



## MEMORANDUM

DATE: June 3, 2021

TO: Ms. Jean M. Bubon, AICP  
Sturbridge Town Planner

CC: file

FROM: John P. Shevlin, P.E.

RE: **Engineering Review Services-Response to Comments  
Noble Energy Real Estate Holdings, LLC  
Noble Energy Travel Plaza and EV Discovery  
Center at 195, 197, 201 and 201A Charlton Road  
Peer Review, Stormwater Management, Traffic Impact Analysis and  
General Site Plan Approval Compliance  
Sturbridge, Massachusetts  
(Pare Project No.: 21083.00)**

Pare Corporation (Pare) has been provided responses to our May 12, 2021, review letter. Vanasse & Associates has provided responses dated May 20, 2021 and CMG has provided responses in a May 27, 2021 response letter. In addition to our review of these responses, Pare had attended the May 25, 2021, Planning Board hearing and has had some coordination with the applicants engineer to discuss the project. The following provides supplemental information to our review of each comment that required feedback to the applicants engineer responses.

### **Vanasse Traffic Impact Study, dated April 2021 and Response to Comments dated May 20, 2021:**

- *Project Description* – Please provide update regarding consultation with MassDOT regarding off-site improvements and the State Highway Access Permit in addition to the Environmental Notification Form (ENF) and the Environmental Impact Report (EIR).

*The applicant has responded that on-going coordination with the Town and MassDOT has continued. An initial State Highway Access Permit Application was submitted to MassDOT in December 2020 to initiate a coordination/scoping meeting that also took place in December 2020. Consultation has continued with MassDOT to confirm the trip generation methodology and the study area that has been assessed in the April 2021 TIA as well as design to the access at the proposed site driveways in particular the signal at the main entrance. The applicant's traffic engineer has stated that an EENF is being prepared for the project pursuant to the requirements of the MEPA and will be followed by the preparation of an EIR. Has further coordination occurred with MassDOT and where does the EENF stand. Also has any further progress been made with the relocation of the bank driveway been made. Without this realignment of the driveway, left turn movements out of the bank driveway will be difficult due to queuing of traffic at the light.*





*Also, for the secondary access, the study does not take into account the business across the street and what impacts the two-way left turn lane may have on truck traffic exiting the proposed site that will need to cross two travel lanes and the proposed two-way left turn lane. Please provide further clarification.*

- *Existing Travel Volumes* – Weekday a.m. peak hour, weekday p.m. peak hour and Saturday midday peak hour counts were collected. Adjustments were reviewed for the counts due to seasonal fluctuations. The month (October) when counts were performed are above-average month conditions. No adjustments were made for seasonal fluctuations. Also, adjustments were reviewed and made due to the COVID-19 pandemic. Volumes pre-COVID versus during the pandemic were reviewed from the Hobbs Brook Driveway. Proper adjustments were made to the existing volumes throughout the study area.

*As stated above, please provide more information related to traffic from business across Route 20 at the secondary access to the proposed site and an analysis of how this intersection will operate. Pare reviewed this development in 2017. The proposed office use was anticipated to generate 98 trips in the morning peak hour (86 in/12 out) and 124 trips in the p.m. peak hour (22 in/102 out). Please provide volumes that could/are anticipated during the peak conditions and what the impacts are. Also, please clarify the impact of the additional traffic.*

- *Project – Generated Traffic* – Pare agrees that Automobile Sales LUC 840 for the electrical vehicle discovery center is the best comparable use to determine trips. It is understood that classes/seminars could be taught at this center attracting a significant number of visitors/users. Were these volumes considered?

*As discussed at the Planning Board hearing, it was previously stated that 70+ individuals could be attending classes/seminars and they may extend to a release time of late afternoon, i.e. the p.m. peak hour. Provide analysis taking into account the impacts of these peak volumes.*

For the travel center, two XtraMarts on Route 146 in Sutton and Millbury were used to determine potential trips as they have a similar level of amenities. It has been noted that these sites were discussed with MassDOT. Please provide information to size of those facilities, uses at those facilities (number of fueling stations, diesel stations, uses inside building, etc.) for comparison. For example the site at 27 Worcester-Providence Turnpike does not have a drive-thru or sit-down restaurants. Provide further back-up as to how they compare and to justify why they were used to develop trips for this site.

