



Bright View Engineering
Moving you forward

April 9th, 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:

- 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 August 8, 2023
- 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:

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 proposed via two driveways to Ernston Road. While the site plans submitted indicate two full movement driveways, the March 12, 2024 update to the traffic impact study indicates that the left turns out of the western driveway will be prohibited as per direction from Middlesex County. A total of 109 parking spaces are proposed as a combination of surface spaces and structured parking under the building.

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Traffic Impact Study

Existing Traffic Conditions

- 1) The March, 2024 update to the Traffic Impact Analysis (TIA) includes counts conducted on Friday, March 1st from 12:00 PM to 4:00 PM to supplement counts completed on Sunday, June 18th, 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.
- 2) Based on a recent site visit conducted by this office on the afternoon of Friday, March 22nd, 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.

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.

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.
- 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.



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.
- 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.
- 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.
- 9) At the April 3rd, 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.
- 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.



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.

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.
- 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.

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.
- 2) We note that the 6th 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.
- 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.



- 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 3rd 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.
- 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.
- 6) Additional information / testimony should be provided regarding the tandem parking spaces proposed under the building. How will these spaces be managed / assigned?

Site Plan / Internal Circulation

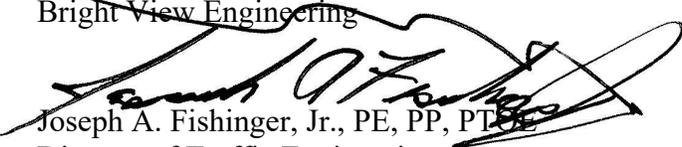
- 7) Sheets 9 & 10 of the site plans include vehicle turning templates for the site, including for a passenger car, garbage truck, SU-30 delivery truck and fire truck. We recommend that the turning plans be revised to eliminate overlapping vehicle paths as it is difficult to review the information as currently presented.
- 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.
- 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.
- 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.
- 11) The site plans should be revised to accommodate the left turn prohibition cited in the March 12th TIA update. A concrete island is recommended to discourage left turns out of the site at this location.



- 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.
- 13) During the April 3rd 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 wholeheartedly 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.
- 14) Testimony was also provided at the April 3rd 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?

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.

Sincerely,
Bright View Engineering


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