YOUR GOALS. OUR MISSION.

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Parkside Avenue and Calvin Terrace
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Parkside Avenue and Calvin Terrace to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Parkside Avenue

Parkside Avenue is a local roadway with a general east-west orientation under the jurisdiction of West Orange Township and spans approximately 250 feet from Calvin Terrace to Valley Way. There are no posted speed limit signs on Parkside Avenue – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 24 feet wide and accommodates two-way traffic and parking on both sides. Other than crosswalk, double yellow, and stop bar striping at the intersection of Parkside Avenue & Valley Way, no pavement markings are present on the roadway. Land uses along Parkside Avenue are residential in nature.

Calvin Terrace

Calvin Terrace is a roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 700 feet from Eagle Rock Avenue (CR 611). There are no posted speed limit signs on Calvin Terrace – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Other than crosswalk, double yellow, and stop bar striping at the intersection of Calvin Terrace & Eagle Rock Avenue (CR 611), no pavement markings are present on the roadway. Land uses along Calvin Terrace are residential in nature.

The intersection of Parkside Avenue and Calvin Terrace is uncontrolled 'T' style intersection. Pavement markings are not present at the intersection, however the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

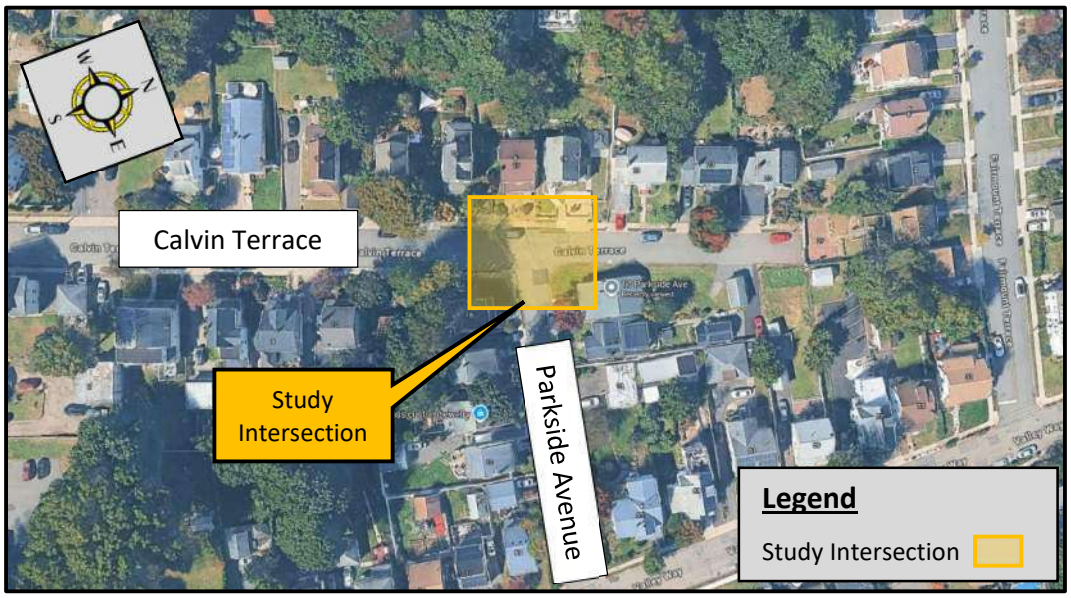


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. The crash history from January 1, 2019 to August 1, 2026 is shown in **Table 1** below:

DATE	STREET	CROSS STREET	TYPE	CIRCUMSTANCE
12/21/19	Calvin Terrace	Parkside Avenue	Struck Parked Vehicle	Driver Inattention
12/7/24	Calvin Terrace	Parkside Avenue	Fixed Object	Unsafe Speed

Based upon the crash data provided, we observe that two (2) incidents were reported at the study intersection on 12/21/19 and 12/7/24. The incident on 12/21/19 was contributed to driver inattention and the incident on 12/7/24 was contributed to speeding.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are generally clear. A photo of the intersection is provided below in **Figure 2**.



Figure 2: Calvin Terrace & Parkside Avenue

Analysis and Recommendations

It is our recommendation that stop control be implemented along the westbound, Parkside Avenue approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation and proper sight lines are present.



Figure 3: Calvin Terrace & Parkside Avenue STOP Sign Installation

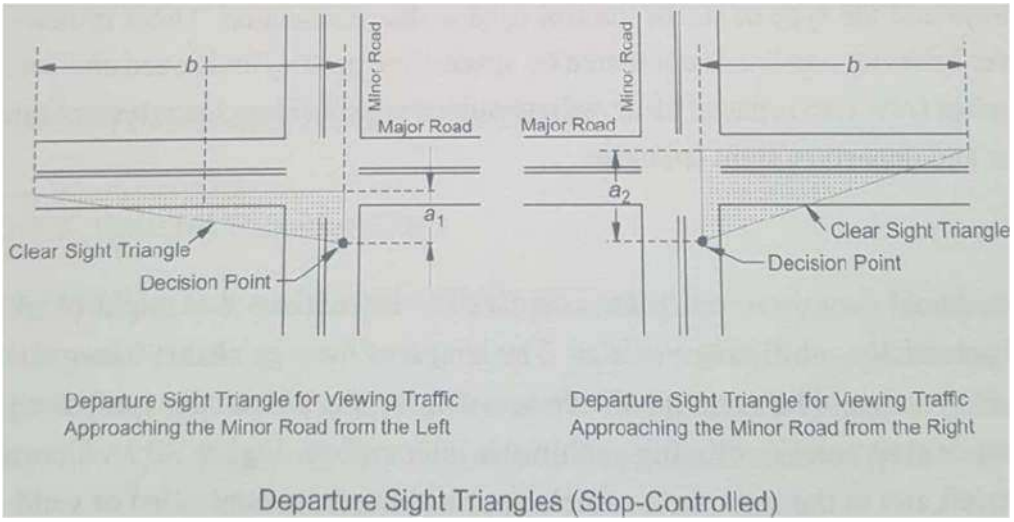


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the westbound, Parkside Avenue approach at the intersection of Parkside Avenue and Calvin Terrace. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Carolina Avenue & Shelley Terrace
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Carolina Avenue & Shelley Terrace to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Carolina Avenue

Carolina Avenue is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 1,100 feet from Shelley Terrace to NJ Route 10. There are no posted speed limit signs on Carolina Avenue – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Crosswalk, double yellow, and stop bar striping are present at various locations on the roadway. Land uses along Carolina Avenue are residential in nature.

Shelley Terrace

Shelley Terrace is a local roadway with a general east/west orientation under the jurisdiction of West Orange Township and spans approximately 1,000 feet from Roosevelt Avenue. There are no posted speed limit signs on Shelley Terrace – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Crosswalk, double yellow, and stop bar striping are present at various locations on the roadway. Land uses along Shelley Terrace are residential in nature.

The intersection of Carolina Avenue & Shelley Terrace is uncontrolled 'T' style intersection. Other than the crosswalk striping across Carolina Avenue, no pavement markings are present at the intersection. However, the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

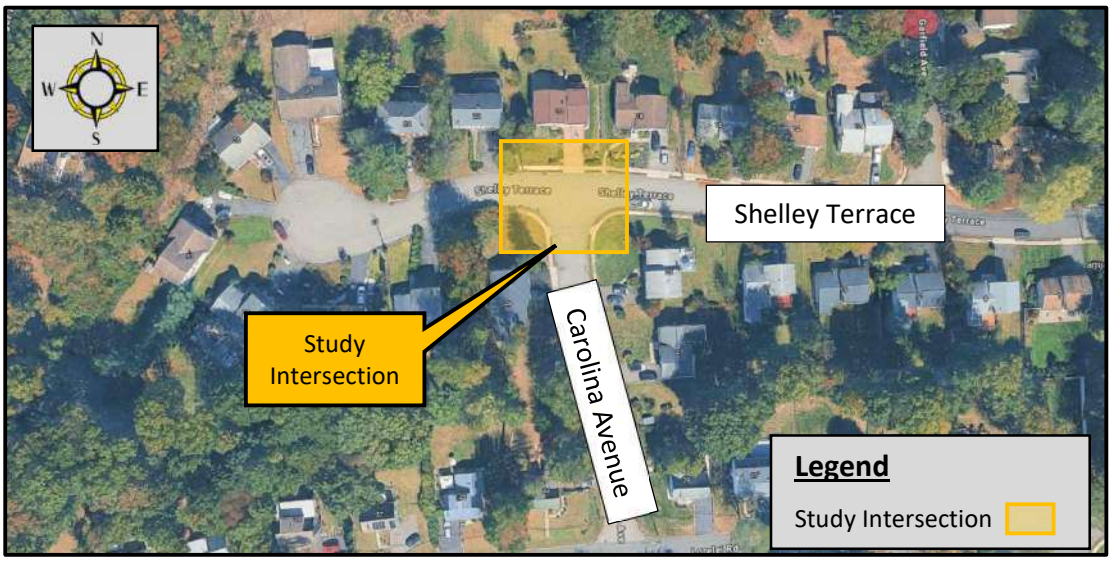


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. Based on the Numetrics database, there have been no vehicular crashes at the intersection of Carolina Avenue & Shelley Terrace from January 1, 2019 to August 1, 2026.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are generally clear. A photo of the intersection is provided below in **Figure 2**.



Figure 2: Shelley Terrace & Carolina Avenue

Analysis and Recommendations

It is our recommendation that stop control be implemented along the northbound, Carolina Avenue approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation and proper sight lines are present.



Figure 3: Shelley Terrace & Carolina Avenue STOP Sign Installation

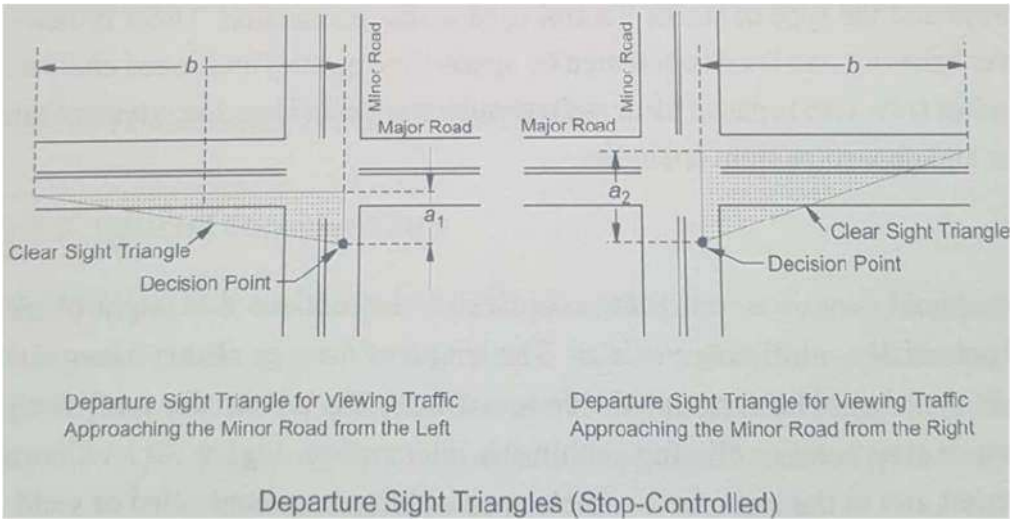


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the northbound, Carolina Avenue approach at the intersection of Carolina Avenue & Shelley Terrace. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Westover Terrace and Hunterdon Road
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Westover Terrace and Hunterdon Road to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Westover Terrace

Westover Terrace is a local roadway with a general east-west orientation under the jurisdiction of West Orange Township and spans approximately 900 feet from Merkin Avenue to Crestmont Road. There are no posted speed limit signs on Westover Terrace – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Westover Terrace are residential in nature.

