Stantec

Memo

To:	Mr. Richard Gosselin, Chairman MILLBURY PLANNING BOARD Municipal Office Building 127 Elm Street Millbury, Massachusetts 01527	From:	Richard S. Bryant, P.E. Northampton, MA
File:	Singletary Arms Mixed Use Development Traffic Impact Study Peer Review	Date:	January 21, 2021 Nitsch Responses in BLUE 3/3/2021

Stantec Consulting Services Inc, ("Stantec") has reviewed the *Traffic Assessment Report, 115 West Main Street, Millbury, MA* updated January 18, 2021 that was prepared by Nitsch Engineering for the above-referenced project. Stantec also reviewed plan sheet #C-4.2 depicting proposed improvements to the Burbank Street/High Street/West Main Street intersection prepared by Branson Surveying and Engineering, LLC dated January 11, 2021. The traffic study and plans were submitted in support of a proposal to reuse the Steelcraft Inc. manufacturing buildings and construct new buildings on the Steelcraft site. The reuse plan will accommodate 197 residential dwelling units, 2400 square feet of restaurant space and 10,000 square feet of office space. Approximately 330 parking spaces are proposed.

SUMMARY

The report reviewed is an update of a November 23, 2020 report also reviewed by Stantec. The updated report was prepared in response to comments submitted to the Town by Stantec dated December 11, 2020. **Stantec generally finds that the updated report is adequate to inform decision making regarding the proposed project. There are a few technical issues that may warrant clarification however, addressing these concerns should not substantially impact the findings of the study. The study outlines a traffic mitigation strategy for the Burbank Street/High Street/West Main Street intersection. This strategy is inconsistent with the plan submitted by the project's site engineer. Also, the proposed mitigation plan impacts other stakeholders, most notably the owner of the market at the Burbank Street/High Street/West Main Street intersection. It is recommended that the applicant engage in a more robust process to develop, refine, and design the mitigation plan.**

PRIOR COMMENTS AND RESPONSES

Comments from Stantec's December 11, 2020 review are repeated below in italics. Updated comments are also provided in bold text.

Traffic Signal *The traffic study describes the potential operational impacts of installing a traffic signal at the Burbank Street/High Street/West Main Street intersection without recommending its installation and without describing how installation would be funded. The study should put forward a recommended approach and possible funding plan if installation of the signal is recommended. The funding plan should define the applicant's commitment to the installation, if any. Signalization should only be considered if an MUTCD traffic signal warrant is met. The signal warrant analysis provided indicates that a signal is not warranted. As noted above, the site traffic volume levels used in the signal warrant analysis may be understated and the analysis should be updated. However, even if*

Reference: **Singletary Arms**

the updated analysis satisfies the 4-Hour warrant that was applied, alternative improvements should first be considered other than signal control. The study suggests installation of a HAWK/pedestrian signal as an alternative however, this would only be justified with high pedestrian volumes. As suggested below, the applicant should consider new signal warrant analyses as part of the future traffic monitoring program.

The new study has updated the traffic forecasts and signal warrant analyses. A signal does not appear to be warranted and is no longer being recommended.

Nitsch Response: No action needed.

TDM Plan *The traffic study describes a broad range of Travel Demand Management strategies that may be implemented if directed by the Town. The applicant should confirm that all suggested actions are feasible and would be funded by the applicant. Of special concern relative to cost implications and feasibility are proposals to install electric vehicle charging stations, provide bike racks and provide car-share vehicles on site.*

A "comment/response" memo submitted by the traffic engineer dated January 18, 2021 includes a statement asserting to the feasibility of the proposed TDM measures.

Nitsch Response: No action needed.

Traffic Monitoring *The study commits to a post-build traffic monitoring program to be developed in greater detail with the Town. The purpose of the program should be clearly defined. Of concern is the study's discussion of a new traffic signal. The monitoring study could provide a more rigorous signal warrant analysis including consideration of the MUTCD Eight-Hour Warrant.*

Traffic signal installation is no longer proposed however, the traffic monitoring program has been updated to include an eight-hour signal warrant analysis.

Nitsch Response: No action needed.

Pedestrian Accommodations *The study describes existing deficiencies in the pedestrian network adjacent to the site including missing or non-compliant wheelchair ramps. Any proposals to upgrade these facilities as part of the site redevelopment or as off-site mitigation should be described.*

The updated study includes commitments to upgrade non-compliant wheelchair ramps to ADA standards. However, as described in greater detail below, further work is required to better define the intersection improvement plans.

Nitsch Response: The latest version of Sheets C-4.2 and C-4.3, dated 3/1/2021, shows the improvements for the intersection that are consistent with our recommendations in the report, including new ADA-compliant curb ramps.

Reference: **Singletary Arms**

NEW COMMENTS

Comments related to the updated traffic analyses are provided below. Addressing these comments will not likely change the findings of the study.

Trip Generation Trip generation forecasts for the project were updated, as suggested by Stantec, using ITE trip rates for low-rise, multifamily housing. These rates are higher (more conservative) than the mid-rise rates first used in the study. This change should have resulted in higher trip forecasts for the entire project. However, the updated study estimated fewer site trips for the PM peak hour, 122 trips, than used in the prior study, 126 trips. The difference resulted from an unexplained reduction in the number of restaurant trips (reduced from 46 to 23) and the inappropriate application of a five percent reduction for mode choice. Also, the office floor area in the project reportedly increased from 7500 square feet to 10,000 square feet but no change was made to the forecasted office trips.

