		
06:30			30	30	19	19	49	49		36	17	15	18	51	35		
06:45			25	18	17	12	42	30		28	17	15	18	43	35		
07:00			34	22	12	17	46	39		30	19	14	17	44	36		
07:15			28	13	9	13	37	26		25	17	16	11	41	28		
07:30			35	16	18	13	53	29		29	16	15	10	44	26		
07:45			14	17	24	13	38	30		28	16	10	7	38	23		
08:00			24	21	13	11	37	32		13	28	16	9	29	37		
08:15			27	11	7	22	34	33		21	23	13	10	34	33		
08:30			26	12	14	13	40	25		18	13	11	7	29	20		
08:45			18	12	12	11	30	23		21	7	18	12	39	19		
09:00			21	13	14	7	35	20		18	10	13	11	31	21		
09:15			22	6	8	7	30	13		13	12	14	9	27	21		
09:30			18	6	15	6	33	12		17	13	7	10	24	23		
09:45			22	4	8	5	30	9		24	7	7	6	31	13		
10:00			10	10	8	9	18	19		18	10	11	5	29	15		
10:15			17	5	11	2	28	7		14	4	12	7	26	11		
10:30			18	1	11	6	29	7		14	6	21	7	35	13		
10:45			15	1	9	6	24	7		16	4	9	2	25	6		
11:00			14	4	10	2	24	6		15	2	12	1	27	3		
11:15			11	3	10	4	21	7		13	4	6	4	19	8		
11:30			17	5	15	2	32	7		16	2	17	3	33	5		
11:45			13	1	10	2	23	3		13	2	5	3	18	5		
Total			591	820	340	686	931	1506		571	875	339	698	910	1573		
Day Total			1411		1026		2437			1446		1037		2483			
% Total			24.3%	33.6%	14.0%	28.1%				23.0%	35.2%	13.7%	28.1%				
Peak	-		06:45	04:45	06:15	04:00	06:15	04:45	-	06:15	03:45	06:15	04:45	06:15	03:45		
Vol.	-		122	123	64	101	183	218	-	128	141	63	107	191	240		
P.H.F.			0.871	0.831	0.842	0.871	0.934	0.893		0.889	0.928	0.829	0.955	0.901	0.909		

Old Colony Planning Council
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Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

Start Time	08-Sep-14 Mon	09-Sep-14 Tue	10-Sep-14 Wed	11-Sep-14 Thu	12-Sep-14 Fri	13-Sep-14 Sat	14-Sep-14 Sun	Week Average
12:00 AM	*	*	18	9	*	*	*	14
01:00	*	*	7	3	*	*	*	5
02:00	*	*	3	11	*	*	*	7
03:00	*	*	9	7	*	*	*	8
04:00	*	*	24	24	*	*	*	24
05:00	*	*	66	65	*	*	*	66
06:00	*	*	162	168	*	*	*	165
07:00	*	*	174	167	*	*	*	170
08:00	*	*	141	131	*	*	*	136
09:00	*	*	128	113	*	*	*	120
10:00	*	*	99	115	*	*	*	107
11:00	*	*	100	97	*	*	*	98
12:00 PM	*	*	119	109	*	*	*	114
01:00	*	*	132	127	*	*	*	130
02:00	*	*	146	161	*	*	*	154
03:00	*	*	188	206	*	*	*	197
04:00	*	*	212	234	*	*	*	223
05:00	*	*	196	218	*	*	*	207
06:00	*	*	159	152	*	*	*	156
07:00	*	*	124	113	*	*	*	118
08:00	*	*	113	109	*	*	*	111
09:00	*	*	54	78	*	*	*	66
10:00	*	*	40	45	*	*	*	42
11:00	*	*	23	21	*	*	*	22
Total	0	0	2437	2483	0	0	0	2460
Percentage	0.0%	0.0%	99.1%	100.9%	0.0%	0.0%	0.0%	
AM Peak	-	-	07:00	06:00	-	-	-	07:00
Vol.	-	-	174	168	-	-	-	170
PM Peak	-	-	16:00	16:00	-	-	-	16:00
Vol.	-	-	212	234	-	-	-	223

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Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

NB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	999	Total
09/10/14	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	6
01:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
02:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:00	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
04:00	6	9	3	0	0	0	0	0	0	0	0	0	0	0	0	18
05:00	21	20	6	2	0	0	0	0	0	0	0	0	0	0	0	49
06:00	60	32	10	0	0	0	0	0	0	0	0	0	0	0	0	102
07:00	52	44	14	1	0	0	0	0	0	0	0	0	0	0	0	111
08:00	52	32	11	0	0	0	0	0	0	0	0	0	0	0	0	95
09:00	42	34	7	0	0	0	0	0	0	0	0	0	0	0	0	83
10:00	22	26	12	0	0	0	0	0	0	0	0	0	0	0	0	60
11:00	40	12	2	1	0	0	0	0	0	0	0	0	0	0	0	55
12 PM	32	21	13	1	0	0	0	0	0	0	0	0	0	0	0	67
13:00	31	36	12	1	0	0	0	0	0	0	0	0	0	0	0	80
14:00	36	31	7	3	0	0	0	0	0	0	0	0	0	0	0	77
15:00	58	34	11	2	0	0	0	0	0	0	0	0	0	0	0	105
16:00	65	39	7	0	0	0	0	0	0	0	0	0	0	0	0	111
17:00	57	42	12	1	0	0	0	0	0	0	0	0	0	0	0	112
18:00	48	30	7	0	0	0	0	0	0	0	0	0	0	0	0	85
19:00	36	26	6	0	0	0	0	0	0	0	0	0	0	0	0	68
20:00	33	14	9	0	0	0	0	0	0	0	0	0	0	0	0	56
21:00	14	13	1	0	0	1	0	0	0	0	0	0	0	0	0	29
22:00	11	3	3	0	0	0	0	0	0	0	0	0	0	0	0	17
23:00	5	3	3	1	1	0	0	0	0	0	0	0	0	0	0	13
Total	732	507	156	14	1	1	0	0	0	0	0	0	0	0	0	1411

Daily

15th Percentile :	11 MPH
50th Percentile :	23 MPH
85th Percentile :	35 MPH
95th Percentile :	40 MPH
Mean Speed(Average) :	24 MPH
10 MPH Pace Speed :	16-25 MPH
Number in Pace :	460
Percent in Pace :	32.6%
Number of Vehicles > 25 MPH :	1074
Percent of Vehicles > 25 MPH :	76.1%

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Community: Whitman
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 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

NB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/11/14	2	1	1	0	0	0	0	0	0	0	0	0	0	0	4
01:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
03:00	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
04:00	7	8	5	1	0	0	0	0	0	0	0	0	0	0	21
05:00	18	17	9	2	1	0	0	0	0	0	0	0	0	0	47
06:00	56	46	8	1	1	0	0	0	0	0	0	0	0	0	112
07:00	46	47	18	1	0	0	0	0	0	0	0	0	0	0	112
08:00	45	20	6	2	0	0	0	0	0	0	0	0	0	0	73
09:00	33	29	10	0	0	0	0	0	0	0	0	0	0	0	72
10:00	38	16	7	1	0	0	0	0	0	0	0	0	0	0	62
11:00	29	21	7	0	0	0	0	0	0	0	0	0	0	0	57
12 PM	30	20	6	1	0	0	0	0	0	0	0	0	0	0	57
13:00	36	24	12	2	0	0	0	0	0	0	0	0	0	0	74
14:00	45	31	8	1	0	0	0	0	0	0	0	0	0	0	85
15:00	63	47	8	1	0	0	0	0	0	0	0	0	0	0	119
16:00	60	51	16	2	0	0	0	0	0	0	0	0	0	0	129
17:00	66	36	7	5	0	0	0	0	0	0	0	0	0	0	114
18:00	58	18	5	1	0	0	0	0	0	0	0	0	0	0	82
19:00	38	21	8	1	0	0	0	0	0	0	0	0	0	0	68
20:00	41	26	4	0	0	0	0	0	0	0	0	0	0	0	71
21:00	29	12	1	0	0	0	0	0	0	0	0	0	0	0	42
22:00	17	4	3	0	0	0	0	0	0	0	0	0	0	0	24
23:00	7	3	0	0	0	0	0	0	0	0	0	0	0	0	10
Total	772	501	149	22	2	0	0	0	0	0	0	0	0	0	1446

Daily
 15th Percentile : 11 MPH
 50th Percentile : 22 MPH
 85th Percentile : 35 MPH
 95th Percentile : 39 MPH
 Mean Speed(Average) : 24 MPH
 10 MPH Pace Speed : 16-25 MPH
 Number in Pace : 478
 Percent in Pace : 33.1%
 Number of Vehicles > 25 MPH : 1074
 Percent of Vehicles > 25 MPH : 74.3%

Grand Total	1504	1008	305	36	3	1	0	0	0	0	0	0	0	0	2857
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Overall
 15th Percentile : 11 MPH
 50th Percentile : 23 MPH
 85th Percentile : 35 MPH
 95th Percentile : 40 MPH
 Mean Speed(Average) : 24 MPH
 10 MPH Pace Speed : 16-25 MPH
 Number in Pace : 939
 Percent in Pace : 32.9%
 Number of Vehicles > 25 MPH : 2148
 Percent of Vehicles > 25 MPH : 75.2%

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Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

SB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	999	Total
09/10/14	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	12
01:00	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	4
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
05:00	12	3	1	0	1	0	0	0	0	0	0	0	0	0	0	17
06:00	33	22	4	1	0	0	0	0	0	0	0	0	0	0	0	60
07:00	40	21	2	0	0	0	0	0	0	0	0	0	0	0	0	63
08:00	34	7	4	1	0	0	0	0	0	0	0	0	0	0	0	46
09:00	18	23	4	0	0	0	0	0	0	0	0	0	0	0	0	45
10:00	26	11	2	0	0	0	0	0	0	0	0	0	0	0	0	39
11:00	28	13	4	0	0	0	0	0	0	0	0	0	0	0	0	45
12 PM	26	22	4	0	0	0	0	0	0	0	0	0	0	0	0	52
13:00	38	13	1	0	0	0	0	0	0	0	0	0	0	0	0	52
14:00	42	24	3	0	0	0	0	0	0	0	0	0	0	0	0	69
15:00	43	30	10	0	0	0	0	0	0	0	0	0	0	0	0	83
16:00	46	51	4	0	0	0	0	0	0	0	0	0	0	0	0	101
17:00	44	31	9	0	0	0	0	0	0	0	0	0	0	0	0	84
18:00	39	31	4	0	0	0	0	0	0	0	0	0	0	0	0	74
19:00	28	23	5	0	0	0	0	0	0	0	0	0	0	0	0	56
20:00	37	15	5	0	0	0	0	0	0	0	0	0	0	0	0	57
21:00	20	3	2	0	0	0	0	0	0	0	0	0	0	0	0	25
22:00	15	6	2	0	0	0	0	0	0	0	0	0	0	0	0	23
23:00	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	10
Total	589	360	73	2	1	0	0	1	0	0	0	0	0	0	0	1026

