



Bright View Engineering
Moving you forward

2853-24

May 1, 2024

VIA EMAIL

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: Safety Study
Abington Road & Deerfield Drive
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an evaluation of the existing traffic controls at the intersection of Abington Road & Deerfield Drive. This analysis was performed to assess the safety conditions at the intersection and the installation of a stop control on Abington Road.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash data along roadway segments interconnecting the study intersections;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Abington Road is an east to west oriented roadway which spans approximately 385 ft between Deerfield Drive and Deerfield Drive. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Abington Road; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Deerfield Drive. There are no sidewalks or crosswalks present along the roadway.

Deerfield Drive is a north to south oriented roadway which spans approximately 1,200 ft from Seaman Road to a dead end. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Deerfield Drive; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Bryn Mawr Road. There are no sidewalks or crosswalks present along the roadway.



FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. There were no crashes reported at the study intersection.

FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. The study area is a residential neighborhood with primarily single-family housing.

We observed that the sight lines at the intersection of Abington Road and Deerfield Drive are clear of obstructions.

FIGURE 2 – Abington Road & Deerfield Drive





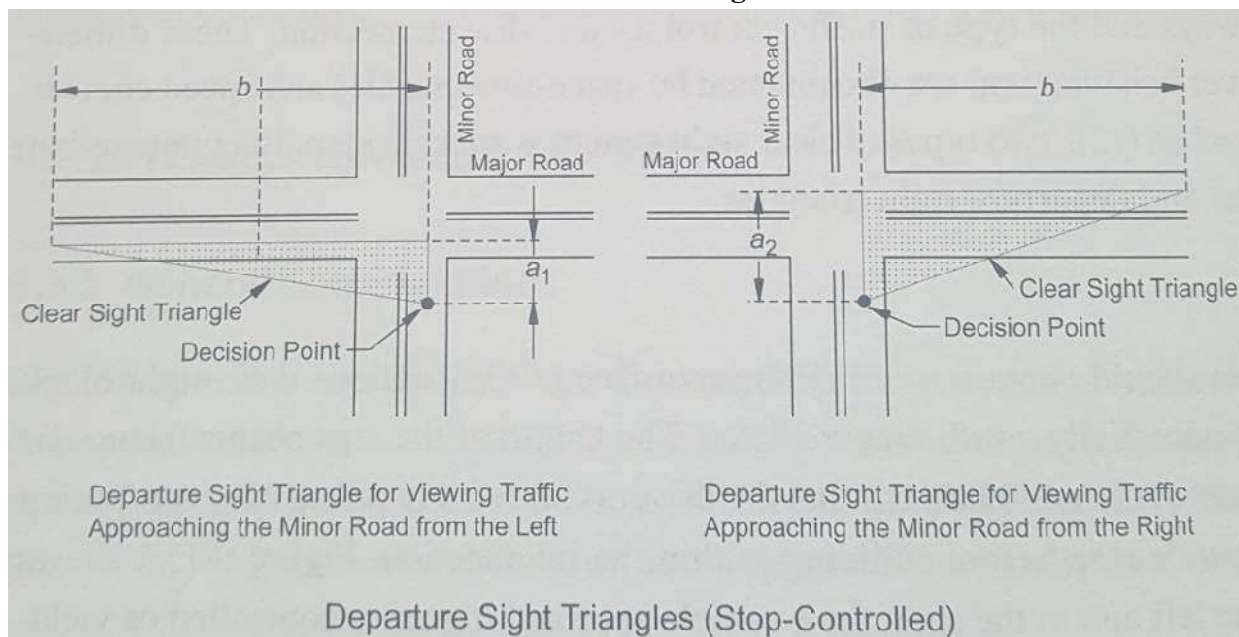
RECOMMENDATIONS

It is our recommendation that a STOP sign be installed on the Abington Road approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements – At the intersection of Abington Road & Deerfield Drive, the line of sight of approaching vehicles was found to be clear. We observed that stopped vehicles would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Deerfield Drive.

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners of the study intersection. We recommend that the Township continue to cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

FIGURE 3 – Intersection Sight Distance





STOP Sign Installation – A STOP control on the minor-road approach should be considered as per Section 2B.11-Minor Road Stop Control of the MUTCD (11th Edition). The STOP sign would provide the appropriate traffic control at the study intersection to improve safety and circulation of traffic. We recommend that the Township install a STOP sign on Abington Road at the study intersection. The installation of the STOP sign should be implemented per the guidance presented within Chapter 2B-Regulatory Signs, Barricades, and Gates of the MUTCD (11th Edition).

FIGURE 4 – STOP Sign Installation



Sidewalk and Crosswalk Markings – We recommend that the Township consider installing sidewalks and marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.



SUMMARY & CONCLUSIONS

It is our recommendation, based upon our field observations, the guidance from MUTCD and Title 39, and the existing conditions, that the Township of West Orange should consider the installation of a STOP sign at the study intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John Jahr, P.T.P., T.S.O.S.
Principal


Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/08-AbingtonRd-DeerfieldDr.docxs>



Bright View Engineering
Moving you forward

May 1, 2024

VIA EMAIL

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: Safety Study
Abington Road & Seaman Road
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an evaluation of the existing traffic controls at the intersection of Abington Road & Seaman Road. This analysis was performed to assess the safety conditions at the intersection and the installation of a stop control on Abington Road.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash data along roadway segments interconnecting the study intersections;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

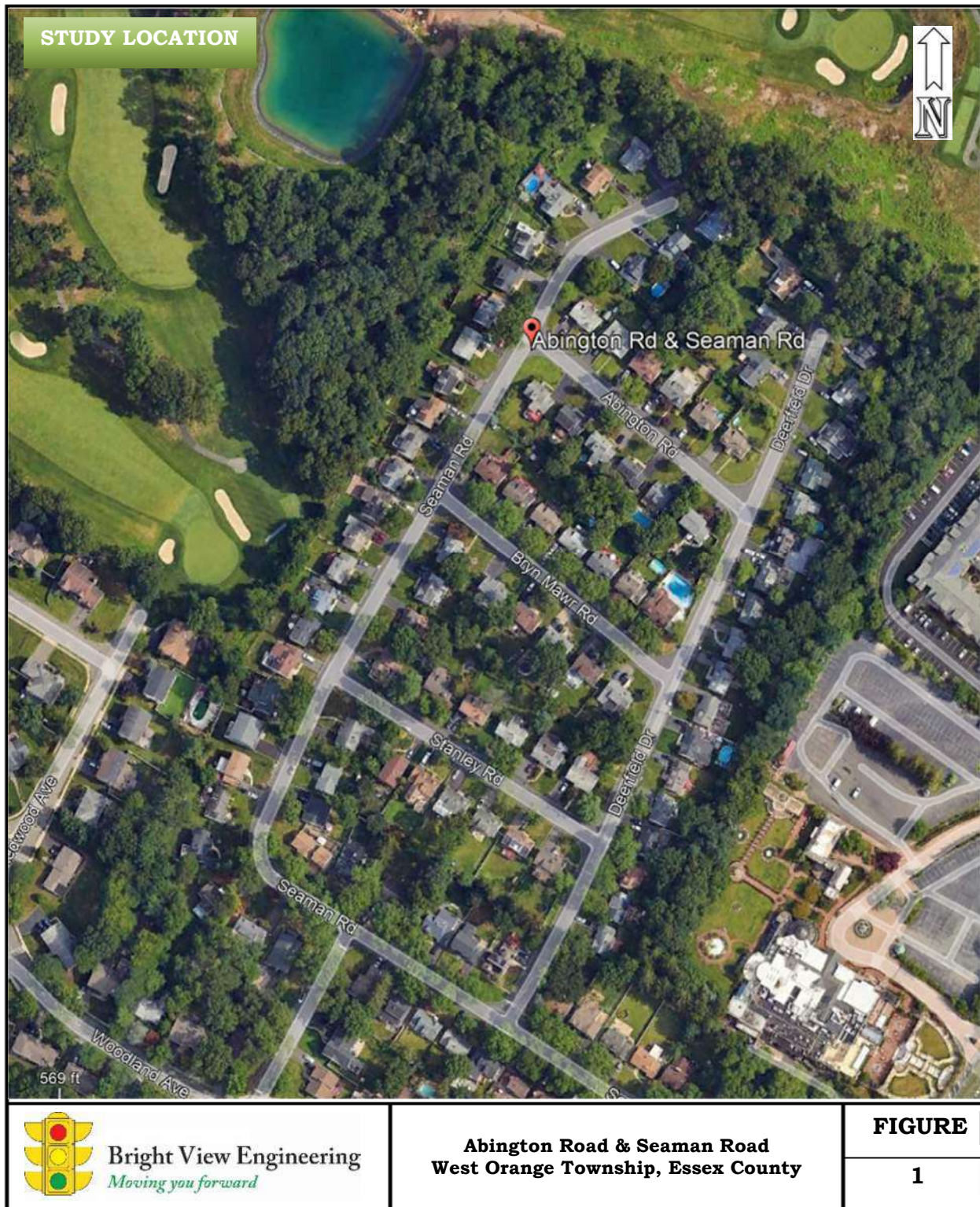
Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Abington Road is an east to west oriented roadway which spans approximately 385 ft between Seaman Road and Deerfield Drive. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Abington Road; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Seaman Road. There are no sidewalks or crosswalks present along the roadway.

Seaman Road is a north to south oriented roadway which spans 2,270 ft from Woodland Avenue to a dead end. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Seaman Road; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Abington Road. There are no sidewalks or crosswalks present along the roadway.



FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. There were no crashes reported at the study intersection.

FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. The study area is a residential neighborhood.

We observed that the sight lines at the intersection of Abington Road and Seaman Road are clear of obstructions.

FIGURE 2 – Abington Road & Seaman Road





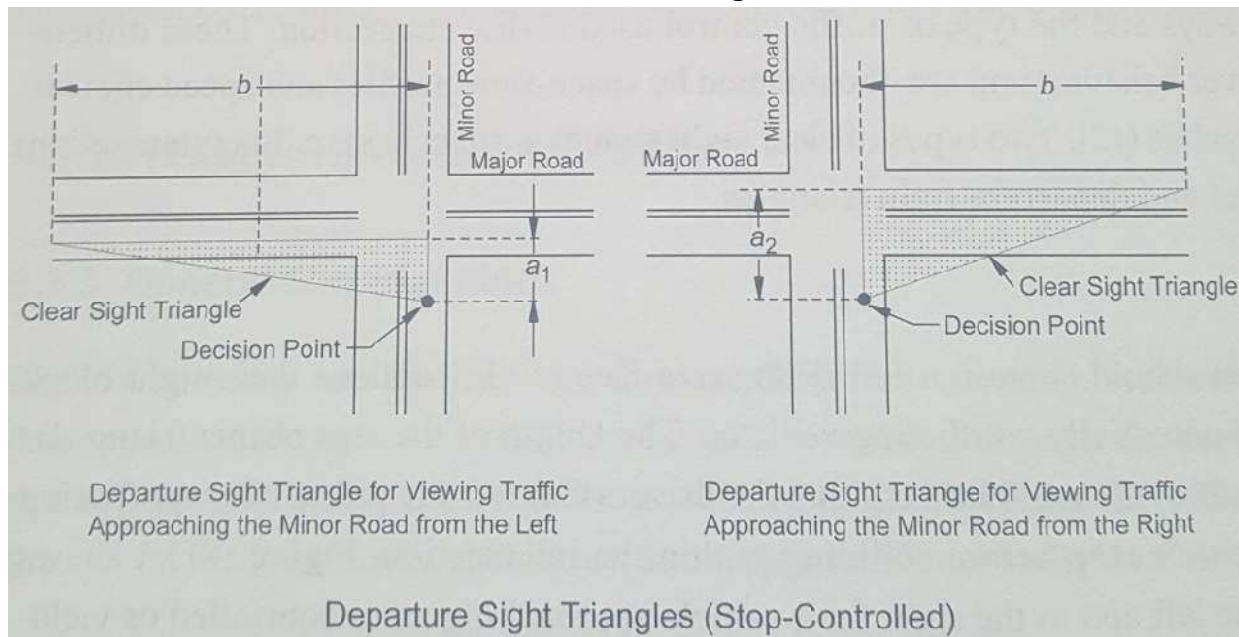
RECOMMENDATIONS

It is our recommendation that a STOP sign be installed on the Abington Road approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements – At the intersection of Abington Road & Seaman Road, the line of sight of approaching vehicles was found to be clear. We observed that stopped vehicles would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Seaman Road.

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners of the study intersection. We recommend that the Township continue to cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

FIGURE 3 – Intersection Sight Distance





STOP Sign Installation – A STOP control on the minor-road approach should be considered as per Section 2B.11-Minor Road Stop Control of the MUTCD (11th Edition). The STOP sign would provide the appropriate traffic control at the study intersection to improve safety and circulation of traffic. We recommend that the Township install a STOP sign on Abington Road at the study intersection. The installation of the STOP sign should be implemented per the guidance presented within Chapter 2B-Regulatory Signs, Barricades, and Gates of the MUTCD (11th Edition).

FIGURE 4 – STOP Sign Installation



Sidewalk and Crosswalk Markings – We recommend that the Township consider installing sidewalks and marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.



SUMMARY & CONCLUSIONS

It is our recommendation, based upon our field observations, the guidance from MUTCD and Title 39, and the existing conditions, that the Township of West Orange should consider the installation of a STOP sign at the study intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John Jahr, P.T.P., T.S.O.S.
Principal


Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/07-AbingtonRd-SeamanRd.docxs>



Bright View Engineering
Moving you forward

May 1, 2024

VIA EMAIL

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: Safety Study
Bryn Mawr Road & Deerfield Drive
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an evaluation of the existing traffic controls at the intersection of Bryn Mawr Road & Deerfield Drive. This analysis was performed to assess the safety conditions at the intersection and the installation of a stop control on Bryn Mawr Road.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash data along roadway segments interconnecting the study intersections;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Bryn Mawr Road is an east to west oriented roadway which spans approximately 440 ft between Deerfield Drive and Deerfield Drive. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Bryn Mawr Road; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Deerfield Drive. There are no sidewalks or crosswalks present along the roadway.

