Community Development Department
Town of Purcellville
221 South Nursery Avenue
Purcellville, VA 20132
540-338-2304 www.purcellvilleva.gov

Addendum

Catoctin Creek Towne Center

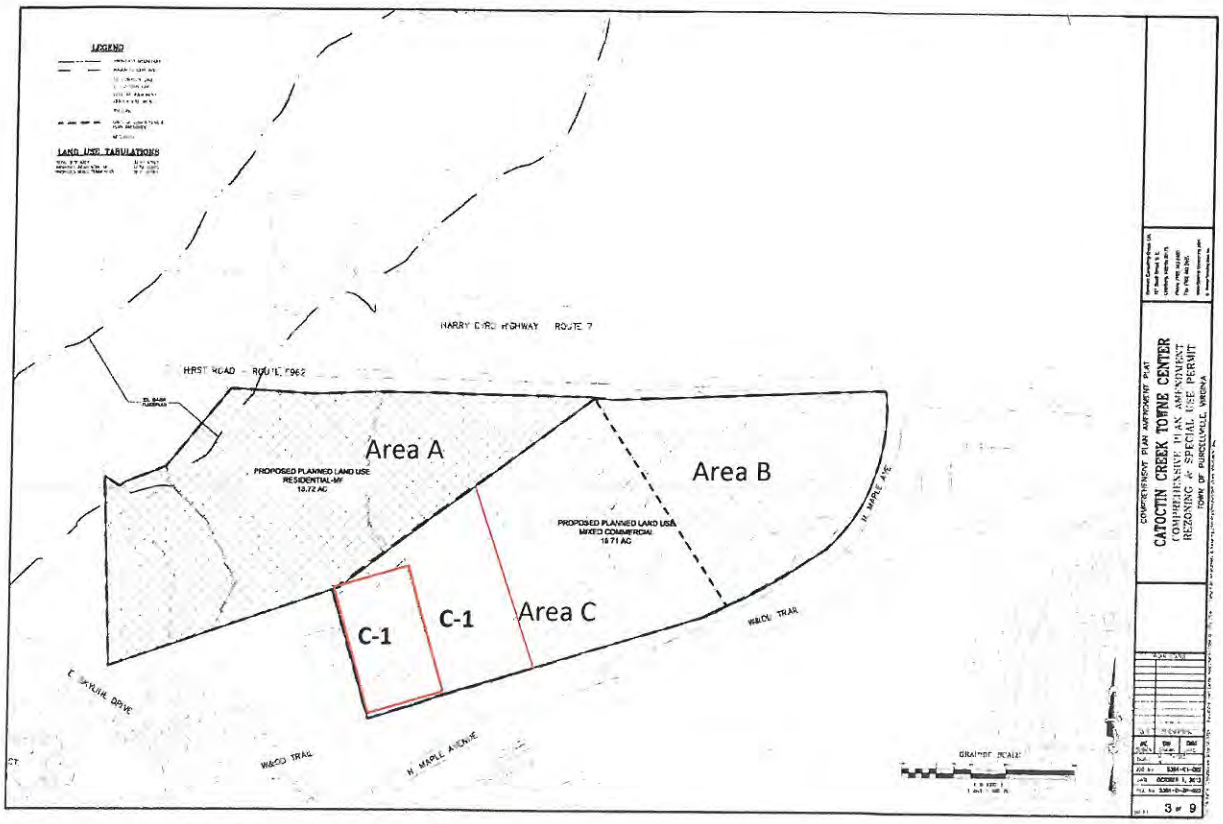
As of February 6, 2014

Contents:

1. Staff Report Replacement pages 15-16
2. Preliminary Cost Estimate for Traffic Improvements at Hirst and 287
3. Applicants response to traffic comments from the Town, Kimley-Horn and VDOT
4. Noise levels for Electric Go Karts

Rezoning Request

Map 2



PDH-15 MC

Background.

For rezoning purposes, the development site is comprised of three Areas, A, B and C as noted on Map 1. Areas A & B are owned by Branko Stupar. Area C is owned by Brent Mercke.

The applicants have applied for a rezoning of the 32.43 acre site. Most of the site is presently zoned CM-1 which is an office/industrial designation. There is a two acre parcel and another portion of area C to the south and west in Parcel C that is zoned C-1 (see map 2) which has an office commercial designation. The applicants are requesting that Area A be rezoned to PDH-15 and that Areas B & C including C1 as shown on Map 2 be rezoned to Mixed Commercial (MC). The PDH designation refers to a Planned Development Housing district. The numeric indicator of 15 refers to the allowable density of

15 dwelling units per acre. There are general standards and design standards outlined below that must be reviewed prior to the approval of the rezoning application.

An outdoor commercial recreation use will be a major part of the development on Areas B & C. This use will require a Special Use Permit. The applicant for the 18 acre commercial segment of the project, Bill Tilley, is applying for the SUP. The Special Use Permit review will run concurrently with the rezoning review. *(PZO) Article 8 Section 1.4 B.*

Rezoning review.

Any rezoning requires that certain relevant factors be considered. Article 1 Section 3 of the Zoning Ordinance of the Town of Purcellville, Virginia (ZO) states that zoning districts must be drawn and applied by reasonably considering the following: the existing use and character of property; the comprehensive plan; the suitability of the property for various uses; the trends of growth and change, the current and future requirements of the community as to land for various purposes as determined by population and economic studies and other studies; the transportation requirements of a community; the requirements for public services; the conservation of natural resources; the encouragement of the most appropriate use of land throughout the locality and to promote the health, safety, morals, order, convenience, prosperity and general welfare of the Purcellville community.

In addition, the PDH district rezoning has its own provisions for review, *"...rezoning to and development under this district (PDH) will be permitted only in accordance with a development plan prepared and approved in accordance with the provisions of Article 11." (PZO Article 4 Section 12.1)*

Provided below are the individual standards found in Article 11 of the zoning ordinance and factors from Article 1 of the zoning ordinance as noted above, along with staff comments. The general standards and the design standards for the PDH district can be found in the ZO Article 11 Section 7. In addition, Article 4 Section 12 provides additional standards for the PDH-15 district. The relevant factors to be analyzed as part of the rezoning process can be found in Article 1 of the ZO.

Please review the various agency comments that are located in the attachments to this report. The comments do not necessarily reflect the position of staff and should be reviewed as independent comments. The comments may or may not have been mentioned or included in the body of this staff report. However, please remember that the commenting agency has a particular expertise in their field and their comments should be reviewed with that expertise in mind.

Sullivan, Patrick

From: Chris Mohn <cmohn@bowmanconsulting.com>
Sent: Thursday, February 06, 2014 9:22 AM
To: Sullivan, Patrick
Cc: Galindo, Daniel; Mark Nelis; Tom Johnston (tjohnston@tfjgroup.com); Erich Strohhacker; Payman Homayouni
Subject: Catoctin Creek TC - Cost Estimate for Road Improvements
Attachments: Prelim Estimate 2014-2020 Intx 020614.pdf; 2014-01-08- Road Improvements Exhibit.pdf

Importance: High

Patrick,

Attached is the preliminary cost estimate for the proposed improvements to the intersection of Hirst Road and Berlin Turnpike, which are highlighted in yellow and labeled on the accompanying exhibit.

Note that the cost estimate combines all of the improvements into a single project to derive the grand total, which is approximately $850,000.00 (with contingencies). Of course, this is a rough estimate completed without the benefit of engineering design, so ultimate costs could easily exceed the estimate and consume the "cushion" provided by the balance of the $1M budget.

Please let me know if you have any questions or require additional information, and I'll respond accordingly.

Regards,
Chris

Christopher Mohn, AICP | Director of Planning
Bowman Consulting

101 South Street, S.E. Leesburg, VA 20175
phone: 703.443.2400 | fax: 703.443.2425 | mobile: 540.771.7088
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CATOCTIN CREEK TOWNE CENTER

PROPOSED ROAD IMPROVEMENTS EXHIBIT
INTERSECTION OF HIRST RD AND BERLIN TPK
FIGURE EX2

Bowman CONSULTING

Date: January 8, 2014
Scale: 1" = 100' (11x17)

COUNTY OF LOUDOUN

PUBLIC IMPROVEMENT BOND UNIT COST LIST AND BOND REDUCTION FORM 2010 (CPAP)

PROJECT NAME: Hirst/Berlin Intx. Improvements - Interim Condition PROJECT NUMBER: 5384-01-001

PREPARED BY: PH FIRM: Bowman Consulting DATE: 5/29/13/Rev 2/6/14

		BOND ESTIMATE			BOND REDUCTION		
ITEM	UNIT	UNIT COST	QUANTITY	EXTENSION	QUANTITY	EXTENSION	%COMPLETE
MOBILIZATION							
Mobilization	LS	$6,250.00	1	$6,250.00			
Field Office	EA	$3,000.00	1	$3,000.00			
Job Sign	EA	$1,150.00	1	$1,150.00			
SURVEYING							
Steel Pipe Property Corner	EA	$275.00					
R.O.W. Monuments Surveyed In Place							
RM -- 1	EA	$825.00					
RM -- 2	EA	$575.00					
EARTHWORK EXCAVATION							
Regular Bulk used as Fill	CY	$3.86					
Rock, Rip	CY	$17.30					
Rock, Blast	CY	$38.48					
BORROW MATERIAL							
Buy, Load, Haul 10 Mi. Select	CY	$28.90	4200	$121,380.00			
Fill and Compaction of On-site Borrow	CY	$5.95					
UNSUITABLE MATERIAL							
Load and Haul, 20 mi R/T	CY	$21.95	1500	$32,925.00			
Dump Charge	CY	$37.50					
Site Grading	SY	$0.75					
CLEAR & GRUB							
Light	AC	$6,675.00	1.5	$10,012.50			
Moderate	AC	$9,750.00					
Heavy	AC	$12,250.00					
Very Heavy	AC	$14,250.00					
LANDSCAPING							
Seeding	SY	$0.77	3600	$2,772.00			
Sodding	SY	$3.64					

