

Exhibit: **B-4**

JOHN H. ALLGAIR, PE, PP, LS (1983-2001)
DAVID J. SAMUEL, PE, PP, CME
JOHN J. STEFANI, PE, LS, PP, CME
JAY B. CORNELL, PE, PP, CME
MICHAEL J. McCLELLAND, PE, PP, CME
GREGORY R. VALES, PE, PP, CME



TIM W. GILLEN, PE, PP, CME (1991-2019)
BRUCE M. KOCH, PE, PP, CME
LOUIS J. PLOSKONKA, PE, CME
TREVOR J. TAYLOR, PE, PP, CME
BEHRAM TURAN, PE, LSRP
LAURA J. NEUMANN, PE, PP
DOUGLAS ROHMEYER, PE, CFM, CME
ROBERT J. RUSSO, PE, PP, CME
JOHN J. HESS, PE, PP, CME

November 19, 2019

Kaplan Companies
433 River Road
Highland Park, New Jersey 08904

Attn: Mr. Bret Kaplan
General Counsel

**Re: Borough of Sayreville
Camelot at Ernston Road LLC Site Plan
Block 347.01, Lots 3.01; Block 366, Lot 1
Our File No. PSAP0366.01**

Dear Mr. Kaplan:

Our office is in receipt of your October 15, 2019 emails and November 18, 2019 letter which provided additional information for review relative to the above referenced project.

We have reviewed the documents provided and determined that this information has addressed the previous completeness issues raised by our office.

Transmitted herein for your use, please find one (1) copy of a Technical Engineering Review for the project. These technical items must be addressed in the form of revised plans and engineering reports before this matter can be scheduled for a Planning Board hearing.

Should you have any question concerning this matter, please do not hesitate to contact this office.

Very truly yours,

Jay B. Cornell, P.E.
Borough Engineer's Office

JBC/blr
Enclosure

cc: Planning Board Secretary
John Leoncavallo – Board Planner
Abbingon Associates, LLC



**BOROUGH OF SAYREVILLE
CAMELOT AT ERNSTON ROAD
PRELIMINARY AND FINAL MAJOR SITE PLAN**

- TECHNICAL ENGINEERING REVIEW -

Our File No.: PSAP0366.01/600.01

A. SITE GRADING & GENERAL COMMENTS

1. The Applicant will be required to obtain the following governmental approvals necessary to implement this project:
 - a. Middlesex County Planning Board Approval,
 - b. NJDEP Treatment Works Approval,
 - c. NJDEP Bureau of Safe Drinking Water,
 - d. NJDEP – Freshwater Wetland Permits,
 - e. NJPDES – Construction Activity Stormwater Discharge Authorization,
 - f. Borough of Sayreville – Soil Erosion and Sediment Control Plan Certification,
 - g. Borough of Sayreville – Soil Removal or Fill Placement Permit,
 - h. Borough of Sayreville – Tree Removal Permit,
 - i. Jersey Central Power & Light.

2. A comprehensive and itemized N.J. Residential Site Improvement Standards (RSIS) compliance report should be submitted for the project. The report should include all site improvement items that are applicable to the project, including roadway geometry, pavement sections, parking, water, sanitary sewer, stormwater management, etc.

3. Based on the number of proposed dwelling units (142 apartments), the following RSIS street classifications should be assigned based on average daily traffic for mid-rise apartments of 5.5 trips per dwelling unit:
 - a. Drive Aisle “A” (stations 0+18 to 7+50) – Residential Access (<1500 ADT), High Intensity Development (>8 D.U./Acre), with no on-street parking,
 - b. Drive Aisle “A” (stations 7+50 to 12+00) – Off-street parking, access aisle and driveway,
 - c. Drive Aisle “B” (stations 0+25 to 3+60) – Residential Access (<1500 ADT), High Intensity of Development (>8D.U./Acre), with non-parallel on-street parking,
 - d. Drive Aisle “B” (stations 3+60 to 9+70) – Off-street parking, access aisle and driveway,
 - e. Drive Aisle “C” – Off-street parking, access aisle and driveway,
 - f. Drive Aisle “D” (stations 0+12 to 5+30+/-) – Residential Access (<1500 ADT), High Intensity Development (>8D.U./Acre), with non-parallel on-street parking,
 - g. Drive Aisle “D” (stations 5+30+/- to 7+50+/-) – Multifamily Court (<300 ft. long), High Intensity Development (>8D.U./Acre), with non-parallel on-street parking.