Deerfield Drive is a north to south oriented roadway which spans approximately 1,200 ft from Seaman Road to a dead end. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Deerfield Drive; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Bryn Mawr Road. There are no sidewalks or crosswalks present along the roadway.



FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. The crashes are shown in Table 1 below:

Table 1 – Crash Data for Bryn Mawr Road & Deerfield Drive

DATE	STREET	CROSS STREET	TYPE	CIRCUMSTANCE
6/26/21	Bryn Mawr Rd	Deerfield Dr	Fixed Object	Other Vehicle
8/6/23	Bryn Mawr Rd	Deerfield Dr	Struck Parked Vehicle	Driver Inattention

Based upon the provided crash data, we observe that two (2) incidents were reported at the study intersection between 6/26/21 and 8/6/23. The crash reports indicate no traffic control was present. The incidents were not contributed to speeding but driver inattention and other obstructions/fixed objects at the study intersection.

FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. The study area is a residential neighborhood.

We observed that the sight lines at the intersection of Bryn Mawr Road and Deerfield Drive are clear of obstructions.

FIGURE 2 – Bryn Mawr Road & Deerfield Drive





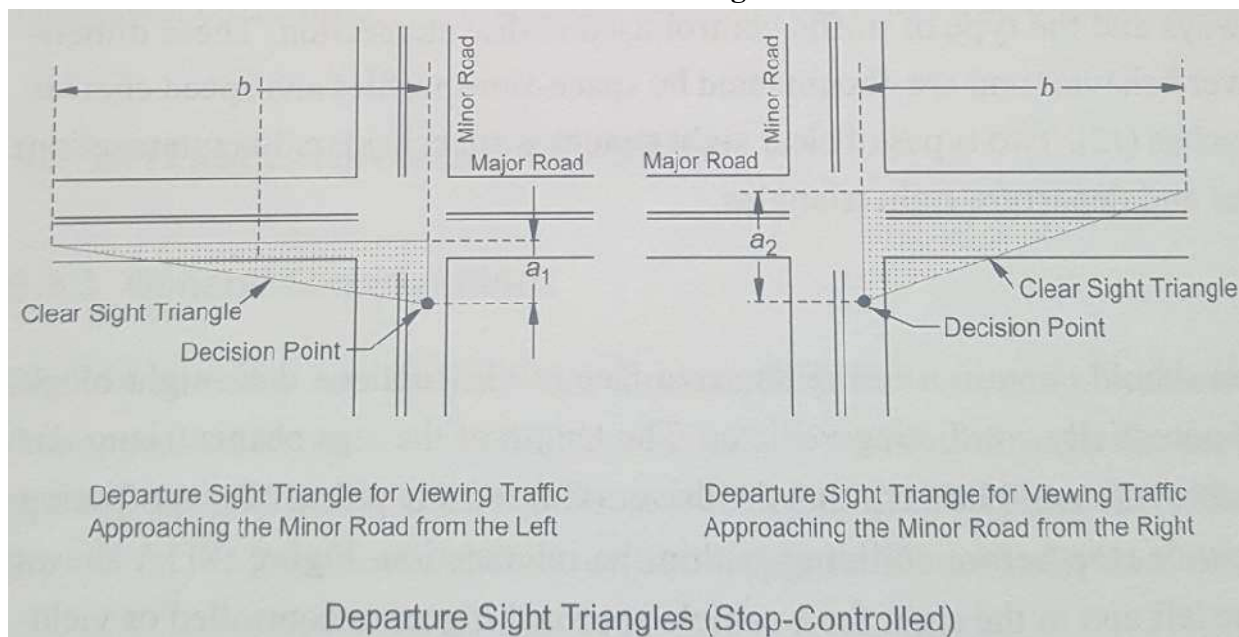
RECOMMENDATIONS

It is our recommendation that a STOP sign be installed on the Bryn Mawr Road approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements – At the intersection of Bryn Mawr Road & Deerfield Drive, the line of sight of approaching vehicles was found to be clear. We observed that stopped vehicles have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Deerfield Drive.

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners of the study intersection. We recommend that the Township continue to cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

FIGURE 3 – Intersection Sight Distance





STOP Sign Installation – A STOP control on the minor-road approach should be considered as per Section 2B.11-Minor Road Stop Control of the MUTCD (11th Edition). The STOP sign would provide the appropriate traffic control at the study intersection to improve safety and circulation of traffic. We recommend that the Township install a STOP sign on Bryn Mawr Road at the study intersection. The installation of the STOP sign should be implemented per the guidance presented within Chapter 2B-Regulatory Signs, Barricades, and Gates of the MUTCD (11th Edition).

FIGURE 4 – STOP Sign Installation



Sidewalk and Crosswalk Markings – We recommend that the Township consider installing sidewalks and marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.



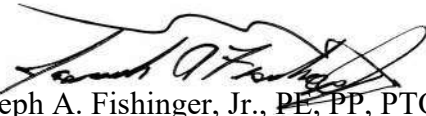
SUMMARY & CONCLUSIONS

It is our recommendation, based upon our field observations, the guidance from MUTCD and Title 39, and the existing conditions, that the Township of West Orange should consider the installation of a STOP sign at the study intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John Jahr, P.T.P., T.S.O.S.
Principal


Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/06-BrynMawrRd-DeerfieldDr.docxs>



Bright View Engineering
Moving you forward

May 1, 2024

VIA EMAIL

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: Safety Study
Bryn Mawr Road & Seaman Road
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an evaluation of the existing traffic controls at the intersection of Bryn Mawr Road & Seaman Road. This analysis was performed to assess the safety conditions at the intersection and the installation of a stop control on Bryn Mawr Road.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash data along roadway segments interconnecting the study intersections;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

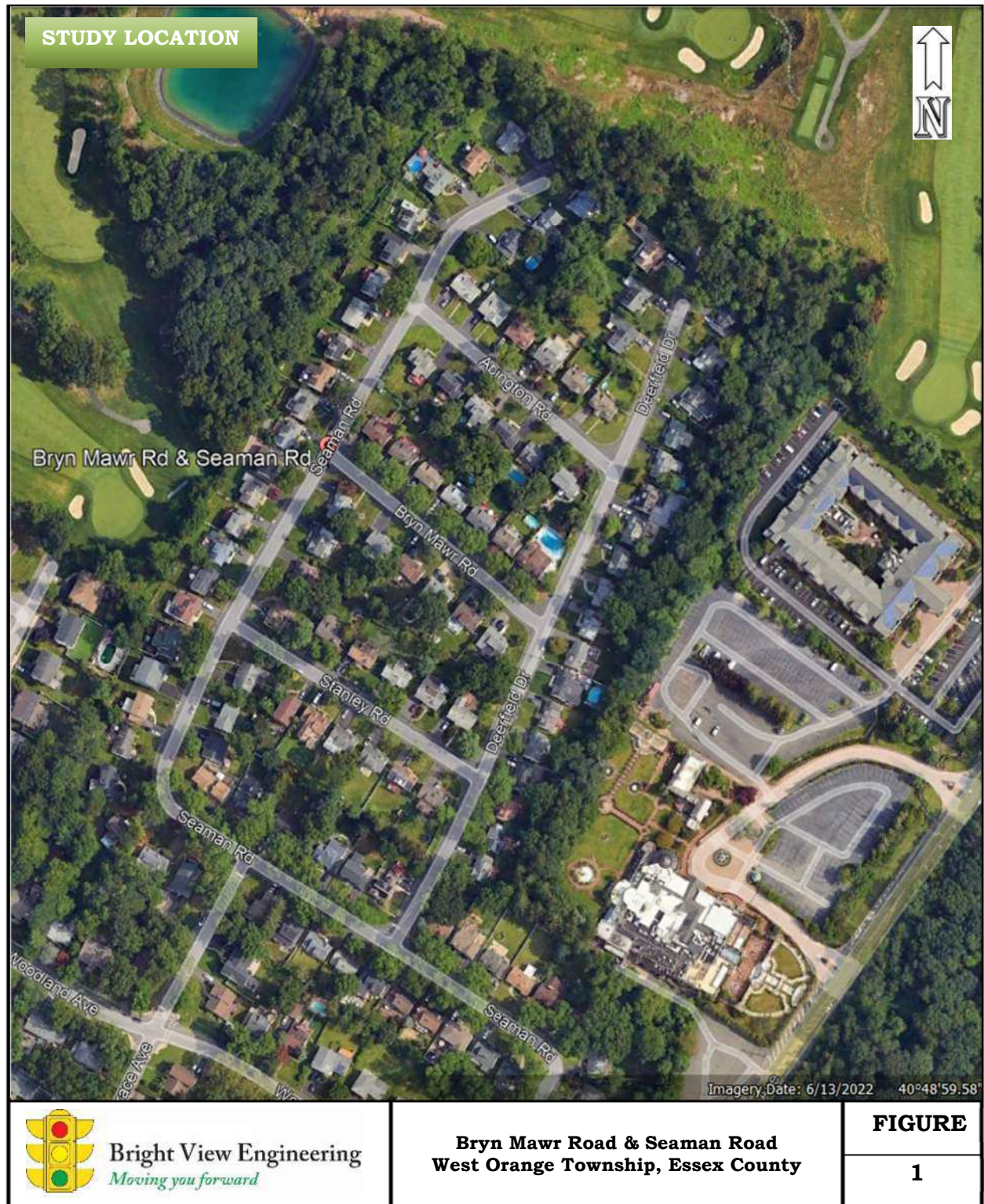
Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Bryn Mawr Road is an east to west oriented roadway which spans approximately 440 ft between Seaman Road and Deerfield Drive. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Bryn Mawr Road; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Seaman Road. There are no sidewalks or crosswalks present along the roadway.

Seaman Road is a north to south oriented roadway which spans 2,270 ft from Woodland Avenue to a dead end. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Seaman Road; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Bryn Mawr Road. There are no sidewalks or crosswalks present along the roadway.



FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. There were no crashes reported at the study intersection.

FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. The study area is a residential neighborhood.

We observed that the sight lines at the intersection of Bryn Mawr Road and Seaman Road are clear of obstructions.

FIGURE 2 – Bryn Mawr Road & Seaman Road





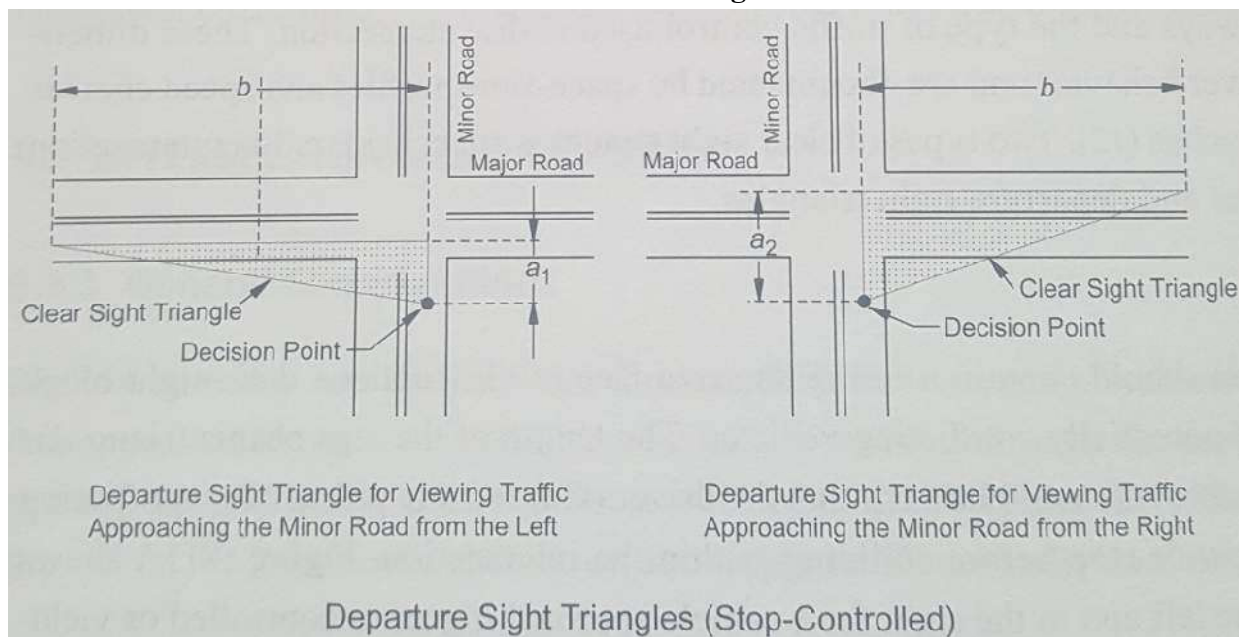
RECOMMENDATIONS

It is our recommendation that a STOP sign be installed on the Bryn Mawr Road approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements – At the intersection of Bryn Mawr Road & Seaman Road, the line of sight of approaching vehicles was found to be clear. We observed that stopped vehicles would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Seaman Road.

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners of the study intersection. We recommend that the Township continue to cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

FIGURE 3 – Intersection Sight Distance





STOP Sign Installation – A STOP control on the minor-road approach should be considered as per Section 2B.11-Minor Road Stop Control of the MUTCD (11th Edition). The STOP sign would provide the appropriate traffic control at the study intersection to improve safety and circulation of traffic. We recommend that the Township install a STOP sign on Bryn Mawr Road at the study intersection. The installation of the STOP sign should be implemented per the guidance presented within Chapter 2B-Regulatory Signs, Barricades, and Gates of the MUTCD (11th Edition).

FIGURE 4 – STOP Sign Installation



Sidewalk and Crosswalk Markings – We recommend that the Township consider installing sidewalks and marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.



