

Sumter City-County Planning Commission

January 25, 2012

SD-11-02, Moonlite Village Phase 2 – Old Camden Highway (County)

I. THE REQUEST

Applicant:	Louis Tisdale, representing Tyler B. Dunlap
Status of the Applicant:	Property Owner Representative
Request:	A request for preliminary plat approval to develop a 79 lot residential subdivision.
Location:	1770 Old Camden Highway
Size of Property:	+/- 26.34 acres
Present Use/Zoning:	Undeveloped /Agricultural Conservation (AC) being rezoned to Residential-6 (R-6)
Proposed Use of Property:	Residential Subdivision
Tax Map Reference:	188-00-02-038 (Part)
Adjacent Property Land Use and Zoning:	North – Residential/AC South – Residential/AC East – Residential/AC & Camden Hwy. West – Undeveloped/AC with portion being rezoned to LC

II. BACKGROUND

The applicant proposes to develop a 79 lot residential subdivision on a 26.34 acre portion of a larger 40 acre tract. The area proposed for development is the same tract of land that is currently going through the rezoning process—RZ-11-13. The request is to rezone the property from Agricultural Conservation (AC) to Residential-6 (R-6) and has received First Reading Approval from County Council. At time of publication of this report, the rezoning request is scheduled to receive Second Reading/Public Hearing Approval at the January 24, 2012 County Council Meeting.

III. COMPATIBILITY WITH THE 2030 COMPREHENSIVE PLAN

The single dominating notion of the 2030 Comprehensive Plan is for the City and County to manage growth in such a way that individual development adds value to the community at large.

As shown in the 2030 Comprehensive Plan Map to the right, the proposed area for development, outlined in red, is influenced by the Suburban Development Planning Area (SD). The primary objective of the SD designation is to scrutinize and manage the existing development patterns, foster intentional mixed-use development and identify new commercial and industrial locations where form and design are a focus, all in a more efficient manner.



The type of development, the timing of development, and the relationship to existing and surrounding development is critical to securing new residential development of a quality equal to our newfound expectations. For these reasons, careful consideration should be given to design criteria such as landscaping and access in order to enhance compatibility with the surrounding low density residential uses as well as keeping an eye towards future roadway expansions on Old Camden Hwy. The graphic below shows the existing development site as it appears today.



Shown Above: Photographs of the site as it currently appears. Photographs 1 & 2 are taken from the Camden Highway Frontage while the panorama shown in Photograph 3 is on the Thomas Sumter Highway Frontage.

IV. PRELIMINARY PLAT REVIEW

Based on Article 7, Section 7.d.5, the approval of the preliminary plat constitutes approval of the subdivision as to its character, intensity of development, general layout, and the approximate dimensions of streets, lots and other planned features. This approval binds the developer to the general scheme of the subdivision and permits the developer to proceed with the installation of site improvements, subject to obtaining other necessary permits. An applicant may request final approval for the whole development or for a section of the preliminary plat as long as specific phased approval is granted by the Planning Commission Board. Based on Planning Staff's understanding of the preliminary plat submission, the developer is not requesting phased approval for this 79 lot subdivision. This proposal is for a single-family detached subdivision developed using Residential-6 development standards, and has been reviewed as such.

Zoning District Requirements

The purpose of the Residential-6 (R-6) zoning district is to provide for a variety of single-family housing on small lots to meet market demands for smaller lot development. It is also the intent of this district to balance higher densities with common open space. Residential permitted uses within the R-6 district include single-family detached dwellings, duplexes, single family attached dwelling, accessory uses such as bathhouses, cabanas, non-commercial greenhouses, private garages and carports, storage buildings, swimming pools, tool sheds and workshops and home occupations. This district also allows accessory apartments subject to the development criteria established in Section 4.g.2 of the Zoning Ordinance.

The minimum development standards in the R-6 District for Single-family detached dwellings are as follows:

Minimum Lot Area Per structure:	6,000 sq. ft. (approx. 0.14 acres)
Minimum Lot Width:	60 ft. at front setback
Minimum Yards, Per Structure:	
Front – 35 ft.	
Side – 8 ft.	
Rear – 20 ft.	
Maximum Impervious Surface Ratio:	45%
Common Open Space Ratio:	None required
Maximum Density (units per gross acre):	7.2
Maximum Building Height:	35 ft.

The average lot size in this development is 0.21 acres with lots ranging in size from 0.18 acres up to 0.40 acres. All lots meet the minimum lot width of 60 ft. at the minimum building line and are within the required residential width to depth ratio requirement of 1:2.5. Each parcel has enough buildable area to meet all minimum setback standards without exceeding the maximum 45% impervious surface ratio. The proposed subdivision does not exceed the permitted maximum unit density.

It should be noted that the minimum building area shown on Lot #66 has an improper rear setback and must be revised prior to final plat approval.

