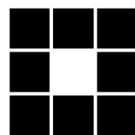


**NORTHPORT VAMC
(PROPOSED ASSISTED LIVING FACILITY)**

**TOWN OF HUNTINGTON
SUFFOLK COUNTY, NEW YORK**

**TRAFFIC IMPACT STUDY
RMS JOB NO. 2010-014**

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RMS ENGINEERING

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EXECUTIVE SUMMARY

The proposed project involves a conceptual plan to construct a 200 bed Assisted Living Facility located on 20 acres on the Northport Veterans Medical Center's (VAMC) campus. The parcel is located on the southerly side of Middleville Road and Rinaldo Road/Veterans Memorial Drive in the Town of Huntington, Suffolk County, New York. The following is a summary of the results of the study performed by this firm that investigated the potential traffic impacts associated with the project.

1. As part of this investigation, an estimate was prepared of the quantity of traffic generated by the development of the proposed project. These estimates were prepared utilizing the **Institute of Transportation Engineers (ITE) Trip Generation Manual, 8th Edition, 2008**. For the purpose of this analysis, the rates contained under Land Use Code 254 Assisted Living was utilized to estimate the quantity of trips generated by the proposed development. It is anticipated that the proposed project will generate 28 total trips during the weekday AM Commuter peak hour (18 entering, 10 exiting) and 44 total trips during the weekday PM peak hour (20 entering, 24 exiting).
2. We performed an analysis between the AM and PM "No Build" and "Build" intersection volumes to determine the percent increase in the overall traffic that will enter and exit the intersections of Middleville Road at Rinaldo Road/Veterans Memorial Drive and Middleville Road at Back Gate Drive. Based on this information we would anticipate a 1.6% increase in vehicle activity during the AM peak hour and 3.6% increase during the PM peak hour at the intersection of Middleville Road and Rinaldo Road/Veterans Memorial Drive. At the intersection of Middleville Road and Back Gate Drive we would anticipate a 1.9% increase in vehicle activity during the AM peak hour and 2.6% increase during the PM peak hour. We believe that the increase in traffic is relatively minor and will not significantly impact the operation at the above-mentioned intersections.
3. Upon the introduction of the site-generated traffic based on development of the 200 bed Assisted Living facility, the signalized intersection of Middleville Road & Rinaldo

Road/Veterans Memorials Drive will experience an increase in delay and degradation in LOS during the “No Build” and “Build” when compared to the “Existing” condition for the northbound movements. It is important to understand the degradation in the LOS would happen if the proposed Assisted Living Facility was not constructed. Upon the introduction of the site-generated traffic, the unsignalized intersection of Middleville Road and Back Gate Drive will operate at acceptable LOS during AM and PM peak hours studied.

4. Based upon the analysis presented herein, the traffic generated by the proposed project will not create any adverse traffic conditions or hazards in the vicinity of the site. Therefore, it is our opinion the Application be granted.

INTRODUCTION

The proposed project involves a conceptual plan to construct a 200 bed Assisted Living Facility located on 20 acres on the Northport Veterans Medical Center's (VAMC) campus. The parcel is located on the southerly side of Middleville Road and Rinaldo Road/Veterans Memorial Drive in the Town of Huntington, Suffolk County, New York. The location of the project site is visually depicted in Figure 1 – Location Map contained in Appendix A.

RMS conducted a detailed investigation of the potential traffic impacts of the proposed project on the surrounding street system. This report reviews existing roadway and traffic conditions in the area, estimates the volume and pattern of traffic generated by the proposed project, and summarizes the results of the analysis performed. The effect of additional traffic on the surrounding roadway network is also analyzed.

PROJECT DESCRIPTION

Existing Land Use

The parcel is located on the southeasterly side of Middleville Road and Rinaldo Road/Veterans Memorial Drive in the Town of Huntington, Suffolk County, New York. The site currently contains a partially wooded area and four (4) aging residential structures within the Northport VAMC campus.

