

City of Montpelier
Department of Public Works
Memorandum

To: Development Review Board
c/o Meredith Strobridge Crandall, Planning and Zoning Administrator

From: Thomas McArdle, Director
Corey Line, Project Management Director

Date: October 15, 2018

Subject: Capitol Plaza Hotel and Parking Garage
Traffic Impact Study by RSG, Inc
Staff Review Comments

This memorandum summarizes our review of the Traffic Study prepared by David Grover, PE, of RSG, Inc., dated 10/11/18. The traffic study was prepared for Gregory Rabideau of Rabideau Architects, Inc., who is employed through a public and private partnership between the City and the owners of the Capital Plaza property. Our comments are intended to assist the DRB in the deliberation of the site plan application in our capacity as technical advisors to municipal boards and commissions. We have spoken with Mr. Glover and Mr. Rabideau seeking answers to our questions for clarification purposes and have also spoken with the City Manager's office as the applicant representative.

- We find the report to be comprehensive, reflecting all known permitted land use alterations in the vicinity of the study area: transit center/housing project, new hotel, and expanded garage project.
- The report includes background traffic projections based on previous studies. This includes a 2015 traffic impact report prepared by Lucy Gibson, PE, of Dubois & King (D&K) relative to the One Taylor Street redevelopment. She also prepared a follow-up study to assess bus circulation needs as expressed by CVTA and to present available options for the new transit center. RSG used the 2015 D&K report and the proposed Taylor Street lane alterations described in the bus circulation study in its Level of Service analysis for the Taylor/State intersection. RSG also considered the need to update or modify its conclusions and recommendations concerning the hotel traffic impact projections.
- I confirmed with the author of the D&K report, Lucy Gibson, PE, that she chose to prepare a conservative report based on the uncertain final plans for the One Taylor transit center and housing project which was not finalized at the time of her studies. As such, the former parking lot containing approximately 111 spaces serving primarily office employees was included in the existing background traffic volumes and retained for purposes of projecting the new land use traffic analysis. The actual parking being provided at One Taylor will be 30 spaces for housing and transit center use. As Ms Gibson stated via email, "...the multimodal center would generate less traffic than the parking lot so we opted to use the existing traffic volumes with the idea that it would be a bit conservative."
- In the section entitled Parking and Trip Generation of the RSG report, (page 5) concludes there will be a net gain of 163 parking spaces at the project site (including existing surface parking in the Capital Plaza and Heney parking lots). If we consider the loss of 81 spaces in the former Carr parking lot, the net gain is 82 spaces in the combined study area.

- We agree with the RSG approach to consider all trips associated with the garage to be new trips in the study area. This gives us a worst case scenario from which to consider the relative impacts. Given that the D&K traffic impact study also elected to employ conservative traffic projections for the One Taylor Street redevelopment and RSG is utilizing those values as background traffic, we believe the relative impacts as projected represent a greater impact than we are likely to realize upon full build-out of the projects.
- We concur that conducting Level of Service (LOS) analysis for nearby intersections was appropriate even though the threshold levels recommended in the VTrans guidelines may not have been satisfied to warrant the more detailed analysis. We also believe it's important for the DRB and the City, as both an applicant and in its role as the responsible party for managing the transportation systems infrastructure, to fully understand the implications associated with large scale developments situated within its downtown. It is incumbent upon the City to ensure that any potential adverse impacts are identified and understood, to consider the appropriate near and long term response. and to ensure there is sufficient available capacity to accommodate future growth potential. This may include one or more office, retail or other parking facilities situated within this compact urban area. We note the volume to capacity ratio (v/c) at the subject intersections will allow for some additional growth, although the poor left turn service levels at State and Taylor Streets will need to be addressed at some point in the future by implementing alternate control methods, such as a roundabout, as described in the D&K report.
- It is relevant to note that traffic volume trends in the area have been stagnant for several years with little to no growth. For the Taylor/State intersection, the 2015 D&K report states "There has been a general decline in traffic volumes at the intersection over this period." in reference to VTrans counts from 2001–2015 (section 2.2 Traffic Volumes). However, RSG used a 3% growth factor for the 2025 design year. As pointed out in the RSG report, they did not adjust the Taylor/State counts used by D&K which may have been a little high per the DHV adjustment typically used and then further increased the projection by the 3% growth factor. Projected bus traffic associated with the transit center are also included in the background traffic.
- Traffic distribution to and from the site as used by RSG in both of their 2018 studies assumed no change in directional travel in the post-construction condition (see figure 3). This may not be accurate because of the existing circuitous route a motorist must negotiate to traverse the parking lot between Taylor and State Streets. The proposed dedicated access "road" will be similar to a street, making directional choices more convenient based on the intended destination or point of origin. Distribution is also likely to be influenced by perceived or actual delay as well as local knowledge. (We may also experience some cut-through traffic not associated with any of the land uses.) Essentially, the route of choice may be the Taylor Street access if the destination or origin is the Interstate or Route 2, thereby potentially decreasing projected State and Taylor Street project related impacts. For traffic impact study purposes, its best to use the existing conditions to proportionally assign the projected distribution pattern because it is difficult to predict how the new circulation design will be utilized.
- The relative peak hour impacts of a hotel and parking garage is not mentioned in the report specifically but it is reflected in the projections. When we consider project traffic impacts, we typically focus on the weekday peak hour of the affected highways as the most critical

time period of concern. Not all land uses generate traffic at a time period directly coinciding with the weekday afternoon and/or morning peak hours of a roadway network. The peak hour of a hotel revolves around the check-in and check-out times which occur after or before the peak hour of the highway network. The disconnected peak hours reduce the impact during the critical time periods of the highway. It is noteworthy that the consultant chose to use a 50% hotel occupancy rate for purposes of the analysis. This may appear to be an inaccurate reflection of true occupancy rates. In discussing this choice with the consultant, it was explained that 50% occupancy allowed him to assign more traffic to the unused parking spaces which would be available for short term retail shoppers or to long term office related uses. This actually results in a higher trip generation rate to intentionally result in a worst case scenario during the AM and PM peak hours. The only exception may be Friday afternoons, because hotels tend to be busier on weekends than weekdays, but arrivals will still be scattered vs concentrated during the peak hours for the highway facility.

- We recommend that a follow-up traffic study be performed to determine whether the traffic projections were close to reality and to ascertain whether any off-site mitigation may be needed that are directly attributable to the new land uses. I suggest this follow-up study be conducted one year from the date of full occupancy and use.

We agree with the conclusions provided in the RSG report. The report provides the information necessary to ascertain the relative impacts of the combined parking garage and hotel project. However, the traffic impacts shown may actually be less than projected and a follow-up study would help the City understand its future transportation system needs.