PROJECT NAME: Hirst/Berlin Intx. Improvements - Interim Condition PROJECT NUMBER: 5384-01-001

PREPARED BY: PH FIRM: Bowman Consulting DATE: 5/29/13/Rev 2/6/14

ITEM	UNIT	BOND ESTIMATE UNIT COST	BOND ESTIMATE QUANTITY	BOND ESTIMATE EXTENSION	BOND REDUCTION QUANTITY	BOND REDUCTION EXTENSION	BOND REDUCTION %COMPLETE
PLANTING SHRUBS							
18"	EA	$40.00					
24"	EA	$70.00					
TREES							
6' – 8' (1-2 in. Caliper)	EA	$400.00					
8' – 10' (2.5-3 in. Caliper)	EA	$700.00					
Tree Protection	LF	$9.00					
MISCELLANEOUS SITE IMPROVEMENTS							
Retaining Walls							
FENCING							
TOT LOTS							
STORM DRAINAGE							
STORM SEWER							
NOTE: All pipe unit prices include trench, excavation, bedding, pipe, & backfill							
Rock Excavation for All Pipe Types							
Trench De-watering							
Trench De-watering	LF	$2.95					
RCP CLASS III ROUND T & G W/MASTIC							
MISCELLANEOUS INLETS							
MISCELLANEOUS STORM							
Connection to Existing Structure							
Casing Pipe, Bore and Jack (3/8" wall)							
Plug Pipe							
Pavement Edge Pipe							
Standard Pipe Underdrain	LF	$19.00	1890	$35,910.00			
Riprap							
Dry, Class I, 18"	SY	$47.87	30	$1,436.10			
Dry, Class II, 18"	SY	$51.46					

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ITEM	UNIT	BOND ESTIMATE			BOND REDUCTION		
		UNIT COST	QUANTITY	EXTENSION	QUANTITY	EXTENSION	%COMPLETE
Grouted, Class I, 18"	SY	$69.97					
Filter Fabric							
Class I	SY	$3.50	30	$105.00			
Class II	SY	$3.00					
Class III	SY	$2.25					
Gabions (No excavation)							
Mattress	CY	$130.00					
Revetment	CY	$164.33					
Wall	CY	$212.25					
Paved Ditch (4" Thick)							
Concrete (Non-reinforced)	SY	$62.00					
Bituminous Concrete(4")	SY	$30.00					
Sodded Ditch							
Sodded Ditch (Incl Fine Grading)	SY	$9.86					
STREET CONSTRUCTION							
ROADS AND PARKING							
Soil Stabilization	**Inches**						
Cement 6%	SY/Inch Depth	$2.70					
Depth (in Inches):							
Lime 6%	SY/Inch Depth	$1.89					
Depth (in Inches):							
Subbase, Aggregated Material							
Base Type I (12' wide lane)	SY/Inch Depth	$1.75	2025	$28,350.00			
Depth (in Inches):	8						
Bituminous Concrete							
Base Course	SY/Inch Depth	$5.59					
Depth (in Inches):							
Intermediate Course (12' wide lane)	SY/Inch Depth	$5.49	2025	$44,469.00			
Depth (in Inches):	4						
Top Course (12' wide lanes)	SY/Inch Depth	$5.49	2025	$22,234.50			

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ITEM	UNIT	BOND ESTIMATE			BOND REDUCTION		
		UNIT COST	QUANTITY	EXTENSION	QUANTITY	EXTENSION	%COMPLETE
Depth (in Inches):	2						
Milling Cold Asphalt	SY	$2.60					
Tack Coat	SY	$1.10					
Driveway Restoration							
4" Concrete & 4" Gravel	SY	$79.95					
2" S-5 & 7 6" Gravel	SY	$31.96					
Shoulders, Type I							
Aggregated Base, 4" (8' wide)	SY	$11.50	1365	$15,697.50			
Concrete Curbing							
Curb & Gutter CG6 & CG7	LF	$22.50					
Curb Cut, CG-12 Detectable Surf.	EA	$569.00					
Entrances/Driveways							
Commercial Entrance CG-11	SY	$52.88					
Commercial Entrance CG-13	SY	$64.67					
Residential Driveway Apron	SY	$51.79					
Guardrails							
Std. Blocked-out W beam (GR2)	LF	$42.50					
Std. W beam, Weak Post GR8	LF	$28.50					
Terminal, GR-6 (L=12'-6")	EA	$2,929.00					
Terminal, GR-7 (L=6'-3")	EA	$2,659.00					
Type I, GR-8 Terminal (L=25')	EA	$1,399.00					
Type II, GR-8 Terminal (L=13'-6")	EA	$695.00					
Terminal, MB-4 (L=37'-6")	EA	$3,495.00					
Type I, MB-5 Terminal (L=27'-1)	EA	$2,925.00					
Type II, MB-5 Terminal (L=13'-6)	EA	$1,675.00					
Miscellaneous							
Trash enclosure - Brick 6' high	LF	$325.00					
Reinforced Concrete Pad 6" to 8"	SY	$62.00					
Striping 4" width (VDOT Type B)	LF	$2.25	775	$1,743.75			
Arrow Head	EA	$100.00	5	$500.00			
Concrete Wheel Stops	EA	$70.00					
Parking Lot Striping	EA	$50.00					
Sign Island	EA	$850.00					
Traffic Barricade	LF	$43.45					
Street Name Signs	EA	$435.00					
Traffic Control Signs	EA	$375.00	15	$5,625.00			
Street Light (pole, bracket, light)	EA	$4,285.00					

Loudoun County Bond Estimate August 2010

PROJECT NAME: Hirst/Berlin Intx. Improvements - Interim Condition PROJECT NUMBER: 5384-01-001

PREPARED BY: PH FIRM: Bowman Consulting DATE: 5/29/13/Rev 2/6/14

ITEM	UNIT	BOND ESTIMATE			BOND REDUCTION		
		UNIT COST	QUANTITY	EXTENSION	QUANTITY	EXTENSION	%COMPLETE
SIDEWALKS AND TRAILS							
Sidewalk							
Concrete 4" w/WWF, No base	SY	$45.23					
Bitum. Conc, 2" w/4" Base	SY	$30.00					
4" Conc, No Reinf., No Base	SY	$41.00					
HANDRAIL							
Handrail 3 Rail 1-1/4" #4 Finish	LF	$96.50					
Wood Chip Trail							
Trails(Incl Excavation & Grading) Wood chip, 4' wide	SY	$17.69					
Bituminous Trail							
6' to 10' wide	SY	$49.25					
CRITICAL SLOPE STABILIZATION							
Paved Flume	SY	$67.00					
Stmwtr Conc Channel-Excav	SY	$7.75					
ADD Grass Lined-seeded	SY	$5.37					
ADD Grass Lined-sodded	SY	$10.89					
Outlet Protection							
Non-grouted Riprap 18"	SY	$52.00					
Concrete 4"	SY	$53.50					
Level Spreader	SY	$4.44					
Struc Streambank Protection							
Non-grouted Riprap 18"	SY	$58.00					
Gabions	CY	$147.00					
Vegetative Erosion Control							
Sodding incl Fertilizing – Banks	SY	$7.77					
Sodding incl Fertilizing – Flat	SY	$5.36					
Seeding incl Fertilizing	SY	$2.44					
Sodding W/Soil Treat & Watering	SY	$3.25					
Seeding W/Soil Treat & Watering	SY	$6.46					
Straw Mulch w/Tack	SY	$1.40					
Jute Mesh	SY	$1.77					
Special Items							
Signal Modification	EA	$75,000.00	1	$75,000.00			
Survey and Constr stake out	EA	$35,000.00	1	$35,000.00			
MOT	EA	$100,000.00	1	$100,000.00			

Loudoun County Bond Estimate August 2010

PROJECT NAME: Hirst/Berlin Intx. Improvements - Interim Condition PROJECT NUMBER: 5384-01-001

PREPARED BY: PH FIRM: Bowman Consulting DATE: 5/29/13/Rev 2/6/14

ITEM	UNIT	BOND ESTIMATE			BOND REDUCTION		
		UNIT COST	QUANTITY	EXTENSION	QUANTITY	EXTENSION	%COMPLETE
Design and permitting	EA	$100,000.00	1	$100,000.00			
Drainage improvements at Intx	EA	$75,000.00	1	$75,000.00			
Erosion Control	EA	$20,000.00	1	$20,000.00			
Subtotal				$738,560.35			

TOTAL ESTIMATE OF COMPLETED WORK:

Notes and assumptions: a) Assuming no additional right-of-way is required, b) Layout is based on VDOT's Route 7/287 intersection study dated 9/25/12, c) Applicable portion of the stockpile on the north side of Hirst Road will be hauled off site.

