

Johnson Avenue Corridor Study



Meriden, CT
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Prepared For:



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1 Introduction

Fuss and O'Neill has prepared this Corridor Study for the South Central Regional Council of Governments (SCRCOG) on behalf of the City of Meriden to evaluate the existing transportation performance of Johnson Avenue from Finch Avenue to West Main Street. The corridor study length is approximately 7,000'. A project location map is presented in *Figure 1*.

This study will be used as a planning tool by the City to evaluate and prioritize potential roadway improvements along the corridor. This study establishes the existing conditions of the roadway which will include pavement conditions, sight distances, drainage, utilities, and geometry. The study will identify existing deficiencies and will recommend potential improvements. Construction cost information is provided so that the City can prioritize improvements within the corridor.

2 Existing Conditions

A comprehensive field inventory of the study area roadway system was performed in May 2010. The inventory included documentation of existing roadway and intersection geometry, pavement conditions, sidewalk presence, drainage systems, and traffic control devices along the corridor.

2.1 Overview of Corridor

2.1.1 Johnson Avenue

Johnson Avenue is a two lane roadway oriented in a southeast/northwest direction, between Finch Avenue and West Main Street. The land use along Johnson Avenue is primarily residential. The roadway is functionally classified as an Urban Collector Street according to the Connecticut Department of Transportation (CTDOT) and has a posted speed limit of 25 miles per hour. There is no on-street parking or bicycle facilities on this corridor. Sidewalks are present on the south side of Johnson Avenue from Allen Avenue to West Main Street and on the north side from Jeffrey Lane to West Main Street.

Automated traffic recorder counts were collected on Johnson Avenue, east of Spruce Street, in June 2010. The counts were collected bi-directionally over a 48-hour period along with speed data. Based on the counts, the existing weekday average daily traffic on Johnson Avenue is 3,000 vehicles per day, with 1,500 vehicles traveling eastbound and 1,500 vehicles traveling westbound. The 85th percentile speed for Johnson Avenue, east of Spruce Street was 39 miles per hour eastbound and 40 miles per hour westbound. Based on field observations and roadway geometry, this should not be considered the uniform speed of traffic. Further speed evaluations should be performed along the corridor. Automated traffic recorder counts data are presented in *Appendix A*.

2.2 Existing Roadway Segments and Intersection Conditions

There are four distinct roadway segments within the Johnson Avenue corridor. Each roadway segment description includes a summary of the geometry, roadway widths, and pavement condition. The intersections that are present within each particular roadway segment are further described with the relevant intersection sight distance at stop-controlled intersections, pavement conditions, drainage structures present, and pavement marking condition. Town GIS data was utilized in reviewing existing horizontal and vertical geometry.

Intersection sight distances were measured at each intersection in accordance with criteria set forth in the 2003 CTDOT Highway Design Manual. Adequate intersection sight distances are required for intersection designs to maintain safe sight distances for motorists to enter or cross an intersection safely without disrupting the flow of traffic on the roadway. Intersection sight distances are a desired requirement while stopping sight distances are required.

Design criteria are based on the CTDOT Highway Design Manual, 2003 edition. The relevant design criteria are shown for 3R Non-Freeway Projects classified as an Urban Collector Street. The selected design speed was based on the CTDOT HDM for an Urban Collector Street in a suburban area. This speed is 5 miles per hour above the posted speed limit and is appropriate for the residential context of the corridor. This study analyzes the existing roadway through context sensitive design (CSD) procedures.

CSD, as defined by the Federal Highway Administration, is “a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility.” One of design controls that CSD differs from historical practice is the use of speed data. Historically, it has been the practice to design the roadway for the 85th percentile speed. This approach has the potential to promote speeds that are not consistent with the adjacent land use/environment. It should be noted that the CSD approach as used herein may underestimate geometric related deficiencies. In these instances, increased enforcement and traffic calming measures should be considered.

According to the Manual, design parameters for Urban Collector Street, Figure 2-3H (Suburban Area, 30 mph design speed) are:

- Travel lane width: 10' – 12'
- Shoulder width (non-NHS): 2' - 8'
- Parking lanes: 7' - 10', if present
- Bike lanes: 5', if present
- Sidewalk width: 5' minimum, if present
- Stopping sight distance: 200'
- Intersection sight distance: 335'
- Minimum Radius: 295' (Low Speed Urban)
- Grade: 0.5% - 13%
- Sag Vertical Curve K-Value: 37 (Headlight) – 20 (Comfort)
- Crest Vertical Curve K-Value: 19

Detailed accident data was requested from the City of Meriden's Police Department for the last five years on record from 2005 to 2010. To date, only a general accident summary has been received. The only accidents reported to have occurred within the corridor are at the intersection of Johnson Avenue at Finch Avenue. According to the City of Meriden Police Department, 5 accidents have occurred at the intersection with 2 involving injuries.

Additional details beyond the summary total were not provided. It is presumed from the roadway geometry and visual evidence, that these accidents follow typical patterns associated with intersections and roadways of this type. These patterns include roadside fixed objects and turning movement counts. The overall totals indicate no significant accident pattern exists. In addition, no fatalities were recorded.

2.2.1 Johnson Avenue - Finch Avenue to Sperry Lane/Cynrose Place

This segment of Johnson Avenue is approximately 1,800' long and ascends in elevation from Finch Avenue to Alanby Drive before descending towards the Sperry Lane/Cynrose Place intersection. The vertical alignment of the roadway varies with grades ranging from 1.9% to 11.4% as it ascends toward Alanby Drive. To the east of Alanby Drive, the roadway descends with a profile grade of 1.8%. There are two substandard crest and two substandard sag curves between Finch Avenue and Gwen Road. The horizontal geometry of Johnson Avenue through this segment is fairly straight with various horizontal curves that provide small deflections. The minimum radius curve within this segment is 600'. There is one variable width travel lane in each direction with no delineated shoulder. The roadway width varies between 19' and 25' between Finch Avenue and Gwen Road. The roadway width from Gwen Road to Sperry Lane/Cynrose Place varies between 20' and 24'.



Narrow roadway on Johnson Avenue looking east towards Sperry Lane

The majority of the roadway and pavement markings are in fair to good condition with minor cracking. The roadway is illuminated except at the intersection of Finch Avenue. A closed drainage system exists from Jeffery Lane to Finch Avenue. Sidewalks exist on the north side of Johnson Avenue at Alanby Drive and extend to the east. The land use within this segment is primarily residential.

2.2.1.1 Finch Avenue Intersection

Finch Avenue meets Johnson Avenue to form a stop-controlled T-intersection, with Finch Avenue stop-controlled. Finch Avenue is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Finch Avenue looking to the west was measured at 215' and 220' looking east. The intersection sight distance looking west is inhibited by vegetation and a cluster of trees looking east. The measured intersection sight distance looking in both directions is insufficient compared to the recommended intersection sight distance of 335'; however, it meets the required 200' for stopping sight distance.



Stop bar on Finch Avenue set back from Johnson Avenue

The intersection pavement contains transverse and longitudinal cracks. The stop bar on Finch Avenue is fading and there is no centerline striping. The stop bar is set back from Johnson Avenue in an unsuitable location as vehicles do not have adequate sight distance at the stop bar. The pavement markings on Johnson Avenue are in fair condition. Curbing exists on both corners of the intersection.

2.2.1.2 Gwen Road Intersection

Gwen Road meets Johnson Avenue to form a stop-controlled T-intersection, with Gwen Road stop-controlled. Gwen Road is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Gwen Road looking to the west was measured at 410' and 285' looking east. The intersection sight distance looking east is inhibited by vegetation bordering Johnson Avenue. The measured intersection sight distance looking east is insufficient compared to the recommended intersection sight distance of 335'; however, it meets the required 200' for stopping sight distance.



Johnson Avenue narrows at Gwen Road intersection

The pavement condition on Johnson Avenue includes longitudinal cracks and minor fatigue cracking and patching. The eastern side of Gwen Road has severe cracking and patching. No pavement markings are present on Gwen Road. The Johnson Avenue pavement markings are in good to fair condition. Curbing is present on all corners of the intersection, however the northeast corner curbing is in poor condition.

2.2.1.3 Jeffrey Lane Intersection

Jeffrey Lane meets Johnson Avenue to form a stop-controlled T-intersection, with Jeffrey Lane stop-controlled. Jeffrey Lane is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Jeffrey Lane looking to the west was measured at 450' and 195' looking east. The intersection sight distance looking east is inhibited by a cluster of trees at the intersection. The measured intersection sight distance looking east is insufficient compared to the recommended intersection sight distance of 335' and does not meet the required 200' for stopping sight distance.



Jeffrey Lane approaching Johnson Avenue

The pavement condition of both roadways seems to be in good to fair condition. Jeffrey Lane has a longitudinal crack and fatigue cracking along the western side of the roadway. Pavement markings are in fair condition on Johnson Avenue. There is no centerline striping on Jeffrey Lane and the stop bar is faded. There is curbing present on the corners of the intersection, however the Jeffrey Lane curbing is in poor condition.

2.2.1.4 Alanby Drive Intersection

Alanby Drive meets Johnson Avenue to form a stop-controlled T-intersection, with Alanby Drive stop-controlled. Alanby Drive is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Alanby Drive looking to the west was measured at 510' and 250' looking east. The intersection sight distance looking east is inhibited by a cluster of vegetation between Alanby Drive and Sperry Lane. The measured intersection sight distance looking east is insufficient compared to the recommended intersection sight distance of 335'; however, it meets the required 200' for stopping sight distance.



Vegetation between Alanby Lane and Sperry Drive on Johnson Avenue inhibits intersection sight distance looking left from Alanby Drive

Fatigue cracking is present on the pavement for Alanby Drive along with cracking along the joint where Alanby Drive meets Johnson Avenue. The pavement for Johnson Avenue is in fair condition with minimal cracking. Pavement markings are faded on both roadways. There is curbing present on Johnson Avenue, but not on Alanby Drive or at the corners of the intersection.

2.2.1.5 Sperry Lane/Cynrose Place Intersection

Sperry Lane/Cynrose Place meets Johnson Avenue to form a four-way intersection, with Sperry Lane/Cynrose Place stop-controlled. Sperry Lane and Cynrose Place are classified as Local Streets and have a single travel lane in each direction. The intersection sight distance from Sperry Lane looking to the west was measured at 420' and 270' looking east. The intersection sight distance looking east is inhibited by vegetation bordering Johnson Avenue. The measured intersection sight distance looking east is insufficient compared to the recommended intersection sight distance of 335'; however, it meets the required 200' for stopping sight distance. The intersection sight distance from Cynrose Place looking to the west was measured at 390' and 390' looking east.



Johnson Avenue at the intersection of Sperry lane/Cynrose Place looking west

Stop bar pavement markings are faded on both Sperry Lane and Cynrose Place with no centerline striping. On Sperry Lane, a painted crosswalk is also faded. The centerline striping on Johnson Avenue is fading. There is curbing on the Cynrose Place corners, along with a sidewalk on the eastern side. The Cynrose Place pavement is in fair condition with cracking along the joint where it meets Johnson Road. The Sperry Lane pavement is also in fair condition except for the excessive fatigue cracking along the northeast corner. The Johnson Avenue pavement has fatigue cracking where it meets Sperry Lane along with longitudinal cracking. Transverse cracking is also present at the intersection.

2.2.2 Johnson Avenue - Sperry Lane/Cynrose Place to Smithfield Avenue

This segment of Johnson Avenue is approximately 2,350' long and descends in elevation from Sperry lane/Cynrose Place to Smithfield Avenue with an intermediate low point to the west of Smithfield Avenue. The vertical alignment of the roadway descends from Sperry Lane/Cynrose Place with varying grades ranging from 0.7% to 1.8% to Eaton Avenue. The vertical profile then steepens quickly to a maximum grade of 14.6%, which is above the maximum standard grade, before flattening at a low point to the west of Smithfield Avenue. From the low point, the vertical profile reaches a high point to the west of Fiesta Heights (West) with a profile grade of 1.6%. The profile grade then steepens again with a grade of 16.8%, which is also above the



Poor pavement condition on Johnson Avenue

maximum standard grade, to Fairfax Avenue. There are two vertical curves at the intersections of Fiesta Heights (West) and Fairfax Avenue that do not meet standard K-values. The horizontal geometry of Johnson Avenue through this segment is fairly straight with various horizontal curves that provide small deflections. The minimum radius curve within this segment is 800'. There is one variable width travel lane in each direction with no delineated shoulder. The roadway width varies between 18' and 23' within this roadway segment.

The pavement is eroding on the edges of Johnson Road between Smithfield Avenue and Runge Drive due to the non-existence of a drainage system and no curbing. Fatigue cracking is heavily present throughout the roadway along with longitudinal and transverse cracks, potholes and pavement patching. The pavement markings are in fair to good condition for the majority of the roadway; however near the Spruce Street intersection they are faded. Curbing is intermittent along this segment of roadway. There are only three catch basins present in this segment of roadway, located near Spruce Street and Eaton Avenue, which is not sufficient for the length and grade of the roadway. There are two manholes located in the middle of the sidewalk in the Spruce Street area. There are also three yard drains draining into Johnson Avenue located directly across from Easton Avenue. Sidewalks are provided along the north side of the roadway. The land use within the area is primarily residential.

2.2.2.1 Eaton Avenue

Eaton Avenue meets Johnson Avenue to form a stop-controlled T-intersection, with Eaton Avenue stop-controlled. Eaton Avenue is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Eaton Avenue looking to the west was measured at 250' and 120' looking east. The intersection sight distance looking west is inhibited by a tree line at the back of the sidewalk along with a pillar and a cluster of trees at the intersection looking east. The measured intersection sight distance looking in both directions is insufficient compared to the recommended intersection sight distance of 335' and only looking west meets the required 200' for stopping sight distance.



