

**Loudoun County School Board**  
**LCPS School at C.S. Monroe Property**  
**TLSE 2018-0008**  
**Response to Referral Comments, dated October 12, 2018**  
**December 11, 2018**

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**Town Plan Compliance**

Comments dated October 12, 2018

**Comment 1:** The Subject Property (Property) is located in the Leesburg Town Plan’s Central Planning Policy Area, and the Planned Land Use Policy Map further designates the subject property for “Major Institutional” uses. There are no specific area objective policies for the Property. Major Institutional policies are discussed beginning on Page 6-32 of the *Town Plan*. The primary intent of Major Institutional is to provide a variety of public-based community services on properties measuring at least 10 acres. (*Project Manager Comment*)

**Response:** Acknowledged. The subject site is 10 acres in size and has been utilized for educational purposes since 1977. Schools are an integral component to the provision of community services.

**Comment 2: Land Use, General Objectives:** Reference is made to general objectives to protect residential areas, preserve and expand town character, and accommodate growth.

- a. **Land Use, General Objective 2:** “Development and redevelopment should be compatible with the Town’s character in terms of land use and design.” Architectural renderings are promised to be submitted with the second submission of the application pursuant to the conditions of the waiver granted by staff for the initial submission of this special exception. Although the Property is situated outside of either the H-1 or H-2 Architectural Overlay Districts, staff will pursue design and materials that are consistent with and complimentary of the built environment surrounding the Property pursuant to General Objective 11 and Central Planning Area Objective 1.

**Response:** Architectural renderings and floor plans are provided with this submission. The exterior of the building is designed to be similar to other governmental, school and institutional facilities located in the Town of Leesburg and is compatible with the surrounding built environment.

- b. **Land Use, General Objective 11:** This objective “encourage(s) infill development that is compatible with the character of existing or planned development in the vicinity.” Compatibility is achieved through site design that includes the location of facilities and access, building height, scale and massing and buffering between different uses.

**Response:** Acknowledged. By utilizing a two-story design, the school may be located to provide increased building setback and buffers to the Foxridge community. The adjacent residences are likewise two-story design. The scale and massing of the building is illustrated in accompanying architectural renderings and floorplans. A tree inventory was conducted to determine the health of the existing trees. The landscaping plan identifies tree preservation areas and those trees that are to be removed due to a “poor” condition ranking or due to location within the limits of disturbance. The landscaping plan also identifies the trees to be added to comply with the Town’s landscaping requirements. Overall, the site development will be compatible with the existing uses.

**c. Land Use General Objective 12: Provide institutional uses, such as schools, libraries, and government facilities throughout the Town.**

- i. Facilities should be compatible in scale and design with existing or planned development in the vicinity.*
- ii. Facilities should not have a negative impact in terms of automobile traffic, noise, lighting, and visibility.*

**Response:** Please reference the architectural renderings which depict the building design and scale. The building has been designed to be compatible with Town Plan policies and existing development within the Town. No adverse impacts related to traffic, noise, lighting or visibility are anticipated. A detailed traffic analysis has been conducted and finds the area road network will continue to provide acceptable levels of service in accord with the Town’s policies. The use will not generate any unusual noise or lighting impacts. HVAC rooftop units and generator will be screened with materials that tie into the proposed building design in order to minimize both visual and noise impacts. An outdoor noise analysis will be performed during design to ensure that the emergency generator does not exceed the maximum noise at the property line. Site lighting will comply with Town standards including building and parking lot lighting that is full-cutoff, directed downward and inward toward the site. The proposed school building will be visually attractive and site development will preserve mature vegetation along the site boundaries with supplemental plantings to meet Town buffer standards.