Daily

15th Percentile :	11 MPH
50th Percentile :	22 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	23 MPH
10 MPH Pace Speed :	16-25 MPH
Number in Pace :	349
Percent in Pace :	34.0%
Number of Vehicles > 25 MPH :	722
Percent of Vehicles > 25 MPH :	70.3%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

SB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	999	Total
09/11/14	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5
01:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
03:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3
05:00	14	4	0	0	0	0	0	0	0	0	0	0	0	0	0	18
06:00	32	21	1	2	0	0	0	0	0	0	0	0	0	0	0	56
07:00	33	21	0	1	0	0	0	0	0	0	0	0	0	0	0	55
08:00	35	18	4	1	0	0	0	0	0	0	0	0	0	0	0	58
09:00	27	11	3	0	0	0	0	0	0	0	0	0	0	0	0	41
10:00	38	15	0	0	0	0	0	0	0	0	0	0	0	0	0	53
11:00	27	11	2	0	0	0	0	0	0	0	0	0	0	0	0	40
12 PM	42	9	1	0	0	0	0	0	0	0	0	0	0	0	0	52
13:00	37	15	1	0	0	0	0	0	0	0	0	0	0	0	0	53
14:00	41	27	8	0	0	0	0	0	0	0	0	0	0	0	0	76
15:00	54	28	5	0	0	0	0	0	0	0	0	0	0	0	0	87
16:00	57	37	10	1	0	0	0	0	0	0	0	0	0	0	0	105
17:00	61	36	7	0	0	0	0	0	0	0	0	0	0	0	0	104
18:00	39	26	5	0	0	0	0	0	0	0	0	0	0	0	0	70
19:00	29	14	2	0	0	0	0	0	0	0	0	0	0	0	0	45
20:00	17	20	1	0	0	0	0	0	0	0	0	0	0	0	0	38
21:00	27	5	3	1	0	0	0	0	0	0	0	0	0	0	0	36
22:00	16	4	1	0	0	0	0	0	0	0	0	0	0	0	0	21
23:00	3	6	2	0	0	0	0	0	0	0	0	0	0	0	0	11
Total	637	337	56	7	0	0	0	0	0	0	0	0	0	0	0	1037

Daily
 15th Percentile : 11 MPH
 50th Percentile : 21 MPH
 85th Percentile : 33 MPH
 95th Percentile : 38 MPH

 Mean Speed(Average) : 23 MPH
 10 MPH Pace Speed : 16-25 MPH
 Number in Pace : 364
 Percent in Pace : 35.1%
 Number of Vehicles > 25 MPH : 680
 Percent of Vehicles > 25 MPH : 65.6%

Grand Total	1226	697	129	9	1	0	0	1	0	0	0	0	0	0	0	2063
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Overall
 15th Percentile : 11 MPH
 50th Percentile : 22 MPH
 85th Percentile : 34 MPH
 95th Percentile : 38 MPH

 Mean Speed(Average) : 23 MPH
 10 MPH Pace Speed : 16-25 MPH
 Number in Pace : 714
 Percent in Pace : 34.6%
 Number of Vehicles > 25 MPH : 1402
 Percent of Vehicles > 25 MPH : 67.9%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

NB, SB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	999	Total
09/10/14	10	6	1	1	0	0	0	0	0	0	0	0	0	0	0	18
01:00	4	2	0	0	0	0	0	1	0	0	0	0	0	0	0	7
02:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:00	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	9
04:00	10	11	3	0	0	0	0	0	0	0	0	0	0	0	0	24
05:00	33	23	7	2	1	0	0	0	0	0	0	0	0	0	0	66
06:00	93	54	14	1	0	0	0	0	0	0	0	0	0	0	0	162
07:00	92	65	16	1	0	0	0	0	0	0	0	0	0	0	0	174
08:00	86	39	15	1	0	0	0	0	0	0	0	0	0	0	0	141
09:00	60	57	11	0	0	0	0	0	0	0	0	0	0	0	0	128
10:00	48	37	14	0	0	0	0	0	0	0	0	0	0	0	0	99
11:00	68	25	6	1	0	0	0	0	0	0	0	0	0	0	0	100
12 PM	58	43	17	1	0	0	0	0	0	0	0	0	0	0	0	119
13:00	69	49	13	1	0	0	0	0	0	0	0	0	0	0	0	132
14:00	78	55	10	3	0	0	0	0	0	0	0	0	0	0	0	146
15:00	101	64	21	2	0	0	0	0	0	0	0	0	0	0	0	188
16:00	111	90	11	0	0	0	0	0	0	0	0	0	0	0	0	212
17:00	101	73	21	1	0	0	0	0	0	0	0	0	0	0	0	196
18:00	87	61	11	0	0	0	0	0	0	0	0	0	0	0	0	159
19:00	64	49	11	0	0	0	0	0	0	0	0	0	0	0	0	124
20:00	70	29	14	0	0	0	0	0	0	0	0	0	0	0	0	113
21:00	34	16	3	0	0	1	0	0	0	0	0	0	0	0	0	54
22:00	26	9	5	0	0	0	0	0	0	0	0	0	0	0	0	40
23:00	10	7	4	1	1	0	0	0	0	0	0	0	0	0	0	23
Total	1321	867	229	16	2	1	0	1	0	0	0	0	0	0	0	2437

Daily

15th Percentile :	11 MPH
50th Percentile :	22 MPH
85th Percentile :	35 MPH
95th Percentile :	39 MPH

Mean Speed(Average) :	24 MPH
10 MPH Pace Speed :	16-25 MPH
Number in Pace :	810
Percent in Pace :	33.2%
Number of Vehicles > 25 MPH :	1796
Percent of Vehicles > 25 MPH :	73.7%

Old Colony Planning Council
70 School Street
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Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

NB, SB

Start Time	1	36	41	46	51	56	61	66	71	76	81	86	91	96	Total
	35	40	45	50	55	60	65	70	75	80	85	90	95	999	
09/11/14	5	3	1	0	0	0	0	0	0	0	0	0	0	0	9
01:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
02:00	6	5	0	0	0	0	0	0	0	0	0	0	0	0	11
03:00	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
04:00	7	10	5	2	0	0	0	0	0	0	0	0	0	0	24
05:00	32	21	9	2	1	0	0	0	0	0	0	0	0	0	65
06:00	88	67	9	3	1	0	0	0	0	0	0	0	0	0	168
07:00	79	68	18	2	0	0	0	0	0	0	0	0	0	0	167
08:00	80	38	10	3	0	0	0	0	0	0	0	0	0	0	131
09:00	60	40	13	0	0	0	0	0	0	0	0	0	0	0	113
10:00	76	31	7	1	0	0	0	0	0	0	0	0	0	0	115
11:00	56	32	9	0	0	0	0	0	0	0	0	0	0	0	97
12 PM	72	29	7	1	0	0	0	0	0	0	0	0	0	0	109
13:00	73	39	13	2	0	0	0	0	0	0	0	0	0	0	127
14:00	86	58	16	1	0	0	0	0	0	0	0	0	0	0	161
15:00	117	75	13	1	0	0	0	0	0	0	0	0	0	0	206
16:00	117	88	26	3	0	0	0	0	0	0	0	0	0	0	234
17:00	127	72	14	5	0	0	0	0	0	0	0	0	0	0	218
18:00	97	44	10	1	0	0	0	0	0	0	0	0	0	0	152
19:00	67	35	10	1	0	0	0	0	0	0	0	0	0	0	113
20:00	58	46	5	0	0	0	0	0	0	0	0	0	0	0	109
21:00	56	17	4	1	0	0	0	0	0	0	0	0	0	0	78
22:00	33	8	4	0	0	0	0	0	0	0	0	0	0	0	45
23:00	10	9	2	0	0	0	0	0	0	0	0	0	0	0	21
Total	1409	838	205	29	2	0	0	0	0	0	0	0	0	0	2483

Daily
 15th Percentile : 11 MPH
 50th Percentile : 22 MPH
 85th Percentile : 34 MPH
 95th Percentile : 39 MPH

 Mean Speed(Average) : 23 MPH
 10 MPH Pace Speed : 16-25 MPH
 Number in Pace : 844
 Percent in Pace : 34.0%
 Number of Vehicles > 25 MPH : 1754
 Percent of Vehicles > 25 MPH : 70.6%

Grand Total	2730	1705	434	45	4	1	0	1	0	0	0	0	0	0	4920
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Overall
 15th Percentile : 11 MPH
 50th Percentile : 22 MPH
 85th Percentile : 34 MPH
 95th Percentile : 39 MPH

 Mean Speed(Average) : 24 MPH
 10 MPH Pace Speed : 16-25 MPH
 Number in Pace : 1654
 Percent in Pace : 33.6%
 Number of Vehicles > 25 MPH : 3550
 Percent of Vehicles > 25 MPH : 72.1%