*Supporting documentation has been provided pertaining to the XtraMart sites. Although not a direct correlation of uses, and the fact that ITE does not have a compatible use and lastly these sites were recommended by MassDOT for developing proposed trips, Pare accepts the use of these two sites for developing trips generation numbers for the proposed site.*

- *Traffic Operations Analysis*- Applicant reviewed existing (2020) conditions and Future (2028) No-build and Build conditions.



*Results*

- *Route 20/Main Site Driveway/Bank* - Does analysis take into account traffic from Bank if driveway is to be realigned? This should be included in the operations of the intersection and the analysis. This will be needed to get a better understanding of capacity, delays and queues.

*Additional analysis assuming driveway to bank and proposed site has been provided for the Future (2028) AM and PM Peak hours. The results indicate that the intersection operates at good conditions during the AM Peak Hour, worst case approach Level of Service (LOS) C for an approach with the overall intersection operating at LOS B. The 95<sup>th</sup> queue length for east bound traffic during this peak hour is 281 feet. The distance between the proposed signalized intersection and Hall Road is approximately 420 feet.*

*The results also indicate that the intersection operates at good conditions during the PM Peak Hour, worst case approach LOS C for an approach with the overall intersection operating at LOS B. The 95<sup>th</sup> queue length for east bound traffic during this peak hour is 330 feet versus the distance 420 feet to Hall Road.*

- *Route 20 at Hall Road*- Existing movements northbound operate at LOS E and F during peak hours. Future No-Build versus Future Build indicates no significant reduction in LOS but there is significant delay northbound. The applicant is to perform a detailed Traffic Signal Warrant Analysis for the Route 20/Hall Road intersection. The results of that and the impacts on this project should be discussed.

*Applicant states that a warrant analysis will be performed and provided to Town and MassDOT. The applicant should provide more information as to why the proposed signal could help traffic at Hall Road.*

- *Route 20 at the Exit-Only Driveway*- Level of Service appears acceptable based on volumes generated. There is a concern however that this is going to be truck traffic only and most will be travelling westbound towards the Turnpike. Traffic exiting the site heading westbound will need to cross two eastbound travel lanes. How will this intersection work with proposed signal in place? Gaps may be created due to signal but what will queues be like for traffic heading westbound. This should be addressed.

*As previously noted, the development (office space) at 198 Charlton Road is not included in the analysis. Also, a two-way left turn lane in the median is proposed at this driveway. Analyze this intersection with the traffic from the development at 198 Charlton Road and with the left turn lane being installed into that site. Also, more supporting documentation as to why it is felt truck traffic will take a right turn out of the proposed site. In addition to the proposed Pilot stop, there is a diesel fueling station on the Turnpike east of Route 84. Trucks heading east will be anticipated to use this site if heading eastbound instead of using the proposed site and the signalized roadway of Route 20 if heading eastbound. Please provide more justification as to why truck traffic leaving site may be making right turns.*



**Sturbridge Police Department Comments, dated May 20, 2021:**

1. From Chief Dessert via e-mail 05-07-2021

Concern that TT units will be pulling out of the far east driveway. This driveway will not be the driveway controlled by a traffic light and therefore TT units will be crossing over all lanes of travel when making a left turn out of there. As you are aware this is a high-speed road and having the TT units crossing over all travel lanes to turn left will be unsafe. I would also be concerned that the traffic light would stop TT's as they pull out and potentially leave TT units stopped across the lanes as they pull out.

*See response to previous comment 'Route 20 at the Exit-Only Driveway'.*

2. From Lt. Joseph Lombardi via e-mail 05-07-21

In addition to the Chief's concerns, the Lt. added he is concerned as he feels trucks will be heading westbound to Route 84 and the Pike. He cautions making exit a right-turn only as TT units will make u-turns in the Hobb Brook Plaza or other locations to reverse travel.