Poor pavement condition at the Eaton Avenue intersection

The pavement at the intersection has patches and potholes on Johnson Avenue and fatigue cracking on Eaton Avenue. The pavement markings are in fair to good condition on both Eaton Avenue and Johnson Avenue. Curbing is present at this intersection except for segments on the southern side of Johnson Avenue. The curbing is in fair to poor condition.

2.2.2.2 Runge Drive Intersection

Runge Drive meets Johnson Avenue to form a stop-controlled T-intersection, with Runge Drive stop-controlled. Runge Drive is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Runge Drive looking to the west was measured at 260' and 435' looking east. The intersection sight distance looking west is inhibited by a large tree at the intersection. The measured intersection sight distance looking west is insufficient compared to the recommended intersection sight distance of 335'; however, it meets the required 200' for stopping sight distance.



Intersection of Johnson Avenue at Runge Drive looking west

There is longitudinal cracking in the pavement along the center of the Johnson Avenue and along the joint where the two roadways meet. The pavement for Runge Drive is in good to fair condition. Curbing exists on both corners of the intersection. Pavement markings for Johnson Avenue and Runge Drive are faded.

2.2.2.3 Spruce Street Intersection

Spruce Street meets Johnson Avenue to form a stop-controlled T-intersection, with Spruce Street stop-controlled. Spruce Street is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Spruce Street looking to the west was measured at 660' and 275' looking east. The intersection sight distance looking east is inhibited by an overgrown hedge row at the back of sidewalk. The measured intersection sight distance looking east is insufficient compared to the recommended intersection sight distance of 335'; however, it meets the required 200' for stopping sight distance.



Intersection of Johnson Avenue at Spruce Street looking west

The pavement at the intersection has a longitudinal crack running down the center of Johnson Avenue and along the joint where the two roadways meet. The pavement on Spruce Street is in good to fair condition with minimal cracking and faded pavement markings. Fatigue cracking is present on the eastern side. Curbing is present on the corners of the intersection.

2.2.2.4 Smithfield Avenue Intersection

Smithfield Avenue meets Johnson Avenue to form a stop-controlled T-intersection, with Smithfield Avenue stop-controlled. Smithfield Avenue is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Smithfield Avenue looking to the west was measured at 450' and 420' looking east.

There is heavy longitudinal and fatigue cracking present in the pavement on Johnson Avenue. The pavement on Smithfield Avenue is in good condition. Pavement markings at the intersection are in fair to poor condition. A small section of curbing is present along the northeastern corner of the intersection, but it is in poor shape.



Fatigue cracking at the intersection of Johnson Avenue and Smithfield Avenue

2.2.3 Johnson Avenue – Smithfield Avenue to Fairfax Avenue

This segment of Johnson Avenue is approximately 1,800' long and descends in elevation from Smithfield Avenue to Fairfax Avenue with a high point to the west of Fiesta Heights (West). The vertical alignment of the roadway begins just east of a low point and ascends at 1.6% to a high point to the west of Fiesta Heights (West). The roadway profile then steepens greatly to 16.8% towards Goodspeed Avenue, which is above the maximum standard grade. The roadway profile continues to descend towards Fairfax Avenue with flatter grades ranging from 0.7% to 7.1%. There are two vertical curves that accompany the steep 16.8% grade that do not meet standard K-values. The horizontal geometry of Johnson Avenue meanders in the north and south directions with various horizontal curves. The minimum radius curve within this segment is 450'. The roadway width varies between 18' and 20' between Smithfield Avenue and Fiesta Heights (West). The roadway width from Fiesta Heights (West) to Fairfax Avenue varies between 22' and 26'. Curbing exists but is intermittent on both sides of the roadway. No closed drainage system is present from Fiesta Heights (West) to 400' east of Goodspeed Avenue. Thus, slope erosion and pavement cracking along the edges of Johnson Avenue are present along non-curbed portions of the roadway. Additionally, along the roadway edges are layers of pavement that are eroding due to storm water running along the gutter of the road. Longitudinal, transverse, and fatigue cracking in the pavement are all present throughout the length of the roadway including severe driveway damage to a driveway 100' west of Goodspeed Avenue. This roadway segment is illuminated and sidewalks are provided along the northern side. Land use in the vicinity is primarily residential.



Erosion of pavement layers along Johnson Avenue

2.2.3.1 *Fiesta Heights (West) Intersection*

Fiesta Heights (West) meets Johnson Avenue to form a stop-controlled T-intersection, with Fiesta Heights (West) and Johnson Avenue eastbound stop-controlled. Fiesta Heights (West) is classified as a Local Street and has a single travel lane in each direction. There are left turn prohibition signs for Fiesta Heights (West) and Johnson Avenue eastbound. The intersection sight distance from Fiesta Heights (West) looking to the west was measured at 220' and 160' looking east. The intersection sight distance looking west is inhibited by a hedge row at the back of sidewalk and a vertical crest curve looking east. The measured intersection sight distance looking in both directions is insufficient compared to the recommended intersection sight distance of 335' and only looking west meets the required 200' for stopping sight distance.



Vertical crest curve inhibits sight distance on Johnson Avenue at Fiesta Heights (West)

The pavement at the intersection has longitudinal and fatigue cracking. There are small potholes located in the center of the intersection and along the south side of Johnson Avenue. Pavement markings are in fair condition. Curbing is present along the corners of the intersection. Curbing is not present along the south side of Johnson Avenue.

2.2.3.2 *Goodspeed Avenue Intersection*

Goodspeed Avenue meets Johnson Avenue to form a stop-controlled T-intersection, with Goodspeed Avenue stop-controlled. Goodspeed Avenue is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Goodspeed Avenue looking to the west was measured at 170' and over 400' looking east. The intersection sight distance looking west is inhibited by a steep vegetated sloped adjacent to Johnson Avenue. The measured intersection sight distance looking west is insufficient compared to the recommended intersection sight distance of 335' and does not meet the required 200' for stopping sight distance.



Steep vegetated slope inhibits intersection sight distance on Goodspeed Avenue looking west

The pavement on Goodspeed Avenue is in fair to good condition with minor cracking. Fatigue cracking is heavily present at the approaches to and at the intersection. Erosion is present along a section of the north side of Johnson Avenue where the roadway transitions from the 16.8% grade. Pavement markings are in fair to poor condition and are fading. Curbing is present along the southeast corner of the intersection.

2.2.3.3 *Fiesta Heights (East) Intersection*

Fiesta Heights (East) meets Johnson Avenue to form a stop-controlled T-intersection, with Fiesta Heights stop-controlled. Fiesta Heights (East) is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Fiesta Heights (East) looking to the west was measured at 400' and 240' looking east. The intersection sight distance looking east is inhibited by the horizontal curvature of the roadway that projects the sight line over private property. The measured intersection sight distance looking east is insufficient compared to the recommended intersection sight distance of 335'; however, it meets the required 200' for stopping sight distance.



Horizontal curve on Johnson Avenue east of Fiesta Heights (East)

The pavement at the intersection has longitudinal and transverse cracks. There are potholes around the manhole located in the center of the intersection. Pavement markings are in good to fair condition. Curbing is present on Fiesta Heights (East) at the intersection.

2.2.3.4 *Suzio Drive*

Suzio Drive meets Johnson Avenue to form a stop-controlled T-intersection, with Suzio Drive stop-controlled. Suzio Drive is not classified and is likely a private driveway that provides access to various residential properties. Suzio Drive varies in width between 10' and 12'. Because of the likelihood that Suzio Drive is a private roadway, intersection sight distance was not measured.



Johnson Avenue at Suzio Drive intersection

2.2.3.5 *Fairfax Avenue Intersection*

Fairfax Avenue meets Johnson Avenue to form a stop-controlled T-intersection, with Fairfax Avenue stop-controlled. Fairfax Avenue is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Fairfax Avenue looking to the west was measured at 360' and 80' looking east. The intersection sight distance looking east is inhibited by a steep vegetated slope adjacent to



Severe pavement cracking and potholes on Johnson Avenue at Fairfax Avenue intersection

Johnson Avenue. The measured intersection sight distance looking east is insufficient compared to the recommended intersection sight distance of 335' and does not meet the required 200' for stopping sight distance.

The pavement on the eastbound approach of Johnson Avenue is in poor condition with many potholes approaching to and at the intersection. There are also many longitudinal cracks present. At the time of the site visit, Fairfax Avenue was entirely stripped of pavement and was in the process of being repaved. The pavement markings on Johnson Avenue are faded. Curbing exists on the southeast corner of the intersection.

2.2.4 Johnson Avenue – Fairfax Avenue to West Main Street

This segment of Johnson Avenue is approximately 1,050' long and descends in elevation from Fairfax Avenue to West Main Street. The vertical alignment of the roadway steepens at Fairfax Avenue with a profile grade of 16.1%, which is above the maximum profile grade, before it begins to flatten out at Allen Avenue and towards the West Main Street intersection. A vertical crest curve between Fairfax Avenue and Johnson Heights has a substandard K-value of 13. There is a horizontal curve with a radius of 800' from Fairfax Avenue to Johnson Heights that shifts the roadway to the south. The roadway width varies between 25' and 28' between Fairfax Avenue and Johnson Heights. The roadway width from Johnson Heights to West Main Street is 30'. Curbing exists for the majority of the roadway except on the south side of Johnson Avenue between Allen Avenue and Fairfax Avenue. A closed drainage system is present with numerous existing catch basins.



Poor pavement condition around manholes on Johnson Avenue

The pavement condition in this section has many longitudinal cracks throughout its length. There are many fatigue cracks and potholes around manholes. Potholes are prevalent around the intersection areas. The majority of the pavement markings are faded. The roadway is generally unlit with lighting only provided at intersections. A sidewalk is present for this segment along the west side of Johnson Avenue. The majority of the sidewalk is bituminous concrete, in fair to poor shape and most likely does not meet current ADA guidelines. In addition, the sidewalk ramps at the intersection do not conform to current ADA guidelines. Land uses within this segment are primarily residential with commercial at West Main Street.

2.2.4.1 Johnson Heights Intersection

Johnson Heights meets Johnson Avenue to form a stop-controlled T-intersection, with Johnson Heights stop-controlled. Johnson Heights is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Johnson Avenue looking to the west was measured at 240' and 395' looking east. The intersection sight distance looking west is inhibited by the vertical crest curve on Johnson Avenue. The measured intersection sight

distance looking east is insufficient compared to the recommended intersection sight distance of 335'; however, it meets the required 200' for stopping sight distance.

The pavement condition of Johnson Heights is in good to fair condition with little cracking. The eastern edge of Johnson Heights where it meets Johnson Avenue is in poor condition with potholes and longitudinal cracking. Additional longitudinal cracking is present along Johnson Avenue at the intersection with patching around the manhole located in the center of the intersection. Curbing is present along the north side of the intersection.



Poor pavement condition at Johnson Heights Intersection

2.2.4.2 Allen Avenue Intersection

Allen Avenue meets Johnson Avenue to form a stop-controlled T-intersection, with Allen Avenue stop-controlled. Allen Avenue is classified as a Local Street and has a single travel lane in each direction. The intersection sight distance from Allen Avenue looking to the west was measured at 310' and 420' looking east. The intersection sight distance looking west is inhibited by the horizontal curvature of the roadway that projects the sight line over vegetation on private property. The measured intersection sight distance looking west is insufficient compared to the recommended intersection sight distance of 335'; however, it meets the required 200' for stopping sight distance.

The pavement condition at this intersection has large cracks, both longitudinal and transverse, throughout the intersection with exceptionally poor areas at the approach on Allen Avenue and on the westbound travel lane on Johnson Avenue.

2.2.4.3 West Main Street Intersection

Johnson Avenue intersects West Main Street and Sylvan Avenue to form a four-legged intersection operating under a semi-actuated traffic control signal. West Main Street is classified as an Urban Minor Arterial and Sylvan Avenue is a Local Street. The West Main Street southeastbound approach provides a shared through/right turn lane and a left turn lane. The Johnson Avenue eastbound approach provides a single travel lane approach. The West Main Street westbound approach provides a marked left turn lane onto Johnson Avenue and a shared through/right turn lane. Sylvan Avenue provides a single travel lane for all movements.

The pavement condition at the intersection is fair with pavement patching, longitudinal and transverse cracking throughout. The pavement markings are in good to fair condition. Due to the skew of the West Main Street, there are two stop



Pavement patches, cracking, faded pavement markings and two stop bars present on Johnson Avenue at West Main Street Intersection

bars on the eastbound approach on Johnson Avenue and also on the southeastbound approach on West Main Street with all four markings faded. The number of stop bars cause confusion as to where to stop for the signal. There could be a conflict with school busses and other larger vehicles turning left from Johnson Avenue if a vehicle has stopped at the further stop bar on West Main Street. There are painted crosswalks across Sylvan Avenue and the east section of West Main Street. A pedestrian signal is present for this crosswalk; however, it was not working at the time of the site visit. A project is currently under design by the City to reconstruct the intersection.

3 Drainage Analysis

A conceptual drainage analysis was performed to determine deficiencies and potential drainage improvements for the corridor. The existing drainage areas for the corridor were defined based on the City GIS data and the design flows were analyzed for the 25-year storm. Proposed catch basin spacing was based on maximum recommended spacing. Detailed gutter analysis was not in the scope of this effort.

The Johnson Avenue corridor has one existing low point at Smithfield Avenue. Roadway drainage at the eastern terminus continues along West Main Street and along Johnson Avenue to past Finch Avenue at the west terminus.

A closed drainage system exists from Finch Avenue to Alanby Drive. The existing drainage area was delineated to be 1.3 acres. The existing outlet was not field located and could exist either south on Finch Avenue or farther west of Johnson Avenue. The existing catch basin spacing does not meet the CTDOT recommended maximum spacing of 300' on the south side of Johnson Avenue between Alanby Drive to Gwen Road.