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

NB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/10/14	0	2	4	0	0	0	0	0	0	0	0	0	0	6	0
01:00	0	1	1	0	1	0	0	0	0	0	0	0	0	3	1
02:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0
03:00	0	2	2	0	1	0	0	0	1	0	0	0	0	6	2
04:00	0	6	7	0	5	0	0	0	0	0	0	0	0	18	5
05:00	1	14	25	0	7	1	0	0	1	0	0	0	0	49	9
06:00	0	41	40	3	17	0	0	0	0	0	0	0	0	101	20
07:00	0	33	53	2	22	0	0	0	0	0	0	0	0	110	24
08:00	1	31	50	2	10	1	0	0	0	0	0	0	0	95	13
09:00	0	33	33	0	15	0	0	1	1	0	0	0	0	83	17
10:00	1	26	23	0	6	0	0	2	1	0	0	0	0	59	9
11:00	0	20	26	0	8	0	0	0	0	0	0	0	0	54	8
12 PM	1	22	33	2	7	0	0	2	0	0	0	0	0	67	11
13:00	1	27	38	2	9	1	0	2	0	0	0	0	0	80	14
14:00	0	25	40	1	7	0	0	1	0	0	0	0	0	74	9
15:00	0	36	51	2	12	0	0	2	0	0	0	0	0	103	16
16:00	0	39	61	1	8	0	0	1	0	0	0	0	0	110	10
17:00	0	38	54	0	19	0	0	0	0	0	0	0	0	111	19
18:00	1	32	41	0	10	0	0	0	0	0	0	0	0	84	10
19:00	0	35	27	0	5	1	0	0	0	0	0	0	0	68	6
20:00	0	23	23	0	8	1	0	0	0	0	0	0	0	55	9
21:00	0	10	14	0	4	0	0	0	0	0	0	0	0	28	4
22:00	0	6	6	0	5	0	0	0	0	0	0	0	0	17	5
23:00	0	2	9	0	1	0	0	1	0	0	0	0	0	13	2
Total	6	505	662	15	187	5	0	12	4	0	0	0	0	1396	223
Percent	0.4%	36.2%	47.4%	1.1%	13.4%	0.4%	0.0%	0.9%	0.3%	0.0%	0.0%	0.0%	0.0%		16.0%
AM Peak	05:00	06:00	07:00	06:00	07:00	05:00		10:00	03:00					07:00	07:00
Vol.	1	41	53	3	22	1		2	1					110	24
PM Peak	12:00	16:00	16:00	12:00	17:00	13:00		12:00						17:00	17:00
Vol.	1	39	61	2	19	1		2						111	19

Old Colony Planning Council
70 School Street
Brockton, MA 02301
508-583-1833
www.ocpcrpa.org

Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

NB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/11/14	0	1	2	0	1	0	0	0	0	0	0	0	0	4	1
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
02:00	0	2	2	0	2	0	0	0	0	0	0	0	0	6	2
03:00	0	2	0	0	1	0	0	0	0	0	0	0	0	3	1
04:00	0	7	9	0	4	0	0	0	1	0	0	0	0	21	5
05:00	0	15	23	0	7	1	0	0	1	0	0	0	0	47	9
06:00	1	42	46	3	18	0	0	1	0	0	0	0	0	111	22
07:00	1	35	50	1	18	0	0	3	0	0	0	0	0	108	22
08:00	0	27	35	2	9	0	0	0	0	0	0	0	0	73	11
09:00	0	25	34	0	12	0	0	1	0	0	0	0	0	72	13
10:00	0	17	31	1	8	1	0	1	1	0	0	0	0	60	12
11:00	0	18	30	0	9	0	0	0	0	0	0	0	0	57	9
12 PM	0	21	23	3	8	0	0	0	0	0	0	0	0	55	11
13:00	0	23	37	1	9	2	0	2	0	0	0	0	0	74	14
14:00	1	28	39	3	12	0	0	1	0	0	0	0	0	84	16
15:00	0	36	65	1	10	2	0	3	0	0	0	0	0	117	16
16:00	1	50	50	0	21	0	0	4	0	0	0	0	0	126	25
17:00	0	32	63	1	16	0	0	1	0	0	0	0	0	113	18
18:00	1	29	42	2	6	0	0	0	0	0	0	0	0	80	8
19:00	0	23	39	0	4	1	0	0	0	0	0	0	0	67	5
20:00	0	26	37	0	8	0	0	0	0	0	0	0	0	71	8
21:00	0	17	20	0	5	0	0	0	0	0	0	0	0	42	5
22:00	1	15	5	0	3	0	0	0	0	0	0	0	0	24	3
23:00	0	4	5	0	1	0	0	0	0	0	0	0	0	10	1
Total	6	496	687	18	192	7	0	17	3	0	0	0	0	1426	237
Percent	0.4%	34.8%	48.2%	1.3%	13.5%	0.5%	0.0%	1.2%	0.2%	0.0%	0.0%	0.0%	0.0%		16.6%
AM Peak	06:00	06:00	07:00	06:00	06:00	05:00		07:00	04:00					06:00	06:00
Vol.	1	42	50	3	18	1		3	1					111	22
PM Peak	14:00	16:00	15:00	12:00	16:00	13:00		16:00						16:00	16:00
Vol.	1	50	65	3	21	2		4						126	25
Grand Total	12	1001	1349	33	379	12	0	29	7	0	0	0	0	2822	460
Percent	0.4%	35.5%	47.8%	1.2%	13.4%	0.4%	0.0%	1.0%	0.2%	0.0%	0.0%	0.0%	0.0%		16.3%

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70 School Street
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Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/10/14	1	7	3	0	0	0	0	0	0	0	0	0	0	11	0
01:00	0	3	0	0	1	0	0	0	0	0	0	0	0	4	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3	0
04:00	0	3	3	0	0	0	0	0	0	0	0	0	0	6	0
05:00	0	6	7	0	4	0	0	0	0	0	0	0	0	17	4
06:00	0	29	23	1	5	0	0	0	0	0	0	0	0	58	6
07:00	0	32	19	0	11	1	0	0	0	0	0	0	0	63	12
08:00	1	24	12	0	7	0	0	1	1	0	0	0	0	46	9
09:00	0	26	14	0	5	0	0	0	0	0	0	0	0	45	5
10:00	0	15	20	0	3	0	0	0	0	0	0	0	0	38	3
11:00	1	22	12	0	8	1	0	0	1	0	0	0	0	45	10
12 PM	0	23	19	1	9	0	0	0	0	0	0	0	0	52	10
13:00	0	27	13	2	7	1	0	2	0	0	0	0	0	52	12
14:00	0	34	23	1	9	0	0	0	0	0	0	0	0	67	10
15:00	2	39	28	1	11	0	0	0	0	0	0	0	0	81	12
16:00	1	48	34	0	15	1	0	0	1	0	0	0	0	100	17
17:00	1	47	23	0	12	0	0	1	0	0	0	0	0	84	13
18:00	0	36	25	0	12	0	0	0	0	0	0	0	0	73	12
19:00	1	30	16	0	6	0	0	0	0	0	0	0	0	53	6
20:00	0	35	18	0	4	0	0	0	0	0	0	0	0	57	4
21:00	0	14	7	0	3	0	0	0	0	0	0	0	0	24	3
22:00	0	14	8	0	1	0	0	0	0	0	0	0	0	23	1
23:00	0	7	2	0	1	0	0	0	0	0	0	0	0	10	1
Total	8	523	330	6	134	4	0	4	3	0	0	0	0	1012	151
Percent	0.8%	51.7%	32.6%	0.6%	13.2%	0.4%	0.0%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%		14.9%
AM Peak	00:00	07:00	06:00	06:00	07:00	07:00		08:00	08:00					07:00	07:00
Vol.	1	32	23	1	11	1		1	1					63	12
PM Peak	15:00	16:00	16:00	13:00	16:00	13:00		13:00	16:00					16:00	16:00
Vol.	2	48	34	2	15	1		2	1					100	17

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Community: Whitman
 Com#_UR/FC: 338_U0
 Recorder #: 25236
 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/11/14	0	1	4	0	0	0	0	0	0	0	0	0	0	5	0
01:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0
02:00	1	1	2	0	0	0	0	0	0	0	0	0	0	4	0
03:00	0	1	2	0	0	0	0	0	0	0	0	0	0	3	0
04:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3	0
05:00	0	6	8	0	4	0	0	0	0	0	0	0	0	18	4
06:00	2	27	21	1	4	0	0	0	0	0	0	0	0	55	5
07:00	1	31	11	0	9	0	0	1	0	0	0	0	0	53	10
08:00	0	22	29	0	4	0	0	1	0	0	0	0	0	56	5
09:00	0	13	24	0	4	0	0	0	0	0	0	0	0	41	4
10:00	0	26	19	0	5	0	0	2	0	0	0	0	0	52	7
11:00	0	13	19	0	6	0	0	2	0	0	0	0	0	40	8
12 PM	1	25	19	1	4	0	1	0	0	0	0	0	0	51	6
13:00	0	27	14	1	8	0	2	0	0	0	0	0	0	52	11
14:00	0	25	33	3	11	0	0	0	1	0	0	0	0	73	15
15:00	0	30	45	1	8	1	0	0	0	0	0	0	0	85	10
16:00	0	43	39	2	18	1	0	0	0	0	0	0	0	103	21
17:00	1	54	36	0	11	0	0	2	0	0	0	0	0	104	13
18:00	0	31	27	0	11	0	0	0	0	0	0	0	0	69	11
19:00	0	25	14	0	5	0	0	0	0	0	0	0	0	44	5
20:00	0	22	10	0	6	0	0	0	0	0	0	0	0	38	6
21:00	1	19	12	0	4	0	0	0	0	0	0	0	0	36	4
22:00	0	15	3	0	1	0	0	0	0	0	0	0	0	19	1
23:00	1	7	1	0	2	0	0	0	0	0	0	0	0	11	2
Total	8	467	394	9	125	2	3	8	1	0	0	0	0	1017	148
Percent	0.8%	45.9%	38.7%	0.9%	12.3%	0.2%	0.3%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%		14.6%
AM Peak	06:00	07:00	08:00	06:00	07:00			10:00						08:00	07:00
Vol.	2	31	29	1	9			2						56	10
PM Peak	12:00	17:00	15:00	14:00	16:00	15:00	13:00	17:00	14:00					17:00	16:00
Vol.	1	54	45	3	18	1	2	2	1					104	21
Grand Total	16	990	724	15	259	6	3	12	4	0	0	0	0	2029	299
Percent	0.8%	48.8%	35.7%	0.7%	12.8%	0.3%	0.1%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%		14.7%

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Community: Whitman
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 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