Hunterdon Road

Hunterdon Road is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 1,900 feet from Warren Road to Westover Terrace. There are no posted speed limit signs on Hunterdon Road – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Hunterdon Road are residential in nature.

The intersection of Westover Terrace and Hunterdon Road is uncontrolled 'T' style intersection. A stop bar and double yellow striping are present on the Westover Terrace approach to the intersection and the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

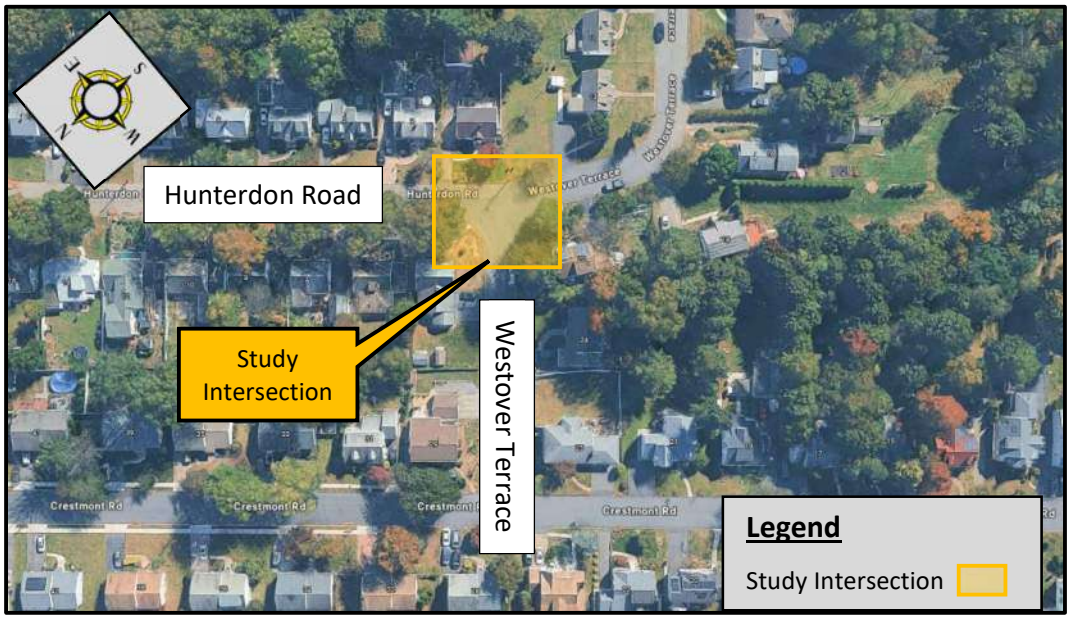


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. The crash history from January 1, 2019 to August 1, 2026 is shown in **Table 1** below:

DATE	STREET	CROSS STREET	TYPE	CIRCUMSTANCE
7/10/19	Hunterdon Road	Westover Terrace	Struck Parked Vehicle	Backing Unsafely

Based upon the crash data provided, we observe that one (1) incident was reported at the study intersection on 7/10/19. The incident was not contributed to speeding but backing unsafely.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are obstructed due to overgrown foliage. A photo of the intersection is provided below in **Figure 2.**



Figure 2: Hunterdon Road & Westover Terrace

Analysis and Recommendations

It is our recommendation that stop control be implemented along the eastbound, Westover Terrace approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation.



Figure 3: Hunterdon Road & Westover Terrace STOP Sign Installation

Sight Distance Improvements - At the intersection of Westover Terrace and Hunterdon Road, the line of sight of approaching vehicles was found to be obstructed. We observed that if vehicles stop closer to the mainline on Hunterdon Road, then they would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Hunterdon Road.

It is our opinion that sight distance at the intersection can be improved by trimming trees and overgrown foliage within the sight triangles. We recommend that the Township coordinate with residents, as reasonable, to remove sight obstructions consistent with **Figure 4** below.

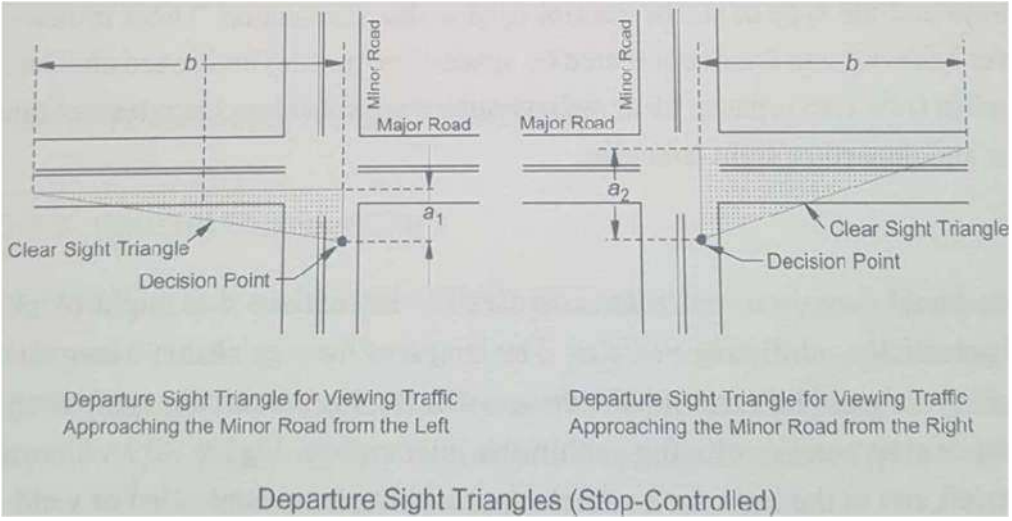


Figure 4: Intersection Sight Distance

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the eastbound, Westover Terrace approach at the intersection of Westover Terrace and Hunterdon Road. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
King Road & Crestmont Road
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of King Road & Crestmont Road to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

King Road

King Road is a local roadway with a general east/west orientation under the jurisdiction of West Orange Township and spans approximately 550 feet between Crestmont Road and Warren Road. There are no posted speed limit signs on King Road – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Crosswalk, double yellow, and stop bar striping are present at various locations on the roadway. Land uses along King Road are residential in nature.

Crestmont Road

Crestmont Road is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 0.5 miles between NJ Route 10 and Warren Road. There are no posted speed limit signs on Crestmont Road – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 28 feet wide and accommodates two-way traffic and parking on both sides. Crosswalk, double yellow, and stop bar striping are present at various locations along on the roadway. Land uses along Crestmont Road are residential in nature.

The intersection of King Road & Crestmont Road is uncontrolled 'T' style intersection. Other than the crosswalk striping across King Road, no pavement markings are present at the intersection. However, the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

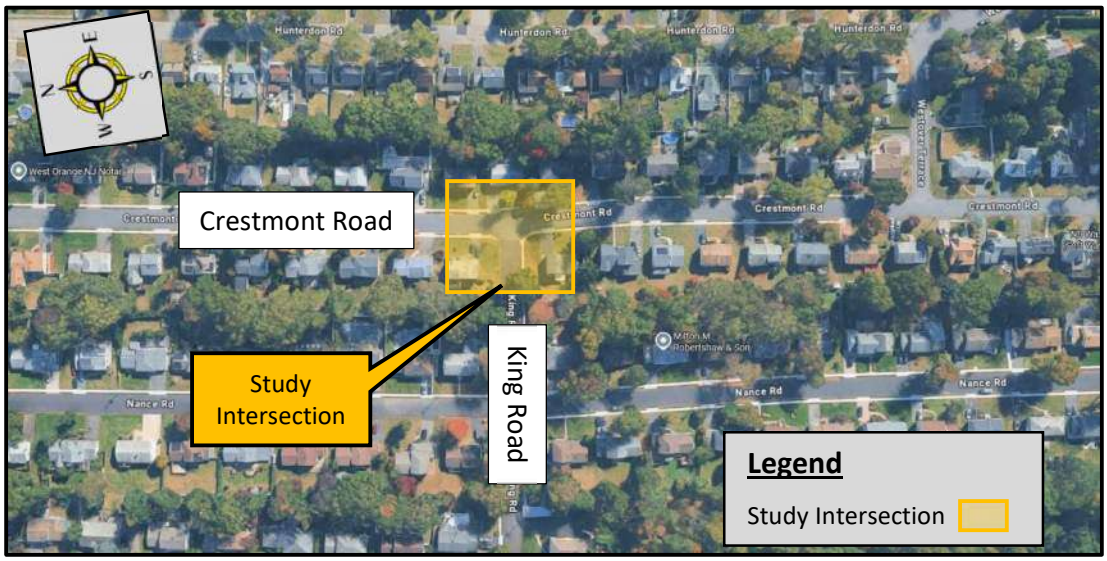


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. Based on the Numetrics database, there have been no vehicular crashes at the intersection of King Road & Crestmont Road from January 1, 2019 to August 1, 2026.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are generally clear. A photo of the intersection is provided below in **Figure 2**.



Figure 2: Crestmont Road & King Road

Analysis and Recommendations

It is our recommendation that stop control be implemented along the eastbound, King Road approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation and proper sight lines are present.



Figure 3: Crestmont Road & King Road STOP Sign Installation

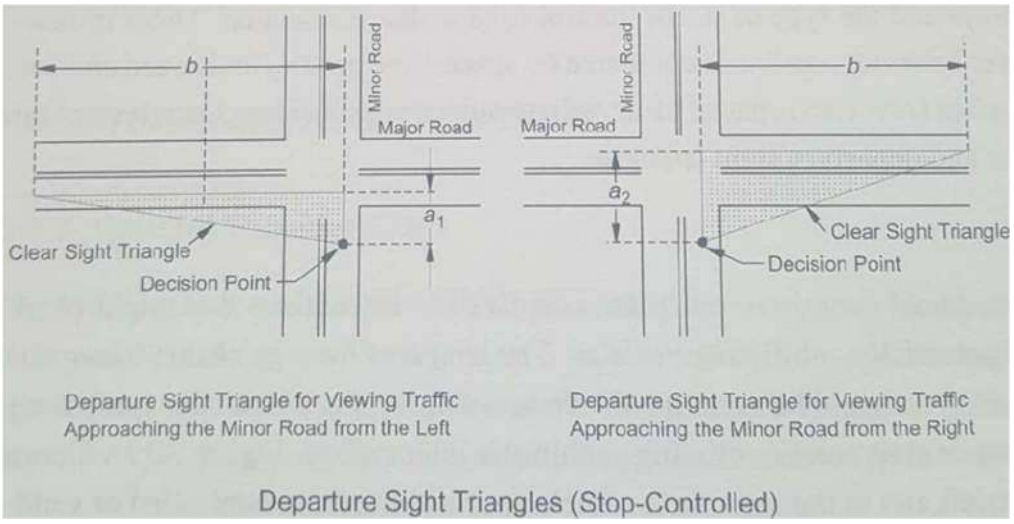


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the eastbound, King Road approach at the intersection of King Road & Crestmont Road. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Manger Road & McGuire Drive
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Manger Road & McGuire Drive to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Manger Road

Manger Road is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 0.7 miles from McGuire Drive to Ellison Avenue. The posted speed limit along Manger Road is 25 mph and the roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Crosswalk, double yellow, and stop bar striping are present at various locations on the roadway. Land uses along Manger Road are residential in nature.

McGuire Drive

McGuire Drive is a local roadway with a general east/west orientation under the jurisdiction of West Orange Township and spans approximately 1,900 feet from Colonial Woods Drive. There are no posted speed limit signs on McGuire Drive – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along McGuire Drive are residential in nature.

