

**Bright View Engineering**

*Moving you forward*

October 11<sup>th</sup>, 2024

**VIA E-MAIL**

Planningbrd@sayreville.com

Beth Magnani  
Board Secretary  
Sayreville Borough Planning Board  
Borough of Sayreville  
167 Main Street  
Sayreville, NJ 08872

**Re: Masjid Sadar – Community Center / House of Worship Site Plan  
Block 444.04, Lots 23, 24, 25 & 28  
216 Ernston Road  
Sayreville Borough, Middlesex County, New Jersey  
BVE Project No.: 241046**

Dear Ms. Magnani:

As requested, Bright View Engineering (*BVE herewith*) has had an opportunity to review the following documentation with regard to the above referenced application. For ease of reference, updated documentation is provided in **bold** text:

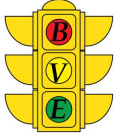
- Site Plans entitled “Preliminary and Final Site Plan, 212, 214 & 216 Ernston Road” prepared by AWZ Engineering, Inc. revised October 25, 2023, 19 sheets
- Architectural Plans entitled “New Places of Worship Building – Mosque, 216 Ernston Road, Sayreville, NJ 08859” prepared by Vision Consultants, revised October 3, 2023, 8 sheets
- “Traffic Impact Analysis for Shameer Properties, LLC” prepared by Stimmel Engineering, **revised October 2, 2024**
- Update to the August 3, 2023 Traffic Impact Analysis entitled “Masjid Sadar & Community Center” prepared by Stimmel Engineering, dated March 12, 2024

With regard to the above referenced materials, BVE offers the following comments for consideration by the Board. For ease of reference, original comments are provided in *italics* and additional commentary in regular text:

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Roseland, NJ 07068



## Project Summary

*The proposed project consists of razing the existing buildings on site and constructing an approximately 44,391 sf mosque including ancillary meeting and recreation space on the north side of Ernston Road between Parkway Place and Center Avenue. Access to the site is now proposed via two driveways to Ernston Road, one full movement and one with left turns out restricted. A total of 166 parking spaces are proposed including 45 surface spaces, 64 ground level spaces under the building and 57 elevated spaces under the building. Parking under the building is proposed to be operated via a valet system.*

## Traffic Impact Study

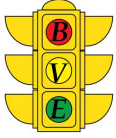
### *Existing Traffic Conditions*

- 1) The March, 2024 update to the Traffic Impact Analysis (TIA) includes counts conducted on Friday, March 1<sup>st</sup> from 12:00 PM to 4:00 PM to supplement counts completed on Sunday, June 18<sup>th</sup>, 2023 from 9:30 AM to 1:30 PM. While the counts provided are generally consistent with historical traffic count data available in the area, we recommend traffic count data be collected to determine the traditional weekday morning, weekday late afternoon (to capture school traffic from the adjacent elementary school), weekday evening, and Saturday mid-day peak hours on Ernston Road. A 7 day ATR style count by direction is likely the most appropriate way to determine these values.*

The October, 2024 update to the TIA includes a 7-day ATR count conducted from Friday, May 17<sup>th</sup>, 2024 to Friday, May 24<sup>th</sup>, 2024. We note that ATR data presented indicates that volumes on Ernston Road are highest during the weekday evening commuter peak hour. We recommend a capacity analysis be conducted for the weekday morning and evening peak hours in addition to the Friday mid-day analysis to determine how the driveway will operate when existing roadway volumes are at their highest.

- 2) Based on a recent site visit conducted by this office on the afternoon of Friday, March 22<sup>nd</sup>, 2024, the westbound approach to the traffic signal at Ernston Road & Bordentown Road routinely backs up past the site frontage. Additional information / testimony should be provided regarding how these backups affect the data collection and the results presented in the TIA.*

Comment remains. We recommend testimony be provided regarding the impact of existing queuing on Ernston Road and how it affects the conclusions in the TIA.



