**APPROVED:**

**MOTION BY:** **SECONDED BY:**

**AYES:** **NAYS:** **ABSTENTIONS:** **ABSENT:**

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By: _____

Wendy Rosinski, Town Clerk

# WORKSHOP MINUTES

# TOWN OF LLOYD PLANNING BOARD

## Thursday July 18, 2019

**CALL TO ORDER TIME: 5:30 pm**

**PLEDGE OF ALLEGIANCE**

**ATTENDANCE** **Present:** Fred Pizzuto (Chair), Lawrence Hammond, , Sal Cuciti, Carl DiLorenzo, Franco Zani, Lambros Violaris (Alternate), David Barton (Building Department Director), Laura Oddo-Kelly (Administrative Assistant To Planning and Zoning), Rob Stout (Land Use Attorney), Andrew Learn (Town Engineer).

**Absent:** Scott McCarthy (Vice-Chair), Charly Long, Claire Winslow (Town Board Liaison).

**ANNOUNCEMENTS: GENERAL, NO SMOKING, LOCATION OF FIRE EXITS; ROOM CAPACITY IS 49, PURSUANT TO NYS FIRE SAFETY REGULATIONS. PLEASE TURN OFF ALL CELL PHONES.**

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## Extended Public Hearing

**EZ Bottle and Can Returns, Inc., 32 South Roberts Rd, SBL# 96.29-2-2 in DB Zone.**
Applicant is seeking a special use permit and commercial site plan approval to open a bottle and can return center.
**The Planning Board reviewed the EAF, issued a negative declaration on March 28, 2019 and set the public hearing for April 25, 2019.**

**The Planning Board requested an engineering report for the proposed truck turning radius on 06.20.2019.**

Joann Ellis, applicant's representative, said her client has conceded to all the conditions the Planning Board has requested except for the closure on Sundays. She said the applicant needs to have the business open on Sundays in order for it to be financially feasible. The hours on Sunday would be 10am – 4pm and there would be no pick ups on the weekends.
Pizzuto said the Planning Board would discuss it and reconvene next Thursday. He additionally stated that some of the Planning Board members have gone down to the site. Whats not shown on the engineering report are the elevations. It has become an issue with grading when you are present at the site. It is something that needs to be addressed by the Planning Board.

## Old Business

**The Views at Highland, 3715-3725 Route 9W, SBL# 95.2-2-12.100 & 95.2-2-12.200 in HBD Zone.**

Applicant is seeking commercial site plan approval to redevelop property at 3715-3725 Route 9W (SBL 95.2-2-12.100 & 12.200) for a mixed-use commercial and residential development with related parking and landscaping. The applicant proposes to construct two mixed-use buildings comprised of retail and office space on the first floor of each building and twenty-two apartment units located on the upper two floors in each respective buildings. In accordance with the Town of Lloyd Zoning Code Section 100-36D, ten percent of the proposed residential units will be designated as below market rates.

Taylor Palmer, applicant's attorney and Andrew Villari, applicant's engineer, presented more site plan particulars and an explanation of traffic generation of the proposed project. They referred to the supplemental submission dated July 15, 2019 which included an updated traffic study plan and proposed mitigation of what the proposed project will be generating.

STONEFIELD ENGINEERING & DESIGN, LLC THE VIEWS AT HIGHLAND
LLOYD, NEW YORK
1

**INTRODUCTION**

This Traffic Impact Study was prepared to investigate the potential impacts of the proposed residential, retail, and office development (the "Project") on the adjacent roadway network. The subject development, called "The Views at Highland," is located at 3725 U.S. Route 9W in the Hamlet of Highland, Town of Lloyd, Ulster County, New York. The site location is shown on appended **Figure 1**. The subject property is designated as Tax Map ID numbers 95.2-2-12.100 and 95.2-2-12.200 as depicted on the Ulster County Tax Map. The site is presently developed with four (4) structures, one (1) of which is occupied by a podiatrist. Under the proposed development program, the existing structures would be razed and two (2) new mixed use
buildings with footprints of 10,280 square feet would be constructed. The Project includes a total of 14,000 square feet of retail space, 6,560 square feet of office space, 32 one-bedroom dwelling units, and 12 two bedrooms
dwelling units. Site access would be provided via one (1) right-in/right-out driveway along U.S. Route 9W and one (1) full-movement driveway along Mayer Drive.

**METHODOLOGY**

Stonefield Engineering & Design, LLC has prepared this Traffic Impact Study in accordance with the recommended guidelines and practices outlined by the Institute of Transportation Engineers (ITE) within Transportation Impact Analyses for Site Development. A detailed field investigation was performed to assess the existing conditions of the adjacent roadway network. A data collection effort was completed to identify the existing traffic volumes at the study intersections to serve as a base for the traffic analyses. Capacity analysis, a procedure used to estimate the traffic-carrying ability of roadway facilities over a range of defined operating conditions, was performed using the Highway Capacity Manual, 2000 (HCM) and the Synchro10 software for all study conditions to assess the roadway operations.

For an unsignalized intersection, Level of Service (LOS) A indicates operations with delay of less than 10 seconds per vehicle, while LOS F describes operations with delay in excess of 50 seconds per vehicle. For a signalized intersection, LOS A indicates operations with delay of less than 10 seconds per vehicle, while LOS F describes operations with delay in excess of 80 seconds per vehicle. The Technical Appendix contains the Highway Capacity Analysis Detail Sheets for the study intersections analyzed in this assessment. The traffic signal timing utilized within the signalized analysis is based on timing directives provided by New York State

Department of Transportation (NYSDOT).

**2018 EXISTING CONDITIONS**

2018 EXISTING ROADWAY CONDITIONS

The site for the Project is located along southbound U.S. Route 9W. The site has approximately 530 feet of frontage along Route 9W. Land uses in the area are a mix of commercial and residential.

U.S. Route 9W is classified as an urban principal arterial roadway, has a general north-south orientation, and is under the jurisdiction of the NYSDOT. Along the site frontage, the roadway provides two (2) lanes in each direction and has a posted speed limit of 45 mph. Curb and sidewalk are generally not provided along either side of the roadway. On-street parking is not regulated in the site vicinity. The pavement surface and roadway striping appear to be in good condition. U.S. Route 9W provides north-south mobility between Fort Lee, New Jersey and Albany, New York. Chapel Hill Road (County Route 11) is classified as an urban major collector roadway, has a general east west orientation, and is under the jurisdiction of the Ulster County Department of Public Works. The roadway generally provides one (1) lane in each direction and has a posted speed limit of 40 mph. Curbs and sidewalks are not provided along either side of the roadway and on-street parking is not permitted. The pavement surface and roadway striping appear to be in fair condition. Chapel Hill Road provides east-west mobility between U.S. Route 9W and Vineyard Avenue (U.S. Route 44).

Macks Lane is a local roadway and is under the jurisdiction of the Town of Lloyd. The roadway provides one (1) lane of travel in each direction and has a speed limit of 30 mph. Curbs and sidewalks are not provided along either side of the roadway. On-street parking is generally permitted. Please note that pavement markings are present at the roadway's intersection with U.S. Route 9W and extend for approximately 140 feet east; otherwise the roadway is unstriped. The pavement surface and roadway striping appear to be in fair condition.

Macks Lane provides access to residential uses east of U.S. Route 9W.

Mayer Drive is a local roadway and is under the jurisdiction of the Town of Lloyd. The roadway has a general east-west orientation along the site frontage and has a speed limit of 30 mph. Curbs and sidewalks are not provided along either side of the roadway. On-street parking is generally permitted. Please note that pavement markings are present at the roadway's intersection with South Chapel Hill Road and extend for approximately 30 feet west; otherwise the roadway is unstriped. The pavement surface and roadway striping appear to be in fair condition. Mayer Drive provides access to the residential development west of U.S. Route 9W, known as "Highland Hills." The roadway forms a "horseshoe" shape and connects with U.S. Route 9W both north and south of the subject property.

South Chapel Hill Road is a local roadway and is under the jurisdiction of the Town of Lloyd. The roadway serves as a southbound on- and off-ramp between Chapel Hill Road and U.S. Route 9W. In vicinity to the site, the roadway provides one (1) lane of southbound travel.

South Gate Road is a local roadway and is under the jurisdiction of the Town of Lloyd. The roadway provides one (1) lane of travel in each direction. Curbs and sidewalks are not provided along either side of the roadway. On-street parking is generally permitted. The pavement surface appears to be in fair condition. South Gate Road provides access to the residential development known as "Highland Hills." The roadway extends for approximately 550 feet between Chapel Hill Road and Mayer Drive.

U.S. Route 9W, Chapel Hill Road, and Macks Lane intersect to form a four (4)-leg interaction controlled by a four (4)-phase actuated traffic signal operating without a uniform cycle length. The northbound U.S. Route 9W approach provides one (1) exclusive left-turn lane, one (1) exclusive through lane, and one (1) shared through/right-turn lane. The southbound U.S. Route 9W approach provides one (1) left-turn lane and one (1) shared through/right-turn lane. The eastbound Chapel Hill Road approach provided one (1) exclusive left-turn lane and one (1) shared left-turn/through/right-turn lane. The westbound Macks Lane provides one (1) shared left-turn/through/right-turn lane. A crosswalk with pedestrian signals is provided across the north leg of the intersection.

