



MEMORANDUM

DATE: May 12, 2021

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

CC: file

FROM: John P. Shevlin, P.E.

RE: **Engineering Review Services**
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)

This review is being made on behalf of the Planning Board (“Board”) which is currently considering a Site Plan Approval submitted by Noble Energy Real Estate Holdings, LLC for the redevelopment of the properties located at 195, 197, 201 and 201A Charlton Road that will be divided into Lots 1 and 2.

The applicant proposes to construct an 8,437 square foot Travel Plaza consisting of a Noble Energy Filling Station/Convenience Store with a drive-thru coffee/sandwich shop and “Frisbie’s Ice Cream” take-out and outdoor walk-up service window. The filling station will consist of ten vehicle fueling islands, ten electric vehicle charging stations and four high speed diesel fueling stations with overhead canopies and related site improvements on Lot 1 as shown on the plans submitted.

Lot 2 will be developed with the construction of a 16,640 square foot 2-story Electric Vehicle Discovery Center which will include a first floor not-for-profit electric vehicle display showroom and discovery learning center and the second floor will include a 120-seat restaurant and bar, outdoor patio and separate office space as shown on the plans submitted.

Pare has been provided the following information for review:

- CMG Project Narrative Summary Letter & CMG Sewerage Flow Estimate Calculation Letter dated March 23, 2021
- Site Plan Application Form, Site Plan Checklist, & Property Deed dated March 26, 2021
- Certified Abutters List dated March 8, 2021
- Site Plans "Noble Energy Proposed Travel Center" prepared by CMG dated March 26, 2021
- Noble Energy Filling Station Architect Plans & Signage, prepared by MDA, Inc. dated March 26, 2021
- Noble Energy EV Discovery Center Architect Plans, prepared by Phase Zero dated March 26, 2021





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- Stormwater Management Report, prepared by CMG dated March 26, 2021
- Traffic Study, prepared by Vanasse & Associates, Inc. (to be obtained)

Pare offers the following comments pertaining to the review of this submission and our site review.

Traffic Impact Study, dated April 2021:

- *Introduction* - Limits of study area are acceptable.
- *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).
- *Study Methodology* - The applicant's has completed the traffic study by reviewing existing conditions, future no-build conditions and future build conditions and by performing the study in accordance with *MassDOT's Transportation Impact Assessment Guidelines*. Capacity and safety analysis were completed as part of the study. Methodology is acceptable.
- *Existing Conditions* – Roadway and intersection descriptions are correct.
- *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.
- *Spot Speed Measurements* – Speed data was obtained for Route 20 in the vicinity of the proposed site. Speed data obtained appears correct.
- *Pedestrian and Bicycle Facilities*- Data collected for these components appear accurate.
- *Public Transportation* – Section description is correct.
- *Motor Vehicle Crash Data* – The data collection and summary appear accurate. Crash rate analysis to support the rates being below both MassDOT Statewide and District Averages are included in Appendix. Crash rates currently are less than State averages.
- *Future Traffic Growth*- Applicant considered future projects and background growth to determine Future No-Build (2028) conditions. Methodology is correct.
- *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?



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.

Pass-by trip adjustments are acceptable.

- *Trip Distribution and Assignment*- The trip distribution was based on existing traffic patterns. The distribution of traffic provided in Figures 9 through 15 are acceptable.
- *Traffic Operations Analysis*- Applicant reviewed existing (2020) conditions and Future (2028) No-build and Build conditions.

Results

- *Route 20 at the Center at Hobbs Brook Driveway*- The proposed development with projected volumes indicate no significant impacts to capacity or delay at this intersection.
- *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.
- *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.
- *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.
- *Traffic Signal Warrant Analysis* – Applicant has demonstrated that a traffic signal is warranted at the proposed main driveway entrance.
- *Sight Distance Evaluation* – Pare is in agreement that the sight distance at the driveways are acceptable as good sight lines are available eastbound and westbound along Route 20.
- *Site Access and Circulation* – The report does not discuss site access and circulation. Comments regarding this are provided under Plan comments.



STORMWATER MANAGEMENT REPORT

1. *Introduction* - The applicant does a good job describing the property, the methodology, the soil testing and conditions and the existing and proposed conditions for the stormwater systems.

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.

2. *Hydrologic Analysis* – The information and analyses performed pertaining to this section are complete. The results of the analyses indicates a decrease in post peak rate runoff at all five analysis points for the 2, 10, 25 and 100-year, 24-hour storm event. Analysis provided is acceptable.
3. *Stormwater Standards* –
 - *Standard 1- No New Untreated Discharges*- Met. Stormwater is treated throughout the site with a combination of deep sump catch basins with hoods, oil-grit separators, and water quality units for treatment. Stormwater is discharged into an existing facility.
 - *Standard 2- Peak Rate Attenuation* – Met. Post-development discharge rates do not exceed pre-development peak discharge rates as shown by the analysis and as shown on Table No. 1 within the Appendix of the report.
 - *Standard 3 – Recharge to Groundwater*- There is no recharge being proposed as contaminated soils and high groundwater exist. This project is a redevelopment and there is a reduction in impervious area and infiltration is restricted.
 - *Standard 4 – Water Quality*- Met. The applicant has met this standard the TSS removal calculations and a proposed Long Term Operation and Maintenance Plan has been provided and is acceptable.
 - *Standard 5 – Land Uses with Higher Pollutant Loads* – Met. The applicant has incorporated storm water BMP's determined by the Department. A Long-Term Pollution Prevention Plan is included in the report.
 - *Standard 6 – Critical Areas*- Pare agrees that this development does not lie within a Zone II or Interim Wellhead Protection Area of a public water supply. Applicant is to confirm that the stormwater will not discharge to any other critical area.
 - *Standard 7 – Redevelopment* - Pare is in concurrence that the site is a redevelopment and that all of the pertinent Stormwater standards will be met on-site.
 - *Standard 8 – Construction Period Controls*- Met. A plan for inspections, the need for an EPA-NPDES Stormwater General Permit and an Erosion and Sediment Control Plan have been provided or identified and are found to be acceptable.
 - *Standard 9- Operations and Maintenance Plan*- Met. A plan has been provided along with an O&M Compliance Statement and Inspection & Maintenance Schedule are provided. All are acceptable.
 - *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.



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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.
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.
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.
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 .
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.
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.
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?
9. *C3.3: ADA Accessible Ramp Details* – Detectable warning panels need to be installed on wheelchair ramps.
10. *C5.0: Erosion & Sediment Control Plan*: Revise callout for Gravel Construction Exit to Crushed Stone Construction Exit.
11. *C 6.0: Truck Turn Figure*: As discussed above, provide turning templates for trucks accessing the EV Center.

We will also be at the May 25, 2021 Planning Board meeting to discuss further. In the meantime, if you have any questions or comments, please feel free to reach out to me.