



May 17, 2018

Ref: 26536.00

Mr. John Bossalini  
Amedore Homes  
1900 Western Avenue  
Albany, NY 12203

Re: Newkirk Road Senior Housing Development:

Dear Mr. Bossalini,

VHB has conducted a traffic evaluation to assess the potential traffic impacts associated with the proposed 96-unit senior housing development located on Newkirk Road in the Town of East Greenbush.

This letter includes an evaluation of the peak hour site trip generation and a qualitative evaluation of the distribution of traffic on the adjacent roadway network. As detailed herein, the proposed project is expected to have a minor impact on local traffic operations.

## Site Location and Proposed Development

The approximate 17.6-acre project site, as shown in the google aerial image, is located on the north side of Newkirk Road and is currently undeveloped. The proposed project includes construction of 96 senior housing units in three 32-unit buildings. Access to the site is proposed via a full access driveway creating a fourth leg to the Newkirk Road/Michael Road intersection and a second full access driveway on Newkirk Road to the west of the Michael Road intersection. Based on initial recommendations made by the Town, it is proposed that with the site development the western end of Newkirk Road, where it intersects with Luther Road (NY Route 151), be eliminated. With this change a stub end would be provided on Newkirk Road just west of the proposed site access driveway. This modification will eliminate the skewed intersection at Luther Road and divert all traffic on Newkirk Road to enter and exit via a signalized intersection. Since Newkirk Road currently provides access to four single family homes it is a low volume roadway; therefore, the elimination of the Luther Road intersection and diversion of all trips to Michael Road will have a minor impact to the roadway network. Details on this roadway closure and discussions regarding the need or potential to maintain some level of access for emergency vehicles will be coordinated with the Town as the project progresses.

The project is expected to be completed in 2019. The Overall Site Plan, prepared by Brett L. Steenburgh is included in Attachment A.



## Existing Conditions

Luther Road (NY Route 151) is classified as an urban major collector and generally provides east-west access between US Route 4 and NY Route 150. At the project site, Luther Road is a two-lane roadway with approximate 10.5-foot travel lanes, four-foot paved shoulders, and a posted speed limit of 45-mph. Luther Road is designated at NY State Bicycle Route 5. In the project vicinity, there are sidewalks on the north side of Luther Road and the traffic signal at the Luther Road/Michael Road intersection provides pedestrian accommodations with push buttons, countdown timers, and marked crosswalks on all four intersection approaches. Based on the latest available traffic volume data from the New York State Department of Transportation (NYSDOT) in 2015, Luther Road accommodates approximately 3,700 vehicles per day (vpd). Land uses on Luther Road are primarily residential and institutional with access to Columbia High School located approximately 1,500 feet east of Newkirk Road. Table 1 summarizes the existing traffic volume data on Luther Road based on the available NYSDOT data. The data is included in Attachment B.

Newkirk Road is a local road, approximately 800 feet in length, providing access from Luther Road to a dead end adjacent to Interstate 90. Newkirk Road is a two-lane roadway with approximately 21 feet of pavement and no shoulders. There is no posted speed limit on Newkirk Road; therefore, a local road speed limit of 30-mph is assumed. Newkirk Road currently provides access to four residential homes.

Michael Road is a local road generally providing north-south access between Newkirk Road and Elliot Road. The leg of Michael Road north of Luther Road, providing access to Newkirk Road, provides



approximately 20 feet of pavement and no shoulders. South of Luther Road, Michael Road is a two-lane road with approximately 12-foot travel lanes, approximate 2-foot shoulders, and a posted speed limit of 30-mph. There are no sidewalks on Michael Road except for a short segment on the west side of the roadway between Luther Road and Community Way. Land uses on Michael Road are primarily residential. Just south of Luther Road, Michael Road provides access to Community Way which houses the Town Library, YMCA, and the Eddy Hawthorne Ridge independent senior living community.