### *Peak Hour Selection*

- 3) *The TIA includes an analysis of the intersection of Ernston Road & Bordentown Road for Friday between 1:00 PM and 2:00 PM. Based on our review of the Ernston Road & Bordentown Road data provided, the peak hour for the intersection is from 2:30 PM to 3:30 PM. The data provided for similar Mosque sites in New Jersey peaks from 12:45 PM to 1:45 PM and 12:30 to 1:30. The site trips provided for the existing site in April of 2022 peak from 1:15 PM to 2:15 PM when considering the site traffic only. Please clarify / provide justification for the use of the 1PM to 2PM Friday mid-day peak hour as it is not readily apparent why this time period was chosen for analysis given the variety of site and roadway traffic peaks presented.*

Consistent with comment #2 above, we recommend analysis of the weekday morning and weekday evening commuter peak hours be conducted to determine the operation of the site driveways when commuter traffic is the highest. Additional commentary on the Friday mid-day analysis is provided in subsequent comments below.

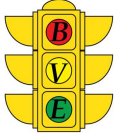
### *Anticipated Background Growth*

- 4) *In December of 2023, NJDOT published an updated Annual Background Growth Rate Table, which increased the background traffic growth for urban minor arterials in Middlesex County to 2.75% per year. The analysis in the TIA should be updated accordingly.*

Addressed. The TIA was revised to include the most recent NJDOT growth rate as requested.

- 5) *Additional information / testimony should be provided regarding if any other planned developments within the vicinity of the project were considered in developing background traffic volumes.*

Addressed. The October, 2024 TIA states that both Old Bridge Township and Sayreville Borough were contacted and confirmed there were no other pending developments in the area.



### *Trip Generation*

- 6) *The August, 2023 TIA includes count data at the existing Ernston Road driveways that was collected on April 29, 2022. According to the TIA, 150 vehicles enter the site for Friday prayers on a holiday period. Additional information / clarification is required regarding the assumption of 150 vehicles entering the site for high holy days, as the count data provided indicates 170 vehicles entering between 12:45 PM and 1:45 PM and 198 vehicles entering overall during the 4 hours counted.*

The October, 2024 TIA utilizes counts conducted at the nearby firehouse where prayer services are currently being conducted to estimate the Friday mid-day prayer service volumes, resulting in 145 inbound trips and 121 outbound trips during the highest hour. These volumes include a 10% increase over the observed volumes. While the methodology provided is generally acceptable to this office to determine anticipated trip generation for the site, information on the number of people present during service at the firehouse should be provided and compared to the anticipated occupancy of the proposed development.

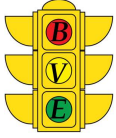
We note that based on the May 17, 2024 firehouse counts, a maximum of 121 vehicles are on site during the period studied (without the 10% increase stated above). Additional information / testimony should be provided regarding how this compares to the parking provided at the proposed site, including a projection of the maximum number of vehicles anticipated to be on site at any given time.

- 7) *Since ITE has very limited data for Mosques, the TIA conducted traffic counts at two other facilities in New Jersey to determine an average vehicle occupancy of 1.82 and 1.88 persons per vehicle. Additional information / testimony should be provided regarding how the facilities counted compare to the proposed site, including building size, membership, parking capacity and type / size of amenity spaces.*

Comment remains. Testimony regarding how the facilities in East Brunswick and Somerset compare to the proposed facility should be provided. Information on the vehicle occupancy of the counts conducted at the firehouse should also be provided for comparison.

- 8) *The TIA states that a maximum of 90 vehicles are anticipated to enter / leave the site for a typical Friday mid-day prayer service. Additional information regarding how the 90 vehicle value was determined should be provided, as it is not readily apparent from the TIA.*

No longer applicable. The TIA has been revised based on counts conducted at the firehouse.



- 9) *At the April 3<sup>rd</sup>, 2024 Planning Board hearing, testimony was provided that none of the amenity space would be utilized during scheduled prayers. Additional information / testimony should be provided regarding the schedule for use of the classroom, multi-purpose, and athletic spaces; including the hours when these facilities will be available and when they will closed due to scheduled prayers.*

Comment remains.

- 10) *We recommend trip generation estimates for the entire facility be provided that include weekday morning, weekday evening, and Saturday mid-day time periods compared to the schedule of activities requested above. This should include estimates for the classroom space, multipurpose hall, exercise areas, and basketball court. Traffic counts at similar facilities in New Jersey should be conducted if industry accepted trip generation estimates are not available.*

Comment remains. While we acknowledge that the various amenity spaces will not be used during prayer services, it is not clear when these spaces will be used and what affect they will have on the adjacent roadway network.