A closed drainage system exists with intermittent catch basins from Alanby Drive to Fiesta Heights (West). The existing drainage area was delineated to be 3.1 acres. The existing outlet could not be field located and could be directed down various side streets. The existing catch basin spacing does not meet the CTDOT recommended maximum spacing of 300'. In addition, paved leakoffs exist that drain the low point at Smithfield Avenue into a watercourse.

A closed drainage system exists from Fiesta Heights (West) to West Main Street. The existing drainage area was delineated to be 10.8 acres. The existing outlet was not field located; however, is assumed to connect to the West Main Street drainage system. The existing catch basin spacing does not meet the CTDOT recommended maximum spacing of 300' on various segments.

4 Recommended Improvements

The existing conditions assessment served to identify existing roadway deficiencies along the Johnson Avenue corridor. The purpose of this section of the report is to summarize potential improvements based on the identified existing deficiencies. Preliminary construction cost estimates were prepared for each roadway segment per CTDOT preliminary estimating procedures for the City to prioritize the implementation of the recommended improvements.

The projected Year 2030 weekday average daily traffic volumes for Johnson Avenue, given a 1% annual growth rate, are estimated to be 3,660 vehicles per day with 1,830 traveling in each direction. Based on these volumes, the two-lane Johnson Avenue should accommodate the projected Year 2030 weekday average daily traffic.

4.1 Johnson Avenue – Finch Avenue to Sperry Lane/Cynrose Place

The recommended improvements for Johnson Avenue from Finch Avenue to Sperry Lane/Cynrose Place presented in *Figures 2 and 3*, are as follows:

- Perform full-depth reconstruction for pavement rehabilitation from Finch Avenue to Gwen Road. Perform vertical profile revisions to correct vertical profile deficiencies at Finch Avenue. Vertical profile revisions will result in a 1' maximum cut and fill. Perform variable width widening to provide 22' wide minimum width roadway from Finch Avenue to Gwen Road.
- Mill and overlay with variable width widening to provide 22' wide minimum width roadway from Gwen Road to Alanby Drive.
- Perform full-depth reconstruction for pavement rehabilitation and variable width widening to provide 22' wide minimum width roadway from Alanby Drive to Sperry Lane/Cynrose Place.
- CTDOT design standards require a minimum roadway width of 24' for this classification of roadway. The minimum existing width of roadway through this section is 19'. Given the existing nature of the roadway, it is our professional opinion a 22' wide roadway is adequate. However, depending on the funding source, it may be required to widen the roadway to the CTDOT design standard width of 24'. The cost of this potential widening has been provided in the cost estimate.
- Reconstruct the existing sidewalks with concrete sidewalks on the north side of Johnson Avenue from Jeffrey Lane to Sperry Lane.
- Install bituminous concrete lip curbing on both sides of Johnson Avenue.
- Remove vegetation on both the southwest and southeast corners of Johnson Avenue at Finch Avenue to improve intersection sight distance on Finch Avenue looking in both the east and west directions onto Johnson Avenue.
- Prune vegetation on the north side of Johnson Avenue between Gwen Road and Jeffrey Lane to improve intersection sight distance on Gwen Road looking east onto Johnson Avenue.



- Remove vegetation on northeast corner of Johnson Avenue at Jeffrey Lane to improve intersection sight distance on Jeffrey Lane looking east onto Johnson Avenue.
- Prune vegetation on north side of Johnson Avenue between Alanby Drive and Sperry Lane to improve intersection sight distance on Alanby Drive looking east onto Johnson Avenue.
- Upgrade the existing drainage system with additional catch basins from Alanby Drive to Finch Avenue.
- Install underdrain along the roadway edge on the north side of Johnson Avenue at Finch Avenue.
- Install underdrain along the roadway edge on both the north and south sides of Johnson Avenue between Gwen Road and Jeffrey Lane.
- Relocate stop bar and stop sign on Finch Avenue from south side of driveway to north side of driveway.
- Install illumination on existing utility pole at intersection of Johnson Avenue and Finch Avenue for vertical sag curve.
- Replace all existing signage to conform to latest edition of the Manual of Uniform Traffic Control Devices for reflectivity and letter legend standards.

The construction cost for the recommended improvements for this segment of roadway is \$1,256,000. A detailed construction cost estimate is presented in *Appendix B*.

4.2 Johnson Avenue – Sperry Lane/Cynrose Place to Smithfield Avenue

The recommended improvements for Johnson Avenue from Sperry Lane/Cynrose Place to Smithfield Avenue presented in *Figures 3 and 4*, are as follows:

- Perform full-depth reconstruction for pavement rehabilitation and variable width widening to provide 22' wide minimum width roadway through the entire segment.
- CTDOT design standards require a minimum roadway width of 24' for this classification of roadway. The minimum existing width of roadway through this section is 18'. Given the existing nature of the roadway, it is our professional opinion a 22' wide roadway is adequate. However, depending on the funding source, it may be required to widen the roadway to the CTDOT design standard width of 24'. The cost of this potential widening has been provided in the cost estimate.
- Reconstruct the existing sidewalks with concrete sidewalks on the north side of Johnson Avenue.
- Install bituminous concrete lip curbing on both sides of Johnson Avenue.
- Prune vegetation on Johnson Avenue between Sperry Lane and Eaton Avenue to improve intersection sight distance on Sperry Lane looking east onto Johnson Avenue.
- Remove vegetation on both the northeast and northwest corners of Johnson Avenue at Eaton Avenue to improve intersection sight distance on Eaton Avenue looking in both the east and west directions onto Johnson Avenue.

- Prune vegetation on Johnson Avenue east of Spruce Street to improve intersection sight distance on Spruce Street looking east onto Johnson Avenue.
- Install metal beam rail and proper end treatments on both sides of Johnson Avenue west of Smithfield Avenue at the watercourse.
- Install a new drainage system from Alanby Drive to Smithfield Avenue. Install a new 18" outlet pipe west of Smithfield Avenue at the watercourse. It is assumed given the impervious drainage area within this system, a hydrodynamic separator will need to be installed to conform to the latest stormwater quality guidelines.
- Install underdrain along the roadway edge on the north side of Johnson Avenue from Runge Drive to Spruce Street.
- Replace all existing signage to conform to latest edition of the Manual of Uniform Traffic Control Devices for reflectivity and letter legend standards.

The construction cost for the recommended improvements for this segment of roadway is \$2,610,000. A detailed construction cost estimate is presented in *Appendix B*.

4.3 Johnson Avenue – Smithfield Avenue to Fairfax Avenue

The recommended improvements for Johnson Avenue to Fairfax Avenue presented in *Figure 5*, are as follows:

- Perform full-depth reconstruction for pavement rehabilitation through the entire section. Perform vertical profile revisions to correct vertical profile deficiencies from Fiesta Heights (West) to Goodspeed Avenue. Vertical profile revisions will result in a 2' maximum cut at the Fiesta Heights (West) intersection and a 2.5' maximum fill at the Goodspeed Avenue intersection.
- CTDOT design standards require a minimum roadway width of 24' for this classification of roadway. The minimum existing width of roadway through this section is 22'. Given the existing nature of the roadway, it is our professional opinion a 22' wide roadway is adequate. However, depending on the funding source, it may be required to widen the roadway to the CTDOT design standard width of 24'. The cost of this potential widening has been provided in the cost estimate.
- Reconstruct the existing retaining wall on north side of Johnson Avenue between Fiesta Heights (West) and Goodspeed Avenue due to recommended vertical profile revisions.
- Construct a new retaining wall on southeast corner of Johnson Avenue at Goodspeed Avenue due to recommended vertical profile revisions.
- Reconstruct the existing sidewalks with concrete sidewalks on the north side of Johnson Avenue.
- Install bituminous concrete lip curbing on both sides of Johnson Avenue.
- Regrade existing slope on southwest corner of Johnson Avenue at Goodspeed Avenue to improve intersection sight distance on Goodspeed Avenue looking west onto Johnson Avenue.
- Install a new drainage system from Smithfield Avenue to Fiesta Heights (West).

- Install underdrain along the roadway edge on both the north and south sides of Johnson Avenue between Fiesta Heights (West) and Goodspeed Avenue.
- Replace all existing signage to conform to latest edition of the Manual of Uniform Traffic Control Devices for reflectivity and letter legend standards.

The construction cost for the recommended improvements for this segment of roadway is \$1,950,000. A detailed construction cost estimate is presented in *Appendix B*.

4.4 Johnson Avenue – Fairfax Avenue to West Main Street

The recommended improvements for Johnson Avenue from Fairfax Avenue to West Main Street presented in *Figure 6*, are as follows:

- Perform full-depth reconstruction for pavement rehabilitation through the entire section. Perform vertical profile revisions to correct vertical profile deficiencies from Fairfax Avenue to Johnson Heights. Vertical profile revisions will result in a 1' maximum cut.
- Reconstruct the existing sidewalks with concrete sidewalks on north side of Johnson Avenue and on south side of Johnson Avenue between Allen Avenue and West Main Street
- Install bituminous concrete lip curbing on both sides of Johnson Avenue. Install concrete curb where concrete sidewalk borders the roadway.
- Regrade slope on southeast corner of Johnson Avenue at Fairfax Avenue to improve intersection sight distance on Fairfax Avenue looking east onto Johnson Avenue.
- Prune vegetation encroaching on existing sidewalk on north side of Johnson Avenue east of Johnson Heights onto Johnson Avenue.
- Upgrade the existing drainage system with additional catch basins from Fairfax Avenue to West Main Street.
- Install underdrain along the roadway edge on the south side of Johnson Avenue between Fairfax Avenue and Allen Court.
- Replace all existing signage to conform to latest edition of the Manual of Uniform Traffic Control Devices for reflectivity and letter legend standards.

The construction cost for the recommended improvements for this segment of roadway is \$1,178,000. A detailed construction cost estimate is presented in *Appendix B*.

5 Implementation of Recommended Improvements and Funding Sources

Based on the recommended improvements and cost estimates prepared for the various roadway segments, the City can prioritize individual projects. A summary of the construction cost for each segment is presented in *Table 1*.

Table 1
Construction Cost Summary

Roadway Segment	Construction Cost
Johnson Avenue – Finch Avenue to Sperry Lane/Cynrose Place	\$1,256,000
Johnson Avenue – Sperry Lane/Cynrose Place to Smithfield Avenue	\$2,610,000
Johnson Avenue – Smithfield Avenue to Fairfax Avenue	\$1,950,000
Johnson Avenue – Fairfax Avenue to West Main Street	\$1,178,000
Total	\$6,994,000

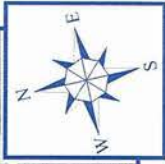
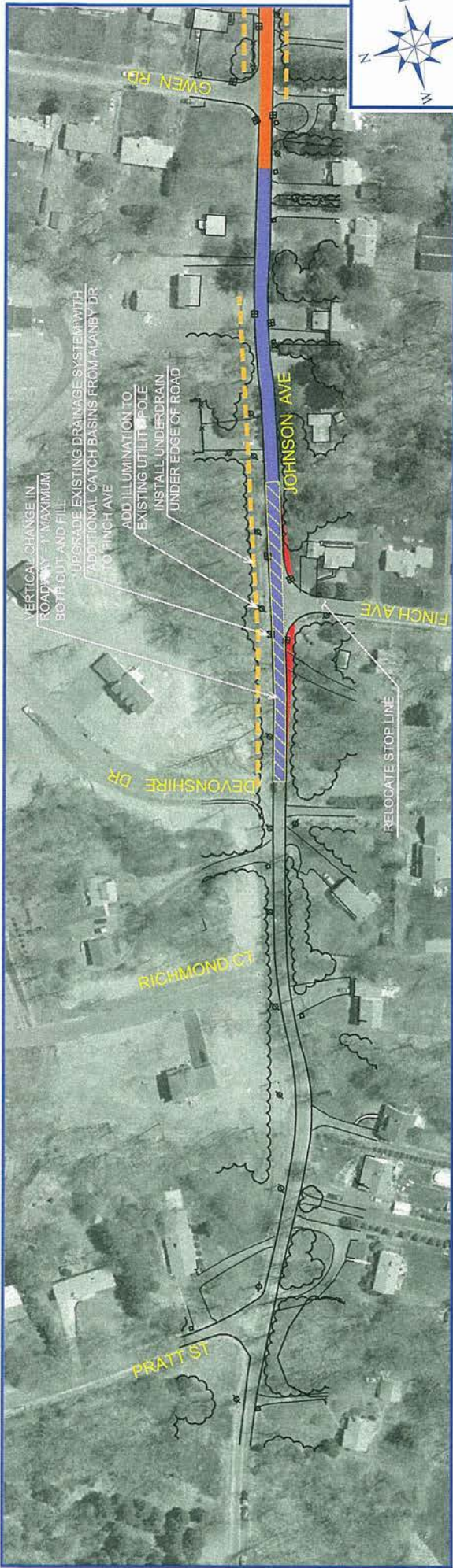
The total construction cost for the entire corridor is estimated to be \$6,994,000

There are various funding sources available for the implementation of the recommended improvements for the corridor, (i.e. Local Capital Improvement (LOCIP), Surface Transportation Plan – Urban (STP-Urban), High Priority Project (HPP), and other State and local funding.)

Short-term improvements such as clearing of vegetation for intersection sight distance improvements, upgrading existing signing, and pavement marking restriping can be implemented in a short-time period at a low cost. Drainage improvements, sidewalk improvements, and milling and overlay can be considered intermediate improvements. Full-depth reconstruction, vertical profile corrections, and widening can be considered long-term improvement projects, which will require dedicated funding.

The identification of recommended improvements along with construction cost estimates for each roadway segment of the corridor will allow the City to develop a phased improvement plan as funding becomes available.

