

1460 Route 9 South Howell, NJ 07731 732.462.7400 © www.cmeusa1.com ⊕

December 12, 2024

Howell Township Planning Board 4567 Route 9 North PO Box 580 Howell, NJ 07731

Re: Archangel Michael Coptic Orthodox Church Corp. (SP-1133) Preliminary and Final Major Site Plan Engineering Review #1 Block 76 Lots 30.01 & 32.01 Location: Kent Road & Church Road Zone: ARE-2 (Agricultural Rural Estate) Our File: 115.HWP0076.H03

Dear Board Members:

Our office has received the following information in support of the above referenced application for Preliminary and Final Major Site Plan Approval:

- Preliminary and Final Major Site Plan (9 sheets) prepared by J.K.R. Engineering and Planning Service, LLC, dated April 20, 2023, unrevised;
- Architectural Floor Plans and Elevations (4 sheets) prepared by Karnak Architecture LLC, dated April 10, 2022, unrevised;
- Survey and Topography (1 sheet) prepared Alpine Land Professionals, dated March 15, 2022, unrevised;
- Stormwater Management Report prepared J.K.R. Engineering and Planning Service, LLC. dated May 2024;
- Traffic Statement prepared by McDonough and Rea Associates, Inc., dated April 5, 2023;
- Environmental Impact Report prepared by J.KR. Engineering and Planning Service, LLC., dated May 2006, last revised May 2024;
- Description of the multi-function addition to the church building, prepared by Karnak Architecture LLC, dated September 27, 2022;

CONSULTING AND MUNICIPAL ENGINEERS LLC

NJ CERTIFICATE OF AUTHORIZATION NO. 24GA28359000 Barnegat • Berlin • Camden • Howell • Medford • Monmouth Junction • Parlin



# Consulting & Municipal ENGINEERS

Howell Township Planning BoardDecember 12, 2024Re: Archangel Michael Coptic Orthodox Church Corp (SP-1133)Our File: 115.HWP0076.H03Preliminary and Final Major Site Plan - Engineering Review #1Page 2

- Submission Letter prepared by Heilbrunn Pape, LLC, dated August 14, 2024;
- Howell Township Utilities Department Application, dated August 13, 2024;
- Freehold Soil Conservation District Application, dated August 13, 2024;
- Monmouth County Planning Board Application, dated August 14, 2024;
- Prior Resolution of Approval, approved March 1, 2007, memorialized April 2, 2007;
- List of persons to testify prepared by Heilbrunn Pape, LLC, dated August 14, 2024;
- Letter identifying outside agency approvals required prepared by Heilbrunn Pape, LLC, dated August 14, 2024;
- Submission waiver request letter prepared by Heilbrunn Pape, LLC, dated September 4, 2024;
- A development application and checklist.

In accordance with your authorization, we have reviewed this application for Preliminary and Final Major Site Plan and offer the following comments:

#### 1. Project Description

The subject tract is located within the ARE-2 Zone District and contains Lots 30.01 and 32.01. Lot 30.01 fronts along Kent Road and Church Road, while Lot 32.01 fronts along Church Road. Lot 30.01 currently contains an existing 2 story church building owned by the Applicant along with an existing parking lot, lighting, landscaping, and an existing infiltration basin. The southern half of Lot 30.01 is currently wooded. Lot 32.01 contains an existing residential dwelling with wooded area behind the dwelling.

The Applicant proposes to keep the existing church building and facility while demolishing the existing residential dwelling on Lot 32.01 to construct a 2-story, 28,690 sf accessory multipurpose building to the church. The new building will contain religious classrooms, day care, adult day care, a gymnasium, and more. A 336-sf gazebo and 3,200-sf shelter building are proposed in the rear of the new building. On the south side of the lot is a new soccer field with lights and a basketball court. The parking lot will be expanded for the new building, to include 58 new parking spaces. The two existing driveways to the site will continue to be utilized; however, a new 20-foot-wide gravel fire access driveway is proposed from Church



# **Consulting & Municipal** ENGINEERS

Howell Township Planning Board

December 12, 2024 Re: Archangel Michael Coptic Orthodox Church Corp (SP-1133) Our File: 115.HWP0076.H03 Preliminary and Final Major Site Plan - Engineering Review #1 Page 3

Road along the western side of the property. Public water and sanitary sewer currently service the existing church building and will also serve the new building. Stormwater management will be addressed by removing the existing infiltration basin and constructing one (1) sloped smallscale infiltration basin, one (1) walled infiltration basin, and one (1) underground infiltration system. Additional improvements consist of lighting and landscaping.