South Chapel Hill Road diverges from southbound U.S. Route 9W at an unsignalized intersection. Approximately 350 feet south of its intersection with U.S. Route 9W, South Chapel Hill Road intersects Mayer

Drive at an unsignalized intersection. South Chapel Hill Road provides one lane of southbound travel. The eastbound Mayer Drive approach provides one (1) exclusive right-turn lane operating under stop control. South Chapel Hill Road and Chapel Hill Road intersect to form an unsignalized T-intersection. The eastbound Chapel Hill Road approach provides two (2) lanes of through travel and westbound Chapel Hill Road approach provides one (1) lane of through travel. The southbound South Chapel Hill Road approach provides one (1) shared left-turn/right-turn lane operating under stop control.
South Gate Road and Mayer Drive intersect to form an unsignalized T-Intersection. The northbound Mayer Drive approach operates under stop control. No striping is provided at the intersection.
South Gate Road and Chapel Hill Road intersect to form an unsignalized T-Intersection. The eastbound and westbound Chapel Hill Road approaches each provide one (1) lane of through travel. The southbound South Gate Road approach provides one (1) shared left-turn/right-turn lane operating under stop control.

2018 EXISTING TRAFFIC VOLUMES
Manual turning movement counts were collected during the typical weekday morning, weekday midday, weekday evening, and Saturday midday time periods to evaluate existing traffic conditions and identify the specific hours when traffic activity on the adjacent roadways is at a maximum and could be potentially impacted
by the development of the site. Turning movement counts were collected at the following intersections:

- Signalized intersection of U.S. Route 9W, Chapel Hill Road, and Macks Lane;
- Unsignalized intersection of U.S. Route 9W and South Chapel Hill Road;
- Unsignalized intersection of South Chapel Hill Road and Chapel Hill Road; and
- Unsignalized intersection of South Chapel Hill Road and Mayer Drive

Specifically, manual turning movement counts were conducted on Thursday, November 8, 2018 from 7:00 a.m. to 9:00 a.m., from 11:00 a.m. to 2:00 p.m., and from 4:00 p.m. to 7:00 p.m. and on Saturday, November 10, 2018 from 11:00 a.m. to 2:00 p.m. The study time periods were chosen as they are representative of the peak periods of both the adjacent roadway network and the Project. The traffic volume data was collected and analyzed to identify the design peak hour in accordance with HCM and ITE guidelines. Based on the review of the count data the weekday morning peak hour occurred from 7:15 a.m. to 8:15 a.m., the weekday midday peak hour occurred from 1:00 p.m. to 2:00 p.m. the weekday evening peak hour occurred from 4:45 p.m. to 5:45 p.m., and the Saturday midday peak hour occurred from 1:00 p.m. to 2:00 p.m.
As requested by the Town of Lloyd, supplemental manual turning movement counts were collected at the following intersections:

- Unsignalized intersection of South Gate Road and Mayer Drive; and
- Unsignalized intersection of South Gate Road and Chapel Hill Road

Specifically, manual turning movement counts were conducted on Saturday, June 29, 2019 from 11:00 a.m. to 2:00 p.m., and Tuesday, July 2, 2019 from 7:00 a.m. to 9:00 a.m., from 11:00 a.m. to 2:00 p.m., and from 4:00 p.m. to 7:00 p.m. Please note that the Saturday, June 29, 2019 turning movement counts at the intersection of South Gate Road and Mayer Drive was disrupted due to interference by the surrounding neighbors and police activity. Therefore, additional turning movement counts were conducted at both supplemental intersections on Saturday, July 6, 2019 from 11:00 a.m. to 2:00 p.m.
Please note that a comparison of traffic volumes along Chapel Hill Road between Stonefield's November 2018 and July 2019 turning movement counts revealed that traffic volumes remained fairly consistent and therefore, a seasonal adjustment factor was not applied. Rather, Chapel Hill Road through movement volumes at the intersections of South Gate Road and Chapel Hill Road were balanced to reflect traffic volumes from the November 2018 turning movement counts. Traffic volumes at the intersection of South Gate Road and
Mayer Drive were balanced in accordance to industry-standard practices. **Table 1** presents a comparison

between traffic volumes along Chapel Hill Road during Stonefield's November 2018 and July 2019 turning movement counts.

**Table 1 – Traffic Volume Comparison – Chapel Hill Road**

| Chapel Hill Road | | | Chapel Hill Road | | |
|---|---|---|---|---|---|
| EB | WB | Total | EB | WB | Total |
| **November 2018** | | | | | |
| **AM** 685 | 170 | 855 | | | |
| **July 2019** | | | | | |
| **AM** 576 | 177 | 753 | | | |
| **MID** 253 | 241 | 494 | **MID** 298 | 262 | 560 |
| **PM** 349 | 630 | 979 | **PM** 352 | 564 | 916 |
| **SAT** 335 | 341 | 676 | **SAT** 333 | 375 | 708 |
| **Net Difference (Traffic Volumes)** | | | | | |
| **AM** -109 | 7 | -102 | | | |
| **Net Difference (Percentage)** | | | | | |
| **AM** -16% | +4% | -12% | | | |
| **MID** 45 | 21 | 66 | **MID** +18% | +9% | +13% |
| **PM** 3 | -66 | -63 | **PM** +1% | -10% | -6% |
| **SAT** -2 | 34 | 32 | **SAT** -1% | +10% | +5% |

The Technical Appendix contains a summary of the turning movement count data. The 2018 Existing weekday morning, weekday midday, weekday evening, and Saturday midday peak-hour volumes are summarized on appended **Figure 2.**

2018 EXISTING LOS/CAPACITY ANALYSIS

A Level of Service and Volume/Capacity analysis was conducted for the 2018 Existing Condition during the weekday morning, weekday midday, weekday evening, and Saturday midday peak hours at the study intersections. Under the 2018 Existing Conditions, the signalized intersection of U.S. Route 9W, Chapel Hill Road, and Macks Lane is calculated to operate at overall Level of Service E during the weekday morning peak hour, overall Level of Service C during the weekday midday peak hour, overall Level of Service F during the weekday evening peak hour, and overall Level of Service D during the Saturday midday peak hour.

The southbound movement at the unsignalized intersection of South Chapel Hill Road and Chapel Hill Road is calculated to operate at Level of Service A during the weekday morning and weekday midday peak hours, at overall Level of Service C during the weekday evening peak hour, and at Level of Service B during the Saturday midday peak hour. The eastbound movement at the unsignalized intersection of South Chapel Hill Road and Mayer Drive is calculated to operate at Level of Service A during the weekday morning and weekday midday peak hours and at Level of Service B during the weekday evening and Saturday midday peak hour.

All movements at the unsignalized intersection of South Gate Road and Mayer Drive are calculated to operate at Level of Service A during each study period. The eastbound movements at the unsignalized intersection of Chapel Hill Road and South Gate Road are calculated to operate at Level of Service A during each study period. The southbound movements at the unsignalized intersection of Chapel Hill Road and South Gate Road are calculated to operate at Level of Service C or better during the study peak hours.

EXISTING VEHICULAR GAP ANALYSIS

In addition to the manual turning movement counts, Stonefield conducted an analysis of the total vehicular capacity of the right-turn egress movements in terms of available gaps in traffic along U.S. Route 9W. Vehicular gaps in southbound traffic along U.S. Route 9W were recorded during the weekday morning and weekday evening peak periods to evaluate the existing vehicular headway conditions along the subject

roadway. Vehicular gaps were recorded coincidently with the supplemental manual turning movement counts. The data was analyzed using minimum gap acceptance rates as specified within *Highway Capacity Manual 2010* (HCM). An available gap, or critical headway, represents the minimum time interval between oncoming vehicles that a motorist will accept in order to execute a turning movement.
The total number and duration of the existing gaps in traffic on U.S. Route 9W were evaluated in terms of the minimum gap acceptance and follow-up times. The existing gaps were summarized over the course of the weekday morning and evening peak hours, as provided in **Table 2**.

**Table 2 – U.S. Route 9W Egress – Total Capacity**

| **Movement Peak Hour** | **Total Vehicular Capacity (HCM Base Critical Gap)** |
|---|---|
| U.S. Route 9W Right-turn Egress (Main Line, 2 lanes) | |
| AM Peak Hour (7:15 a.m. to 8:15 a.m.) | 439 (6.2 sec) |
| PM Peak Hour (4:45 p.m. to 5:45 p.m.) | 90 (6.2 sec) |

**ACCIDENT ANALYSIS**

In order to assess the accident history of the intersections adjacent to the site, the three (3) most recent years of available motor vehicle collision data were obtained from the NYSDOT. A total of 22 motor vehicle collisions occurred at the intersections along U.S. Route 9W with Chapel Hill Road, South Chapel Hill Road, and Macks Lane and the intersection of Chapel Hill Road & South Chapel Hill Road. It is important to note that zero (0) fatalities occurred as a result of the reported motor vehicle collisions in the study network. **Table 3** below provides a summary of the manner and severity of the reported motor vehicle collisions that occurred between October 2, 2015 and August 30, 2018.