Accordingly, the design of the aforementioned roadways, including cartway widths, curbs, sidewalks, horizontal and vertical geometry, and pavement structures should meet RSIS requirements based on the indicated street classification.



Technical Engineering Review
Camelot at Ernston Road
Page 2 of 13

4. For "Residential Access Streets with Nonparallel Parking (all intensities)", the following RSIS design requirements shall apply:
 - a. Traveled way width = 24 feet,
 - b. Parking lane width = 18 feet (one-sided parking) or 36 feet (two-sided parking),
 - c. Curb – required along both sides of the street,
 - d. Sidewalk – required along both sides of the street,
 - e. Sidewalks along streets with nonparallel parking shall be placed parallel to the street, and shall not be located between the parked vehicles and the traveled way,
 - f. The minimum street grade shall be 0.5 percent,
 - g. The maximum street grade shall be 12 percent,
 - h. The maximum street grade within 50 feet of an intersection shall be 5 percent,
 - i. The minimum horizontal curve radius shall be 100 feet (measured from centerline of the street),
 - j. The minimum tangent length between horizontal reverse curves shall be 50 feet,
 - k. The minimum curb radii at intersections shall be 25 feet,
 - l. Sight easements shall be required at all street intersections and horizontal curves,
 - m. Vertical curves shall be required along all streets,
 - n. Vertical curves shall provide minimum required sight distances based on a speed limit of 25 mph (30 mph design speed).

Accordingly, the site plan should be revised to comply with the aforementioned design requirements.

5. Centerline stationing should be provided on the site plans for proposed Drive Aisle "D"
6. A roadway profile should be provided for Drive Aisle "D", including vertical curve information, etc.
7. The Applicant should arrange with all applicable utility companies for the installation of their underground supply lines and service connections. A written instrument from each serving utility company should be submitted to our office.
8. All required building setback lines should be indicated on the site plan.
9. In accordance with the AH-2 zone district design standards, a minimum ten (10') ft. wide landscape buffer shall be provided between the buildings/parking areas and Main Street, as well as between the buildings/parking areas and adjacent Lot 2.05 in Block 347.01. In addition, all buffer area plantings shall consist of evergreen trees having a minimum height of six (6') feet at the time of planting. The plans should be revised to indicate the required buffer areas and evergreen tree plantings for compliance with the aforementioned zone district design standards.
10. In accordance with the AH-2 zone district design standards, all outside refuse and recycling storage areas shall conform to the required perimeter building setback (20 ft.). The proposed refuse enclosure for Building #6, and the proposed bulk refuse area near Building #1 do not comply with this requirement and should be revised.



Technical Engineering Review
Camelot at Ernston Road
Page 3 of 13

11. In accordance with the AH-2 zone district design standards, no refuse and recycling storage areas shall be permitted between the front of a building and the street. The proposed refuse enclosure between Buildings #1 and #2 does not comply with this requirement and should be revised.
12. In accordance with the AH-2 zone district design standards, the minimum distance to off-street parking spaces from buildings shall be 15 feet. The proposed off-street parking spaces located directly west of Building #6 do not satisfy this requirement and should be revised.
13. Typical length and width dimensions should be provided for the proposed driveways in front of Building #6.
14. Additional width dimensions for all sidewalks should be provided on the dimension plan. In accordance with RSIS requirements, all sidewalks shall have a minimum width of four (4') feet. Where sidewalks abut the curb and cars overhang the sidewalk, a minimum sidewalk width of six (6') feet shall be provided. In high-density residential areas, all sidewalks that abut the curb shall have a minimum width of six (6') feet. The plans should be revised to comply with these requirements.
15. In accordance with RSIS requirements, residential access streets in high intensity developments shall have sidewalk along both sides of the street. The plans should be revised to comply with this requirement.
16. Spot elevations should be provided at the top and bottom of all handicap ramps.
17. The Applicant should discuss with the Board the findings of the Preliminary Assessment Report concerning existing environmental conditions at the subject site. All Areas of Concern (AOCs) should be further investigated or remediated as required prior to the issuance of any building permits for the project.
18. The quantity of parking surface parking spaces, as indicated in the parking table on plan sheet #1 (188), is inconsistent with the quantity of spaces indicated on the site plans (187), and should be further reviewed.
19. The total quantity and locations of car charging stations should be indicated on the site plans.
20. The anticipated time frame for the completion of the club house should be reviewed with the Board.
21. Invert elevations should be indicated on the grading plans for all detention basin headwalls and outlet structures.
22. The proposed grading within a number of a lawn areas results in slopes that are less than the minimum 2% required by the Borough Ordinance and should be further reviewed and revised accordingly.