Tree Protection, Buffering, Landscaping, & Open Space Plans:

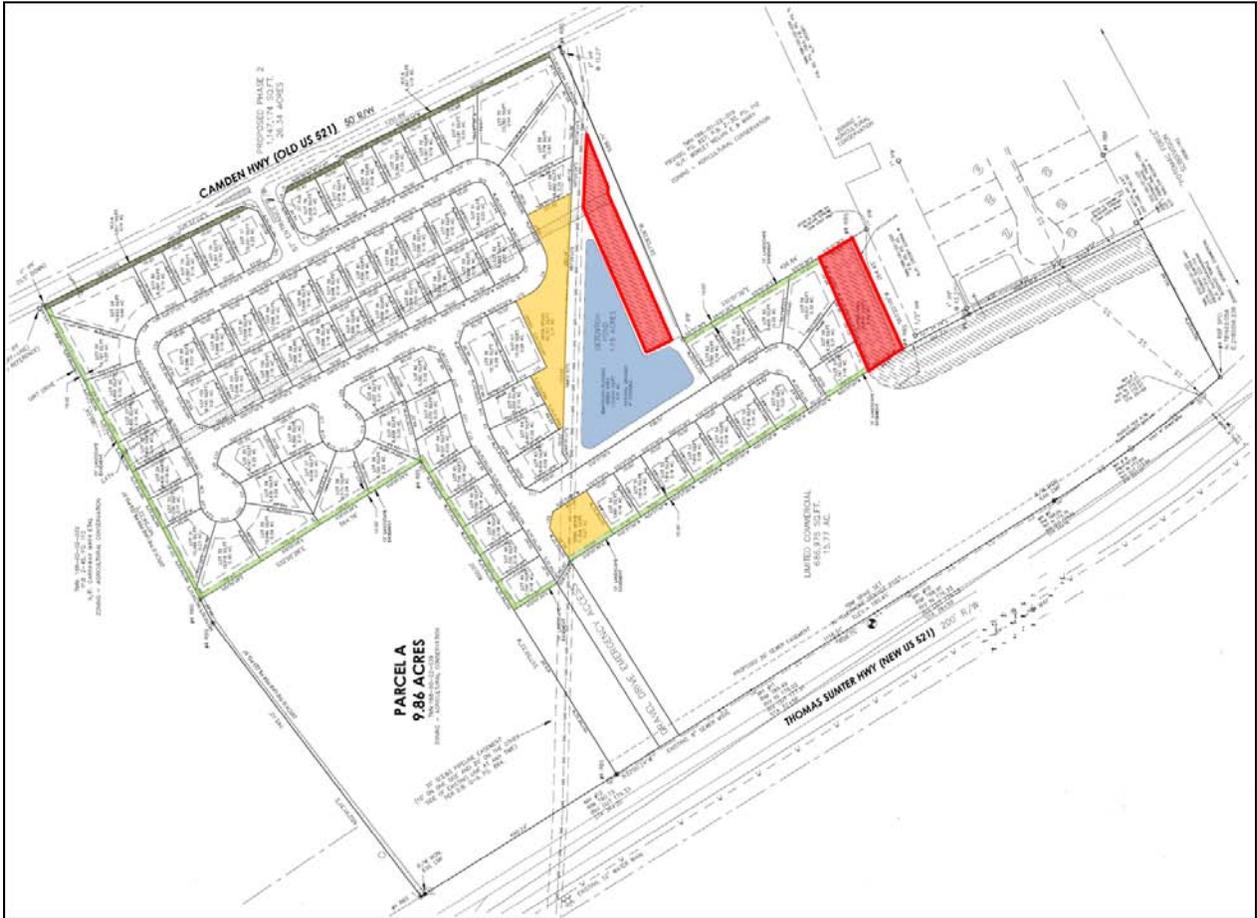
Section 8.d.3.b requires the submission of a tree survey and tree protection plan. To date no tree survey or tree protection plan has been submitted for this proposed development, however; this issue has been discussed with the applicant's representative. As shown in the orthophotograph to the right, there is an existing tree line that follows an established ditch line that is planned to be filled as part of this development proposal. The applicant has stated on submitted plans under "Development Notes" in item #2:



2. The areas shown for wetlands mitigation along the ditches have restrictive easements which do not allow removal of trees without COE permission. Most of the larger trees in this project are in these areas and will as a result, be protected. The ditch that traverses across the lots will be removed as will most of the trees along it. Where possible, these trees will be preserved if not within a building envelope.

This note does not meet the requirements of Section 8.d.3.b of the Ordinance. At minimum, a formal tree survey must be submitted for on-site Staff review to determine whether there are any protected species within the ditch line area that must either be preserved or mitigated through provision of additional landscaping.

As per Article 8, Section 8.b.6., reasonable landscaping should be provided at site entrances, in public areas, adjacent and around the perimeter of buildings. Additionally, in accordance with Section 8.d.7., buffering shall be provided when natural land features or existing vegetative barriers do not provide reasonable screening. Buffering shall be provided to shield neighboring developed or undeveloped properties from any adverse external effects of a development. A buffer strip of 10 ft. in width **is required** where more intensive land uses or zoning districts abut less intensive land uses or zoning district. In high density developments, the Sumter City-County Planning Commission may require landscaping, fencing, or walls to screen dwelling units for privacy, and buffering may be required for front, side, or rear property lines, excluding driveways.