Nitsch Response: Previous trip generation used inconsistent data types for the different land uses (a mix of vehicle trips and person trips, where vehicle trips were converted to person trips using an assumed vehicle occupancy rate of 1.1 persons per vehicle), and peak-hour trip generation was based on the peak hour of the generator. The revised trip generation used vehicle trips for all land uses for consistency, because the data sets from which those trip generation rates are devised are more robust, and because person trips are not needed for the method we employed. The new peak-hour trip generation was based on the peak hour of adjacent street traffic, which is consistent with standard traffic engineering practices, and naturally resulted in fewer trips generated during the peak hour than when based on the peak hour of the generator. Broken down by land use, the number of trips generated by the apartments has increased, the number of trips generated by the restaurant and the existing manufacturing use (the latter used as a deduction for net future trips) has decreased, and the number of trips generated by the office space has remained about the same as before.

We note that Table 6 of the revised report shows vehicle trips, whereas that table in the previous report shows person trips. The PM peak hour now has 122 net vehicle trips (before mode share applied), versus the previous version of 126 net person trips, which converts to 115 vehicle trips. Therefore, the net trip generation for the PM peak hour is actually higher in the revised version than the previous version, despite any decreases in vehicle trips for any one land use due to the change from peak hour of the generator to peak hour of adjacent street traffic.

Mode share adjustment to vehicle trips is a standard traffic engineering practice in the four-step modeling process for projecting travel demand. We applied a five percent reduction based on the Town of Millbury 2019 Master Plan, which shows that 95% of people travel using cars. It is common practice to skip this step when the project is far from public transportation options, as is the case for this project. However, the Master Plan indicates only one percent of people use public transportation, and the other four percent reduction come from work-from-home and other transportation mode options. Therefore, we believe this five percent reduction is appropriate. If, however, the peer reviewer would prefer the more conservative final trip generation numbers obtained by skipping the mode-share reduction, we can make that adjustment, though we believe that there would be negligible change in the analysis results, and it would not affect our overall findings and recommendations.

Reference: **Singletary Arms**

Traffic Operations The updated study includes a left-turn lane warrant analysis for turns from West Main Street southbound to Burbank Road as suggested by Stantec. Predicted volume conditions satisfy the warrant criteria.

Nitsch Response: No action needed.

Site Access Sight line evaluations were updated for the two garage driveways proposed on Burbank Street and added for the parking on West Main Street and for a driveway proposed on the east side of Burbank Street as suggested by Stantec. **Sight line limitations were noted for the two garage driveways earlier and reported for the other Burbank Street driveway as well. The applicant has proposed warning signage to address these limitations. The post-build monitoring study should assess the effectiveness of the signage.**

Nitsch Response: No action needed.

Parking Angle parking has been replaced with parallel parking along Burbank Street adjacent to the site. This change likely reduced the overall parking supply for the project yet, the updated study reports no change in the parking supply.

Nitsch Response: Previously, there were a total of 330 parking spaces, with 10 of them as angled parking spaces along Burbank Street. Under the most recent site plan (dated 3/1/2021), there are a total of 327 parking spaces, with 5 of them as parallel parking spaces along Burbank Street. There is also one fewer parking space than before in the Building 2 parking garage, and there are 3 additional parking spaces in a small surface lot off West Main Street. The removal of 6 spaces from Burbank Street and the garage, and addition of 3 spaces on West Main Street, results in a net change of -3 parking spaces, which matches the difference in total parking spaces between the old plan and the new.

OFF-SITE MITIGATION

The updated study recommends certain improvements to the Burbank Street/High Street/West Main Street intersection. Specifically, the study recommends:

- Adding a westbound left turn lane on West Main Street;
- Removing on street parking along West Main Street to accommodate the left turn lane;
- Reconstructing existing sidewalk ramps at the intersection to make them ADA compliant; and,
- Installing a pedestrian signal (either a HAWK or RRFB) at the existing West Main Street crosswalk.

Site plans showing offsite improvements, Sheet C-4.2 referenced above, are inconsistent with these recommendations. These plans do not show the left-turn lane, pedestrian signals, or the removal of parking on West Main Street. Instead, they show a curb extension on Burbank Street, relocation of the existing crosswalk on West Main Street to the west side of Burbank Street, and the removal of on-street parking on the east side of Burbank Street. The removal of this parking could negatively impact the retail business at this corner.

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Nitsch Response: The latest version of Sheets C-4.2 and C-4.3, dated 3/1/2021, shows the improvements for the intersection that are consistent with our recommendations in the report, including the left-turn lane, the RRFB, the removal of parking on West Main Street, new ADA-compliant curb ramps, and placement of the crosswalk on West Main Street near its current location. The removal of on-street parking on the east side of Burbank Street is no longer required.

It is recommended that applicant address these inconsistencies by engaging a broader group of stakeholders in the development of a mitigation plan. This group should include Town departments such as public works, police, and fire as well as residents and business owners. Construction documents, based on conceptual plans approved by this group, should then be prepared and reviewed by the Town.

Nitsch Response: We anticipate that, as the design of the mitigation improvements progresses, we will have meetings with stakeholders and Town departments, and we will provide the Town final plans for review and approval.

Thank you for providing us the opportunity to review the updated Singletary Arms traffic impact study. Please do not hesitate to call if we can be of further assistance.

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