The intersection of Manger Road & McGuire Drive is uncontrolled 'T' style intersection. Other than the crosswalk striping across Manger Road, no pavement markings are present at the intersection. However, the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

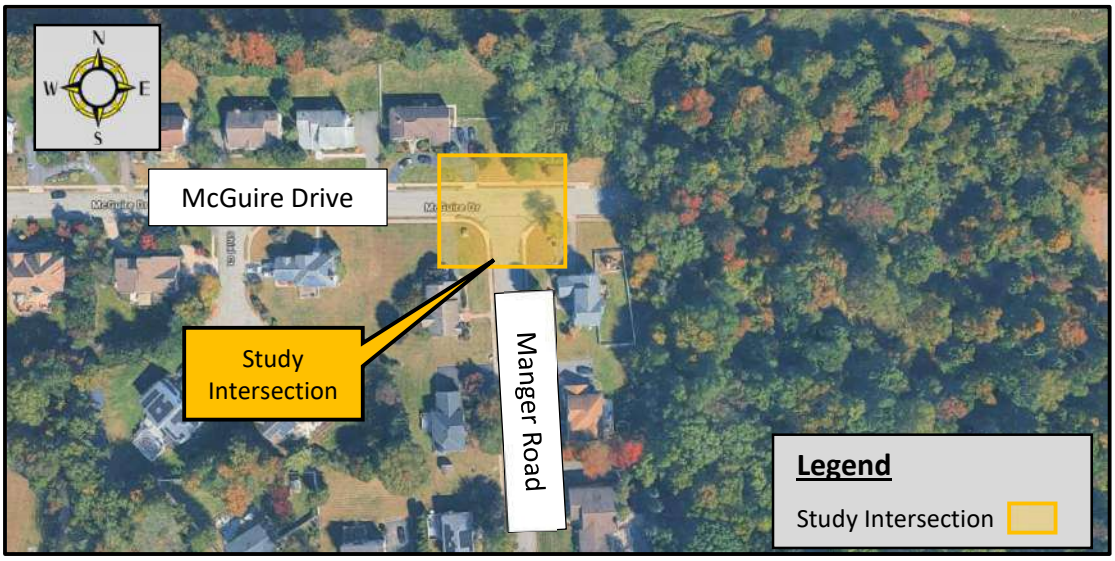


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. Based on the Numetrics database, there have been no vehicular crashes at the intersection of Manger Road & McGuire Drive from January 1, 2019 to August 1, 2026.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are generally clear. A photo of the intersection is provided below in **Figure 2**.



Figure 2: McGuire Drive & Manger Road

Analysis and Recommendations

It is our recommendation that stop control be implemented along the northbound, Manger Road approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation and proper sight lines are present.



Figure 3: McGuire Drive & Manger Road STOP Sign Installation

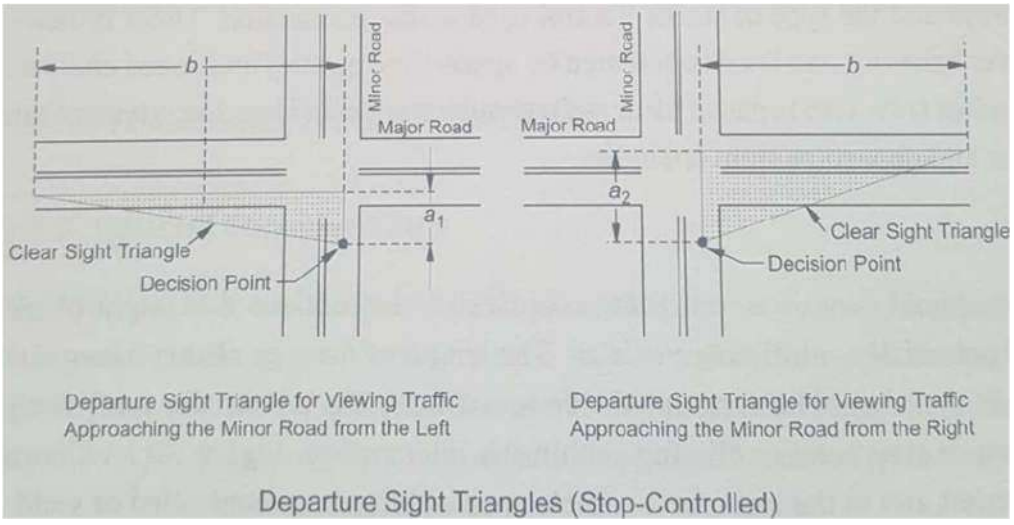


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the northbound, Manger Road approach at the intersection of Manger Road & McGuire Drive. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Quarry Terrace and Wakeman Street
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Quarry Terrace and Wakeman Street to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Quarry Terrace

Quarry Terrace is a local roadway with a general east-west orientation under the jurisdiction of West Orange Township and spans approximately 750 feet from Wakeman Street. There are no posted speed limit signs on Quarry Terrace – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Quarry Terrace are residential in nature.

Wakeman Street

Wakeman Street is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 650 feet from Eagle Rock Avenue (CR 611). There are no posted speed limit signs on Wakeman Street – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Wakeman Street are residential in nature.

The intersection of Quarry Terrace and Wakeman Street is uncontrolled 'T' style intersection. Pavement markings are not present at the intersection, however the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

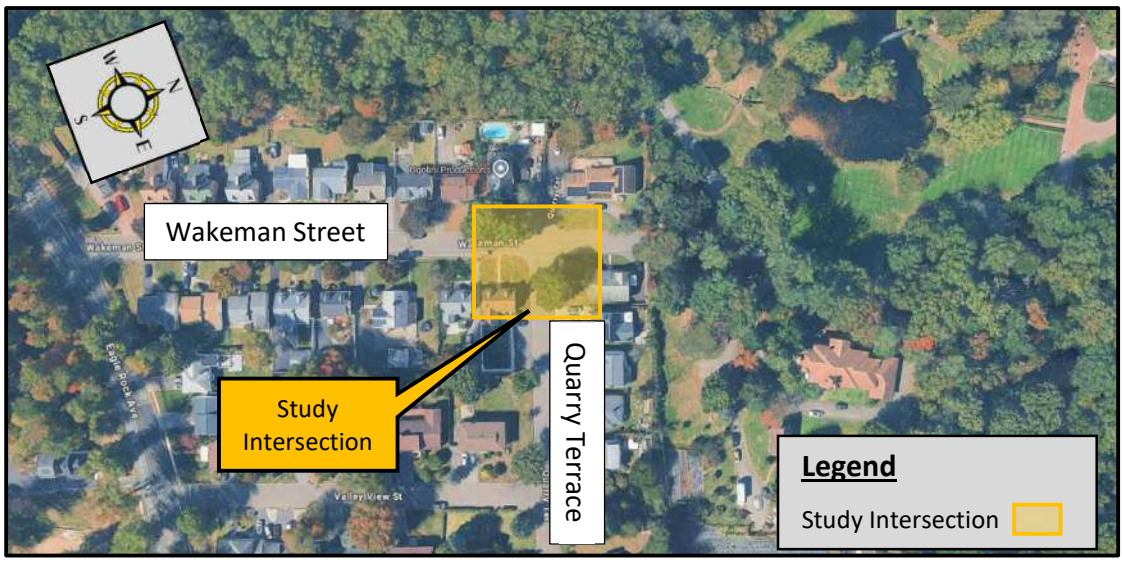


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. The crash history from January 1, 2019 to August 1, 2026 is shown in **Table 1** below:

DATE	STREET	CROSS STREET	TYPE	CIRCUMSTANCE
3/11/25	Wakeman Street	Quarry Terrace	Fixed Object	Driver Inattention

Based upon the crash data provided, we observe that one (1) incident was reported at the study intersection on 3/11/25. The incident was not contributed to speeding but driver inattention.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are generally clear. A photo of the intersection is provided below in **Figure 2**.



Figure 2: Wakeman Street & Quarry Terrace

Analysis and Recommendations

It is our recommendation that stop control be implemented along the westbound, Quarry Terrace approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation and proper sight lines are present.



Figure 3: Wakeman Street & Quarry Terrace STOP Sign Installation

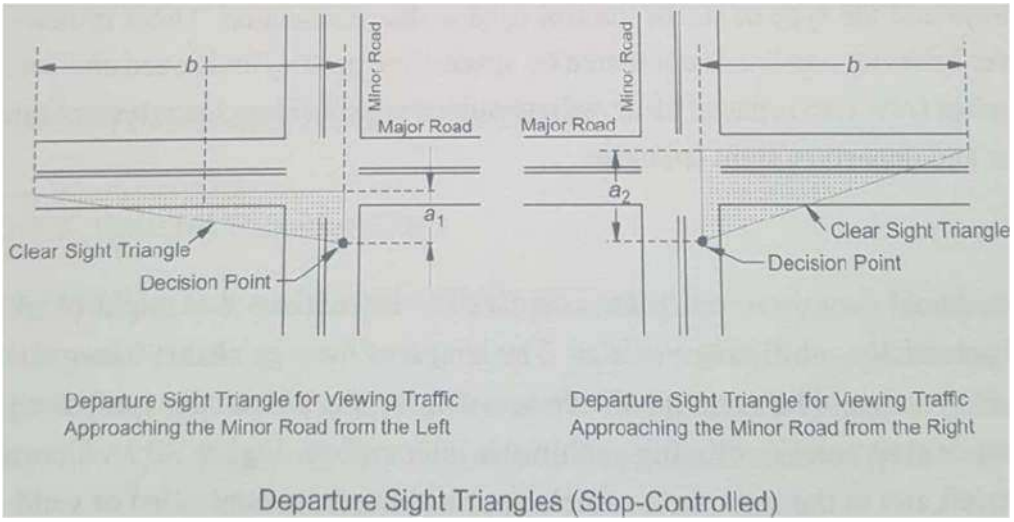


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the westbound, Quarry Terrace approach at the intersection of Quarry Terrace and Wakeman Street. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Ralph Road & Manger Road
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Ralph Road & Manger Road to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Ralph Road

Ralph Road is a local roadway with a general east/west orientation under the jurisdiction of West Orange Township and spans approximately 0.5 miles and intersects Manger Road at two locations. There are no posted speed limit signs on Ralph Road – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Crosswalk, double yellow, and stop bar striping are present at various locations on the roadway. Land uses along Ralph Road are residential in nature.

Manger Road

Manger Road is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 0.7 miles from McGuire Drive to Ellison Avenue. The posted speed limit along Manger Road is 25 mph and the roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Crosswalk, double yellow, and stop bar striping are present at various locations on the roadway. Land uses along Manger Road are residential in nature.

The intersection of Ralph Road & Manger Road is uncontrolled 'T' style intersection. Other than the crosswalk striping across Ralph Road, no pavement markings are present at the intersection. However, the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

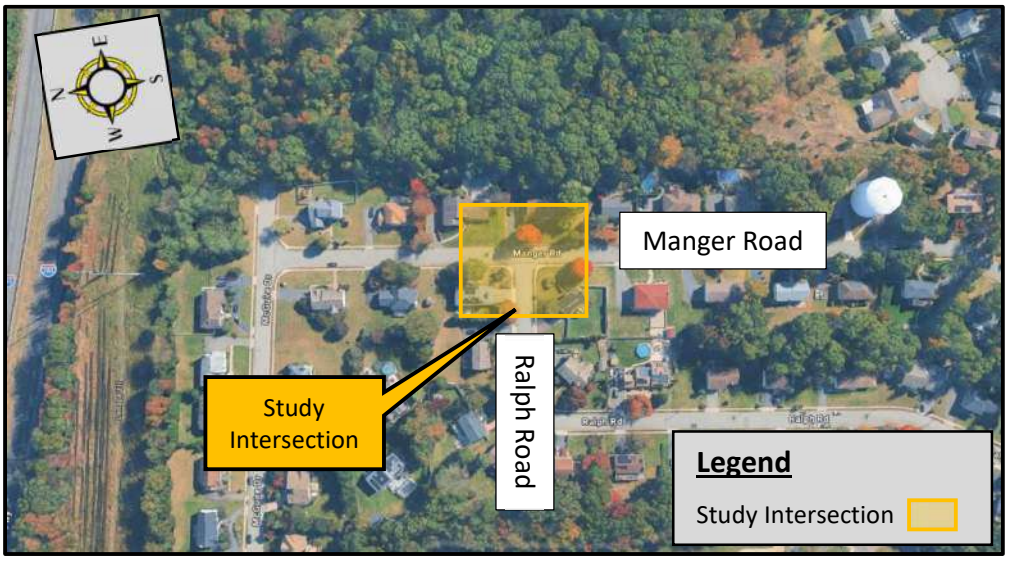


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. Based on the Numetrics database, there have been no vehicular crashes at the intersection of Ralph Road & Manger Road from January 1, 2019 to August 1, 2026.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are generally clear. A photo of the intersection is provided below in **Figure 2**.