**Table 3 – Motor Vehicle Collision Data Summary**

| **Intersection** | **Accident Type** | **Number of Accidents** | **Number of Injures** | **Number of Fatalities** |
|---|---|---|---|---|
| **U.S. Route 9W, Chapel Hill Road, & Macks Lane** | Rear End | 11 | 2 | 0 |
| | Right Turn | 1 | 0 | 0 |
| | Right Angle | 1 | 0 | 0 |
| | Collision with parked car | 1 | 1 | 0 |
| | Collision with fixed object | 1 | 0 | 0 |
| | Overtaking | 1 | 0 | 0 |
| **Total** | | **16** | **3** | **0** |
| **U.S. Route 9W & South Chapel Hill Road** | Rear End | 2 | 1 | 0 |
| **Total** | | **2** | **1** | **0** |
| **South Chapel Hill Road & Chapel Hill Road** | | | | |

Rear End 1 0 0
Right Angle 1 0 0
**Total 2 0 0**

An accident rate has been calculated for the study intersections over the three (3)-year study period to provide a comparison to the 2015-2016 Average Accident Rates for State Highways published by the NYSDOT. The calculation is based on the projected volume of traffic through the intersection over the study period. The intersection of U.S. Route 9W, Chapel Hill Road, and Macks Lane is calculated to experience 0.61 accidents per million entering vehicles, which is greater than the 0.25 accidents per million entering vehicles reported by the NYSDOT for four (4)-leg intersections with signed traffic controls with a left turn signal at five (5) or more lanes in urban settings. The average rate of accidents over the three (3)-year study period is equivalent to less than one (1) accident occurring every two (2) months. Please note that the intersection has experienced fewer accidents in each subsequent year of the study period. Beginning in October of each year, eight (8) accidents occurred between 2015 and 2016, five (5) accidents occurred between 2016 and 2017, and three (3) accidents occurred between 2017 and 2018. The intersection of U.S. Route 9W and South Chapel Hill Road is calculated to experience 0.07 accidents per million entering vehicles, which is less than the 0.18 accidents per million entering vehicles reported by the NYSDOT for a one (1) lane off-ramp merge in urban settings.

The intersection of South Chapel Hill Road and Chapel Hill Road is calculated to experience 0.17 accidents per million entering vehicles, which is less than the 0.29 accidents per million entering vehicles reported by the NYSDOT for unsignalized four (4)-leg intersections with one (1) to three (3) lanes in urban settings.

**2021 NO-BUILD CONDITIONS**

BACKGROUND GROWTH

The 2018 Existing Conditions traffic volume data was grown to a future horizon year of 2021, which is when the Project is expected to be fully constructed. In accordance with industry guidelines, the existing traffic volumes at the study intersections were increased by 2.0% annually for three (3) years to generate the 2021 Base Traffic Volumes. Please note that a 2.0% background growth rate provides a conservative analysis as U.S. Route 9W traffic patterns forecasted by the NYSDOT Highway Data Services Bureau account for a reduction in historic traffic volumes. The 2021 Base Traffic Volumes are presented on appended **Figure 3**.

OTHER PLANNED DEVELOPMENT PROJECTS

To evaluate the future traffic conditions, it is important to consider the potential site-generated traffic of other projects that could influence the traffic volume at the study intersections. Other planned development projects include those that are either in the entitlement process or have recently been approved for building permits in proximity to the Project site. Based on consultations with the Town of Lloyd, the following developments are anticipated to impact traffic volumes within the study area:

· The Hudson Valley Wine Village: Approved mixed use development located at the east side of US Route 9W generally south of Bluepoint Road.

The development would include:

· 800 Residential Dwelling Units;

· 155,000 square feet of commercial and office space;

· 450,000 square feet of light industrial space; and

· Hotel and Conference Center.

· Village of Hudson Valley: Senior living and adult care development located north of Mayer Drive between US Route 9W and NYS Route 55 (Vineyard Ave).

The development would include:

· 11,000 square feet of urgent care facility;

· 127 beds for assisted living; and

· 205 independent senior living units.

· AutoZone: Proposed 7,000-square-foot auto parts store located at US Route 9W and Argent Drive.

· Stewart's Shops: Proposed 4,000-square-foot convenience store with eight (8) vehicle fueling positions located at US Route 9W and Chapel Hill Road.

The traffic volumes associated with the 2021 design year for the Hudson Valley Wine Village as reported in the Traffic Impact Study prepared by Maser Consulting P.A., revised December 19, 2013 have been included in the 2021 No-Build Condition analysis. The traffic volumes associated with the Hudson Valley Wine Village were obtained from Figures 8 and 9 of Maser Consulting's Traffic Impact Study and are presented in appended

**Figure 4**. It should be noted, however, that the above-mentioned Traffic Impact Study did not provide traffic volumes for the weekday midday and Saturday midday peak periods, therefore the weekday evening peak period volumes were analyzed for the weekday midday and Saturday midday peak periods.

The traffic volumes associated with the 2023 design year for the Village of Hudson Valley senior living development as reported in the Traffic Assessment Update prepared by Creighton Manning Engineering, LLP, dated May 30, 2019 have been included in the 2021 No-Build Condition analysis. The traffic volumes associated with the Village of Hudson Valley senior living development were obtained from Figures 6 and 7 of Creighton Manning's Traffic Assessment Update and are presented in appended **Figure 5**. It should be noted, however, that the above-mentioned Traffic Impact Study did not provide traffic volumes for the weekday midday and Saturday midday peak periods, therefore the weekday morning peak period volumes were analyzed for the weekday midday and Saturday midday peak periods.

In order to estimate the impact of the proposed AutoZone development, trip generation projections were prepared based on ITE's Trip Generation Manual, 10th Edition. Specifically, trip generation rates associated with Land Use 843 "Automobile Parts Sales" were cited for the 7,000-square-foot auto parts store. The resulting trip generation calculations were used to determine the anticipated increase in site-generated traffic associated with the considered auto parts store and are summarized in **Table 4.**

**Table 4 – Projected Trip Generation – AutoZone**

| **Land Use** | **Weekday Morning Peak Hour** | | | **Weekday Midday Peak Hour** | | | **Weekday Evening Peak Hour** | | | **Saturday Midday Peak Hour** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** |
| 7,000 SF Automobile Parts Sales *ITE Land Use 843* | 10 | 8 | 18 | 20 | 21 | 41 | 16 | 18 | 34 | 41 | 40 | 81 |

Based on the proposed development's location, it is unlikely that all the AutoZone-generated trips would be routed through the study network. Therefore, in order to provide a conservative analysis, 50% of inbound trips associated with the AutoZone were assumed to originate from northbound US Route 9W and 50% of outbound trips associated with the AutoZone were assumed to be destined to southbound US Route 9W. **Table 5** shows the portion of AutoZone-generated traffic volumes expected to be added to the study network.

**Table 5 – Projected Trip Addition to Study Network - AutoZone**

| **Land Use** | **Weekday Morning Peak Hour** | | | **Weekday Midday Peak Hour** | | | **Weekday Evening Peak Hour** | | | **Saturday Midday Peak Hour** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** |
| AutoZone Auto Parts | 5 | 4 | 9 | 10 | 11 | 21 | 8 | 9 | 17 | 21 | 20 | 41 |

The trips generated by AutoZone were distributed according to the location of nearby residential development, which the proposed AutoZone is expected to draw customers from. These projected traffic volumes are presented in appended **Figure 6.**

In order to estimate the impact of the proposed development of a Stewart's Shops convenience store with gasoline pumps on the adjacent roadway network, trip generation projections were prepared based on ITE's Trip Generation Manual, 10th Edition. Specifically, trip generation rates associated with Land Use 853 "Convenience Market with Gasoline Pumps" were cited for the 4,000-square-foot convenience store with eight (8) fueling positions. The resulting trip generation calculations were used to determine the anticipated increase in site-generated traffic associated with the proposed Stewart's Shops and are summarized in **Table 6**. It should be noted, however, that ITE's Trip Generation Manual does not provide Saturday midday peak period traffic volumes for Land Use 853, therefore volumes from similar Land Use 960 "Super Convenience Market/Gas Station" were used instead.

