



**T Consulting**



1396 White Bridge Road  
Chittenango, NY 13037

Tel: (315) 391-5110 Fax: (315) 687-6267

March 26, 2021

Clough Harbour & Associates, LLP  
441 South Salina Street  
Syracuse, NY 13202-4712

Attn: Mr. Brian Bouchard, P.E.

**Re: Traffic Operations Review – Proposed Baltimore Ridge Residential Development  
Baker Road & Dunlap Avenue, Village of Marcellus, NY**

Dear Mr. Bouchard:

I have completed my review of traffic operations associated with the proposed Baltimore Ridge residential development in Marcellus, NY. This letter summarizes the work completed in this review as well as my findings.

#### *Project Understanding*

The proposed development includes 24 single family residential lots to the south of Baker Road and Dunlap Avenue in the Village of Marcellus, NY. The site is currently vacant wooded property. Access to the development is proposed via extensions of Baker Road and Dunlap Avenue with a new crossroad which will connect to S St Road approximately 275 feet to the south of the Platt Road intersection.

A layout plan developed by CHA, dated December 12, 2020 has been attached.

#### *Data Collection*

Site visits were conducted on Thursday – March 25<sup>th</sup>, 2021 to collect the following:

- Spot Speed Measurements – 50 speed measurements were collected in each direction on S St Road to identify average and 85<sup>th</sup> percentile operating speeds in the area passing the proposed site access location. The data was collected for free flow traffic during off-peak times. The weather was sunny and the roadway was dry.
- Sight Distance Measurements – Sight lines looking north/south along S St Road from the proposed site access location were collected for comparison to design standards in order to confirm that adequate sight lines are available for safe ingress and egress from the site.

#### *Existing Operations*

S St Road has one lane in each direction passing the site with a posted speed limit of 40 mph. The speed limit drops to 30 mph to the north of the site access location.

Mr. Bouchard  
March 26, 2021  
Page 2 of 4

**Re: Traffic Operations Review – Proposed Baltimore Ridge Residential Development  
Baker Road & Dunlap Avenue, Village of Marcellus, NY**

S St Road is classified as a major urban collector roadway in the area. Based on a March 29<sup>th</sup>, 2016 traffic count taken from the NYSDOT Traffic Data Viewer Website, which was collected close to the proposed access location at 111 feet north of Parson Drive, the roadway carries approximately 90 vehicles northbound/55 vehicles southbound during the morning peak hour and 116 vehicles northbound/128 vehicles southbound during the evening peak hour. This would generally be considered a low volume roadway.

Assuming uniform traffic arrival in each direction on S St Road, the existing traffic volumes equate to 1 vehicle passing the access location every 40-65 seconds in each direction during the morning peak hour and 1 vehicle passing the access location every 28-31 seconds during the evening peak hour. There are no concerns with available gaps in traffic on S St Road to accommodate the development traffic.

The posted speed limit passing the site is 40 mph on S St Road. The speed data collected indicates that the average speeds passing the site on S St Road are 33 mph northbound and 35 mph southbound. The 85<sup>th</sup> percentile speeds based on the data collected are 37 mph in both directions on S St Road. The speed data has been attached.

Based on the AASHTO A Policy on Design of Highways and Streets and an operating speed of approximately 40 mph on S St Road, the recommended sight distance to provide safe ingress and egress from the site is 445 feet looking in each direction from the driveway location. This distance is measured from the driver's eye when exiting the side road, typically 14 feet from the edge of the closest travel lane. Given the existing positive slope on the west side of S St Road and the slight curve in the road looking north, the exact sight distance measurement looking north cannot be measured.

The vertical sight distance looking north from the driveway location, closer to the edge of the travel lane, is approximately 630 feet, well over the recommended 445 for safe egress. Therefore, the only concern with sight distance is looking across the slope on the side of the road. When constructing the new roadway, a sight line will need to be taken looking north from a point 14 feet behind the travel lane, with the embankment along the west side of S St Road being graded back to allow the recommended 445 foot sight distance.