Figure 2: Manger Road & Ralph Road

Analysis and Recommendations

It is our recommendation that stop control be implemented along the eastbound, Ralph Road approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation and proper sight lines are present.



Figure 3: Manger Road & Ralph Road STOP Sign Installation

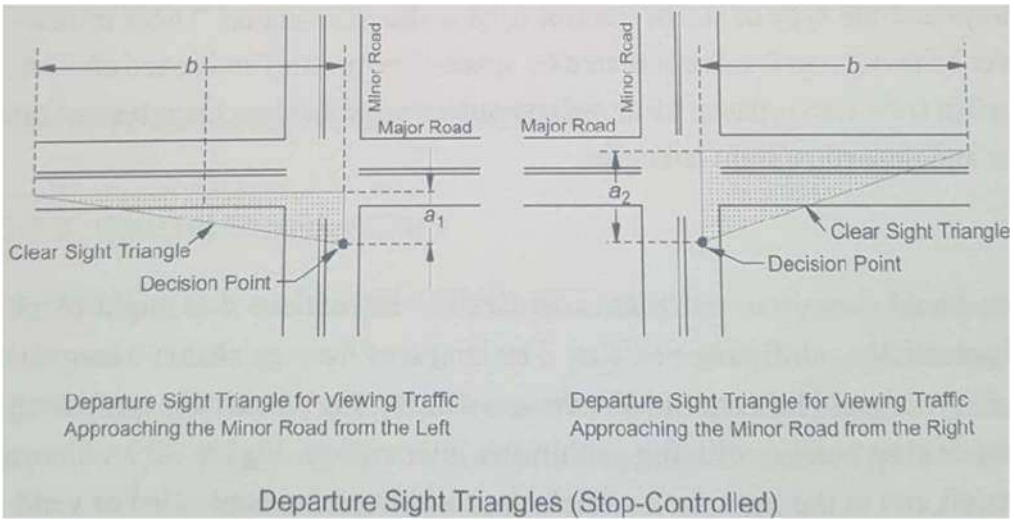


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the eastbound, Ralph Road approach at the intersection of Ralph Road & Manger Road. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Ridgeview Avenue and Clonavor Road
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Ridgeview Avenue and Clonavor Road to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Ridgeview Avenue

Ridgeview Avenue is a local roadway with a general east/west orientation under the jurisdiction of West Orange Township and spans approximately 1,200 feet from Overlook Avenue to South Valley Road. There are no posted speed limit signs on Ridgeview Avenue – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 27 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Ridgeview Avenue are residential in nature.

Clonavor Road

Clonavor Road is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 1,200 feet between Ridgeview Avenue and Silver Spring Road. There are no posted speed limit signs on Clonavor Road – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Clonavor Road are residential in nature.

The intersection of Ridgeview Avenue and Clonavor Road is uncontrolled 'T' style intersection. Pavement markings are not present at the intersection, however the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

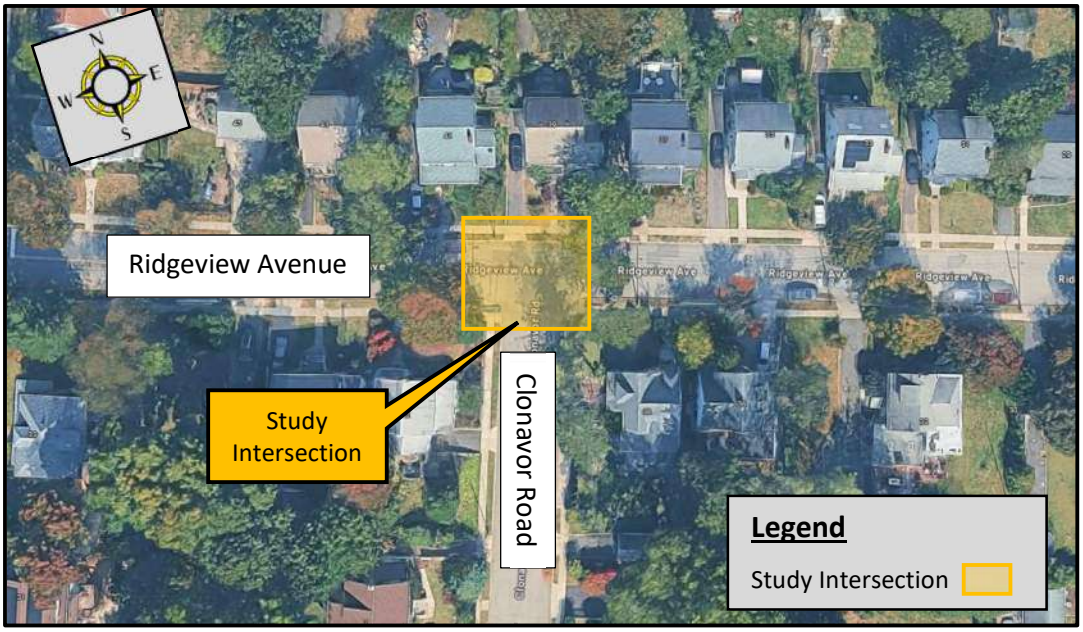


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. Based on the Numetrics database, there have been no vehicular crashes at the intersection of Ridgeview Avenue and Clonavor Road from January 1, 2019 to August 1, 2026.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are obstructed due to overgrown foliage. A photo of the intersection is provided below in **Figure 2.**



Figure 2: Ridgeview Avenue & Clonavor Road

Analysis and Recommendations

It is our recommendation that stop control be implemented along the northbound, Clonavor Road approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements - At the intersection of Ridgeview Avenue and Clonavor Road, the line of sight of approaching vehicles was found to be obstructed. We observed that if vehicles stop closer to the mainline on Ridgeview Avenue, then they would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Ridgeview Avenue.

It is our opinion that sight distance at the intersection can be improved by trimming trees and overgrown foliage within the sight triangles as indicated in **Figure 4** below.

We recommend that the Township coordinate with residents, as reasonable, to remove sight obstructions. It is our recommendation that stop control be implemented along the northbound, Clonavor Road approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation.



Figure 3: Ridgeview Avenue & Clonavor Road STOP Sign Installation

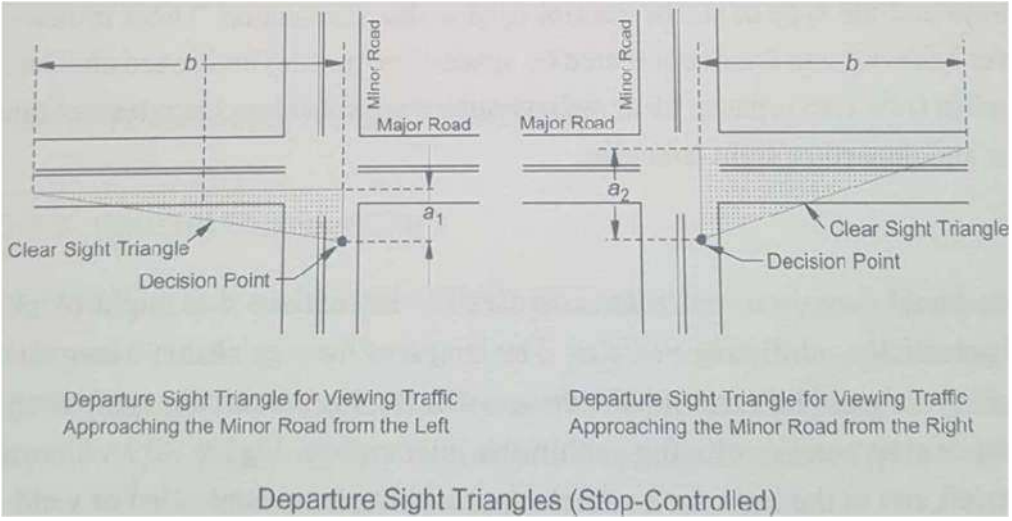


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the northbound, Clonavor Road approach at the intersection of Ridgeview Avenue and Clonavor Road. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Garfield Avenue and Shelley Terrace
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Garfield Avenue and Shelley Terrace to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Garfield Avenue

Garfield Avenue is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 300 feet from Shelley Terrace. There are no posted speed limit signs on Garfield Avenue – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Garfield Avenue are residential in nature.

Shelley Terrace

Shelley Terrace is a local roadway with a general east/west orientation under the jurisdiction of West Orange Township and spans approximately 1,000 feet from Roosevelt Avenue. There are no posted speed limit signs on Shelley Terrace – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Crosswalk, double yellow, and stop bar striping are present at various locations on the roadway. Land uses along Shelley Terrace are residential in nature.

The intersection of Garfield Avenue and Shelley Terrace is uncontrolled 'T' style intersection. Other than the crosswalk striping across Garfield Avenue, no pavement markings are present at the intersection. However, the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

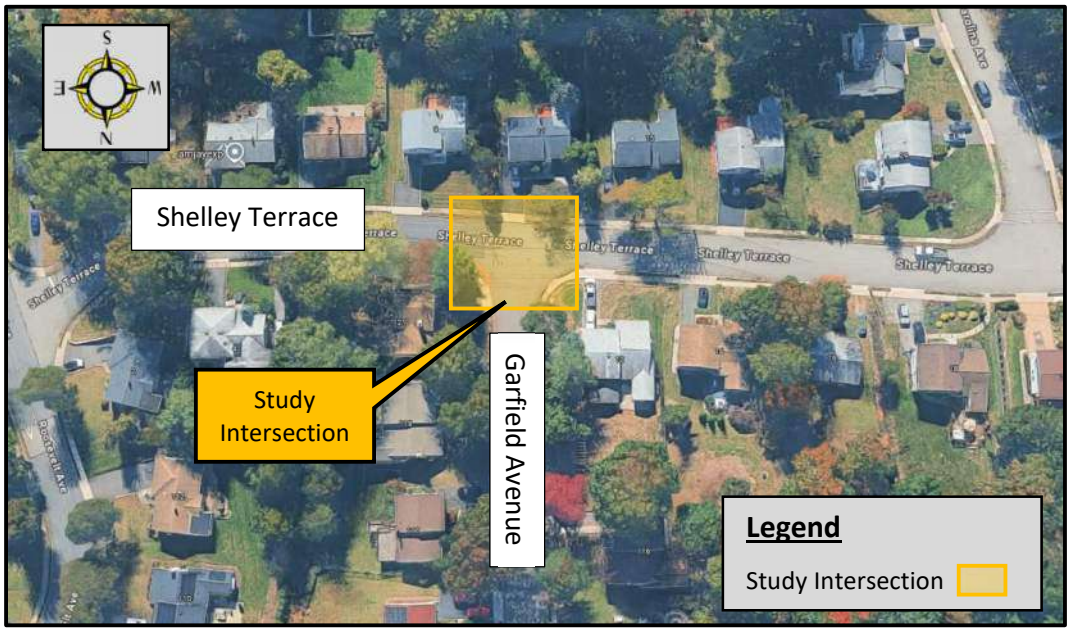


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. Based on the Numetrics database, there have been no vehicular crashes at the intersection of Garfield Avenue and Shelley Terrace from January 1, 2019 to August 1, 2026.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are obstructed due to overgrown foliage. A photo of the intersection is provided below in **Figure 2.**



Figure 2: Shelley Terrace & Garfield Avenue

Analysis and Recommendations

It is our recommendation that stop control be implemented along the southbound, Garfield Avenue approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements - At the intersection of Garfield Avenue and Shelley Terrace, the line of sight of approaching vehicles was found to be obstructed. We observed that if vehicles stop closer to the mainline on Shelley Terrace, then they would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Shelley Terrace.