Technical Engineering Review
Camelot at Ernston Road
Page 4 of 13

23. The proposed grading within a number of paved areas results in slopes that are less than the minimum 0.5% required by the RSIS and should be further reviewed and revised accordingly.
24. There are a number of proposed spot elevations and contour lines that are inconsistent with the proposed grading in the immediate areas for same and should be further reviewed and revised accordingly.

B. SANITARY SEWER SYSTEM

1. A NJDEP Treatment Works Approval will be required for the proposed improvements.
2. The Sanitary Sewer Report should be revised to include calculations that demonstrate the adequacy of the existing sanitary sewer downstream of the proposed site improvements to accept the increased sewage flows. The calculations should include wastewater flow quantities from all existing development that is tributary to the downstream system.
3. The quantity of one-bedroom apartments indicated in the Sanitary and Water Report (52) is inconsistent with the quantity of one-bedroom apartments indicated on the plans and should be revised.
4. Pipe diameter, material, slope and upper/lower invert elevations should be provided on the utility plans for all proposed sanitary laterals from each building. In addition, all required clean-out locations, including rim and invert elevations, should be indicated on the utility plans.
5. As per NJDEP requirements, the maximum flow velocity in sanitary sewer mains is 10 ft./sec. Accordingly, the Applicant's Engineer should verify that the proposed sanitary sewers at 5% slope satisfy this requirement.

C. WATER DISTRIBUTION SYSTEM

1. The Water System Report should be revised to include needed fire flow (NFF) calculations for the proposed buildings. The needed fire flow calculations shall conform to the Insurance Services Office (ISO) standard, Fire Suppression Rating Schedule, or per AWWA M31, "Manual of Water Supply Practices-Distribution System Requirements for Fire Protection", ISO method on pages 3-9, as referenced in the RSIS. In addition, the RSIS indicates that the proposed water system shall be capable of providing the NFF plus the required maximum daily residential demand simultaneously. Accordingly, a hydrant flow test shall be required in order to verify that the simultaneous NFF and maximum domestic flows are available from the Borough water distribution system at a minimum 20 psig residual pressure.



Technical Engineering Review
Camelot at Ernston Road
Page 5 of 13

2. The quantity of one-bedroom apartments indicated in the Sanitary and Water Report (52) is inconsistent with the quantity of one-bedroom apartments indicated on the plans and should be revised.
3. In accordance with RSIS requirements, no more than twenty (20) dwelling units shall be permitted on a dead-end water main. The proposed dead-end water main serving buildings #1, #2, #3 and #4 does not comply with this requirement and should be revised.
4. The utility plans should be revised to indicate valves on each branch of every 8" diameter or larger water main tee intersection in accordance with RSIS requirements.
5. The sizes of the proposed domestic water and fire service lines to Building #5 should be indicated on the utility plan.
6. An isolation valve should be provided on the existing 12" diameter water main between the two (2) proposed wet tap connections in order to satisfy RSIS requirements for looped water supply systems.

D. STORM SEWER SYSTEM

1. In accordance with RSIS requirements, to the maximum extent practicable, stormwater management standards shall be met by incorporating nonstructural stormwater management strategies into a design. The Applicant's Engineer should include in the drainage report an executed "Low Impact Development Checklist" to demonstrate that the nonstructural stormwater management requirements of the rules have been met. The checklist can be found in Appendix A of the BMP Manual.
2. The existing and proposed drainage area maps included in the drainage report should be revised to include offsite tributary areas draining into the subject site.
3. In accordance with RSIS requirements, for the purpose of calculating runoff coefficients and groundwater recharge, there is a presumption that the pre-construction condition of a site or portion thereof, is a wooded land use in good hydrologic condition. The runoff calculations under pre-development conditions were computed using a CN of 46, but according to the TR-55 manual, for a HSG A soil a CN of 30 should be used. The runoff hydrographs should be revised accordingly.
4. The time of concentration for DA#1 Impervious was computed as 4.21 minutes, but a minimum time of 10 minutes was used to generate runoff hydrographs for the pervious and impervious surfaces. The minimum time of concentration in TR-55 is 6 min (0.10 hrs). The drainage report should be revised accordingly.
5. The time of concentration for DA#3 Impervious and pervious was assumed to be 10 minutes to generate runoff hydrographs. The minimum time of concentration in TR-55 is 6 min (0.10 hrs). The drainage report should be revised accordingly.