SUMMARY & CONCLUSIONS

It is our recommendation, based upon our field observations, the guidance from MUTCD and Title 39, and the existing conditions, that the Township of West Orange should consider the installation of a STOP sign at the study intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John Jahr, P.T.P., T.S.O.S.
Principal


Joseph A. Fishingier, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/05-BrynMawrRd-SeamanRd.docxs>



Bright View Engineering
Moving you forward

May 1, 2024

VIA EMAIL

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: Safety Study
Stanley Road & Deerfield Drive
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an evaluation of the existing traffic controls at the intersection of Stanley Road & Deerfield Drive. This analysis was performed to assess the safety conditions at the intersection and the installation of a stop control on Stanley Road.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash data along roadway segments interconnecting the study intersections;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

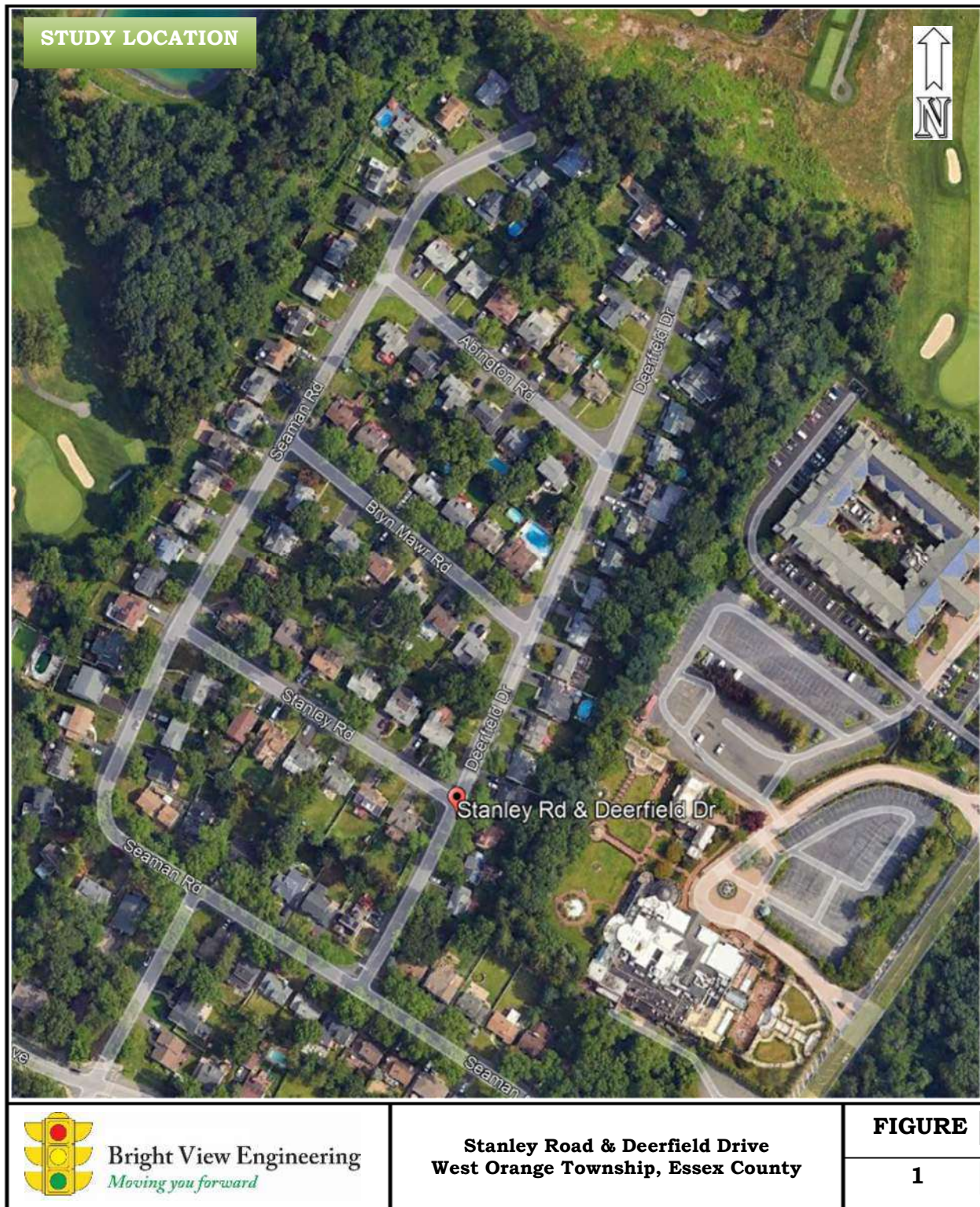
Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Stanley Road is an east to west oriented roadway which spans approximately 475 ft between Deerfield Drive and Deerfield Drive. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Stanley Road; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Deerfield Drive. There are no sidewalks or crosswalks present along the roadway.

Deerfield Drive is a north to south oriented roadway which spans approximately 1,200 ft from Seaman Road to a dead end. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Deerfield Drive; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Stanley Road. There are no sidewalks or crosswalks present along the roadway.



FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. There were no crashes reported at the study intersection.

FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. The study area is a residential neighborhood.

We observed that a huge tree is obstructing the sight lines at the intersection of Stanley Road and Deerfield Drive; however, if vehicles pulled up closer to Deerfield Drive along the controlled approach, they would have improved visibility of traffic conditions at the intersection and would also be more visible themselves.

FIGURE 2 – Stanley Road & Deerfield Drive





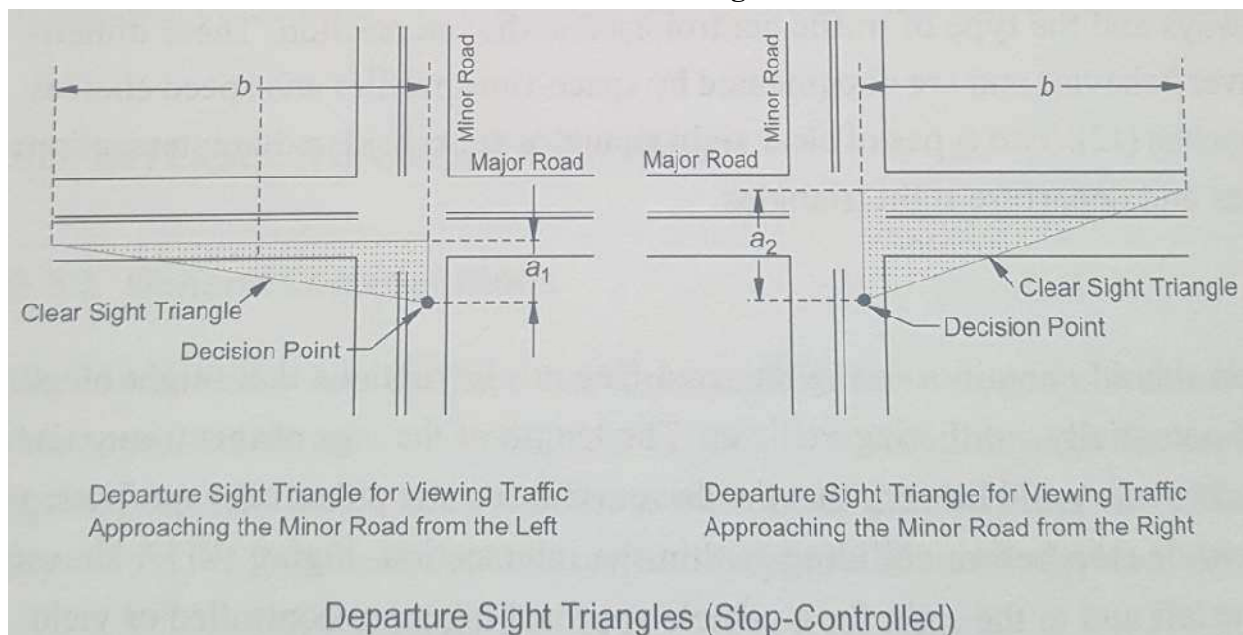
RECOMMENDATIONS

It is our recommendation that a STOP sign be installed on the Stanley Road approach at the study intersection. Treatments which can be considered include but are not limited to:

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

It is our opinion that if the tree and other foliage at the corners of the intersection are cleared, then the sight distance can be improved. We recommend that the Township cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

FIGURE 3 – Intersection Sight Distance





STOP Sign Installation – A STOP control on the minor-road approach should be considered as per Section 2B.11-Minor Road Stop Control of the MUTCD (11th Edition). The STOP sign would provide the appropriate traffic control at the study intersection to improve safety and circulation of traffic. We recommend that the Township install a STOP sign on Stanley Road at the study intersection. The installation of the STOP sign should be implemented per the guidance presented within Chapter 2B-Regulatory Signs, Barricades, and Gates of the MUTCD (11th Edition).

FIGURE 4 – STOP Sign Installation



Sidewalk and Crosswalk Markings – We recommend that the Township consider installing sidewalks and marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.



SUMMARY & CONCLUSIONS

It is our recommendation, based upon our field observations, the guidance from MUTCD and Title 39, and the existing conditions, that the Township of West Orange should consider the installation of a STOP sign at the study intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John Jahr, P.T.P., T.S.O.S.
Principal


Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/04-StanleyRd-DeerfieldDr.docxs>



Bright View Engineering
Moving you forward

May 1, 2024

VIA EMAIL

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: Safety Study
Stanley Road & Seaman Road
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an evaluation of the existing traffic controls at the intersection of Stanley Road & Seaman Road. This analysis was performed to assess the safety conditions at the intersection and the installation of a stop control on Stanley Road.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash data along roadway segments interconnecting the study intersections;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

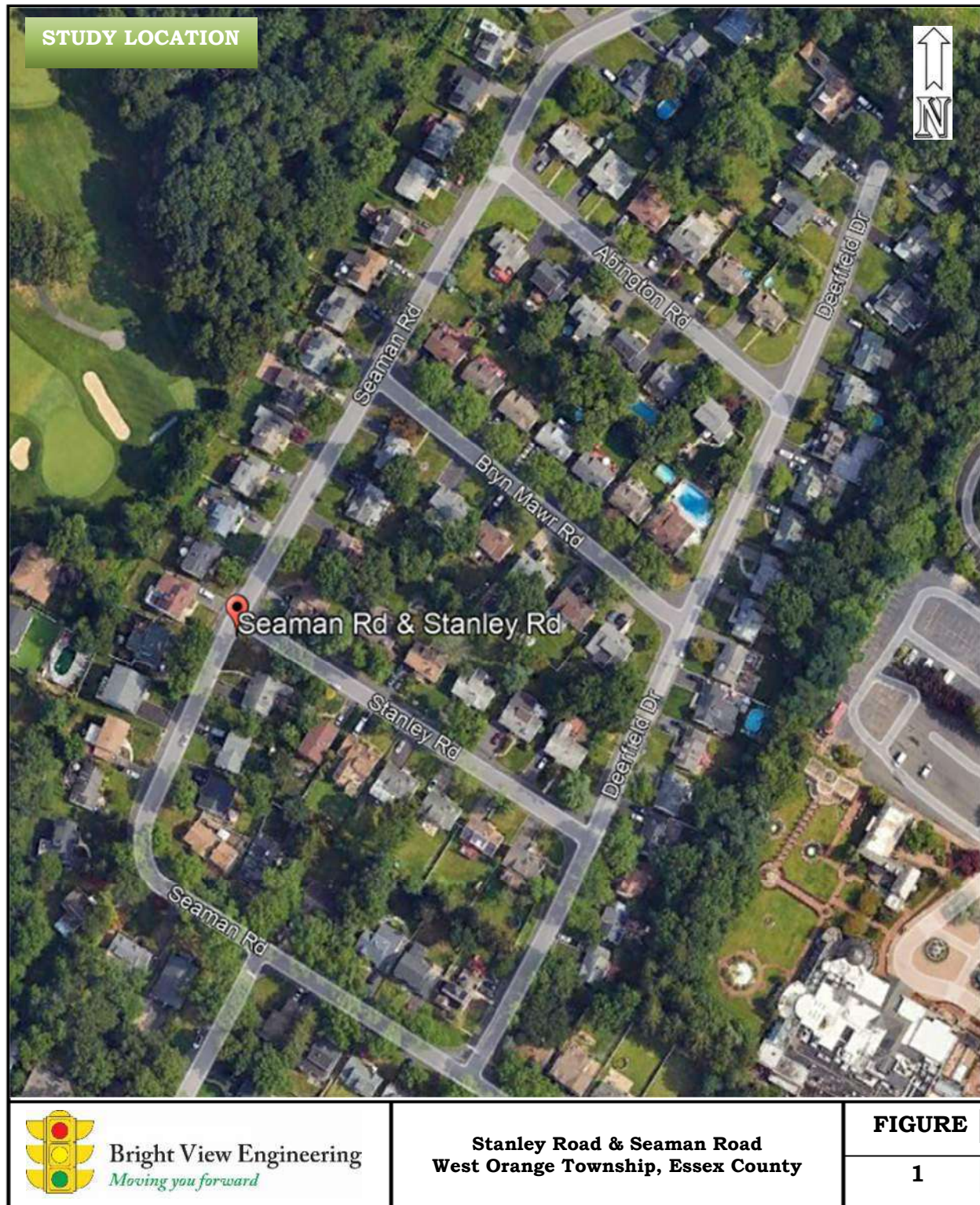
Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Stanley Road is an east to west oriented roadway which spans approximately 475 ft between Seaman Road and Deerfield Drive. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Stanley Road; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Seaman Road. There are no sidewalks or crosswalks present along the roadway.

Seaman Road is a north to south oriented roadway which spans 2,270 ft from Woodland Avenue to a dead end. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Seaman Road; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Stanley Road. There are no sidewalks or crosswalks present along the roadway.



FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. There were no crashes reported at the study intersection.

FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. The study area is a residential neighborhood.

We observed that the sight lines at the intersection of Stanley Road and Seaman Road are clear of obstructions.