Access

Access to the site is provided via one existing full access driveway on Middleville Road and Rinaldo Road/Veterans Memorial Drive and one existing full access driveway on Middleville Road and Back Gate Drive. Back Gate Drive is only open during the posted hours of 7:00-8:00AM and 4:00-5:00PM. During all other times this access is closed off by a gate.

STUDY METHODOLOGY

RMS' approach to conducting this investigation involved the following:

1. A detailed review of existing land use, roadway characteristics and traffic conditions in the vicinity of the project site.
2. Traffic volume turning movement counts were collected by this firm in January 2010 during the weekday AM, and PM commuter peak hours listed below. The AM commuter peak hour (7:00am-10:00am) and the PM commuter peak hour (3:30 pm to 6:00 pm), data was collected on Thursday January 28, 2010.
 - Middleville Road & Rinaldo Road/Veterans Memorial Drive
 - Middleville Road & Back Gate Drive
3. The traffic volumes were analyzed to determine the intersections' Levels of Service (LOS) at the study locations. Capacity analyses were performed to compute the LOS for both existing and future conditions. The future conditions consist of two scenarios, "No Build" and "Build".
4. An ambient traffic growth rate factor of 1.00% per year, obtained from the NYSDOT, was applied to the collected 2010 traffic volumes for expansion to year 2013 design levels. The "No Build" condition analysis determined the future LOS at the study intersections assuming the project is not constructed. In addition, information obtained from the Town of Huntington revealed that there are three (3) planned/proposed projects in the vicinity of the site. The traffic volumes associated with the planned/proposed projects were also applied to the "No Build" condition.
5. The 2013 "Build" condition analysis considered the impact of the traffic generated by the construction of the proposed development. This traffic was then superimposed onto the 2013 "No Build" volumes at the study locations.

EXISTING TRAFFIC CONDITIONS

Roadway Network

Current roadway conditions in the study area are summarized below:

1. Middleville Road: This is a easterly-westerly local roadway under the jurisdiction of the Town of Huntington Highway Department. It consists of one lane in each direction. The posted speed limit is 30 mph in the vicinity of the site.
2. Rinaldo Road: This is a north-south local roadway under the jurisdiction of Town of Huntington Highway Department. It consists of one lane in each direction. The posted speed limit is 30 mph in the vicinity of the site.
3. Veterans Memorial Drive: This is a northerly-southerly roadway that serves the Northport Veterans Hospital. It contains one lane in each direction.
4. Back Gate Drive: This is a easterly-westerly roadway that serves the Northport Veterans Hospital. It contains one lane in each direction. This roadway is typically closed of by a gate except during the posted hours of 7:00-8:00AM and 4:00-5:00PM.

Study Intersections

The following are the current traffic control conditions for the study intersections:

1. Middleville Road at Rinaldo Road/Veterans Memorial Drive (Three Phase Traffic Signal)
2. Middleville Road at Back Gate Drive (Unsignalized Intersection)

Traffic Volume Data

1. Traffic volume turning movement counts were collected by this firm in January 2010 during the weekday AM and PM commuter peak hours. The AM commuter peak hour (7:00am-10:00am) and PM commuter peak hour (3:30pm-6:00pm) data were collected on Thursday January 28, 2010. Figures 2 and 3, located in Appendix A, contain a visual depiction of the traffic volume data. The peak hour traffic volumes at the study intersections are tabulated in Appendix C.