Figures



LEGEND

- FULL-DEPTH RECONSTRUCTION TO FLATTEN VERTICAL CURVES AND FOR PAVEMENT REHABILITATION. VARIABLE WIDTH WIDENING TO PROVIDE 22' WIDE MINIMUM ROADWAY.
- MILL AND OVERLAY WITH VARIABLE WIDTH WIDENING TO PROVIDE 22' WIDE MINIMUM ROADWAY.
- REMOVE OBSTRUCTIONS FROM SIGHT TRIANGLES
- INSTALL UNDERDRAIN
- FULL DEPTH RECONSTRUCTION TO CORRECT VERTICAL PROFILE DEFICIENCIES

NOTES

- REPLACE ALL EXISTING SIGNING TO CONFORM TO LATEST EDITION OF MUTCD
- ROADWAY MAY REQUIRE WIDENING TO 24' WIDE DEPENDING ON FUNDING SOURCE



RELOCATE STOP BAR CLOSER TO JOHNSON AVE. FINCH AVE. LOOKING TOWARD JOHNSON AVE.



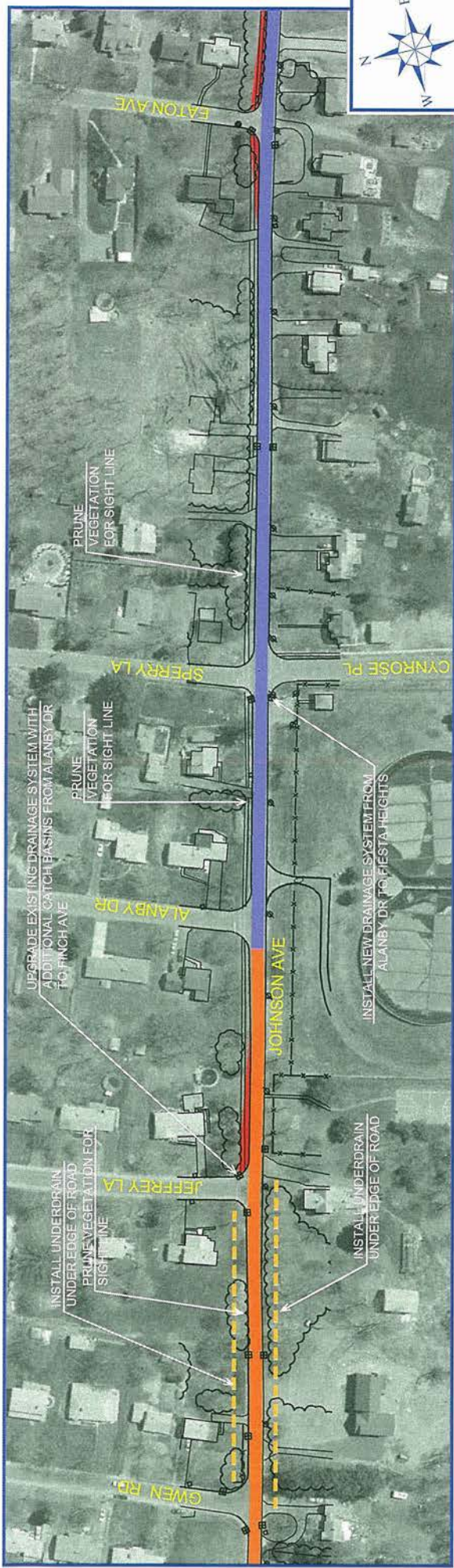
RECONSTRUCT ROADWAY TO FLATTEN VERTICAL PROFILE JOHNSON AVE. AT FINCH AVE. LOOKING EAST

Figure 2 - Johnson Avenue
From Pratt St to Gwenn Rd

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LEGEND



FULL-DEPTH RECONSTRUCTION TO FLATTEN VERTICAL CURVES AND FOR PAVEMENT REHABILITATION. VARIABLE WIDTH WIDENING TO PROVIDE 22' WIDE MINIMUM ROADWAY. RECONSTRUCT EXISTING SIDEWALKS WITH CONCRETE SIDEWALKS AND ADA COMPLIANT RAMPS.

MILL AND OVERLAY WITH VARIABLE WIDTH WIDENING TO PROVIDE 22' WIDE MINIMUM ROADWAY. RECONSTRUCT EXISTING SIDEWALKS WITH CONCRETE SIDEWALKS AND ADA COMPLIANT RAMPS.

REMOVE OBSTRUCTIONS FROM SIGHT TRIANGLES

INSTALL UNDERDRAIN

NOTES

- REPLACE ALL EXISTING SIGNING TO CONFORM TO LATEST EDITION OF MUTCD
- ROADWAY MAY REQUIRE WIDENING TO 24' WIDE DEPENDING ON FUNDING SOURCE



WIDEN NARROW ROADWAY
JOHNSON AVE. LOOKING EAST TOWARDS SPERRY LN.



RECONSTRUCT ROADWAY FOR PAVEMENT REHABILITATION
JOHNSON AVE. BETWEEN SPERRY LN. AND EATON AVE.

Figure 3 - Johnson Avenue
From Gwen Rd to Eaton Ave

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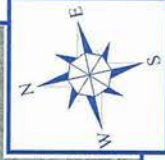
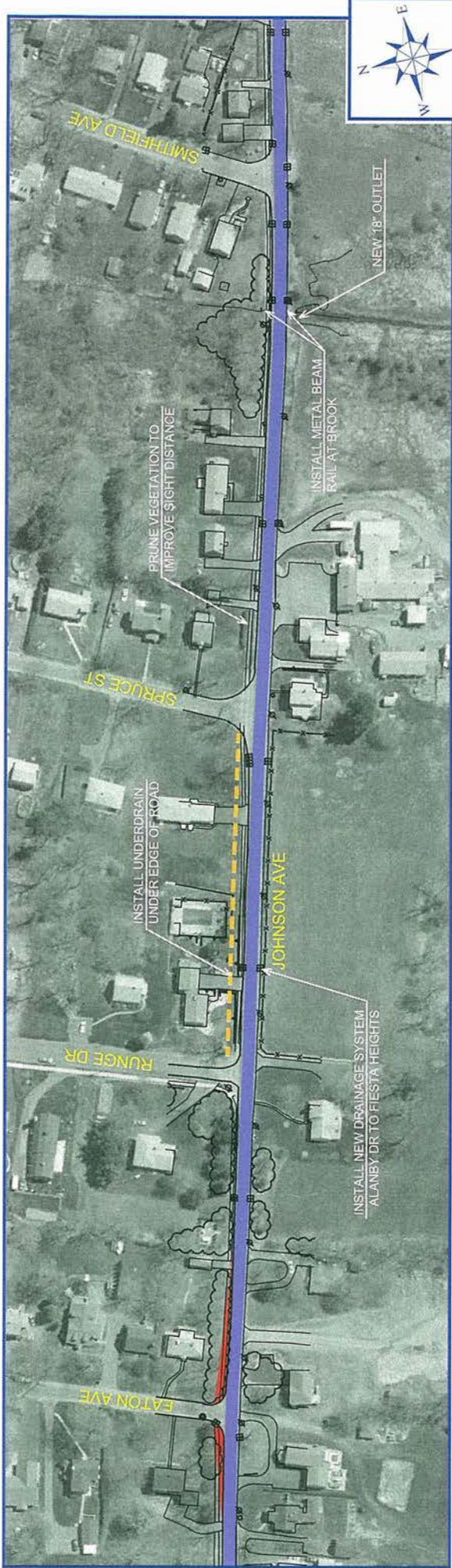
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South Central Regional Council of Governments

CORRIDOR STUDY
MERIDEN, CONNECTICUT



June 2010



LEGEND

- FULL-DEPTH RECONSTRUCTION FOR PAVEMENT REHABILITATION. VARIABLE WIDTH WIDENING TO PROVIDE 22' WIDE MINIMUM ROADWAY. RECONSTRUCT EXISTING SIDEWALKS WITH CONCRETE SIDEWALKS AND ADA COMPLIANT RAMPS.
- REMOVE OBSTRUCTIONS FROM SIGHT TRIANGLES
- INSTALL UNDERDRAIN

NOTES

- REPLACE ALL EXISTING SIGNING TO CONFORM TO LATEST EDITION OF MUTCD
- ROADWAY MAY REQUIRE WIDENING TO 24' WIDE DEPENDING ON FUNDING SOURCE



RECONSTRUCT EXISTING SIDEWALKS
JOHNSON AVE. BETWEEN SPRUCE ST. & SMITHFIELD AVE.



WIDEN NARROW ROADWAY
JOHNSON AVE. LOOKING WEST FROM SMITHFIELD AVE.



RECONSTRUCT ROADWAY FOR PAVEMENT REHABILITATION
JOHNSON AVE. AT RUNGE DR.

Figure 4 - Johnson Avenue
From Eaton Ave to Smithfield Ave



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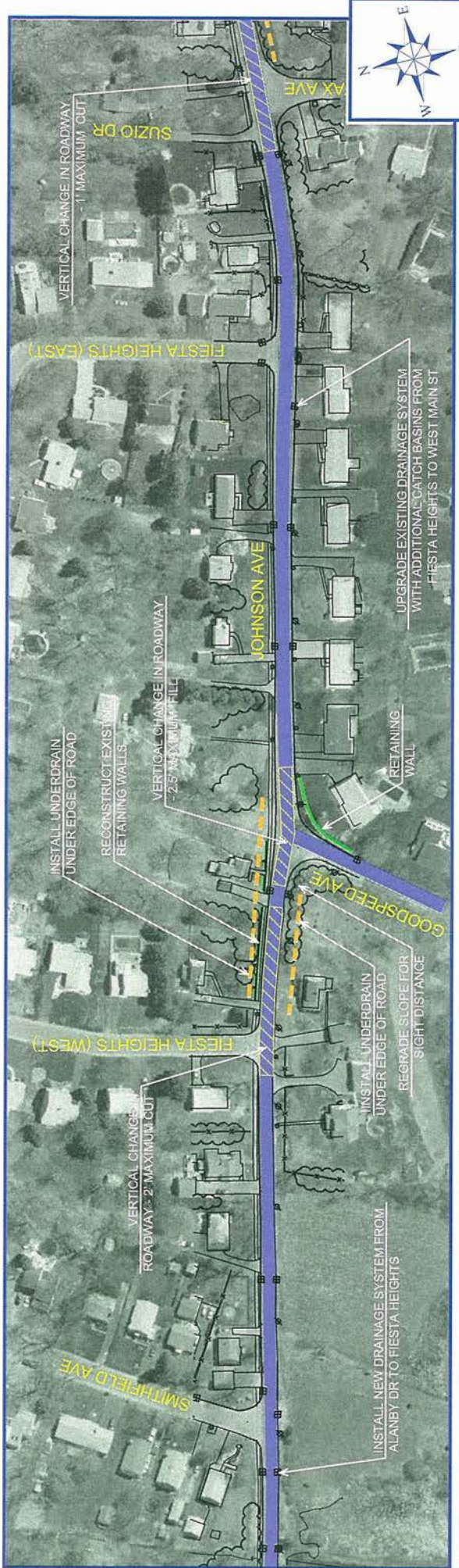
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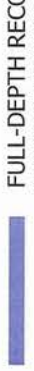

South Central Regional Council of Governments

CORRIDOR STUDY
MERIDEN, CONNECTICUT

June 2010



LEGEND

-  FULL-DEPTH RECONSTRUCTION TO FLATTEN VERTICAL CURVES AND FOR PAVEMENT REHABILITATION. VARIABLE WIDTH WIDENING TO PROVIDE 22' WIDE MINIMUM ROADWAY. RECONSTRUCT EXISTING SIDEWALKS WITH CONCRETE SIDEWALKS AND ADA COMPLIANT RAMPS.
-  INSTALL UNDERDRAIN
-  FULL DEPTH RECONSTRUCTION TO CORRECT VERTICAL PROFILE DEFICIENCIES
-  RECONSTRUCT EXISTING OR CONSTRUCT NEW RETAINING WALL

NOTES

- REPLACE ALL EXISTING SIGNING TO CONFORM TO LATEST EDITION OF MUTCD
- ROADWAY MAY REQUIRE WIDENING TO 24' WIDE DEPENDING ON FUNDING SOURCE



RECONSTRUCT ROADWAY TO FLATTEN VERTICAL PROFILE JOHNSON AVE. AT FIESTA HEIGHTS LOOKING EAST



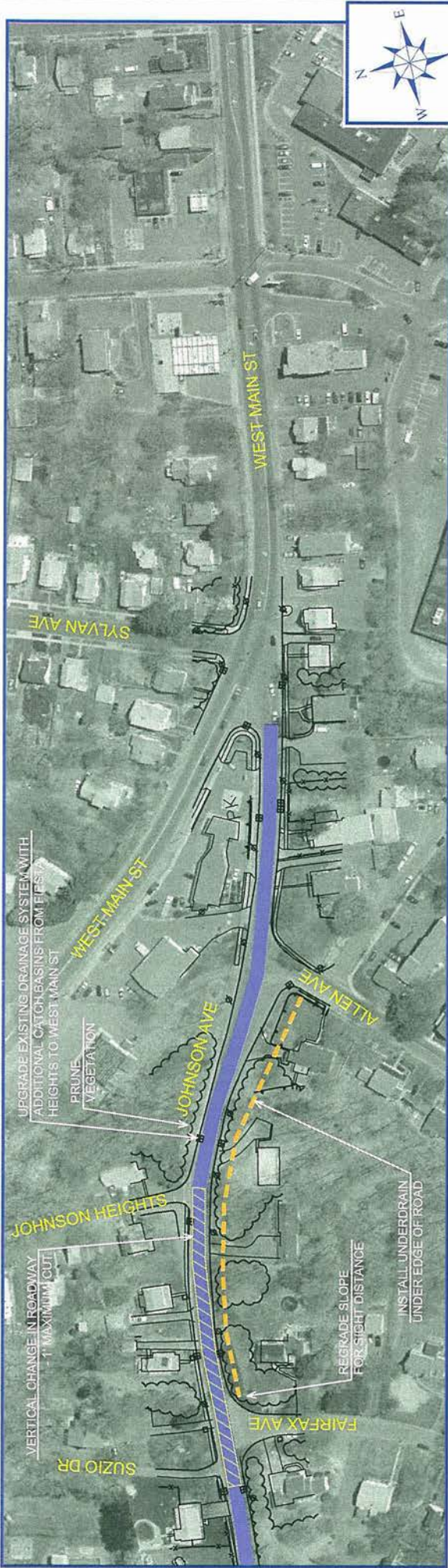
REGRADE SLOPE TO IMPROVE SIGHT DISTANCE JOHNSON AVE. AT GOODSPEED AVE. LOOKING WEST