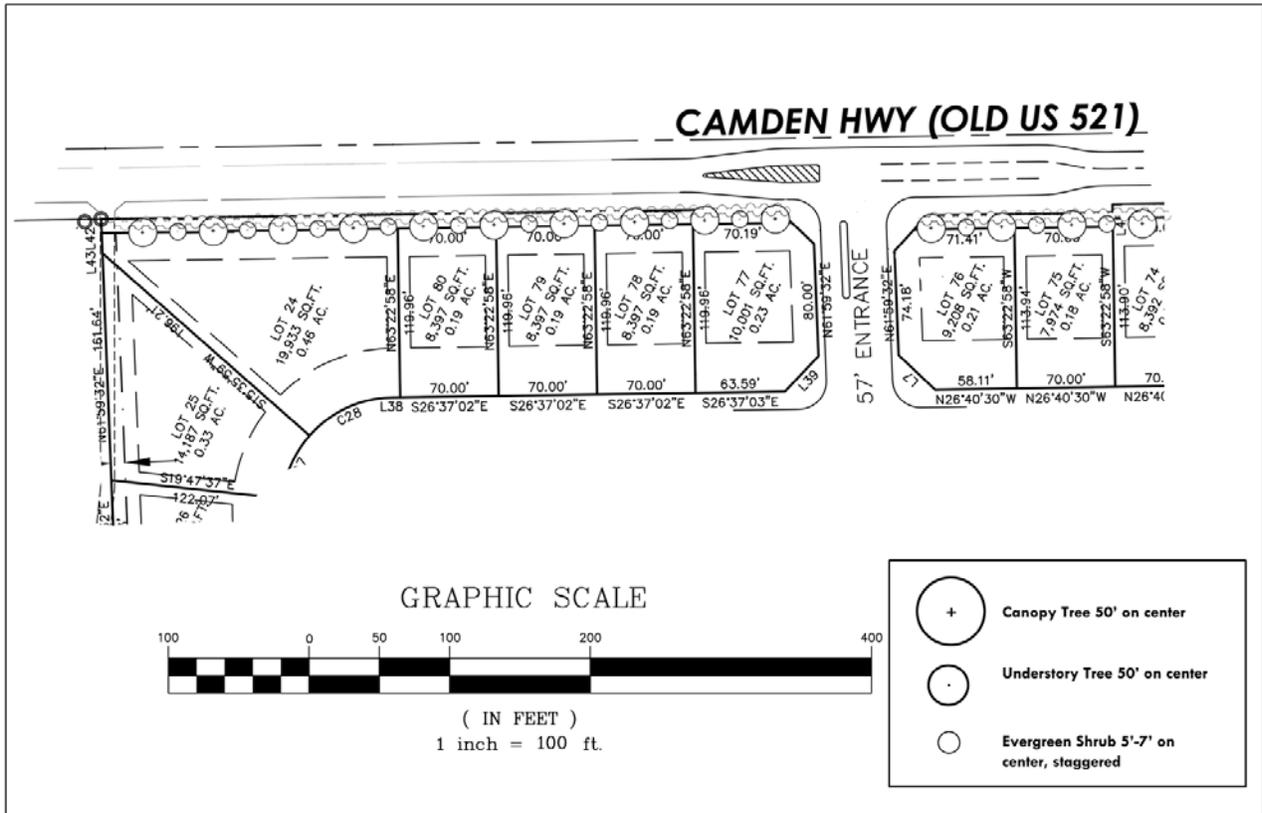


As shown in the graphic above, the areas indicated in light green have been set aside as 10 ft. landscape easements designated for the installation of an evergreen buffer strip. The area indicated in darker green is an independent 10 ft. wide 0.15 acre parcel that will be owned by the HOA and planted as a buffer between the development and Camden Hwy. street frontage. Areas indicated in red are areas protected under recorded covenants with the US Army Corps of Engineers as wetlands remediation areas and are not to be disturbed; and the areas shaded in orange are community open space and the blue highlighted area is the stormwater management pond.

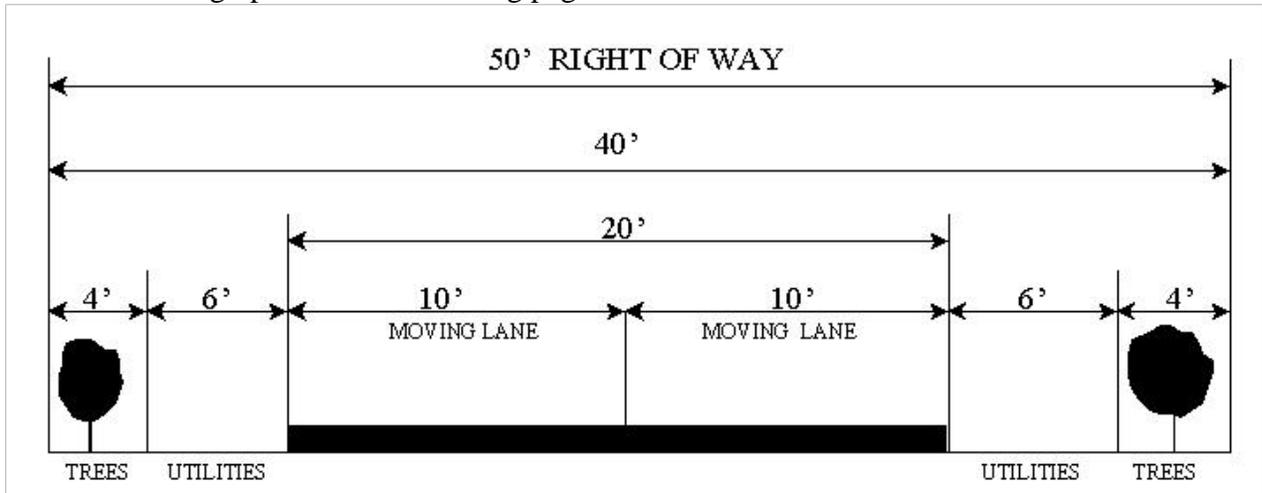
In accordance with Section 8.d.1, landscaping shall be provided as part of site plan and subdivision designs. Planning Staff recommends that the designated buffer easements and HOA owned buffer parcel be planted with the following minimum plantings:

- One canopy tree every 50 ft.; minimum 2 in. caliper and 6 ft. tall at time of planting;
- 1 understory tree centered between every canopy tree; minimum 1 ½ in. caliper and 5 ft. tall at time of planting;
- 10 evergreen shrubs every 50 ft. spaced 5 ft. to 7 ft. on center. Selected species shall meet a minimum height of 6 ft. at maturity and shall be a minimum size of 3 gallons and 30 in. tall at time of planting.

The graphic on the following page illustrates the layout of the bufferyard plantings done to scale.



Street trees are also required for this development. One street tree must be planted for each lot. Required street trees should be planted in the first 4 ft. outside of the designated utility easements as shown in the graphic on the following page.



Additionally, a comprehensive landscape plan must be submitted that addresses the stormwater management facility and the open space areas indicated in the graphic on page 5 of this report.

Environmental Issues:

The property is not in a Special Flood Hazard Area. The property is designated as being in Zone X, as shown on FEMA FIRM Panels 45085C0281D and 45085C0282D; effective date: 2-16-2007.

There are no mapped wetlands as shown on the National Wetlands Inventory; however there is a Blue Line Stream present on the parcel that is subject to US Army Corps of Engineers (USACE) Jurisdiction. Additionally, there are wetlands mitigation areas designated as part of this development that are under Corps jurisdiction. The applicant has provided copies of the restrictive covenants for development within the mitigation areas. Additionally, these areas have been shown on the development proposal. Anything beyond the scope of the existing approval must receive new review and approval from the US ACE.

Stormwater Management Plan:

A stormwater approval letter for Stormwater Permit Number: 2-12-002 was issued on January 10 2012 by the Sumter County Storm Water Utility. This approval was based on previously issued plans and will require resubmission of subdivision plans due to changes in the subdivision layout and access plan.

The proposed stormwater management facility will be a dry pond at final construction and will be integrated into the community open space plan.

Public Safety:

Fire –

The proposed plan was reviewed by Robbie Rickard, Fire Inspector with the Sumter Fire Department. It has been determined that the proposed plans meet minimum fire safety requirements.

Proposed Roadway/Sidewalks –

The proposed roadway will be asphalt with concrete curbing. The intensity of development based on average lot width as per section 8.e.3.b is “medium” intensity. As per exhibit 17, due to the projected traffic of approximately 766 daily vehicle trips, the proposed road is considered to be a residential subcollector street.

Residential subcollector streets in medium intensity developments with off-street parking are required to have two 10 ft. travel lanes with no parking lane resulting in a total pavement width of 20 ft. As indicated on the submitted application, the proposed street will have concrete curbing. When doing conventional concrete curbing, a 12 month maintenance guarantee is required as part of final approval.

Sidewalks are not a requirement based on the current development proposal and street profile in the County. Additionally, the applicant has stated that sidewalks are not to be provided as part of this development.

V. UTILITIES

Utility plans are not required for preliminary plat approval however the applicant has indicated the following:

Sewer & Water – Sewer and Water are to be provided by the City of Sumter.

Electric – Black River Electric Cooperative will provide Power to the Development