#### 2. Zoning Compliance

The subject property is situated within an ARE-2 Zone District and the table below summarizes the bulk standards and zone requirements:

Description	ARE-2 Requirements	Proposed
Minimum Lot Area	2 acres	16.14 acres
Minimum Lot Width	200 feet	> 200 feet
Minimum Lot Depth	200 feet	> 200 feet
Minimum Front Yard Setback	50 feet	77 feet
Minimum Side Yard Setback	30 feet	> 30 feet
Minimum Rear Yard Setback	50 feet	> 50 feet
Maximum Impervious Cover	15%	24.3% <b>(V)</b>
Maximum Building Cover (Principal and Accessory)	12%	5.7%
Maximum Building Height	35 feet	TBD
Location of Accessory Buildings	Side or rear yard shall equal building height	complies
Minimum number of parking spaces	House of worship: 1 space/ 4 seats (482 seats) = 121 spaces	275 spaces
	The applicability of additional parking spaces being required per the proposed building/uses shall be further reviewed with the Board Planner.	



(EC) – Existing Condition (V) – Variance

The Applicant has not requested any variances with this application, however the following relief appears necessary:

- a. Section 188-10 Signs shall conform to Chapter 256:
  - i. **Section 256-4A** One sign advertising a permitted use is permitted provided that such sign shall not exceed four square feet in area, shall not be greater than four feet tall, and shall not be artificially illuminated. Whereas the project is proposing two monument ID signs, approximately 6.2 feet tall, approximately 35 square feet in size, and externally illuminated. There is also at least one building sign on the proposed building, and a detail is not provided.
- b. **Section 188-69.1 Schedule III** The maximum required impervious coverage is 15%; whereas 24.3% is proposed.

The Applicant has not requested any design waivers; however, the following appear to be required:

- a. Section 188-22 The light intensity provided at ground level shall be minimum of 0.3 footcandles anywhere and shall average a maximum of 0.5 footcandles over the entire area; whereas the Applicant has not provided a data summary chart to determine average footcandles. However, light levels appear to be above a maximum average of 0.50 footcandles.
- b. Section 188-106C All parking lots with more than 10 spaces and all loading areas shall have concrete or Belgian block curbing around the perimeter of the parking and loading areas in conjunction with an overall drainage plan. Curbing shall be either depressed at the driveway or have the curbing rounded at the corners with the access drive connected to the street in the same manner as another street. Curbing between vehicular and pedestrian ways shall be designed with periodic ramps from the street or parking grade to the sidewalk which shall be no less frequent than one every 65 feet and located in accordance with a pedestrian circulation plan. Whereas it appears the new proposed parking lot south of the proposed building does not comply with the minimum curb ramp spacing requirements
- c. **Section 188-224C** Primary building entrances shall be physically and visually oriented toward streets, parks and plazas. Primary orientation to the interior of blocks, parking lots



and garages is acceptable and upon discretion of the Board. Whereas the proposed building is not oriented towards Church Road.

- d. **Section 188-224G(1)** All lots shall have private walkway access to a public sidewalk in the right-of-way. Such access shall be designed for the safety, control, efficient movement, convenience and encouragement of pedestrian traffic into and out of the site and to promote pedestrian circulation generally within the Township. All site plan applications shall provide public sidewalks along the entire frontage of the subject property. If the Board grants a waiver from providing sidewalk along the frontage of the property, the Applicant shall be responsible to pay into the Howell Township Sidewalk Trust Fund in the amount of \$4,480.00. (160 LF x 4 FT wide = 640 SF x 7/SF = 4,480.00).
- 3. The Applicant has requested the following checklist waivers:
  - a. Checklist Item #14 Natural Resource Inventory.
  - b. **Checklist Item #17** Meets and bounds descriptions for all easements, covenants and deed restrictions.
  - c. Checklist Item #18 Written explanation for waiver requests.