NB, SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/10/14	1	9	7	0	0	0	0	0	0	0	0	0	0	17	0
01:00	0	4	1	0	2	0	0	0	0	0	0	0	0	7	2
02:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0
03:00	0	4	3	0	1	0	0	0	1	0	0	0	0	9	2
04:00	0	9	10	0	5	0	0	0	0	0	0	0	0	24	5
05:00	1	20	32	0	11	1	0	0	1	0	0	0	0	66	13
06:00	0	70	63	4	22	0	0	0	0	0	0	0	0	159	26
07:00	0	65	72	2	33	1	0	0	0	0	0	0	0	173	36
08:00	2	55	62	2	17	1	0	1	1	0	0	0	0	141	22
09:00	0	59	47	0	20	0	0	1	1	0	0	0	0	128	22
10:00	1	41	43	0	9	0	0	2	1	0	0	0	0	97	12
11:00	1	42	38	0	16	1	0	0	1	0	0	0	0	99	18
12 PM	1	45	52	3	16	0	0	2	0	0	0	0	0	119	21
13:00	1	54	51	4	16	2	0	4	0	0	0	0	0	132	26
14:00	0	59	63	2	16	0	0	1	0	0	0	0	0	141	19
15:00	2	75	79	3	23	0	0	2	0	0	0	0	0	184	28
16:00	1	87	95	1	23	1	0	1	1	0	0	0	0	210	27
17:00	1	85	77	0	31	0	0	1	0	0	0	0	0	195	32
18:00	1	68	66	0	22	0	0	0	0	0	0	0	0	157	22
19:00	1	65	43	0	11	1	0	0	0	0	0	0	0	121	12
20:00	0	58	41	0	12	1	0	0	0	0	0	0	0	112	13
21:00	0	24	21	0	7	0	0	0	0	0	0	0	0	52	7
22:00	0	20	14	0	6	0	0	0	0	0	0	0	0	40	6
23:00	0	9	11	0	2	0	0	1	0	0	0	0	0	23	3
Total	14	1028	992	21	321	9	0	16	7	0	0	0	0	2408	374
Percent	0.6%	42.7%	41.2%	0.9%	13.3%	0.4%	0.0%	0.7%	0.3%	0.0%	0.0%	0.0%	0.0%		15.5%
AM Peak	08:00	06:00	07:00	06:00	07:00	05:00		10:00	03:00					07:00	07:00
Vol.	2	70	72	4	33	1		2	1					173	36
PM Peak	15:00	16:00	16:00	13:00	17:00	13:00		13:00	16:00					16:00	17:00
Vol.	2	87	95	4	31	2		4	1					210	32

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 Layout: L6 Basic (2')

Station ID:
 Site Code: 338
 Date Start: 10-Sep-14
 Date End: 11-Sep-14
 Pleasant St, north of South Ave (27)

NB, SB

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	Truck Total
09/11/14	0	2	6	0	1	0	0	0	0	0	0	0	0	9	1
01:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3	0
02:00	1	3	4	0	2	0	0	0	0	0	0	0	0	10	2
03:00	0	3	2	0	1	0	0	0	0	0	0	0	0	6	1
04:00	0	9	10	0	4	0	0	0	1	0	0	0	0	24	5
05:00	0	21	31	0	11	1	0	0	1	0	0	0	0	65	13
06:00	3	69	67	4	22	0	0	1	0	0	0	0	0	166	27
07:00	2	66	61	1	27	0	0	4	0	0	0	0	0	161	32
08:00	0	49	64	2	13	0	0	1	0	0	0	0	0	129	16
09:00	0	38	58	0	16	0	0	1	0	0	0	0	0	113	17
10:00	0	43	50	1	13	1	0	3	1	0	0	0	0	112	19
11:00	0	31	49	0	15	0	0	2	0	0	0	0	0	97	17
12 PM	1	46	42	4	12	0	1	0	0	0	0	0	0	106	17
13:00	0	50	51	2	17	2	2	2	0	0	0	0	0	126	25
14:00	1	53	72	6	23	0	0	1	1	0	0	0	0	157	31
15:00	0	66	110	2	18	3	0	3	0	0	0	0	0	202	26
16:00	1	93	89	2	39	1	0	4	0	0	0	0	0	229	46
17:00	1	86	99	1	27	0	0	3	0	0	0	0	0	217	31
18:00	1	60	69	2	17	0	0	0	0	0	0	0	0	149	19
19:00	0	48	53	0	9	1	0	0	0	0	0	0	0	111	10
20:00	0	48	47	0	14	0	0	0	0	0	0	0	0	109	14
21:00	1	36	32	0	9	0	0	0	0	0	0	0	0	78	9
22:00	1	30	8	0	4	0	0	0	0	0	0	0	0	43	4
23:00	1	11	6	0	3	0	0	0	0	0	0	0	0	21	3
Total	14	963	1081	27	317	9	3	25	4	0	0	0	0	2443	385
Percent	0.6%	39.4%	44.2%	1.1%	13.0%	0.4%	0.1%	1.0%	0.2%	0.0%	0.0%	0.0%	0.0%		15.8%
AM Peak	06:00	06:00	06:00	06:00	07:00	05:00		07:00	04:00					06:00	07:00
Vol.	3	69	67	4	27	1		4	1					166	32
PM Peak	12:00	16:00	15:00	14:00	16:00	15:00	13:00	16:00	14:00					16:00	16:00
Vol.	1	93	110	6	39	3	2	4	1					229	46
Grand Total	28	1991	2073	48	638	18	3	41	11	0	0	0	0	4851	759
Percent	0.6%	41.0%	42.7%	1.0%	13.2%	0.4%	0.1%	0.8%	0.2%	0.0%	0.0%	0.0%	0.0%		15.6%



6.5 AM and PM Intersection Peak Hour Levels-of-Service

Level-of-Service	Stop Sign	Traffic Signal
A	0 to 10	0 to 10
B	>10 to 15	>10 to 20
C	>15 to 25	>20 to 35
D	>25 to 35	>35 to 55
E	>35 to 50	>55 to 80
F	>50	>80

Existing Lane Configuration Existing Two Way Stop Control

South Avenue (Route 27)/Franklin Street/Pleasant Street Intersection	2007 LOS AM Peak	Average Delay Sec.	2007 LOS PM Peak	Average Delay Sec.	2014 LOS AM Peak	Average Delay Sec.	2014 LOS PM Peak	Average Delay Sec.
Franklin Street Northbound Left Turn	C	18.3	F	87.0	C	20.3	E	38.3
Franklin Street Northbound Through and Right Turns	B	14.7	C	18.8	C	15.6	C	18.3
Pleasant Street Southbound Left/Through/Right	B	14.7	D	28.0	B	14.6	C	18.3

Improvement Alternative LOS

Improvement Alternative	2007 AM LOS	Av. Delay Sec.	2007 PM LOS	Av. Delay Sec.	2014 AM LOS	Av. Delay Sec.	2014 PM Peak	Av. Delay Sec.
1) Consolidate Franklin St NB Franklin St NB Left/Thru Franklin St NB Right Pleasant St SB All Movements	C A C	23.4 9.5 15.2	F F D	133.8 133.8 28.0	D D B	28.2 28.2 14.6	F F C	54.0 54.0 21.5
2) All-Way Stop Existing Lane Configuration South Ave (Route 27) EB All Movements South Ave WB All Movements Franklin Street NB Left Franklin Street NB Thru Franklin Street NB Right Pleasant Street SB All Movements	B B B A A A	11.2 12.2 11.1 8.9 5.0 9.5	F C B B A B	65.4 15.8 14.5 10.2 5.0 12.2	B B B A A A	11.4 13.1 11.5 9.2 9.2 9.5	D B B A A B	30.7 14.1 12.9 10.0 10.0 11.4
3) All-Way Stop Consolidate Franklin St NB Left and Thru Lanes into One Shared Lane South Ave (Route 27) EB All Movements South Ave WB All Movements Franklin St NB Left/Thru Franklin St NB Right Pleasant St SB All Movements	B B B A A	11.2 12.1 12.0 6.2 9.3	F C C A B	66.0 15.9 15.6 6.2 12.0	B B B A A	11.4 13.1 12.7 6.2 9.4	D B B A B	30.8 14.1 14.1 6.2 11.2
4) Signalization (Overall LOS)	B	10.8	B	15.2	A	9.2	B	12.5
5) Roundabout (Overall LOS)	A	7.0	B	11.2	A	7.4	A	9.3

Intersection

Intersection Delay (sec/veh)	23.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	1	301	237	5	246	14	139	63	1	7	61	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	1	327	258	5	267	15	151	68	1	8	66	5
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	32.1	14.6	16.3	11.6
HCM LOS	D	B	C	B

Lane

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Volume Left (%)	69%	0%	0%	2%	10%
Volume Thru (%)	31%	0%	56%	93%	84%
Volume Right (%)	0%	100%	44%	5%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Volume by Lane	202	1	539	265	73
Left Turning Volume	63	0	301	246	61
Through Volume	0	1	237	14	5
Right Turning Volume	139	0	1	5	7
Lane Flow Rate	220	1	586	288	79
Geometry Group	7	7	2	2	5
Degree of Utilization, X	0.456	0.002	0.858	0.484	0.158
Departure Headway, Hd	7.478	6.408	5.383	6.043	7.178
Convergence(Y/N)	Yes	Yes	Yes	Yes	Yes
Capacity	483	560	680	599	501
Service Time	5.196	4.126	3.383	4.064	5.207
HCM Lane V/C Ratio	0.455	0.002	0.862	0.481	0.158
HCM Control Delay	16.3	9.1	32.1	14.6	11.6
HCM Lane LOS	C	A	D	B	B
HCM 95th Percentile Queue	2.5	0	17.7	2.8	0.6