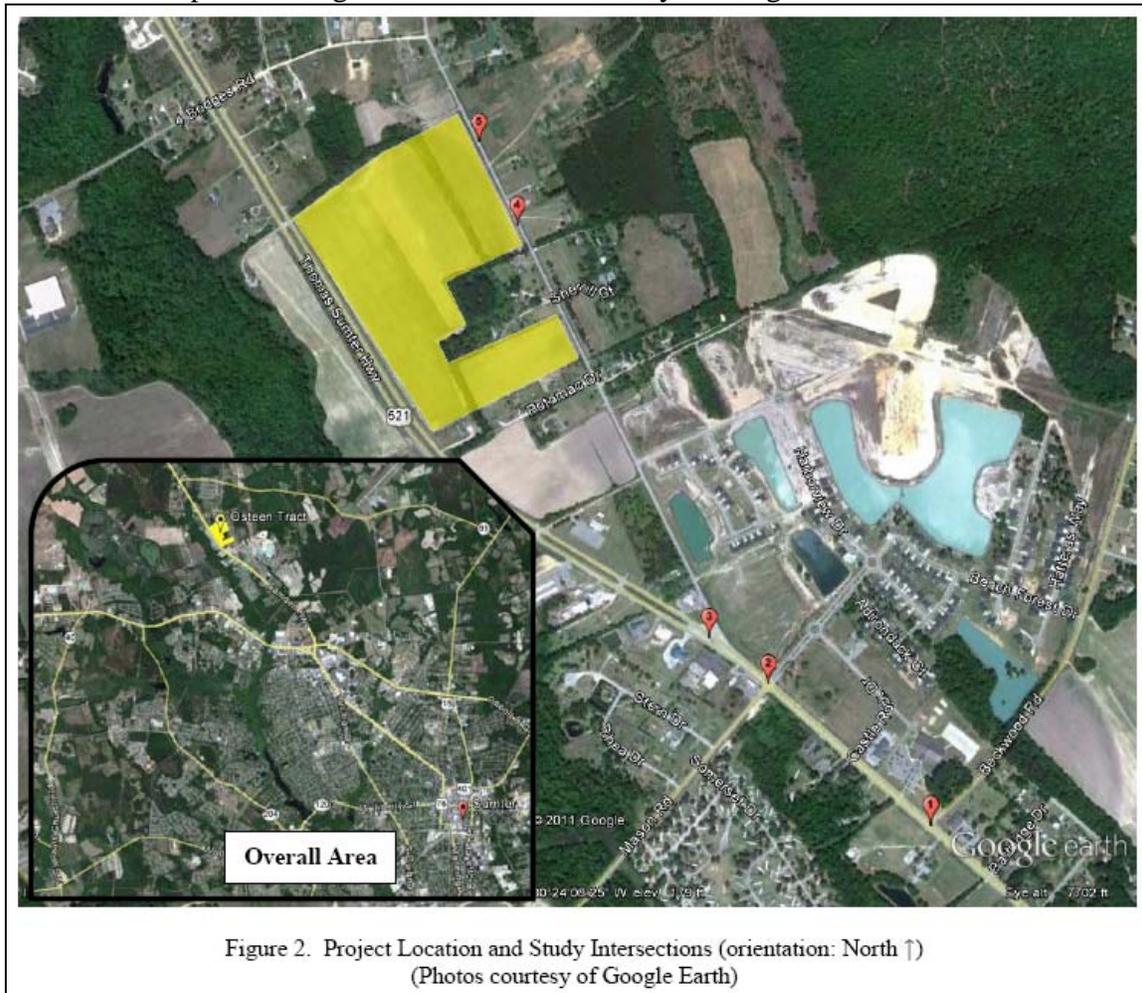
Telephone – Farmers Telephone Cooperative

Natural Gas – SCE&G, there is a large gas line right of way cutting through the southern side of the development.

VI. TRAFFIC REVIEW

Per Section 7.d.10 of the City of Sumter – Zoning & Development Standards Ordinance, Major Subdivisions that require 100 or more off-street parking spaces must submit a Traffic Impact Study (TIS). Based on the required number of parking spaces a TIS was submitted titled, “Traffic Impact Study for the Osteen Tract Phase 2 (Residential) in SCDOT District 1 Sumter, South Carolina.” Prepared by Dennis Corporation and dated December 9, 2011.

The report summarizes the existing and future traffic conditions based on the construction of this 79 unit residential development along the Camden Hwy. frontage with no consideration of future commercial development along the Thomas Sumter Hwy. frontage of the overall 40 acre tract.



As shown in the graphic above, five intersections in the vicinity of the project were included in the study area for traffic analysis:

- Intersection 1 – Camden Hwy. (US 521) at Beckwood Rod. (S-947) [unsignalized]
- Intersection 2 – Camden Hwy. (US 521) at Mason Rd. (S-673) and Beach Forest Dr. (local) [signalized]
- Intersection 3 – Thomas Sumter Hwy. (US 521N) at Camden Hwy. (S-1342) [unsignalized]
- Intersection 4 – Camden Hwy. (S-1342) at Proposed Access 1 [unsignalized]
- Intersection 5 – Camden Hwy. (S-1342) at Proposed Access 2 [unsignalized]

It should be noted that the development proposal that the TIS is based on shows two proposed access drives for the subdivision along the Camden Hwy. Frontage—referred to as intersection 4 and 5 in the report.

The proposed development is estimated to generate a total of 766 daily vehicle trips with 70 AM peak hour trips and 90 PM peak hour trips based upon ITE Trip Generation Manual (Land Use Code, #210-Single Family Residential), 8th ed., 2008.

Per the TIS, the existing traffic conditions in the study area show some of the intersections already operating at/or above capacity during AM and PM peak hour based. This determination is based upon field observations and 2010 SCDOT traffic volume data.

By 2014, with 3% growth rate on network traffic volume, even without the development of this subdivision, two intersections in the study area will be operating below a Level of Service (LOS) ‘C’ during both AM and PM peak hours. These additional 79 lots will make this condition worse.

Impact is analyzed in terms of level of service (LOS). LOS is ranked from the best, LOS ‘A’, to the worst LOS ‘F’. Currently, Camden Hwy. at Beckwood Rd. and Camden Hwy. at Thomas Sumter Hwy. are already operating at a Level of Service ‘C’ or less during AM/PM peak hours. Operation of the Camden Hwy. at Thomas Sumter Hwy. intersection is projected to degrade to LOS ‘F’ by 2014. This condition is projected to occur with or without the development of Moonlite Village Phase 2. The table below summarizes existing and anticipated LOS in the study area.