Additionally, the Applicant shall submit the following checklist items or waivers shall be requested for the same:

- d. *Checklist Item #19* Statement indicating how conditional use standards are met.
- e. **Checklist Item #53** Topography of the parcel and surrounding area. All elevations based on NAVD 1988 with source noted.
- f. **Checklist Item #60** All overland and underground drainage conveyances within 2,000 feet that are down flow of the point of discharge and/or overflow of any on-site drainage system shall require a downstream analysis assuming failure of the on-site drainage system.
- g. **Checklist Item #70** Use of existing and proposed buildings by floor area. Floor area and ground area of existing and proposed building in square feet.
- 4. Based on our review of the subject application, we estimate that the following fees are required:

#### a. Nonrefundable Application Fees:

Preliminary Major Site Plan: \$1,000 for building area over 10,000 s.f. + \$100 per each 1,000 s.f. over 10,000 sf (32,833 sf) \$3,283.30



Howell Township Planning Board Re: Archangel Michael Coptic Orthodox Church Corp (SP-1133) O Preliminary and Final Major Site Plan - Engineering Review #1	December 12, 2024 Our File: 115.HWP0076.H03 Page 6		
Final Major Site Plan: 50% preliminary fee	\$1,641.65		
Variance: \$500 plus \$50 per variance (4)	\$700.00		
Subtotal:	\$5,624.95		
b. <i>Professional Services Escrow Fees:</i>			
Preliminary Site Plan: 10,001 to 500,000 s.f building area	\$10,000.00		
Final Site Plan (1/3 preliminary)	\$3,333.33		
Bulk Variance	\$2,000.00		
Subtotal:	\$15,333.33		

We recommend the Township collect \$5,624.95 in nonrefundable application fees and \$15,333.33 in professional services escrow fees from the Applicant prior to deeming the application complete. In addition, the Applicant will be required to pay all applicable revision fees as stipulated in the Township Ordinances.

- 5. The Applicant should be prepared to discuss the following issues with the Board:
  - a. Compliance with the Conditional Use criteria for Places of Worship.
  - b. The proposed building height shall be verified in accordance with the "Building Height" definition and the height exception described by Section 188-59. The average grade shall be calculated and clearly provided on the site plans. That elevation shall be transferred to the architectural elevations, which currently indicates an arbitrary finished floor elevation of 100. We note that the bulk chart on the Cover Sheet of the site plans indicates a proposed building height of 30 feet and a 30 foot requirement. However, the architectural elevations show a building height ranging from 28.3 to 38.2 feet, and the ARE-2 zone requires a maximum of 35 feet. We acknowledge that there is a height exception for steeples of houses of worship; however, we defer further applicability to the Board Planner and Attorney as to whether the proposed building would qualify under this exception. If the proposed building height exceeds 35 feet, a bulk variance will be required. If the height exceeds 38.5 feet, a D6 height variance will be required, and a D3 conditional use variance may also be required with regards to the setback based upon building height.
  - c. Continued compliance with the comments and conditions of the 2007 Resolution of Approval.



- d. The anticipated operation of the Sunday school. Identify the days, and hours of operation, number of students, and whether the school will be limited to members of the congregation or open to the general public. The application and site plans note the proposed use as a house of worship. We note that the public and private schools are not a permitted or conditional use in the ARE-2 zone.
- e. The type of deliveries required for the proposed building, as well as the frequency and location.
- f. Whether busses are anticipated to visit the site. Discuss drop off/pick up and parking for same onsite.
- g. The architectural plans depict proposed kitchen, kitchen pantry and food pantry spaces. The applicant should clarify whether any food preparation is proposed onsite or whether this is a "breakroom" type kitchen. The operations statement should also indicate whether the gymnasium or any other spaces within the existing and proposed building can be utilized for cafeteria purposes.
- h. The architectural plans depict a bookstore space. The applicant should clarify the difference between this space and the library proposed on the second floor, and if either spaces are open to the general public.
- i. Clarify the frequency and hours of operation anticipated for the soccer field and basketball court. We note that the soccer field includes lights and the basketball court does not.
- j. Discuss the anticipated use for the proposed outdoor shelter and gazebo.
- k. Whether existing Lots 32.01 and 30.01 are to be consolidated. We note that the application indicates the two lots are proposed to be one.
- I. The stormwater management of the site and subsequent compliance with Ordinance and NJDEP regulations. At a minimum, the site does not appear to comply with NJAC 7:8 stormwater runoff quantity, quality, recharge, and green infrastructure standards. If Infiltration Basin #1 is to be a small-scale infiltration basin then it is exceeding the maximum contributory limit of 2.5 acres (7.26 acres proposed) required by NJAC 7:8-5.3. If it is to be a large scale infiltration basin, then it cannot be used for stormwater runoff quality nor groundwater recharge requirements. Furthermore, all the stormwater BMPs are clustered next to one another in a single area of the site and thus not meeting the green infrastructure requirements as described in the "Meeting the GI Requirement Fact Sheet" located on the NJDEP website.