SEAL & SIGNATURE OF ENGINEER

TOTAL:	$738,560.35
+ 15% CONTINGENCIES:	$110,784.05
GRAND TOTAL:	$849,344.40
+ 4% INFLATION FACTOR:	$33,973.78
SECOND YEAR BOND=	**$918,000.00**
THIRD YEAR BOND=	**$952,000.00**

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CONSULTING

January 15, 2014

Mr. Patrick G. Sullivan
Community Development Director
Town of Purcellville
221 S. Nursery Avenue
Purcellville, Virginia 20132

RE: Catoctin Creek Towne Center
(2nd Submission)
Town of Purcellville Application Numbers RZ 12-01, CPAM 12-01and SUP 13-04
BCG Project # 5384-01-001

Dear Mr. Sullivan:

Bowman Consulting Group (BCG) is in receipt of the Town's (Kimley-Horn) review comments (dated 12/11/2013) for Catoctin Creek Towne Center. BCG has provided the comment responses below (bold) to each of the comments related to the Traffic Impact Analysis (TIA).

Question 1 - Please review your memorandum, to the Town dated February 7, 2013, regarding Catoctin Creek Apartments. Do you consider those comments still relevant considering that changes have been made to the commercial portion of the development? If not, please note any changes.

KH Response – The previous comments are addressed below:

a. *The traffic data used in the revised study is the same as that used in the original December 2012 study and was collected on a weekday from 7AM to 9AM and from 4PM to 6PM. Typically, traffic impact studies in the Town and Loudoun County include 3 hour peak period data (6AM to 9AM; 4PM to 7PM) to account for the early morning and later afternoon commuting patterns. The scoping form in the study appendix does not specifically address this item.*

   BCG Response: The AM and PM peak hour traffic counts were conducted from 7AM to 9AM and 4PM to 6PM in accordance with other recently approved traffic studies in the area (Catoctin Corner Revised Traffic Impact Analysis by PHR+A, dated May 28, 2010). The PHR+A counts studied the Berlin Turnpike corridor from the Route 7 interchange to Main Street and indicated that the peak hour of the intersection occurred from 7:45AM to 8:45AM and from 4PM to 5PM.

Bowman Consulting Group, Ltd.
3951 Westerre Parkway • Suite 150 • Richmond, VA 23233
Phone: 804.616.3240 • Fax: 804.270.2008 • www.bowmanconsulting.com

The BCG counts indicate a slightly later PM peak hour but still fall within the timeframe counted in both studies.

b. *The revised study uses common network peak hours (7:45AM to 8:45AM and 5PM to 6PM) for all intersections, with the exception of the intersection Maple Avenue and Hirst Road and Maple Avenue and Main Street during the AM peak hour. Based on our experience, VDOT's Northern Virginia District staff typically require the network peak hour the analysis. The scooping form in the study appendix does not specifically address this item.*

BCG Response: The analysis reflects the highest traffic volumes identified during the peak hour traffic counts. By using the highest peak hour volumes for the analysis, the traffic study assumes a 'worst' case traffic condition for all analyses.

c. *The peak hour factor (PHF) assumptions for the traffic analyses are now consistent with the approved scoping agreement; a value of 0.92 has been assumed in the future conditions.*

BCG Response: Noted.

d. *The revised study now specifies the individual commercial uses of the development.*

BCG Response: Noted.

e. *Similar to the previous traffic impact study, is that the developer will provide a monetary contribution to the Hirst Road and Berlin Turnpike intersection improvements but is silent about contributions or funding the other improvements. The study also states that the improvements are assumed to be built by others.*

BCG Response: Noted.

f. *The left-turn and right-turn warrant analyses now includes all tree site driveway entrances. The results show the volumes satisfy the left-turn lane warrant for both site entrances along Hirst Road, the right-turn lane warrant for site entrance #2 (commercial) along Hirst Road, and right-turn taper warrants for site entrance #1 (residential) along Hirst Road and site entrance #3 along Maple Avenue. KH previously suggested considering a full right-turn lane at Entrance #1 (residential) for consistency along the corridor and to be consistent with driver expectation. However, the application has retained the right-turn taper.*

BCG Response: Turn lane recommendations are based on current standards/thresholds for conducting this type analysis. Based on current policy/standards the identified improvements are expected to accommodate future traffic conditions. Therefore the turn lane is neither warranted by current policy/standards nor the impacts of the development and has not been provided.

Question 2 – The developer will proffer $1 million dollars to help with offsite traffic improvements (not including the turn lanes into the site). Please offer suggestions as to what improvements would be best pursued using this money.

KH Response – The study appears to indicate that the proffer money is intended to be applied at the Hirst Road and Berlin Turnpike intersection, which will certainly improve traffic operations at that location. Other intersections identified with levels of service worse than D in the study where the proffer money could be applied are:

- *Hirst Road and Hatcher Avenue*
- *Hirst Road and Maple Avenue*
- *Hirst Toad and 21st Street*
- *Berlin Turnpike and the Route 7 EB Ramps*

BCG Response: Noted.

Question 3 – Please provide a list of traffic improvements, based on what the study suggests, that in your opinion would be the minimum required to maintain the current level of service if the apartments and the commercial applications are both approved.

KH Response – Based on the study results, the following traffic improvements would be necessary to maintain LOS D in the 2014 scenario if both the apartments and commercial uses are approved:

a. *Hirst Road/Berlin Turnpike – additional eastbound, northbound, and south lanes (proffered improvements).*

   BCG Response: Noted.

b. *Main Street and Hatcher Avenue – add a westbound left turn lane.*

   BCG Response: Overall intersection levels of service are maintained from 2014 background traffic conditions to 2014 buildout traffic conditions. No improvements are recommended on behalf of the development team.

c. *Berlin Turnpike and Route 7 EB Ramps – improvements identified in study will continue to have poor levels of service for the eastbound movements. Applicant should identify additional improvements.*

BCG Response: Turn lane improvements have been analyzed. Analysis indicates that a change in traffic control (signalization) would be needed to improve side street levels of service to acceptable measures. However, EB left turn peak hour volumes indicate that a traffic signal would not meet warrants for installation under buildout traffic conditions.

d. *Hirst Road and Maple Avenue – Applicant should identify improvements for the northbound left-turn movement*

BCG Response: Northbound left turn movements at this intersection are expected to operate at failing levels of service under buildout traffic conditions. Currently, all turning movements at this intersection have a dedicated turn lane. In order to improve the NB left turn movement to acceptable levels of service a change in traffic control (i.e. signalization) would be needed. However, peak hour volumes indicate that a traffic signal would not meet warrants for installation under buildout traffic conditions.

Question 4 – What improvements will be necessary to make sure that Hirst traffic does not back up to Maple Avenue from the Berlin Turnpike. Does the traffic study adequately address this?

KH Response – Based on study results, the eastbound vehicle queue lengths in the total future 2020 analyses scenario without proffered improvements will be 741 feet and 680 feet in the AM and PM peak hours, respectively. It is noted, however, that the intersection volumes exceeds the capacity in this scenario and that the queue lengths may theoretically be longer than the analysis results. With the proffered improvements, the vehicle queue lengths are expected to decrease by 154 feet and 407 feet in the AM and PM peak hours, respectively. The distance along Hirst Road between Maple Avenue and Berlin Turnpike is approximately 1,.950 feet apart, therefore the Hirst Road traffic should not back up to Maple Avenue.

BCG Response: Agreed.

Question 5 – The present speed limit on Hirst is 45mph, should this be changed in the vicinity of the project?

KH Response – Changing the speed limit seems reasonable considering the proposed residential and commercial recreational land uses, additional driveways, as well as the proximity to the W&OD trail crossing east of the Maple Avenue intersection. Changing the speed limit would require coordination with VDOT and submission of a formal VDOT Speed Study.

BCG Response: Noted.

Question 6 – Please comment on the proposed internal roadway that connects Maple with Hirst.

- *Will it help or hinder the traffic flow in this area?*
- *Will cars tend to cut through to get to Hirst? If so, is it properly designed to handle that traffic?*
- *Are the ingress and egress points for the new road between Maple and Hirst adequate to handle expected traffic flow?*

KH Response – The proposed internal roadway shouldn't directly help nor hinder traffic flow in the area since it's not intended to facilitate non-site traffic. However, the layout of the commercial site street connecting the two driveways may make it attractive for cut-through to avoid the Hirst Road and Maple Avenue intersection. The northbound exiting left-turn movement at the Hirst Road entrance is anticipated to operate at LOS F in the 2020 conditions so adding any cut-through traffic will make that movement worse. The ingress and egress points for the new road appear to operate at acceptable levels of service and with minimal queuing. The one exception is the northbound left-turn movement onto Hirst where the level of service will be F.

BCG Response: Agreed.

Question 7 – Please provide any other comments that you feel the Town should be aware of as we move forward with reviewing this proposal.

