



March 23, 2013

Keith Bredehoeft
Director of Public Works
3535 Somerset
Prairie Village, KS 66208

**Re: Mission Chateau Traffic Impact Study Review
Prairie Village, Kansas**

Dear Mr. Bredehoeft:

In response to your request and authorization, we reviewed the traffic impact study prepared by Olsson Associates (dated March 2013) for the proposed Mission Chateau development on Mission Road between roughly 84th Street and 85th Street. It is proposed on the site previously occupied by the Mission Valley Middle School. I also reviewed the site plan you provided to me (titled Proposed Drainage Map and dated November 6, 2012).

My comments on the traffic impact study and site plan are listed below.

1. The report does not indicate the author. A traffic impact study should be signed by the author and/or professional engineer in responsible charge.
The traffic study has been updated and is now signed and sealed by a professional engineer (Todd Fredericksen).
2. A new driveway is proposed across from 85th Street. There was no mention of available sight lines along Mission Road from this point. The study should include an evaluation based on current and proposed conditions. I did note some large trees behind the Mission Road sidewalk near the south property line. Similarly, sight lines at the north driveway should be assessed relative to proposed conditions. Berms are proposed, but not detailed, between the street and parking lot.
Prior to final design, sight distance requirements must be reviewed and meet or exceed requirements set forth by AASHTO. Report updated.
3. The report notes that the two site driveways will align with 84th Terrace and 85th Street on the east side of Mission Road. Neither the traffic study nor the site plan shows the existing public streets to the east in sufficient detail to judge the alignments. It's important to specify that now to provide sufficient guidance to the designer. Absent a topographic survey, I'd suggest that the center lines of the driveways align with the center lines of the public streets on the opposite side of Mission Road.
Sight drive alignment is now depicted on the site plan to align with the center of the adjacent streets.
4. Whereas the traffic impact study suggests marking a two-way center left-turn lane on Mission Road south of 84th Terrace, the additional width for that lane extends only about midway between 84th Terrace and 85th Street. It would be better to mark that space for a northbound left-turn lane.
Revisions have been made to the traffic study to provide a northbound left-turn lane rather than a two-way-left-turn lane continuation. Recommendations for a two-way-left-turn lane were made in

the initial study to provide better continuity through the roadway section north of the study area and also provide access to the private drive just south of 84th Terrace. Proper taper must be provided for either recommendation as the existing roadway-width will govern.

5. The length of the throat of both site driveways is about 60 feet (it's difficult to know for certain since the curb line of Mission Road isn't clearly shown). Driveway throats should be at least 100 feet off of an arterial street for two main reasons - to store exiting traffic and to provide a transition for entering traffic. The relatively modest traffic volumes anticipated with this development suggest the shorter throat lengths could function adequately but provisions should be made to clearly give inbound traffic the right-of-way at the first intersection on the site. This would include stop-sign control of the other approaches and providing signage for inbound drivers (similar to what is used on many shopping center entrances).

The traffic study now includes recommendations for internal drive signing at the two main entrances. Entering traffic shall have the right-of-way with northbound and southbound traffic stop controlled.

6. The design of each end of the raised median on the northern most driveway should be modified to accommodate reasonable turning radii. In particular, the west end of this median should not extend to the very edge of the intersecting driving aisle. Final placement of sidewalk along Mission Road could influence the design of the east end of this median.

The site layout was revised to make accommodations for this comment.

7. The traffic impact study indicates that exiting traffic would operate at poor levels of service. That is primarily due to the traffic volumes on Mission Road. The site-generated traffic volumes, as well as the traffic volumes on the residential streets to the east, don't come close to warranting traffic signals at either driveway. Providing two outbound lanes on each driveway is the best way to mitigate this situation and minimize delay on the site driveways. The site plan shows two outbound lanes at the northern most driveway but only one at the south driveway. A recommendation in the traffic study is to add an outbound lane at this location.

Recommendations made in the traffic study are accommodated in the updated site plan.

8. Curvilinear sidewalk is proposed along Mission Road. The separation between Mission Road and the sidewalk on each site driveway is quite significant. I would encourage you to place these relatively close to Mission Road (5 to 8 feet) so pedestrians are visible to turning traffic and pedestrians don't have to cross behind outbound traffic stopped on the driveway. Bear in mind that exiting drivers will pull up very close to Mission Road in order to maximize their view of oncoming traffic and to lessen the time they are exposed to conflicting traffic as they turn.

The site layout was revised to make accommodations for this comment. Sidewalks cross entrances much closer to Mission Road now.

9. Sidewalk is proposed around the footprints of the two main buildings but it is incomplete. Further, there is no continuity across the two major driveways associated with the building closest to Mission Road. There is no sidewalk along the side of the interior drive where the villas are proposed.

The site layout was revised to make accommodations for this comment.

10. It would be preferable to have one-way traffic flow at each of the three major building entrances. Using angle parking where feasible would help reinforce the appropriate travel path.

This recommendation is currently under evaluation for future plans.

11. The curve in the driveway at the northeast corner of the site is very tight. Virtually every driver will encroach into the opposing lane while navigating this curve, particularly traffic traveling towards the back of the site. The inside radius appears to have been abbreviated for parking. That radius should be developed fully and perhaps even increased somewhat.
The site layout was revised to make accommodations for this comment.

12. Parking along a curvilinear driving aisle is problematic in that viewing distances for drivers in the aisle and drivers unparking will be limited. It is important to maintain a low-speed environment to minimize potential conflicts. One way to accomplish that would be by constructing raised crosswalks at strategic locations; in essence a traffic calming strategy.
The site layout was revised to make accommodations for this comment.

13. The abundance of parking along driving aisles, as well as the curvilinear alignment and tight curves, makes it essential that sight lines be protected. Careful placement of potential obstructions such as landscaping and signage is critical.
The site layout was revised to make accommodations for this comment.

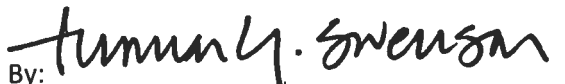
14. The applicant should demonstrate how trucks will navigate through the site.
A copy of the truck turning templates is now provided in the Appendix of the report under Existing plus Development conditions.

15. A signing and pavement marking plan should be developed for the site.
The interior signing is now shown on Figure 2 of the report.

I will be available to review this matter with you at your convenience.

Very truly yours,

TranSystems Corporation

By: 
Thomas G. Swenson, PE, PTOE

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