FIGURE 2 – Stanley Road & Seaman Road





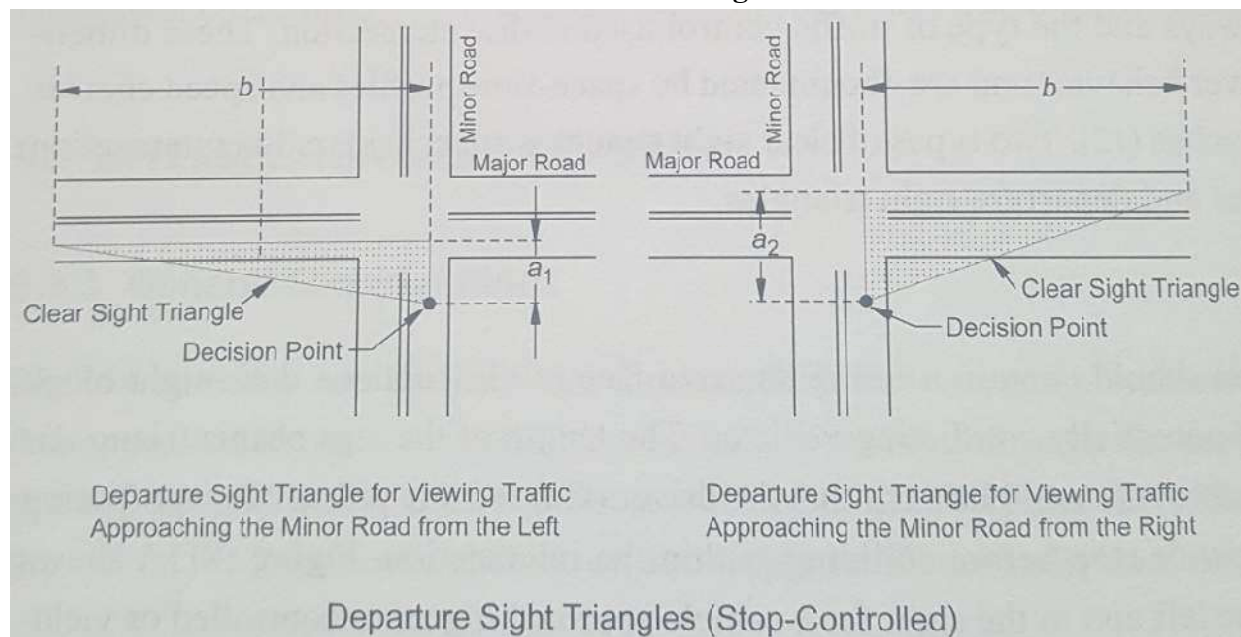
RECOMMENDATIONS

It is our recommendation that a STOP sign be installed on the Stanley Road approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements – At the intersection of Stanley Road & Seaman Road, the line of sight for approaching vehicles was found to be clear. We observed that stopped vehicles would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Seaman Road.

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners of the study intersection. We recommend that the Township continue to cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

FIGURE 3 – Intersection Sight Distance





STOP Sign Installation – A STOP control on the minor-road approach should be considered as per Section 2B.11-Minor Road Stop Control of the MUTCD (11th Edition). The STOP sign would provide the appropriate traffic control at the study intersection to improve safety and circulation of traffic. We recommend that the Township install a STOP sign on Stanley Road at the study intersection. The installation of the STOP sign should be implemented per the guidance presented within Chapter 2B-Regulatory Signs, Barricades, and Gates of the MUTCD (11th Edition).

FIGURE 4 – STOP Sign Installation



Sidewalk and Crosswalk Markings – We recommend that the Township consider installing sidewalks and marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.



SUMMARY & CONCLUSIONS

It is our recommendation, based upon our field observations, the guidance from MUTCD and Title 39, and the existing conditions, that the Township of West Orange should consider the installation of a STOP sign at the study intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John Jahr, P.T.P., T.S.O.S.
Principal


Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/03-StanleyRd-SeamanRd.docxs>



Bright View Engineering
Moving you forward

May 1, 2024

VIA EMAIL

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: Safety Study
Knollwood Drive/Ash Avenue & Hillcrest Avenue
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an evaluation of the existing traffic controls at the intersection of Knollwood Drive/Ash Avenue & Hillcrest Avenue. This analysis was performed to assess the safety conditions at the intersection and the installation of a stop control on Knollwood Drive and Ash Avenue.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash data along roadway segments interconnecting the study intersections;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Knollwood Drive is a north to south oriented roadway which spans approximately 1,380 ft between Walker Road and Hillcrest Avenue. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Knollwood Drive; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Hillcrest Avenue. There are sidewalks present on both sides of the roadway.

Ash Avenue is a north to south oriented roadway which spans approximately 400 ft from Hillcrest Avenue to a dead end. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Ash Avenue; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Hillcrest Avenue. There are sidewalks present along the northbound approach of Ash Avenue to Hillcrest Avenue.

Hillcrest Avenue is an east to west oriented roadway which spans approximately 1,700 ft from Oak Avenue to a dead end. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Hillcrest Avenue; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Knollwood Drive and Ash Avenue. There are sidewalks present on some sections of Hillcrest Avenue.

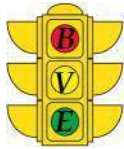
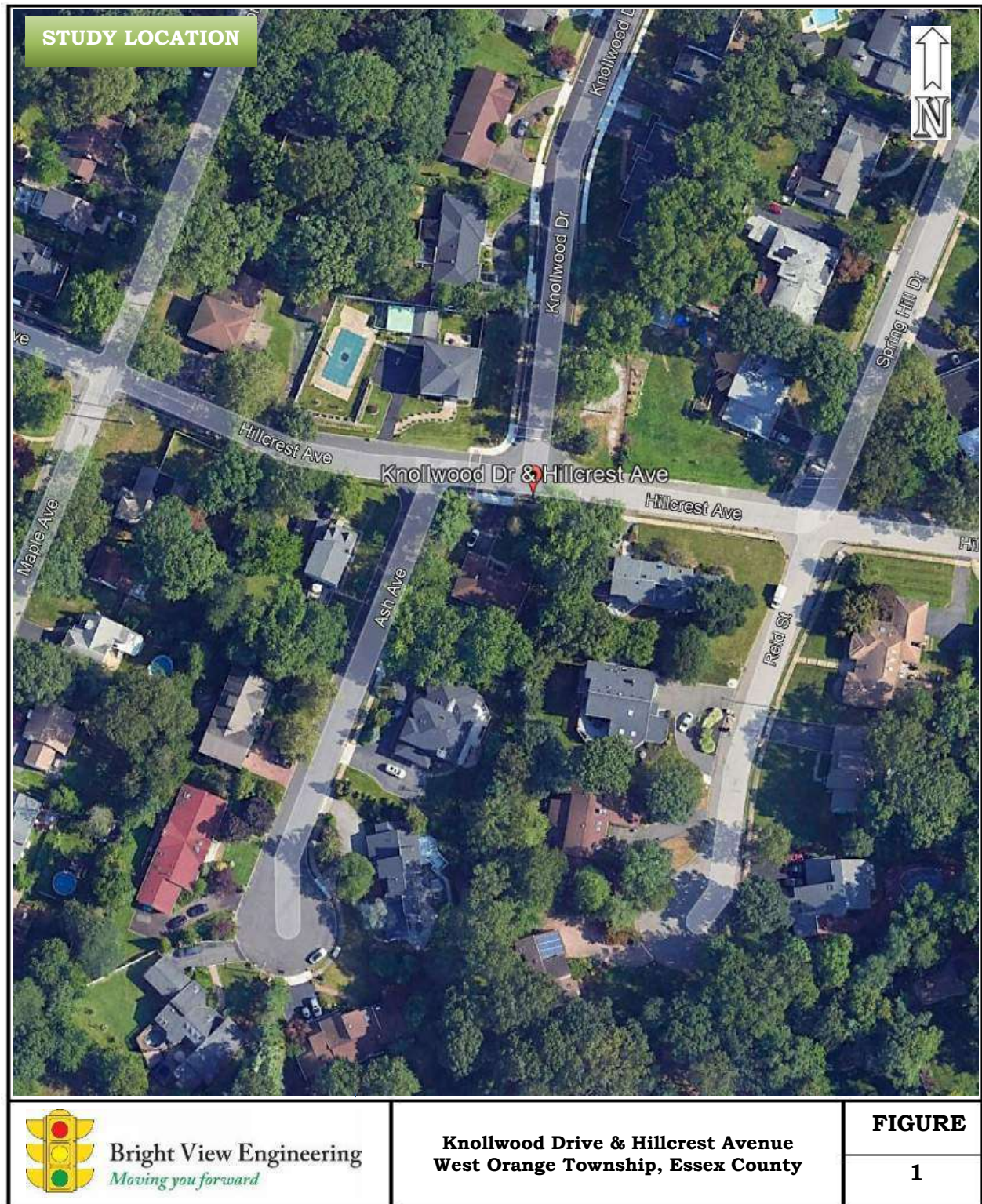
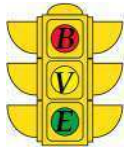


FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. The crashes are shown in Table 1 below:

Table 1 – Crash Data for Knollwood Drive & Hillcrest Avenue

DATE	STREET	CROSS STREET	TYPE	CIRCUMSTANCE
10/10/22	Knollwood Dr	Hillcrest Ave	Fixed Object	Driver Inattention

Based upon the provided crash data, we observe that one (1) incident was reported at the study intersection on 10/10/22. The crash report indicates no traffic control was present. The incident was not contributed to speeding but driver inattention and fixed objects at the study intersection.

FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. We note that the adjacent intersections on Hillcrest Avenue on Maple Avenue and Reid Street are STOP-controlled along the minor approaches. The study area is a residential neighborhood.

We observed that the sight lines at the intersection of Knollwood Drive & Hillcrest Avenue and Ash Avenue & Hillcrest Avenue are clear of obstructions.

FIGURE 2 – Knollwood Drive & Hillcrest Avenue





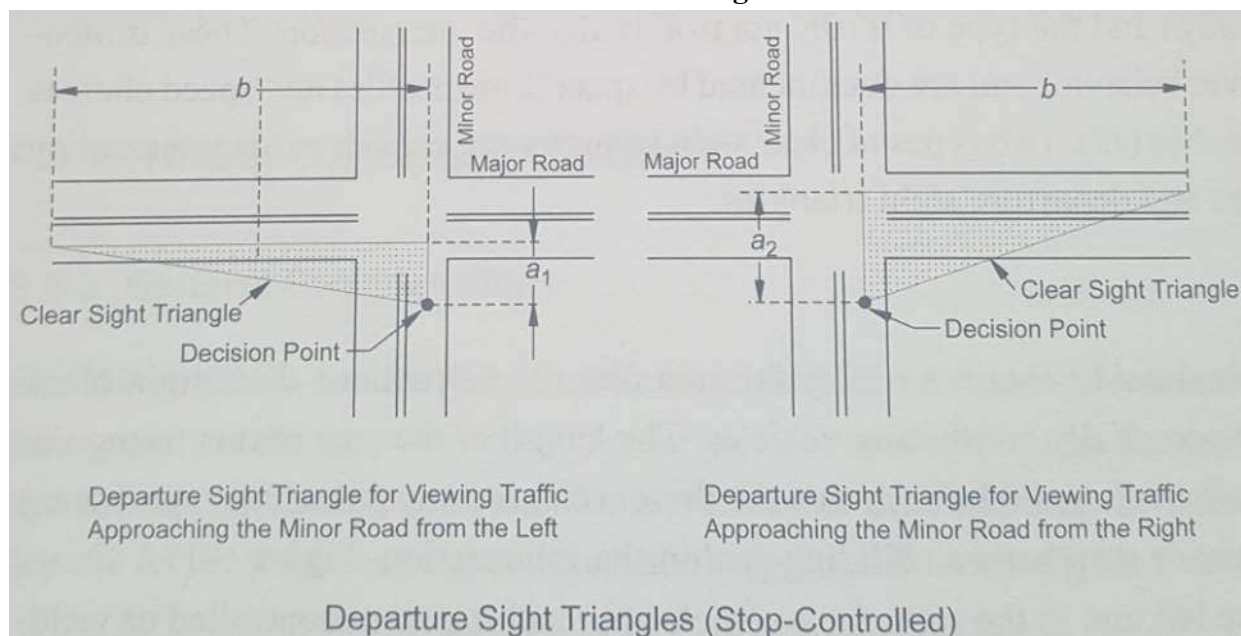
RECOMMENDATIONS

It is our recommendation that a STOP sign be installed on Knollwood Drive and on Ash Avenue. Treatments which can be considered include but are not limited to:

Sight Distance Improvements – At the intersections of Knollwood Drive & Hillcrest Avenue and Ash Avenue & Hillcrest Avenue, the line of sight of approaching vehicles was found to be clear. We note that if stopped vehicles pulled up closer to the mainline on Hillcrest Avenue, they would have improved visibility of traffic conditions at the intersection and would also be more visible themselves. We observed that stopped vehicles would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Hillcrest Avenue.

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners of the study intersection. We recommend that the Township continue to cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

FIGURE 3 – Intersection Sight Distance





STOP Sign Installation – A STOP control on the minor-road approach should be considered as per Section 2B.11-Minor Road Stop Control of the MUTCD (11th Edition). The STOP sign would provide the appropriate traffic control at the study intersection to improve safety and circulation of traffic. We recommend that the Township install a STOP sign on Knollwood Drive and Ash Avenue at their intersection with Hillcrest Avenue. The installation of the STOP sign should be implemented per the guidance presented within Chapter 2B-Regulatory Signs, Barricades, and Gates of the MUTCD (11th Edition).

FIGURE 4a – STOP Sign Installation at Knollwood Drive & Hillcrest Avenue





FIGURE 4b – STOP Sign Installation at Ash Avenue & Hillcrest Avenue



Striping and Signages – Given the roadway geometry and existing conditions at the intersections of Knollwood Drive & Hillcrest Avenue and Ash Avenue & Hillcrest Avenue, we recommend the implementation of additional striping to support the installation of the stop sign. We recommend that the Township provide a stop bar and double yellow line striping on the minor approaches to support the stop sign.

Sidewalk and Crosswalk Markings – We recommend that the Township consider installing sidewalks and marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.