It is our opinion that sight distance at the intersection can be improved by trimming trees and overgrown foliage within the sight triangles. We recommend that the Township coordinate with residents, as reasonable, to remove sight obstructions. It is our recommendation that stop control be implemented along the southbound, Garfield Avenue approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation.



Figure 3: Shelley Terrace & Garfield Avenue STOP Sign Installation

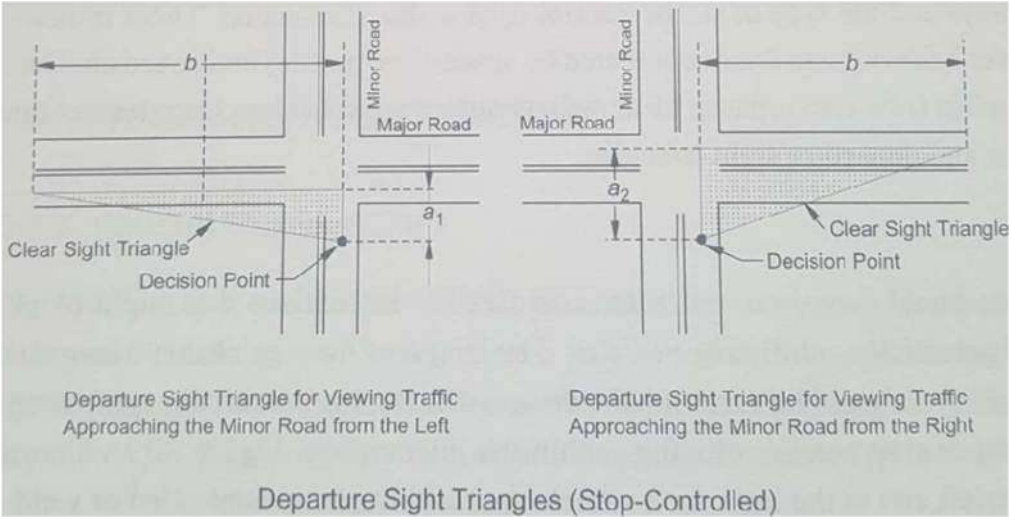


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the southbound, Garfield Avenue approach at the intersection of Garfield Avenue and Shelley Terrace. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Shiel Court & McGuire Drive
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Shiel Court & McGuire Drive to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Shiel Court

Shiel Court is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 150 feet from McGuire Drive. There are no posted speed limit signs on McGuire Drive – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Shiel Court are residential in nature.

McGuire Drive

McGuire Drive is a local roadway with a general east/west orientation under the jurisdiction of West Orange Township and spans approximately 1,900 feet from Colonial Woods Drive. There are no posted speed limit signs on McGuire Drive – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along McGuire Drive are residential in nature.

The intersection of Shiel Court & McGuire Drive is uncontrolled 'T' style intersection. Pavement markings are not present at the intersection, however the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

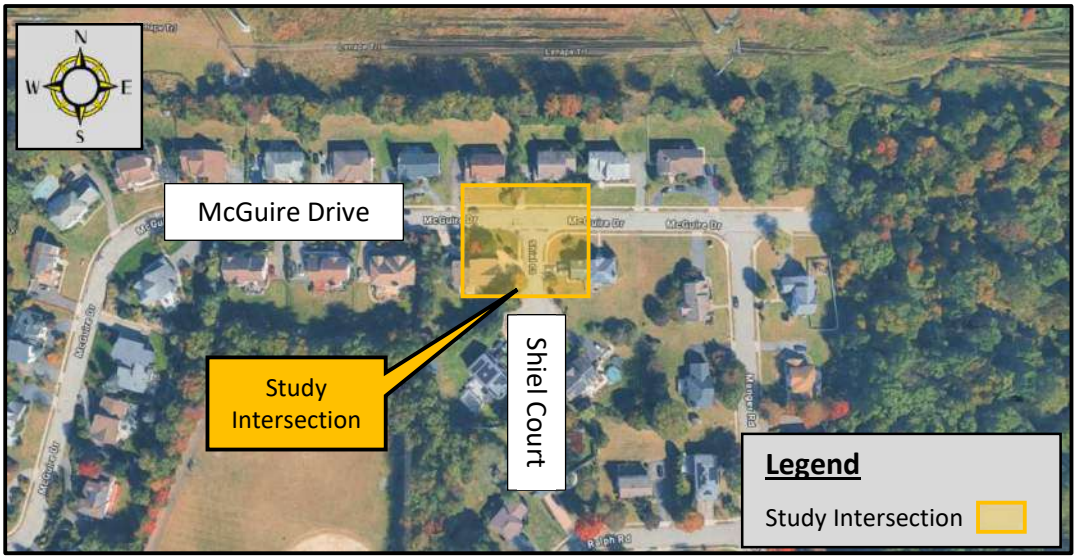


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. Based on the Numetrics database, there have been no vehicular crashes at the intersection of Shiel Court & McGuire Drive from January 1, 2019 to August 1, 2026.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are generally clear. A photo of the intersection is provided below in **Figure 2**.



Figure 2: McGuire Drive & Shiel Court

Analysis and Recommendations

It is our recommendation that stop control be implemented along the northbound, Shiel Court approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation and proper sight lines are present.



Figure 3: McGuire Drive & Shiel Court STOP Sign Installation

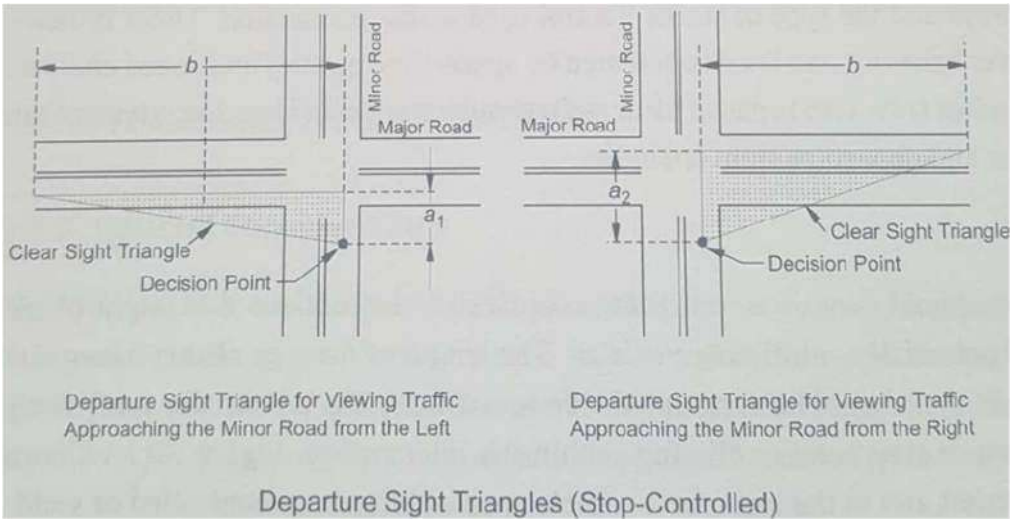


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the northbound, Shiel Court approach at the intersection of Shiel Court & McGuire Drive. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Silver Spring Road and Clonavor Road
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Silver Spring Road and Clonavor Road to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Silver Spring Road

Silver Spring Road is a local roadway with a general east/west orientation under the jurisdiction of West Orange Township and spans approximately 900 feet from Clonavor Road to South Valley Road. There are no posted speed limit signs on Silver Spring Road – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Silver Spring Road are residential in nature.

Clonavor Road

Clonavor Road is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 1,200 feet between Ridgeview Avenue and Silver Spring Road. There are no posted speed limit signs on Clonavor Road – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Clonavor Road are residential in nature.

The intersection of Silver Spring Road and Clonavor Road is uncontrolled 'T' style intersection. Pavement markings are not present at the intersection, however the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

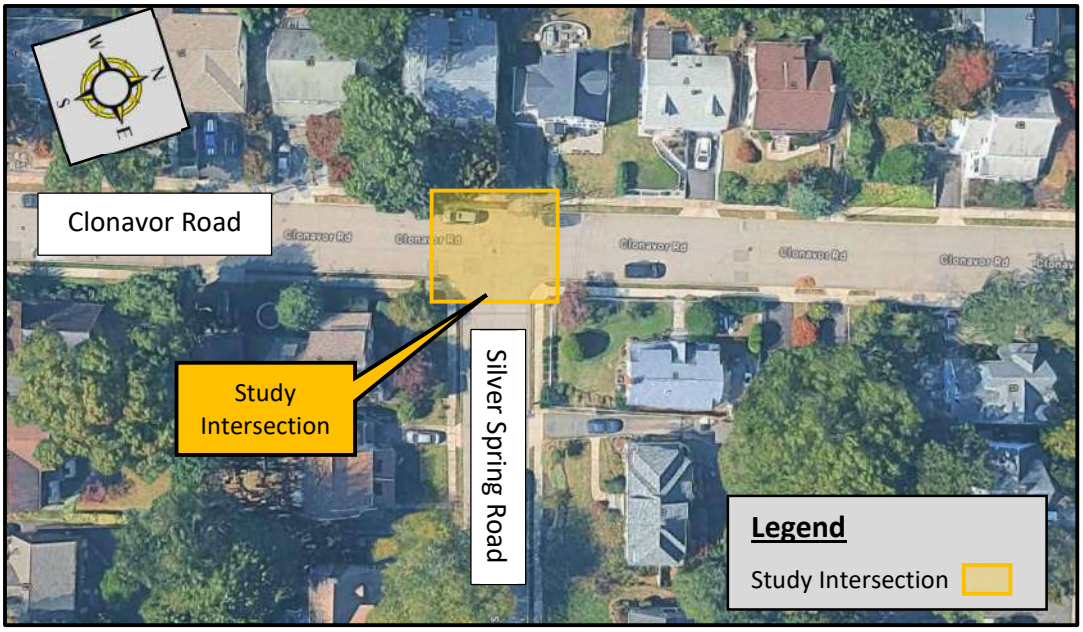


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. Based on the Numetrics database, there have been no vehicular crashes at the intersection of Silver Spring Road and Clonavor Road from January 1, 2019 to August 1, 2026.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are obstructed due to overgrown foliage. A photo of the intersection is provided below in **Figure 2.**