- m. A Traffic Statement has been submitted which concludes that the new building will be accessory to the existing church, and therefore, will not generate additional trips. Operations testimony shall be provided to demonstrate how all of the new uses, interior and exterior to the new building, will not generate new trips. The existing traffic counts are also noted to have been taken during 2020.
- n. The adequacy of parking. It appears that the Applicant has reviewed the required parking calculation based upon the existing Church building/use only. The Cover Sheet of the Site Plans indicate that 161 spaces are required and the Traffic Statement indicates that 181 spaces are required. However, the ordinance requires 1 space per 4 seats (482 seats) resulting in a requirement of 121 spaces. The Applicant's calculation appears to require additional spaces, although no calculation is identified for the proposed building or uses. The submission documents identify that the proposed uses will include adult day care, indoor and outdoor basketball courts, soccer field, Sunday school, and more, all of which have their own parking calculation criteria (adult day care, sports facility private, school).
- o. Traffic queuing at the site driveways at Church Road and Kent Road following the conclusion of events.
- p. Whether the one existing trash enclosure will be of adequate size and location to serve all buildings and uses. We recommend additional trash enclosures be provided.
- q. Whether bike racks will be required or provided at the proposed building.
- r. Any signage or key/ID requirements related to use of the soccer field and basketball court by only those intended to use same.
- s. The total number of signs proposed with this application. Whether each circular symbol located at the top of all four sides of the building is a window or a sign.
- t. Provide a summary of all new utilities to serve to the proposed building.
- u. Compliance with Ordinance Section Article IV, Standards of Performance, regarding but not limited to: noise; glare; pollutants; solid/liquid waste; flammable/hazardous material; etc.
- v. The proposed improvements (curb, sidewalk, widening, right-of-way dedication, etc.) along both road frontages. We note that the 2007 Resolution of Approval required sidewalk to be installed along both frontages; whereas the existing sidewalk does not currently extend along the frontage of Lot 32.01. If the Applicant agrees to extend new sidewalk/waiver is not granted, we recommend that curb also be installed, and the road be repaved from curb to curb in this location.



- 6. This application may be subject to the following outside agency approvals:
  - a. Monmouth County Planning Board
  - b. Freehold Soil Conservation District
  - c. NJDEP
  - d. Howell Township Municipal Utilities Department
  - e. Howell Township Shade Tree Commission
  - f. Howell Township Environmental Commission
  - g. Howell Township Police Department
  - h. Howell Township Bureau of Fire Prevention
  - i. All other outside agency approvals as may be required. The Applicant shall address the Board regarding the status of all outside agency approvals for the project. In addition, copies of all outside agency approvals shall be forwarded to our office.

Prior to the application being deemed complete, the Board must act on the Applicant's request for the submission waivers outlined in Item #3 of our report. We recommend the Applicant comply with all applicable notification requirements as set forth in the Howell Township Land Use Ordinance and the Municipal Land Use Law.

Our office has prepared the attached Technical Engineering Review #1. The items contained therein should be addressed by the Applicant's professionals.

The right is reserved to present additional comments pending the receipt of revised plans and/or testimony of the Applicant before the Board.



Re: Archangel Michael Coptic Orthodox Church Corp (SP-1133) Our File: 115.HWP0076.H03 Preliminary and Final Major Site Plan - Engineering Review #1

December 12, 2024 Page 10

If you have any questions with regard to the above matter, please do not hesitate to call.