Intersection

Intersection Delay (sec/veh): 11.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	1	301	237	5	246	14	139	63	1	7	61	5
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None	Free	Free	Free	None	None	None
Storage Length	0		0	0		0	120		60	0		0
Median Width		0			0			0			0	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	1	327	258	5	267	15	151	68	1	8	66	5
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Major/Minor	Major 1			Major 2			Minor 1			Minor 2		
Conflicting Flow Rate - All	282	0	0	585	0	0	778	750	456	778	872	275
Stage 1	-	-	-	-	-	-	458	458	-	285	285	-
Stage 2	-	-	-	-	-	-	320	292	-	493	587	-
Follow-up Headway	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Capacity-1 Maneuver	1280	-	-	990	-	-	314	340	604	314	289	764
Stage 1	-	-	-	-	-	-	583	567	-	722	676	-
Stage 2	-	-	-	-	-	-	692	671	-	558	497	-
Time blocked-Platoon(%)	0	-	-	0	-	-	0	0	0	0	0	0
Mov Capacity-1 Maneuver	1280	-	-	990	-	-	255	338	604	263	287	764
Mov Capacity-2 Maneuver	-	-	-	-	-	-	255	338	-	263	287	-
Stage 1	-	-	-	-	-	-	582	566	-	721	672	-
Stage 2	-	-	-	-	-	-	616	667	-	489	497	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	0	0.2	54.2	21.5
HCM LOS	A	A	F	C

Lane	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (vph)	276	604							297
HCM Control Delay (s)	54.4	11	7.815	0	-	8.656	0	-	21.5
HCM Lane VC Ratio	0.796	0.002	0.001	-	-	0.005	-	-	0.267
HCM Lane LOS	F	B	A	A	-	A	A	-	C
HCM 95th Percentile Queue (veh)	6.208	0.005	0.003	-	-	0.017	-	-	1.053

Intersection

Intersection Delay (sec/veh)	30.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	1	301	237	5	246	14	139	63	1	7	61	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	1	327	258	5	267	15	151	68	1	8	66	5
Number of Lanes	0	1	0	0	1	0	1	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	1	1	1
HCM Control Delay	46.5	16.1	13.4	12.2
HCM LOS	E	C	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1
Volume Left (%)	100%	0%	0%	0%	2%	10%
Volume Thru (%)	0%	100%	0%	56%	93%	84%
Volume Right (%)	0%	0%	100%	44%	5%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume by Lane	139	63	1	539	265	73
Left Turning Volume	0	63	0	301	246	61
Through Volume	0	0	1	237	14	5
Right Turning Volume	139	0	0	1	5	7
Lane Flow Rate	151	68	1	586	288	79
Geometry Group	7	7	7	7	7	7
Degree of Utilization, X	0.33	0.14	0.002	0.939	0.516	0.173
Departure Headway, Hd	7.867	7.353	6.635	5.768	6.572	7.854
Convergence(Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Capacity	459	490	542	621	553	459
Service Time	5.572	5.059	4.34	3.562	4.272	5.562
HCM Lane V/C Ratio	0.329	0.139	0.002	0.944	0.521	0.172
HCM Control Delay	14.4	11.3	9.4	46.5	16.1	12.2
HCM Lane LOS	B	B	A	E	C	B
HCM 95th Percentile Queue	1.5	0.5	0	40.4	3.2	0.6

Intersection												
Intersection Delay (sec/veh):	7.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	1	301	237	5	246	14	139	63	1	7	61	5
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None	Free	Free	Free	None	None	None
Storage Length	0		0	0		0	120		60	0		0
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	1	327	258	5	267	15	151	68	1	8	66	5
Number of Lanes	0	1	0	0	1	0	1	1	1	0	1	0
Major/Minor	Major 1			Major 2			Minor 1			Minor 2		
Conflicting Flow Rate - All	282	0	0	585	0	0	778	750	456	778	872	275
Stage 1	-	-	-	-	-	-	458	458	-	285	285	-
Stage 2	-	-	-	-	-	-	320	292	-	493	587	-
Follow-up Headway	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Capacity-1 Maneuver	1280	-	-	990	-	-	314	340	604	314	289	764
Stage 1	-	-	-	-	-	-	583	567	-	722	676	-
Stage 2	-	-	-	-	-	-	692	671	-	558	497	-
Time blocked-Platoon(%)	0	-	-	0	-	-	0	0	0	0	0	0
Mov Capacity-1 Maneuver	1280	-	-	990	-	-	255	338	604	263	287	764
Mov Capacity-2 Maneuver	-	-	-	-	-	-	255	338	-	263	287	-
Stage 1	-	-	-	-	-	-	582	566	-	721	672	-
Stage 2	-	-	-	-	-	-	616	667	-	489	497	-
Approach	EB			WB			NB			SB		
HCM Control Delay (s)	0			0.2			31.6			21.5		
HCM LOS	A			A			D			C		
Lane	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1		
Capacity (vph)	255	338	604							297		
HCM Control Delay (s)	37.8	18.3	11	7.815	0	-	8.656	0	-	21.5		
HCM Lane VC Ratio	0.592	0.203	0.002	0.001	-	-	0.005	-	-	0.267		
HCM Lane LOS	E	C	B	A	A	-	A	A	-	C		
HCM 95th Percentile Queue (veh)	3.447	0.746	0.005	0.003	-	-	0.017	-	-	1.053		

Intersection												
Intersection Delay (sec/veh)	13.4											
Intersection LOS	B											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	2	171	77	8	290	15	155	88	6	4	20	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	2	186	84	9	315	16	168	96	7	4	22	2
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	11.8	13.7	14.9	9.7
HCM LOS	B	B	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Volume Left (%)	64%	0%	1%	3%	15%
Volume Thru (%)	36%	0%	68%	93%	77%
Volume Right (%)	0%	100%	31%	5%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Volume by Lane	243	6	250	313	26
Left Turning Volume	88	0	171	290	20
Through Volume	0	6	77	15	2
Right Turning Volume	155	0	2	8	4
Lane Flow Rate	264	7	272	340	28
Geometry Group	7	7	2	2	5
Degree of Utilization, X	0.478	0.01	0.398	0.503	0.049
Departure Headway, Hd	6.515	5.481	5.271	5.32	6.281
Convergence(Y/N)	Yes	Yes	Yes	Yes	Yes
Capacity	552	652	682	677	568
Service Time	4.256	3.221	3.316	3.362	4.345
HCM Lane V/C Ratio	0.478	0.011	0.399	0.502	0.049
HCM Control Delay	15.1	8.3	11.8	13.7	9.7
HCM Lane LOS	C	A	B	B	A
HCM 95th Percentile Queue	2.7	0	2	3	0.2

Intersection

Intersection Delay (sec/veh): 8.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	2	171	74	8	290	15	155	88	6	4	20	2
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None	Free	Free	Free	None	None	None
Storage Length	0		0	0		0	120		60	0		0
Median Width		0			0			0			0	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	2	186	80	9	315	16	168	96	7	4	22	2
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Major/Minor	Major 1			Major 2			Minor 1			Minor 2		
Conflicting Flow Rate - All	331	0	0	266	0	0	583	579	226	623	611	323
Stage 1	-	-	-	-	-	-	230	230	-	341	341	-
Stage 2	-	-	-	-	-	-	353	349	-	282	270	-
Follow-up Headway	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Capacity-1 Maneuver	1228	-	-	1298	-	-	424	426	813	398	409	718
Stage 1	-	-	-	-	-	-	773	714	-	674	639	-
Stage 2	-	-	-	-	-	-	664	633	-	725	686	-
Time blocked-Platoon(%)	0	-	-	0	-	-	0	0	0	0	0	0
Mov Capacity-1 Maneuver	1228	-	-	1298	-	-	402	421	813	323	405	718
Mov Capacity-2 Maneuver	-	-	-	-	-	-	402	421	-	323	405	-
Stage 1	-	-	-	-	-	-	771	713	-	673	633	-
Stage 2	-	-	-	-	-	-	634	627	-	621	685	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	0.1	0.2	28	14.6
HCM LOS	A	A	D	B

Lane	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (vph)	409	813							403
HCM Control Delay (s)	28.5	9.5	7.937	0	-	7.792	0	-	14.6
HCM Lane VC Ratio	0.646	0.008	0.002	-	-	0.007	-	-	0.07
HCM Lane LOS	D	A	A	A	-	A	A	-	B
HCM 95th Percentile Queue (veh)	4.4	0.024	0.005	-	-	0.02	-	-	0.225

2:

Intersection												
Intersection Delay (sec/veh)	13.5											
Intersection LOS	B											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	2	171	77	8	290	15	155	88	6	4	20	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	2	186	84	9	315	16	168	96	7	4	22	2
Number of Lanes	0	1	0	0	1	0	1	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	1	1	1
HCM Control Delay	12.8	15.6	11.8	10.1
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1
Volume Left (%)	100%	0%	0%	1%	3%	15%
Volume Thru (%)	0%	100%	0%	68%	93%	77%
Volume Right (%)	0%	0%	100%	31%	5%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume by Lane	155	88	6	250	313	26
Left Turning Volume	0	88	0	171	290	20
Through Volume	0	0	6	77	15	2
Right Turning Volume	155	0	0	2	8	4
Lane Flow Rate	168	96	7	272	340	28
Geometry Group	7	7	7	7	7	7
Degree of Utilization, X	0.32	0.168	0.01	0.434	0.552	0.054
Departure Headway, Hd	6.847	6.339	5.627	5.748	5.836	6.917
Convergence(Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Capacity	526	565	635	628	619	516
Service Time	4.59	4.082	3.37	3.484	3.57	4.678
HCM Lane V/C Ratio	0.319	0.17	0.011	0.433	0.549	0.054
HCM Control Delay	12.8	10.4	8.4	12.8	15.6	10.1
HCM Lane LOS	B	B	A	B	C	B
HCM 95th Percentile Queue	1.4	0.6	0	2.3	3.7	0.2

Intersection

Intersection Delay (sec/veh): 6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	2	171	77	8	290	15	155	88	6	4	20	2
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None	Free	Free	Free	None	None	None
Storage Length	0		0	0		0	120		60	0		0
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	2	186	84	9	315	16	168	96	7	4	22	2
Number of Lanes	0	1	0	0	1	0	1	1	1	0	1	0

Major/Minor	Major 1			Major 2			Minor 1			Minor 2		
Conflicting Flow Rate - All	331	0	0	270	0	0	585	581	228	625	615	323
Stage 1	-	-	-	-	-	-	232	232	-	341	341	-
Stage 2	-	-	-	-	-	-	353	349	-	284	274	-
Follow-up Headway	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Capacity-1 Maneuver	1228	-	-	1293	-	-	422	425	811	397	407	718
Stage 1	-	-	-	-	-	-	771	713	-	674	639	-
Stage 2	-	-	-	-	-	-	664	633	-	723	683	-
Time blocked-Platoon(%)	0	-	-	0	-	-	0	0	0	0	0	0
Mov Capacity-1 Maneuver	1228	-	-	1293	-	-	400	420	811	322	403	718
Mov Capacity-2 Maneuver	-	-	-	-	-	-	400	420	-	322	403	-
Stage 1	-	-	-	-	-	-	769	712	-	673	633	-
Stage 2	-	-	-	-	-	-	634	627	-	620	682	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	0.1	0.2	18.6	14.7
HCM LOS	A	A	C	B

