

Memorandum

DATE: March 27, 2017

TO: Windom Park Citizens in Action
Small Area Transportation Plan Steering Committee

FROM: Bill Smith

RE: Lowry Grove Village LLC Development
Traffic Study Review

Background

This memorandum documents a review of a traffic study that was prepared for the Lowry Grove Village development, a proposed residential development in the City of Saint Anthony Village. The traffic study was prepared by WSB and Associates, Inc., a Twin Cities-based firm that consults public and private sector clients in the areas of engineering, planning, environmental, and construction services.¹ The traffic study for the proposed development was an element of a larger Alternative Urban Areawide Review (AUAR) that was required by the City of Saint Anthony Village as part of the development review/approval process.² The Lowry Grove Village developer (project applicant) is The Village, LLC. It is presumed that the applicant directly contracted WSB to prepare its traffic study for submission to the city.

The Lowry Grove Village development is proposed to be located in the northeast quadrant of the intersection of Kenzie Terrace (County State Aid Highway (CSAH) 153) and Stinson Parkway in the City of Saint Anthony Village.³ The proposed development is immediately adjacent to the City of Minneapolis, as Stinson Parkway is the border between Saint Anthony Village and Minneapolis north of Lowry Avenue. Therefore, there are direct physical links between the proposed development and Minneapolis, and residents in Minneapolis neighborhoods have been concerned that the development's traffic/transportation issues have not adequately addressed impacts that they will experience after the project is implemented.

¹ As the City of Saint Anthony Village does not employ a planning director and planning staff, WSB is currently retained (contracted) to provide planning services to the city. Among other activities, these services would include administration of the development review/approval process for proposed developments and providing administrative and staff support to the city's planning commission.

² An AUAR is a planning tool local governments can use to understand how alternative development scenarios will affect the environment of their communities before the development occurs. The process is designed to look at the cumulative impacts of anticipated development scenarios within a given geographic area.

³ As a reference, the development site, at 15 acres, exists today as a community of 200 manufactured homes and recreational vehicles.

What Traffic Studies Do and Do Not Do

Traffic studies are prepared through applications of both science and art. The scientific steps are well documented and are outlined in State of Minnesota manuals prepared by MnDOT and the Institute of Transportation Engineer's (ITE's) 2006 Recommended Practice Transportation Impact Analysis for Site Development. The artistic component is applied, because no two traffic studies are exactly alike. Each project will present with differences in size, density, and development program; location within a city or town; size and scope of the project's influence area; availability of alternative travel modes within the influence area; and even the availability of background data.

In essence, however, traffic impact studies are evaluations of the congestion and safety effects of a particular development on its surroundings and supporting transportation infrastructure. It is performed to ascertain if a development will have adverse impacts on that infrastructure and, if so, how the impacts can be mitigated.

While there have been cases where the negative traffic impacts of a particular development are so onerous, no reasonably cost mitigation measures are available. In these cases, the applicants decide to back out, and the project is scrapped. However, stopping projects from coming to fruition is not typically one of the intents of a traffic study. As described above, the intents are to: a) discover if a proposed project will cause major impacts to occur and b) identify approaches to minimize the negative impacts so that the proposed project can be developed and operate as a good neighbor.⁴

Traffic studies consist of a number of analyses and analytical steps. The most significant of these is the Intersection Capacity Analysis. This analysis and the process followed to complete it is important because it recognizes two factors. First, the worst-case traffic conditions (i.e., conflicts that will result in congestion, increased CO₂ emissions, and car, bus, bike and pedestrian crashes) occur at intersections. Secondly, the AM and PM peak hour periods are the two times of day when the highest volume of traffic will be on the streets and at the intersections.

Intersection capacity analyses include:

- counting AM and PM peak hour turns at critical intersections
- estimating the number of trips that will be generated by the proposed development
- distributing trips to/from the development in accordance with geographically-based socio-demographic and economic characteristics of populations surrounding the development
- assigning traffic to the system of streets and intersections that will directly serve the site
- assessing whether traffic generated by the proposed development (when added to traffic that already exists without the development) will result in congestion, delay, and unsafe traffic operations at intersections.
- Developing and testing the effects of improvements that can mitigate identified traffic impacts, including installation of traffic control devices such as signage or traffic signals; adjusting the

⁴ It should be mentioned that reducing the scale (size) of a proposed development, so that it doesn't generate as much traffic as it otherwise would have, is an often accepted mitigation measure.

timing and/or phasing of already existing traffic signals; adding intersection turn lanes and/or traffic channelizers; or generally improving the configuration and geometry of traffic lanes.

Intersection capacity analyses are typically conducted for three development scenarios.