Figure 5 - Johnson Avenue
From Smithfield Ave to Fairfax Ave

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NOTES

- REPLACE ALL EXISTING SIGNING TO CONFORM TO LATEST EDITION OF MUTCD

LEGEND

-  FULL-DEPTH RECONSTRUCTION FOR PAVEMENT REHABILITATION. RECONSTRUCT EXISTING SIDEWALKS WITH CONCRETE SIDEWALKS AND ADA COMPLIANT RAMPS.
-  FULL-DEPTH RECONSTRUCTION TO CORRECT VERTICAL PROFILE DEFICIENCIES
-  INSTALL UNDERDRAIN



REGRADE SLOPE TO IMPROVE SIGHT DISTANCE JOHNSON AVE. AT FAIRFAX AVE. LOOKING EAST



PRUNE VEGETATION TO IMPROVE SIGHT DISTANCE JOHNSON AVE. AT JOHNSON HEIGHTS LOOKING EAST



CITY PROJECT UNDER DESIGN TO REPLACE SIGNAL JOHNSON AVE. AT EAST MAIN STREET LOOKING EAST

Figure 6 - Johnson Avenue
From Fairfax Ave to West Main Street

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South Central Regional Council of Governments
 CORRIDOR STUDY
 MERIDEN, CONNECTICUT
 June 2010

Appendix A

Automated Traffic Recorder Counts

Connecticut Counts LLC
63 Sugar Maple Lane
Kensington, Connecticut 06037
(860) 828-1693

Johnson Avenue East of Spruce Street
 Meriden, Connecticut

Site Code: 2208
 Station ID: SN:021479

Latitude: 0' 0.000 Undefined

Start Time	07-Jun-10		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
12:00 AM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	16	13
01:00	*	*	*	*	*	*	*	*	7	8	16	18	16	4	7	5
02:00	*	*	*	*	*	*	*	*	7	3	12	9	3	4	8	7
03:00	*	*	*	*	*	*	*	*	5	4	10	8	8	10	7	3
04:00	*	*	*	*	*	*	*	*	8	4	6	3	4	3	6	3
05:00	*	*	*	*	*	*	*	*	1	11	1	4	2	3	1	6
06:00	*	*	*	*	*	*	*	*	10	16	6	10	1	8	6	11
07:00	*	*	*	*	*	*	*	*	45	37	22	12	11	9	26	19
08:00	*	*	*	*	*	*	*	*	127	77	42	38	21	14	63	43
09:00	*	*	*	*	*	*	*	*	90	76	62	52	28	32	60	53
10:00	*	*	*	*	*	*	*	*	64	63	95	61	54	49	71	58
11:00	*	*	*	*	*	*	*	*	80	70	71	98	70	55	74	74
12:00 PM	*	*	*	*	*	*	*	*	91	81	112	99	88	82	97	87
01:00	*	*	*	*	*	*	*	*	95	111	82	101	97	90	86	94
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09:00	*	*	*	*	*	*	*	*	55	75	46	46	47	36	51	58
10:00	*	*	*	*	*	*	*	*	66	64	50	40	40	33	50	44
11:00	*	*	*	*	*	*	*	*	49	42	29	29	14	23	29	31
Lane Day	0	0	0	0	0	0	0	0	1519	1494	1216	1166	1044	997	1270	1247
AM Peak Vol.	0	0	0	0	0	0	0	1822	3013	2382	2041	2517	11:00	11:00	11:00	11:00
PM Peak Vol.									07:00	11:00	11:00	11:00	11:00	11:00	16:00	17:00
									127	81	112	99	88	82	97	87
									17:00	17:00	13:00	12:00	12:00	13:00	16:00	17:00
									115	125	95	101	97	94	98	102

Connecticut Counts LLC
 63 Sugar Maple Lane
 Kensington, Connecticut 06037
 (860) 828-1693

Johnson Avenue East of Spruce Street
 Meriden, Connecticut

Site Code: 2208
 Station ID: SN:021479

Latitude: 0' 0.000 Undefined

Start Time	14-Jun-10		Tue		Wed		Thu		Fri		Sat		Sun		Week Average		
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	
12:00 AM	7	4	6	5	*	*	*	*	*	*	*	*	*	*	*	6	4
01:00	5	6	7	6	*	*	*	*	*	*	*	*	*	*	*	6	6
02:00	4	3	5	2	*	*	*	*	*	*	*	*	*	*	*	4	2
03:00	3	1	4	4	*	*	*	*	*	*	*	*	*	*	*	4	2
04:00	5	8	5	10	*	*	*	*	*	*	*	*	*	*	*	5	9
05:00	5	18	13	24	*	*	*	*	*	*	*	*	*	*	*	9	21
06:00	52	41	52	49	*	*	*	*	*	*	*	*	*	*	*	52	45
07:00	117	80	122	79	*	*	*	*	*	*	*	*	*	*	*	120	80
08:00	95	82	106	67	*	*	*	*	*	*	*	*	*	*	*	100	74
09:00	85	70	72	64	*	*	*	*	*	*	*	*	*	*	*	78	67
10:00	57	55	54	65	*	*	*	*	*	*	*	*	*	*	*	56	60
11:00	77	75	75	84	*	*	*	*	*	*	*	*	*	*	*	76	80
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01:00	72	71	*	*	*	*	*	*	*	*	*	*	*	*	*	72	71
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03:00	105	96	*	*	*	*	*	*	*	*	*	*	*	*	*	105	96
04:00	124	130	*	*	*	*	*	*	*	*	*	*	*	*	*	124	130
05:00	137	126	*	*	*	*	*	*	*	*	*	*	*	*	*	137	126
06:00	105	87	*	*	*	*	*	*	*	*	*	*	*	*	*	105	87
07:00	85	102	*	*	*	*	*	*	*	*	*	*	*	*	*	85	102
08:00	70	92	*	*	*	*	*	*	*	*	*	*	*	*	*	70	92
09:00	49	47	*	*	*	*	*	*	*	*	*	*	*	*	*	49	47
10:00	28	25	*	*	*	*	*	*	*	*	*	*	*	*	*	28	25
11:00	19	16	*	*	*	*	*	*	*	*	*	*	*	*	*	19	16
Lane	1486	1450	617	548	0	0	0	0	0	0	0	0	0	0	0	1492	1451
Day	2936		1165		0		0		0		0		0		2943		
AM Peak	07:00	08:00	07:00	11:00												07:00	07:00
Vol.	117	82	122	84												120	80
PM Peak	17:00	16:00	12:00	12:00												17:00	16:00
Vol.	137	130	96	89												137	130
Comb. Total	2936		1165		0		1822		3013		2382		2041		5460		
ADT	ADT 2,974		ADT 2,974		AADT 2,974												

Connecticut Counts LLC
63 Sugar Maple Lane
Kensington, Connecticut 06037
(860) 828-1693

Johnson Avenue East of Spruce Street
 Meriden, Connecticut

Site Code: 2208
 Station ID: SN:021479

Latitude: 0' 0.000 Undefined

Eastbound	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace	Number	
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999		Speed	in Pace	
6/10/10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	2	1	4	12	23	21	3	3	0	0	0	0	0	0	69	31-40	44	
13:00	0	0	4	12	29	20	5	3	0	1	0	0	0	0	74	31-40	49	
14:00	0	2	9	21	28	27	9	2	0	0	0	0	0	0	98	30-39	55	
15:00	0	2	5	23	34	28	10	2	1	0	0	0	0	0	105	29-38	62	
16:00	0	2	11	22	46	20	7	2	1	0	0	0	0	0	111	26-35	68	
17:00	1	2	8	24	42	33	5	0	0	0	0	0	0	0	115	31-40	75	
18:00	0	2	3	16	31	29	6	1	0	0	0	0	0	0	88	31-40	60	
19:00	0	1	5	19	23	10	5	2	0	0	0	0	0	0	65	26-35	42	
20:00	0	1	2	19	20	10	3	1	1	0	0	0	0	0	57	26-35	39	
21:00	1	0	3	15	18	8	1	0	0	0	0	0	0	0	46	26-35	33	
22:00	0	1	1	8	7	6	0	1	0	0	0	0	0	0	24	25-34	15	
23:00	0	0	0	6	5	3	2	1	1	0	0	0	0	0	18	26-35	11	
Total	4	14	55	197	306	215	56	18	4	1	0	0	0	0	870			
Percent	0.5%	1.6%	6.3%	22.6%	35.2%	24.7%	6.4%	2.1%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%				
AM Peak Vol.																		
PM Peak Vol.	2	2	11	24	46	33	10	3	1	1					17:00		115	

Connecticut Counts LLC
63 Sugar Maple Lane
Kensington, Connecticut 06037
(860) 828-1693

Johnson Avenue East of Spruce Street
 Meriden, Connecticut

Site Code: 2208
 Station ID: SN:021479

Latitude: 0' 0.000 Undefined

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
6/11/10	0	1	1	2	2	1	0	0	0	0	0	0	0	0	7	23-32	5
01:00	0	0	1	2	3	1	0	0	0	0	0	0	0	0	7	24-33	6
02:00	0	0	0	1	2	1	0	1	0	0	0	0	0	0	5	27-36	4
03:00	0	0	2	3	2	1	0	0	0	0	0	0	0	0	8	23-32	7
04:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	27-36	1
05:00	0	0	0	0	5	4	1	0	0	0	0	0	0	0	10	30-39	9
06:00	0	1	3	7	20	10	4	0	0	0	0	0	0	0	45	29-38	30
07:00	0	1	8	17	43	37	18	3	0	0	0	0	0	0	127	31-40	80
08:00	1	1	10	14	35	20	6	3	0	0	0	0	0	0	90	31-40	55
09:00	1	1	5	13	21	15	8	0	0	0	0	0	0	0	64	28-37	36
10:00	0	0	7	15	26	24	7	1	0	0	0	0	0	0	80	31-40	50
11:00	0	6	6	26	29	17	6	1	0	0	0	0	0	0	91	26-35	55
12 PM	0	7	11	26	29	18	4	0	0	0	0	0	0	0	95	26-35	55
13:00	0	1	4	18	30	16	9	1	0	0	0	0	0	0	79	27-36	49
14:00	2	1	12	17	39	18	6	0	1	0	0	0	0	0	96	29-38	59
15:00	0	1	10	23	28	20	12	1	0	0	0	0	0	0	95	26-35	51
16:00	0	0	2	24	49	32	16	2	1	0	0	0	0	0	126	31-40	81
17:00	0	4	11	29	38	44	7	2	0	0	0	0	0	0	135	31-40	82
18:00	0	1	5	15	30	29	5	3	0	0	0	0	0	0	88	31-40	59
19:00	0	0	6	15	27	18	2	2	1	0	0	0	0	0	71	29-38	45
20:00	0	0	6	13	15	14	6	1	0	0	0	0	0	0	55	28-37	30
21:00	0	0	3	22	28	7	4	2	0	0	0	0	0	0	66	26-35	50
22:00	0	1	6	15	14	10	2	0	1	0	0	0	0	0	49	25-34	29
23:00	0	0	1	12	13	2	0	0	1	0	0	0	0	0	29	26-35	25
Total	4	27	120	329	528	360	123	23	5	0	0	0	0	0	1519		
Percent	0.3%	1.8%	7.9%	21.7%	34.8%	23.7%	8.1%	1.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	11:00	08:00	11:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00		
Vol.	1	6	10	26	43	37	18	3							127		
PM Peak	14:00	12:00	14:00	17:00	16:00	17:00	16:00	18:00	14:00						17:00		
Vol.	2	7	12	29	49	44	16	3	1					135			