Very truly yours, **CME** Associates

Laura J. Neumann, PE, PP, CME, CFM Planning Board Engineer

LJN/JAR/TJB

Howell Township Environmental Commission CC: Ronald Cucchiaro, Esq., Board Attorney Jen Beahm – Board Planner Archangel Michael Coptic Orthodox Church Corp. – Applicant (fatherishak@gmail.com) JKR Engineering – Applicant's Engineer (jkr@jkrengineering.com) Kenneth L. Pape – Applicant's Attorney (KPape@hpnjlaw.com)



# HOWELL TOWNSHIP PLANNING BOARD

# Archangel Michael Coptic Orthodox Church Corp.

# Preliminary and Final Major Site Plan

# December 12, 2024

# **TECHNICAL ENGINEERING REVIEW #1**

#### A. General

- 1. Revise General Note 10 to state that the parking requirement is calculated as 1 space per 4 seats to align with section 188-92(F).
- 2. All zoning setback requirements should be provided on the site plans.
- 3. The survey shows an existing drainage easement on the site near the intersection of Church Road and Kent Road. This easement should be shown on the Site Plans.
- 4. Label the total floor area and building footprint of the proposed building on the building on the site plan.
- 5. Provide a length and width dimension for at least one parking stall in each row of parking.
- 6. Provide a width dimension for each ADA parking space and access aisle.
- 7. Show compliance with the NJ EV parking requirements. Additionally, provide the necessary notes, signage, and details.
- 8. All proposed full height curb throughout the site should be six inches. Revise the detail to be consistent.
- 9. Identify all areas of flush curb and the associated curb transitions.
- 10. Identify the length of depressed curb where the ingress for the fire lane meets Church Road.
- 11. Revise the Church Road pavement cross section to contain at least 2" surface, 4" base, and 6" DGA.

NJ CERTIFICATE OF AUTHORIZATION NO. 24GA28359000 Barnegat • Berlin • Camden • Howell • Medford • Monmouth Junction • Parlin



- 12. Provide a note on the plans regarding the possible need to repave Church Road in accordance with Section 277-34.
- 13. It appears the labels for the eastern and western architectural elevations may be switched.
- 14. Identify all exterior door locations for the proposed building on the site plan.
- 15. Identify the playground on the site plan.
- 16. Specify if the proposed soccer field will be grass or synthetic turf.
- 17. The proposed 4 foot high chain link fence should fully encompass the walled infiltration basin to prevent a fall hazard. The chain link fence shall be located behind the guard rail.
- 18. Clarify how the guiderail and plantings are to coincide as it appears they are directly over top of one another.
- 19. Inlet filters should be identified on the Soil Erosion and Sediment Control Plan where it appears none are provided.
- 20. Revise the plans to list the total amount of disturbance in square feet and acres.
- 21. Include a detail for the following items:
  - a. Walled sand bottom infiltration basin #1
  - b. Underground infiltration basin #3
  - c. OCS detail w/ wing walls
  - d. OCS details without wing walls
  - e. Cross Walk
  - f. Standard parking stall striping
  - g. Rip-rap apron
  - h. Scour hole
  - i. Headwall without windwalls
  - j. Chain link fence
  - k. Solid fence
  - I. Pipe crossing with concrete encasement
  - m. Emergency spillway
  - n. On site pavement
  - o. Depressed curb



- p. Flush curb
- q. Vertical curb taper
- 22. Revise all applicable construction details to note a minimum concrete strength of 4,500 PSI.
- 23. Revise the sidewalk detail to indicate at least 6 inches of compacted subgrade.
- 24. Provide a concrete pad for the proposed transformer.
- 25. Revise note #5 in the handicapped parking stall details to state that the handicap stall striping will be blue.
- 26. Provide a vehicle circulation plan for a fire truck, garbage truck (for any new trash enclosures), the largest anticipated delivery vehicle, and a bus (if applicable).

### B. Site Grading

- 1. Provide average grade calculations for the proposed building.
- 2. Revise the Grading and Utility Plan to provide slopes at a minimum of 1%.
- 3. Revise the Grading and Utility Plan so that all existing and proposed grades are clearly legible as many existing and proposed spot shots overlapping.
- 4. All spot shots along curb should provide a top of curb and bottom of curb grades.
- 5. Spot shots should be on the exact location where they are intended to provide elevation. Many are set off of curb making it unclear where the grade is intended.
- 6. Identify or remove the leader located in the center of the forebay pointing to the concrete gutter on the Grading and Utility Plan.
- 7. Identify or remove the large black box north of the existing building on the Grading and Utility Plan.
- 8. Structural plans and calculations for all retaining walls shall be approved prior to obtaining resolution compliance.