**Table 1 Existing Traffic Volume Summary**

Luther Road (US Route 151)	Weekday Daily	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
	Volume <sup>a</sup>	Vol <sup>b</sup>	K Factor <sup>c</sup>	Dir. Dist.	Volume	K Factor	Dir. Dist.
East of I-90	3,711	347	9.4%	83% WB	391	10.5%	69% EB

Source NYSDOT data collected in April 2015

- a. Daily traffic expressed in vehicles per day.
- b. Peak hour volumes expressed in vehicles per hour.
- c. Percent of daily traffic which occurs during the peak hour.

As shown in Table 1, Luther Road carries approximately 3,711 vehicles per day (vpd) on a typical weekday with approximately 9.4% of the daily traffic volume occurring during the weekday morning peak hour and 10.5% occurring during the weekday evening peak hour. The NYSDOT counter was located to the east of Interstate 90 where the traffic flow is significantly heavier in the westbound direction during the morning peak hour and in the eastbound direction during the evening peak hour consistent with expected commuter and school travel patterns in the area.

## Site Generated Traffic Volumes

To estimate the site-generated traffic, the Institute of Transportation Engineers' (ITE) publication *Trip Generation, 10<sup>th</sup> Edition*<sup>1</sup> was utilized. The number of vehicle trips generated by the proposed project were estimated based on ITE land use code (LUC) 252 – Senior Adult Housing-Attached. A summary of the trip generation estimate is provided in Table 2.

Based on the projections outlined below, the proposed project is expected to generate 19 new vehicle trips during the AM peak hour (7 entering and 12 exiting) and 25 new vehicle trips during the PM peak hour (14 entering and 11 exiting). The site generated trips will result in less than the NYSDOT and ITE threshold of 100 vehicle trips generated on a single intersection approach for determining the need for off-site intersection analysis. These agency thresholds were developed as a tool to identify locations where the magnitude of traffic generated has the potential to impact operations at off-site intersection and screen out locations that do not meet the threshold and are therefore unlikely to require mitigation.

<sup>1</sup> Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, Washington D.C., 2017.



**Table 2 Trip Generation Summary**

Weekday Time Period	Movement	Senior Adult Housing-Attached <sup>a</sup>
Morning Peak Hour	Enter	7
	<u>Exit</u>	<u>12</u>
	Total	19
Evening Peak Hour	Enter	14
	<u>Exit</u>	<u>11</u>
	Total	25

a. Trip generation estimate based on ITE LUC 252 (Senior Adult Housing-Attached) for 96 units

As noted, access to the site will be provided on Newkirk Road via Michael Road with all of the site traffic passing through the Luther Road/Michael Road signalized intersection. Based on a review of available traffic volume data and the surrounding roadway network, it is anticipated that 5% of the site traffic will travel to and from the east, 25% will travel to and from the south, and 70% will travel to and from the west. The distribution of trips on the roadway network will result in 12 AM peak hour trips and 11 PM peak hour trips on the southbound Michael Road approach to Luther Road and a maximum increase of trips on Luther Road west of the intersection of 13 AM peak hour trips (5 eastbound and 8 westbound) and 18 PM peak hour trips (10 eastbound and 8 westbound). This magnitude of traffic volume increase is small, equating to the addition of one vehicle trip every 5 minutes or more during the peak hours. The additional traffic will be accommodated for by the existing roadway network and traffic signal at the Luther Road/Michael Road intersection.

It is noted that there are two proposed development projects in the area surrounding the project site, a 286-unit apartment project on Michael Road, just south of Community Way, which is currently under review by the Town, and a 60-single family home development on Elliott Road, east of Michael Road, which is conditionally approved. Both of these projects have the potential to add additional traffic in the study area and to the Luther Road/Michael Road intersection. The additional traffic from these other potential developments; however, would not change the level of impact associated with the proposed site with the low traffic volume generation of 25 vehicles or less during the peak hours.