There are no concerns looking south from the proposed access location with well over 500 feet of sight distance available.

*Trip Generation Estimate and Distribution*

The proposed development includes 24 single family homes. Trips generated by the proposed development were estimated using the ITE Trip Generation, 10<sup>th</sup> Edition, which is the industry accepted standard for estimating traffic generated by new developments. Land Use 210 – Single

**Re: Traffic Operations Review – Proposed Baltimore Ridge Residential Development  
 Baker Road & Dunlap Avenue, Village of Marcellus, NY**

Family Detached Housing was used.

The following table summarizes the trip generation estimate for the proposed development.

**Trip Generation Summary**

	<b>Weekday Total</b>		<b>Morning Peak Hour</b>		<b>Evening Peak Hour</b>	
	<b>Entering</b>	<b>Exiting</b>	<b>Entering</b>	<b>Exiting</b>	<b>Entering</b>	<b>Exiting</b>
24 Homes	114	114	4	14	15	9

The detailed trip generation calculations have been attached.

Many people expect that residential land uses will generate an average of 2 trips per unit during peak hours. The trip generation rates for residential land uses are generally less than 1 trip per unit for a number of reasons. The primary reason is that people work different times, some may leave for work at 6:30 in the morning while others may leave at 7:30 or 8:30. Subsequently, the arrival patterns home in the evening will also be staggered over multiple hours. Some people work evenings while others may stay at home or work from home. The rates contained in the ITE Trip Generation have been verified and provide an accurate representation of what may be expected for this development during the peak hours of the adjacent streets.

Overall, the development is minor traffic generator with less than 20 vehicles entering and exiting during the peak hours.

Based on existing traffic patterns and population centers in the area, 70% of the trips generated are expected to travel to/from the north on S St Road and 30% is expect to travel to/from the south. A minor portion of the traffic generated may use the existing residential roadways to travel north to Wilson Drive, however, that would be balanced out as a minor portion of the existing residential traffic may use the new access to S St Road when traveling to the south.

*Build Operations*

The proposed development will generate approximately 1 car exiting onto S St Road every 4 minutes during the morning peak hour and a car entering from S St Road every 4 minutes during the evening peak hour. This minimal increase in traffic in the area will generally not even be noticeable to existing motorists or residents.



# ZONING REGULATIONS FOR DEVELOPMENT

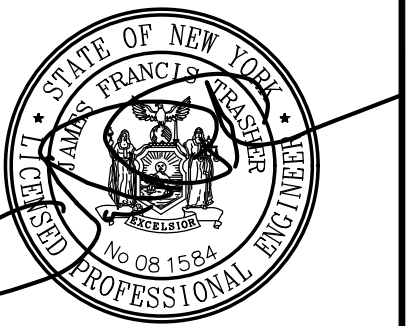
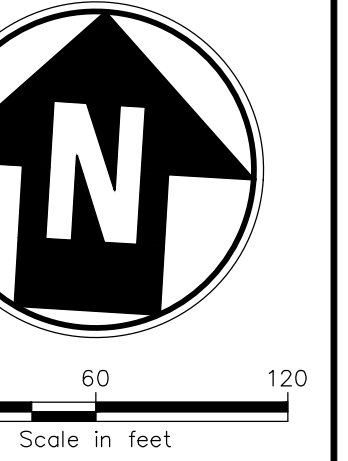
ZONING: RESIDENTIAL CLASS A (RA) - SINGLE FAMILY

PROPERTY INFORMATION: VILLAGE OF MARCELLUS, NY  
TMP: #077-01-11.0  
SITE ACREAGE: 19.77 AC

	CODE	PROVIDED
MINIMUM LOT AREA:	8,000 SF	>8,000 SF
MINIMUM LOT WIDTH:	AVG OF EXIST. NEIGHBORS	±90'
MAXIMUM BUILDING HEIGHT:	35'	
MINIMUM BUILDING FOOTPRINT:	900 SF	
MAXIMUM LOT COVERAGE:	25%	
MINIMUM YARDS:		
-FRONT:	AVG OF EXIST. NEIGHBORS	±35'
-SIDE:	12'	±12'
-REAR:	20'	±20'

NOTES: LOTS 21-24 ARE THE 4 LOTS PERMITTED ON THE WESTERN 10 ACRES OF THE EXISTING LOT PER EXISTING COVENANT

CAMEX REALTY, LLC  
605 W GENESEE ST #100  
SYRACUSE, NY 13204



IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE REGISTERED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER ANY PLAN OR MAP. IF AN UNREGISTERED PERSON'S STAMP OR SEAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE WORDS "ALTERED BY FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION."