December 12, 2024 Re: Archangel Michael Coptic Orthodox Church Corp (SP-1133) Our File: 115.HWP0076.H03 Preliminary and Final Major Site Plan - Engineering Review #1 Page 14

### C. Stormwater Management

- 1. The site does not appear to comply with NJAC 7:8 stormwater runoff quantity, quality, recharge, and green infrastructure standards. If Infiltration Basin #1 is to be a small-scale infiltration basin then it is exceeding the maximum contributory limit of 2.5 acres (7.26 acres proposed) required by NJAC 7:8-5.3. If it is to be a large scale infiltration basin, then it cannot be used for stormwater runoff quality nor groundwater recharge requirements. Furthermore, all the stormwater BMPs are clustered next to one another in a single area of the site and thus not meeting the green infrastructure requirements as described in the "Meeting the GI Requirement Fact Sheet" located on the NJDEP website.
- The underground infiltration states the top of the stone layer is elevation 104.50 where 2. the 100-year storm elevation is 104.85 indicating that the stormwater is bubbling up to the surface resulting in a failing BMP. Revise the system so that the 100-year storm elevation stays within the system.
- All stormwater basins should have an outlet control structure set at the basin bottom 3. elevation regardless of whether or not the basin is infiltrating or not so that was can be easily removed from the site in the scenario that infiltration within the basin fails. All outlet control structures should tie into existing stormwater infrastructure in the roadway or discharge to a similar discharge location as under existing conditions.
- 4. Revise the stormwater report to specify whether the third basin is extended detention or small-scale infiltration. Extended detention basins cannot be used for groundwater recharge.
- 5. The mounding calculations must confirm there is no overlapping mounds between the stormwater basins.
- 6. If exfiltration is to be used in a basin, then pretreatment must be provided whereas it appears no pretreatment is provided in basin #1 and #3.
- 7. The stormwater routing calculations should be provided for the current adjusted and future runoff rates.
- 8. The stormwater report states that in order for emergency overflow to bubble up into Church Road via inlet #W-1 it would need to back flow the inlet pipe from pipe run W-1 to W7 and then overtop inlet #W-1. This would result in inlets #W-5 & #W-6 to overflow first and flood the site. This is not an acceptable design to use a pipe designed to inflow



water to the basin as an outflow pipe at the same time. A separate outfall pipe needs to be established leaving the basin.

- 9. The underground infiltration basin cannot have an emergency spillway above the basin elevation as it means that in order for it to be used the system must fail and flood almost the entire soccer field. This is not an acceptable design.
- 10. Per Page 8 section 5 of NJ BMP Manual: "Infiltration of the entire 2-, 10- or 100-year storm is allowed only when: existing site conditions are such that no runoff leaves the site for the pre-construction condition scenario, thereby constraining the design to infiltrate 100% of the volume produced by the post-construction condition for the same design storm. In this case, the maximum storm that can be entirely infiltrated is the largest storm event with no runoff leaves the site in pre-construction conditions". As existing conditions show that runoff leaves the site, infiltrating the entire 2, 10, and 100-year storms is not permitted.
- 11. Flow reductions need to provided for the site as a whole as well as each point of analysis.
- 12. Runoff exiting out of the top of the Soccer Basin is to be considered proposed outflow. Revise the runoff calculations accordingly.
- 13. Provide supporting calcs for confirming compliance with the groundwater recharge requirements.
- 14. Revise the soil logs to state the existing elevation at which the profile pit was performed.
- 15. The infiltration test sheets should be revised to indicate what kind of testing was performed on the soil samples. Additionally, the tests should denote whether they were performed on "undisturbed" or "disturbed" samples. If testing was done on "disturbed" samples, additional testing will be required.
- 16. CN & TC calculations are required to provided in order to review the provided hydrology models.
- 17. Revise the hydrology models as it appears that there are discrepancies in the rainfall data used.
- 18. Revise the hydrology reports so the hydrographs are fully within the limits of the graphs.