KH Response – Additional comments for consideration are as follows:

a. *No AM peak hour trips were assumed to be generated by the commercial component of the project development. While this is appropriate based on the currently identified commercial uses, it is recognized that there is a potential in the future for a new commercial operator to open during the AM peak hours. It's recommended that the Town restricts the hours of operation during the AM peak hour or revise the study to include an assumption for AM peak hour trips.*

   BCG Response: Noted.

b. *Consideration should be given to providing a full right-turn lane along Hirst Road at the residential site driveway for geometric consistency along the corridor and to be consistent with driver expectation.*

   BCG Response: Current policy/standards indicate that a right turn taper is warranted under buildout traffic conditions. Therefore the turn lane is neither warranted by current policy/standards nor the impacts of the development and has not been provided.

c. *Consideration should be given to providing a left-turn lane into the Maple Avenue driveway to minimize the potential for queues to extend to the W&OD Trail Crossing.*

BCG Response: Analysis indicates that the shared left/through queue under 2020 total future traffic conditions is expected to be no more than 25 feet for the 95th percentile traffic queue. Based on current plans, the spacing between the proposed site drive and the W&OD Trail is 260 feet.

d. *Consideration should be given to providing an internal pedestrian/bicycle connection between the W&OD Trail and the residential buildings.*

BCG Response: Noted.

e. *Consideration should be given to providing a driveway between the commercial and residential properties.*

BCG Response: Noted.

Should you have any questions or comments, please contact our office at (804) 616-3240

Sincerely,

BOWMAN CONSULTING GROUP, LTD.

Erich W. Strohhacker, PE, PTOE
Transportation Team Leader

Attachments

Bowman
CONSULTING

January 15, 2014

Mr. Patrick G. Sullivan
Community Development Director
Town of Purcellville
221 S. Nursery Avenue
Purcellville, Virginia 20132

RE: Catoctin Creek Towne Center
(2nd Submission)
Town of Purcellville Application Numbers RZ 12-01, CPAM 12-01and SUP 13-04
BCG Project # 5384-01-001

Dear Mr. Sullivan:

Bowman Consulting Group (BCG) is in receipt of the VDOT review comments (dated 12/12/2013) for Catoctin Creek Towne Center. BCG has provided the comment responses below (bold) to each of the comments related to the Traffic Impact Analysis (TIA).

VDOT General Comments

Comment 1. Please see the attached email dated Tuesday, March 05, 2013 from Mr. Fred R. Hodgson of VDOT's Transportation Planning Section.

BCG Response: Mr. Hodgson's letter has been received and comments have been noted.

Comment 2. Please see the attached memorandum dated December 2, 2013 from Mr. Arun Raj of VDOT's Traffic Engineering Section.

BCG Response: Please see responses to *VDOT Traffic Engineering* comments following this section.

Comment 3. Provide written copy of draft proffers to this office for review.

BCG Response: Refer to the attachments for the draft proffers.

Comment 4. Provide a comment response letter with an item-by-item response.

BCG Response: VDOT Comment responses are contained herein.

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3951 Westerre Parkway • Suite 150 • Richmond, VA 23233
Phone: 804.616.3240 • Fax: 804.270.2008 • www.bowmanconsulting.com

Comment 5. If onsite roads are proposed to be private roads, then clearly label this on the plan.

BCG Response: Noted.

Comment 6. This application now meets Chapter 827 criteria.

BCG Response: Noted.

Comment 7. This application needs to be in compliance with VDOT Access Management standards. Towards this end, we recommend that an exhibit be prepared to include the following information:

a. Label Functional Classification all roadways

BCG Response: Refer to the attachments for a revised plan that illustrates this requirement

b. Label Speed Limit all roadways

BCG Response: Refer to the attachments for a revised plan that illustrates this requirement

c. Clearly label type of all intersections (i.e., signalized, unsignalized, full movement, and including intersections which may require signalization in the future)

BCG Response: Refer to the attachments for a revised plan that illustrates this requirement

d. "Corner Clearance" to internal intersections, entrances, etc

BCG Response: Refer to the attachments for a revised plan that illustrates this requirement

e. Dimension distances (either center-to-center or Edge-of-Pavement (EP) – to- EP depending on applicability) between intersections, entrances, etc. and ensure compliance with VDOT Access Management standards

BCG Response: Refer to the attachments for a revised plan that illustrates this requirement

f. Any other pertinent information.

BCG Response: No other information has been provided.

Comment 8. Applicant should proffer funding for traffic signalization warrant studies and, if warrants are met as determined by VDOT, fund the design and installation of traffic signals to include but, not limited to the following intersections:

BCG Response: Traffic signal warrants are typically provided for intersections that indicate high minor street left/through volumes under peak hour traffic conditions. Once identified the intersection being analyzed must typically meet Warrant #1 (8 hour warrant), where a minimum number of left/through movement vehicles must meet the threshold for warrant satisfaction for a minimum of 8 hours on a typical weekday.

a. Both entrances to Hirst Road, i.e. "Entrance #1" (Residential) and "Entrance # 2 (Commercial")

BCG Response: Based on projected peak hour traffic conditions, this intersection is not expected to meet warrants for installation of a traffic signal upon buildout of the proposed site. We respectfully decline any additional analysis that preliminary analysis indicates will not meet warrants.

b. Hirst Road/ N. Maple Avenue

BCG Response: We agree that traffic conditions at this intersection show indications that a signal may be warranted in a non-standard analysis. However, all major traffic movements at this intersection are expected to operate at acceptable levels of service under stop controlled operation. The northbound left turn movement is expected to experience significant delay under projected traffic conditions; however, the movement volumes are very low and should not be utilized as the sole reason for a change in traffic control.

c. N. Maple Avenue/Site Entrance, i.e., "Entrance # 3" (Commercial).

BCG Response: Based on projected peak hour traffic conditions, this intersection is not expected to meet warrants for installation of a traffic signal upon buildout of the proposed site. We respectfully decline any additional analysis that preliminary analysis indicates will not meet warrants.

Comment 9. Comment # 8 above should also apply to intersection/signal modifications of existing intersections requiring such.

BCG Response: No other study intersections are anticipated to meet traffic signal warrants based on a preliminary review of projected traffic operations.

Comment 10. All turn lanes lengths and lane shift transition lengths are to meet VDOT standards.

BCG Response: Noted.

Comment 11. Westerly most entrance (Entrance #1 – Residential) to Hirst Road: Change right turn taper to turn lane with taper.

BCG Response: As detailed in the TIA, the turn lane warrants analysis for this movement indicate that a right turn taper is warranted for buildout traffic conditions. Without any additional policy or standard that can be applied to the turn lane warrant analysis, the measures provided in the TIA still apply. Therefore the turn lane is neither warranted by current policy/standards nor the impacts of the development and has not been provided.

Comment 12. Entrance to N. Maple Avenue: a. Change right turn taper to turn lane with taper b. Provide an exclusive left turn lane into the site entrance.

BCG Response: As detailed in the TIA, the turn lane warrants analysis for these movements indicate that a right turn taper and NO left turn lane are warranted for buildout traffic conditions. Without any additional policy or standard that can be applied to the turn lane warrant analysis, the measures provided in the TIA still apply. Therefore the turn lane is neither warranted by current policy/standards nor the impacts of the development and has not been provided.

Comment 13. All entrance throat lengths are to comply with VDOT Road Design Manual, Appendix F, Table 4-2.

BCG Response: Noted.

Comment 14. Hirst Road/Berlin Turnpike intersection:

a. Provide dual left eastbound-to-northbound turn lanes

BCG Response: This improvement is being provided as part of the recommended roadway improvements for this intersection. However, one lane will be marked as a shared left/right turn lane.

b. Provide an exclusive eastbound-to-southbound right turn lane so as not to block the right-on-red movement.

BCG Response: Analysis indicates that no additional improvements are needed to mitigate site traffic conditions at this intersection beyond those analyzed and

recommended in the traffic study. With the recommended intersection improvements, both AM and PM peak hour overall intersection levels of service will be maintained/improved based on 2014 peak hour traffic conditions.

c. Westbound receiving lane on Hirst Road will need to be in accordance with standard length per AASHTO.

BCG Response: Noted.

Comment 15. Hirst Road/N. Maple Avenue intersection:

a. Provide exclusive eastbound –to-southbound right turn lane

BCG Response: This improvement was provided in recent years as part of the Towns capital improvement plan.

b. Provide exclusive northbound-to-eastbound right turn lane

BCG Response: This improvement was provided in recent years as part of the Towns capital improvement plan.

c. Recommend to construct a westbound-to-southbound left turn lane.

BCG Response: This improvement was provided in recent years as part of the Towns capital improvement plan.

Comment 16. We recommend the Town pursue a monetary contribution

BCG Response: The development team for the proposed site has determined that construction of the recommended roadway improvements per the TIA Report will be provided directly by the development team. Therefore, no additional monies will be provided beyond the final agreed upon roadway improvements.

<u>VDOT Traffic Engineering Comments</u>

Accuracy of the Traffic Impact Analysis

Comment 1: Since there is another access to the site via intersection # 8 on Hirst Road. Is the following state on page 3 correct? "Access to the site is proposed via a full movement entrance off of Hirst Road into the residential area and an internal public road that would connect the

commercial/recreation portion of the site to both Hirst Road and Maple Avenue." Please check and correct accordingly.