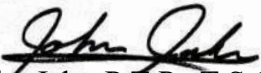


SUMMARY & CONCLUSIONS

It is our recommendation, based upon our field observations, the guidance from MUTCD and Title 39, and the existing conditions, that the Township of West Orange should consider the installation of a STOP sign and additional striping at the study intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering



John Jahr, P.T.P., T.S.O.S.
Principal



Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/11-Knollwood-Hillcrest.docxs>



Bright View Engineering
Moving you forward

May 8, 2024

VIA EMAIL

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: Safety Study
Luddington Terrace & Lowell Place
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an evaluation of the existing traffic controls at the intersection of Luddington Terrace & Lowell Place. This analysis was performed to assess the safety conditions at the intersection and the installation of a stop control on Luddington Terrace.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash data along roadway segments interconnecting the study intersections;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

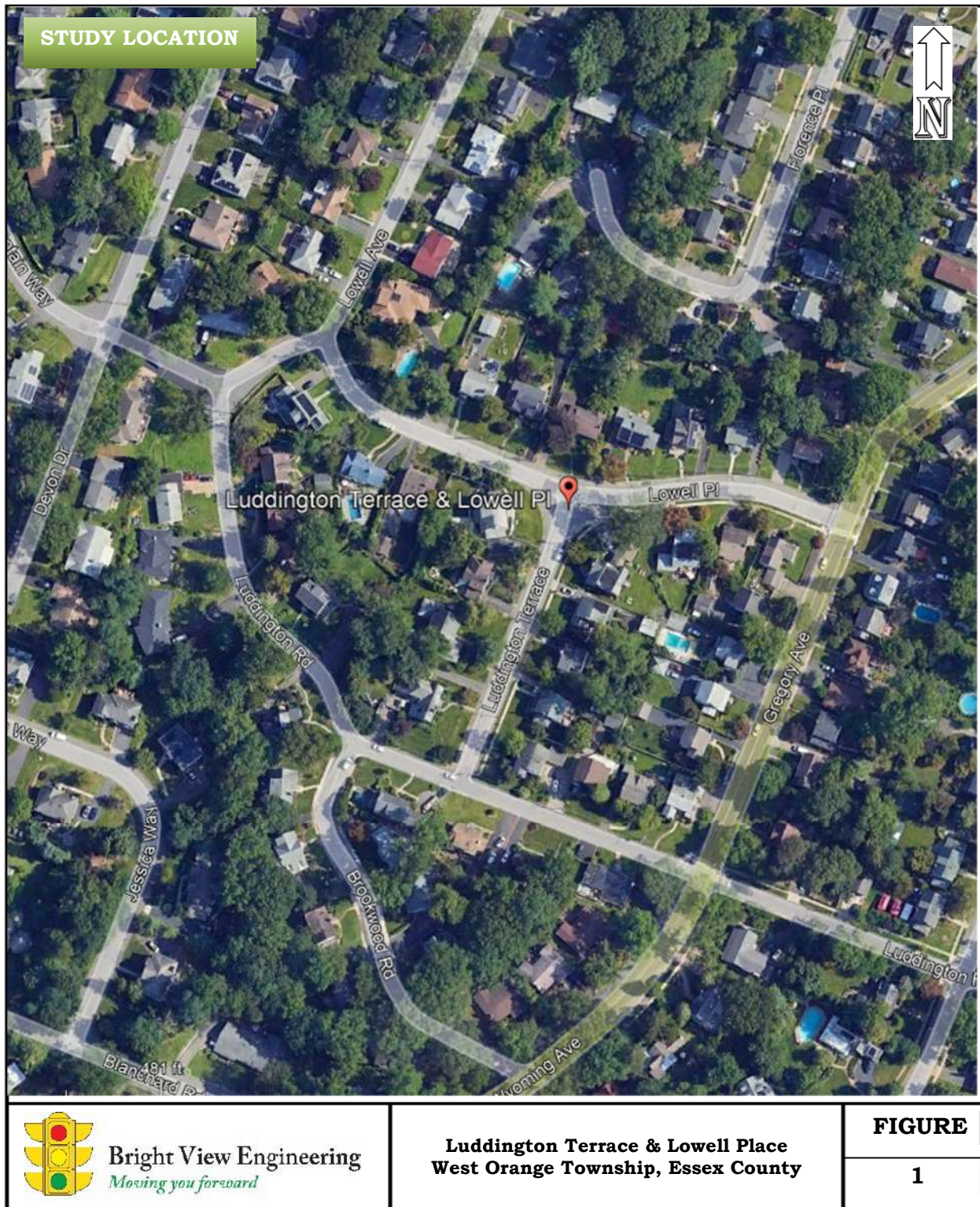
Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Luddington Terrace is a north to south oriented roadway which spans approximately 380 ft between Luddington Road and Lowell Place. The roadway is a local roadway within the Township of West Orange. There are no speed limit signs posted on Luddington Terrace; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at the study intersection. There is a sidewalk present along the northbound travel lane of Luddington Terrace to Lowell Place.

Lowell Place is generally an east to west oriented roadway which spans approximately 700 ft between Lowell Avenue and Gregory Avenue. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Lowell Place; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft wide and allows for bi-directional travel from Gregory Avenue to Lowell Avenue. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Luddington Terrace. There is a sidewalk present along the eastbound approach of Lowell Place from Luddington Terrace to Gregory Avenue.



FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. There were no crashes reported at the study intersection.

FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. The study area is a residential neighborhood with primarily single-family housing.

We observed that the sight lines at the intersection of Luddington Terrace & Lowell Place are clear and free of obstructions.

FIGURE 2 – Luddington Terrace & Lowell Place





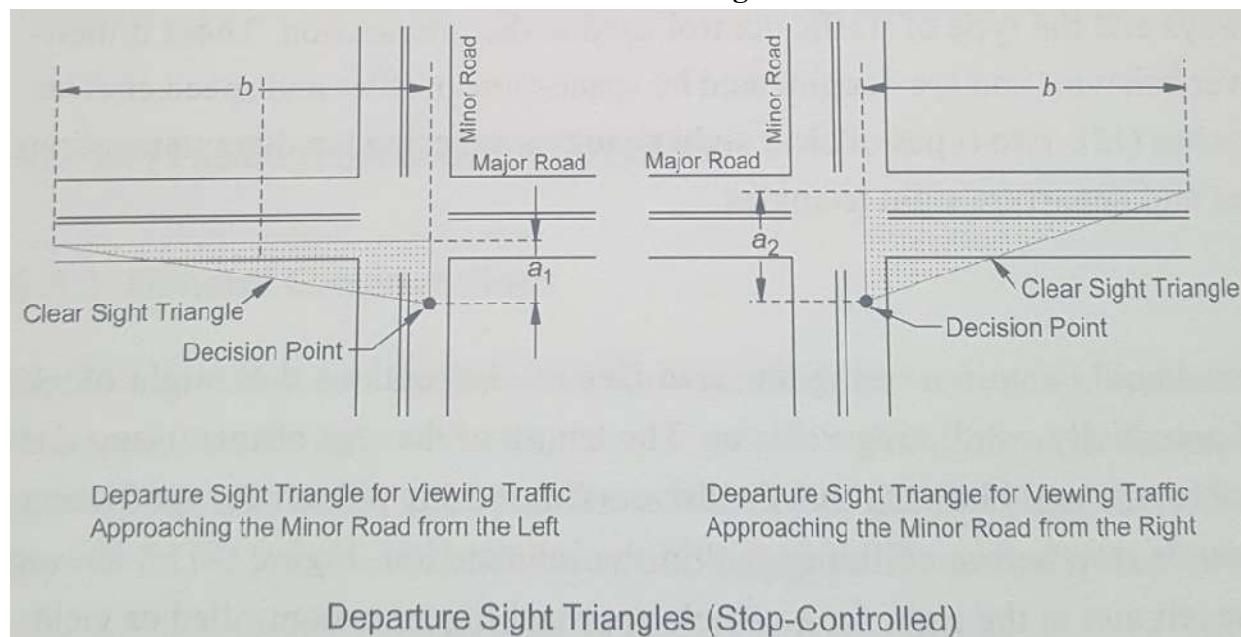
RECOMMENDATIONS

It is our recommendation that a STOP sign be installed on the Luddington Terrace approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements – At the intersection of Luddington Terrace & Lowell Place, the line of sight of approaching vehicles was found to be clear. We observed that stopped vehicles would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Lowell Place.

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners of the study. We recommend that the Township continue to cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

FIGURE 3 – Intersection Sight Distance





STOP Sign Installation – A STOP control on the minor-road approach should be considered as per Section 2B.11-Minor Road Stop Control of the MUTCD (11th Edition). The STOP sign would provide the appropriate traffic control at the study intersection to improve safety and circulation of traffic. We recommend that the Township install a STOP sign on Luddington Terrace at the study intersection. The installation of the STOP sign should be implemented per the guidance presented within Chapter 2B-Regulatory Signs, Barricades, and Gates of the MUTCD (11th Edition).

FIGURE 4 – STOP Sign Installation



Striping and Signages – Given the wide curb radius at the study intersection, we recommend the implementation of additional striping to support the installation of the stop sign. We recommend that the Township provide a stop bar and double yellow line striping on Luddington Terrace to support the stop sign.

Sidewalk and Crosswalk Markings – We recommend that the Township consider installing sidewalks and marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.



SUMMARY & CONCLUSIONS

It is our recommendation, based upon our field observations, the guidance from MUTCD and Title 39, and the existing conditions, that the Township of West Orange should consider the installation of a STOP sign and additional striping at the study intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John Jahr, P.T.P., T.S.O.S.
Principal


Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/09-LuddingtonTerr-LowellPl.docxs>



Bright View Engineering
Moving you forward

May 1, 2024

VIA EMAIL

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: Safety Study
Luddington Terrace & Luddington Road
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an evaluation of the existing traffic controls at the intersection of Luddington Terrace & Luddington Road. This analysis was performed to assess the safety conditions at the intersection and the installation of a stop control on Luddington Terrace.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash data along roadway segments interconnecting the study intersections;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

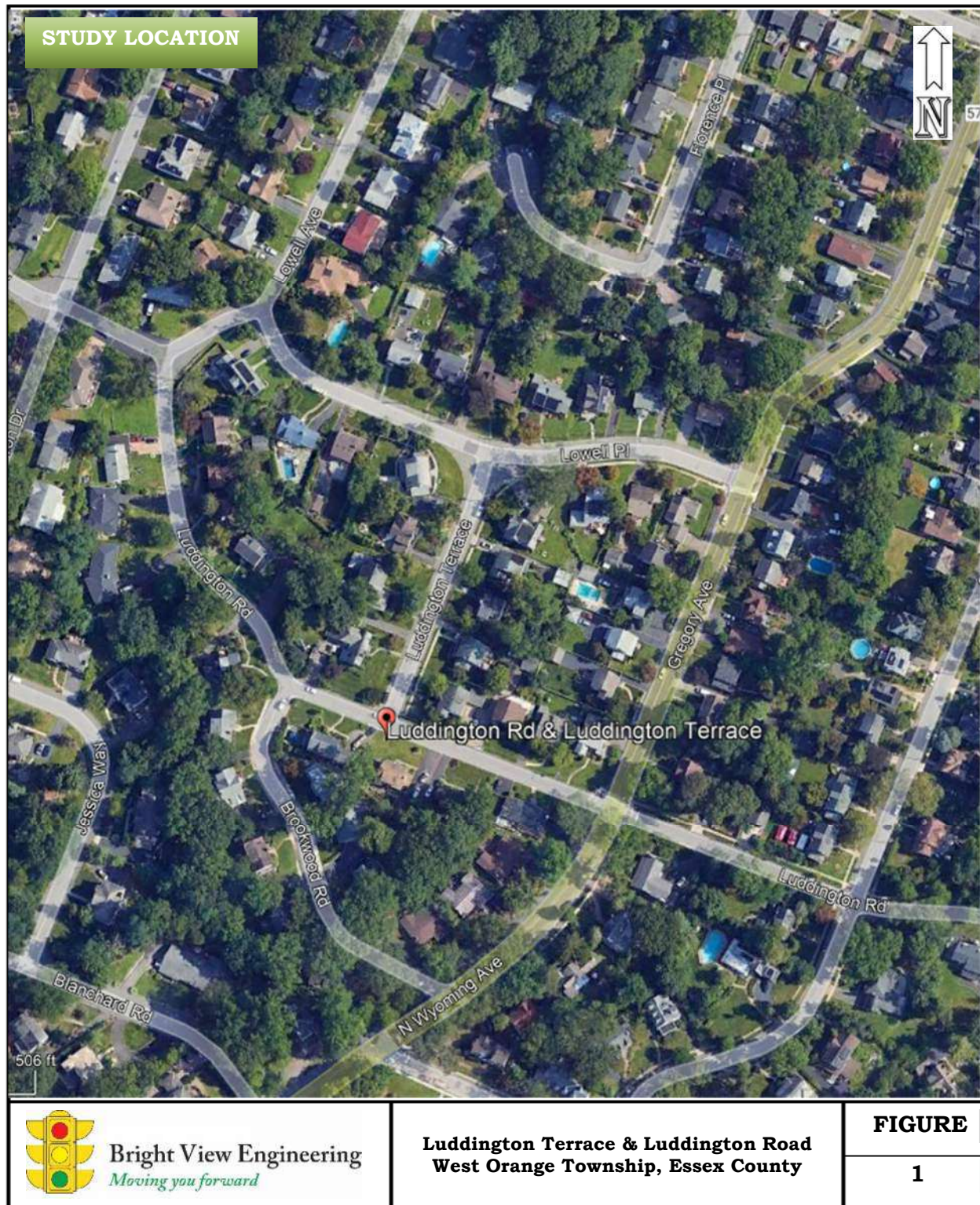
Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Luddington Terrace is a north to south oriented roadway which spans approximately 380 ft between Luddington Road and Lowell Place. The roadway is a local roadway within the Township of West Orange. There are no speed limit signs posted on Luddington Terrace; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at the study intersection. There is a sidewalk present along the northbound approach of Luddington Terrace to Lowell Place.

Luddington Road is generally an east to west oriented roadway which spans approximately 2,400 ft between Lowell Avenue and South Valley Road. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Luddington Road; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 20 ft and allows for one-way travel westbound from South Valley Road to Lowell Avenue. On-street parking is not permitted along both sides of the roadway. There are no traffic controls at its intersection with Luddington Terrace. There are no sidewalks or crosswalks at its intersection with Luddington Terrace.



FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. There were no crashes reported at the study intersection.

FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. The study area is a residential neighborhood with primarily single-family housing.

We observed that the sight lines at the intersection of Luddington Terrace & Luddington Road are clear and free of obstructions.