**Comment 3: Central Planning Area Objectives: Objective 1 states, “[E]nsure development reinforces the desired character of the Central Planning Area.)**

**Response:** Reference responses under #2 above.

**Comment 4: Community Design: Objective 1.a: “Design lots, including the placement of buildings, parking, access, and landscaping, to be compatible with existing and planned development in the immediate vicinity.”**

**Response:** Reference responses under #2 above.

**Comment 5: Community Design: Objective 1.b.: “Design buildings, including size, height, location, scale, massing, color, roofline, and materials to enrich the character of Leesburg.”**

**Response:** Reference responses under #2 above.

## **STATEMENT OF COMPLIANCE**

**Comment 6: Correction Needed:** In the Statement of Justification, it states that the existing CS Monroe facility was approved by right under the R-1 regulations when it was first constructed in 1977. Although it does not affect the present application the Zoning Ordinance regulations in effect in 1977 required Condition Use approval for schools in the R-1 Zoning District.

**Response:** Acknowledged. Thank you for the clarification. The Statement of Justification has been amended.

**Comment 7: Special Exception Approval Criteria:**

- a. **The proposed use will not adversely affect the use of neighboring properties:** The minimum parking requirement was calculated using the “University, College” rate of 1 space per 1.67 students design capacity versus the High School rate of 1 space for 2.5 classroom seats design capacity. Address why the decision was made to utilize a higher parking standard than required given the number of students who are bused and why 58 more spaces to the minimum number of spaces were added. Given the parking issue created by students from Loudoun County High School (LCHS) parking along streets in the adjacent neighborhoods, is any of this additional parking being included to address this matter?

Because the proposed use Alternative Education Programs serves both middle school as well as high school students, the numbers of school busses will increase from one from each high school (15) to also accommodating one from each of the 15 LCPS middle schools for a total of 32 in the morning and the afternoon.

If the larger parking area is intended in part to address the LCHS parking issue, the TIA does not appear to analyze trips generated from LCHS students utilizing parking on the Property. This should be corrected.

**Response:** At the June 11, 2018, pre-application meeting, Town staff recommended LCPS utilize the higher parking standard because the school includes an adult education program that aligns with the “University, College” rate. Further, there have been parking concerns at Loudoun County High School and LCPS wishes to ensure that there will be adequate on-site student parking for this new school. The currently proposed parking is 401 spaces.

LCPS staff needs to correct information previously provided regarding the bus transportation. The high school buses will transport both the high school and middle school students. Thus, there will

only be 17 buses, one from each high school, not 32 (no separate buses from the middle schools). The bus loop will easily accommodate 22 buses, which will allow for additional buses should the number of high schools in the County increase due to growth. The buses travel from schools across the County resulting in various arrival times in the morning. At the afternoon dismissal, the buses are staged on-site at the same time. At the existing Catocin Circle location, this is accomplished by double stacking given the current site limitations.

LCPS staff recently monitored the arrival and dismissal at The Douglass School on Catocin Circle. The LCPS Staff observations found that the morning arrival spanned over 50 minutes with a total of 14 buses transporting students to school. Only four buses were on site at one time during the morning arrival period. For the afternoon dismissal, the majority of the buses are present. The school staff keeps track of which buses are on-site and posts this information for the students. If the bus has not arrived, the students wait in the front lobby until the bus is on-site. The system is efficient. The majority of the students utilize bus transportation. Dismissal is at 3:30 p.m. and by 3:36 p.m. the students have boarded and the buses depart for their home high schools, which dismiss at approximately 4:00 p.m.