Technical Engineering Review
Camelot at Ernston Road
Page 6 of 13

6. The proposed development requires a disturbance of freshwater wetlands and transition areas, therefore the Applicant should obtain an NJDEP Freshwater Wetlands permit to fill those areas within the property.
7. The drainage report and plans refer to Detention Basins 1 and 2 but according to the analysis in the drainage report, basins 1 and 2 consist of infiltration basins. The report and plans should be revised to label the basins correctly.
8. As per RSIS requirements, a minimum of two soil profile pits for the first 10,000 sf of infiltration area and one (1) additional soil pit for each additional 10,000 sf of infiltration area must be performed in order to determine the suitability of the existing soil at the location of the proposed infiltration area. The Applicant's engineer proposes two (2) infiltration basins, but only one soil boring SB#1 and SB #2 were provided for the infiltration basins. If the Applicant's engineer decides to conduct soil borings instead of soil pits, two (2) soil boring should be conducted in place of one (1) required soil profile pit. Additional soil logs must be performed to meet RSIS requirements.
9. In accordance with RSIS requirements, soil explorations (soil profile pits and soil borings) shall extend to a minimum depth of 8 feet below the lowest elevation of the basin bottom or to a depth that is at least two (2) times the maximum potential water depth in the proposed basins. The excavated soil borings are not in accordance with this requirement and should be revised.
10. As per RSIS requirements, a minimum of two permeability tests are required for the first 10,000 sf of infiltration area and one (1) additional test for each additional 10,000 sf of infiltration area within the infiltration area of each basin. The permeability tests shall be conducted on the most hydraulically restrictive horizon to be left in place. The Applicant's engineer performed only one (1) permeability test for each infiltration area. Additional permeability testing must be performed to meet RSIS requirements.
11. As per RSIS requirements, groundwater mounding impacts due to infiltration must be assessed as required by N.J.A.C. 7:8-5.4(a)2.iv. This should include an analysis of the reduction in the permeability rate when the groundwater mounding is present. The Applicant's Engineer should perform a groundwater mounding analysis.
12. In accordance with BMP Manual requirements, a factor of safety of 2 must be applied to the slowest tested permeability rate to determine the design permeability rate for an infiltration basin. The calculations in the drainage report should be revised accordingly.
13. The data for the 24-inch outflow pipe at outlet structure #1 included in the drainage report should be revised to match information shown on the Utility Plan. The drainage report shows a 40 ft pipe at a 0.80% slope but the plans show a 30 ft long pipe at a slope of 4.0%. The calculations should be revised accordingly.



