

County of Loudoun

Office of Transportation Services

MEMORANDUM

DATE: September 25, 2009

TO: Jane McCarter, Project Manager
Department of Planning

FROM: Marc Lewis-DeGrace, Transportation Planner *MLDG*

SUBJECT: CMPT 2009-0003, SPEX 2009-0004 & SPEX 2009-0015 –
Scott Jenkins Memorial Park
Second Referral

Background

This referral updates the status of issues identified in the first OTS referral on these applications (dated June 24, 2009). The subject Commission Permit (CMPT) and Special Exception (SPEX) applications propose an active recreational park with lighted fields and a 250-space commuter parking lot on an approximately 35-acre site in the Agricultural Rural (AR-1) zoning district. The site is located on the north side of East Colonial Highway (Business Route 7), approximately one (1) mile east of the Town of Hamilton. Access to the proposed uses would be via two new entrances from Business Route 7, one for passenger vehicles (for both the park facilities and commuter parking lot) and the other for the exclusive use of commuter buses.

This update is based on review of materials received from the Department of Planning on August 13, 2009, namely (1) a letter responding to first referral comments, dated August 11, 2009, and (2) a special exception plat prepared by Patton Harris Rust & Associates, PC, dated February 2009.

Status of Transportation Issues/Comments

Staff comments from the first OTS referral as well as the Applicant's responses (quoted directly from its August 11, 2009 response letter) and current issue status, are provided below.

1. Initial Staff Comment (1st Referral): The traffic study recommends that the speed limit be lowered to 45 MPH for the entire segment of East Colonial Highway (Business Route 7) between Hamilton Station Road (Route 704) and Charlestown Pike (Route 9) due to existing roadway conditions. OTS staff notes that the Board of Supervisors would need to request such a speed limit reduction from VDOT, and that a speed study would need to be completed. OTS defers to VDOT's traffic engineering section for additional comments on this matter.

Applicant's Response (August 11, 2009): Agreed with OTS comments, speed reduction should be requested by the County Board to VDOT. The reduction in speed is suggested for improved site access, but is not required for VDOT approval of the proposed site.

Issue Status: Issue resolved.

2. Initial Staff Comment (1st Referral): OTS staff requests further explanation of the "alternative length" measurement used in the traffic study [Attachment 16 in the 1st OTS referral]. In addition, OTS would like to know why the westbound left-turn lane length provided at the main site entrance (510 feet) is shorter than the maximum length (550 feet) noted in the study [Attachment 16 in the 1st OTS referral].

Applicant's Response (August 11, 2009): The table was derived by PHR+A from VDOT Location and Design calculations for another public road project in the County. The Alternative AASHTO column was shown to reflect the VDOT L&D, Traffic Engineering, and Land Development direction that the AASHTO turn lane standards could be satisfied based on the length of turn lane and storage. No written standards have been adopted by VDOT other than revisions to the VDOT Regional Road Design Manual. However, based on current land use application review regarding design waivers, since Business 7 is not a National Highway System Route, the application of the VDOT Road Design Manual minimum turn lane standards should apply. Or a 55 MPH speed limit, the turn lane storage is based on capacity analyses for urban conditions with a minimum storage length of 200 feet. A 200 foot taper is required for roads with over 45 MPH design speed. For the subject site use, PHR+A revised table 10, as attached, to show the storage requirements in relation to VDOT Road Design standards and concluded that the turn lane[s] are adequate. The comparisons also show the minimum turn lane requirements for AASHTO guidelines for 50 [MPH] and 55 [MPH] design speeds, for comparison purposes. The left turn lane into the site is 510 feet (410 ft turn plus 100 ft taper) allows for storage and deceleration per AASHTO minimum requirements at 50 MPH design, and exceeds the minimum VDOT standards of 400 feet. VDOT review did not highlight any turn lane issues.

Issue Status: Issue resolved.

3. Initial Staff Comment (1st Referral): Consistent with the traffic study's 2010 recommendation, the eastbound left-turn lane into the main site entrance and the westbound right-turn lane into the bus access lane and main site entrance should be installed prior to the opening of Phase 1 of this project. In addition, the plat should be clarified to clearly indicate the length of each turn lane proposed.

Applicant's Response (August 11, 2009): The plat has been updated to include the turn lane lengths (taper + storage).

Issue Status: Issue resolved.

4. Initial Staff Comment (1st Referral): It does not appear that the right-turn lane is long enough to allow for sufficient deceleration of buses accessing the site. The right-turn lane should begin at an appropriate point prior to the bus entrance.

