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November 25, 2015

**MEMORANDUM TO:** Sparta Township Planning Board

**FROM:** David B. Simmons, Jr., P.E., L.S., C.M.E.

**SUBJECT:** Application #621 -- Preliminary & Final Site Plan for CC Holdings, LLC  
North Village at Sparta  
Portions of Existing Tax Lots 4 & 91, Block 16001  
(Approved Tax Lots 91.01, 91.02, 91.03 & 91.04; Block 16001 -- Not Yet Filed)  
Located on NJSH Route 15 & White Lake Road  
Sparta Township, Sussex County  
HPA No. 15-128

Dear Board Members:

The Applicant has submitted an application to NJDOT for the proposed access points onto NJSH Route 15. My understanding is the NJDOT has jurisdiction in this matter and is currently reviewing the application.

Per the Planning Board's request, I have reviewed the traffic reports and documents that were submitted for the site plan captioned above, and compared them to the documents submitted for the various site plans and subdivisions submitted to the Board to date. Based on that review, I have the following comments:

1. The traffic study documents reviewed included the following:
  - a. Plans prepared by Dykstra Associates, PC, specifically the following sheets:
    - i. Conceptual Site Plan Layout -- North Village at Sparta -- NJDOT Application for Major Access Permit with Planning Review and Lot Subdivision -- Tax Lots 4, 89, and 91, Block 16001 -- Sheet 4 of 13 dated August 7, 2014, last revised May 20, 2015.
    - ii. State Highway Frontage Plan -- North Village at Sparta -- NJDOT Application for Major Access Permit with Planning Review and Lot Subdivision -- Tax Lots 4, 89, and 91, Block 16001 -- Sheet 5 of 13 dated August 7, 2014, last revised May 20, 2015.

- b. NJDOT Scope of Study for North Village at Sparta – Proposed Mixed-Use Development, Route 15 Northbound, Milepost 15.25, prepared by Dolan & Dean Consulting Engineers, LLC, dated June 19, 2013.
- c. NJDOT Traffic Impact Assessment for North Village at Sparta, Route 15 Northbound, Milepost 15.25, prepared by Dolan & Dean Consulting Engineers, LLC, dated September 16, 2014.
- d. Traffic Impact Assessment for North Village at Sparta – Proposed Mixed-Use Development, Township of Sparta, prepared by Dolan & Dean Consulting Engineers, LLC, dated March 31, 2015.

## 2. STUDY AREA

The traffic study included the following intersections along the NJSH Route 15 corridor:

- a. Route 181/Lafayette Road (Sparta Township)
- b. Houses Corner Road (Sparta Township)
- c. White Lake Road/Wilson Drive (Sparta Township)
- d. Route 94/Sussex County Route 623/Sunset Inn Road (Lafayette Township)
- e. Meadows Road (Lafayette Township)

I note that the intersection of NJSH Routes 15 and 94 in Lafayette Township was shown schematically on the study area sketches, but traffic counts at the intersection and level of service analysis were not performed at this intersection.

The impact of the proposed development should also be evaluated at the Route 15/94 intersection or reasons provided why NJDOT did not require this intersection to be studied.

## 3. PROJECTED TRAFFIC

I reviewed the proposed development data that was used in the traffic study to the most current development data available from the subdivision and site plan applications that have been submitted to the Sparta Township Planning Board in 2015, and have the following comparison:

Traffic Study Land Use	Site Plan/Subdivision Land Use
A. 135,000 SF Shopping Center	ShopRite, Including Mezzanine: 87,000 SF *
	Liquor Store: 15,000 SF *
	Commercial Building "C": 9,170 SF *
	Commercial Building "D": 11,285 SF *
	Building "E" – Restaurant: 6,000 SF **
	Building "F" – Retail: 5,880 SF **
	Building "G" – Restaurant: 4,050 SF **
	Building "H" – Bank: 3,100 SF **

Traffic Study Land Use	Site Plan/Subdivision Land Use
	Retail Building: 6,000 SF ***
	Retail Building: 4,000 SF ***
	<b>Total: 151,485 SF ±</b>
B. 100-Room Hotel	100-Room Hotel ***
C. 90 Single-Family Homes	92 Single-Family Homes ****
D. 114 Apartments	Building "C": 8 Apts. *
	Building "D": 10 Apts. *
	25,680 SF Apt. Building: 70 Apts. ***
	6-Apt. Building Complex: 24 Apts. ***
	<b>Total: 112 Apts.</b>
E. 0 – Townhouses & Duplexes	10 Duplex Buildings 20 Housing Units ***

\* Site Plan Application #621

\*\* Scaled from Site Plan – Application #621

\*\*\* From Conceptual Site Layout Plan – Sheet 4 of 13 Last Revised May 20, 2015; Detailed Site Plan Not Submitted to Date

\*\*\*\* Major Subdivision Application #2365

The above chart shows the following discrepancies between the traffic study submitted to NJDOT and site plans/subdivisions submitted to the Sparta Planning Board to date, plus information scaled from the concept site plan layout:

- a. Shopping center area is approximately 16,485 SF more than the traffic study.
- b. Single-Family Homes – Two more homes than the traffic study.
- c. Apartments – Two less apartments than the traffic study.
- d. Townhouses and Duplexes – 10 more duplex units than the traffic study.