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(860) 828-1693

Johnson Avenue East of Spruce Street
 Meriden, Connecticut

Site Code: 2208
 Station ID: SN:021479

Latitude: 0' 0.000 Undefined

Eastbound	Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
6/12/10	01:00	0	0	1	4	4	3	3	1	0	0	0	0	0	0	16	25-34	9
	02:00	0	0	1	4	4	3	0	0	0	0	0	0	0	0	12	25-34	9
	03:00	0	0	0	6	4	0	0	0	0	0	0	0	0	0	10	25-34	10
	04:00	0	0	0	1	2	2	1	0	0	0	0	0	0	0	6	28-37	5
	05:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	17-26	1
	06:00	0	0	2	1	3	1	0	0	0	0	0	0	0	0	6	27-36	5
	07:00	1	0	1	6	9	4	4	1	1	0	0	0	0	0	22	30-39	13
	08:00	0	2	4	18	17	14	8	0	0	0	0	0	0	0	42	30-39	26
	09:00	0	4	14	23	30	16	6	1	0	0	0	0	0	0	62	26-35	35
	10:00	0	0	3	24	24	16	3	4	1	0	0	0	0	0	95	26-35	53
	11:00	1	4	18	31	40	13	4	1	0	0	0	0	0	0	112	26-35	48
	12 PM	0	3	8	19	29	17	5	0	1	0	0	0	0	0	82	27-36	49
	13:00	0	2	9	33	33	16	2	0	0	0	0	0	0	0	95	26-35	66
	14:00	0	1	11	18	32	5	3	0	0	0	0	0	0	0	70	26-35	50
	15:00	0	0	9	17	33	13	5	1	0	0	0	0	0	0	78	26-35	50
	16:00	0	2	7	16	24	12	5	2	0	0	0	0	0	0	68	26-35	40
	17:00	0	2	4	15	21	19	6	5	0	0	0	0	0	0	72	30-39	40
	18:00	2	3	5	12	20	26	8	2	0	0	0	0	0	0	78	31-40	46
	19:00	0	1	12	13	20	10	13	1	1	0	0	0	0	0	71	26-35	33
	20:00	0	0	9	16	14	4	1	1	1	0	0	0	0	0	46	25-34	30
	21:00	0	0	5	14	15	11	4	0	1	0	0	0	0	0	50	27-36	30
	22:00	0	1	2	9	10	6	0	1	0	0	0	0	0	0	29	27-36	20
	23:00	0	0	3	9	8	2	0	0	0	0	0	0	0	0	22	24-33	17
Total		4	26	128	311	410	225	84	22	6	0	0	0	0	0	1216		
Percent		0.3%	2.1%	10.5%	25.6%	33.7%	18.5%	6.9%	1.8%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00		09:00	11:00	11:00	11:00	09:00	07:00	09:00	06:00						11:00		
Vol.	1	4	18	31	40	40	16	8	4	1						112		
PM Peak	18:00	12:00	19:00	13:00	13:00	13:00	18:00	19:00	17:00	12:00						13:00		
Vol.	2	3	12	33	33	33	26	13	5	1						95		

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 Station ID: SN:021479

Latitude: 0' 0.000 Undefined

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
6/13/10	0	0	1	6	6	0	3	0	0	0	0	0	0	0	16	25-34	12
01:00	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3	27-36	3
02:00	0	0	1	2	2	3	0	0	0	0	0	0	0	0	8	29-38	7
03:00	0	0	1	1	1	1	0	0	0	0	0	0	0	0	4	27-36	3
04:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	27-36	2
05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	7-16	1
06:00	0	1	2	1	2	2	3	0	0	0	0	0	0	0	11	34-43	7
07:00	0	0	1	6	3	8	3	0	0	0	0	0	0	0	21	33-42	13
08:00	0	1	2	5	8	8	4	0	0	0	0	0	0	0	28	29-38	16
09:00	0	1	6	14	17	11	5	0	0	0	0	0	0	0	54	27-36	32
10:00	1	1	3	14	24	21	5	1	0	0	0	0	0	0	70	31-40	45
11:00	1	1	6	22	34	15	4	5	0	0	0	0	0	0	88	26-35	56
12 PM	0	1	6	23	39	19	7	1	1	0	0	0	0	0	97	26-35	62
13:00	1	0	7	23	30	13	9	2	0	0	0	0	0	0	85	26-35	53
14:00	1	4	8	14	33	20	3	0	0	0	0	0	0	0	83	31-40	53
15:00	0	1	7	16	25	24	4	1	0	0	0	0	0	0	78	30-39	49
16:00	0	2	9	17	35	15	4	4	0	0	0	0	0	0	86	26-35	52
17:00	0	0	3	13	21	17	6	4	1	0	0	0	0	0	65	28-37	38
18:00	0	1	7	11	24	13	4	2	0	0	0	0	0	0	62	29-38	38
19:00	0	1	8	15	23	14	3	0	1	0	0	0	0	0	65	26-35	38
20:00	0	0	5	17	15	6	4	0	0	0	0	0	0	0	47	26-35	32
21:00	0	1	3	5	16	13	2	0	0	0	0	0	0	0	40	31-40	29
22:00	0	0	2	5	3	4	0	0	0	0	0	0	0	0	14	24-33	8
23:00	0	0	1	6	6	2	0	1	0	0	0	0	0	0	16	25-34	12
Total	4	17	89	237	369	231	73	21	3	0	0	0	0	0	1044		
Percent	0.4%	1.6%	8.5%	22.7%	35.3%	22.1%	7.0%	2.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	05:00	09:00	11:00	11:00	10:00	09:00	11:00							11:00		
Vol.	1	1	6	22	34	21	5	5							88		
PM Peak	13:00	14:00	16:00	12:00	12:00	15:00	13:00	16:00	12:00	12:00					12:00		
Vol.	1	4	9	23	39	24	9	4	1					97			

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Site Code: 2208
 Station ID: SN:021479

Latitude: 0' 0.000 Undefined

Eastbound	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999			
6/14/10	0	0	2	3	1	1	0	0	0	0	0	0	0	0	7	19-28	5
01:00	0	0	0	1	3	1	0	0	0	0	0	0	0	0	5	27-36	5
02:00	0	0	0	0	2	1	0	0	0	0	0	0	0	0	4	27-36	3
03:00	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3	27-36	3
04:00	0	1	0	0	2	1	1	0	0	0	0	0	0	0	5	31-40	3
05:00	0	0	0	0	3	2	0	0	0	0	0	0	0	0	5	28-37	5
06:00	0	1	1	10	22	12	5	1	0	0	0	0	0	0	52	28-37	34
07:00	0	1	7	15	47	34	12	1	0	0	0	0	0	0	117	31-40	81
08:00	0	4	9	17	40	19	4	0	1	1	0	0	0	0	95	29-38	60
09:00	2	3	3	22	32	15	5	3	0	0	0	0	0	0	85	26-35	54
10:00	0	0	2	19	22	11	3	0	0	0	0	0	0	0	57	26-35	41
11:00	1	1	9	16	15	26	8	0	1	0	0	0	0	0	77	31-40	41
12 PM	0	3	10	18	32	23	6	0	0	0	0	0	0	0	92	29-38	55
13:00	1	2	6	23	21	15	3	0	1	0	0	0	0	0	72	26-35	44
14:00	0	0	4	16	33	26	8	1	0	0	0	0	0	0	88	31-40	59
15:00	1	2	12	20	33	32	4	1	0	0	0	0	0	0	105	31-40	65
16:00	0	0	12	28	46	32	3	3	0	0	0	0	0	0	124	28-37	78
17:00	0	0	5	27	46	46	10	2	1	0	0	0	0	0	137	31-40	92
18:00	0	0	6	18	41	30	7	0	3	0	0	0	0	0	105	31-40	71
19:00	0	1	6	25	26	22	5	0	0	0	0	0	0	0	85	26-35	51
20:00	0	1	8	21	24	11	2	3	0	0	0	0	0	0	70	26-35	45
21:00	0	0	4	13	15	14	2	0	1	0	0	0	0	0	49	28-37	30
22:00	0	2	2	6	9	8	0	0	1	0	0	0	0	0	28	29-38	18
23:00	0	0	1	3	9	4	2	0	0	0	0	0	0	0	19	28-37	14
Total	5	23	109	322	525	387	90	15	9	1	0	0	0	0	1486		
Percent	0.3%	1.5%	7.3%	21.7%	35.3%	26.0%	6.1%	1.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	08:00	08:00	09:00	07:00	07:00	07:00	09:00	08:00	08:00	0.0%	0.0%	0.0%	0.0%	07:00		
Vol.	2	4	9	22	47	34	12	3	1	1					117		
PM Peak	13:00	12:00	15:00	16:00	16:00	17:00	17:00	16:00	18:00	18:00					17:00		
Vol.	1	3	12	28	46	46	10	3	3	3					137		

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Latitude: 0' 0.000 Undefined

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
6/15/10	0	0	1	0	2	1	1	1	0	0	0	0	0	0	6	31-40	3
01:00	0	0	0	1	2	1	1	2	0	0	0	0	0	0	7	38-47	4
02:00	0	0	0	1	2	2	0	0	0	0	0	0	0	0	5	28-37	5
03:00	0	0	0	1	2	0	1	0	0	0	0	0	0	0	4	23-32	3
04:00	0	1	1	1	1	0	1	0	0	0	0	0	0	0	5	22-31	3
05:00	1	0	1	2	2	3	4	0	0	0	0	0	0	0	13	34-43	8
06:00	0	0	2	7	22	12	8	1	0	0	0	0	0	0	52	29-38	34
07:00	0	1	6	15	33	43	18	5	1	0	0	0	0	0	122	31-40	76
08:00	0	4	11	29	35	19	6	2	0	0	0	0	0	0	106	26-35	64
09:00	0	0	5	12	29	20	5	0	1	0	0	0	0	0	72	31-40	49
10:00	1	1	1	9	23	11	6	1	1	0	0	0	0	0	54	27-36	34
11:00	1	4	6	12	24	19	7	1	1	0	0	0	0	0	75	30-39	43
12 PM	0	2	6	25	30	22	6	5	0	0	0	0	0	0	96	26-35	55
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	3	13	40	115	207	153	64	18	4	0	0	0	0	0	617		
Percent	0.5%	2.1%	6.5%	18.6%	33.5%	24.8%	10.4%	2.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	05:00	08:00	08:00	08:00	08:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00	07:00		
Vol.	1	4	11	29	35	43	18	5	1						122		
PM Peak	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00		
Vol.	2	2	6	25	30	22	6	5							96		
Total	24	120	541	1511	2345	1571	490	117	31	2	0	0	0	0	6752		
Percent	0.4%	1.8%	8.0%	22.4%	34.7%	23.3%	7.3%	1.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%			

Stats	10 MPH Pace Speed	31-40 MPH
Number in Pace	3916	
Percent in Pace	58.0%	
Number of Vehicles > 35 MPH	2211	
Percent of Vehicles > 35 MPH	32.7%	
Mean Speed(Average)	33 MPH	

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Latitude: 0' 0.000 Undefined

Westbound	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace	Number	
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999		Speed	in Pace	
6/10/10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	0	1	1	8	30	24	9	0	0	0	0	0	0	0	73	31-40	54	
13:00	0	1	4	9	21	20	6	0	0	0	0	0	0	0	61	31-40	41	
14:00	1	1	7	22	49	33	12	0	0	0	0	0	0	0	125	31-40	82	
15:00	0	1	6	20	41	26	14	1	0	0	0	0	0	0	109	31-40	67	
16:00	0	0	3	19	37	42	15	1	1	0	0	0	0	0	118	31-40	79	
17:00	0	0	9	15	38	37	17	4	0	0	0	0	0	0	120	31-40	75	
18:00	0	0	4	13	34	45	6	1	0	0	0	0	0	0	103	31-40	79	
19:00	0	1	5	8	27	33	8	1	0	0	0	0	0	0	83	31-40	60	
20:00	1	0	2	10	32	21	5	3	0	0	0	0	0	0	74	31-40	53	
21:00	0	1	3	2	10	20	4	1	0	0	0	0	0	0	41	31-40	30	
22:00	0	0	1	5	9	9	3	2	0	0	0	0	0	0	29	30-39	18	
23:00	0	0	0	2	7	7	0	0	0	0	0	0	0	0	16	29-38	14	
Total	2	6	45	133	335	317	99	14	1	0	0	0	0	0	952			
Percent	0.2%	0.6%	4.7%	14.0%	35.2%	33.3%	10.4%	1.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%				

AM Peak	Vol.
14:00	1
17:00	9
18:00	45
19:00	17
17:00	4
16:00	1
14:00	125

Connecticut Counts LLC
63 Sugar Maple Lane
Kensington, Connecticut 06037
(860) 828-1693

Johnson Avenue East of Spruce Street
 Meriden, Connecticut

Site Code: 2208
 Station ID: SN:021479

Latitude: 0' 0.000 Undefined

Westbound	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999			
6/11/10	0	0	1	0	3	4	0	0	0	0	0	0	0	0	8	30-39	7
01:00	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3	33-42	3
02:00	0	1	1	1	0	0	0	0	0	0	0	0	0	0	4	17-26	3
03:00	0	0	0	0	1	1	2	0	0	0	0	0	0	0	4	33-42	4
04:00	0	0	0	2	4	4	1	0	0	0	0	0	0	0	11	29-38	9
05:00	0	0	0	0	5	9	2	0	0	0	0	0	0	0	16	31-40	14
06:00	0	0	2	4	12	11	7	1	0	0	0	0	0	0	37	31-40	23
07:00	0	4	2	5	18	36	11	1	0	0	0	0	0	0	77	31-40	54
08:00	0	0	1	16	19	29	8	2	1	0	0	0	0	0	76	31-40	48
09:00	0	1	6	6	22	18	7	3	0	0	0	0	0	0	63	31-40	40
10:00	0	2	1	8	33	16	7	3	0	0	0	0	0	0	70	31-40	49
11:00	0	0	7	15	30	15	14	0	0	0	0	0	0	0	81	26-35	45
12 PM	0	1	3	11	48	32	14	2	0	0	0	0	0	0	111	31-40	80
13:00	0	0	6	10	33	37	4	4	0	0	0	0	0	0	94	31-40	70
14:00	1	5	3	11	32	37	11	3	1	0	0	0	0	0	104	31-40	69
15:00	1	1	3	19	26	42	18	2	0	0	0	0	0	0	112	31-40	68
16:00	0	2	10	6	26	41	9	1	0	0	0	0	0	0	95	31-40	67
17:00	0	0	7	22	45	51	11	1	0	0	0	0	0	0	137	31-40	96
18:00	0	0	4	12	30	41	15	2	1	0	0	0	0	0	105	31-40	71
19:00	0	0	6	7	24	30	12	2	0	0	0	0	0	0	81	31-40	54
20:00	0	0	4	6	28	28	6	3	0	0	0	0	0	0	75	31-40	56
21:00	0	0	3	9	19	25	7	1	0	0	0	0	0	0	64	31-40	44
22:00	0	0	3	6	18	10	5	0	0	0	0	0	0	0	42	30-39	28
23:00	0	0	3	5	7	8	1	0	0	0	0	0	0	0	24	29-38	15
Total	2	17	76	181	483	526	175	31	3	0	0	0	0	0	1494		
Percent	0.1%	1.1%	5.1%	12.1%	32.3%	35.2%	11.7%	2.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	14:00	11:00	08:00	10:00	07:00	11:00	09:00	08:00						11:00		
Vol.	4	4	7	16	33	36	14	3	1						81		
PM Peak	14:00	14:00	16:00	17:00	12:00	17:00	15:00	13:00	14:00						17:00		
Vol.	1	5	10	22	48	51	18	4	1						137		