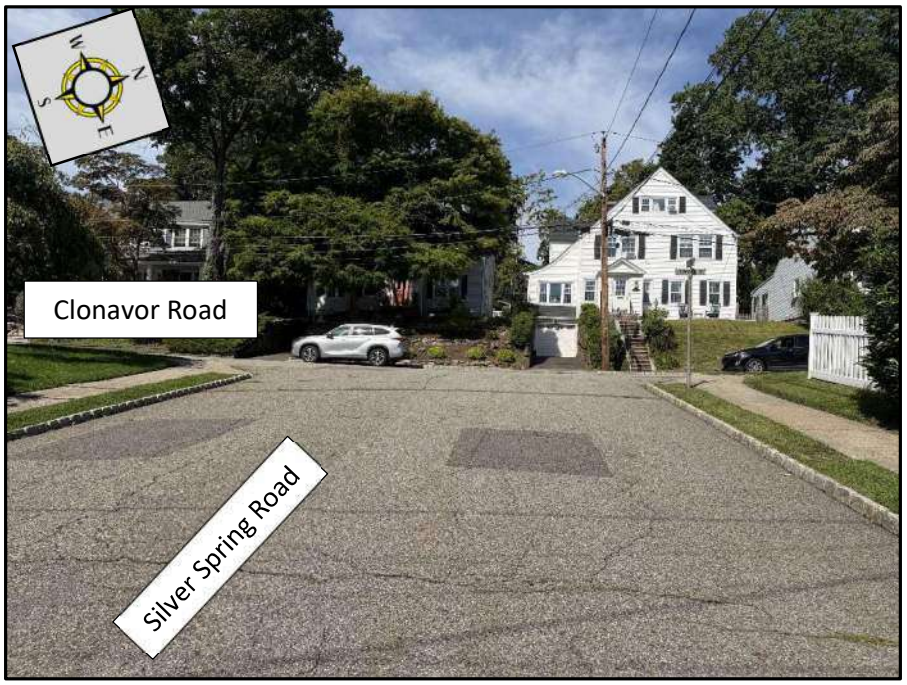


Figure 2: Clonavor Road & Silver Spring Road

Analysis and Recommendations

It is our recommendation that stop control be implemented along the westbound, Silver Spring Road approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements - At the intersection of Silver Spring Road and Clonavor Road, the line of sight of approaching vehicles was found to be obstructed. We observed that if vehicles stop closer to the mainline on Clonavor Road, then they would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Clonavor Road.

It is our opinion that sight distance at the intersection can be improved by trimming trees and overgrown foliage within the sight triangles. We recommend that the Township coordinate with residents, as reasonable, to remove sight obstructions. It is our recommendation that stop control be implemented along the westbound, Silver Spring Road approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation.



Figure 3: Clonavor Road & Silver Spring Road STOP Sign Installation

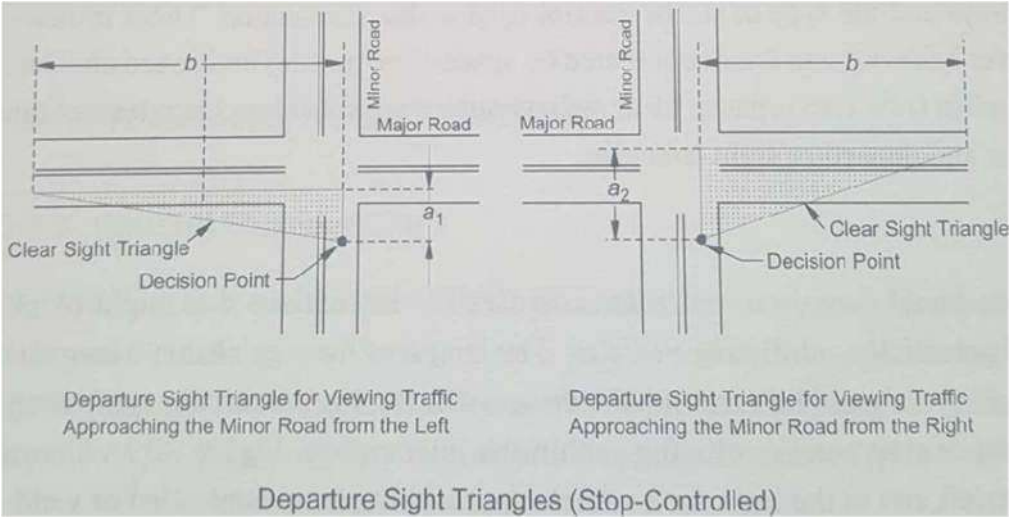


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the westbound, Silver Spring Road approach at the intersection of Silver Spring Road and Clonavor Road. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Valley View Street and Quarry Terrace
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Valley View Street and Quarry Terrace to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Valley View Street

Valley View Street is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 450 feet from Quarry Terrace to Eagle Rock Avenue (CR 611). There are no posted speed limit signs on Valley View Street – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Other than crosswalk, double yellow, and stop bar striping at the intersection of Valley View Street and Eagle Rock Avenue (CR 611), no pavement markings are present on the roadway. Land uses along Valley View Street are residential in nature.

Quarry Terrace

Quarry Terrace is a local roadway with a general east/west orientation under the jurisdiction of West Orange Township and spans approximately 800 feet between Cliff Street and Wakeman Street. There are no posted speed limit signs on Quarry Terrace – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Quarry Terrace are residential in nature.

The intersection of Valley View Street and Quarry Terrace is uncontrolled 'T' style intersection. Pavement markings are not present at the intersection, however the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

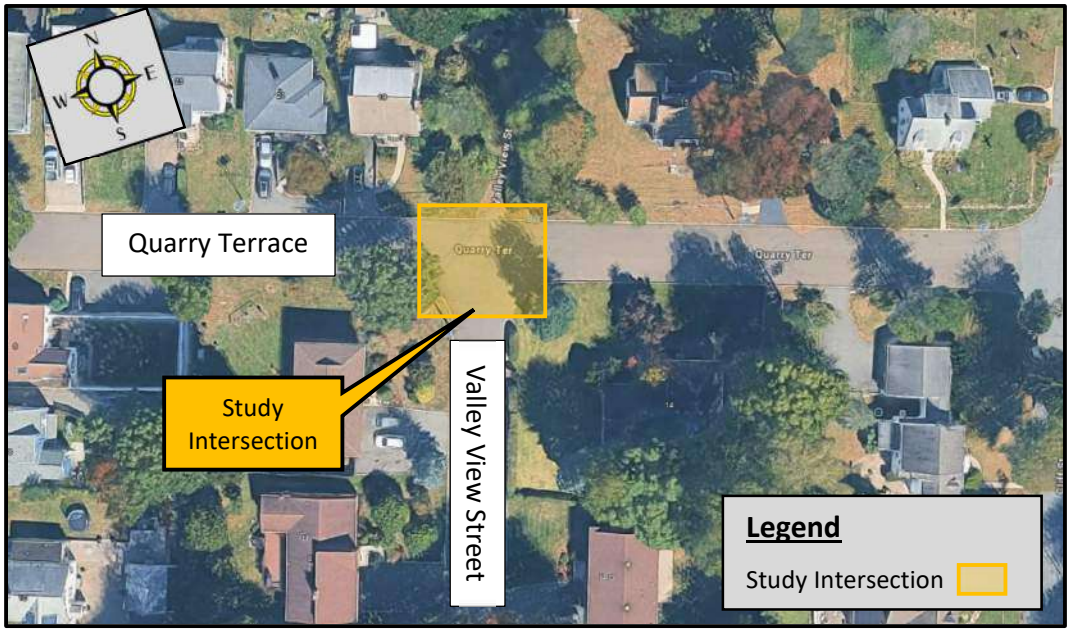


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. Based on the Numetrics database, there have been no vehicular crashes at the intersection of Valley View Street and Quarry Terrace from January 1, 2019 to August 1, 2026.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are obstructed due to overgrown foliage. A photo of the intersection is provided below in **Figure 2.**



Figure 2: Quarry Terrace & Valley View Street

Analysis and Recommendations

It is our recommendation that stop control be implemented along the northbound, Valley View Street approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements - At the intersection of Valley View Street and Quarry Terrace, the line of sight of approaching vehicles was found to be obstructed. We observed that if vehicles stop closer to the mainline on Quarry Terrace, then they would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Quarry Terrace.

It is our opinion that sight distance at the intersection can be improved by trimming trees and overgrown foliage within the sight triangles. We recommend that the Township coordinate with residents, as reasonable, to remove sight obstructions. It is our recommendation that stop control be implemented along the northbound, Valley View Street approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation.



Figure 3: Quarry Terrace & Valley View Street STOP Sign Installation

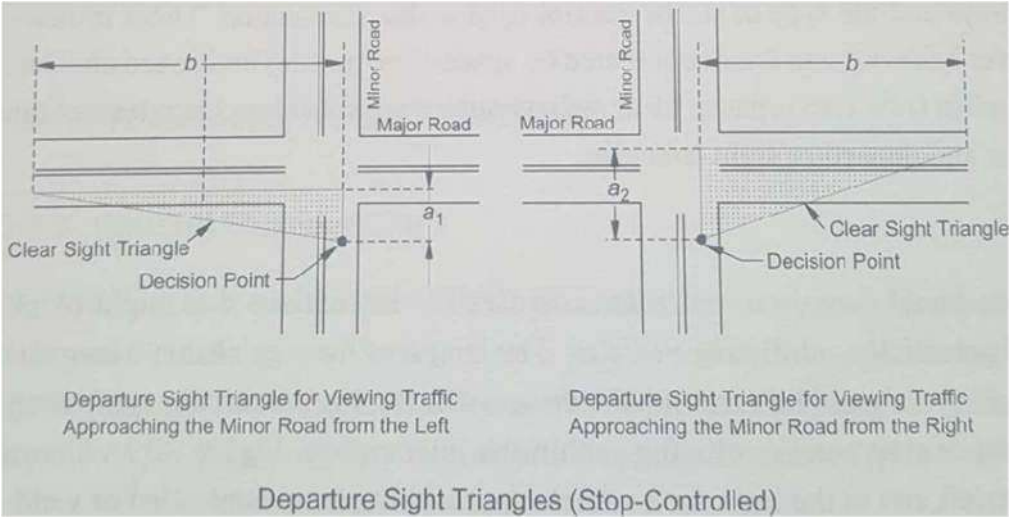


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the northbound, Quarry Terrace approach at the intersection of Valley View Street and Quarry Terrace. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Hunterdon Road and Warren Road
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Hunterdon Road and Warren Road to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Hunterdon Road

Hunterdon Road is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 1,900 feet from Warren Road to Westover Terrace. There are no posted speed limit signs on Hunterdon Road – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Striping for stop control has been installed at the intersection along Hunterdon Road. Land uses along Hunterdon Road are residential in nature.

Warren Road

Warren Road is a local roadway with a general east/west orientation under the jurisdiction of West Orange Township and spans approximately 0.5 miles from Colonial Woods Drive to King Road. There are no posted speed limit signs on Warren Road – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Other than crosswalk striping at various locations, no pavement markings are present on the roadway. Land uses along Warren Road are residential in nature.