As shown in the Table 6 on the following page, the addition of this subdivision development will further degrade the level of service, specifically at Intersection #2 and 3 beyond that projected in the no-build scenario.

Intersection	Peak Hour	2011 Existing Conditions			2014 No-Build Conditions			2014 Build Conditions			2014 Build Mitigation		
		Delay (s/v) ¹	V/C Ratio ²	LOS ³	Delay (s/v) ¹	V/C Ratio ²	LOS ³	Delay (s/v) ¹	V/C Ratio ²	LOS ³	Delay (s/v) ¹	V/C Ratio ²	LOS ³
1. Camden Hwy at Beckwood Rd.	AM	12.9 (SB)	0.10	B	16.4 (SB)	0.19	C	16.8 (SB)	0.20	C	No Change		
	PM	17.9 (SB)	0.09	C	25.8 (SB)	0.25	D	27.4 (SB)	0.26	D	No Change		
2. Camden Hwy at Beach Forest Dr	AM	10.7	0.60	B	18.1	0.83	B	19.3	0.85	B	17.9	0.77	B
	PM	9.8	0.55	A	14.6	0.81	B	15.6	0.87	B	15.4	0.76	B
3. Camden Hwy at US 521	AM	27.9 (SB)	0.71	D	159 (SB)	1.25	F	204 (SB)	1.36	F	22.7 (SB)	0.67	C
	PM	20.2 (SB)	0.50	C	74.9 (SB)	0.98	F	93.3 (SB)	1.05	F	22.7 (SB)	0.56	C
											<i>Overall Intersection ↓</i>		
											10.6	0.53	B
											9.9	0.45	A
4. Camden Hwy at Access #1	AM	--	--	--	--	--	--	11.9 (EB)	0.06	B	No Change		
	PM	--	--	--	--	--	--	12.3 (EB)	0.04	B	No Change		
5. Camden Hwy at Access #2	AM	--	--	--	--	--	--	11.7 (EB)	0.04	B	No Change		
	PM	--	--	--	--	--	--	11.7 (EB)	0.02	B	No Change		

1. (s/v) - Seconds of delay per vehicle measured on the most delayed minor street approach (2-way stop intersections) or the entire intersection (4-way stop intersections and signalized intersections).
2. V/C Ratio – Volume to capacity ratio for critical lane movement calculated by HCM method.
3. LOS - Level-of-Service corresponding to the delay.

Based upon the anticipated changes in level of service, the TIS set out two separate sets of mitigation measures: (1) mitigation attributed to the development and (2) mitigation not attributed to the development.

Mitigation Attributed to the Development –

- Camden Hwy. (2-lane) at the Proposed Development Accesses (Intersection 4 and/or 5)
 - Based on the assumed trip distribution for the proposed development, one of the proposed driveways will meet the South Carolina Highway Design Manual left-turn auxiliary lane criteria. Since the majority of the traffic is projected to utilize the southeastern-most driveway, this intersection should have the auxiliary left-turn lane. The turn lane should be designed to SCDOT standards for width, length, and taper. From an access management standpoint, it might be preferred to combine the two proposed access points into a single driveway on Camden Hwy. and provide the left-turn auxiliary lane there.
 - Although the delays anticipated for vehicles departing the development are only anticipated to be LOS B conditions, it is recommended that dedicated left-turn and right-turn lanes are provided exiting the development at the southeastern-most driveway. This will help minimize any delays and accommodate any additional volumes in the future that might be generated due to commercial development within this tract.
 - If the two accesses are combined into a single access, as recommended, the dedicated turn lanes exiting the development would be further justified.

Mitigation Not Attributed to this Development –

- Camden Hwy. (US 521) at Beckwood Rd. (Intersection 1)
 - No mitigation recommendations

- Camden Hwy. (US 521) at Mason Rd. and Beach Forest Dr. (Intersection 2)
 - The southeastern-bound left-turn on US 521 should be converted to be a protected-permitted left-turn phasing. This will improve the LOS for that movement from LOS 'E' during PM peak hour to LOS 'B'
 - The traffic signal should be optimized to account for the new traffic volumes. This will result in reduced delays while maintaining a 60-second cycle length. The overall intersection will still operate at LOS 'B' during both peak periods.