BALTIMORE RIDGE  
SUBDIVISION  
BAKER RD & DUNLAP AVE  
MARCELLUS, NY 13108

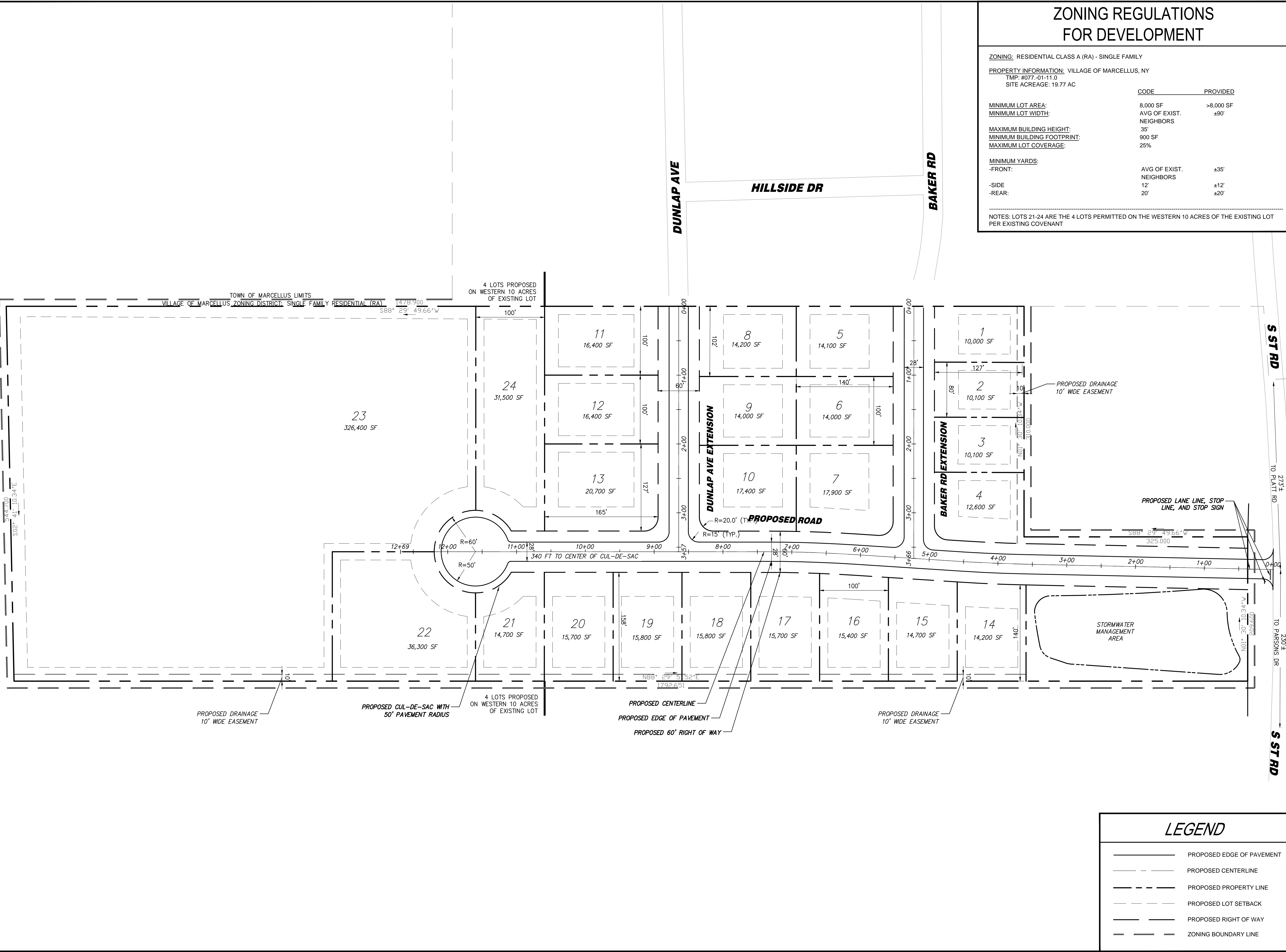
No.	Submittal / Revision	App'd. By	Date

PRELIMINARY PLAT SUBMITTAL JFT AMV 02/09/21

## LAYOUT PLAN

Designed By: AMV/RPM	Drawn By: AMV/RPM	Checked By: BFB
Issue Date: 12/15/20	Project No: 67298	Scale: AS SHOWN

Drawing No.:  
**C-100**



**Proposed Baltimore Ridge Residential Development - Baker Road & Dunlap Avenue, Marcellus, NY**

Speed Study Measurements - S St Road Passing Proposed Site Access

3/25/2021

Distance Travelled (ft) = 210

50 Speed Measurements per Direction

Speed Limit 40 mph

NB Time Seconds	Calculated Speed	NB Time Seconds	Calculated Speed	SB Time Seconds	Calculated Speed	SB Time Seconds	Calculated Speed
5.57	26	4.25	34	4.94	29	3.99	36
5.31	27	4.22	34	4.78	30	3.98	36
5.28	27	4.22	34	4.56	31	3.97	36
5.16	28	4.2	34	4.56	31	3.97	36
5.16	28	4.13	35	4.51	32	3.95	36
5.14	28	4.13	35	4.5	32	3.94	36
4.97	29	4.1	35	4.46	32	3.93	36
4.91	29	4.1	35	4.36	33	3.91	37
4.82	30	4.05	35	4.31	33	3.89	37
4.78	30	3.96	36	4.29	33	3.88	37
4.75	30	3.95	36	4.28	33	3.88	37
4.72	30	3.95	36	4.25	34	3.87	37
4.69	31	3.95	36	4.25	34	3.87	37