Connecticut Counts LLC
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 Station ID: SN:021479

Latitude: 0' 0.000 Undefined

Westbound	Start Time	15	16	20	21	25	26	30	31	35	36	40	41	45	46	50	51	55	56	60	61	65	66	70	71	75	76	999	Total	Pace Speed	Number in Pace	
6/12/10	01:00	0	0	0	0	3	3	3	3	3	7	7	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	33-42	12	
	02:00	0	0	0	0	1	1	1	2	2	4	4	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9	30-39	5	
	03:00	0	0	0	0	0	0	0	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	30-39	7	
	04:00	0	0	0	0	0	0	0	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	27-36	3		
	05:00	0	0	0	0	0	0	0	1	1	4	4	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	4	28-37	4		
	06:00	0	0	0	0	0	2	2	3	3	6	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	35-44	9		
	07:00	0	1	1	1	1	2	2	14	14	17	17	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	12	32-41	10		
	08:00	0	0	0	0	3	9	9	24	24	9	9	6	6	0	0	1	1	0	0	0	0	0	0	0	0	0	38	31-40	31		
	09:00	0	1	1	7	14	18	18	18	18	13	13	7	7	1	0	0	0	0	0	0	0	0	0	0	0	0	52	27-36	34		
	10:00	1	3	8	23	23	23	23	23	23	27	27	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	61	27-36	33		
	11:00	0	3	17	19	19	19	19	29	29	24	24	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	98	28-37	50		
	12 PM	0	1	5	13	13	13	13	37	37	33	33	10	10	2	2	0	0	0	0	0	0	0	0	0	0	0	99	30-39	53		
	13:00	0	0	0	0	4	8	8	41	41	29	29	6	6	2	2	0	0	0	0	0	0	0	0	0	0	0	101	31-40	70		
	14:00	1	1	1	1	1	11	11	31	31	23	23	2	2	4	4	0	0	0	0	0	0	0	0	0	0	0	90	31-40	70		
	15:00	0	1	1	1	1	13	13	30	30	25	25	11	11	5	5	0	0	0	0	0	0	0	0	0	0	0	74	31-40	54		
	16:00	0	0	0	0	2	5	5	24	24	24	24	7	7	1	1	0	0	0	0	0	0	0	0	0	0	0	86	31-40	55		
	17:00	0	0	0	0	2	10	10	21	21	29	29	10	10	1	1	0	0	0	0	0	0	0	0	0	0	0	63	31-40	48		
	18:00	1	0	0	0	4	8	8	29	29	18	18	8	8	0	0	1	1	0	0	0	0	0	0	0	0	0	74	31-40	50		
	19:00	0	1	4	10	4	10	10	29	29	15	15	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	68	31-40	47		
	20:00	0	0	0	0	4	6	6	14	14	17	17	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	61	31-40	44		
	21:00	0	0	0	0	2	7	7	7	7	14	14	9	9	0	0	0	0	0	1	1	0	0	0	0	0	0	46	31-40	31		
	22:00	0	0	0	0	0	4	4	11	11	10	10	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	40	34-43	24		
	23:00	0	0	0	0	2	4	4	7	7	6	6	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	29	31-40	21		
	Total	3	12	67	174	174	359	359	404	404	359	359	124	124	20	20	2	2	1	1	0	0	0	0	0	0	0	1166		13		
	Percent	0.3%	1.0%	5.7%	14.9%	14.9%	34.6%	34.6%	30.8%	30.8%	10.6%	10.6%	1.7%	1.7%	0.2%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
	AM Peak	10:00	10:00	11:00	10:00	10:00	11:00	11:00	11:00	11:00	10:00	10:00	10:00	10:00	01:00	01:00	08:00	08:00														
	Vol.	1	3	17	23	23	29	29	29	29	27	27	13	13	1	1	1	1											99			
	PM Peak	14:00	12:00	12:00	12:00	12:00	13:00	13:00	13:00	12:00	12:00	12:00	15:00	15:00	15:00	15:00	17:00	17:00	21:00	21:00												
	Vol.	1	1	5	13	13	41	41	41	33	33	11	11	11	5	5	1	1	1	1									12:00			
																													101			

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Latitude: 0' 0.000 Undefined

Westbound	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total	Pace Speed	Number in Pace
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	80			
6/13/10	0	0	0	5	6	3	2	0	0	0	0	0	0	0	16	26-35	11
01:00	0	0	0	1	0	2	1	0	0	0	0	0	0	0	4	32-41	3
02:00	0	0	0	1	1	1	4	3	0	0	0	0	0	0	10	39-48	8
03:00	0	0	0	1	0	2	0	0	0	0	0	0	0	0	3	28-37	2
04:00	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3	27-36	3
05:00	0	0	0	0	2	3	3	0	0	0	0	0	0	0	8	34-43	8
06:00	0	0	1	1	3	1	3	0	0	0	0	0	0	0	9	24-33	5
07:00	0	0	0	3	1	8	2	0	0	0	0	0	0	0	14	33-42	11
08:00	0	1	2	8	10	7	3	1	0	0	0	0	0	0	32	28-37	20
09:00	0	1	3	5	20	14	6	0	0	0	0	0	0	0	49	31-40	34
10:00	0	1	4	8	15	18	6	3	0	0	0	0	0	0	55	31-40	33
11:00	0	2	7	12	26	22	9	4	0	0	0	0	0	0	82	31-40	48
12 PM	0	1	2	11	28	36	11	1	0	0	0	0	0	0	90	31-40	64
13:00	0	1	4	14	36	29	8	2	0	0	0	0	0	0	94	31-40	65
14:00	0	2	4	10	30	24	8	1	0	0	0	0	0	0	79	31-40	54
15:00	0	0	5	12	15	32	3	2	0	0	0	0	0	0	69	31-40	47
16:00	0	1	2	15	25	27	5	1	0	0	0	0	0	0	76	31-40	52
17:00	0	0	1	11	16	28	19	1	0	0	0	0	0	0	76	35-44	48
18:00	0	0	3	6	19	25	11	2	0	0	0	0	0	0	66	31-40	44
19:00	0	0	3	3	24	20	5	0	1	0	0	0	0	0	56	31-40	44
20:00	0	0	2	13	6	12	3	0	0	0	0	0	0	0	36	26-35	19
21:00	0	0	0	2	16	10	2	3	0	0	0	0	0	0	33	31-40	26
22:00	0	0	0	2	7	9	5	0	0	0	0	0	0	0	23	30-39	16
23:00	0	0	0	2	3	7	1	0	1	0	0	0	0	0	14	32-41	11
Total	0	10	43	147	310	341	120	24	2	0	0	0	0	0	997		
Percent	0.0%	1.0%	4.3%	14.7%	31.1%	34.2%	12.0%	2.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak Vol.	2	2	7	12	26	22	9	4							11:00		82
PM Peak Vol.	14:00	2	15:00	16:00	13:00	12:00	17:00	21:00	19:00						13:00		94

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Latitude: 0' 0.000 Undefined

Westbound	Start Time	15	16	20	21	25	26	30	31	35	36	40	41	45	46	50	51	55	56	60	61	65	66	70	71	75	76	999	Total	Pace Speed	Number in Pace
6/14/10	01:00	0	0	0	0	0	0	0	2	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	28-37	4
	02:00	0	0	0	0	0	1	1	0	0	3	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	6	32-41	4
	03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	22-31	2
	04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	37-46	1
	05:00	0	0	0	0	0	0	0	2	2	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	32-41	8
	06:00	0	0	0	0	0	4	4	16	16	13	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	34-43	15
	07:00	0	0	0	0	5	6	21	34	39	24	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	31-40	29
	08:00	0	0	0	0	6	15	34	34	24	19	6	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	31-40	60
	09:00	1	1	1	5	5	11	25	25	19	1	1	6	10	1	0	1	0	0	0	0	0	0	0	0	0	0	0	82	31-40	58
	10:00	0	0	0	4	4	8	12	12	12	1	1	10	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	70	30-39	44
	11:00	0	0	4	6	6	13	20	20	24	2	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	31-40	32
12 PM	12:00	0	1	1	4	4	10	31	31	43	24	10	10	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	75	31-40	44
	13:00	0	0	0	3	3	10	28	28	18	18	9	9	9	2	1	1	0	0	0	0	0	0	0	0	0	0	0	100	31-40	74
	14:00	0	1	1	3	3	21	42	42	37	3	8	8	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	71	31-40	46
	15:00	0	2	2	7	7	14	31	31	31	1	10	10	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	115	31-40	79
	16:00	0	0	0	4	4	14	49	49	51	1	1	10	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	96	31-40	62
	17:00	0	0	0	1	1	12	46	46	46	1	18	18	18	1	0	2	0	0	0	0	0	0	0	0	0	0	0	130	31-40	100
	18:00	0	0	0	3	3	12	23	23	34	1	13	13	13	1	1	1	0	0	0	0	0	0	0	0	0	0	0	126	31-40	92
	19:00	0	0	0	2	2	13	36	36	36	2	13	13	13	2	0	0	0	0	0	0	0	0	0	0	0	0	0	87	31-40	57
	20:00	0	0	0	3	3	13	34	34	30	0	12	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	31-40	72
	21:00	0	0	0	1	1	7	22	22	13	4	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92	31-40	64
	22:00	0	0	0	1	1	3	7	7	11	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	29-38	35
	23:00	0	1	1	4	4	4	5	5	4	4	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	31-40	18
Total		1	10	58	193	489	513	163	15	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1450		10	
Percent		0.1%	0.7%	4.0%	13.3%	33.7%	35.4%	11.2%	1.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	1	4	6	15	34	39	10	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	08:00		
Vol.		1	4	6	15	34	39	10	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	82			
PM Peak	15:00	2	7	21	49	51	18	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:00			
Vol.		2	7	21	49	51	18	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130			

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Latitude: 0' 0.000 Undefined

Start Time	15	16	20	21	25	26	30	31	35	36	40	41	45	46	50	51	55	56	60	61	65	66	70	71	75	76	999	Total	Pace Speed	Number in Pace	
6/15/10	0	0	0	1	1	1	1	0	0	2	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	32-41	3	
01:00	0	0	0	0	0	0	0	2	0	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	32-41	6		
02:00	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	32-41	2		
03:00	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4	32-41	4		
04:00	0	0	0	0	0	0	0	5	5	4	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	30-39	9		
05:00	0	1	0	0	0	1	1	12	12	6	6	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	24	30-39	18		
06:00	0	0	0	3	3	5	5	16	16	11	11	11	11	3	3	0	0	0	0	0	0	0	0	0	0	0	49	31-40	27		
07:00	0	0	0	2	2	4	4	23	23	33	33	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	79	31-40	56		
08:00	0	0	0	5	5	10	10	27	27	19	19	5	5	1	1	0	0	0	0	0	0	0	0	0	0	0	67	31-40	46		
09:00	0	1	1	0	0	4	4	28	28	23	23	7	7	1	1	0	0	0	0	0	0	0	0	0	0	0	64	31-40	51		
10:00	1	2	2	4	4	13	13	17	17	15	15	11	11	2	2	0	0	0	0	0	0	0	0	0	0	0	65	28-37	32		
11:00	0	0	0	5	5	6	6	32	32	31	31	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	84	31-40	63		
12 PM	0	0	0	2	2	5	5	41	41	29	29	11	11	1	1	0	0	0	0	0	0	0	0	0	0	0	89	31-40	70		
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Total	1	4	4	22	22	49	49	204	204	178	178	81	81	8	8	1	1	0	0	0	0	0	0	0	0	0	548				
Percent	0.2%	0.7%	0.7%	4.0%	4.0%	8.9%	8.9%	37.2%	37.2%	32.5%	32.5%	14.8%	14.8%	1.5%	1.5%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
AM Peak	10:00	10:00	10:00	08:00	08:00	10:00	10:00	11:00	11:00	07:00	07:00	07:00	07:00	06:00	06:00	03:00															
Vol.	1	2	2	5	5	13	13	32	32	33	33	17	17	3	3	1											11:00				
PM Peak				12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00												12:00				
Vol.				2	2	5	5	41	41	29	29	11	11	1	1												84				
Total	9	59	59	311	311	877	877	2225	2225	2234	2234	762	762	112	112	16											12:00				
Percent	0.1%	0.9%	0.9%	4.7%	4.7%	13.3%	13.3%	33.7%	33.7%	33.8%	33.8%	11.5%	11.5%	1.7%	1.7%	0.2%											6607				

Stats	10 MPH Pace Speed :	31-40 MPH
Number in Pace :	4459	
Percent in Pace :	67.5%	
Number of Vehicles > 35 MPH :	3126	
Percent of Vehicles > 35 MPH :	47.3%	
Mean Speed(Average) :	35 MPH	

Appendix B

Construction Cost Estimates



ORDER OF MAGNITUDE OPINION OF COST

PROJECT: JOHNSON AVENUE CORRIDOR STUDY	DATE PREPARED:	
LOCATION: JOHNSON AVENUE	BASIS: ConnDOT 2010	
DESCRIPTION: BETWEEN FINCH AVENUE AND SPERRY LANE/CYNROSE PLACE	From Sta.	To Sta.
	LENGTH: 1,800	WIDTH: 24
PROJECT NO.: 20090602.A10	ESTIMATOR: MSR	CHECKED BY: KPC

Since Fuss & O'Neill has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor(s)' methods of determining prices, or over competitive bidding or market conditions, Fuss & O'Neill's opinion of probable Total Project Costs and Construction Cost are made on the basis of Fuss & O'Neill's experience and qualifications and represent Fuss & O'Neill's best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but Fuss & O'Neill cannot and does not guarantee that proposals, bids or actual Total Project or Construction Costs will not vary from opinions of probable cost prepared by Fuss & O'Neill. If prior to the bidding or negotiating Phase the Owner wishes greater assurance as to Total Project or Construction Costs, the Owner shall employ an independent cost estimator.