## **MODIFICATIONS AND WAIVERS**

### **Comment 8: Waiver Request: Zoning Ordinance Section 12.8.6.D.2 (Table 12.8.6.B) Screening.**

**More information needed.**

**It is proposed to replace the shrubs required by the S-2 screen with evergreen trees at the rate of one (1) evergreen tree per six (6) required shrubs.**

**Shrubs play the role of ground-level screening. If they are eliminated from the required buffer yards as proposed, will the evergreen tree varieties exchanged satisfactorily provide the ground level screening intended by the S-2 Screen?**

**The Applicant has indicated that they are preparing a Tree Management Report (TMR) that will provide detailed information about trees intended to be retained on the site. The information provided in the TMR will assist staff in assessing the ultimate impact of the proposed modification might have on the proposed screening and whether or not the modification is appropriate.**

**Response:** Acknowledged. Ground level screening, in the 12"-24" range, that would typically be provided by shrubs will be filled by evergreen varieties that maintain low level limbs. Eight out of the eleven evergreen species proposed provide low level screening and are used to add additional screening throughout the buffers. The proposed species that provide ground level screening are *Cryptomeria japonica* "Yoshino", *Juniperus virginiana*, *Magnolia grandiflora* 'D.D. Blanchard', *Thuja plicata* 'Green Giant', *Ilex x attenuata*, *Ilex x Nellie Stevens*, *Juniperus scopularum* 'Moonglow', and *Thuja occidentalis*.

The Tree Preservation Plan which includes detailed information about the trees to be retained on the site has been included with this application.

## **SPECIAL EXCEPTION PLAT (PLAT)**

### **Comment 9: Address the following minor comments on the proposed application:**

**Comment: a. Case Number: Update the special exception application number to read TLSE-2018-0008 in the title block of all plan sheets per TLZO Sec. 3.4.6.E.23.**

**Response:** The special exception application number TLSE-2018-0008 has been added to the title block of all plan sheets.

**Comment: b. Corporate Limits: Depict and label the Town's corporate limit line on the vicinity map on Sheet 1 per TLZO Sec. 3.4.6.E.1**

**Response:** The Town's corporate limit line has been added to the Plat. See vicinity map on Sheet 1 and Sheet 3.

**Comment: c. House Locations: Depict the location of the single-family homes in the neighboring Foxridge subdivision on the landscape sheets (Sheets 10 and 11) per TLZO 3.4.6.E.4.**

**Response:** The locations of the single-family homes in the neighboring Foxridge subdivision have been depicted on the landscape sheet. See Sheet 14.

**Comment: d. Revision Block: Please note the type and date of revisions in the revision blocks of the applicable plan sheets with the next submission (Sheets.1 – 13) per TLZO 3.4.6.E.23.**

**Response:** The time and date of revisions have been updated in the revisions blocks of the applicable plan sheets.

**Comment: e. Offsite Contour: Provide extended offsite contour and topo at minimum of 25 feet beyond the site limit or limits of disturbance, whichever is greater (Sht. 4) per DCSM Section 10-120.2.H.2. (DPR Comment #1)**

**Response:** The contours have been extended to 25 feet beyond the site limit or limit of disturbance. See Sheet 4.

**Comment 10: Parking Spaces Provided:** Staff suggested the parking calculation for University, College or Similar Institution (1 space for each 1.67 enrollees maximum capacity + 20 visitor spaces) be utilized instead of the calculation for High School (1 space for each 2.5 seats maximum capacity + 20 visitor spaces) for the adult programs.

The maximum planned capacity of the facility is 450 high school/middle school students + 100 daytime adult education program enrollees, or 550 total. As a result, minimum required parking pursuant to the University/College calculation is 349 parking spaces. An additional 58 spaces have been included for a total of 407 on the Property.

Explain the need for the 407 parking spaces to serve the planned facility given the uses and the location of the school adjacent to residential neighborhoods.

The TIA submitted with this application indicates the estimated Average Daily Trips (ADT) after development equals 1,066 or 533 in/out vehicle trips throughout the course of a typical weekday. Note, this ADT also calculates the estimated evening Adult Education Program enrollees who are anticipated to number around 172-217 based on figures provided in the Statement. Assuming each of these enrollees drives separately, the total number of trips would range from 346-434 of that total ADT of 1066.