Technical Engineering Review
Camelot at Ernston Road
Page 7 of 13

14. The data for the 24-inch outflow pipe at outlet structure #2 included in the drainage report should be revised to match information shown on the Utility Plan. The drainage report shows a 32 ft pipe at a 0.70% slope with an invert of 36.00 but the plans show a 23 ft long pipe at a slope of 0.50% with an invert of 38.00. The calculations should be revised accordingly.
15. It appears that proposed infiltration basins 1 and 2 qualify as a Class IV dam and in accordance with N.J.A.C. 7:20, a New Jersey licensed professional engineer must design the Class IV dam to meet all technical requirements in N.J.A.C. 7:20. The Applicant's Engineer should provide a certification that the basins comply with all applicable N.J.A.C. 20 requirements.
16. In accordance with N.J.A.C. 7:20, all dams shall include a device to permit draining the reservoir for maintenance. The proposed basin does not meet this requirement and should be revised accordingly.
17. The proposed stormwater management plan does not meet water quantity control standards for the 2-yr storm event and should be revised accordingly.
18. The Grading Plans and Utility Plans should be revised to label the maximum water elevation for the water quality water, 2-yr, 10-yr, 100-yr and emergency spillway storm events for infiltration basins 1 and 2.
19. In accordance with RSIS requirements, seepage along pipes extending through embankments shall be controlled by use of a filter, drainage diaphragm or anti-seep collars. The stormwater report should be revised to include design information of the seepage control measures for basins 1 and 2. The location of structure and construction details should be revised on the plans.
20. Based on the proposed grading, offsite and onsite runoff will pond between Drive Aisle B and the railroad tracks. The Applicant's Engineer should further review this issue.
21. In accordance with RSIS requirements, the minimum elevation of the top of the settled embankment for all basins shall be one (1) foot above the water surface in the basins, with the emergency spillway flowing at the design depth. Design engineers shall increase the design height of the structure by not less than 5% to ensure that after settlement the height of the berm equals or exceeds the design amount. Proposed infiltration basins 1 and 2 do not meet this requirement and should be revised accordingly.
22. In accordance with RSIS requirements, the minimum top width for a dam should be 10 ft. The proposed top of width for basins 1 and 2 is 6 feet and should be revised accordingly.
23. In accordance with RSIS requirements, when necessary, embankment ponds shall have foundation cutoff walls of relatively impervious material under the berm. The cutoff walls shall extend up to abutments as required and be deep enough to extend into a relatively impervious layer. The grading plan should be revised to indicate the extent of the required cutoff wall.



Technical Engineering Review
Camelot at Ernston Road
Page 8 of 13

24. In accordance with BMP Manual requirements, the seasonal high water table (SHWT) must be at least 2 feet below the lowest extent of an infiltration basin bottom. In surface basins, this distance is measured from the bottom of the sand layer. Infiltration basins 1 and 2 are not in accordance and should be revised accordingly.
25. In accordance with BMP Manual requirements, no standing water may remain in an infiltration basin 72 hours after a rain event in order to allow for sufficient storage for the next rain event. It appears that the drain time for the 100-yr storm event for basins 1 and 2 exceeds 72 hours and should be revised accordingly.
26. The drainage report should be revised to include calculations to determine the design detention time for infiltration basin 1 and 2.
27. An access road eighteen (18) feet wide with a maximum slope of 1 vertical to 4 horizontal should be provided to each basin for maintenance. Proposed basins 1 and 2 provide a 10-ft wide access and should be revised accordingly.
28. In accordance with BMP Manual requirements, post-construction testing must be performed on the as-built infiltration basins in accordance with the Construction and Post-construction Oversight and Soil Permeability Testing in Appendix E of the BMP Manual. Where as-built testing shows a longer time than designed, corrective action must be taken. A note should be added to the grading and utility plan stating this requirement.
29. In accordance with RSIS requirements, the overflow grate shall be designed to withstand a perpendicular live loading of 300 lbs/sf and the grate spacing must be no greater than 2 inches across the smallest dimension. The construction detail provided on sheet 25 should be revised to note these requirements.
30. In accordance with RSIS requirements, trash racks at the intake of an outlet structure above the water quality storm event shall have parallel bars spaced no greater one-third the diameter of the orifice or one-third the width of the weir. Trash rack details provided on sheet 25 should be revised to meet these requirements. The details should provide specific dimensions to verify compliance.
31. The cross section of the proposed detention basin provided on sheet 25 should be revised to show the separation provided between the bottom of the sand layer and the seasonal high groundwater table. In addition, the detail should include sand layer requirements (ASTM specification, maximum percentage of fines, minimum tested permeability rate, filter fabric, etc.).
32. The Utility Plan should be revised to show the pipe diameter and pipe slope for proposed roof leaders for building 1, 2 and 6. In addition, the drainage report should be revised to include pipe sizing calculations for the roof leader laterals.
33. Groundwater recharge calculations for the proposed infiltration basins should be revised to include the correct BMP area, BMP effective depth, upper level of the BMP and depth of the



Technical Engineering Review
Camelot at Ernston Road
Page 9 of 13

lower surface of BMP. It is recommended that a separate analysis be provided for each infiltration basin.