*See response to previous comment 'Route 20 at the Exit-Only Driveway'.*

**STORMWATER MANAGEMENT REPORT**

- The proposed stormwater system ties into the State drainage system at Route 20. The peak discharges from the site and water quality measures have been incorporated into the design. The applicant should however provide more information for where this system leads to beyond the crossing under Route 20 and determine if any other permits need to be obtained.

*The applicant has stated that MassDOT will review the proposed drainage improvements as part of the EENF review and State Highway Access permitting process. It should be noted that the proposed stormwater design decreases off-site runoff for the calculated storm events and does provide upgraded treatment in accordance with land use with high potential pollutant load standards through the use of water quality units to reduce existing impacts to the Route 20 stormwater system.*

1. *Stormwater Standards –*
  - *Standard 10- Illicit Discharges to Drainage System – This standard is to be addressed as part of the final "Storm Water Management System Long-Term Operation & Maintenance Plan."*

**PLANS/MISCELLANEOUS COMMENTS**

1. *C-1.0: Demolition Plan- Callout for "Ex. DMH -9 to remain. Contractor to protect in place during construction". Do not see it as part of future drainage design. Please clarify.*

*DMH-9 has been revised to be removed.*



2. *C-2.0: Site Layout Plan*- Provide turning templates for delivery trucks and fire truck apparatus throughout critical areas on-site to ensure full access around the site can be provided- in particular large trucks and fire apparatus being able to make turns into the Proposed EV Discovery Center.

*Sheet No. 6.0 has been provided and found to be acceptable.*

3. *C-2.0: Site Layout Plan*- Please review means for improving pedestrian traffic within the parking lot of the travel center in particular for the six (6) spaces located west of the pumps. Uses being proposed within the travel center may draw families/children.

*Six spaces located west of pumps have been changed to employee parking spaces.*

4. *C-2.0: Site Layout Plan*- What will be the travel center hours of operations be? When will trash be picked up? When will deliveries be scheduled? Trying to get an understanding of how they will operate when facility is open.

*It appears that deliveries are going to be scheduled to occur during off-peak hours. I assume the scheduling of trash pick-up will be the same.*

5. *C-2.0: Site Layout Plan*- Information will need to be provided to MassDOT for the State Highway Line and curb offsets for laying out the curb along Route 20 and at the site entrances .

*Applicant will revise plans for MassDOT submission for layout.*

6. *C-2.0: Site Layout Plan* – Crosswalks are called out to be 5-foot wide. Crosswalks are typically 8 foot in width. Please review.

*Crosswalk widths have been revised.*

7. *C-2.0: Site Layout Plan*: Provide more detail for layout of columns for deck above for EV center to ensure ADA is met for clearance for entrance.

*Plans were revised to allow clearance for ADA.*

8. *C3.1: Grading & Drainage Plan Sheet 1 of 2*: Should sidewalk from back door to dumpster/loading areas be a ramp for dollies/carts?

*Plan has been revised.*

9. *C3.3: ADA Accessible Ramp Details* – Detectable warning panels need to be installed on wheelchair ramps.

*Plans have been revised.*

10. *C5.0: Erosion & Sediment Control Plan*: Revise callout for Gravel Construction Exit to Crushed Stone Construction Exit.

*Plan has been revised.*



Ms. Jean M. Bubon

(6)

June 3, 2021

11. *C 5.1 Erosion & Sediment Control Details*: Provide more detail pertaining to rip-rap pad.

*Needs to be addressed.*

12. *C 6.0: Truck Turn Figure*: As discussed above, provide turning templates for trucks accessing the EV Center.

*Plan has been revised and are acceptable.*

13. *C 7.1: Detail Sheet*: Add detail for a fire hydrant.

*Detail is necessary.*

If you have any questions or comments, please feel free to reach out to me.

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