1. **The existing condition** to determine the effectiveness of the current situation, as measured by Level of Service (LOS). By policy, most municipalities have selected LOS A, B, C, and D as acceptable levels of traffic operations in terms of intersection delay, with LOS A as the best, and LOS D as the least acceptable condition. LOS E and F, in most municipalities, are conditions that warrant mitigation.
2. **The future no-build condition** where intersection approach volumes are extrapolated to a future time period (typically one-year after construction on the proposed development has been completed), but traffic generated by the proposed development has not been added. Testing this condition allows the analyst to determine if there will be negative impacts on the system of streets and intersections in the future, without the development. If negative impacts are identified, these are mitigated to ensure that all intersections in the future no-build are operating at minimal LOS D.
3. **The future build condition** where traffic from the proposed development is now added to traffic from the future no-build condition. If impacts are identified under this development scenario, it can be stated that they are solely attributable to the development and not to other factors. This is important, because cities will then have standing to require the developer (applicant) to pay the costs required to mitigate impacts and ensure minimal LOS D traffic operations.

Traffic studies in AUARs may include an additional development scenario, because the developments under study in AUARs often have several development phases. Therefore, there could be more than one **future build condition** under analysis in an AUAR.

Lowry Grove Development Traffic Study Review Findings (*Good on Science, Lacking on Art*)

Generally, the traffic study was properly prepared; all the scientific steps were covered. The artistic component of the traffic study was not addressed equally as well and indicates a lack of intimate knowledge with the street system, Minneapolis Park Board policies regarding the speed of commuter traffic on parkways, and land uses in the vicinity of the proposed development.

Five key concerns with the traffic study include:

1. Lack of documented assumptions
2. Study area is not large enough to capture all anticipated impacts
3. Weekend (Saturday) traffic issues were not addressed
4. Transit availability and use were not addressed
5. Crash data were not addressed

These five concerns are discussed below.

1. Assumptions not Shown:

The traffic study provided in Appendix D of the Lowry Grove Development AUAR does not provide a list of assumptions that the WSB analyst used to reach conclusions on a number of inputs in the traffic study. Perhaps these assumptions are provided in an addendum to the traffic study that I was not able to find. The assumptions would have explained the WSB analyst's selection/identification of the proposed development's:

- influence area
- trip distribution
- critical intersections for analysis

2. The Study Area is not Large Enough to Consider all the Traffic Issues

The WSB analyst should have considered a larger project influence area. This would have resulted in more nuanced results from the trip distribution analysis and would have then led to the inclusion of intersections in Minneapolis; particularly those along Johnson Street that provide access to southbound I-35W.

The trip distribution analysis results are presented on page 11 of the WSB traffic study. They indicate:

- 5 percent of traffic will travel to/from the development on Stinson Parkway, north of the development
- 4 percent to/from the north on Silver Lake Road
- 5 percent to/from the northeast on New Brighton Boulevard
- 5 percent to/from the southeast on Saint Anthony Boulevard
- 20 percent to/from the southwest on New Brighton Boulevard
- 50 percent to/from the south on Stinson Parkway
- 6 percent to/from the west on Lowry Avenue
- 1 percent to/from the west on 26th Avenue
- 1 percent to/from the west on 27th Avenue
- 3 percent to/from the west on Saint Anthony Boulevard

As described above, the largest percentage of traffic that will be distributed to/from the site will travel on Stinson Parkway, south of the development. Travelling south from the development, this route will get traffic to the intersection of 18th Avenue/New Brighton Boulevard/Stinson Parkway, which provides access to Stinson Parkway where northbound and southbound I-35 W ramps are located.

This intersection (18th Avenue/New Brighton Boulevard/Stinson Parkway) is known for two things; a) odd geometrics and b) peak hour congestion. In addition, Stinson Parkway, itself, is known as a parkway-type street, with a posted speed of 25 miles per hour, and where residents have worked with the Minneapolis Park Board to increase police surveillance and enforcement of posted speed limits.

As a result of these factors, it is likely that if 50 percent of AM and PM, peak hour inbound and outbound traffic were to use Stinson Parkway, it would find an unwelcoming environment where peak hour speeds

would be curtailed and possible traffic congestion would occur as it attempts to either access the I-35W ramps in the morning or travel north from the ramps in the afternoon.⁵

Because the 18th Avenue/New Brighton Boulevard/Stinson Parkway intersection was not included in the intersection capacity analysis, it is not known if existing and future traffic operations would be negatively impacted by additional traffic driving to/from the development.

Even if the 18th Avenue/New Brighton Boulevard/Stinson Parkway intersection were to operate at acceptable LOS A through D under a future No-Build condition, it is likely that some of the traffic travelling between the proposed development and the University of Minnesota East and West Bank Campuses, downtown Minneapolis, and other locations in the I-35W southbound corridor would opt to avoid the intersection. The southbound approach to this intersection, which consists of two lanes, is severely constrained by odd geometrics that permit an awkward northbound left-turn movement (on a slope) from Stinson Parkway to 18th Avenue. Motorist's decision to avoid this intersection would mean that the trip distribution percentage to/from the west along Lowry Avenue should be higher than the 6 percent that is reported in the WSB traffic study.