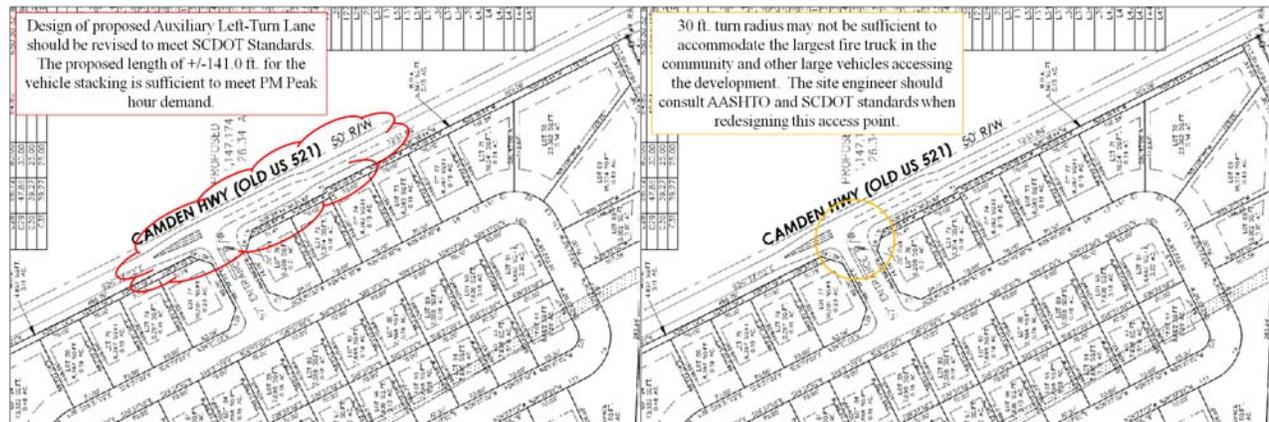
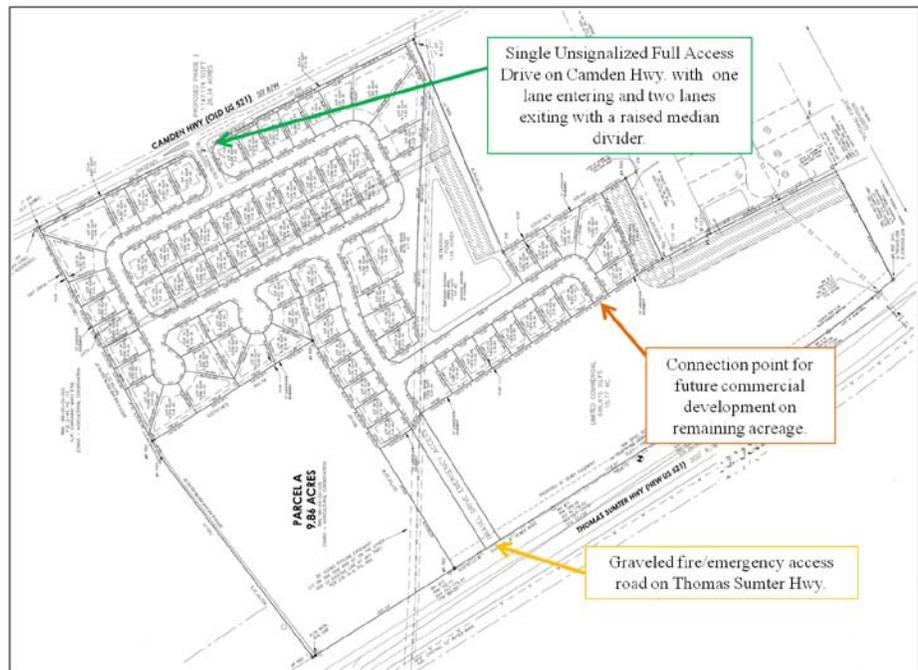
- Thomas Sumter Hwy. (US 521) and Camden Hwy. (Intersection 3)
 - The Camden Hwy. approach at this intersection is anticipated to operate at LOS 'F' during both peak periods in the 2014 Build scenario. It currently operates at LOS 'D' during the AM peak period and LOS 'C' during the PM peak period. The only mitigation that could improve this movement is a traffic signal or a roundabout. Due to the close proximity to the signalized intersection at Mason Rd. (580 ft.), a roundabout is likely not a feasible alternative. However, an interconnected traffic signal could function at an acceptable level, despite the close spacing.
 - The Manual on Uniform Traffic Control Devices (MUTCD, 2009 edition) 4-hour and 8-hour signal warrants were applied to the 5 hours of data collected for development. As shown in the analysis and summary, this intersection currently meets the 4-hour traffic signal warrant. The satisfaction of the 4-hour warrant in itself justifies the installation of a traffic signal.
 - As part of the signalization, it is recommended that the southbound left-turn on US 521 operate as protected-permitted and this intersection be designed to run on a 60-second cycle coordinated with Intersection 2.
 - In order to improve safety of the intersection, the channelized free-flow right-turn movement from US 521 on to Camden Hwy. should be eliminated. A right-turn auxiliary lane should be installed so that vehicles must approach the actual intersection and make a right-turn under a green signal indication.
 - In order to minimize the delays to US 521, it is recommended that dual left-turn lanes be provided on the Camden Hwy. approach. This will reduce the amount of time it takes to serve this movement, allowing more green time on US 521. This approach should also have a dedicated right-turn auxiliary lane so that right-turning vehicles are not impeded by vehicles waiting to turn left.
 - After improvements are made, the southbound Camden Hwy. approach will be improved from a LOS 'F' during both peak periods to a LOS 'C' (left-turn movement) and LOS 'B' (right-turn movement) during both peak periods. The US 521 movement will operate at LOS 'A' during both peak periods, with the overall intersection operating at LOS 'B' during AM peak period and LOS 'A' during the PM peak period.

Staff Recommendations Based on TIS Mitigation Measure Recommendations –

The applicant has already modified site access to the subdivision in accordance with the TIS recommendations by consolidating the Camden Hwy. driveways as shown in the graphic to the right.

Staff has reviewed this proposal from a technical standpoint to determine whether it meets

applicable design criteria to provide sufficient queuing capacity for both entrance movements and exit movements. There are still design issues that must be addressed as shown in the graphics below but overall the concept is in keeping with the recommendations of the TIS.