**Table 6 – Projected Trip Generation – Stewart's Shops**

| **Land Use** | **Weekday Morning Peak Hour** | | | **Weekday Midday Peak Hour** | | | **Weekday Evening Peak Hour** | | | **Saturday Midday Peak Hour** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** |
| 4,000 SF Convenience Market w/ Gasoline Pumps *ITE Land Use 853* | 81 | 81 | 162 | 99 | 99 | 198 | 98 | 99 | 197 | 108 | 107 | 215 |

As stated within Chapter 10 of ITE's Trip Generation Handbook, 3rd Edition, there are instances when the total number of trips generated by a site is different from the amount of new traffic added to the street system by the generator. Convenience stores and gasoline stations are specifically located on or adjacent to busy streets to attract motorists already on the roadway. Therefore, the proposed Stewart's Shops is expected to attract a portion of its trips from the traffic passing the site on the way from an origin to an ultimate destination. These trips do not add new traffic to the adjacent roadway system and are referred to as pass-by trips. Based upon the published ITE data for Land Use 853 "Convenience Market with Gasoline Pumps," 63% of the site-generated traffic during the weekday morning peak hour and 66% during the

weekday evening peak hour is comprised of pass-by traffic. Please note that ITE does not publish pass-by rates for Land Use 853 during the weekday midday peak hour and Saturday midday peak hours, however it is reasonable to assume that a portion of traffic would be pass-by. Therefore, the weekday morning peak hour pass-by rates were applied to the weekday midday peak hour and Saturday midday peak hours. **Table 7** shows the "new" and "pass-by" trip generation associated with Stewart's Shops.

**Table 7 – Projected Trip Generation – New & Pass-by Trips**

| **Land Use** | **Weekday Morning Peak Hour** | | | **Weekday Midday Peak Hour** | | | **Weekday Evening Peak Hour** | | | **Saturday Midday Peak Hour** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** |
| "New" Trips | 30 | 30 | 60 | 37 | 37 | 74 | 34 | 35 | 69 | 41 | 40 | 81 |
| "Pass-By" Trips | 51 | 51 | 102 | 62 | 62 | 124 | 64 | 64 | 128 | 67 | 67 | 134 |
| **Total** | **81** | **81** | **162** | **99** | **99** | **198** | **98** | **99** | **197** | **108** | **107** | **215** |

As the development is still in the preliminary stages of the application process and a proposed site plan has not yet been submitted to the Town of Lloyd, this analyses assumes the development would be accessed via a right-in/right-out driveway along U.S. Route 9W and a right-in/right-out driveway along Chapel Hill Road. The "new" trips generated by Stewart's Shops were distributed according to nearby uses where trips would be expected to originate from and the expected site access plan. These projected traffic volumes are presented in appended **Figure 7.** The cumulative traffic volumes associated with the four (4) nearby developments described above are summarized in appended **Figure 8.**

2021 NO-BUILD TRAFFIC VOLUMES

The total traffic volumes associated with the four (4) nearby developments were added to the 2021 Base Traffic Volumes to calculate the 2021 No-Build Traffic Volumes. These volumes are summarized on appended **Figure 9.**

2021 NO-BUILD LOS/CAPACITY ANALYSIS

A Level of Service and Volume/Capacity analysis was also conducted for the 2021 No-Build Conditions during the four (4) peak hours at the study intersections. Under the 2021 No-Build Conditions, the signalized intersection of U.S. Route 9W, Chapel Hill Road, and Macks Lane is calculated to operate at overall Level of Service F during the weekday morning peak hour, overall Level of Service E during the weekday midday peak hour, overall Level of Service F during the weekday evening peak hour, and overall Level of Service E during the Saturday midday peak hour.

The unsignalized intersections of South Chapel Hill Road and Chapel Hill Road, South Chapel Hill Road and Mayer Drive, South Gate Road and Mayer Drive, and South Gate Road and Chapel Hill Road are calculated
to operate generally consistently with the findings of the 2018 Existing Conditions during the study peak hours.

NO-BUILD VEHICULAR GAP ANALYSIS

As traffic would be added to southbound U.S. Route 9W due to the projected growth in traffic and nearby planned developments, the total number of available gaps in traffic would be expected to decrease. Southbound
traffic in the mainline of U.S. Route 9W is projected to increase by approximately 60% in the weekday morning peak hour and approximately 25% in the weekday evening peak hour, therefore the existing gaps in traffic were decreased proportionately. The expected gaps over the course of the weekday morning and evening peak hours are provided in **Table 8**.

**Table 8 – U.S. Route 9W Egress – Projected Capacity**
**Movement Peak Hour**
**Total Projected Vehicular**
**Capacity (HCM Base Critical Gap)**
U.S. Route 9W Right-turn Egress
(Main Line, 2 lanes)
AM Peak Hour
(7:15 a.m. to 8:15 a.m.) 175 (6.2 sec)
PM Peak Hour
(4:45 p.m. to 5:45 p.m.) 67 (6.2 sec)

**2021 BUILD CONDITIONS**
The site-generated traffic volume of the Project was estimated to identify the potential impacts of the Project. For the purpose of this analysis, a complete Project "build out" is assumed within three (3) years of the preparation of this study.
TRIP GENERATION
Trip generation projections for the Project were prepared utilizing the ITE's Trip Generation Manual, 10th Edition. Trip generation rates associated with Land Use 220 "Multifamily Housing (Low-Rise)" were cited for the proposed apartments, totaling 44 dwelling units; rates associated with Land Use 820 "Shopping Center" were cited for the proposed 14,000 square feet of retail space; and rates associate with Land Use 712 "Small Office Building" were cited for the proposed 6,560 square feet of office space. **Table 9** presents the projected trip generation during the study peak hours.
**Table 9 – Projected Trip Generation**
**Weekday Morning**
**Peak Hour**
**Weekday Midday**
**Peak Hour**
**Weekday Evening**
**Peak Hour**
**Saturday Midday**
**Peak Hour**
**Land Use Enter Exit Total Enter Exit Total Enter Exit Total Enter Exit Total**
**Apartments**
44 Dwelling Units
*ITE Land Use 220*
5 17 22 18 12 30 18 10 28 15 16 31
**Retail**
14,000 Square Feet
*ITE Land Use 820*
8 5 13 69 68 137 61 66 127 68 63 131
**Office**
6,560 Square Feet
*ITE Land Use 712*
11 2 13 11 13 24 5 11 16 11 13 24
**Total 24 24 48 98 93 191 84 87 171 94 92 186**
Please note that ITE does not provide trip generation data for Land Use 712 "Small Office Building" during the Saturday Midday period. Therefore, in order to provide a conservative analysis, the weekday midday trip generation rates have been applied to the Saturday Midday period. As summarized in **Table 8**, the Project is projected to generate 48 trips during the weekday morning peak hour, 191 trips during the weekday midday peak hour, 171 trips during the weekday evening peak hour, and 186 trips during the Saturday midday peak

hour. As stated within Chapter 10 of ITE's Trip Generation Handbook, 3rd Edition, there are instances when the total number of trips generated by a site is different from the amount of new traffic added to the street system by the generator. Retail uses are specifically located on or adjacent to busy streets to attract motorists already on the roadway. Therefore, the proposed site is expected to attract a portion of its trips from the traffic passing the site on the way from an origin to an ultimate destination. These trips do not add new traffic to the adjacent roadway system and are referred to as pass-by trips.

Based upon the published ITE data for Land Use 820 "Shopping Center," 34% of the site-generated traffic during the weekday evening period and 26% during the Saturday midday period is comprised of pass-by traffic. Note that the ITE does not publish pass-by rates for the weekday midday period; however, it is reasonable to assume that a portion of the traffic generated by the retail use in the weekday midday period would be comprised of pass-by traffic. Therefore, the weekday evening pass-by rate has been applied to the weekday midday period. **Table 10** shows the additional site generated traffic for the proposed development in terms of newly generated traffic and pass-by traffic.

**Table 10 – Projected Trip Generation – New & Pass-by Trips**

| **Land Use** | **Weekday Morning Peak Hour** | | | **Weekday Midday Peak Hour** | | | **Weekday Evening Peak Hour** | | | **Saturday Midday Peak Hour** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** | **Enter** | **Exit** | **Total** |
| "New" Trips | 24 | 24 | 48 | 75 | 70 | 145 | 63 | 66 | 129 | 78 | 76 | 154 |
| "Pass-By" Trips | 0 | 0 | 0 | 23 | 23 | 46 | 21 | 21 | 42 | 16 | 16 | 32 |
| **Total** | **24** | **24** | **48** | **98** | **93** | **191** | **84** | **87** | **171** | **94** | **92** | **186** |

TRIP ASSIGNMENT/DISTRIBUTION

The trips generated by the Project were distributed according to the existing travel pattern along U.S. Route 9W and in the nearby roadway network, and according to the access management plan of the site. Please note that the proposed driveway along U.S. Route 9W would not provide direct ingress or egress access to northbound U.S. Route 9W. Therefore, trips that originate from northbound U.S. Route 9W would travel westbound along Chapel Hill Road, execute a westbound right-turn at the intersection of Chapel Hill Road and South Gate Road, execute a northbound right-turn at the intersection of South Gate Road and Mayer Drive, and execute an eastbound left-turn into the site driveway along Mayer Drive. Similarly, trips that are destined to northbound U.S. Route 9W would travel southbound along South Chapel Hill Road, execute a southbound left-turn at the intersection of South Chapel Hill Road and Chapel Hill Road, and execute an eastbound left turn at the signalized intersection of Chapel Hill Road, Macks Lane, and U.S. Route 9W. Although South Chapel Hill Road has a southwest orientation, left-turn movements are not restricted via striping or signage. Based on Stonefield's traffic counts, a portion of the existing roadway volume executed a southbound left-turn from South Chapel Hill Road onto Chapel Hill Road.