To maintain consistency with the current intersection control at the Newkirk Road/Michael Road intersection with the Michael Road northbound vehicles yielding to traffic on Newkirk Road, it is recommended that the site driveway proposed as the fourth leg (north leg) at the intersection be controlled with a stop sign. It is also recommended that a stop sign be installed on the northbound Michael Road intersection approach.



## Conclusions

VHB has conducted a traffic evaluation to assess the traffic associated with the construction of a 96-unit senior housing community located on Newkirk Road in the Town of East Greenbush. Access to the site is proposed via a full access driveway creating a fourth leg at the Newkirk Road/Michael Road intersection and a second driveway on Newkirk Road west of Michael Road. Based on initial recommendations made by the Town, it is proposed that the west leg of Newkirk Road where it intersects with Luther Road be closed as part of this project to eliminate the existing skewed intersection. This modification would relocate all Newkirk Road traffic associated with the existing four single family homes with access on Newkirk Road to the signalized Michael Road/Luther Road intersection. The project is anticipated to be constructed in 2019. The following is noted:

- The proposed project is expected to generate 19 new vehicle trips during the morning peak hour (7 entering and 12 exiting) and 25 new vehicle trips evening peak hour (14 entering and 11 exiting). The site generated trips will result in less than the NYSDOT and ITE threshold of 100 vehicle trips on a single intersection approach for determining the need for off-site intersection analysis.
- The distribution of the site-generated traffic will result in the maximum addition of 12 AM peak hour and 11 PM peak hour trips on the southbound Michael Road approach to Luther Road and a maximum increase of trips on Luther Road west of the intersection of 13 AM peak hour trips (5 eastbound and 8 westbound) and 18 PM peak hour trips (10 eastbound and 8 westbound). This magnitude of traffic will be accommodated for by the existing roadway network.
- It is recommended that the site driveway proposed as the fourth leg (north leg) at the Newkirk Road/Michael Road intersection be controlled with a stop sign. It is also recommended that a stop sign be installed on the northbound Michael Road intersection approach.

If you have any questions on the above evaluation, please call.

Sincerely,

VHB Engineering, Surveying and Landscape Architecture, P.C.

A handwritten signature in blue ink, appearing to read "Wendy C. Holsberger".

Wendy C. Holsberger, PE, PTOE

Director of Transportation  
wholsberger@vhb.com

A handwritten signature in blue ink, appearing to read "Alanna M. Moran".

Alanna M. Moran

Senior Traffic Designer  
amoran@vhb.com

Attachments

## Attachment A – Overall Plan



## Attachment B – NYSDOT Traffic Volume Data

# New York State Department of Transportation

## Traffic Count Hourly Report

ROUTE #: **NY 151** ROAD NAME: **Luther Rd** FROM: **RT 4 JCT** TO: **CR 53** COUNTY: **Rensselaer**  
 DIRECTION: Eastbound FACTOR GROUP: 30 REC. SERIAL #: CM61 FUNC. CLASS: 17 TOWN: **EAST GREENBUSH**  
 STATE DIR CODE: 6 WK OF YR: 16 PLACEMENT: 232 Yds W of Moore Rd (East Entrance) NHS: no LION#:   
 DATE OF COUNT: 04/13/2015 @ REF MARKER: JURIS: City BIN: 1070430  
 NOTES LANE 1: EB travel lane ADDL DATA: Class Speed CC Stn: RR CROSSING:   
 COUNT TYPE: AXLE PAIRS BATCH ID: DOT-R01 WW16a Class HPMS SAMPLE: 3005481