BCG Response: Addressed. The statement has been revised to include intersection 8 as an additional access point to the site.

Comment 2: Please provide line diagram in the report showing distance of proposed access points from nearby intersections. Also, provide description of the actual distances and required distances as per VDOT access management and verify that all access points meet the access management standards.

BCG Response: Plans have been revised to reflect the information request per access management guidelines.

Comment 3: The existing traffic counts for the Berlin Turnpike/VA Route 7 Bypass Eastbound Ramps intersection were obtained from the "Route 7 Bypass and Route 287 Interchange Study" prepared by HNTB and dated August 21, 2012. It could not be verified if traffic data used for Berlin Turnpike/VA Route 7 Bypass Eastbound Ramps intersection analysis was within the last 24 months time frame from the submission of this report.

BCG Response: According to the HNTB study (Introduction, page 1), data collection was performed in November and December of 2011, which would indicate that this report complies and includes data within the required 24 month timeframe.

Comment 4: The following statement on page 49 is not entirely true; "As shown in Table 4, under Total Future 2014 conditions and with the improvements committed to by the site, each of the intersections are expected to operate at comparable or better levels of service to the background conditions."

BCG Response: Revisions to the study will reflect a change to this statement.

Comments on the Recommended Improvements

Comment 1: Hirst Road at Maple Avenue intersection total future 2014 with development LOS deteriorates from 83 sec/veh delay to 524.4 sec/veh delay for northbound left turn movement as well as overall northbound approach deteriorates from LOS E (37.3 sec/veh delay) to LOS F (217.6 sec/veh delay) for PM peak hour. Please provide a mitigation measure to have total future 2014 with development LOS (delay) comparable or better than 2014 background conditions.

BCG Response: We agree that the delay measures for the northbound left turn movement are significant. However, the overall volumes for this movement do not

indicate the need for intersection signalization. Also, this intersection has recently been improved to provide for turn lanes on all turning movements.

Comment 2: Main Street at Hatcher Avenue intersection total future 2014 with development LOS deteriorates from LOS D to LOS E for PM peak hour for southbound approach. Please provide a mitigation measure to have total future 2014 with development LOS (delay) comparable or better than 2014 background conditions.

BCG Response: Overall intersection levels of service are expected to operate at acceptable intersection levels of services under 2014 peak hour traffic conditions. No improvements have been outlined for this intersection.

Comment 3: Berlin Turnpike/VA Route 7 Bypass Eastbound Ramps intersection total future 2014 with development delay (sec/veh) deteriorates significantly for PM peak hour for eastbound approach. Please provide a mitigation measure to have total future 2014 with development (delay) comparable or better than 2014 background conditions.

BCG Response: Improvements have been outlined in the traffic study that illustrates mitigation of existing/background traffic conditions. The development team has not proffered any improvements at this intersection to mitigate existing/background traffic conditions.

Comment 4: There are few access points recommended to the property. All new proposed intersections shall meet the access management standards as defined in Access Management.

BCG Response: Access management standards have been reviewed and applied to the proposed site drive locations. All points of access have been found to be within standards.

Additional VDOT Recommendations/Comments

Comment 1: It is to be noted that the potential special events (concerts, festivals, etc.) held on the site would be irregular in occurrence and therefore were not included in the typical weekday operations analyzed in this study. However, the applicant will provide a Traffic Management Plan for special events at a later date.

BCG Response: Noted.

Comment 2: Ensure that all turn lane length and taper meet VDOT design standards. If not, design waivers will be required.

BCG Response: Noted.

Should you have any questions or comments, please contact our office at (804) 616-3240

Sincerely,

BOWMAN CONSULTING GROUP, LTD.

Erich W. Strohhacker, PE, PTOE
Transportation Team Leader

Attachments

Bowman
CONSULTING

January 15, 2014

Mr. Patrick G. Sullivan
Community Development Director
Town of Purcellville
221 S. Nursery Avenue
Purcellville, VA 20132

Re: Catoctin Creek Towne Center
RZ12-01, CPA12-01 & SUP13-04
BCG Project # 005384-01-002

Dear Mr. Sullivan:

We have received the referral comments from review agencies concerning the subject applications, and offer the following information in response:

Department of Community Development, dated November 25, 2013
[Referral comments pertain to proposed PDH-15 rezoning]

1. *"Sheet 1 - Provide a note stating: The proposed development conforms to the provisions of all applicable ordinances, regulations and adopted standards." ZO 11.8.1.1.v*

   a. Also, remove the note about the landscape buffer exception in the Statement of Justification. Either all of these properties will be rezoned or none will be. If they are, then 20' is the correct buffer."

   Response: The requested note has been added to Sheet 1 of the plan set.

2. *"Sheet 4 - A "100' Major Stream Setback" is labeled, but no line of delineation is present."*

   Response: The setback line corresponding with the 100' Major Stream Setback has been added to the subject plan sheet.

3. *"Sheet 4 - An estimated open space percentage would be preferred rather than stating that open space will be "≥" the minimum required. ZO 11.8.1.1.u."*

   Response: The estimated minimum quantity of open space has been stated in the tabulations, as requested.

Bowman Consulting Group, Ltd.
101 South Street SE • Leesburg, Virginia 20175
Phone 703.443.2400 • Fax 703.443.2425 • www.bowmanconsulting.com

4. *"Sheet 4 - Note the public improvements, both on-site and off-site, that are proposed for dedication and/or construction, and provide an estimate of the timing of providing such improvements. ZO 11.8.1.3."*

   Response: **The Applicant has proposed off-site improvements to the intersection of Hirst Road and Berlin Turnpike (VA Route 287), which, in addition to entrance-related improvements, are detailed on Sheet 5 of the plan set. No other public improvements are proposed with the project, either on- or off-site. With regard to timing, improvements to the intersection of Hirst Road and Berlin Turnpike will be constructed or bonded for construction prior to issuance of the first occupancy permit for the project. Site entrances and related improvements within the public right of way will be fully constructed prior to the first occupancy permit for the portion of the project served by said entrance and improvements.**

5. *"Sheets 4-7 - In the northwest portion of the site, there is a proposed SWM/BMP pond displayed and/or labeled on Sheets 4-6, but it is not labeled as such on Sheet 7 nor is an estimated volume provided. These sheets should be clarified to property convey whether or not a pond is proposed for this area. (If the pond is proposed, include an estimated volume on Sheet 7.) ZO 11.8.1.1.l."*

   Response: **The subject SWM/BMP facility and its estimated volume have been labeled on Sheet 7.**

6. *"Sheet 8 - The dimensions from the existing centerline to the edge of the pavement and the edge of the right-of-way should be added. ZO 11.8.1.1.i"*

   Response: **The subject dimensions have been added to Sheet 8, as requested.**

7. *"Sheet 8 - Has a Phase 1 Assessment been conducted on the pollution source displayed? If so, provide any relevant information known about the pollution source. If not, one should be conducted. ZO 11.8.1.4"*

   Response: **The subject pollution source (PSCS-1989-0057) is an above-ground storage tank (AST) containing material used by the existing light industrial use (Loudoun Stairs). As such, a Phase 1 Assessment has not been conducted to date. That said, the AST will be removed from the site prior to its redevelopment, and all necessary permit(s) for such removal will be secured from the Loudoun County Fire Marshal, which will include soil testing and remediation, if required.**

Department of Community Development, dated November 25, 2013
[Referral comments pertain to Tilley Entertainment SUP application]

1. *"Sheet 1 - Since the SUP application is being added to the associated rezoning and comprehensive plan amendment plans, add Tilley's information as an applicant."*

   Response: **Tilley Entertainment has been added to the cover sheet as the applicant for the requested SUP.**

2. *"Sheet 9 - Add surveyed bearings and distances to the concept plan as shown on other plans within the rezoning application. ZO 8.1.4.C.4.a"*

   Response: **Bearings and distances have been added to the SUP Concept Plan consistent with those shown on other sheets of the plan set.**

3. *"Sheet 9 - Add the total area of the property on which the SUP is requested. ZO 8.1.4.C.4.b"*

   Response: **The total area of the property subject to the SUP request (18.71 acres) has been added to Sheet 9, and is further stated in Note #6 on Sheet 1.**

4. *"Sheet 9 - Add the size (in square feet) of all proposed structures which are part of the SUP request. ZO 8.1.4.C.4.c*

   a. Similarly, noting the estimated acreage of the specific outdoor uses on the plan would also be appreciated.