Based on the above comparison, some additional traffic will be generated by the proposed development beyond what has been calculated and used in the capacity analysis in the traffic report.

It should be noted that detailed site plans and subdivision plans have not been submitted for all of the proposed buildings to date. As a result, traffic generated from the site may vary from the projections due to any changes in building size, etc.

#### 4. PROPOSED ACCESS POINTS

- a. The conceptual site layout plan shows the following proposed entrances/exits from Route 15 for the development:
  - i. Right turn in/out at the southerly corner of the site.
  - ii. New signalized intersection at the approximate midpoint of the site.
  - iii. Right turn in/out at the northerly corner of the site.

- b. The proposed new signalized intersection at the approximate midpoint of the site is at the location originally set up for a four-way intersection when the Route 15/Houses Corner Road intersection project was designed and built several years ago.
- c. The two proposed right turn in/out locations will help to relieve some of the traffic from going through the proposed new traffic signal, thereby helping to increase its level of service.

5. **PROPOSED ROUTE 15 IMPROVEMENTS**

- a. Based on the traffic counts and capacity analysis, the traffic study proposes the following improvements to help mitigate the increased traffic flow and volume produced by the Applicant's overall development.

- i. **Route 15 and Route 181/Lafayette Road Intersection**

Due to an increase in left turns from Lafayette Road to Route 15 North, the Applicant proposes to redistribute five seconds of green time from Route 15 and add it to the Lafayette Road approach during the evening peak hours, and eight seconds during the Saturday peak hours.

This adjustment is basically a change made to the existing traffic controller timing at the intersection.

- ii. **Route 15 and Houses Corner Road Intersection**

The intersection experiences delays during the evening and Saturday peak hours.

The Applicant proposes to change the existing 150-second cycle at this intersection to a 120-second cycle to match the traffic signal cycle lengths at the adjacent signalized intersections.

This adjustment is basically a change made to the existing traffic controller timing at the intersection.

- iii. **Route 15 and White Lake Road/Wilson Drive Intersection**

The proposed development will generate new site traffic, which will have some impact on this intersection.

The Applicant conceptually proposes to add an additional northbound lane to Route 15. The plans show the additional northbound lane starting to develop just to the south of the existing Route 15 bridge over the railroad tracks, running along the entire frontage of the Applicant's property, and

then tapering back to one northbound lane approximately in the area of the Sparta carwash.

I note that in the level of service computer printout (copy attached), in the northbound direction there is a dedicated left turn lane and two northbound lanes used in the analysis at the Route 15/Wilson Drive/White Lake Road intersection. However, this widened configuration is not reflected on the State Highway Frontage Plan.

Based on the limited conceptual plan provided, the Applicant is proposing to add the additional northbound lane by using the existing paved shoulder and restriping the pavement for an additional lane.

Issues that the Applicant may have to deal with the NJDOT on this proposal include the following:

- 1) Design exceptions to eliminate the northbound paved shoulder or additional shoulder widening.
- 2) Utility pole relocation and/or guide rail installation to maintain the clear zone.
- 3) Right-of-way dedication from the proposed edge of pavement.

iv. **Route 15, Route 94, and Route 623 Intersection**

The report indicates low levels of service exist at this intersection due to heavy turn volumes being opposed by heavy through volumes of traffic.

The Applicant's proposed mitigation is to restripe the existing northbound Route 15 approach to the intersection and add a second through lane to accommodate the higher through volumes.

v. **Miscellaneous**

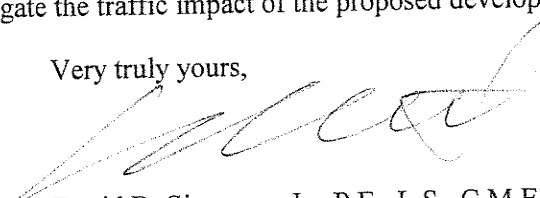
- 1) For some of the proposed physical roadway improvements, the traffic report indicates that if the conceptual mitigation is agreeable to NJDOT, a cost estimate and fair share calculations will be provided.