Capacity Analysis

1. The traffic volumes, in conjunction with the intersection geometry and signal timings/phasing, where applicable, were then used to determine the existing capacity and Levels of Service (LOS) at the study intersections. The capacity analyses were performed by this firm in accordance with guidelines set forth in the **HCM 2000** published by the **Transportation Research Board**.
2. The capacity of a signalized intersection is evaluated in terms of the ratio of demand flow rate to capacity (V/C ratio). The capacity is defined for each approach and measures the maximum rate of flow (for the subject approach), which may pass through the intersection under prevailing traffic, roadway and signalization conditions. The LOS of a signalized intersection is evaluated on the basis of average stopped delay, deceleration, acceleration and queue move-up time measured in seconds per vehicle (sec/veh). Levels of Service A-D are considered acceptable levels of service. Level of Service E is considered to be at capacity and Level of Service F is considered to be over capacity. A more detailed definition of LOS is provided in Appendix B.
3. The capacity of an unsignalized intersection is based on two factors. The first factor is the distribution of gaps in the major street traffic. The second factor is driver judgment in selecting gaps through which to execute their desired maneuver. Levels of Service A-D are considered acceptable levels of service. Level of Service E is considered to be at capacity and Level of Service F is considered to be over capacity. Refer to Appendix B for further definition of LOS for an unsignalized intersection.
4. The capacity analyses for the signalized and unsignalized study intersections were performed using the Highway Capacity Software or "HCS+", which was prepared by the Federal Highway Administration. "HCS+" is a series of computer programs strictly adhering to the guidelines set forth in the **Highway Capacity Manual**. The capacity analysis/LOS worksheets for the study intersections are contained in Appendices D - G.

5. The results of the analysis for the signalized and unsignalized intersection is contained in Tables 1 and 2, located in Appendix A, and indicate that the study locations are operating below capacity during the peak hours studied.

FUTURE TRAFFIC CONDITIONS

Ambient Traffic Growth

1. As previously indicated, the future traffic conditions were determined by applying a 1.00% annual growth rate, obtained from the NYSDOT, to the 2010 traffic volumes to depict 2013 design conditions.

Other Projects

1. Information obtained from the Town of Huntington in February 2010, revealed that, at this time, there three (3) planned/proposed developments in the vicinity of the site.
2. The traffic generated by the other planned/proposed projects was included in the analysis. A description of the other projects is as follows”
 - A existing golf course on the VA property that was closed due to the winter season.
 - A proposed 32.8 acre Town park located southeasterly of the proposed project.
 - Five (5) signal family detached dwelling units located southeasterly of the proposed project.

No Build Traffic Volumes

1. As previously mentioned, the “No Build” traffic volumes include the effects of ambient traffic growth in the vicinity of the site. The traffic generated by each of the planned projects was estimated utilizing the **Institute of Transportation Engineers (ITE) Trip Generation Manual, 8th Edition, 2008**. For each use, the roadways in the vicinity of the planned/proposed projects were examined and the distribution of the project-generated traffic at the study intersections and the site driveway was determined. As previously mentioned, the traffic generation estimates for the proposed/planned projects are summarized in Table 3, located in Appendix A. Figures 4 and 5, located in Appendix A, contain a visual depiction of the No Build traffic volume data.

Site Trip Generation

1. The proposed project involves the construction of a 200 bed Assisted Living facility on the Northport VAMC property.

2. As part of this investigation, an estimate was prepared of the quantity of traffic generated by the development of the proposed project. These estimates were prepared utilizing the **Institute of Transportation Engineers (ITE) Trip Generation Manual, 8th Edition, 2008**. For the purpose of this analysis, the rates contained under Land Use Code 254 Assisted Living was utilized to estimate the quantity of trips generated by the proposed development. The trip generation computations are summarized in Table 4.
3. As shown in Table 4 of Appendix A, it is anticipated that the proposed project will generate 28 total trips during the weekday AM Commuter peak hour (18 entering, 10 exiting) and 44 total trips during the weekday PM peak hour (20 entering, 24 exiting). The trip rate computations are summarized in Table 4 of Appendix A.

Traffic Distribution and Assignment

1. The next step of the investigation consisted of an analysis of the geographical distribution of the traffic to and from the site. In order to determine the distribution of the traffic generated by the site, a careful review of the existing travel patterns and the trip generators/receptors in the vicinity of the site was performed.
2. In order to properly assess the traffic impact of the proposal, it is necessary to determine which roadway(s) will most probably receive the newly generated traffic, in vehicular volume and direction, during the peak hours studied. The existing roadway network in the vicinity of the site was examined and the distribution of the site-generated traffic at each intersection was determined. (Refer to Appendix C for a tabular summary of the trip distribution and assignment as well as the percent increase in volumes from the “No Build” to the “Build” condition). The percent distribution of the site traffic is contained in Figures 6 and 7. The traffic volumes associated with the proposed project are visually depicted on Figures 8 and 9. These volumes were added to the "No Build" peak hour volumes to obtain the "Build" volumes. The “Build” volumes are visually depicted in Figures 9 and 10 of Appendix A.