The distribution percentages of the projected traffic volume for the three (3) land uses for both ingress and egress movements are summarized in appended **Figures 10** through **15.** The cumulative "New" Site-Generated Traffic Volumes and the "Pass-By" Site-Generated Traffic Volumes expected to access the site for the three (3) land uses are illustrated on **Figures 16** and **17**, respectively.

**Table 11** provides a summary of the anticipated increase in intersection volumes based on the proposed Project. The increase is based the total vehicles traversing the intersection of U.S. Route 9W, Chapel Hill Road, and Macks Lane under the 2021 No-Build Condition during the study peak hours, as provided in **Figure 9** and the total "new" vehicles are traversing the intersection during the study peak hours, as shown on **Figure 16.**

**Table 11 – Anticipated Intersection Volume Increase – U.S. Route 9W & Chapel Hill Road/Macks Lane**
**2021 No-Build**
**Traffic Volumes**
**Total Site-Generated Vehicles**
**Through Intersection**
**Percentage**
**Increase**
Weekday Morning Peak Hour 2,855 30 1.1%
Weekday Midday Peak Hour 2,190 87 4.0%
Weekday Evening Peak Hour 2,976 79 2.7%
Saturday Midday Peak Hour 2,391 98 4.1%

As shown in **Table 11**, the proposed Project would increase traffic volumes approximately 4% or less during the study peak hours. As such, the Project's improvements are not anticipated to significantly impact the operations of the adjacent roadway network.

2021 BUILD TRAFFIC VOLUMES

The site-generated trips were added to the 2021 No-Build Traffic Volumes to calculate the 2021 Build Traffic Volumes and are shown on appended **Figure 18**.

2021 BUILD LOS/CAPACITY ANALYSIS

A Level of Service and Volume/Capacity analysis was also conducted for the 2021 Build Condition during the weekday morning and weekday evening peak hours at the study intersection and proposed site driveways.

**Tables 13** through **34** compare the 2018 Existing, 2021 No-Build and 2021 Build Conditions Level of Service and delay values. Under the 2021 Build Conditions, the signalized intersection of U.S. Route 9W, Chapel Hill Road, and Macks Lane is calculated to operate at overall Level of Service F during the weekday midday and Saturday midday peak hours. The intersection is calculated to operate generally consistently with the findings of the 2021 No-Build Condition during the weekday morning and weekday evening peak hours.

The unsignalized intersection of South Chapel Hill Road and Chapel Hill Road is calculated to operate at acceptable Level of Service D during the weekday evening peak hour, the intersection is calculated to operate generally consistently with the findings of the 2021 No-Build Conditions during the weekday morning, weekday midday, and Saturday midday study peak hours. The unsignalized intersections of South Chapel Hill Road and Mayer Drive, South Gate Road and Mayer Drive, and South Gate Road and Chapel Hill Road are calculated to operate generally consistently with the findings of the 2021 No-Build Conditions during the study peak hours.

Movements at the site driveway along U.S. Route 9W are calculated to operate at Level of Service B or better during the weekday morning, weekday midday, and Saturday midday peak hours and at Level of Service D during the weekday evening peak hour. Movements at the site driveway along Mayer Drive are calculated to operate at Level of Service A during all study peak hours.

BUILD VEHICULAR GAP ANALYSIS

To determine if the projected right-turning traffic volumes onto the mainline of U.S. Route 9W would be accommodated by the expected gaps in traffic, the expected vehicular capacity of projected gaps was compared to the projected right-turning volumes. This comparison, over the course of the weekday morning and evening peak hours, are provided in **Table 12**.

**Table 12 – U.S. Route 9W Egress – Projected Capacity**
**Movement Peak Hour**
**Total Projected**
**Vehicular Capacity**
**Total Projected Right turn**
**Traffic Volumes**
U.S. Route 9W Right-turn
Egress

(Main Line, 2 lanes)
AM Peak Hour
(7:15 a.m. to 8:15 a.m.) 175 7
PM Peak Hour
(4:45 p.m. to 5:45 p.m.) 67 45
Based on a review of available gaps in traffic, adequate gaps in traffic are expected to be present over the duration of the peak hours to accommodate the projected right turning volumes.

**MITIGATION MEASURES**

INTERSECTION OF U.S. ROUTE 9W, CHAPEL HILL ROAD, AND MACKS LANE

As part of this report, Stonefield conducted analyses to determine mitigation measures to improve traffic flow through the intersection of U.S. Route 9W, Chapel Hill Road, and Macks Lane. Based on the analyses, adding an additional southbound through lane at the subject intersection would improve intersection functionality, with the most marked improvements in the critical weekday evening peak hour. This mitigation measure is depicted in **Exhibits A** and **B** below. This improvement has been analyzed under the 2021 Mitigation Build Condition.

**Exhibit A: Existing Intersection Configuration Exhibit B: Intersection Configuration with Mitigation**

Please note that this mitigation analysis is based on the assumption that all of the proposed developments described in this report are constructed and the mitigation may not be necessary if all proposed developments are not constructed. The Views at Highland is projected to contributed, on average, only 8.8% of the traffic associated with the proposed developments through the intersection, which in turn represents a small portion of total traffic through the intersection.

MAYER DRIVE AND SOUTH GATE ROAD

In order to discourage site-generated traffic from using the adjacent residential roadways of Mayer Drive and South Gate Road, Stonefield has considered reconfiguring South Chapel Hill Road to provide two-way traffic between Chapel Hill Road and Mayer Drive. This would facilitate a northbound access to Mayer Drive, by which traffic from northbound U.S. Route 9W could access the site driveway. Additionally, by providing a better stop bar alignment, the intersection of South Chapel Hill Road and Chapel Hill Road would provide space right-turning vehicles to pass a vehicle waiting to turn left. These improvements are presented on Concept A.

SOUTH CHAPEL HILL ROAD AND CHAPEL HILL ROAD

Based on consultations with the Town of Lloyd, Stonefield considered reconfiguring South Chapel Hill Road to provide two (2) southbound approach lanes, one (1) left-turn and one (1) right-turn lane. This configuration would allow several southbound left-turning vehicles to queue without conflicting with right turning vehicles. These improvements are presented on Concept B. Note that Concept B is separate from Concept A. Should the Town not permit South Chapel Hill Road improvements per Concept A, Concept B could be constructed to improve present operating conditions.

ULSTER COUNTY AREA TRANSIT

In an effort to reduce the dependency on personal motor vehicles for commuting to places of employment within Ulster County and Dutchess County, and to the Poughkeepsie Metro North Station, the applicant proposes to consult the Ulster County Area Transit (UCAT) regarding increased service on the KPL line which services Kingston, Poughkeepsie, and Marlboro along U.S. Route 9W. Additionally, the applicant would explore providing a bus shelter more proximate to the subject site, in an effort to make bus transit more enticing for future residents, employees, and customers of the proposed development.

SHUTTLE BUS FOR RESIDENTS

Depending on the UCAT's response to increased service and/or an additional bus shelter, the applicant may consider a shuttle service that would provide service between nearby residential developments, places of employment, and transit hubs such as Kingston, Poughkeepsie, and/or Newburgh. Note that this would also reduce the dependency on personal motor vehicles.

2021 MITIGATION BUILD LOS/CAPACITY ANALYSIS

A Level of Service and Volume/Capacity analysis was also conducted for the 2021 Build Condition during

the weekday morning and weekday evening peak hours at the study intersection and proposed site driveways. Under the 2021 Mitigation Build Condition, southbound movements at the signalized intersection of U.S. Route 9W, Chapel Hill Road, and Macks Lane are calculated to operate at Level of Service D or better during the weekday study period and Level of Service E or better during the Saturday peak hour.

**SITE CIRCULATION/PARKING SUPPLY**

A review was conducted of the Project site using the Site Plan prepared by Arden Consulting Engineers, PLLC last revised July 2, 2019. In completing this review, particular attention was focused on the site access, circulation and parking supply.

Access is proposed via one (1) right-in/right-out driveway along U.S. Route 9W and one (1) full-movement driveway along Mayer Drive. Two (2) mixed-use buildings, each with a 10,280-square-foot footprint, will be constructed along the U.S. Route 9W frontage. The trash enclosure will be located proximate to the site driveway along Mayer Drive. A parking field with 117 perpendicular parking stalls and two-way drive-aisles would be located behind (west of) the proposed buildings.