I note this because if this Applicant does not construct and pay for all of the proposed mitigation measures, it is not clear what other entity will be available to contribute to make the improvements.

The Township Committee should incorporate the construction of the various mitigating improvements into the proposed Developer's Agreement for this project.

- 2) Changing the timing and cycle length on some of the existing traffic signals may help the level of service. However, by field observation during evening peak hours, the Route 15 northbound corridor is sometimes backed up from the Route 15/White Lake Road/Wilson Drive intersection. As a result, at some of the intersections south of White Lake Road, there may be periods of time where even though additional green time is provided, the capacity of Route 15 may be exceeded, and northbound traffic may have to wait for an additional cycle of the traffic signal to get through the intersection, regardless of the change in timing.
- 3) NJDOT has jurisdiction on NJSH Route 15. I recommend that the Applicant provide copies of any correspondence and plans going back and forth with NJDOT so that the Township is kept updated on the issues being revised and the improvements being proposed to mitigate the traffic impact of the proposed development.

Very truly yours,



David B. Simmons, Jr., P.E., L.S., C.M.E.  
**HAROLD E. PELLOW & ASSOCIATES, INC.**  
Sparta Township Planning Board Engineer

DBS:mac  
K:\PROJECTS\MUNICIPAL\SPARTA\PB\15-128 - CC HOLDINGS, LLC\PB2.DOC

Attachment

cc: Via E-Mail w/Attachment  
M. Donnelly, Sparta Township Land Use Administrator (& 1<sup>st</sup> Class Mail)  
D. Manhardt, P.P., Sparta Township Planner  
E. Powell, P.E., C.M.E., C.P.W.M., Sparta Township Engineer  
C. Quinn, Esq.  
D. Nicholson, Esq.  
O. Dykstra, P.E.

Analyst: djp  
 Agency: D&D  
 Date: 6-17-2014  
 Period: PM Peak  
 Project ID: Dykstra - Sparta  
 E/W St: White Lake Rd / Wilson Dr

Inter.: Rt15&White Lk Rd / Wilson Dr  
 Area Type: All other areas  
 Jurisd:  
 Year : b WITH MITIGATION  
 N/S St: Route 15

## SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	2	0	1	1	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Volume	122	90	71	248	35	75	35	948	159	50	712	47
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

## Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	A	A			NB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
WB Left	A	A			SB Left	A		
Thru		A			Thru	A		
Right		A			Right	A		
Peds					Peds			
NP Right					EB Right			
S Right					WB Right			
Green	9.0	14.0			78.0			
Yellow	5.0	3.0			5.0			
All Red	0.0	4.0			2.0			

Cycle Length: 120.0 secs

## Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Adj Sat Flow Rate (s)	Ratios		Lane Group		Approach	
	Capacity		v/c	g/c	Delay	LOS	Delay	LOS
Eastbound								
L	257	1736	0.58	0.25	40.5	D		
TR	199	1706	0.99	0.12	113.7	F	82.2	F
Westbound								
L	207	1736	1.46	0.25	277.3	F		
TR	191	1641	0.70	0.12	51.9	E	211.1	F
Northbound								
L	200	307	0.22	0.65	9.1	A		
TR	2212	3403	0.61	0.65	12.7	B	12.6	B
Southbound								
L	178	274	0.34	0.65	10.6	B		
TR	1176	1810	0.79	0.65	13.7	B	18.2	B

Intersection Delay = 49.3 (sec/veh) Intersection LOS = D

## Mariruth Cook

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**From:** Mariruth Cook  
**Sent:** Wednesday, November 25, 2015 1:41 PM  
**To:** 'Maureen Donnelly (maureen.donnelly@spartanj.org)'; 'David Manhardt (david@4027llc.com)'; 'Eric Powell (Eric.Powell@spartanj.org)'; 'Christopher Quinn, Esq. (cquinn@mdsfirm.com)'; 'Debra Nicholson (debra@dnicholsonlaw.com)'; 'Owen Dykstra (owend@edykstra.com)'  
**Cc:** David Simmons  
**Subject:** Sparta PB Application #621 – Preliminary & Final Site Plan for CC Holdings, LLC (North Village at Sparta)  
**Attachments:** Simmons to Sparta PB 11.25.2015 RE CC Holdings, LLC (North Village at Sparta).pdf

Hello Everyone – Attached is a memo from David B. Simmons, Jr., P.E., L.S. to the Sparta Township Planning Board regarding the above referenced application.

Maureen – Please distribute accordingly. Thank you.

*Regards,*

Mariruth A. Cook  
Executive Secretary

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