In terms of off-site mitigation at Intersections 2 and 3, Planning Staff has been in discussions with SCDOT District 1 regarding necessary improvements for these intersections and will be working with relevant state, local and federal agencies and organizations to implement the recommendations as outlined in the TIS. At this time no actual costs for the improvements or designs have been undertaken.

VII. SUBDIVISION-PLANNED DEVELOPMENT REVIEW – JANUARY 10, 2012

Planning Staff met with the applicant prior to the Technical Review meeting to discuss plan deficiencies. The primary discussion at Technical Review was related to site access and emergency management access. The applicant is pursuing one access drive on Camden Hwy. with alternate emergency access from Thomas Sumter Hwy.

- 1) SC DOT – SCDOT provided comments via e-mail stating that a Traffic Impact Study would be required prior to being granted encroachment permits for this development. Planning Staff forwarded a digital copy of the TIS to DOT for review however formal application for encroachment has not been undertaken by the applicant. At this time it does not appear that provided plans meet DOT minimum standards for review and approval of encroachment permits.
- 2) Fire Safety – Because of the number of dwellings proposed (79), this development is required to have at minimum two access points. Based on conversations with the applicant and the Fire Inspector, a single entrance on Camden Hwy. in conjunction with a graveled fire access road from Thomas Sumter Hwy. will satisfy emergency access requirements for this development. The applicant has submitted revised plans showing alternate fire access as well as a design for the entrance on Camden Hwy. that should accommodate access for emergency vehicles.

VIII. STAFF RECOMMENDATION

Staff recommends approval of SD-11-02 subject to the future subdivision submissions meeting all zoning ordinance and development standards, consistent with the preliminary plat (Attachment #2), along with the recommended conditions in the attached “Conditions of Approval” for SD-11-02.

IX. DRAFT MOTION

- 1) I move that the Planning Commission approve SD-11-01, subject to the preliminary plat titled, “Moonlite Village Phase II Providence Township, Sumter County, South Carolina” received by Planning Staff January 16, 2012, prepared by Black River Land Surveying, LLC and the Conditions of Approval dated January 25, 2012.
- 2) I move an alternate motion.

X. PLANNING COMMISSION – JANUARY 25, 2012

SD-11-02, Moonlite Village Phase 2
January 25, 2012

Conditions of Approval

1. The property shall be developed in substantial conformance to the preliminary lot layout shown in the plan titled, "Moonlite Village Phase II Providence Township, Sumter County, South Carolina" prepared by Black River Land Surveying, LLC received by the Planning Department via e-mail January 16, 2012.
2. An SCDOT compliant auxiliary left turn lane shall be installed on Camden Hwy. by the developer prior to issuance of the first construction permit for any dwelling.
3. The single subdivision access on Camden Hwy. with one entrance lane and dedicated left-turn and right-turn exit lanes with a raised planted median shall be installed prior to issuance of the first construction permit for any dwelling.
4. The gravel fire access lane shall be installed, inspected and approved by the Sumter Fire Inspected prior to issuance of the first Certificate of Occupancy.
5. A final landscape plan shall be submitted and approved prior to final plat approval. Said plan shall provide the following minimum plantings:
 - a. Buffer Yards – within the designated 10 ft. buffer easements and 0.15 acre buffer strip along Camden Hwy.:
 - i. One canopy tree every 50 ft.; minimum 2 in. caliper and 6 ft. tall at time of planting;
 - ii. 1 understory tree centered between every canopy tree; minimum 1 ½ in. caliper and 5 ft. tall at time of planting;
 - iii. 10 evergreen shrubs every 50 ft. spaced 5 ft. to 7 ft. on center. Selected species shall meet a minimum height of 6 ft. at maturity and shall be a minimum size of 3 gallons and 30 in. tall at time of planting.
 - b. Open Space – Landscaping shall be provided within the designated community open spaces to include at minimum canopy trees and understory trees as follows:
 - i. One canopy tree every 50 ft. around the perimeter of the open space; minimum 2 in. caliper and 6 ft. tall at time of planting;
 - ii. 1 understory tree centered between every two canopy trees; minimum 1 ½ in. caliper and 5 ft. tall at time of planting;
 - c. Street Trees – every dwelling shall have one canopy tree, a minimum of 2 in. caliper in size, planted within 10 ft. of the front property line.
6. Timeline for installation of landscaping:
 - a. *0.15 Acre HOA owned 10 ft. buffer strip along Camden Hwy. frontage* – this bufferyard shall be installed prior to issuance of the first certificate of occupancy.
 - b. *10 ft. Buffer Easement surrounding remainder of development* – these buffer areas may be installed on a per-lot basis. Final certificate of occupancy shall not be

issued for each individual lot until installation of required approved buffer plantings.

- c. *Community Open Space:*
 - i. 0.27 acre open space adjacent to lot number 50 – landscaping shall be installed within this open space area prior to issuance of certificate of occupancy for lot number 50.
 - ii. 0.71 acre open space adjacent to stormwater retention facility – landscaping shall be installed within this open space prior to issuance of certificate of occupancy for lot number 64, 65, or 67, whichever is last to be constructed.
- d. *Street Trees* – No individual dwelling will be granted a certificate of occupancy until the required street tree has been planted.