#### *Trip Distribution*

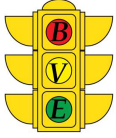
- 11) *It appears from the information provided that the trip distribution for the site is based on the count data collected in April, 2022. Additional information / testimony should be provided regarding the applicability of using a peak event distribution for a typical prayer service. In particular, this office has concerns that more than 17% of the exiting traffic will be oriented towards US Route 9 and the regional roadway network. A zip code study or similar inventory of the existing patrons may be appropriate to justify the distribution utilized.*

Comment remains. Testimony regarding the anticipated trip distribution should be provided.

#### *Capacity Analysis*

- 12) *This office recommends analysis be conducted for the typical weekday morning, weekday evening, and Saturday mid-day peak hour periods including traffic associated with the site during each of these peak periods.*

Comment remains. Level of Service analysis for the commuter peak hours on Ernston Road should be provided to determine the impact of the project when roadway volumes are at their highest. This analysis should include any anticipated trips from the amenity space as well as morning and evening prayer services which overlap with commuter peak hours.



- 13) *As indicated above, recent site visits indicate that traffic on Ernston Road routinely queues past the proposed site driveways. Additional information / testimony should be provided regarding how such queueing affects the capacity analysis presented in the studies provided and any future analysis associated with the project.*

Comment remains.

*Additional Commentary on the October, 2024 TIA*

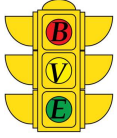
- 14) The analysis contained in the TIA is based on full use of both driveways (accounting for the left turn out restriction for the western driveway). Testimony regarding the applicability of this configuration should be provided to address operations when valet parking is being used, including if the driveways will be restricted to one way in/out during valet operations.
- 15) The Level of Service analysis for the site driveways utilizes a 0.98 peak hour factor (PHF). Additional information / testimony is recommended to justify the PHF utilized, as a 0.98 PHF indicates traffic is very uniformly spread throughout the hour. This is inconsistent with the count data provided for the existing services conducted at the firehouse.

*Parking*

- 1) *The plans provided indicate a parking requirement of 377 spaces calculated using one space per three occupants based on room occupancy. With 109 spaces proposed, this results in a parking shortfall of 268 spaces. Information / testimony regarding the justification for the required parking variance should be provided, including any other parking standards the applicant believes are appropriate.*

Comment remains. Testimony in support of the requested parking variance considering the addition of the proposed car stackers and valet parking operation should be provided.

- 2) *We note that the 6<sup>th</sup> Edition ITE Parking Generation Manual has very limited parking data for Mosques (LU Code 562), with an average parking rate of 20.38 spaces per 1,000 sf. This results in a requirement of 905 parking spaces for the proposed 44,391 sf facility. While we recognize the available ITE data is based on significantly smaller facilities than the proposed, information / testimony should be provided regarding whether or not the available ITE data is appropriate for the proposed use. Parking counts at similar facilities in New Jersey may be appropriate to determine the actual parking demand for the site.*



Based on the information provided for the firehouse where existing services occur, the existing service requires a minimum of 121 parking spaces plus additional spaces for valet operations, weekly variability in attendance and future expansion. Testimony regarding the anticipated parking required for the site as proposed should be provided. Also, information regarding the capacity of the existing parking lots at the firehouse should be provided to confirm the trip generation and parking demand observed for the services conducted at the firehouse is not capacity constrained by the existing parking lots.

- 3) *Based on this office's analysis of the April, 2022 data, 180 vehicles were on site between 1:30 PM and 1:45 PM. Additional information / testimony should be provided on how parking will be accommodated during peak events such as the one counted in April, 2022 as only 109 parking spaces are proposed.*

No longer applicable. The parking demand and supply have been revised based on additional information.

- 4) *The TIA indicates that there will be two Friday prayer sessions that are expected to have 60-90 vehicles each. Testimony at the April 3<sup>rd</sup> hearing indicated a Friday attendance of 80-120 patrons. Please clarify the anticipated number of patrons and vehicles anticipated and how the conversion from patrons to vehicles was determined.*

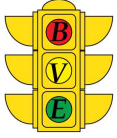
Notwithstanding the changes to the parking supply and operation, please provide testimony regarding how the conversion from patrons to parked vehicles is determined.