   Response: **The approximate sizes of the proposed structures subject to the SUP request have been added to the SUP Concept Plan. The estimated acreage associated with each component of the outdoor recreation complex has also been added. It is noted that the configuration of proposed facilities will be generally as shown on the SUP Concept Plan, but will likely vary based on final engineering design and program requirements.**

5. *"Sheet 9 - Provide the size of the existing public rights-of-way which adjoin the site. ZO 8.1.4.C.4.d"*

   Response: **The widths of the rights-of-way for Hirst Road and Maple Avenue have been added to the SUP Concept Plan, as requested. It is noted that Hirst Road is located within the 300' right-of-way shared with VA Route 7 (Harry Byrd Highway).**

6. *"Sheet 9 - Provide the size of the proposed right-of-way. ZP 8.1.4.C.4.e"*

   Response: **The Concept Development Plan (Sheet 4), Circulation Plan (Sheet 5), SUP Concept Plan (Sheet 9), and other plan sheets, have been revised to eliminate the internal commercial road linking Hirst Road and Maple Avenue. Access to the commercial recreation complex will occur via the proposed entrances on Hirst Road and Maple Avenue as shown on the plan, with the internal circulation system defined at time of site plan. It is noted that said system will be privately owned and maintained.**

7. *"Sheet 9 - Add the proposed sidewalks and trail facilities as shown on other plans within the rezoning application. ZO 8.1.4.C.4.g"*

   Response: **The proposed sidewalk and trail facilities have been added to ensure consistency with the rezoning plan sheets, as requested.**

8. *"Written Statement - Change CM-1 to MC to reflect the requested rezoning. ZO 8.1.4.C.5"*

   Response: **The written statement has been corrected, as requested.**

9. *"When this idea was first discussed with the Town, it was verbally stated that the go karts would run on electric motors instead of internal combustion engines. Is this still true? What about the bumper boats? ZO 8.1.4.D.6"*

   Response: **As per prior descriptions of the project, the go karts will indeed be powered by electric motors as opposed to internal combustion engines. The bumper boats will also be powered by electric motors.**

Town of Purcellville, Supplemental Consolidated Agency Comments, dated December 27, 2013

1. *"The Town requests that the applicant provide updated water/sewer flow information, as noted in the Town's previous comments. Also, please provide the water and sewer layout in ACAD format. Is/are the proposed pump station design(s) advanced sufficiently so that the proposed flows with reflect the discharge rate of the sanitary sewage to the Town's system? Without some additional information, any preliminary modeling will not be able to predict the ability of the town's system to serve the proposed development.*

Response: **The sewer and water layout will be delivered in CAD format for Public Works review, as requested. Sewer flows for the residential component of the project have been estimated using DEQ SCAT standards, as follows:**

100 gpd x 3.5 cap/unit x 176 units x 2.5 PFF = 154,000 gpd

For the commercial component of the project, sewer flows have been estimated based on Loudoun Water Design Manual standards, and reflect the acreage of proposed land bays, as opposed to specific uses. Based on this development capacity assumption, the projected sewer flow for commercial uses at build-out is estimated to be 138,200 gpd.

2. *"Based on the results of the TIA, the Town is requesting that the applicant conduct a signalization warrant study at the intersection of Hirst and Maple. Such study should assume traffic from the development known as Autumn Hill that was approved by Loudoun County in 1991 for 492 units, or, alternatively, should assume 257 residential units and 19 acres of limited industrial development adjoining the valley industrial park."*

Response: **Traffic signal warrants are typically provided for intersections that indicate high minor street left/through volumes under peak hour traffic conditions. Once identified the intersection being analyzed must typically meet Warrant #1 (8 hour warrant), where a minimum number of left/through movement vehicles must meet the threshold for warrant satisfaction for a minimum of 8 hours on a typical weekday.**

Kimley Horn?

It is agreed that traffic conditions at this intersection show indications that a signal may be warranted in a non-standard analysis. However, all major traffic movements at this intersection are expected to operate at acceptable levels of service under stop controlled operation. The northbound left turn movement is expected to experience significant delay under projected traffic conditions; however, the movement volumes are very low and should not be utilized as the sole reason for a change in traffic control. As such, a signal would not be warranted per standard analysis, which is applicable at this intersection.

3. *"Show proposed pedestrian pathways within the MC portion of the application - such as along interior roadways and those that connect across the property boundary to the PDH portion - to better display the internal pedestrian network on the site."*

Response: **Pedestrian connectivity between the proposed MC and PDH portions of the project has been clarified, as requested. It is noted that the layout of the proposed MC acreage is represented in general/schematic form on the rezoning plans, with internal vehicular and pedestrian networks to be defined with subsequent site plan design. Such design work has yet to be initiated pending the outcome of the rezoning and SUP applications enabling the commercial recreation use(s). As such, with the exception of connection points and facilities planned adjacent to public roads, it is premature to depict the pedestrian system for the commercial acreage in greater detail on the proffered rezoning plans. That said, provision of a safe and intuitive circulation system for pedestrians will be integral to successful operation of the proposed commercial recreation complex, and will therefore be of paramount importance during detailed engineering design.**

4. *"Complete comments on the current Proffer draft will be provided at a later date by the Town Attorney; however, staff generally recommends that the applicant list those uses allowed on the property instead of those not allowed."*

Response: **The suggested approach to proffering uses is contrary to the experience of the Applicant's counsel, who recommends precluding undesired uses by proffer as opposed to identifying permitted uses. Applicant's Counsel intends to follow-up regarding this matter with the Town Attorney.**

5. *"Please carefully review all comments received and revise the proffers to include any new commitments volunteered but he applicant not previously listed."*

Response: **Comment acknowledged; a revised draft of the proffer statement is included with this submission.**

6. *"Please provide cost estimates for all improvements offered."*

Response: **The off-site transportation improvements proffered by the Applicant are estimated to cost approximately one million dollars, inclusive of design costs, right-of-way/easement acquisition, and construction contingencies. These estimates will be reviewed with Town staff as the final scope of improvements is confirmed through the public hearing process, prior to Town Council action.**

7. *"Staff recommends that the applicant provide an overall projected revenue assessment for the residential component of the project based on a total build out to help justify the commercial contribution. (PCP Chapter 2)"*

Response: **The development team continues to work on the requested revenue assessment. One of the largest components of the fiscal impact of the development is the payment of water and sewer availability fees and payment of monthly utility charges. These issues are still under discussion with the Department of Public Works.**

8. *"Note the total gross square footage of the residential and the commercial components of the development. For the commercial component list the square footage of the uses (e/g/ miniature golf course) as well as the buildings. (LDSCO Section 5.4)"*

Response: **The total gross square footage of the residential and commercial components of the development has been added to the project tabulations. The residential component will be comprised of a gross floor area of approximately 230,442 SF, and the commercial component will consist of approximately 213,250 SF, which includes roughly 163,350 SF of outdoor commercial recreation uses and multiple commercial buildings totaling approximately 65,000 SF. However, it is noted that the Applicant is not proffering to limit commercial development to the gross floor area stated on the CDP, and ultimate commercial development may be greater or less than the values stated on the CDP, as allowed by the Zoning Ordinance.**

9. *"It is recommended that the applicant provide a desired water meter size for each building. (LDSCO Section 5.4)*

Response: **The analysis required to establish the desired water meter size for each proposed building continues to be refined as of the date of this letter. The development team is working closely to accurately establish the required meter sizes and corresponding availability fees. It is expected that such analysis will be complete by the date of the Planning Commission public hearing on February 6, 2014.**

10. *"Staff requests that the applicant provide <u>projected</u> utility fee revenues for the entire project including the commercial component. (PCP III Public Infrastructure - Utilities and Transportation)."*

Response: **See responses to comments #7 and #9 above.**

11. *"Please provide a tree inventory or a note on the plan that an inventory will be conducted prior to any grading of the site. (Article 7 Section 1.4. & Section 1.5.)"*

Response: **A note has been added to the Cover Sheet indicating that a tree inventory will be completed prior to any site grading, as requested (see Note 27, Sheet 1).**

12. *"Additional children's play spaces available throughout the complex would help meet the standards of the comprehensive plan. (PCP III Parks, Recreation and Open Space)"*

Response: **A playground/tot lot is provided in a central green space on the west side of the residential complex, as depicted on the CDP (see Sheet 4). This play space complements the pool facility located adjacent to the club house on the east side of the complex, which together ensure the availability of varied recreational opportunities appropriate for the entire spectrum of resident age groups.**

13. *"The application does not address dark sky compliance. Please provide a note on the plan that all lighting will meet the dark sky regulations found in the Zoning Ordinance, (Article 6 Section 9)."*

Response: **A note has been added to the Cover Sheet indicating that all site lighting will meet the dark sky regulations of the Zoning Ordinance, as requested (see Note 25, Sheet 1).**

14. *"Adequate access to all buildings for fire protection is to be detailed on the concept plan. (Requested by County Fire and Rescue)."*

Response: **The CDP shows the internal parking and travelway facilities proposed to serve the residential component of the project. All residential buildings will be directly accessible to emergency vehicles, and all four sides of said buildings will be accessible to first responders. Moreover, a secondary emergency access from Hirst Road has been provided on the west end of the complex to ensure unimpeded access into the site for first responders. It is noted that the commercial component of the project has not yet been designed in sufficient detail to demonstrate adequate emergency vehicle access to proposed buildings at this stage of the review process. That said, such access will be ensured with final engineering design, and will be demonstrated on the site plan for the commercial complex.**

15. *"Please note on the plan which roadways are proposed to be dedicated for public maintenance, if any and which will remain private."*

Response: **All internal travelways and parking facilities will be privately owned and maintained, and a note indicating such ownership and maintenance is provided on the Cover Sheet (see Note 15, Sheet 1).**

16. *"Additional mitigation is needed to address the left turn LOS F at the Hirst Road and internal road intersection. (e.g. speed bumps to discourage cars cutting through."*