In order to access the southbound I-35 W ramp, traffic opting to travel west from the development, along Lowry Avenue, would accomplish a westbound left-turn at the intersection of Lowry Avenue/Johnson Street. After passing through this intersection, the traffic would encounter the intersections of 23rd Avenue/Johnson Street, 18th Avenue/Johnson Street, and finally a traffic signal at Johnson Street/Quarry Access Drive that controls access to the I-35W southbound ramps. These traffic signals should be included in the traffic study.

Given what is known about Stinson Parkway, between Lowry and 18th Avenues, and what is suspected about traffic operations at the 18th Avenue/New Brighton Boulevard/Stinson Parkway intersection, it is entirely plausible that travel routes and intersections in the City of Minneapolis will be affected more by the proposed development than the traffic study seems to indicate.

3. Weekend Traffic Issues were not Addressed:

The Quarry Shopping Center is a major trip generator that includes a Home Depot, a CUB grocery store, a Target store, and at least 15 other retail businesses. Moreover, there is a smaller strip center with a liquor store and other retail uses along 18th Avenue at the intersection with Stinson Parkway, along the back side of the Quarry.

It is not surprising that shopping trips destined for the Quarry and the smaller strip center are produced in Northeast Minneapolis. What may be surprising is that the Quarry's market area extends into western Roseville and western Saint Paul, Fridley, North Minneapolis, and Southwest Minneapolis; areas that would not normally be suspected of contributing weekday commuter traffic to the intersections in the proposed development's influence area. For this reason, it is suspected that weekend, peak period

⁵ The volume of site-generated traffic at the 18th Avenue/New Brighton Boulevard/Stinson Parkway intersection would be: AM Peak --- 125 southbound/46 northbound; PM Peak --- 90 southbound/128 northbound. This is traffic that would be added to the existing volume of traffic within one hour.

traffic volumes could possibly be as high as (and may be even higher than) peak hour traffic on some weekdays.

The WSB traffic study, however, did not address weekend traffic operations.

4. Transit Availability:

The study did not include the availability of transit services that might be used by residents at the Lowry Grove development. Interestingly, consideration of transit use to the trip generation analysis (Table 2 on page 10) might have served to reduce the total volume of automobile trips by as much as 10 percent. A quick review of Metro Transit's System Map showed that five bus routes are within one-quarter mile of the Kenzie Terrace/Stinson Parkway intersection.

5. Crash Data not Addressed:

Table 1 on page 7 of the WSB traffic summarizes crash data for the 2013 to 2015 period. As shown, outlier intersections with the highest number of crashes are Saint Anthony Boulevard/Kenzie Terrace with six crashes, Stinson Parkway/Lowry Avenue/Kenzie Terrace with eight, and Saint Anthony Boulevard/New Brighton Boulevard with 16.

None of the conclusions or recommendation, beginning on page 24, ever mentioned any of the findings from the crash data inventory and analysis. So, why were these data even included in the traffic study if they weren't mentioned again and certainly weren't used to inform the recommended actions?

Recommendations

Biko Associates recommends the following:

1. Coalesce with other neighborhoods in Northeast Minneapolis and, as a group, encourage the City of Saint Anthony Village planning department (which is administered and staffed by WSB and Associates, through a retainer contract) to review (or re-review) the traffic study. Encourage the city planning department to consider comments and findings from Biko Associates' critique and to specifically require the traffic engineer (which is WSB and Associates, presumably contracted by the developer, Lowry Grove Developers, LLC) to:
 - Expand the scope of the proposed development's traffic/transportation influence area
 - Expand the scope of the traffic study to consider traffic impacts that will occur on Saturday during the peak shopping period
 - Consider constrained traffic flow on Stinson Parkway, between Lowry Avenue and 18th Avenue, due to increased enforcement of the posted speed.
 - Conduct an intersection capacity analysis of the 18th Avenue/New Brighton Boulevard/Stinson Parkway intersection for the existing and future no-build conditions. If the analysis shows the intersection is near capacity or over capacity, consider alternative routes for accessing I-35W ramps; particularly the southbound ramp.
 - Consider the need to alter trip distribution findings to estimate the percentage of traffic that will be distributed west along Lowry.

- Determine the impact of the proposed project on Minneapolis streets and intersections including Lowry/Johnson, 23rd/Johnson, 18th/Johnson, and Quarry Access Drive/Johnson.
 - Determine how the crash data should inform recommended actions where geometrics and traffic signal controls are improved.
 - Consider transit use in the trip generation estimates.
2. If cooperation with the City of Saint Anthony Village is not forthcoming, coalesce with other neighborhoods in Northeast Minneapolis and approach your councilmember(s). Ask him/her to directly appeal to the City of Saint Anthony Village planning department and Planning Commission to determine how the proposed project will impact streets and intersection in the City of Minneapolis.