**Consulting & Municipal** ENGINEERS

Howell Township Planning Board

December 12, 2024 Re: Archangel Michael Coptic Orthodox Church Corp (SP-1133) Our File: 115.HWP0076.H03 Page 16

- 19. The water quality storm calculations should be based off the total area to the basin, not just the impervious area.
- 20. Revise the Drainage Area Maps to provide two time of concentration paths per drainage area (one beginning in pervious and one beginning in impervious).
- 21. Revise the Drainage Area Maps to show the soil boundary line, and list the soils and their hydraulic soil group rating.
- 22. Revise the Drainage Area Maps to clearly identify all points of analysis.
- 23. Identify the invert of the roof drains leaving the proposed buildings.

Preliminary and Final Major Site Plan - Engineering Review #1

- 24. Roof drains should be set horizontally a minimum distance of 10 ft from the building to being in the zone of influence of the building foundation that could potentially damage the roof drains.
- 25. State the invert and size of all pipes entering any storm structure.
- 26. Revise the storm pipes so that storm sewer pipe provides an adequate pipe velocity of between 2-3 ft/s for self-cleaning purposes.
- 27. If perforated pipe is to be used to allow runoff to infiltrate, test pits should be provided to ensure adequate permeability in the soils below the stone trench. Furthermore, the mounding calculations should be provided for the perforated conveyance system to ensure floatation doesn't occur to the pipes.
- 28. Our office has concerns regarding the construction of Inlet W-3 with both the invert and outvert pipe located on the same face and at the same invert elevation. We recommend providing a drop in the outvert or locating the pipes so they are on separate faces.
- 29. Provide the exact invert of the existing 24" pipe connecting to inlet #E3.
- 30. Ensure that all conduit outlet protection is sized to scale based on the design calculation.
- 31. Our office recommends rip rap aprons within basins as they push water to spread throughout the infiltration basin whereas scour holes could result in static water not reaching the sand bottom.

32. Revise the scour holes to provide the depth of each scour hole.



- 33. Identify the width of all headwalls and their locations within the walled infiltration basin.
- 34. Provide maintenance ports within the underground infiltration basin.
- 35. Provide details for all infiltration basins and outlet control structures.
- 36. Revise the infiltration basin details to note water quality, 2-, 10-, and 100-year storm elevations.
- 37. Revise the infiltration basin details to state the SHWT elevation.
- 38. Revise the infiltration basin details to state the emergency spillway elevation.
- 39. Revise the stone trench / ADS perf pipe detail to identify the size and number of perforations in a single cross section of the perforated pipe. Additionally, provide the number of perforated cross sections per LF of pipe.
- 40. Verify the "10 ft wide gravel basin access" label in the northwest corner of the soccer field.
- 41. An Operations and Maintenance Manual should be provided for the Stormwater Management system. The Manual shall include the contact information for the responsible parties, cost and frequency of maintenance, and the drain down time for each basin.
- 42. In accordance with NJAC 7:8-5.2(m) a deed notice for the stormwater management system shall be submitted for review prior to recording with Monmouth County.

#### D. Profiles

- 1. Label the elevation of the top and bottom of pipe at the pipe crossing as well as the separation between the pipes.
- 2. Revise the slope of the pipe for profile #A6 #E5 to a minimum of 0.35%.
- 3. Provide horizontal and vertical scale for all profiles.



December 12, 2024 Re: Archangel Michael Coptic Orthodox Church Corp (SP-1133) Our File: 115.HWP0076.H03 Preliminary and Final Major Site Plan - Engineering Review #1 Page 18