Response: **Comment acknowledged; the connector road concept has been removed from the commercial component, with internal vehicular access occurring via private parking and travelways. The elimination of the direct connection between Hirst Road and Maple Avenue will arguably resolve the potential impact of cut-through traffic. That said, the Applicant will coordinate with Town staff during the site plan stage of the review process to incorporate traffic calming measures into the parking lot/travelway design, if deemed appropriate to further discourage cut-through traffic.**

17. *"It should be noted that many of the public work's comments detailed at this point in the process will generally be addressed at the site plan review stage. However, there are some comments that need to be addressed with a note on the title page of the CDP that states the comment will be addressed at the site plan review level. Some of the comments as noted will require action prior to approving the CDP."*

Response: **Comment acknowledged; the Cover Sheet includes notes indicating that all site improvements will be constructed in accordance with applicable local and state standards (see Notes 13, 14 and 26, Sheet 1).**

Public Works Department, dated November 15, 2013

1. *"Please provide a plan which shows the phasing of the work for the Apartments and the commercial area, especially as it relates to the construction of the water and sanitary sewer utilities. The timing of the work is critical, especially for the water main work, to show what water main is intended for construction with the Apartments and/or the commercial portion of the project. This is essential to know for the modeling effort to show the points of connection that will be in place for each phase, and to demonstrate the fire flows available for each portion of the development."*

Response: **The CDP depicts the proposed connection points to the external utility system for water and sewer mains serving both the residential and commercial components of the project. To ensure required looping and redundancy of water service for the residential complex, a series of labels have been added to the CDP clarifying that, <u>prior to residential occupancy</u>, the residential water line will be connected to the commercial water line proposed along the Hirst Road frontage, which will in turn be connected to the existing 8" main on the public safety building site. This water line connection will provide service to the first phase of commercial development, and will also provide one of two connections serving the residential complex, the other being at the west end of the project (via either the Mason Property or Old Dominion Valley subdivision). The residential component will build out as a single phase, with both connections occurring prior to occupancy (see Sheet 4).**

2. *"Previous comment regarding the Catoctin Creek Apartments (February 4, 2013 comments). The water layout proposed exceeds the maximum allowable length for a dead end main. 11/15/2013: The comment response states that a second connection on the west side of the site will be provided. However, a second connection on the west side does not address the concern noted. The connection that is shown toward the commercial portion of the site would address this issue. Was this the intent of the response?"*

Response: **As noted in the response above, the second connection serving the residential component of the project will be provided via the water line extending across the commercial frontage to the existing 8" water main on the public safety building site. A series of labels have been added to the CDP clarifying that the multiple segments of water line and associated connections required to achieve this second connection will be constructed prior to residential occupancy (see Sheet 4).**

3. *"Previous comment regarding the Catoctin Creek Apartments (February 4, 2013 comments). The water layout proposed does not provided points of connection that will keep most customers in service in the event of a water main break. 11/15/2013: As noted in comment # 2 above. the comment response states that a second connection on the west side of the site will be provided. However, a second connection on the west side does not address the concern noted. The connection that is shown toward the commercial portion of the site would address this issue. Was this the intent of the response?"*

Response: **As noted in the responses above, the second connection serving the residential component of the project will be provided via the water line extending across the commercial frontage to the existing 8" water main on the public safety building site. A series of labels have been added to the CDP clarifying that the multiple segments of water line and associated connections required to achieve this second connection will be constructed prior to residential occupancy (see Sheet 4).**

4. *"Previous comment regarding the Catoctin Creek Apartments (February 4, 2013 comments). The anticipated water usage as shown in the Statement is low based on both requirements set forth in the Loudoun Water Design Manual (which the Town incorporates by reference), and the VA departments of Environmental Quality SCAT regulations. Please revise the anticipated water usage based on these standards. 11/15/2013 Comment is reiterated; the anticipated water usage must be based on the requirements as noted above."*

Response: **Based on the Loudoun Water Design Manual, water usage for the residential complex is estimated at 171 gpm, which is derived from the following calculation:**

176 units x 3.5 x 100 gpd (avg) x 2 gpd (max) x 2 gpd (peak)/1440 gpm

Water usage for the commercial component, calculated based on the acreage of proposed land bays, is estimated at build-out to be 153 gpm.

5. *"In order to determine the feasibility and final design of the water system, the system will need to be hydraulically modeled. While this level of detail can occur during the design stage, note that final approval of the proposed water extension cannot be approved until the modeling is complete and approved. The Town is currently in the process of updating the water and sewer models. The water modeling shall be completed by the Town's consultant, with the costs for the modeling to be paid for by the Applicant."*

Response: **Comment acknowledged; the Applicant will proffer to pay the costs for the required water and sewer modeling to be completed by the Town's consultant at time of site plan review (see draft proffer statement included with submission).**

6. *"The water extension and design will need to be approved through the Virginia Department of Health during the design stage."*

Response: **Comment acknowledged; no response necessary.**

7. *"The Plans need to clearly note whether the water/sewer lines are proposed to be privately or publicly owned and maintained."*

Response: **The water and sewer lines serving both the residential and commercial components of the project are proposed to be privately owned and maintained. A note has been added to the Cover Sheet clarifying the proposed ownership and maintenance of utility infrastructure (see Note 26, Sheet 1).**

8. *"The proposed sanitary sewer force mains must enter the public sewer by gravity."*

Response: **Comment acknowledged; the CDP has been revised to ensure gravity entry of sanitary sewer force mains into the public sewer (see Sheet 4).**

9. *"In order to determine the feasibility and final design of the proposed sanitary sewer/pump station, the discharge will need to be modeled, taking into account the Town's downstream facilities. While this level of detail can occur during the design stage, note that final approval of the proposed sanitary sewer extension cannot be approved until the modeling is complete and approved. The Town is currently in the process of updating the water and sewer models. This modeling shall be completed by the Town's consultant, with the costs to be borne by the Applicant."*

Response: **Comment acknowledged; the Applicant will proffer to pay the costs for the required water and sewer modeling to be completed by the Town's consultant at time of site plan review.**

10. *"The downstream facilities must be examined to determine if there is adequate capacity and if improvements to the downstream facilities are required."*

Response: **Comment acknowledged; the required assessment of downstream facilities will be completed at the time of site plan design.**

11. *"The developer/applicant is responsible for obtaining any off-site easements required."*

Response: **Comment acknowledged; no response necessary.**

12. *"Please note which roadways are proposed to be dedicated for public maintenance, and which will remain private. Show the proposed right-of way dedication."*

Response: **All internal travelways and parking facilities will be privately owned and maintained thereby precluding the need for right-of-way dedication. A note indicating such ownership and maintenance is provided on the Cover Sheet (see Note 15, Sheet 1).**

13. *"What is the basis for the anticipated water usages shown for the commercial portion of the site?"*

Response: **The anticipated water usages were calculated based on the commercial acreage comprising each land bay.**

Loudoun County Department of Fire - Rescue and Emergency Management, dated December 5, 2013

1. *"Staff cannot adequately evaluate adequate access and circulation of emergency vehicles throughout the property. Due to the multiple buildings proposed, staff request information to demonstrate that access to the proposed structures (all sides) would not be compromised. It is well known that traffic congestion at the intersection of Hirst Road and Route 287 is a concern. The Purcellville Public Safety Center already experiences delays exiting the site during peak hours and it is only expected that this development will only further compromise response times with the additional traffic. As part of the submitted materials the Applicant referenced a proffer contribution to go to toward improvements to the intersection of Hirst Road and Route 287. The Fire and Rescue Planning Staff respectfully request that consideration be given to emergency vehicles access as improvement plans are made. Suggestion may include that additional signal pre-emption measures be implemented. Staff is available to further review and comment on this matter specifically at the appropriate time."*

Response: **The CDP shows the internal parking and travelway facilities proposed to serve the residential component of the project (see Sheet 4). All residential buildings will be directly accessible to emergency vehicles, and all four sides of said buildings will be accessible to first responders. Moreover, a secondary emergency access from Hirst Road has been provided on the west end of the complex to ensure unimpeded access into the site for first responders. It is noted that the commercial component of the project has not yet been designed in sufficient detail to demonstrate adequate emergency vehicle access to proposed buildings at this stage of the review process. That said, such access will be ensured with final engineering design, and will be demonstrated on the site plan for the commercial complex.**

As confirmed by the Town's traffic consultant, the improvements to the intersection of Berlin Turnpike and Hirst Road proffered by the Applicant will alleviate existing issues/concerns involving the stacking of vehicles immediately in front of the Public Safety Center entrance. That said, the Applicant is willing to coordinate with Town and County staff to determine what other means may be necessary and appropriate to ensure adequate access for emergency vehicles, both during and after development.