For apartments, The Town of Lloyd requires one and a half (1.5) parking stalls for each one-bedroom unit and two (2) parking stalls for each two-bedroom unit. Four (4) parking stalls per thousand square feet is required for retail space and three (3) spaces per thousand square feet is required for office space. The Town of Lloyd permits a reduction factor for mixed-use developments to account for the variation in the periods of maximum usage among different land uses which allows different uses to share the same given parking stalls if the uses have different time-of-day or day-of-week usage patterns. Therefore, as shown on the Site Plan, the Project requires 117 parking stalls and the site would provide 117 perpendicular parking stalls. Please note that based on census data provided by the 2017 American Community Survey, on average, vehicle ownership in renter-occupied households in the Town of Lloyd is 1.19 vehicles per household. Therefore, the Town's parking requirement for residential dwelling units is expected to adequately support the parking demand. The stalls will be 9 feet wide by 18 feet deep in accordance with industry and Town standards.

**CONCLUSIONS**

This report was prepared to examine the potential traffic impact of The Views at Highland. The analysis findings, which have been based on industry-standard guidelines, indicate that the Project will not have a significant impact on the traffic operations of the adjacent roadway network. The site driveways and on-site layout have been designed to provide for effective access to and from the subject property. Based on the Town of Lloyd parking requirements for the proposed uses, the parking supply would be adequate to support the development of the Project.

July 15, 2019
Town of Lloyd
12 Church Street
Highland, New York, 12528
Chairperson Fred Pizzuto

**RE: The Views at Highland**
**3715-3725 Route 9W, Town of Lloyd, NY (95.2-2-12.100 & 12.200)**
**Traffic Impact Review**

Dear Chairperson Pizzuto:

Stonefield Engineering and Design, LLC is in receipt of the *Traffic Impact Review* prepared by CPL Architecture, Engineering, Planning ("CPL"), dated June 18, 2019. Accordingly, revisions were made to the Traffic Impact Study to address the comments. The following is an itemized response to each comment:

1. Except as noted herein, the methodology used in the Traffic Impact Study (TIS) is consistent with industry standards. Manuals and software cited are the most recent versions available.

**Response: This comment is noted.**

2. Two site access points are proposed – a full access driveway to Mayer Drive and a right-in/right-out (RIRO) access to Route 9W. The site is in close proximity to the signalized intersection of Route 9/Chapel Hill Road/Macks Lane. The Route 9W site access is on the northern leg of the intersection. Traffic queues on this leg extend beyond the location of the proposed RIRO. Because of this condition,

we agree with a RIRO instead of a full access drive. However, this configuration will require vehicles wishing to access the site from points south, west, and east of the site to utilize South Gate Road to reach the full access on Mayer Drive. As noted herein, analyses pertaining to South Gate Road have not been included in the TIS.

**Response: This comment is noted. The Traffic Impact Study has been reviewed and amended to include analyses of South Gate Road.**

3. Existing Roadway Conditions

a. Macks Lane – the TIS notes that the pavement markings are in fair condition. It should be noted that with the exception of the portion between Route 9W and the Wingate access (~140-ft) there are no pavement markings on this roadway.

b. Mayer Drive – the TIS notes that the pavement markings are in fair condition. It should be noted that with the exception of a small amount of striping (~30-ft) at its intersection with South Chapel Hill Road, there are no pavement markings on this roadway.

c. South Gate Road – The TIS did not include a description of this roadway. This is a residential street that will be utilized to access the site. There are no pavement markings, the utility poles are close to the edge of the western side of the road, and there is a potential horizontal and vertical site distance issue, all of which cause concerns.

**Response: Information related to pavement markings has been corrected. A description of South Gate Road has also been included.**



4. Existing Traffic Volumes

a. The TIS provided intersection turning movement counts at four locations. These were performed in 2018 over the course of several hours on a Thursday during the morning, midday, and evening hours, as well as on a Saturday during the midday hours. These counts were analyzed to determine the peak hour for each timeframe. We performed spot checks of the traffic count information provided versus the information included in Figure 2. The information coincides.

b. The TIS did not include traffic counts for two other key intersections – South Gate Drive/Chapel Hill Road and South Gate Drive/Mayer Drive. The impact on these two intersections will need to be determined. Without existing traffic data, that is not possible.

**Response: This comment is noted. Stonefield conducted supplemental turning movement counts at the intersections of South Gate Drive & Chapel Hill Road and South Gate Drive & Mayer Drive on Saturday, June 29, 2019 from 11:00 a.m. to 2:00 p.m. and on Tuesday, July 2, 2019 from 7:00 a.m. to 9:00 a.m., 11:00 a.m. to 2:00 p.m., and 4:00 p.m. to 7:00 p.m. Please note that the Saturday, June 29, 2019 turning movement counts at the intersection of South Gate Road and Mayer Drive was disrupted due to interference by the surrounding neighbors and police activity. Therefore, additional turning movement counts were conducted at both supplemental intersections on Saturday, July 6, 2019 from 11:00 a.m. to 2:00 p.m. Please refer to Pages 4 and 5 of the revised Traffic Impact Study. Table 1 provides a comparison of the supplemental traffic volumes and the original traffic volumes. The Traffic Impact Study has been updated to include traffic data at the subject intersections.**

**Based on the Level of Service (LOS)/Capacity analysis, all movements at the unsignalized intersection of South Gate Road and Mayer Drive are calculated to operate at Level of Service A during each study period. The eastbound movements at the unsignalized intersection of Chapel Hill Road and South Gate Road are calculated to operate at Level of Service A during each study period. The southbound movements at the unsignalized**

**intersection of Chapel Hill Road and South Gate Road are calculated to operate at Level of Service C or better during the study peak hours.**

5. Background Growth

a. The TIS notes that a 2% growth rate was used to extrapolate the 2018 traffic count data out to 2021, which is the anticipated project completion year. It notes that this rate was consistent with industry guidelines. The TIS further states that that traffic on Route 9W is actually declining. No information was provided to substantiate this statement. We reviewed available information on the NYSDOT website for both Route 9W and Chapel Hill Road. The average annual daily traffic (AADT) volumes are shown in the tables on the next page. The traffic decreased on Chapel Hill Road, and although there was a spike in traffic in 2007, traffic on Route 9W increased by just under 2% per year. We therefore agree that using a 2% growth rate creates a conservative analysis.

b. The TIS indicates that there was consultation with the Town of Lloyd with respect to other developments and noted that the Hudson Valley Wine Village was the only development. Information was included in the TIS with respect to components which are anticipated to be included in that development. There was no information however regarding how the traffic from the Hudson Valley Wine Village would be distributed through the roadway network. In addition, the Views at Highland TIS notes that the Hudson Valley Wine Village TIS did not



include analyses of midday weekday or Saturday traffic. Therefore, the information presented in Figure 4 could not be verified.

**Response: The comment pertaining to the background growth rate has been noted. As it relates to the adjacent development, traffic has been distributed through the roadway network in accordance to Figures 8 and 9 of the Hudson Valley Wine Village TIS, where the site generated traffic volumes are represented. Since no information was provided for midday weekday or Saturday traffic volumes, PM traffic volumes were used instead.**

6. Trip Generation

a. The TIS utilized values from the Institute of Transportation Engineers (ITE) Trip Generation Manual to determine the amount of traffic that would be expected to be generated by the proposed development. The Applicant selected three land uses (LU) from the ITE Manual to represent the three types of mixed-use anticipated to be included as a part of the development. We agree with these land uses.

b. The trip generation values were presented in Table 1 in the TIS.

i. With agree with the values presented in the table for all of the weekday morning, all of the weekday evening, and the retail (LU 820) Saturday midday peak hours.

ii. The ITE Manual does not provide midday trip generation rates for any of these land uses. It is unclear how these values were calculated and therefore cannot be verified.

iii. The ITE Manual does not provide distribution percentages for apartments (LU 220) for the Saturday peak hour. The TIS assumed a 50/50 distribution where 50% of the trips enter and 50% exit. We agree with this assumption.

iv. The values presented for the office space (LU 712) for the Saturday midday peak hour are incorrect based on our calculations. There should be 15 entering and 15 exiting for a total of 30 trips, instead of 11 entering and 13 exiting for a total of 24 trips. This is a small difference, and on its own is not likely to significantly change the results of the TIS, however, when combined with other issues found in the TIS, they could incrementally impact the results.

**Response: Midday trip generation rates for these land uses have been calculated using PM**

**Peak Hour of Generator data from the ITE Trip Generation Manual, 10th Edition. Please note that ITE does not provide acceptable trip generation data for Land Use 712 "Small Office Building" during the Saturday Midday period. The sample size for the Saturday midday period is one (1) site and the reported trip generation rate for the Saturday midday peak hour of generator is 0.40 vehicles per 1,000 square feet, which would equate to approximately 3 total trip ends. Therefore, in order to provide a conservative analysis, the weekday midday trip generation rates have been applied to the Saturday Midday period.**

7. Pass-by Trips are presented in Table 2. The value presented for vehicles entering during the Saturday midday peak hour is incorrect based on our calculations. There should be 18 trips entering instead of 16 trips. This is a small difference, and on its own is not likely to significantly change the results of the TIS, however, when combined with other issues found in the TIS, they could incrementally impact the results.