COUNT TAKEN BY: ORG CODE: TST INITIALS: BEK

PROCESSED BY: ORG CODE: DOT INITIALS: JLB

DATE	DAY	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		AM												PM														
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M																											
7	T																											
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11	S																											
12	S																											
13	M																174	233	310	194	136	96	51	39	18			
14	T	15	3	4	2	6	9	32	61	65	61	68	66	107	104	125	171	242	271	178	137	91	72	32	19	1941	271	17
15	W	11	8	6	2	7	7	25	55	83	52	87	81	106	108	143	206	244	251	177	173	101	70	41	19	2063	251	17
16	T	16	3	7	2	4	7	22	59	68	52	71	77	81	107	138	167	267	264	187	155	126	72	42	19	2013	267	16
17	F	21	2	2	2	3	7	22	52	58	61	76	100	92	112	163	188	253	249	184	128	97	85	47	29	2033	253	16
18	S	27	13	4	2	2	3	6	37	52	76	112	153	163	139	112	133	152	134	117	90	68	66	55	33	1749	163	12
19	S	17	8	4	5	4	4	4	25	30	78	99	115	141	127	127	141	118	128	94	74	54	32	22	13	1464	141	12
20	M	4	4	1	1	2	8	20	62	66	52	79	88	109	95	128	171	252	258	159	117	101	58	36	24	1895	258	17
21	T	10	7	9	3	2	7	16	65	68	65																	
22	W																											
23	T																											
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)																							ADT	
15	5	6	2	4	7	23	59	68	57	76	82	101	104	134	178	248	271	179	144	103	65	38	20	1989
<u>DAYS Counted</u>	<u>HOURS Counted</u>	<u>WEEKDAYS Counted</u>	<u>WEEKDAY Hours</u>	<u>AVERAGE WEEKDAY</u>		Axle Adj. Factor	Seasonal/Weekday Adjustment Factor	<u>ESTIMATED</u>																
				High Hour	% of day																			
9	187	6	121	271	14%	1.000	1.047	AADT																

**AADT**  
**1900**

ROUTE # **NY 151** ROAD NAME: **Luther Rd**  
 STATION: **140124** STATE DIR CODE: **6**

FROM: **RT 4 JCT** TO: **CR 53**  
 PLACEMENT: **232 Yds W of Moore Rd (East Entrance)**

COUNTY: **Rensselaer**  
 DATE OF COUNT: **04/13/2015**

# New York State Department of Transportation

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 COUNT TAKEN BY: ORG CODE: TST INITIALS: BEK PROCESSED BY: ORG CODE: DOT INITIALS: JLB

		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M																											
7	T																											
8	W																											
9	T																											
10	F																											
11	S																											
12	S																											
13	M																112	112	119	97	75	52	30	19	12			
14	T	4	3	2	6	10	36	171	305	182	127	81	80	83	74	81	92	100	108	82	73	51	25	17	6	1799	305	7
15	W	8	2	1	8	7	37	190	284	183	144	98	93	76	86	95	103	104	123	117	97	41	35	14	12	1958	284	7
16	T	3	3	3	5	8	41	175	284	212	125	93	78	79	95	92	121	117	125	117	79	64	30	14	15	1978	284	7
17	F	7	1	1	6	10	38	175	274	183	139	110	77	95	71	96	108	133	122	95	67	38	35	32	18	1931	274	7
18	S	4	11	2	5	4	5	40	101	128	158	134	137	141	113	111	115	97	90	73	62	76	36	32	22	1697	158	9
19	S	13	7	4	3	0	2	28	51	93	119	120	122	136	115	96	108	90	85	77	51	49	21	15	11	1416	136	12
20	M	2	2	1	2	12	28	160	298	185	137	100	76	66	98	91	94	127	126	96	45	50	19	16	11	1842	298	7
21	T	6	2	1	3	6	42	166	283	193	117																	
22	W																											
23	T																											
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25	S																											
26	S																											
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28	T																											
29	W																											
30	T																											

## AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

6 2 2 6 8 39 173 288 190 132 96 81 76 88 90 104 112 120 102 74 52 28 16 11 1896

DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	% of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor
9	187	6	121	288	15%	1.000	1.047

## ESTIMATED

**AADT**  
**1811**

ROUTE # **NY 151** ROAD NAME: **Luther Rd**  
 STATION: **140124** STATE DIR CODE: **7**

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