Loudoun County Department of Building and Development, Fire Protection Plans Reviewer/Inspector, dated November 12, 2013

1. *"Appears to have access."*

   Response: **Comment acknowledged; no response necessary.**

2. *"Appears to have hydrant coverage for proposed residential area."*

   Response: **Comment acknowledged; no response necessary.**

3. *"Appears to also have an emergency access, make sure road supports trucks. Should have bollards/chain."*

   Response: **The emergency access drive will be constructed with a reinforced surface capable of supporting the weight of an emergency vehicle. Moreover, bollards and a break-away chain will be provided to restrict non-emergency access, as requested**

4. *"We will have to see the overall hydrant placement and coverage if project is approved and moves forward."*

   Response: **Comment acknowledged; a Fire Protection Map has been added to the CDP demonstrating sufficiency of hydrant coverage for the residential component (see Sheet 4). Hydrant placement and coverage will be specified for the commercial component with site plan design, and will conform to applicable requirements.**

5. *"We would have to see the overall access of project if approved and moves forward, relative to road widths, etc."*

   Response: **Comment acknowledged; no response necessary.**

6. *"We would have to see the placement of all fire department Siamese building connections."*

Response: **Comment acknowledged. The placement of fire department Siamese connections will be identified with the building plans.**

Loudoun County Department of Planning, dated December 11, 2013

1. *"The Town may wish to consider any offsite impacts of the commercial uses on adjacent uses including Loudoun Valley High School"*

Response: **The SUP Applicant initiated contact with the administration of Loudoun Valley High School to discuss the proposed commercial recreation complex. The SUP Applicant will continue to work with school officials to ensure that commercial operations are in harmony with school requirements and activities.**

2. *"The Town may wish to determine whether an emergency stoplight would be appropriate to place in front of the Purcellville Public Safety Center to ensure adequate egress of fire and rescue vehicles that exit onto Hirst Road"*

Response: **As confirmed by the Town's traffic consultant, the improvements to the intersection of Berlin Turnpike and Hirst Road proffered by the Applicant will alleviate existing issues/concerns involving the stacking of vehicles immediately in front of the Public Safety Center entrance. That said, the Applicant is willing to coordinate with Town staff to determine what other means may be necessary and appropriate to ensure adequate egress of emergency vehicles.**

3. *"The Town may wish to consider whether the applicants should prepare and submit a Proffer Statement that includes contributions that the applicants would provide to address the impacts of development."*

Response: **The Applicant has provided a proffer statement for Town review and acceptance.**

Loudoun County Public Schools dated November 14, 2013

1. *"With the exception of providing an updated project assessment chart, staff offers no further comments from those originally conveyed on January 31, 2013."*

Response: Comment acknowledged; no response necessary.

Kimley-Horn and Associates, Inc. dated December 11, 2013

See attached letter from Bowman Consulting to Patrick Sullivan, dated January 15, 2014.

Virginia Department of Transportation dated December 12, 2013

See attached letter from Bowman Consulting to Patrick Sullivan, dated January 15, 2014.

If you should have any further questions or comments please feel free to contact our office.

Sincerely,
BOWMAN CONSULTING GROUP, LTD.

Christopher Mohn, AICP
Director of Planning

Sullivan, Patrick

From: Chris Mohn <cmohn@bowmanconsulting.com>
Sent: Thursday, January 30, 2014 4:29 PM
To: Sullivan, Patrick
Cc: Galindo, Daniel; Mark Nelis; Erich Strohhacker
Subject: Catoctin Creek Towne Center
Attachments: Catoctin Creek Apts - Meter Sizes + Fees.pdf

Importance: High

Hi Patrick,

Attached is a copy of the meter calculations for the residential component of Catoctin Creek Towne Center. Our engineering folks forwarded this information to Dale earlier today, and I wanted to be sure you also received a copy. As you will see, the availability fees to individually meter the proposed apartment buildings are estimated to total $1,917,837.00, based on the current fee schedule.

On another note, I spoke with Dan earlier this week requesting feedback about the appropriate scope of additional traffic analysis needed to account for future Mayfair traffic, and he indicated that he would pass along my question to you. I would suggest that we provide supplemental analysis in memo form that factors future Mayfair traffic into the future background and build-out conditions at three study area intersections on Hirst Road – (1) Hirst/Hatcher, (2) Hirst/Maple, and (3) Hirst/Berlin. I think this would ensure that foreseeable background impacts are appropriately accommodated at the study area intersections of greatest significance/interest, and effectively address concerns about the absence of Mayfair traffic in the future conditions included in the current TIA.

Please let me know if the suggested approach is acceptable to you, and we will proceed accordingly. Obviously we would like to be able to speak to this issue definitely at next week's work session, and we want to be sure we're moving forward in a manner acceptable to Town staff. I look forward to your feedback.

Thanks,
Chris

Christopher Mohn, AICP | Director of Planning
Bowman Consulting

101 South Street, S.E. Leesburg, VA 20175
phone: 703.443.2400 | fax: 703.443.2425 | mobile: 540.771.7088
cmohn@bowmanconsulting.com | bowmanconsulting.com |

- Go Green! Please consider the environment before printing this email.

Sullivan, Patrick

From: Galindo, Daniel
Sent: Monday, January 27, 2014 4:35 PM
To: Sullivan, Patrick
Cc: Lehnig, Dale; Vanegas, Alex
Subject: FW: CCTC comment response review

FYI

Daniel Galindo, AICP
Planner II

Town of Purcellville
221 S. Nursery Avenue
Purcellville, VA 20132
540.338.2304
www.purcellvilleva.gov

From: Geoff.Giffin@kimley-horn.com [mailto:Geoff.Giffin@kimley-horn.com]
Sent: Monday, January 27, 2014 4:05 PM
To: Galindo, Daniel
Subject: CCTC comment response review

Hi Daniel,

I've gone through and reviewed the applicants comment responses to the Traffic Impact Study. Below is a summary of each:

KHA Comments

Question 1 – No response required
Question 2 – No response required
Question 3 :

a) No response required
b) The overall LOS decreases from C to D in the PM peak hour. The southbound approach decreases from LOS D to E. Will signal timing adjustments improve the operation?
c) The applicant acknowledges that turn lanes will improve traffic operations but further improvements (signalization) would be required to achieve acceptable levels of service. The applicant does not appear to be offering to provide any improvements at this location.
d) Has a roundabout been considered per the Townwide Transportation Plan?

Question 4 – No response required
Question 5 – No response required
Question 6 – No response required
Question 7:

a) No response required
b) The final decision for turn lane or taper will need to be addressed by Town staff
c) While the analysis results show the queue length will not extend beyond the trail, no analysis was performed on a weekday mid-afternoon when the high school is released and there is a surge in traffic traveling north along Maple Avenue.

d) It's unclear from the site plan submitted if a bike/pedestrian connection has been provided between the residential property and the W&OD Trail
e) The site plan provided does not include a driveway between the residential and commercial properties.

VDOT comments:

General Comment 1: No response required (KHA does not have a copy of the letter)
General Comment 2: No response required (KHA does not have a copy of the memorandum)
General Comment 3: No response required (KHA does not have a copy of the draft proffer)
General Comment 4: No response required
General Comment 5: No response required
General Comment 6: No response required
General Comment 7
a) No response required
b) No response required
c) No response required
d) No response required
e) No response required
f) No response required
General Comment 8: No response required
a) No response required
b) Has a roundabout been considered per the Townwide Transportation Plan?
c) No response required
General Comment 9: No response required
General Comment 10: No response required
General Comment 11: VDOT's comment is consistent with Kimley-Horn's comment
General Comment 12: VDOT's comment on the left-turn lane is consistent with Kimley-Horn's comment
General Comment 13: No response required
General Comment 14:
a) The applicant is proposing to provide only an eastbound left turn lane and shared eastbound left/right lane (instead of two dedicated left turn lanes)
b) VDOT requested a dedicated eastbound right turn lane and the applicant does not believe this is necessary
c) No response required
General Comment 15:
a) No response required
b) No response required
c) No response required
d) This item is to be discussed between the Town and applicant

TE Comment 1: No response required
TE Comment 2: No response required
TE Comment 3: No response required
TE Comment 4: No response required

Comments on Recommended Improvements 1: VDOT's comment is consistent with KHA's, KHA suggests that a roundabout is considered per the Townwide Transportation Plan
Comments on Recommended Improvements 2: VDOT's comment is consistent with KHA's, KHA suggests reviewing signal timing
Comments on Recommended Improvements 3: VDOT's comment is consistent with KHA's
Comments on Recommended Improvements 4: No response required

Additional VDOT comment 1: No response required
Additional VDOT comment 2: No response required

Electric go-kart noise levels

These noise levels where taken indoors because the ambient noise level outdoors is great than the sound of the karts.

Noise levels outside building: 62Db or ambient level if greater
Noise levels indoors 3 foot away from kart: 68Db;
Noise levels @ 100 feet from kart: 38Db;
Noise levels @ 200 feet from kart: 32Db;
Noise levels can be as much as 50% less in Db levels of gas karts.

Whisper Quiet Operation = Longer Operating Hours
— When you first enter a conventional karting facility, the roar of the karts fills you with excitement – for about five minutes. After that, the loud, incessant droning is more likely to give you a headache. Customers there to enjoy the facility are driven away. There is no way to bring the noise level of gas engine karts down to an acceptable level. Electric karts on the other hand create almost no noise, except a pleasant high-pitched whine

WHY AN ELECTRIC KART?
Environmentally Friendly Karts = A Fresh, Wholesome Image
— Many people talk about the environment these days, but few are actually doing anything about it. Now, communities and ongoing legislation are demanding changes. With the ecologically friendly electric karts, your customers are presented with a clean environment in which to experience all the speed and thrills of a conventional racetrack indoors, but with none of the negatives of air and noise pollution. You can provide an upscale, exciting and healthful environment conducive to recreation for both the family and the business community. Electric karts are the future of racing.