Lane	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (vph)	400	420	811							401
HCM Control Delay (s)	20.4	16.1	9.5	7.937	0	-	7.803	0	-	14.7
HCM Lane VC Ratio	0.421	0.228	0.008	0.002	-	-	0.007	-	-	0.07
HCM Lane LOS	C	C	A	A	A	-	A	A	-	B
HCM 95th Percentile Queue (veh)	2.039	0.866	0.024	0.005	-	-	0.02	-	-	0.226



6.6 Signal Warrant and Multi-Way Stop Analyses Summaries

MUTCD Traffic Signal Warrant 7 Crash Experience 2014 Volumes
 5 Cross movement Crashes in 2014 (Meets Criteria B)
 7 Cross Movement Crashes in 2013 (Meets Criteria B)

Section 4C.08 Warrant 7, Crash Experience

Support:

1 The Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.

Standard:

2 The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and

B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and

C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80% columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours

Threshold: Total Major must be at least 400, total minor must be at least 120 for 8 hours

Time	South Av Rt	South Av		Franklin	Pleasant	Total	70 percent requirement
	27 Major Street-Entering	Major St entering	Total Major	St entering	St Minor entering		
12:00 AM	24	10	34	10	8	18	
1:00	16	4	20	4	3	7	
2:00	8	2	10	6	2	8	
3:00	8	4	12	8	3	11	
4:00	23	16	39	40	4	44	
5:00	44	74	118	98	18	116	
6:00	264	182	446	248	58	306	satisfied
7:00	222	308	530	251	59	310	satisfied
8:00	277	200	477	181	52	233	satisfied
9:00	240	234	474	134	43	177	satisfied
10:00	216	136	352	119	46	165	
11:00	238	132	370	118	42	160	
12:00 PM	251	155	406	118	52	170	
1:00	324	151	475	206	52	258	satisfied
2:00	376	178	554	178	72	250	satisfied
3:00	420	267	687	172	85	257	satisfied
4:00	494	263	757	234	103	337	satisfied
5:00	506	264	770	166	94	260	satisfied
6:00	468	198	666	137	72	209	satisfied
7:00	307	166	473	106	50	156	
8:00	246	106	352	136	48	184	
9:00	154	74	228	93	30	123	
10:00	110	52	162	40	22	62	
11:00	60	24	84	20	10	30	
Total	5706	2545	8251	2712	694	3406	

THRESHOLD MET FOR CRITERIA A, B, C

MUTCD Traffic Signal Warrant 7 Crash Experience 2008 Volumes
8 Cross movement Crashes in 2006 (Meets Criteria B)

Section 4C.08 Warrant 7, Crash Experience

1 The Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.

Standard:

2 The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and

B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and

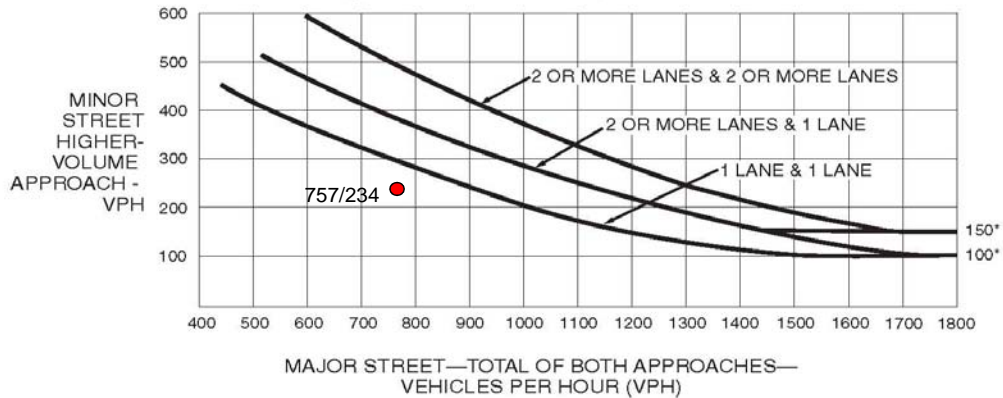
C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 % columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours

Threshold: Total Major must be at least 400, total minor must be at least 120 for 8 hours

Time	Major Street-Entering	South Av Major St entering	Total Major	Franklin St Minor entering	Pleasant St Minor Street entering	Total minor	70 percent requirement
12:00 AM	46	26	72	7	8	15	
1:00	20	18	38	4	2	6	
2:00	8	10	18	4	0	4	
3:00	12	6	18	6	2	8	
4:00	16	4	20	21	2	23	
5:00	54	26	80	76	10	86	
6:00	167	66	233	158	28	186	
7:00	386	122	508	229	38	267	satisfied
8:00	302	131	433	156	32	188	satisfied
9:00	279	120	399	133	25	158	satisfied
10:00	248	126	374	118	24	142	satisfied
11:00	284	154	438	126	24	150	satisfied
12:00 PM	288	154	442	120	30	150	satisfied
1:00	297	162	459	125	28	153	satisfied
2:00	374	170	544	238	50	288	satisfied
3:00	460	192	652	160	64	224	satisfied
4:00	529	238	767	186	74	260	satisfied
5:00	530	240	770	202	77	279	satisfied
6:00	454	220	674	158	62	220	satisfied
7:00	349	170	519	119	32	151	satisfied
8:00	254	128	382	91	30	121	
9:00	178	112	290	52	25	77	
10:00	101	67	168	38	13	51	
11:00	70	50	120	18	14	32	
Total	5706	2545	8251	2712	694	3406	

THRESHOLD MEETS FOR CRITERIA A, B, C

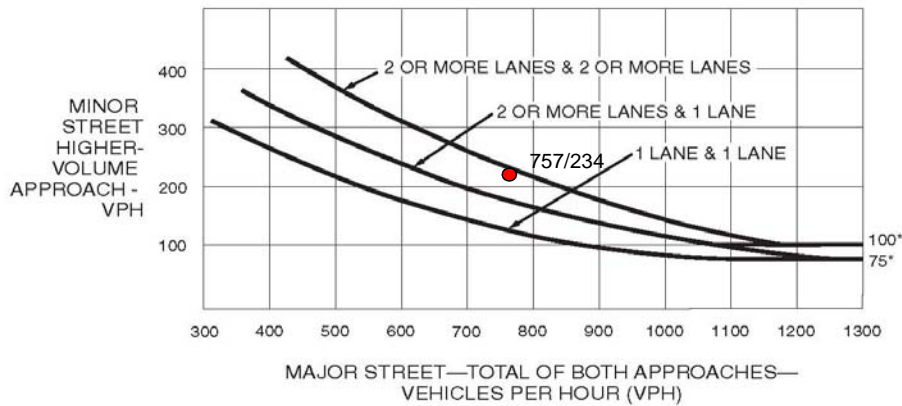
Figure 4C-3. Warrant 3, Peak Hour



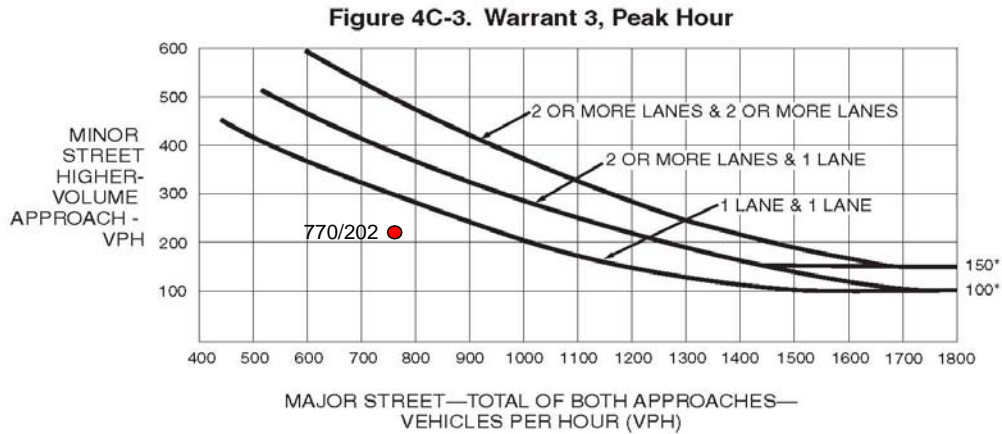
*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

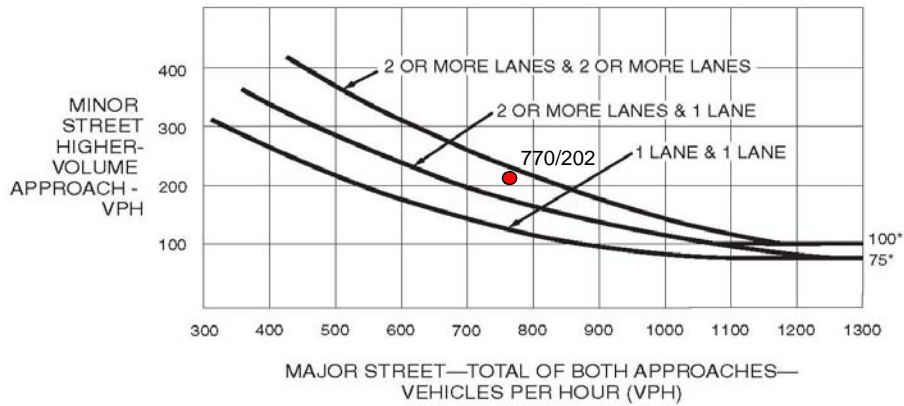


*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.