- 5) *The TIS assumes 90 vehicles in and 90 vehicles out during the Friday mid-day peak. Since two services are proposed, please provide justification on how the proposed 109 space parking lot will accommodate both Friday prayer sessions, especially during the 30 minute period between sessions where one session is exiting the site and another entering.*

Notwithstanding the changes to the parking supply and operation, please provide testimony regarding the current proposed scheduling of Friday mid-day services and the ability of the parking facility to accommodate the anticipated turn over between services.

- 6) *Additional information / testimony should be provided regarding the tandem parking spaces proposed under the building. How will these spaces be managed / assigned?*

Comment remains. Testimony should also include how the interaction between the tandem spaces and the proposed car stackers will be managed.



### Site Plan / Internal Circulation

- 7) *Sheets 9 & 10 of the site plans include vehicle turning templates for the site, including for a passenger car, garbage truck, SU-30 delivery truck and fire truck. We recommend that the turning plans be revised to eliminate overlapping vehicle paths as it is difficult to review the information as currently presented.*

Comment remains.

- 8) *Based on the information provided, it appears the garbage truck and SU-30 delivery truck cross the driveway centerline to complete their maneuvers. We recommend the site driveways be modified to accommodate these movements without crossing into oncoming traffic.*

Comment remains.

- 9) *Additional information / testimony should be provided regarding the likelihood of either school buses or charter buses to be on site and the site layout redesigned accordingly to accommodate buses. Even if buses are not currently contemplated, we recommend provisions for bus access be included in the site design to accommodate shuttle services and/or future events.*

Comment remains.

- 10) *The passenger car circulation plan should be based on a typical AASHTO passenger car and should include vehicle paths both into and out of the subsurface parking area occurring concurrently. This office has concerns that, as designed, two passenger vehicles cannot successfully navigate in and out of the garage area at the same time.*

Comment remains.

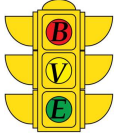
- 11) *The site plans should be revised to accommodate the left turn prohibition cited in the March 12<sup>th</sup> TIA update. A concrete island is recommended to discourage left turns out of the site at this location.*

Comment remains.

- 12) *Justification for the need for 2 two-way driveways should be provided. A pair of one-way driveways may be more appropriate for the proposed use.*

Comment remains.





13) *During the April 3<sup>rd</sup> hearing for the project, testimony was provided regarding a pedestrian connection between the existing sidewalk along Ernston Road and the front of the site. The testimony included that Middlesex County specifically requested the connection not be provided to limit pedestrian traffic along Ernston Road. We wholehearted disagree with this position and strongly recommend the applicant provide a pedestrian connection from the main entrance of the building to the existing sidewalk along the site frontage. Any correspondence between the applicant and Middlesex County regarding this issue should also be provided to the board, as it is unclear to this office why the County would seek to minimize pedestrian access.*

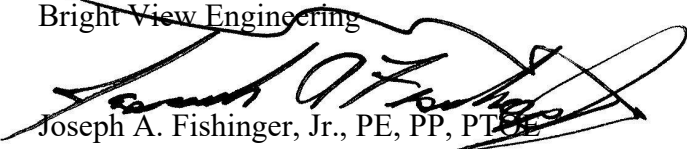
Comment remains.

14) *Testimony was also provided at the April 3<sup>rd</sup> hearing that ‘monitors’ would be provided during Friday services to direct traffic on site. Please clarify the role and qualifications of said ‘monitors.’ Is the applicant proposing to provide police traffic control at the site driveways / on-site every Friday or are ‘monitors’ members of the mosque? If the latter, will any special training be provided?*

The October, 2024 TIA states that off duty police will be utilized to control access to the site driveways during Friday prayer services and special events. The use of police traffic control will likely mitigate any level of service concerns for exiting the site driveway(s), but may result in additional congestion on Ernston Road. We recommend a supplemental Level of Service analysis be provided which considers police traffic control at the site driveway(s) to estimate the impact of this operation on Ernston Road.

I trust this information assists the Board as they are considering this application. If you have any questions or require any additional information, please feel free to contact me at 908-421-4674 or via email at [JFishinger@BVEngr.com](mailto:JFishinger@BVEngr.com).

Sincerely,  
Bright View Engineering

  
Joseph A. Fishinger, Jr., PE, PP, PTE  
Director of Traffic Engineering