34. Structural calculations for any oversized drainage structures and the outlet structures should be provided. A note should be added to the plan indicating same.
35. A construction detail of the anti-seep collar should be included on the site plans.
36. A construction detail of the basin clay core with material specifications should be provided in accordance with RSIS requirements. The limits of the required clay core should be shown on the grading plan and utility plan.
37. A construction detail of the proposed basin embankment should be provided, including specification for the material placed in the fill in accordance with RSIS standards.
38. The construction detail for the outlet structure for basin 2 provided on sheet 25 is not in accordance with information provided in the drainage report and utility plan and should be revised for consistency.
39. A concrete cradle detail should be provided on the plans.
40. A concrete support block detail should be provided on the plans.
41. The construction detail of the proposed emergency spillway for infiltration basins 1 and 2 should be revised to include the top of berm elevation and freeboard provided.
42. An operation and maintenance plan should be prepared for all stormwater management measures incorporated in the design. The maintenance manual shall be in accordance with N.J.A.C. 7:8-5.8 and a copy should be provided to this office for review.

E. SOIL EROSION AND SEDIMENT CONTROL

1. The Soil Erosion and Sediment Control Notes (notes 3 and 4) should be revised to delete "District" and replace same with "Borough of Sayreville".
2. Step 1 of the sequence of construction should be revised to include installation of silt fence.
3. The sequence of construction should be revised to include installation of inlet filters and conduit outlet protection.
4. The sequence of construction includes construction of detention basins but the project includes only infiltration basins. Contributing areas to infiltration basins must be completely stabilized prior to infiltration basin use but the sequence of construction proposes stabilization after construction of the basin. The Applicant's Engineer should further review this issue.



Technical Engineering Review
Camelot at Ernston Road
Page 10 of 13

5. The stabilized construction entrance detail should be revised to provide specific dimensions for the pad (length and width). In addition, it is recommended that a paved transition area be installed between Main Street and the stone entrance to prevent loose stone onto the roadway. The construction detail should be revised accordingly.
6. The Soil Erosion and Sediment Control Plan should be revised to include the length of apron, width of apron, median stone diameter, and thickness of stone blanket for each outlet apron.
7. Conduit Outlet Protection calculations for headwalls #10, #20, #44 and #55 should be revised to use the correct tailwater. TW shall equal the 2-yr storm maximum water elevation in the basin minus the invert of the pipe. The calculations should be revised accordingly.
8. The tailwater for Conduit Outlet Protection for headwalls #22 and #57 are unknown, therefore the tailwater should be 0.02 Do. The calculations should be revised accordingly.
9. A downstream offsite stability analysis must be performed for each point of discharge. The Applicant's Engineer must utilize the procedure contained in Chapter 21 of the Standards for Soil Erosion and Sediment Control in New Jersey.
10. The stability of the proposed emergency spillway for the detention basin must be demonstrated via calculations.
11. Methods and materials provided for sod bed preparation on sheet 21 should be revised to include the type and rate of fertilizer and lime in accordance with the SESC Standards.
12. Section IV of the standard for topsoiling as shown on sheet 21 is not in accordance with the 2014 SESC Standards and should be revised accordingly.
13. The Soil Erosion and Sediment Control plan should be revised to include a soil mitigation plan showing disturbed areas exempt from compaction remediation and areas to be tested specifying the number of tests to be conducted and the location of proposed testing.
14. The Temporary Vegetative Stabilization seeding rates, dates and depths provided on sheet 23 should be revised to remove seeding dates for zones not applicable to this project.
15. The Applicant's Engineer should determine the geologic formation where the proposed development is located and note same on the Acid Soil Conditions and Mitigation Procedures noted on sheet 23. The plans should be revised accordingly.
16. The Standard for Permanent Vegetative Cover for Soil Stabilization included on sheet 22 should be revised to remove optimal seeding dates not applicable to this development.
17. The SESC should be revised to include a stockpile detail for acid soil management.
18. A Hydrologic Modeling Database – Data Entry Form with all applicable hydrologic data and BMPs information should be provided.