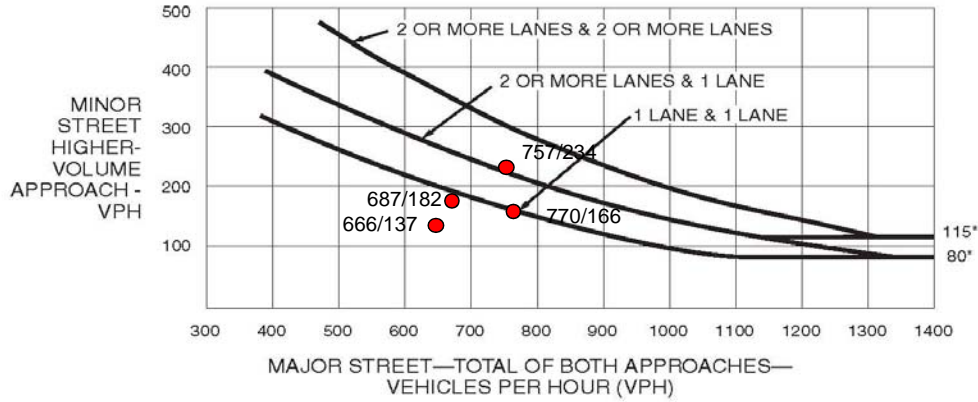
*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

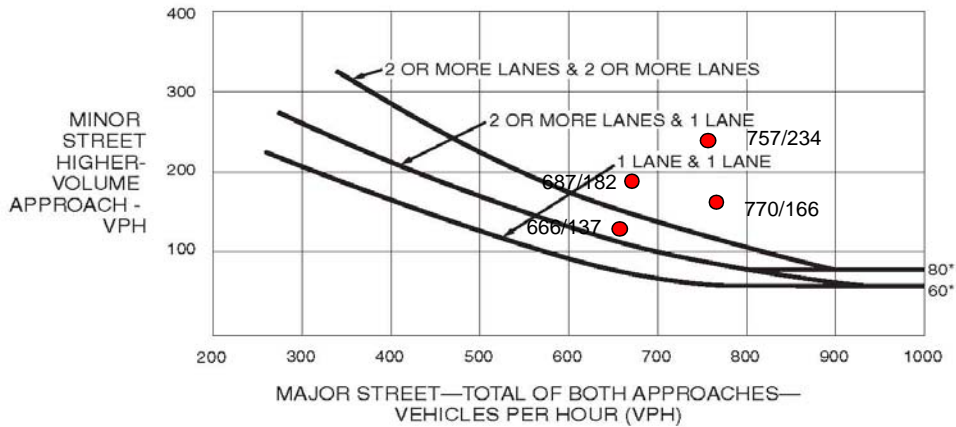
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

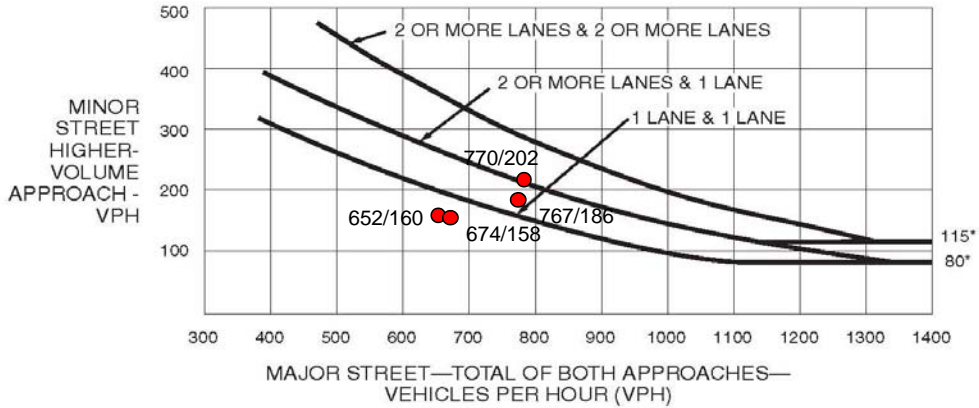
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

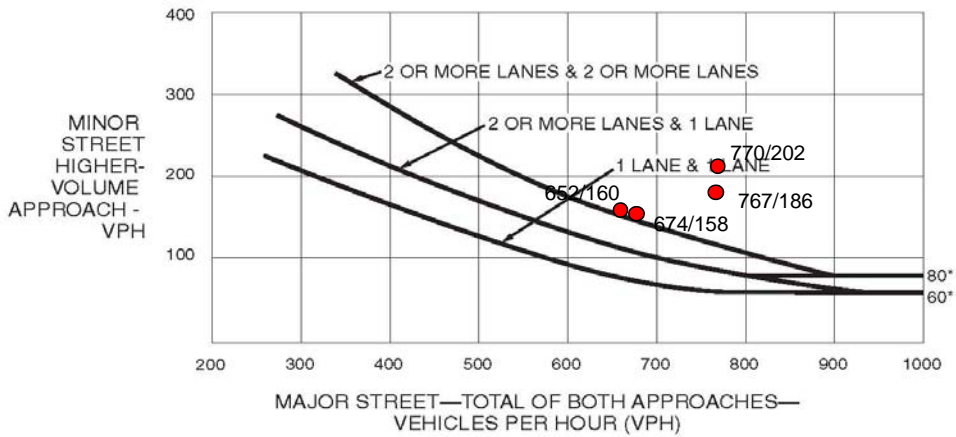
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

MUTCD Traffic Signal Warrant 1 Minimum Vehicular Volume - 2014 Traffic Volumes							
TRAFFIC SIGNAL WARRANT ONE Minimum Vehicular Volume							
Threshold: Total Major must be at least 500, total minor must be at least 150 for 8 hours							
If the 85th percentile is above 40 mph, then use 70 percent of the values meet the requirement							
(350 major street-105 minor street)							
Time	South Av Rt 27 Major Street- Entering	South Av Major St entering	Total Major	Franklin St Minor St entering	Pleasant St Minor Street entering	Total minor	70 percent requirement
12:00 AM	24	10	34	10	8	18	
1:00	16	4	20	4	3	7	
2:00	8	2	10	6	2	8	
3:00	8	4	12	8	3	11	
4:00	23	16	39	40	4	44	
5:00	44	74	118	98	18	116	
6:00	264	182	446	248	58	306	
7:00	222	308	530	251	59	310	satisfied
8:00	277	200	477	181	52	233	
9:00	240	234	474	134	43	177	
10:00	216	136	352	119	46	165	
11:00	238	132	370	118	42	160	
12:00 PM	251	155	406	118	52	170	
1:00	324	151	475	206	52	258	
2:00	376	178	554	178	72	250	satisfied
3:00	420	267	687	172	85	257	satisfied
4:00	494	263	757	234	103	337	satisfied
5:00	506	264	770	166	94	260	satisfied
6:00	468	198	666	137	72	209	
7:00	307	166	473	106	50	156	
8:00	246	106	352	136	48	184	
9:00	154	74	228	93	30	123	
10:00	110	52	162	40	22	62	
11:00	60	24	84	20	10	30	
Total	5706	2545	8251	2712	694	3406	
THRESHOLD NOT MET FOR 8 HOURS							

MUTCD Traffic Signal Warrant 1 Minimum Vehicular Volume - 2008 Traffic Volumes							
TRAFFIC SIGNAL WARRANT ONE Minimum Vehicular Volume							
Threshold: Total Major must be at least 500, total minor must be at least 150 for 8 hours							
If the 85th percentile is above 40 mph, then use 70 percent of the values meet the requirement							
(350 major street-105 minor street)							
Time	South Av Rt 27 Major Street- Entering	South Av Major St entering	Total Major	Franklin Street Rt 27 Minor street entering	Pleasant St Minor Street entering	Total minor	70 percent requirement
12:00 AM	46	26	72	7	8	15	
1:00	20	18	38	4	2	6	
2:00	8	10	18	4	0	4	
3:00	12	6	18	6	2	8	
4:00	16	4	20	21	2	23	
5:00	54	26	80	76	10	86	
6:00	167	66	233	158	28	186	
7:00	386	122	508	229	38	267	satisfied
8:00	302	131	433	156	32	188	satisfied
9:00	279	120	399	133	25	158	satisfied
10:00	248	126	374	118	24	142	satisfied
11:00	284	154	438	126	24	150	satisfied
12:00 PM	288	154	442	120	30	150	satisfied
1:00	297	162	459	125	28	153	satisfied
2:00	374	170	544	238	50	288	satisfied
3:00	460	192	652	160	64	224	satisfied
4:00	529	238	767	186	74	260	satisfied
5:00	530	240	770	202	77	279	satisfied
6:00	454	220	674	158	62	220	satisfied
7:00	349	170	519	119	32	151	satisfied
8:00	254	128	382	91	30	121	satisfied
9:00	178	112	290	52	25	77	
10:00	101	67	168	38	13	51	
11:00	70	50	120	18	14	32	
Total	5706	2545	8251	2712	694	3406	
THRESHOLD MET FOR SIGNAL WARRANT 1 (70 Percent)							

MUTCD Multi-Way Stop Warrant for 2014 traffic volumes							
Threshold: Total Major must be at least 300, total minor must be at least 200 for 8 hours							
If the 85th percentile is above 40 mph, then use 70 percent of the values meet the requirement							
(210 major street-140 minor street)							
Time	South Av Rt 27 Major Street- Entering	South Av Major St entering	Total Major	Franklin St Minor St entering	Pleasant St Minor Street entering	Total minor	70 percent requirement
12:00 AM	24	10	34	10	8	18	
1:00	16	4	20	4	3	7	
2:00	8	2	10	6	2	8	
3:00	8	4	12	8	3	11	
4:00	23	16	39	40	4	44	
5:00	44	74	118	98	18	116	
6:00	264	182	446	248	58	306	satisfied
7:00	222	308	530	251	59	310	satisfied
8:00	277	200	477	181	52	233	satisfied
9:00	240	234	474	134	43	177	
10:00	216	136	352	119	46	165	
11:00	238	132	370	118	42	160	
12:00 PM	251	155	406	118	52	170	
1:00	324	151	475	206	52	258	satisfied
2:00	376	178	554	178	72	250	satisfied
3:00	420	267	687	172	85	257	satisfied
4:00	494	263	757	234	103	337	satisfied
5:00	506	264	770	166	94	260	satisfied
6:00	468	198	666	137	72	209	satisfied
7:00	307	166	473	106	50	156	
8:00	246	106	352	136	48	184	
9:00	154	74	228	93	30	123	
10:00	110	52	162	40	22	62	
11:00	60	24	84	20	10	30	
Total	5706	2545	8251	2712	694	3406	
MUTCD THRESHOLD MET FOR MULTI-WAY STOP							