FIGURE 2 – Luddington Terrace & Luddington Road





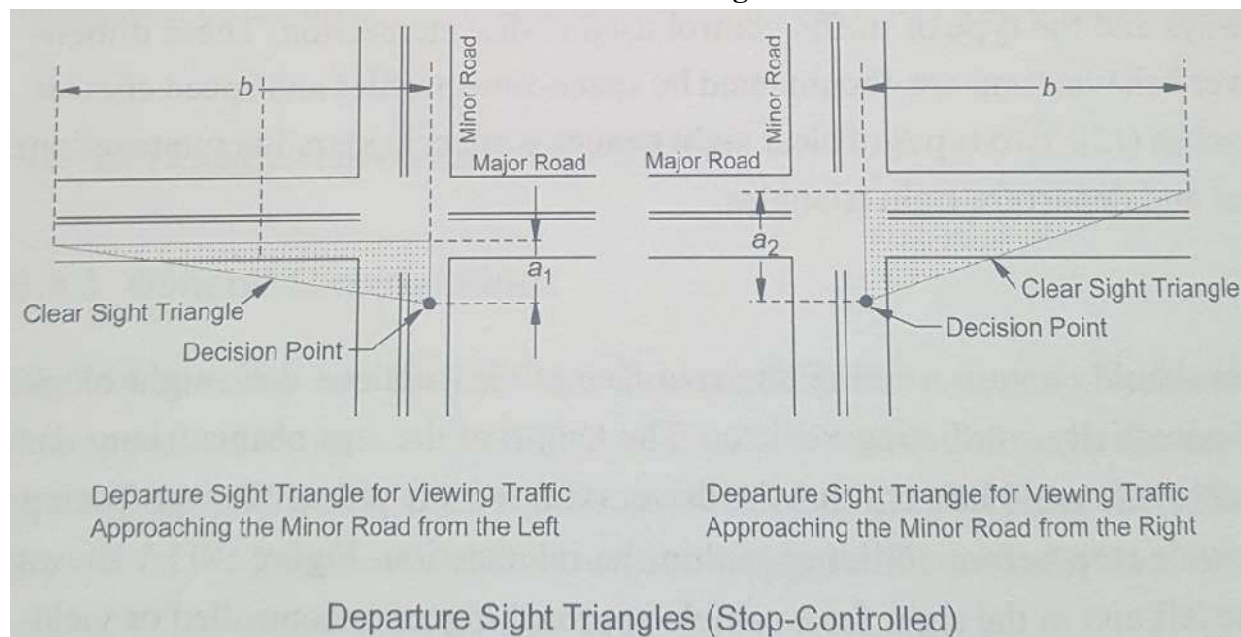
RECOMMENDATIONS

It is our recommendation that a STOP sign be installed on the Luddington Terrace approach at the study intersection. Treatments which can be considered include but are not limited to:

Sight Distance Improvements – At the intersection of Luddington Terrace & Luddington road, the line of sight of approaching vehicles was found to be clear. We observed that stopped vehicles would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Luddington Road.

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners of the study. We recommend that the Township continue to cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

FIGURE 3 – Intersection Sight Distance





STOP Sign Installation – A STOP control on the minor-road approach should be considered as per Section 2B.11-Minor Road Stop Control of the MUTCD (11th Edition). The STOP sign would provide the appropriate traffic control at the study intersection to improve safety and circulation of traffic. We recommend that the Township install a STOP sign on Luddington Terrace at the study intersection. The installation of the STOP sign should be implemented per the guidance presented within Chapter 2B-Regulatory Signs, Barricades, and Gates of the MUTCD (11th Edition).

FIGURE 4 – STOP Sign Installation



Striping and Signages – We recommend that the Township provide a stop bar and double yellow line striping on Luddington Terrace to support the stop sign. We also recommend updating the “One-Way” and “No Left-Turn” signs for Luddington Road as per Section 2B.26-Movement Prohibition Signs of the MUTCD (11th Edition).

Sidewalk and Crosswalk Markings – We recommend that the Township consider installing sidewalks and marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.



SUMMARY & CONCLUSIONS

It is our recommendation, based upon our field observations, the guidance from MUTCD and Title 39, and the existing conditions, that the Township of West Orange should consider the installation of a STOP sign and additional signages and striping, as necessary.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John Jahr, P.T.P., T.S.O.S.
Principal


Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/10-LuddingtonTerr-LuddingtonRd.docxs>



Bright View Engineering
Moving you forward

May 1, 2024

VIA EMAIL

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: Safety Study
Bellevue Terrace & Nutwold Avenue
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an evaluation of the existing traffic controls at the intersection of Bellevue Terrace & Nutwold Avenue. This analysis was performed to assess the safety conditions at the intersection and the installation of a stop control on Bellevue Terrace.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash data along roadway segments interconnecting the study intersections;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

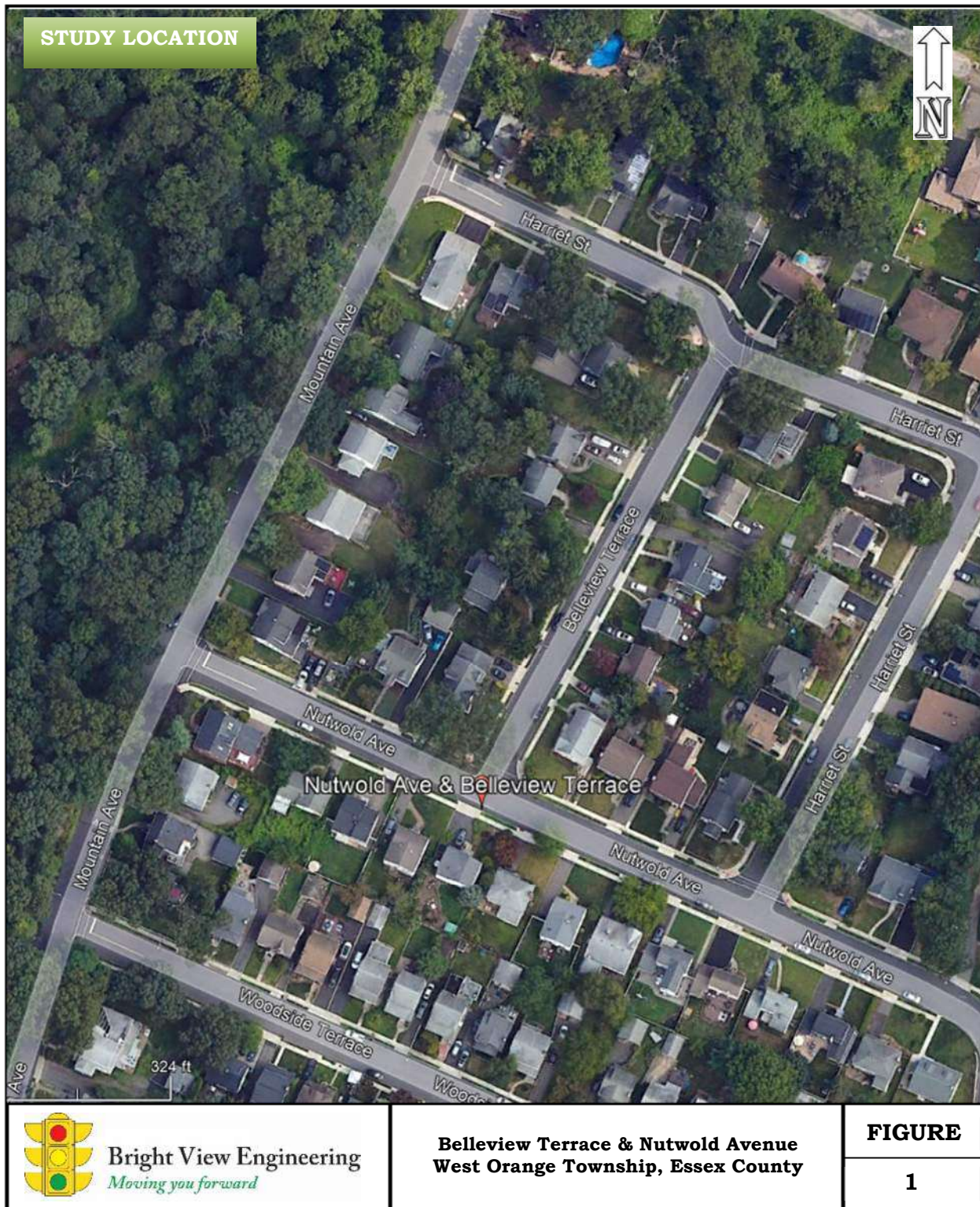
Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Bellevue Terrace is a north to south oriented roadway which spans approximately 400 ft between Harriet Street and Nutwold Avenue. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Bellevue Terrace; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Nutwold Avenue. There are sidewalks present on both sides of the roadway.

Nutwold Avenue is generally an east to west oriented roadway which spans approximately 1,250 ft from Mountain Avenue to Moore Terrace. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Nutwold Avenue; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Bellevue Terrace. There are sidewalks present on both sides of the roadway within the vicinity of the study intersection.



FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. There were no crashes reported at the study intersection.

FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. The study area is a residential neighborhood.

We observed that the foliage at the corners of the study intersection is obstructing the sight lines for approaching vehicles; however, if vehicles pulled up closer to Nutwold Avenue along the controlled approach, they would have improved visibility of traffic conditions at the intersection and would also be more visible.

FIGURE 2 – Bellevue Terrace & Nutwold Avenue





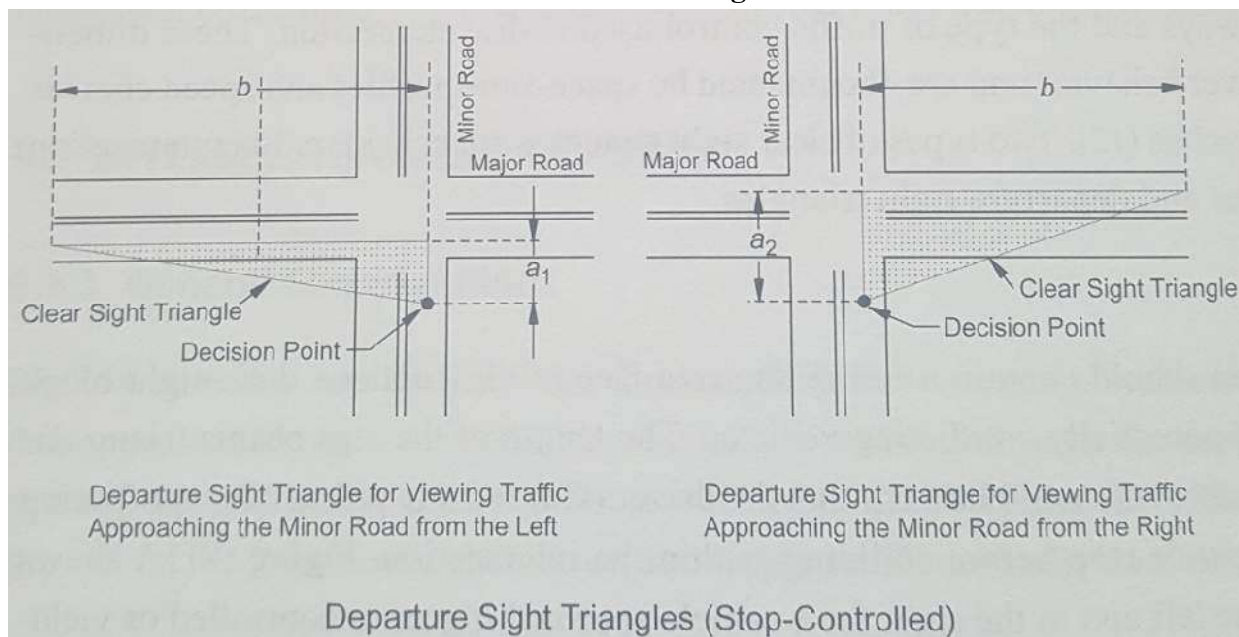
RECOMMENDATIONS

It is our recommendation that a STOP sign be installed on Bellevue Terrace. Treatments which can be considered include but are not limited to:

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

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners of the study intersection. We recommend that the Township cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

FIGURE 3 – Intersection Sight Distance





STOP Sign Installation – A STOP control on the minor-road approach should be considered as per Section 2B.11-Minor Road Stop Control of the MUTCD (11th Edition). The STOP sign would provide the appropriate traffic control at the study intersection to improve safety and circulation of traffic. We recommend that the Township install a STOP sign Bellevue Terrace. The installation of the STOP sign should be implemented per the guidance presented within Chapter 2B-Regulatory Signs, Barricades, and Gates of the MUTCD (11th Edition).

FIGURE 4 – STOP Sign Installation



Striping and Signages – Given the roadway geometry and existing conditions at the intersections of Bellevue Terrace & Nutwold Avenue, we recommend the implementation of additional striping to support the installation of the stop sign. We recommend that the Township provide a stop bar and double yellow line striping on the minor approaches to support the stop sign.

Sidewalk and Crosswalk Markings – We recommend that the Township maintain their sidewalks and update their marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.