Technical Engineering Review
Camelot at Ernston Road
Page 11 of 13

F. LANDSCAPING AND LIGHTING

1. In accordance with Borough Ordinance requirements for lighting design, all sidewalks shall have a minimum of one (1) foot-candle lighting intensity along the entire length. The proposed site lighting does not comply with this requirement and should be revised.
2. The Lighting Plan should be revised to provide minimum required lighting intensities for the proposed pool area.
3. House side shields shall be provided at the appropriate locations to minimize glare into adjacent residential units.
4. In accordance with the Borough Ordinance, all shade trees shall have a minimum caliper of three (3") inches. The planting schedule should be revised accordingly.
5. Our office recommends that the proposed ornamental trees be revised to indicate a caliper of three (3") inches.
6. In accordance with the Borough Ordinance, street trees shall be provided along all site frontages at a spacing of fifty (50') feet. The plans should be revised to provide the required street trees along the Main Street site frontage.
7. The quantities of the following landscape plantings are inconsistent between the plant schedule and the landscape plan and should be further reviewed:
 - a. Kousa Dogwood (6 vs. 7),
 - b. Zuni Crape Myrtle (5 vs. 6),
 - c. Black Tulip Magnolia (16 vs. 15),
 - d. Tama No Hada Azalea (83 vs. 91),
 - e. Pink Muhly (31 vs. 26),
 - f. Fraser's Photinia (51 vs. 43).
8. A number of plantings indicated on the landscape plan have different style planting symbols for the same species, which should be further reviewed and revised accordingly.
9. In accordance with the AH-1 zone district design standards, a minimum of one (1) shade tree per ten (10) surface parking spaces shall be provided. Calculations should be provided on the plans that verify compliance with this requirement.



Technical Engineering Review
Camelot at Ernston Road
Page 12 of 13

G. ROADWAY IMPROVEMENTS AND MISCELLANEOUS

1. The Applicant's Engineer shall provide site circulation plans showing the travel paths of emergency garbage, recycling, and delivery truck design vehicles in order to verify that the on-site circulation system provides adequate access for the required emergency and service vehicles.
2. The Standard Asphalt Pavement (RSIS) Detail should be revised to indicate a 4.5" thick hot mix asphalt base course in accordance with RSIS requirements for a combination pavement section with poor subgrade conditions. In addition, two (2) different thicknesses are indicated for the surface course, which should be further reviewed.
3. The HMA Base course should be revised to indicate 19M64 in accordance with RSIS requirements.
4. The Driveway Pavement Detail should be revised to indicate a standard 1-1/2" depressed curb reveal.
5. The Post and Rail Fence Detail should be revised to indicate concrete footings for the fence posts.
6. The Applicant's engineer should review the need for guiderail along the side of proposed Drive Aisle "B" adjacent to the existing railroad, and around the perimeter of the depressed lawn area within the JCP&L overhead power line easement. Guiderail warrant analyses should be prepared in order to determine the need for same.
7. The 6" high curb elevations that are indicated at the ends of each drive aisle profile (at drive aisle intersections) should be further reviewed, since there should be no curb at those locations.
8. The following construction details should be revised in accordance with the current Borough Standard details for same:
 - a. Typical Pipe Bedding Detail,
 - b. Reinforced Concrete Pipe Trench Installation,
 - c. Water Service Connection Detail,
 - d. Fire Hydrant Detail,
 - e. Type "B" Inlet Detail,
 - f. Type "E" Inlet Detail,
 - g. Drainage Manhole Detail,
 - h. Typical Precast Concrete M.H. Detail.
9. The Looping Water Main detail should be revised to utilize the restraint method indicated in the Borough Standard Vertical Bend Restraint Detail.
10. The Type "J" Eco Curb Piece is not allowed and should be revised to indicate a Type "N" Eco Curb Piece.



Technical Engineering Review
Camelot at Ernston Road
Page 13 of 13

11. The following construction details should be revised to indicate 4500 psi concrete in accordance with Borough Ordinance requirements:
 - a. Sidewalk Detail,
 - b. Masonry Trash Enclosure,
 - c. Typical Trench Drain.
12. General Note #2 on the Sidewalk Detail should be revised to indicate a broom finish in accordance with Borough Ordinance requirements.
13. The Post and Rail Fence Detail should be revised to indicate concrete footings for the posts.

H. TRAFFIC

1. As indicated in Table 3 of the Traffic Impact Study, there will be a significant increase in average vehicle delay (seconds per vehicle) for the Stegiel Place approach to the Main Street intersection as a result of the proposed site driveway to be located directly across Main Street. The Applicant's Traffic Engineer should identify the specific reason for the increase in delay and provide suggested remedial measures for same.
2. Appropriate traffic control signage for the onsite roads and parking areas should be reviewed by the Applicant's Traffic Engineer and added to the site plan where recommended.