3. In addition, we performed an analysis between the AM and PM “No Build” and “Build” intersection volumes to determine the percent increase in the overall traffic that will enter and exit the intersections of Middleville Road at Rinaldo Road/Veterans Memorial Drive and Middleville Road at Gate Drive. Based on this information we would anticipate a 1.6% increase in vehicle activity during the AM peak hour and 3.6% increase during the PM peak hour at the intersection of Middleville Road and Rinaldo Road/Veterans Memorial Drive. At the intersection of Middleville Road and Back Gate Drive we would anticipate a 1.9% increase in vehicle activity during the AM peak hour and 2.6% increase during the PM peak hour. We believe that the increase in traffic is relatively minor and will not significantly impact the operation at the above-mentioned intersections.

CAPACITY ANALYSIS CONCLUSIONS

1. As previously mentioned, future traffic volumes were prepared for the study locations and were then used to perform the capacity analyses for the "No Build" and "Build" conditions.

2. These analyses were performed using the previously mentioned procedures outlined in the **HCM 2000** published by the **Transportation Research Board**. The procedures listed in the **Highway Capacity Manual** permit the computation of intersection capacity and Level of Service (LOS). The capacity and LOS of an intersection has previously been defined in the existing conditions segment of this report. The capacity analysis/LOS worksheets are contained in Appendices D through F while the results are summarized in Tables 1 and 2, of Appendix A. The Table below lists the overall LOS for the study intersections.

| INTERSECTION | CONDITION | AM PEAK HOUR | | | PM PEAK HOUR | | |
|---|-----------------------|--------------|-----------------|-----|--------------|-----------------|-----|
| | | MVMNT | DELAY (SEC/VEH) | LOS | MVMNT | DELAY (SEC/VEH) | LOS |
| MIDDLEVILLE ROAD AT VETERANS MEMORIAL DRIVE /RINALDO ROAD | EXISTING | OVERALL | 25.6 | C | OVERALL | 45.9 | D |
| | NO BUILD | OVERALL | 29.9 | C | OVERALL | 64.0 | E |
| | BUILD | OVERALL | 30.4 | C | OVERALL | 68.6 | E |
| | BUILD w/MITAGATION | OVERALL | 30.4 | C | OVERALL | 34.0 | C |
| MIDDLEVILLE ROAD AT BACK GATE DRIVE | EXISTING | OVERALL | 9.5 | A | OVERALL | 12.0 | B |
| | NO BUILD | OVERALL | 9.7 | A | OVERALL | 13.3 | B |
| | BUILD | OVERALL | 9.8 | A | OVERALL | 13.7 | B |

3. Upon a review of the information contained in Tables 1 and 2, the following can be stated:
 - a. Upon the introduction of the site-generated traffic based on development of the 200 bed Assisted Living Facility, the signalized intersection of Middleville Road & Rinaldo Road/Veterans Memorial Drive will experience an increase in delay and a degradation in LOS during the “No Build” and “Build” when compared to the “Existing” condition for the northbound movements. It is important to understand the degradation in the LOS would happen if the proposed Assisted Living Facility was not constructed. To mitigate the increase in LOS, it is proposed to construct an addition lane to the northbound approach at the intersection of Middleville Road and Rindaldo Road/Veterans Memorial Drive.
 - b. Upon the introduction of the site-generated traffic based on development of the 200 bed assisted living facility, the unsignalized intersection of Middleville Road and Back Gate Drive will operate at acceptable LOS during AM and PM peak hours studied. Mitigation is not required at this location.
4. Based upon the analysis presented herein, the traffic generated by the proposed project will not create any adverse traffic conditions or hazards in the vicinity of the site. Therefore, it is our opinion the Application be granted.