Applicant's Response (August 11, 2009): The right turn length into the bus area has a storage length of 410 feet to the return and 190 foot taper. The VDOT Road Design Manual requirements show a 200 foot turn lane with 200 foot taper. The increase in storage length, as measured from the bus entrance curb return, reflects adequate AASHTO deceleration area for the buses at a 55 MPH speed, with the inclusion of turn lane and taper area. The proposed design should satisfy VDOT requirements.

Issue Status: Issue resolved.

5. Initial Staff Comment (1st Referral): Appropriate signage should be installed to (1) prohibit all eastbound left turns into the bus entrance, and (2) prohibit non-authorized vehicles from accessing the site via the bus entrance.

Applicant's Response (August 11, 2009): Agreed. To be includ[ed] in signing and pavement marking plan for the site plan.

Issue Status: Issues resolved, pending inclusion of condition language to this effect.

6. Initial Staff Comment (1st Referral): All-way stop control (stop signs) should be installed, pending VDOT approval, at the intersection of East Colonial Highway/Dry Mill Road and Charlestown Pike (Intersection 10) prior to the opening of Phase 1 of this project.

Applicant's Response (August 11, 2009): Agreed, conditions should be added, subject to VDOT approval.

Issue Status: Issue resolved, pending inclusion of condition language to this effect.

7. Initial Staff Comment (1st Referral): The traffic study indicates that, under 2020 conditions, a dedicated eastbound left-turn lane on East Colonial Highway and a dedicated westbound right-turn lane on Dry Mill Road at Charlestown Pike (Intersection 10) would improve overall intersection LOS at this location to acceptable levels during both weekday AM and PM peak hours as well as on Saturday. A contribution commensurate with the site impacts should be provided.

Applicant's Response (August 11, 2009): The applicant will commit to a pro-rated contribution for future intersection improvements, and would contribute to the County Transportation fund prior to the opening of Phase 2 of the park.

Issue Status: OTS staff appreciates the Applicant's commitment to a pro-rated contribution towards future intersection improvements. Based on further review of the traffic study and discussions with the Applicant, OTS staff believes that a contribution based on site-generated impacts is more appropriate for the intersection of Hamilton Station Road and East Colonial Highway, as outlined in Comment #8 below. **Issue resolved.**

8. **Initial Staff Comment (1st Referral):** The traffic study indicates that, under 2020 conditions, the installation of a mini-roundabout at the intersection of East Colonial Highway and Hamilton Station Road (Intersection 3) would result in acceptable LOS at this location during both the weekday AM and PM peak hours as well as on Saturday. Further discussion on potential improvements at this location is necessary and need to include the Town of Hamilton as the intersection is in close proximity to the town limits. OTS staff requests further information as to whether a traffic signal was considered for this location. In any case, a contribution commensurate with the site impacts should be provided.

Applicant's Response (August 11, 2009): The applicant will commit to a pro-rated contribution for future intersection improvements, and would contribute to the County Transportation Fund prior to [the] opening of Phase 2 of the park.

In evaluating mitigation measures, the analysis did consider if signalization would be appropriate, but based on the projected 2020 peak hour volumes, a signal would not be warranted based on MUTCD volume guidelines. VDOT would typically require a multi-hour warrant study for an existing intersection to justify signal installation, so review of a roundabout was included as [a] potential alternative. Note that the LOS is adequate with Phase 1 development.

Issue Status: OTS staff appreciates the Applicant's commitment to a pro-rated contribution towards future intersection improvements at this location. OTS recommends that the Applicant contribute \$130,000.00 toward future transportation improvements in the area prior to the opening of Phase 2 of the park; this figure is representative of the site-generated impacts on left turn movements from southbound Hamilton Station Road to eastbound East Colonial Highway. **Issue resolved, pending inclusion of condition language to this effect.**

9. **Initial Staff Comment (1st Referral):** OTS staff recommends that the multi-use path along the length of site should be increased to 10 feet in width per AASHTO guidelines.

Applicant's Response (August 11, 2009): A multi-use trail has been added along the frontage of the property. It will be 10' in width when constructed in the future.

Issue Status: OTS staff recommends that the trail be constructed in phases, with the segment along the frontage of the park and ride lot constructed prior to

the opening of Phase 1. Issue resolved, pending inclusion of condition language to this effect.

Conclusion

Subject to the inclusion of condition language as noted in this referral, OTS has no objection to the approval of these applications. OTS recommends that the speed limit reduction discussed in Comment #1 be pursued with VDOT.

cc: Andrew Beacher, Assistant Director, OTS
Lou Mosurak, Senior Coordinator, OTS
Nancy Gourley, Transit Division Manager, OTS