**Response: As discussed with CPL, based on applying the pass-by percentage to both ingress and egress trip generation values and rounding down the smaller of the two**



**values, 16 is an acceptable number for Saturday Midday Peak Hour pass-by trips entering the site.**

8. Trip Assignments

a. As previously noted, the TIS does not include analyses of the intersection of South Gate Road with Chapel Hill Road and Mayer Drive. Figure 6 of the TIS shows that 8 vehicles in the morning peak hour, 26 midday, 22 evening, and 28 Saturday will access the site using these intersections via westbound Chapel Hill Road. The impact of these vehicles on these intersections should be quantified.

b. Figure 6 in the TIS shows 17 vehicles in the morning peak hour, 45 midday, 42 evening, and 49 Saturday will exit the site via Mayer Drive by making a left turn, and no vehicles will exit by making a right turn. Although, the site plan shows this driveway to be 26-ft. wide, which is not wide enough to provide a designated left and right exit lane in addition to one entrance lane, depending on the number of vehicles attempting to make this left turn, some vehicles may choose to make a right turn to reach South Gate Drive instead. This should be considered in the trip assignments.

c. The TIS notes that Figure 6 was prepared based on existing trip distribution rates within the roadway network. A trip distribution percentage figure is typically included in Traffic Impact Studies. In the case of this TIS, it was not, which made verification of said percentages difficult.

**Response: The Traffic Impact Study has been reviewed and amended to include the South Gate Drive & Chapel Hill Road and South Gate Drive & Mayer Drive intersections in the analyses. As the site driveway on Mayer Drive is calculated to operate at Level of Service A, it is not expected that a significant volume of traffic would choose to make a right turn to reach South Gate Drive, especially trips associated with the office and retail uses at the site. To provide a conservative analysis, 50% of residential traffic exiting at the Mayer Drive driveway that are destined to westbound Chapel Hill Road have been routed to make a right turn to reach South Gate Drive. Trip distribution percentage figures have been included in the revised Traffic Impact Study.**

9. Level of Service (LOS) and Delay

a. As described herein, there are some issues with the calculations in the TIS. The LOS and delay analyses were based on the traffic volumes within the TIS. As such, the LOS and delay results may be flawed.

b. As previously noted, the TIS does not include analyses of the intersections of South Gate Road with Chapel Hill Road and with Mayer Drive. As such, there are no analyses of the impact of the proposed development on the LOS and delay at these intersections. The impact of the proposed development on these intersections should be quantified.
c. Using the values within the TIS, the results of the LOS and delay analyses at the signalized intersection of Route 9W/Chapel Hill Road/Macks Lane show that it gets worse over time. The TIS demonstrates that this degradation is not a direct result of the proposed development. However, the TIS does not offer any possible mitigation options. NYSDOT may wish to change signal timings to address the failing LOS at this location. In addition, the protected-only phase for the north and southbound left turns could be modified to be protected/permissive using the newly approved flashing yellow arrow.
d. Using the values within the TIS, the results of the LOS and delay analyses at the existing stop controlled locations show that the project will have a minimal impact on these intersections.
e. Using the values within the TIS, the results of the LOS and delay analysis at the RIRO show a LOS of D for eastbound right turns onto Route 9W during the evening weekday peak hour. This is likely due to the long queue of vehicles and lack of adequate gaps in traffic on Route



9W. This may lead to driver frustration onsite, and a subsequent increase in vehicles utilizing the site access to Mayer Drive instead. This should be re-examined and quantified.
**Response: The Traffic Impact Study has been reviewed and amended to include South Gate Drive and the relevant intersections in our analyses. Corrections have been made to the traffic volumes within the TIS, and LOS analysis have been updated. The aforementioned measures were considered as possible mitigation strategies to minimize LOS degradation at the study locations.**
**A gap analysis was conducted for the weekday morning and weekday evening peak periods and has been added to the revised Traffic Impact Study. Based on a review of available gaps in traffic, adequate gaps in traffic are expected to be present over the duration of the peak hour to accommodate the projected right turning volumes.**
10. The TIS did not include an accident analysis. Given the high number of vehicles on Route 9W and the complex nature of the intersections near the proposed development, an accident analysis should be provided.
**Response: This comment is noted and an accident analysis has been included in the Traffic Impact Study.**
Additionally, in support of these responses, the following documents have been enclosed:

- Site Plan Package, prepared by Arden Consulting Engineers, PLLC, revised July 2, 2019
- Traffic Impact Study, prepared by Stonefield Engineering & Design, revised July 15, 2019

Should you have any questions, or require any additional information, please do not hesitate to contact our office.
Best regards,
Andrew J. Villari, PE Charles D. Olivo, PE, PTOE
**Stonefield Engineering and Design, LLC Stonefield Engineering and Design, LLC**
\\sedlicfs01\ShareThree\L\2018\L-18085 The Commons at Highland, Inc. ( 3725 US Route 9W, Highland, NY)\Correspondence\Letters-Memos\2019-07\2019-07_Response Letter.docx

**(The above complete submission is available in the Building Department)**

Palmer said they are taking a very conservative analysis, no variances, and not exceeding the density.

Pizzuto said they do not want to put any traffic up through the Hudson Hills development.
Villari said adding traffic to any residential neighborhood should not be the contention of any commercial project. Potential mitigation for that would be to convert a portion of South Chapel Hill Road from a one way southbound road to a two way road.
Villari discussed possible traffic routes, what jurisdiction roads were and how if the applicant widened and improved the road it would alleviate commercial traffic to residential neighborhoods.
Learn had concerns about the possible traffic configuration with accidents and that it does not address all the issues with the traffic.
A discussion of traffic design took place.The Board had safety concerns about the design.
Violaris said they could be creating a hot spot where traffic could be exponential in that area.
Cuciti said the traffic is a very complicated issue.
DiLorenzo commented that the Board also has other issues with the project other than traffic as well. The design of the buildings, the parking etc.. are other issues.
Palmer said they would like to get through the preliminary designs for the traffic before they address anything else.
Cuciti felt the traffic design is even more dangerous than what there is now. He explained coming north on Chapel Hill Road and making a left is dangerous for many reasons including fast south bound traffic.
Villari said he didn't feel that way because there is a stop sign.
Palmer said they would provide more details and examples concerning the traffic at the intersection.
Villari said they could install signs and striping at the intersection.
Violaris asked about putting a light at Mayer Drive. He felt the potential for accidents is very high in that area.
Villari said he did not feel that would be a good solution as it would back up traffic.
Hammond commented that there was discussion about making Chapel Hill Road part of State Route 44-55.
Barton said residents are concerned with the left turn on to Chapel Hill Road to get to Route 9W.
Villari said they wanted to explore what would fix traffic at this intersection and they came up with that an additional southbound lane through the intersection is needed.
Zani asked if the traffic study took into consideration where the commercial traffic be detoured from the site down toward Chapel Hill Road. He said originally DOT wanted to make Chapel Hill Road a truck route.
Barton said they have been discussion for years with the DOT about making Chapel Hill Road a state road.
Hammond said there is a lot of local traffic on Chapel Hill Road.
Barton said they appreciate the effort of the traffic design but in his opinion, he doesn't think either design is optimum. Barton said his sense is that the Board feels the project is too massive and complicated for the parcel and the surrounding area.
Palmer said they would continue to work with all aspects of the Town.

**The Village in the Hudson Valley, 3679 Route 9W, SBL#'s 95.12-1-5 &15.1, 95.2-2-3.21, 9 & 10 in R1/2 Zone.**
Applicant is seeking commercial site plan approval for a proposed Continuing Care Retirement Community and a lot line revision to consolidate and reconfigure five parcels into two parcels.