The intersection of Hunterdon Road and Warren Road is uncontrolled 'T' style intersection. Stop bar and double yellow striping pavement markings are present at the intersection. The intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

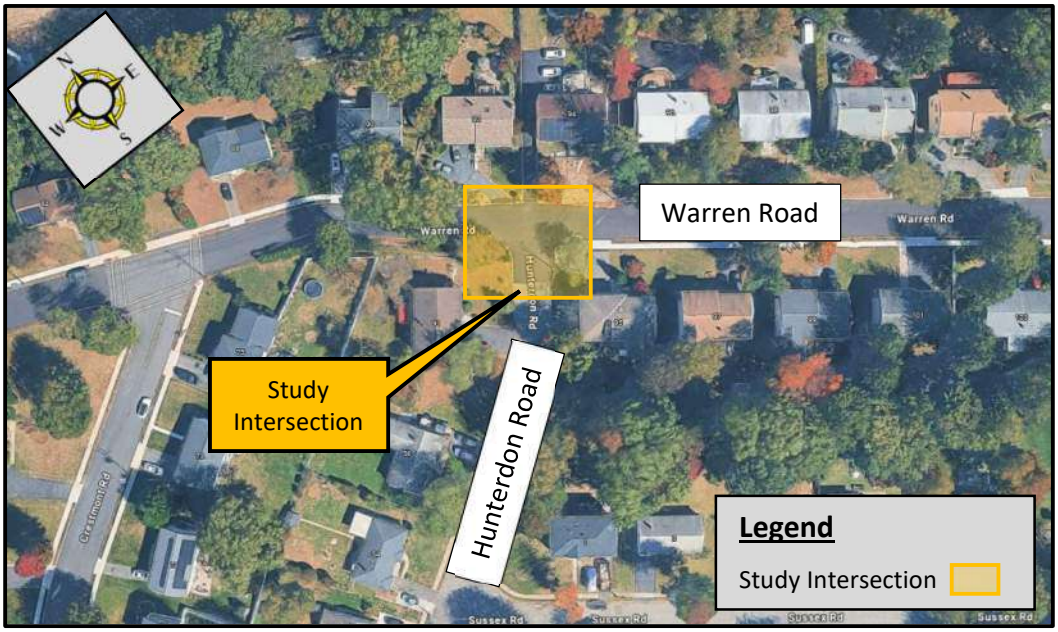


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. Based on the Numetrics database, there have been no vehicular crashes at the intersection of Hunterdon Road and Warren Road from January 1, 2019 to August 1, 2026.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are obstructed due to overgrown foliage. A photo of the intersection is provided below in **Figure 2.**



Figure 2: Warren Road & Hunterdon Road

Analysis and Recommendations

It is our recommendation that stop control be implemented along the northbound, Hunterdon Road approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements - At the intersection of Hunterdon Road and Warren Road, the line of sight of approaching vehicles was found to be obstructed. We observed that if vehicles stop closer to the mainline on Warren Road, then they would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Warren Road.

It is our opinion that sight distance at the intersection can be improved by trimming trees and overgrown foliage within the sight triangles. We recommend that the Township coordinate with residents, as reasonable, to remove sight obstructions. It is our recommendation that stop control be implemented along the northbound, Hunterdon Road approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation.



Figure 3: Warren Road & Hunterdon Road STOP Sign Installation

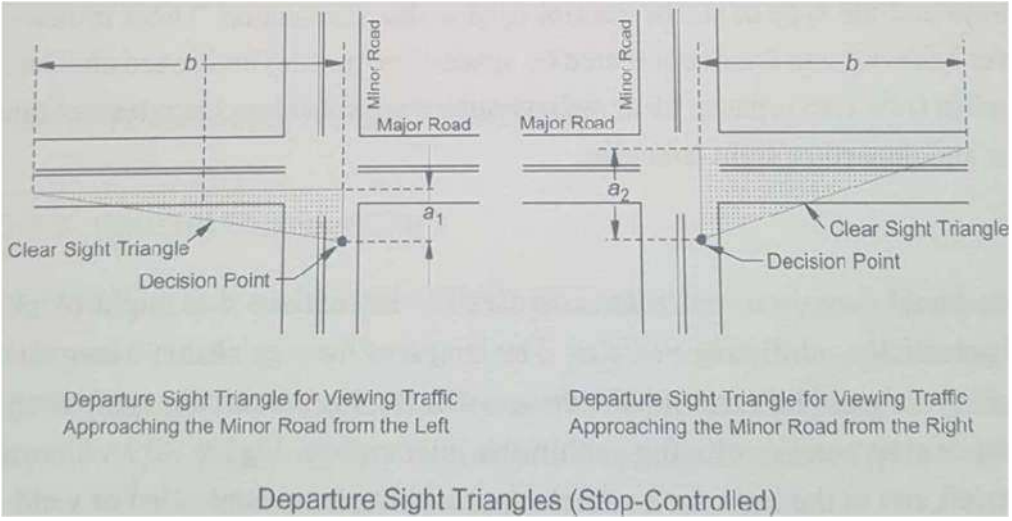


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the northbound, Hunterdon Road approach at the intersection of Hunterdon Road and Warren Road. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Westover Terrace and Crestmont Road
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Westover Terrace and Crestmont Road to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Westover Terrace

Westover Terrace is a local roadway with a general east-west orientation under the jurisdiction of West Orange Township and spans approximately 900 feet from Merkin Avenue to Crestmont Road. There are no posted speed limit signs on Westover Terrace – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Westover Terrace are residential in nature.

Crestmont Road

Crestmont Road is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 0.5 miles between NJ Route 10 and Warren Road. There are no posted speed limit signs on Crestmont Road – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 28 feet wide and accommodates two-way traffic and parking on both sides. Crosswalk, double yellow, and stop bar striping are present at various locations on the roadway. Land uses along Crestmont Road are residential in nature.

The intersection of Westover Terrace and Crestmont Road is uncontrolled 'T' style intersection. Pavement markings are not present at the intersection, however the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

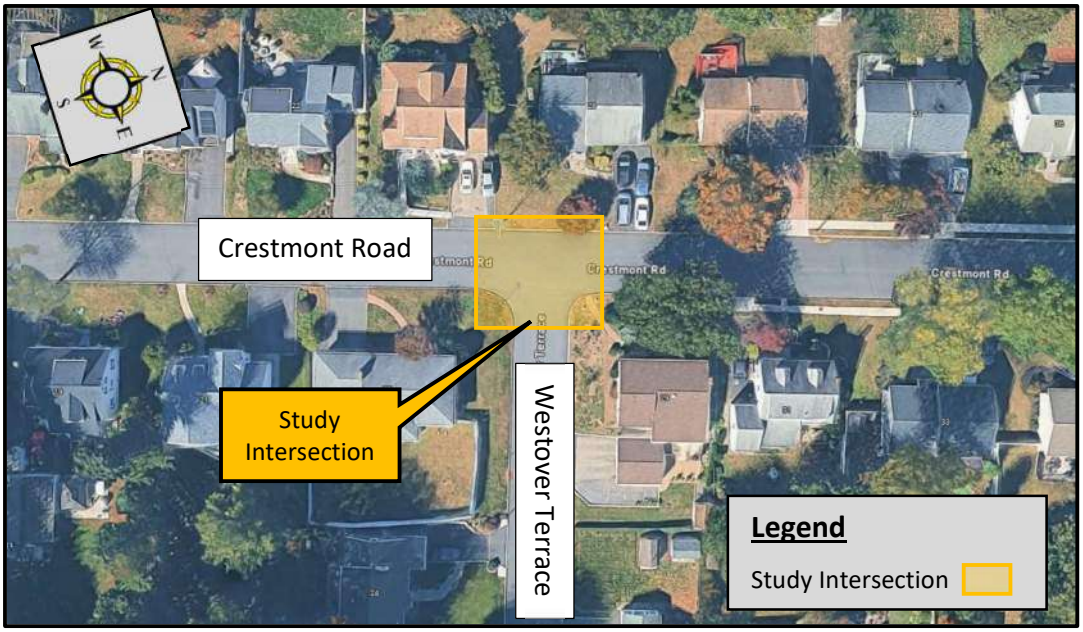


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. Based on the Numetrics database, there have been no vehicular crashes at the intersection of Westover Terrace and Crestmont Road from January 1, 2019 to August 1, 2026.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are obstructed due to overgrown foliage. A photo of the intersection is provided below in **Figure 2.**



Figure 2: Westover Terrace & Crestmont Road

Analysis and Recommendations

It is our recommendation that stop control be implemented along the westbound, Westover Terrace approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements - At the intersection of Westover Terrace & Crestmont Road, the line of sight of approaching vehicles was found to be obstructed. We observed that if vehicles stop closer to the mainline on Crestmont Road, then they would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Crestmont Road.

It is our opinion that sight distance at the intersection can be improved by trimming trees and overgrown foliage within the sight triangles. We recommend that the Township coordinate with residents, as reasonable, to remove sight obstructions.

It is our recommendation that stop control be implemented along the westbound, Westover Terrace approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation.



Figure 3: Westover Terrace & Crestmont Road STOP Sign Installation

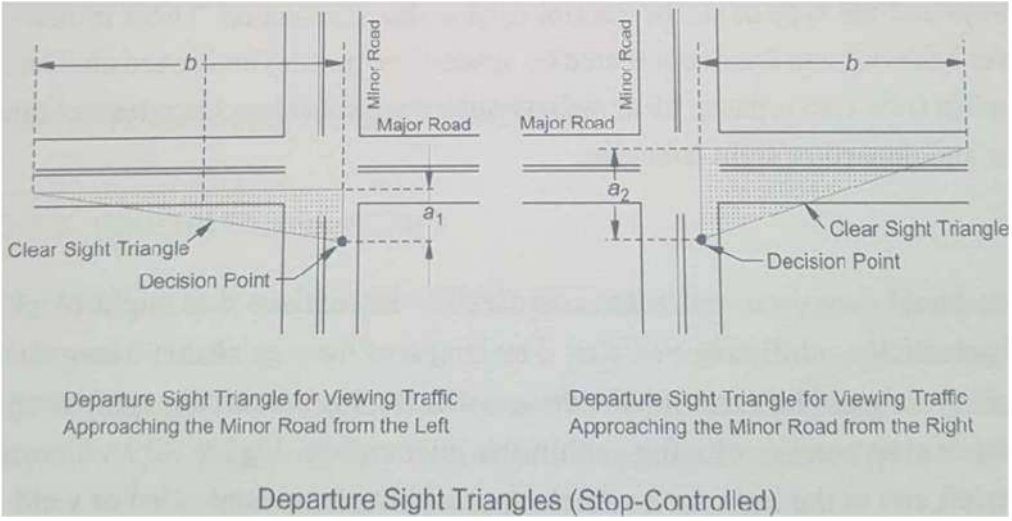


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the westbound, Westover Terrace approach at the intersection of Westover Terrace and Crestmont Road. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Westwood Drive North and Carolina Avenue
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Westwood Drive North and Carolina Avenue to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Westwood Drive North

Westwood Drive North is a local roadway with a general east-west orientation under the jurisdiction of West Orange Township and spans approximately 950 feet from Carolina Avenue to Westwood Drive South. There are no posted speed limit signs on Westwood Drive North – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Westwood Drive North are residential in nature.

Carolina Avenue

Carolina Avenue is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 1,100 feet from Shelley Terrace to NJ Route 10. There are no posted speed limit signs on Carolina Avenue – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Crosswalk, double yellow, and stop bar striping are present at various locations on the roadway. Land uses along Carolina Avenue are residential in nature.