SUMMARY & CONCLUSIONS

It is our recommendation, based upon our field observations, the guidance from MUTCD and Title 39, and the existing conditions, that the Township of West Orange should consider the installation of a STOP sign and additional striping at the study intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John Jahr, P.T.P., T.S.O.S.
Principal


Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/01-Bellevue-Terrace-Nutwold.docxs>



Bright View Engineering
Moving you forward

May 8, 2024

VIA EMAIL

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: Safety Study
Bellevue Terrace & Harriet Street
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an evaluation of the existing traffic controls at the intersection of Bellevue Terrace & Nutwood Avenue. This analysis was performed to assess the safety conditions at the intersection and the installation of a stop control on Bellevue Terrace.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash data along roadway segments interconnecting the study intersections;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

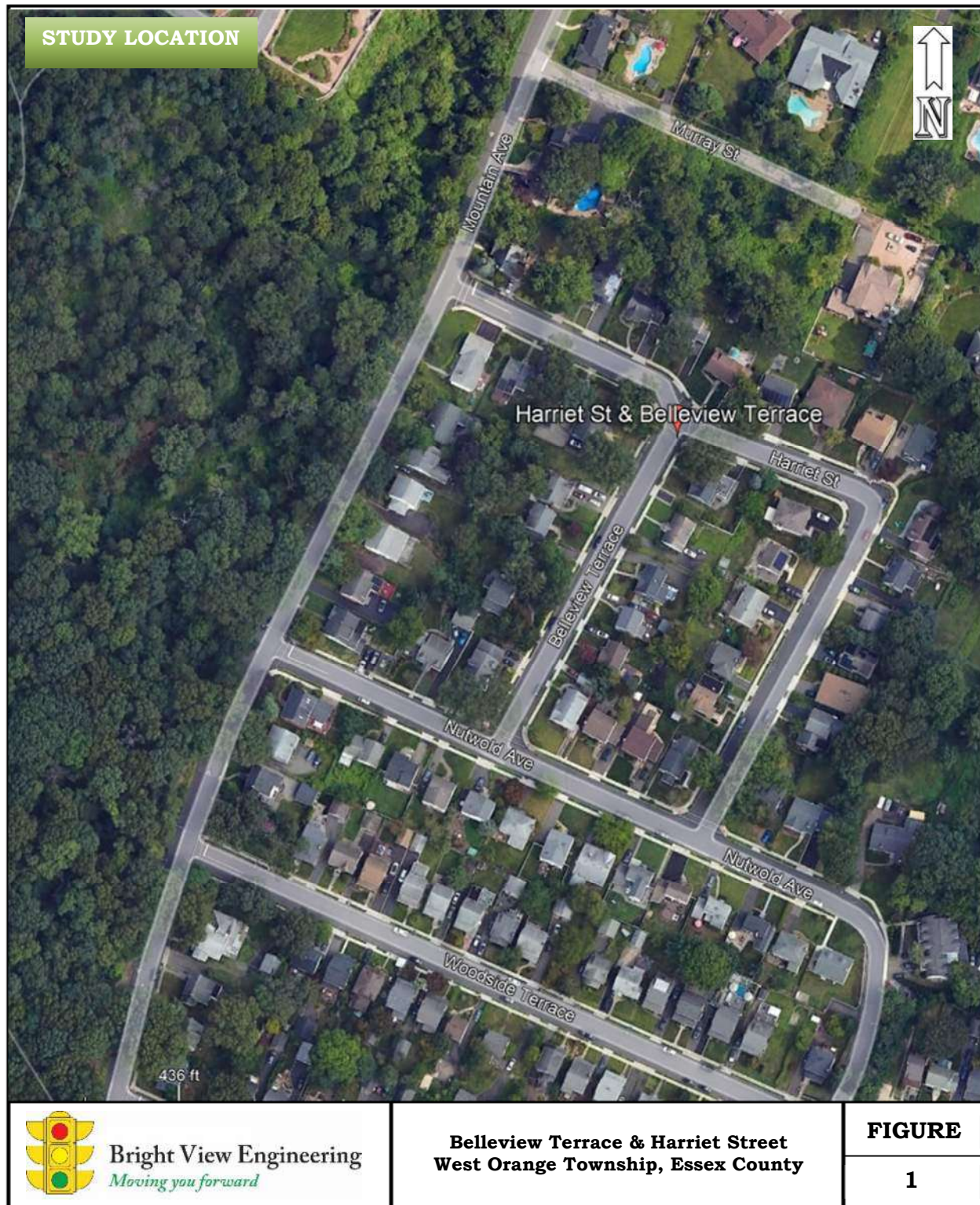
Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Bellevue Terrace is a north to south oriented roadway which spans approximately 400 ft between Harriet Street and Nutwold Avenue. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Bellevue Terrace; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Nutwold Avenue. There are sidewalks present on both sides of the roadway.

Harriet Street is generally an east to west oriented roadway which spans approximately 950 ft from Mountain Avenue to Nutwold Avenue. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Harriet Street; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls at its intersection with Bellevue Terrace. There are sidewalks present on both sides of the roadway.



FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. The crashes are shown in Table 1 below:

Table 1 – Crash Data for Knollwood Drive & Hillcrest Avenue

DATE	STREET	CROSS STREET	TYPE	CIRCUMSTANCE
7/12/21	Bellevue Terrace	Harriet Street	Fixed Object	Driver Inattention

Based upon the provided crash data, we observe that one (1) incident was reported at the study intersection on 7/12/21. The crash report indicates no traffic control was present. The incident was not contributed to speeding but driver inattention and fixed objects at the study intersection.

FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. The study area is a residential neighborhood.

We observed that the foliage at the corners of the study intersection is obstructing the sight lines for approaching vehicles; however, if vehicles pulled up closer to Harriet Street along the controlled approach, they would have improved visibility of traffic conditions at the intersection and would also be more visible.

FIGURE 2 – Bellevue Terrace & Harriet Street





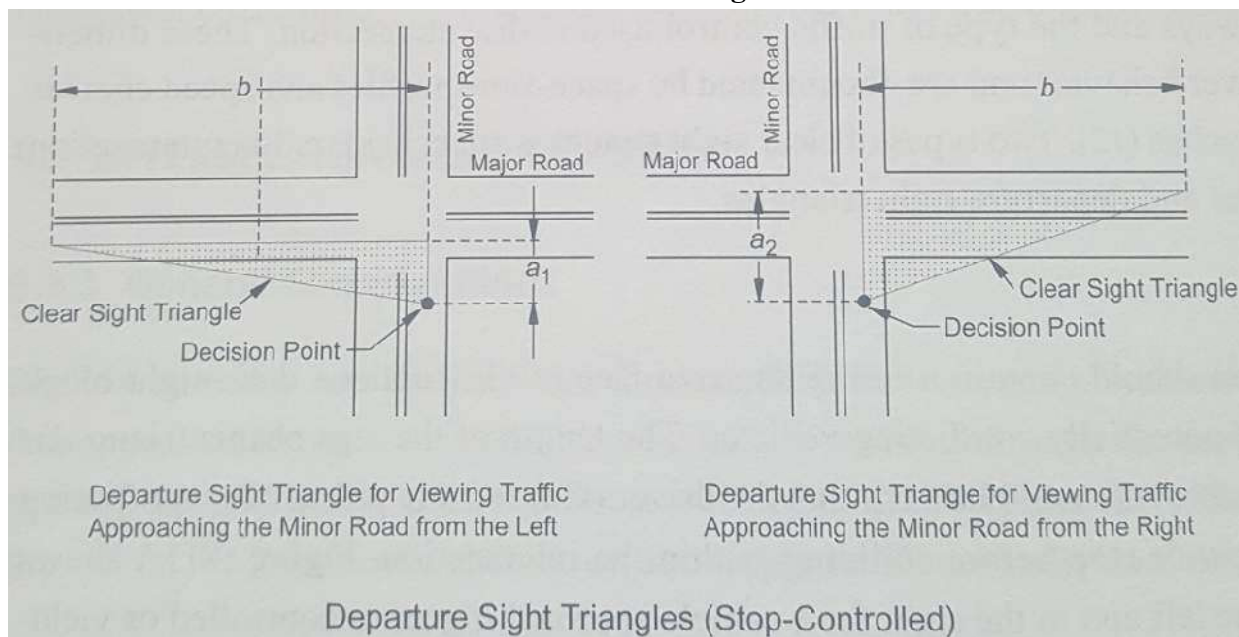
RECOMMENDATIONS

It is our recommendation that a STOP sign be installed on Bellevue Terrace. Treatments which can be considered include but are not limited to:

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

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners of the study intersection. We recommend that the Township cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

FIGURE 3 – Intersection Sight Distance





STOP Sign Installation – A STOP control on the minor-road approach should be considered as per Section 2B.11-Minor Road Stop Control of the MUTCD (11th Edition). The STOP sign would provide the appropriate traffic control at the study intersection to improve safety and circulation of traffic. We recommend that the Township install a STOP sign Bellevue Terrace. The installation of the STOP sign should be implemented per the guidance presented within Chapter 2B-Regulatory Signs, Barricades, and Gates of the MUTCD (11th Edition).

FIGURE 4 – STOP Sign Installation



Striping and Signages – Given the roadway geometry and existing conditions at the intersections of Bellevue Terrace & Harriet Street, we recommend the implementation of additional striping to support the installation of the stop sign. We recommend that the Township provide a stop bar and double yellow line striping on the minor approaches to support the stop sign.

Sidewalk and Crosswalk Markings – We recommend that the Township maintain their sidewalks and update their marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.



SUMMARY & CONCLUSIONS

It is our recommendation, based upon our field observations, the guidance from MUTCD and Title 39, and the existing conditions, that the Township of West Orange should consider the installation of a STOP sign and additional striping at the study intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John Jahr, P.T.P., T.S.O.S.
Principal


Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/02-Bellevue-Terrace-Harriet.docxs>



Bright View Engineering
Moving you forward

May 8, 2024

VIA EMAIL

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 Evaluation
Stanford Avenue & Crestwood Drive
West Orange Township, Essex County, New Jersey
BVE Project No.: 241079

Dear Ms. Carballo:

Bright View Engineering was tasked by the Township of West Orange (*the Township here-in*) with performing an all way stop analysis at the intersection of Stanford Avenue & Crestwood Drive. This analysis was performed to assess the safety conditions and determine the appropriate traffic control measures for the study intersection.

Bright View Engineering (*BVE here-in*), in coordination with the Township, collected data during various site visits to assess the existing conditions at the study location. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. Our methodology conforms with the provisions set forth in NJSA *Title 39:4-8*, Institute of Transportation Engineers (*ITE*) literature, and the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Crash and Volume Data;
- All-Way Stop Analysis;
- Peak Hour Level of Service Analysis;
- Recommendations;
- Summary and Conclusions.

70 South Orange Avenue, Suite 109
Livingston, New Jersey 07039

C: (732) 236-7557 T: (973) 228-0999 F: (201) 753-3904
BrightViewEngineering.com

P.O. Box 99
Roseland, NJ 07068



EXISTING CONDITIONS

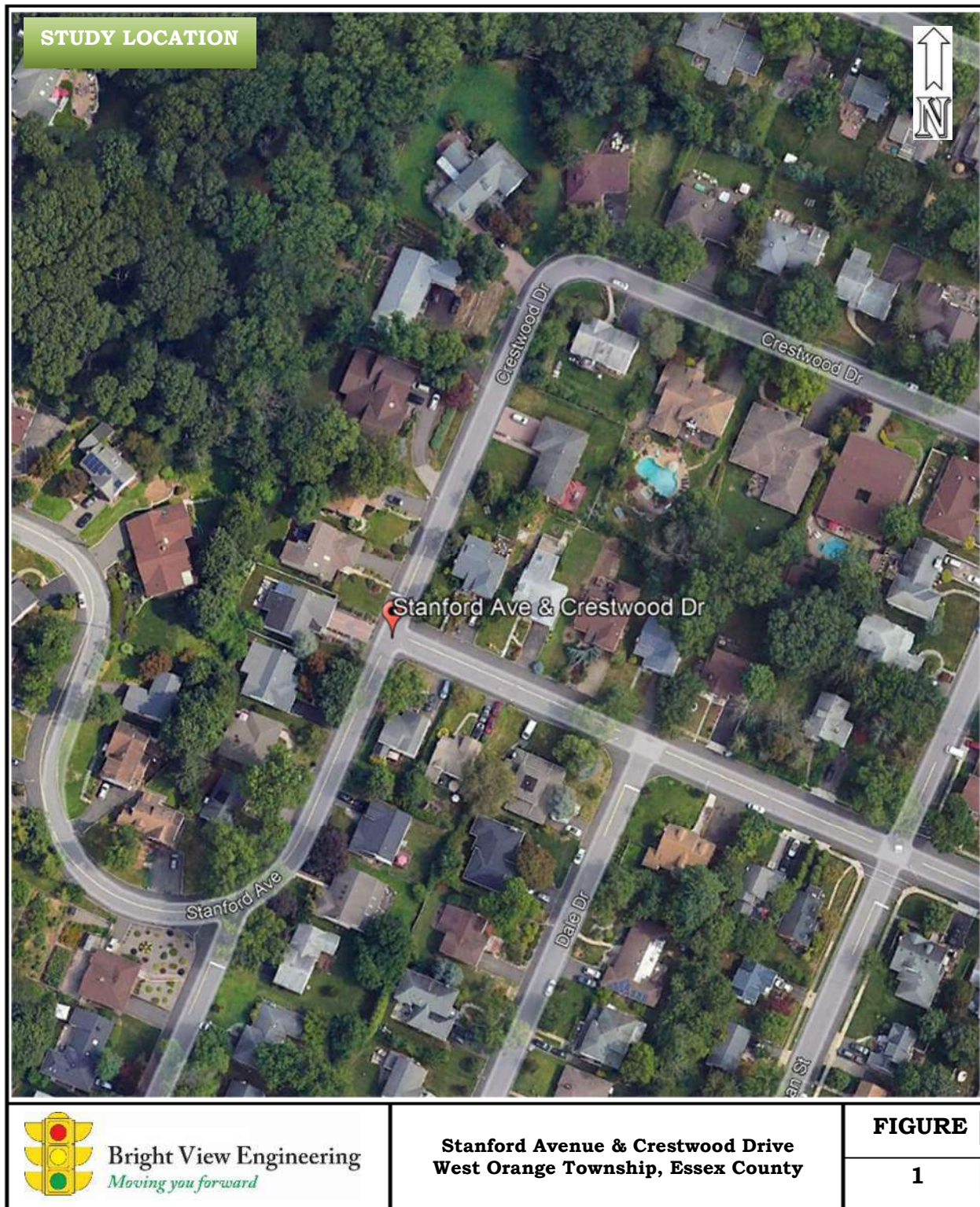
Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

Stanford Avenue is generally an east to west oriented roadway between Ferris Drive and Pleasant Valley Way (CR 636). The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Stanford Avenue; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway is approximately 35 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. There are no traffic controls for this roadway at its intersection with Crestwood Drive. There are no sidewalks present within the vicinity of the study intersection.

Crestwood Drive is the southbound approach at its intersection with Stanford Avenue. The roadway spans approximately 1,170 ft. The roadway is a local road within the Township of West Orange. There are no speed limit signs posted on Crestwood Drive; however, it is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. The roadway width is approximately 30 ft and allows for bi-directional travel. On-street parking is permitted along both sides of the roadway. Crestwood Drive is a horseshoe shaped street that intersects Stanford Avenue twice. There is currently a stop control on Crestwood Drive at both intersections with Stanford Avenue. This study is concerned with moving the stop control from Crestwood Drive to Stanford Avenue at the westerly 'T-intersection' of Stanford Avenue and Crestwood Drive.