### E. Landscaping

- 1. Revise the plans to provide street trees along the frontage, in accordance with Section 188-122. Currently, there are gaps in the existing perimeter buffer where trees can be field located.
- Revise the plans to provide additional plantings to establish an effective buffer, in accordance with Section 188-63F.
- 3. Revise the plans to provide additional plant materials within the residential perimeter buffer to fill in existing gaps in the tree line and to obscure the parking area from public views with a three (3) foot high, four-season screen, in accordance with 188-226E.
- 4. Revise the plans to provide screening, at a minimum of 5' tall for the trash enclosure located near the exit onto Kent Road, in accordance with Section 188-224G.
- 5. Revise the plans to provide foundation landscaping for the proposed site identification signs.
- Revise the plans to provide a greater diversity of shrubs and perennials for the 6. proposed foundation landscaping. Currently, only three (3) shrub species have been provided.
- 7. Revise the plans to provide native deciduous trees for the residential buffer along the west property line. Currently, the Applicant has proposed only an ornamental tree species for this area.
- Revise the 'Proposed Planting Schedule', sheet 5 of 9, to provide a greater variety of 8. species, remove invasive species, such as FI (Forsythia) and ensure all common and botanical names correspond to each other. Also, it appears proposed to (American Holly) is to be installed at 24" tall; however, this is a tree species and should be provided at a minimum size of 4-5 feet tall.
- 9. It appears Note #3 is missing from the 'General Planting Notes', sheet 5 of 9. This should be reviewed and revised.
- 10. Revise the plans to provide a native no mow/low mow seed mix for the side slopes of the proposed basin. Details and maintenance notes should also be included.



December 12, 2024 Re: Archangel Michael Coptic Orthodox Church Corp (SP-1133) Our File: 115.HWP0076.H03 Preliminary and Final Major Site Plan - Engineering Review #1 Page 19

11. Our office recommends scheduling a field meeting to review existing conditions prior to the scheduled Board hearing.

#### F. Woodlands Management

- 1. Revise the tree removal calculations to provide the final contribution amount the Applicant will provide to the Tree Fund, to prevent any confusion at time of construction.
- 2. It appears some of the existing buffer trees are in poor condition and should be reviewed in the field to determine if any require removal.

# G. Lighting

- 1. In accordance with Section 188-225E(1), revise the light fixtures to be at heights of twenty-four (24) feet for parking areas; whereas the Applicant has proposed fixtures to be mounted at 30 feet high. Alternatively, relief will be required.
- 2. Revise the plans to provide isolux patterns and isolux pattern details to include a scale and graph, for further review.
- 3. It appears light levels within the proposed parking area, south of the proposed church, are more than the minimum requirement of 0.50 footcandles, in accordance with IES (Illuminating Engineering Society) standards. This should be reviewed to reduce unnecessary lighting.
- 4. Revise the plans to provide all light fixtures to be focused downward, with a zerodegree tilt, in accordance with Section 188-22. Currently, plans indicate light fixtures with a 30-degree tilt.
- 5. It appears new light fixtures are proposed throughout the entire site. Indicate if any of the existing light poles and/or fixtures are to be retrofitted for the proposed improvements.
- 6. Revise the 'Site Light Base', sheet 6 of 9, to indicate a concrete strength of 4,500 PSI. Currently, the plans indicate 4,000 PSI.
- 7. It does not appear any building mounted fixtures are proposed. If so, provide details, for further review.



December 12, 2024 Re: Archangel Michael Coptic Orthodox Church Corp (SP-1133) Our File: 115.HWP0076.H03 Preliminary and Final Major Site Plan - Engineering Review #1 Page 20

- 8. The Applicant has proposed light fixtures for the soccer field, but it does not appear lighting is proposed for the basketball court. Revise the plans to indicate the proposed timers and hours of operation.
- 9. Revise the plans to indicate proposed timers and hours of operation. Our office recommends light levels be dimmed/turned off to reduce night light pollution.

#### H. ADA (Americans with Disability Act)

We defer compliance with ADA requirements to the Construction Code Official. At a minimum, our office offers the following comments:

- 1. Provide adequate spot shots to ensure the proposed handicap spaces/access aisle and curb ramps contain compliant slopes.
- 2. Provide an ADA compliant path from the existing church building to the proposed building, including curb ramps.

#### Ι. Environmental

- 1. Provide a note that indicates that the existing well on Lot 32.01 will be sealed in accordance with Township, Monmouth County Board of Health and NJDEP requirements. It shall also be removed from the Utility Plan to avoid confusion.
- 2. Verify if there are any underground storage tanks or septic systems located on Lot 32.01. In the event these features are present, their respective locations need to be shown on the Demolition Plan, along with a note stating that their removal needs to be done in accordance with Township, County and or/NJDEP requirements.
- 3. Provide a note stating that any imported fill meets the requirements of Clean Fill as stated within the NJDEP's Technical Requirements for Site Remediation (as found at NJAC 7:26E-1.8).