Patti Brooks, Applicant's Representative; Andy Willingham, Engineer; John Furst, Attorney; Kelli Libolt, Planning Consultatnt and Paul Cohen, Owner's Representative, were present to describe recent changes in the potential site plan of the proposed project.
Brooks explained the changes in the original plan. The revised plan increases beds to 135 from 127 and 212 residences from 205. Originally the plan did not have any apartments. They have made a three tiered living situation from single cottages to multi-family apartment type living to assisted living. They have clustered many of the housing together. They will be required to apply to for a zoning variance as the code requires enriched housing and nursing care units not be less than 25% and no more than 60% of total number of units. They feel the 212 reseidences is as dense as they would like to have on the parcel for the independent living.
Brooks said as the Board requested, they have gone through the code to try to figure out how they are in compliance with each section of the code. The following is a July 8, 2019 memorandum from Brooks and Brooks, PC outlining code compliance of the proposed project:

**MEMORANDUM**
TO: Town of Lloyd Planning Board
FROM: Patricia P. Brooks
RE: Our File #8345.CCRC
DATE: July 08, 2019
The Village in the Hudson Valley Continuing Care Retirement Community is the first project proposed in the Town of Lloyd implementing the regulations of Zoning Code Section 100-45 for a Special Use Permit. Below is an outline of how this project will meet each section of the code, as well as the components for which variances will be required and requested.
***100-45. A.*** The proposed Village in the Hudson Valley project will provide residential housing for persons at least 62 years of age with 120 single family cottage homes and 5 duplex townhomes for independent living, 82 apartment units for independent living, and an assisted living facility with 65 enriched assisted living housing units or adult homes and 70 enhanced special needs and skilled nursing care units.
***100-45. B.*** The proposed Village in the Hudson Valley project is located in the R-1/2 zone and will meet all the conditions specified in items (1), (2), and (3). The independent living units will be offered all amenities and may opt to include the services they determine are needed to meet their physical daily needs. The proposed Urgent Care, Adult Day Care and Respite Program will provide accessory services to the Continuing Care Retirement Community.
Item B. (4) specifies that "The combined number of enriched housing, adult home and nursing care units shall not be less than 25% nor more than 60% of the total number of independent living units." Concordia Senior Communities, as developer and operator of the assisted living facility, has determined that a 135-bed facility is required to support the need in the local area. That would require a minimum of 225 and a maximum of 540 independent living units to meet the percentage set forth in the code. A variance will be required for this item in the code.
Items B. (5) and B. (6) relate to the design of the of the structures, as well as the design of the site. A variety of design and architectural styles will be available to the purchaser of each single-family cottage. Particular attention has been given to the design of appropriate amenities including a community garden, activity courts, and passive seating areas. Pedestrian friendly walkways meander through the site to provide safe convenient accessibility.

***100-45. C.*** The project will comply with the procedures dictated either by Article 46 of the New York State Public Health Law, or other applicable State provisions governing health care services and facilities like the ones proposed here. Increasingly, the preferred terminology for these senior communities is Life Plan Community.

***100-45. D.*** (1), (2), (3), (4), & (5) Parking areas and parking spaces are in compliance with the regulations as noted on the site plan parking schedule. It does not appear that the code anticipated an independent living design consisting of single-family residences and there is not clear direction in distinguishing between a roadway and a driveway. The project has been designed with roadways a minimum of 22 feet in width, with pedestrian walkways five feet in width at a maximum 5% grade connecting all areas of the development. The main access roadway is 28 feet in width to access the Assisted Living Facility parking lot, and up to the gatehouse for the independent living units. It is understood that the developer is fully responsible for the installation of all improvements outlined in items (4) and (5). The applicant has consulted with the Town Water and Sewer Committee, and application will be made to the Town of Lloyd Town Board for extension of the Water District to provide municipal water and sewer service to the project. Item (6) All buildings will be constructed within 300 feet of the street or roadway servicing said structure; however, the proposed Assisted living building will not meet the minimum 100-foot front yard setback from the highway taking line. The building will be setback a minimum of 125 feet from the edge of the shoulder of Route 9W and a variance will be sought due to the constraints of the topography and the location of the property line in relationship to the constructed Route 9W roadway. In consultation with the building department, it was determined that the increased setbacks are applicable to all structures commercial in nature that are not single-family residences. The independent single-family dwellings all exceed the 15-foot side and 30-foot rear yard setback required in the underlying R ½ zone.

Item (7), (8), & (9) It is understood that no building will be located more than 300 feet from a hydrant, no portion of a building below the first story will be used for dwelling purposes, and the project owners will be responsible for collection and proper disposal of all garbage and recycling in accordance with applicable laws and regulations.

Item (10) The maximum total density shall not exceed 12 beds per acre -or- four dwelling units per acre. This item has been interpreted as the "beds" relating to the assisted living component.

212 Dwelling units / 4 per acre = 53 acres required

135 Assisted living beds / 12 beds per acre = 11.25 acres required

As the site acreage is 53.00 acres, both density options are satisfied.

Item (11) Maximum building coverage required is 15%, Proposed is 11.9%

Maximum Lot coverage required is 45%, Proposed is 33.6%

Item (12) The distance between buildings is stipulated to be no closer than the height of the taller building, but in no event less than 25 feet. This criterion is met for all buildings other than the single-family independent living cottages, which maintain a separation distance of 20 feet between habitable living spaces in accordance with New York State building code.

This distance complies with the height portion of the code and it is interpreted that the restriction is intended for the larger commercial buildings only. A variance will be sought if required.

Items (13), (14), & (15) It is understood that all structures shall be limited to four stories in height. The lot size of 53.00 acres exceeds the minimum 35-acre site requirement. It is understood that there shall be no on-street parking. Each independent living unit will have a carport or garage and a minimum of one additional off-street parking space. Valet parking will be available, and the gated community will have the site patrolled to ensure compliance.

Item (16) All required documentation including appropriate deed restrictions limiting the property to the approved use, shall be prepared by the applicant and submitted to the own of Lloyd for review and approval prior to final site plan approval.

Brooks said she wanted to review with the Board the significant change in the multi-family dwellings. Previously all elevations were submitted except for the multi-family as it was not part of the plan at the time. Proposed are two buildings. One is for families straight across and the other one is three story on one side and four story on the other side. Brooks presented the Board with the elevations of the buildings. She additionally added that the buildings are tucked into the back of the development over the slope. With the grading as it is, these buildings would be almost hidden and equal to the elevations of the buildings in the front of the property.
Brooks said she would like to set up an initial informational meeting open to the public which is not part of a Planning Board meeting. In addition, they will contact the Ulster County Planning Board to set up a gateway meeting.
Zani stated that he believes traffic would be a problem getting in and out of the site. He asked if there was a way to connect the access road out to Vineyard Avenue.
Barton said there is a light going into Mayer Drive and there would be a left turn out according to the DOT. In addition to that all lights will be coordinated from Chapel Hill Road to Milton Avenue. There is a traffic study in the packet. Learn will also make comments concerning the traffic.
Brooks said the applicant had been working with DOT for approximately two years concerning the proposed project. She commented that it would be physically impossible to construct a roadway to Vineyard Avenue due to the steep slope.
Learn said he wanted to comment on a concern in regards to fire code. The state fire code has a calculation of how far apart accesses are required to be for a development the size of the proposed project. He thought there should be further discussion on how the proposed project will satisfy that.
Barton said the site right now is only served by Mayer Drive. In the future the primary entrance will be on Rt 9W. The code suggests the fire official can require two points of access. He said he agrees with Learn in that having another point of access would be wise.
Brooks said they have left a provision that hopefully there would be another exit to the north. However, at this point in time, that landowner is not interested in participating in an easement of access through the property or the sale of the property. The applicant has purchased the property at the end of Apple Lane to allow for utility ingress and egress. She said they will work with the municipality to do whatever they need to do to address any concerns.
Barton asked if there was any way to move the emergency vehicle access up into the location of the utility access on Apple Lane.
Brooks replied that physically it could be done.
Barton said he felt it makes more sense.
DiLorenzo asked if the multi-family buildings be visible from Mayer Drive.
Brooks replied that it would be possible for at least one of the buildings to be depending on the elevations.
DiLorenzo asked what size parcel would each cottage be on.
Brooks said 40'x80' and it's not considered a subdivision.
DiLorenzo inquired if the 4-story building would be in compliance.
Brooks said it would not be part of the CCR Code.

DiLorenzo wanted to know the measurements of the building.
Brooks said she would get back to him with the measurements. She reiterated what the general site plan would consist of. A 3D model is being planned.
Learn said a driveway that serves more than one single family dwelling needs to be designed by the code design standards. He said they need to have a discussion on what is acceptable with the fire chief present.
Barton said Brooks is seeking a determination of SEQR. He asked her to craft a letter stating why she thinks it should be one way as opposed to the other and he would work with Stout and Learn with it.
Brooks said she didn't want to apply for the ZBA for anything until the consultants met with each other and flush out all the variances that would be needed for the proposed project in order to present a comprehensive application to the ZBA when they do.
Barton said there will be an informational meeting on 08/22/19, 6pm at the firehouse.

## Informal Discussion

**GlidePath Power Solutions** – Energy Storage Warehouse

Dave Young, The Chazen Company and applicant's representative, said they are proposing a lithium battery energy storage facility. It would be a 20 megawatt, single story, 30,000 sg ft, and approximately 25 feet high facility on 100 acres surrounded by wetlands that would not need to be crossed. The proposed project would be at the intersection of 9W and Route 299. The property is zoned light industrial and there would be an exisitng 50 foot wide access from Lumen Lane. The total disturbance on the 100 acre parcel would be roughly 3 acres, no daily manned office, no bathroom facilities, no water or sewar. Young said the facility would mirror the existing Ulster facility. As the facility would slope in the back, that is where they would collect the stormwater.
Cuciti inquired about the fire suppression sytem.
Young said the details of such are still being worked out and they will have the basis of it by next Thursday's meeting.

A **Motion** to Adjourn was made by Franco Zani, seconded by Sal Cuciti, 6:47PM. All ayes.