FIGURE 1





DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data through the Crash Database from Safety Voyager. The crashes are shown in Table 1 below:

Table 1 – Crash Data for Knollwood Drive & Hillcrest Avenue

DATE	STREET	CROSS STREET	TYPE	CIRCUMSTANCE
2/21/19	Stanford Ave	Stanford Ave	Fixed Object	Brakes

Based upon the provided crash data, we observe that one (1) incident was reported at the study intersection on 2/21/19. The crash report indicates no traffic control was present. The incident was not contributed to speeding but driver inattention and fixed objects at the study intersection.

TRAFFIC VOLUME DATA

Manual Turning Movement Counts (MTMC) at the intersection of Stanford Avenue & Crestwood Drive were conducted on Thursday, April 25, 2024, between the hours of 6:00AM and 7:00PM. Table 2 details the peak hour traffic volumes.

Table 2 – 2024 Peak Hour Traffic Volumes

TIME	Crestwood Drive SB		Stanford Ave NB		Stanford Ave WB		Total
	L	T	T	R	L	R	
8:00 AM – 9:00 AM	2	3	2	12	34	0	53
3:00 PM – 4:00 PM	2	3	3	16	26	0	51
5:00 PM – 6:00 PM	5	2	2	14	12	2	37



FIELD OBSERVATIONS

BVE conducted field data collection and performed vehicle runs along the study area. We observed that presently, there are no traffic controls at the study intersection. The study area is a residential neighborhood.

We observed that the horizontal sight lines at the intersection of Stanford Avenue & Crestwood Drive are clear of major obstructions. We observed that the vertical sight lines from Crestwood Drive (southbound approach) to the study intersection is clear.

FIGURE 2a – Stanford Avenue & Crestwood Drive (Stanford Avenue WB Approach)



FIGURE 2b – Stanford Avenue & Crestwood Drive (Crestwood Drive SB Approach)





ALL-WAY STOP ANALYSIS

We conducted an All-Way Stop warrant analysis in accordance with Section 2B.12 of the MUTCD (11th Edition). The warrants are not a substitute for engineering judgement. It is the engineering study and evaluation of the operational performance or safety of an intersection that will ultimately be the basis for the application of an all-way stop control.

MUTCD Section 2B.13 – Warrant A: Crash Experience

The study intersection is a three-leg intersection with only one (1) reported crash since 2019. The guidelines require four (4) or more reported crashes in a 12-month period or five (5) or more reported crashes in a 36-month period that were susceptible to correction by the installation of an all-way stop. This warrant was not satisfied.

MUTCD Section 2B.14 – Warrant B: Sight Distance

The sight distances at the study intersection are clear and unobstructed. This warrant was not satisfied.

MUTCD Section 2B.15 – Warrant C: Transition to Signal Control or Yield Control at a Circular Intersection

The study intersection is not a circular intersection. This warrant was not satisfied.

MUTCD Section 2B.15 – Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

Stanford Avenue and Crestwood Drive are local roads with similar functions within the study area. We labeled the northbound and southbound approaches at the study intersection as the Major Street, while the westbound approach from Stanford Avenue is identified as the Minor Street. The approach speed for both roadways is 25 MPH which is less than the 40 MPH MUTCD guideline, thus the minimum vehicular warrants at least 300 vehicles per hour for an average day from the major street approach (*total of both approaches*) and at least 200 combined vehicles and pedestrian volume per hour for the same 8 hours from the minor street approach.

Table 3 – Traffic Volume Analysis for Stanford Avenue & Crestwood Drive

Approach		Major	Minor	Major	Minor
Time		NB/SB	WB	>300 MUTCD	>200 MUTCD
1	3:00PM-4:00PM	24	31	NO	NO
2	5:00PM-6:00PM	23	15	NO	NO
3	7:45AM-8:45AM	19	26	NO	NO
4	1:15PM-2:15PM	17	7	NO	NO
5	4:00PM-5:00PM	15	14	NO	NO
6	10:30AM-11:30AM	12	12	NO	NO
7	6:45AM-7:45AM	11	12	NO	NO
8	6:00PM-7:00PM	11	12	NO	NO



From the data detailed in Table 3, we observe that the study intersection does not meet the volume requirements for the application of an all-way stop control. This warrant was not satisfied.

The results of our analysis indicate that changing the existing traffic pattern to an all-way stop control at the intersection of Stanford Avenue & Crestwood Drive is not warranted at this time.

Based Section 2B.11-Minor Road Stop Control of the MUTCD, it is our opinion that the stop sign should be moved from Crestwood Drive and installed on Stanford Avenue. The westbound approach from Stanford Avenue naturally comes to a stop at the 'T' intersection. We believe that adding a stop sign for the westbound approach will formalize the natural stop for vehicles and provide safer turning movements at the intersection.

LEVEL OF SERVICE ANALYSIS

The existing traffic operation was evaluated at the intersection for the morning, midday, and evening peak hours. The results of the capacity analysis provide the Level of Service and average seconds of delay for the intersection movements. Table 4 below details the Level of Service and Delay at the study intersection with the existing traffic control and with the proposed all-way stop control.

Table 7 – Level of Service/Delay

Roadway	Approach	Existing			Proposed (<i>STOP on WB Stanford</i>)		
		AM	MIDDAY	PM	AM	MIDDAY	PM
Stanford Avenue	WB	-	-	-	A/8.7	A/8.7	A/8.7
	NB	-	-	-	A/0.0	A/0.0	A/0.0
Crestwood Drive	SB	A/8.5	A/8.6	A/8.6	A/7.2	A/7.3	A/7.3
<i>Intersection</i>	<i>Overall</i>	<i>A/2.2</i>	<i>A/1.8</i>	<i>A/2.6</i>	<i>A/5.9</i>	<i>A/4.8</i>	<i>A/3.4</i>

Based on our analysis, the study intersection operates at an overall Level of Service 'A' in the existing conditions for all peak hours. We observe that the study intersection will continue to operate at an overall Level of Service 'A' with the proposed stop control on the westbound approach of Stanford Avenue for all peak hours.



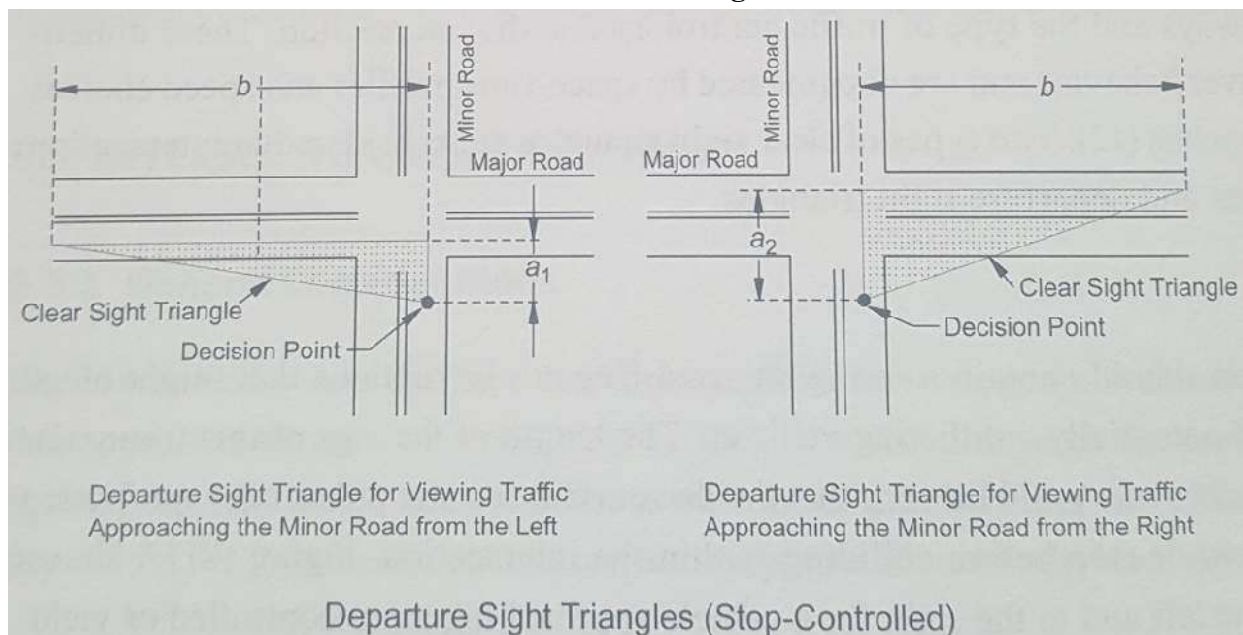
RECOMMENDATIONS

Treatments which can be considered include but are not limited to:

Sight Distance Improvements – At the intersection of Stanford Avenue & Crestwood Drive, the line of sight for approaching vehicles was found to be clear. We observed that stopped vehicles would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn.

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners of the study intersection. We recommend that the Township continue to cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable.

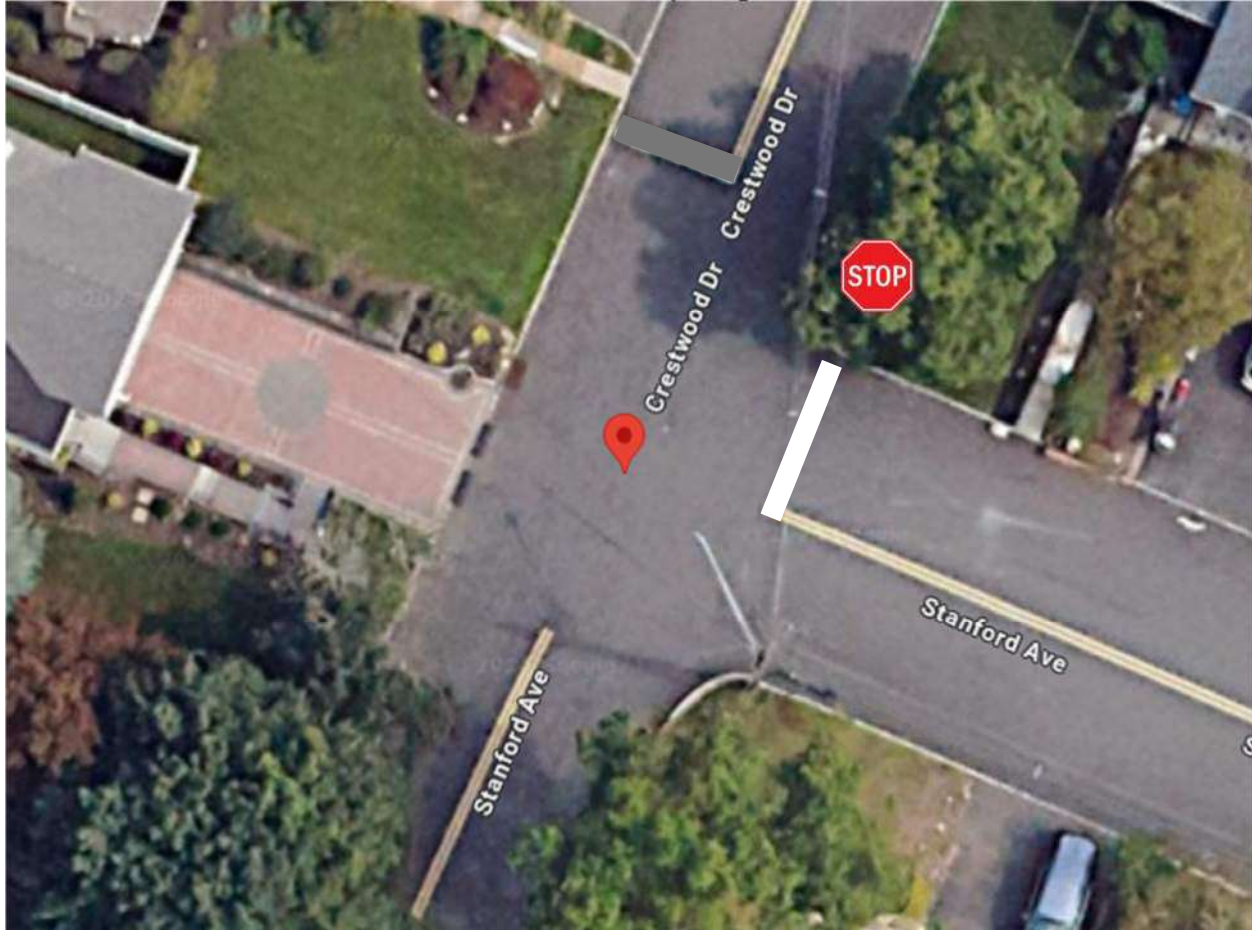
FIGURE 3 – Intersection Sight Distance





Minor Road Stop Control – Based on our all-way stop analysis detailed in this report, we believe an all-way stop control is not warranted at the study intersection. However, we recommend the installation of a stop control on the westbound approach of Stanford Avenue. The placement of the STOP sign should follow the standards and guidance indicated within Section 2B.18-STOP sign or YIELD Placement of the MUTCD (11th Edition).

FIGURE 4 – All-Way Stop Control



Striping and Signages – Given the roadway geometry and existing conditions at the intersection of Stanford Avenue & Crestwood Drive, we recommend the implementation of additional striping to support the installation of the stop sign. We recommend that the Township provide a stop bar and double yellow line striping on the westbound approach to support the stop sign.

Sidewalk and Crosswalk Markings – We recommend that the Township consider installing sidewalks and marked crosswalks within the study area to improve pedestrian safety and circulation. The implementation of the roadway striping, and signs should follow the guidance presented within the latest edition of the MUTCD.



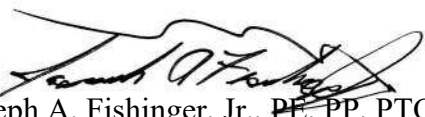
SUMMARY & CONCLUSIONS

It is our recommendation, based on Section 2B.11-Minor Road Stop Control of the MUTCD, that the stop sign should be moved from Crestwood Drive and installed on Stanford Avenue. The westbound approach from Stanford Avenue naturally comes to a stop at the 'T' intersection. We believe that adding a stop sign for the westbound approach will formalize the natural stop for vehicles and provide safer turning movements at the intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John Jahr, P.T.P., T.S.O.S.
Principal


Joseph A. Fishinger, Jr., PE, PP, PTOE
Director of Traffic Engineering

JJJ/as

<https://bvengr.sharepoint.com/sites/bvengr/proj/241079-WOT-StopEval/7-Reports-Analysis/12-Stanford-Crestwood.docxs>