The intersection of Westwood Drive North and Carolina Avenue is uncontrolled 'T' style intersection. Pavement markings are not present at the intersection, however the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

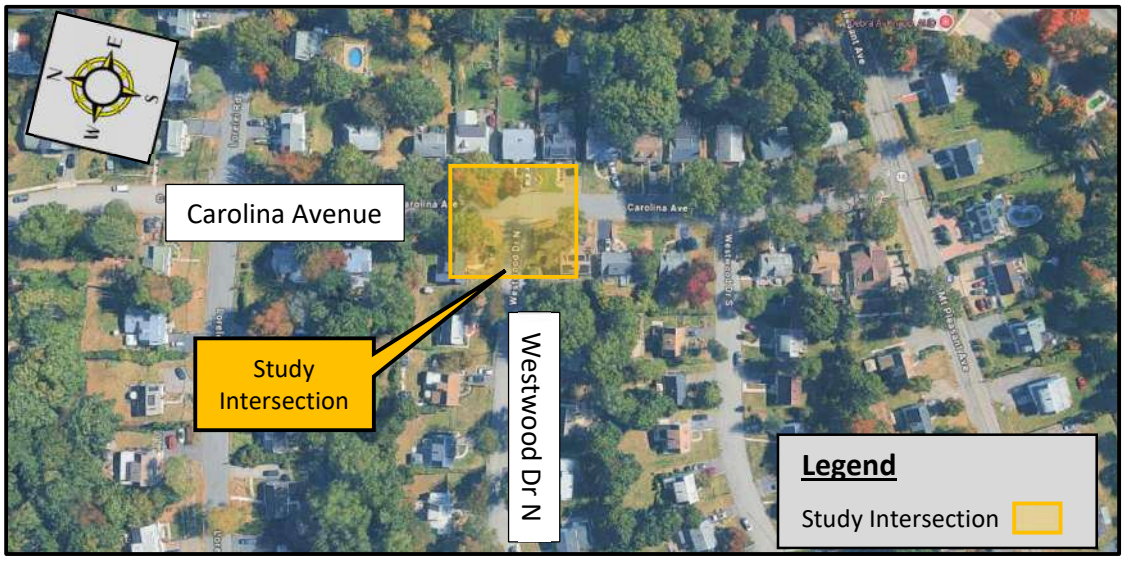


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. The crash history from January 1, 2019 to August 1, 2026 is shown in **Table 1** below:

DATE	STREET	CROSS STREET	TYPE	CIRCUMSTANCE
9/15/23	Carolina Avenue	Westwood Drive North	Struck Parked Vehicle	Backing Unsafely
9/23/23	Carolina Avenue	Westwood Drive North	Pedestrian	Driver Inattention

Based upon the crash data provided, we observe that two (2) incidents were reported at the study intersection. The incident which occurred on 9/15/23 was not contributed to speeding but backing unsafely and incident which occurred on 9/23/23 was not contributed to speeding but driver inattention.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are generally clear. A photo of the intersection is provided below in **Figure 2**.



Figure 2: Carolina Avenue & Westwood Drive North

Analysis and Recommendations

It is our recommendation that stop control be implemented along the eastbound, Westwood Drive North approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation and proper sight lines are present.



Figure 3: Carolina Avenue & Westwood Drive North STOP Sign Installation

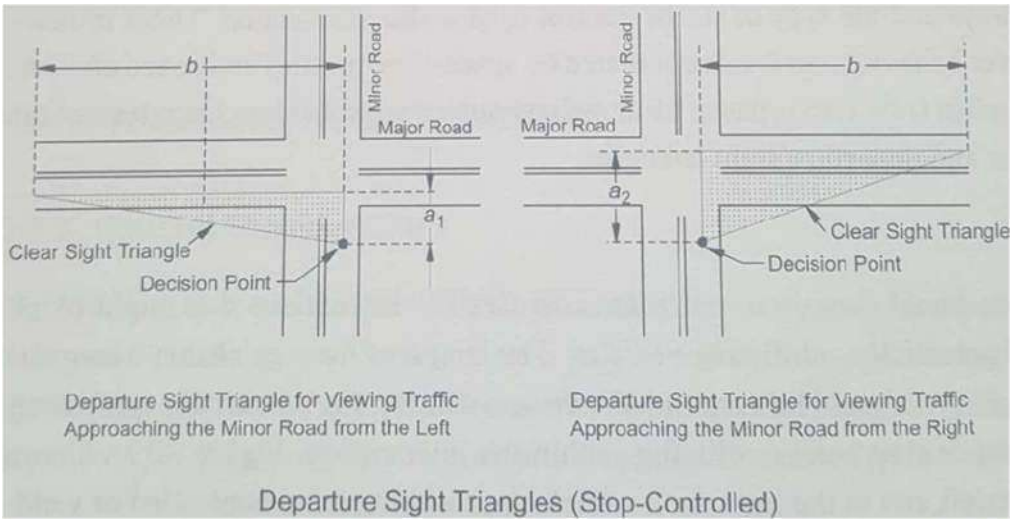


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the eastbound, Westwood Drive North approach at the intersection of Westwood Drive North and Carolina Avenue. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400

September 21, 2026

VIA EMAIL (zcarballo@westorange.org)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

Re: Stop Sign Evaluation
Westwood Drive South and Carolina Avenue
West Orange Township, Essex County, New Jersey

Dear Ms. Carballo:

T&M Associates has been tasked by the Township of West Orange to perform an evaluation of the existing traffic controls at the intersection of Westwood Drive South and Carolina Avenue to assess the safety conditions at the intersection and determine the appropriate location for 'stop' control consistent with the 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD). This letter report represents our findings:

Existing Conditions

Field investigations were conducted by T&M to obtain an inventory of existing roadway conditions, traffic control, adjacent land uses and lane configurations. The following is a brief description of the roadways involved:

Westwood Drive South

Westwood Drive South is a local roadway with a general east-west orientation under the jurisdiction of West Orange Township and spans approximately 950 feet from Carolina Avenue to Westwood Drive North. There are no posted speed limit signs on Westwood Drive South – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. No pavement markings are present on the roadway. Land uses along Westwood Drive South are residential in nature.

Carolina Avenue

Carolina Avenue is a local roadway with a general north/south orientation under the jurisdiction of West Orange Township and spans approximately 1,100 feet from Shelley Terrace to NJ Route 10. There are no posted speed limit signs on Carolina Avenue – the speed limit is assumed to be 25 mph, consistent with the statutory speed limit established for New Jersey via Title 39 for residential streets. The roadway is approximately 30 feet wide and accommodates two-way traffic and parking on both sides. Crosswalk, double yellow, and stop bar striping are present at various locations on the roadway. Land uses along Carolina Avenue are residential in nature.

The intersection of Westwood Drive South and Carolina Avenue is uncontrolled 'T' style intersection. Pavement markings are not present at the intersection, however the intersection functions as a single approach lane in each direction. The intersection location is depicted in **Figure 1** below.

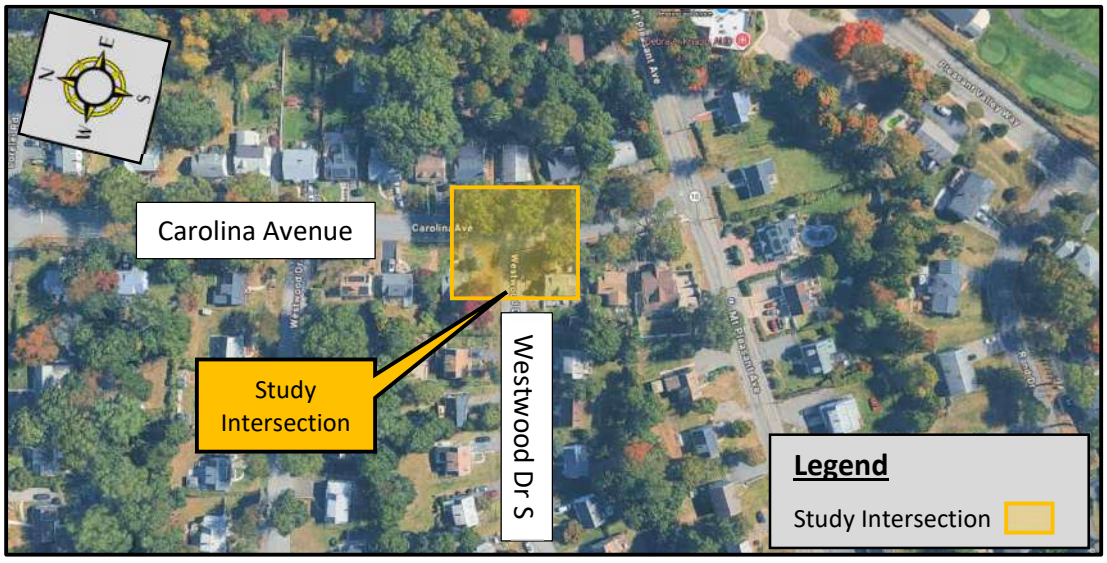


Figure 1: Study Intersection Location Map

Data Collection

Crash History

The New Jersey Department of Transportation's Numetrics based crash database was consulted to review the existing crash history at the intersection. The crash history from January 1, 2019 to August 1, 2026 is shown in **Table 1** below:

DATE	STREET	CROSS STREET	TYPE	CIRCUMSTANCE
5/12/24	Carolina Avenue	Westwood Drive South	Fixed Object	Driver Inattention
3/15/26	Carolina Avenue	Westwood Drive South	Struck Parked Vehicle	Driver Inattention
5/21/26	Carolina Avenue	Westwood Drive South	Fixed Object	Brake Failure

Based upon the crash data provided, we observe that three (3) incidents was reported at the study intersection. The incidents which occurred on 5/12/24 and 3/15/26 was not contributed to speeding but driver inattention. The incident which occurred on 5/21/26 was not contributed to speeding but brake failure.

Field Observations

T&M conducted a field investigation on September 10, 2026 to determine existing conditions, existing traffic control and note any significant issues that may influence the location of any proposed traffic control. The intersection is currently uncontrolled and sight lines are generally clear. A photo of the intersection is provided below in **Figure 2**.



Figure 2: Carolina Avenue & Westwood Drive South

Analysis and Recommendations

It is our recommendation that stop control be implemented along the eastbound, Westwood Drive South approach consistent with **Figure 3** below. The installation of a stop sign at the head of the T intersection is consistent with driver expectation and proper sight lines are present.



Figure 3: Carolina Avenue & Westwood Drive South STOP Sign Installation

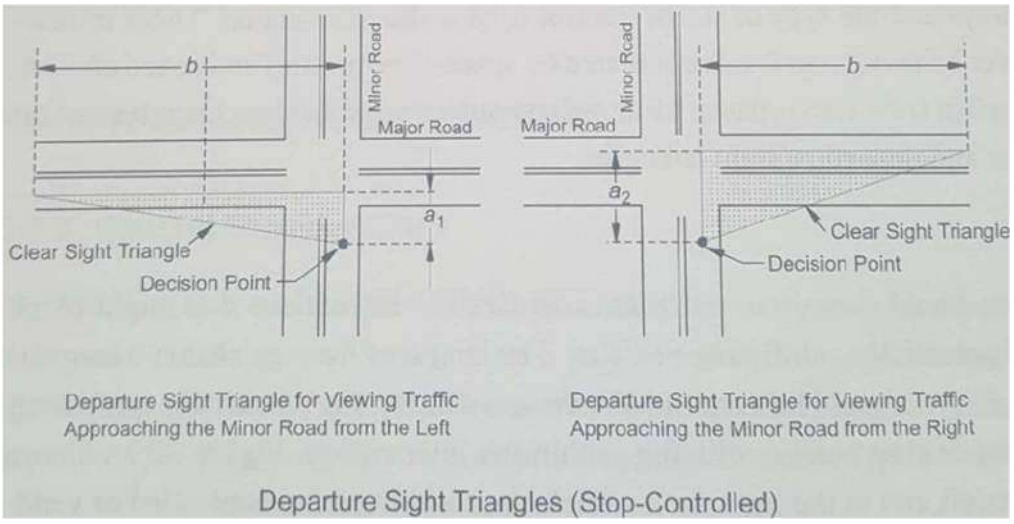


Figure 4: Intersection Sight Distance

After the installation of stop control, we recommend the intersection be monitored to determine if supplemental traffic control devices are necessary such as a stop bar or double yellow line or if intersection sight distances should be improved.

Conclusions

It is our recommendation, based on our review of the data presented herewith, and the guidance from the MUTCD and Title 39, that the Township of West Orange should implement stop control on the eastbound, Westwood Drive South approach at the intersection of Westwood Drive South and Carolina Avenue. The intersection should be monitored after installation to determine if additional signing or striping is necessary.

If you have any questions or require any additional information regarding this intersection, please feel free to contact this office at 973-859-5330.

Sincerely,
T&M ASSOCIATES

Joseph A. Fishinger, PE, PP, PTOE
Group Manager, Traffic
NJ PE# 24GE04613400