MUTCD Multi-Way Stop Warrant for 2008 traffic volumes							
Threshold: Total Major must be at least 300, total minor must be at least 200 for 8 hours							
If the 85th percentile is above 40 mph, then use 70 percent of the values meet the requirement							
(210 major street-140 minor street)							
Time	South Av Rt 27 Major Street- Entering	South Av Major St entering	Total Major	Franklin Street minor entering	Pleasant St Minor Street entering	Total minor	70 percent requirement
12:00 AM	46	26	72	7	8	15	
1:00	20	18	38	4	2	6	
2:00	8	10	18	4	0	4	
3:00	12	6	18	6	2	8	
4:00	16	4	20	21	2	23	
5:00	54	26	80	76	10	86	
6:00	167	66	233	158	28	186	satisfied
7:00	386	122	508	229	38	267	satisfied
8:00	302	131	433	156	32	188	satisfied
9:00	279	120	399	133	25	158	satisfied
10:00	248	126	374	118	24	142	satisfied
11:00	284	154	438	126	24	150	satisfied
12:00 PM	288	154	442	120	30	150	satisfied
1:00	297	162	459	125	28	153	satisfied
2:00	374	170	544	238	50	288	satisfied
3:00	460	192	652	160	64	224	satisfied
4:00	529	238	767	186	74	260	satisfied
5:00	530	240	770	202	77	279	satisfied
6:00	454	220	674	158	62	220	satisfied
7:00	349	170	519	119	32	151	satisfied
8:00	254	128	382	91	30	121	
9:00	178	112	290	52	25	77	
10:00	101	67	168	38	13	51	
11:00	70	50	120	18	14	32	
Total	5706	2545	8251	2712	694	3406	
THRESHOLD MET FOR ALL-WAY STOP (70 Percent)							



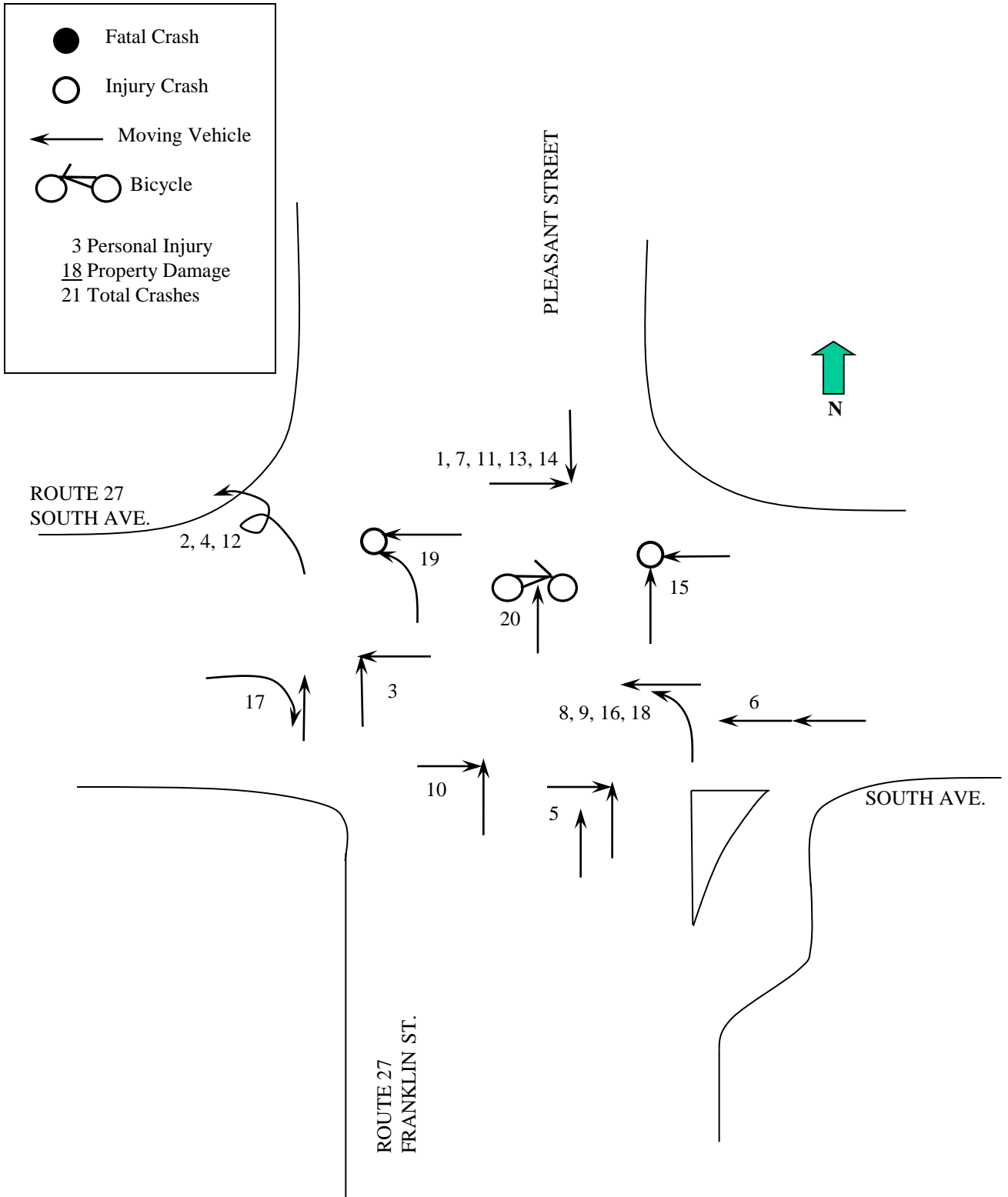
6.7 Crash Rate Work Sheets and Collision Diagrams

COLLISION DIAGRAM

Intersection: Route 27 South Ave. at Pleasant Street and Franklin Street

Period: Years From 2011 to 2014

Community: Whitman, MA Prepared by RG



South Avenue (Route 27)/Pleasant Street/Franklin Street intersection cras

Whitman					Number
Crash	Number	Date	Time	Type	Injured
1	12-9824-AC	11/22/2012	1:19 PM	Angle	0
2	12-10586-AC	12/17/2012	6:57 AM	Ran off Road	0
3	12-10852-AC	12/28/2012	11:35 AM	Angle	0
4	12-6942-AC	8/15/2012	9:33 PM	Ran off Road	0
5	12-8174-AC	9/26/2012	5:10 PM	Angle	0
6	12-9383-AC	11/6/2012	7:59 AM	Rear-End	0
7	13-1012-AC	2/5/2013	12:30 PM	Angle	0
8	13-3030-AC	4/19/2013	10:22 AM	Angle	0
9	13-3597-AC	5/10/2013	9:17 AM	Angle	0
10	13-4733-AC	6/21/2013	12:07 PM	Angle	0
11	13-7097-AC	9/12/2013	2:59 PM	Angle	0
12	13-7959-AC	10/12/2013	10:23 PM	Ran off Road	0
13	13-8884-AC	11/12/2013	4:53 PM	Angle	0
14	13-9067-AC	11/18/2013	4:44 PM	Angle	0
15	14-372-AC	1/15/2014	7:02 PM	Angle	5
16	14-922-AC	2/6/2014	11:25 AM	Angle	0
17	14-947-AC	2/7/2014	8:02 AM	Angle	0
18	14-1767-AC	3/12/2014	1:50 PM	Angle	0
19	14-2655-AC	4/13/2014	3:39 PM	Angle	2
20	11-6339-AC	7/6/2011	2:18 PM	Bicycle	1

Masshighway

CRASH RATE WORKSHEET

CITY/TOWN : Whitman COUNT DATE : 2014 **MHD USE ON**

DISTRICT : 5 UNSIGNALIZED : X SIGNALIZED : Source #

~ INTERSECTION DATA ~

MAJOR STREET : South Avenue RIN #

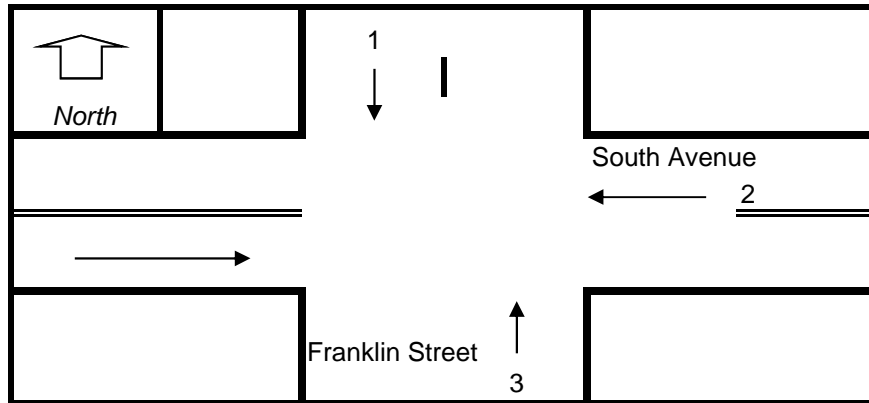
MINOR STREET(S) : Franklin Street/Pleasant Street RIN #

RIN #

RIN #

RIN #

**INTERSECTION
DIAGRAM**
(Label Approaches)



INTERSECTI
REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	6
DIRECTION :	SB	WB	NB	EB	Total	
VOLUMES (AM/PM) :	76	265	210	540	1091	

" K " FACTOR : 0.09 APPROACH ADT : 12,122 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 20 # OF YEARS : 3 AVERAGE # OF ACCIDENTS (A) : 6.67

CRASH RATE CALCULATION : 1.507 RATE = $(A * 1,000,000) / (ADT * 365)$ (

Comments :

District 5 Average:	Signalized	0.77	Statewide Average:	Signalized	0.8
	Unsignalized	0.58		Unsignalized	0.60

Percentage Difference					
District 5 Average:	Signalized	95.68%	Statewide Average:	Signalized	88.34%
	Unsignalized	159.78%		Unsignalized	151.12%