4.63	31	3.94	36	4.21	34	3.86	37
4.59	31	3.93	36	4.21	34	3.86	37
4.56	31	3.92	37	4.2	34	3.86	37
4.56	31	3.89	37	4.15	35	3.85	37
4.56	31	3.88	37	4.13	35	3.84	37
4.54	32	3.87	37	4.12	35	3.81	38
4.5	32	3.87	37	4.12	35	3.81	38
4.4	33	3.85	37	4.11	35	3.76	38
4.33	33	3.83	37	4.11	35	3.76	38
4.32	33	3.82	37	4.1	35	3.75	38
4.26	34	3.82	37	4.1	35	3.75	38
4.25	34	3.83	37	4.07	35	3.43	42

Northbound

Average Speed = 33 mph

85th Percentile Speed = 37 mph

Southbound

Average Speed = 35 mph

85th Percentile Speed = 37 mph

**Proposed Baltimore Ridge Residential Development  
Baker Road & Dunlap Avenue, Village of Marcellus, NY  
Trip Generation Estimate**

Proposed Development

24 Single Family Homes

***ITE Trip Generation - 10th Edition***

Land Use 210 - Single-Family Detached Housing

Weekday	9.44 Trips/Home	50% Enter	50% Exit
Morning Peak Hour	0.74 Trips/Home	25% Enter	75% Exit
Evening Peak Hour	0.99 Trips/Home	63% Enter	37% Exit

**Trip Generation Estimate**

Development	Size	Weekday Total			Morning Peak Hour			Evening Peak Hour		
		Total Trips	Entering	Exiting	Total Trips	Entering	Exiting	Total Trips	Entering	Exiting
Single Family Homes	24 Homes	228	114	114	18	4	14	24	15	9