Item	Est. Quant.	Unit	Unit Price	Total
ROADWAY ITEMS				
Earth Excavation	1830	c.y.	\$25.00	\$45,750
Trench Excavation 0-4' Deep	220	c.y.	\$20.00	\$4,400
Trench Excavation 0-10' Deep	40	c.y.	\$25.00	\$1,000
Rock in Trench Excavation	20	c.y.	\$150.00	\$3,000
Subbase	910	c.y.	\$38.00	\$34,580
Sedimentation Control System	3600	l.f.	\$4.00	\$14,400
Milling of Bituminous Concrete Pavement	1300	s.y.	\$7.50	\$9,750
H.M.A.	1820	ton	\$100.00	\$182,000
Bedding Material	30	c.y.	\$35.00	\$1,050
12" R.C.P.	500	l.f.	\$55.00	\$27,500
6" P.V.C. Underdrain	1450	l.f.	\$30.00	\$43,500
Simple Catch Basin	2	ea.	\$3,000.00	\$6,000
Structure Resetting (Storm and Sanitary)	12	ea.	\$1,000.00	\$12,000
Bituminous Concrete Lip Curbing	3500	l.f.	\$7.00	\$24,500
Concrete Sidewalk	3000	s.f.	\$14.00	\$42,000
Bituminous Concrete Driveway - Residential	400	s.y.	\$40.00	\$16,000
Furnishing and Placing Topsoil	2000	s.y.	\$8.00	\$16,000
Turf Establishment	2000	s.y.	\$3.00	\$6,000
TRAFFIC ITEMS				
Trafficmen - Town (City) Police Officer	480	hr.	\$75.00	\$36,000
Trafficmen - Uniformed Flagger	960	hr.	\$55.00	\$52,800
Contract Items			SUBTOTAL	\$578,200
Clearing and Grubbing Roadway		2.0%		\$11,600
M & P of Traffic		4.0%		\$23,100
Mobilization		7.5%		\$43,400
Construction Staking		1.0%		\$5,800
Minor Items		25.0%		\$144,600
Inflation Factor	0	5.0%		\$0
			CONSTRUCTION TOTALS	\$810,000
CONTINGENCIES		10.0%		\$81,000
INCIDENTALS		30.0%		\$243,000
UTILITIES		15.0%		\$122,000
			TOTAL ESTIMATED COST	\$1,256,000



ORDER OF MAGNITUDE OPINION OF COST

PROJECT: JOHNSON AVENUE CORRIDOR STUDY	DATE PREPARED:	
LOCATION: JOHNSON AVENUE	BASIS: ConnDOT 2010	
DESCRIPTION: BETWEEN SPERRY LANE/CYNROSE PLACE AND SMITHFIELD AVENUE	From Sta.	To Sta.
PROJECT NO.: 20090602.A10	LENGTH: 2,350	WIDTH: 24
	ESTIMATOR: MSR	CHECKED BY: KPC

Since Fuss & O'Neill has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor(s) methods of determining prices, or over competitive bidding or market conditions, Fuss & O'Neill's opinion of probable Total Project Costs and Construction Cost are made on the basis of Fuss & O'Neill's experience and qualifications and represent Fuss & O'Neill's best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but Fuss & O'Neill cannot and does not guarantee that proposals, bids or actual Total Project or Construction Costs will not vary from opinions of probable cost prepared by Fuss & O'Neill. If prior to the bidding or negotiating Phase the Owner wishes greater assurance as to Total Project or Construction Costs, the Owner shall employ an independent cost estimator.

Item	Est. Quant.	Unit	Unit Price	Total
ROADWAY ITEMS				
Earth Excavation	3900	c.y.	\$25.00	\$97,500
Trench Excavation 0-4' Deep	1250	c.y.	\$20.00	\$25,000
Trench Excavation 0-10' Deep	415	c.y.	\$25.00	\$10,375
Rock in Trench Excavation	75	c.y.	\$150.00	\$11,250
Subbase	1850	c.y.	\$38.00	\$70,300
Sedimentation Control System	4700	l.f.	\$4.00	\$18,800
H.M.A.	3420	ton	\$100.00	\$342,000
Bedding Material	190	c.y.	\$35.00	\$6,650
12" R.C.P.	1500	l.f.	\$55.00	\$82,500
15" R.C.P.	900	l.f.	\$65.00	\$58,500
18" R.C.P.	400	l.f.	\$75.00	\$30,000
6" P.V.C. Underdrain	425	l.f.	\$30.00	\$12,750
Simple Catch Basin	18	ea.	\$3,000.00	\$54,000
Double Catch Basin	2	ea.	\$3,500.00	\$7,000
Structure Resetting (Storm and Sanitary)	12	ea.	\$1,000.00	\$12,000
13' x 7' Sedimentation Chamber	1	ea.	\$35,000.00	\$35,000
Bituminous Concrete Lip Curbing	2200	l.f.	\$7.00	\$15,400
Metal Beam Rail (Type R-B 350)	200	l.f.	\$30.00	\$6,000
R-B End Anchorage Type I	4	ea.	\$1,200.00	\$4,800
Concrete Sidewalk	11750	s.f.	\$14.00	\$164,500
Bituminous Concrete Driveway - Residential	900	s.y.	\$40.00	\$36,000
Furnishing and Placing Topsoil	2650	s.y.	\$8.00	\$21,200
Turf Establishment	2650	s.y.	\$3.00	\$7,950
TRAFFIC ITEMS				
Trafficmen - Town (City) Police Officer	640	hr.	\$75.00	\$48,000
Trafficmen - Uniformed Flagger	1280	hr.	\$55.00	\$70,400
Contract Items			SUBTOTAL	\$1,247,900
Clearing and Grubbing Roadway		2.0%		\$25,000
M & P of Traffic		4.0%		\$49,900
Mobilization		7.5%		\$93,600
Construction Staking		1.0%		\$12,500
Minor Items		25.0%		\$312,000
Inflation Factor	0	5.0%		\$0
			CONSTRUCTION TOTALS	\$1,740,000
CONTINGENCIES		10.0%		\$174,000
INCIDENTALS		25.0%		\$435,000
UTILITIES		15.0%		\$261,000
			TOTAL ESTIMATED COST	\$2,610,000



ORDER OF MAGNITUDE OPINION OF COST

PROJECT: JOHNSON AVENUE CORRIDOR STUDY	DATE PREPARED:	
LOCATION: JOHNSON AVENUE	BASIS: ConnDOT 2010	
DESCRIPTION: BETWEEN SMITHFIELD AVENUE TO FAIRFAX AVENUE	From Sta.	To Sta.
	LENGTH: 1,800	WIDTH: 24
PROJECT NO.: 20090602.A10	ESTIMATOR: MSR	CHECKED BY: KPC

Since Fuss & O'Neill has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor(s)' methods of determining prices, or over competitive bidding or market conditions, Fuss & O'Neill's opinion of probable Total Project Costs and Construction Cost are made on the basis of Fuss & O'Neill's experience and qualifications and represent Fuss & O'Neill's best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but Fuss & O'Neill cannot and does not guarantee that proposals, bids or actual Total Project or Construction Costs will not vary from opinions of probable cost prepared by Fuss & O'Neill. If prior to the bidding or negotiating Phase the Owner wishes greater assurance as to Total Project or Construction Costs, the Owner shall employ an independent cost estimator.

Item	Est. Quant.	Unit	Unit Price	Total
ROADWAY ITEMS				
Earth Excavation	3150	c.y.	\$25.00	\$78,750
Trench Excavation 0-4' Deep	300	c.y.	\$20.00	\$6,000
Trench Excavation 0-10' Deep	120	c.y.	\$25.00	\$3,000
Rock in Trench Excavation	25	c.y.	\$150.00	\$3,750
Subbase	1400	c.y.	\$38.00	\$53,200
Sedimentation Control System	3600	l.f.	\$4.00	\$14,400
H.M.A.	2650	ton	\$100.00	\$265,000
Bedding Material	45	c.y.	\$35.00	\$1,575
12" R.C.P.	700	l.f.	\$55.00	\$38,500
6" P.V.C. Underdrain	600	l.f.	\$30.00	\$18,000
Simple Catch Basin	6	ea.	\$3,000.00	\$18,000
Structure Resetting (Storm and Sanitary)	20	ea.	\$1,000.00	\$20,000
Bituminous Concrete Lip Curbing	3100	l.f.	\$7.00	\$21,700
Concrete Sidewalk	8250	s.f.	\$14.00	\$115,500
Bituminous Concrete Driveway - Residential	775	s.y.	\$40.00	\$31,000
Furnishing and Placing Topsoil	2000	s.y.	\$8.00	\$16,000
Turf Establishment	2000	s.y.	\$3.00	\$6,000
STRUCTURE ITEMS				
Retaining Wall (Concrete) - Cast-in-Place Concrete	1300	s.f.	\$55.00	\$71,500
TRAFFIC ITEMS				
Trafficmen - Town (City) Police Officer	800	hr.	\$75.00	\$60,000
Trafficmen - Uniformed Flagger	1600	hr.	\$55.00	\$88,000
Contract Items			SUBTOTAL	\$929,900
Clearing and Grubbing Roadway		2.0%		\$18,600
M & P of Traffic		4.0%		\$37,200
Mobilization		7.5%		\$69,700
Construction Staking		1.0%		\$9,300
Minor Items		25.0%		\$232,500
Inflation Factor	0	5.0%		\$0
			CONSTRUCTION TOTALS	\$1,300,000
CONTINGENCIES		10.0%		\$130,000
INCIDENTALS		25.0%		\$325,000
UTILITIES		15.0%		\$195,000
			TOTAL ESTIMATED COST	\$1,950,000



ORDER OF MAGNITUDE OPINION OF COST

PROJECT: JOHNSON AVENUE CORRIDOR STUDY	DATE PREPARED:	
LOCATION: JOHNSON AVENUE	BASIS: ConnDOT 2010	
DESCRIPTION: BETWEEN FAIRFAX AVENUE TO WEST MAIN STREET	From Sta.	To Sta.
	LENGTH: 1,050	WIDTH: 24
PROJECT NO.: 20090602.A10	ESTIMATOR: MSR	CHECKED BY: KPC

Since Fuss & O'Neill has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor(s) methods of determining prices, or over competitive bidding or market conditions, Fuss & O'Neill's opinion of probable Total Project Costs and Construction Cost are made on the basis of Fuss & O'Neill's experience and qualifications and represent Fuss & O'Neill's best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but Fuss & O'Neill cannot and does not guarantee that proposals, bids or actual Total Project or Construction Costs will not vary from opinions of probable cost prepared by Fuss & O'Neill. If prior to the bidding or negotiating Phase the Owner wishes greater assurance as to Total Project or Construction Costs, the Owner shall employ an independent cost estimator.

Item	Est. Quant.	Unit	Unit Price	Total
ROADWAY ITEMS				
Earth Excavation	2060	c.y.	\$25.00	\$51,500
Trench Excavation 0-4' Deep	25	c.y.	\$20.00	\$500
Trench Excavation 0-10' Deep	40	c.y.	\$25.00	\$1,000
Rock in Trench Excavation	10	c.y.	\$150.00	\$1,500
Subbase	960	c.y.	\$38.00	\$36,480
Sedimentation Control System	2100	l.f.	\$4.00	\$8,400
H.M.A.	1800	ton	\$100.00	\$180,000
Bedding Material	5	c.y.	\$35.00	\$175
12" R.C.P.	50	l.f.	\$55.00	\$2,750
6" P.V.C. Underdrain	550	l.f.	\$30.00	\$16,500
Simple Catch Basin	2	ea.	\$3,000.00	\$6,000
Structure Resetting (Storm and Sanitary)	17	ea.	\$1,000.00	\$17,000
Bituminous Concrete Lip Curbing	1400	l.f.	\$7.00	\$9,800
Concrete Curbing	300	l.f.	\$35.00	\$10,500
Concrete Sidewalk	6000	s.f.	\$14.00	\$84,000
Bituminous Concrete Driveway - Residential	340	s.y.	\$40.00	\$13,600
Furnishing and Placing Topsoil	1200	s.y.	\$8.00	\$9,600
Turf Establishment	1200	s.y.	\$3.00	\$3,600
TRAFFIC ITEMS				
Trafficmen - Town (City) Police Officer	480	hr.	\$75.00	\$36,000
Trafficmen - Uniformed Flagger	960	hr.	\$55.00	\$52,800
Contract Items			SUBTOTAL	\$541,700
Clearing and Grubbing Roadway		2.0%		\$10,800
M & P of Traffic		4.0%		\$21,700
Mobilization		7.5%		\$40,600
Construction Staking		1.0%		\$5,400
Minor Items		25.0%		\$135,400
Inflation Factor	0	5.0%		\$0
			CONSTRUCTION TOTALS	\$760,000
CONTINGENCIES		10.0%		\$76,000
INCIDENTALS		30.0%		\$228,000
UTILITIES		15.0%		\$114,000
			TOTAL ESTIMATED COST	\$1,178,000