**Response:** The number of parking spaces are proposed in accordance with the University, College, or Similar Institution standard at the recommendation of staff. This conservative approach lessens the chance for offsite parking in the residential neighborhood than if the school standard were applied. This standard also corresponds to the adult education program component and addresses the ultimate planned enrollment:

- 450 students (estimate potential for up to 150 drivers based on other high schools)
- 100 teachers/staff
- 75-100 daytime adult education students

At capacity, and assuming 150 student drivers and all adult education students on site at once (arriving by individual vehicle), 350 spaces would be needed. While this scenario is unlikely given bus ridership, the spread of adult education classes and carpooling by adult education students, there will be adequate parking should this ever occur.

The ADT in the traffic study is not directly related to parking needs on the site. A portion of the trips are attributed to buses which have a separate staging area (the bus loop) and are not included in the parking tabulations. Also, the ADT accounts for potential evening events/classes that will utilize parking when most of the students and staff are no longer present on the site, meaning that some of the spaces are “shared” given that staggered demand.

**Comment 11: The tally of parking spaces being provided in the parking lot on the Property on Sheet 3 of the Plat indicates 407 parking spaces. The actual count of the spaces depicted on Sheet 3 numbers 401. Please check this and revise the Plat accordingly (b)(2)((c)).**

**Response:** The parking count has been checked and the Plat revised. There are 401 spaces proposed. See Sheet 3.

**Comment 12: Parking Number Discrepancy:** One row of the parking spaces depicted near the Childrens Center Road frontage is labeled as having 20 spaces, but the number of spaces in that row is 14. Please revise accordingly.

**Response:** The parking count discrepancy has been rectified on Sheet 3.

**Comment 13: Tree Preservation Report:** Provide a Tree Management Report that documents the health and structural condition of the existing trees to be preserved. Also, the 5-inch and 15-inch diameter trees in the northwest corner of the site near Childrens Center Road are either dead or dying and should be shown to be removed instead of preserved.

**Response:** Acknowledged. A Tree Preservation Report has been provided within this submission. The tree preservation report in whole (3 pages, Sheets 17-19) replaces Sheet 10-Tree Preservation Plan. The 5-inch and 15-inch trees are being removed per TNT Environmental Plan Sheet 18.

**Comment 14: Tree Preservation and Easements:** Revise the limits of the proposed tree preservation areas Tree Save 1 and Tree Save 2 depicted on Sheet 10 (Tree Preservation Plan) by excluding all portions of these preservation areas depicted within the existing 20 foot wide drainage easements located along the south of the property, and from the electric and telephone easements (10' VEPCO and C&P Esmt. DB 640 PG 393) along the eastern property line next to Foxridge Park.

Section 8-700 of the DCSM prohibits trees within public easements. Some shrubs may be permitted in such easements subject to review of the specific deed language.

**Response:** Acknowledged. Accurate tree preservation areas are shown on the Tree Preservation Plan prepared by TNT Environmental, See Sheet 18. Additionally, tree preservation areas have been removed from all easements.

**Comment 15: Tree Preservation:** Revise the limits of Tree Save 1 and Tree Save 2 depicted on Sheet 10 (Tree Preservation Plan) by removing all portions of those areas that are within the area where trees are not being saved, but are to be planted, OR relocate the proposed tree plantings outside of the tree preservation areas.

**Response:** Acknowledged. Accurate tree preservation areas are shown on the Tree Preservation Plan prepared by TNT Environmental. See Sheet 18.

**Comment 16: Tree Preservation Limits:** So they can be analyzed together, show the proposed limits of Tree Save 1 and 2 on Sheet 11.

**Response:** Acknowledged and Revised. The proposed limits of the tree save areas and the locations of individual trees have been shown on the Landscape Plan sheet. (Old Sheet 11, New Sheet 14).

**Comment 17: Buffer Yard Tree Credit: A Tree Management Plan (TMR) must be provided and reviewed by staff before the credits being claimed can be confirmed.**

**Response:** Acknowledged and Revised. The buffer yard and screening tabulations have been modified based on the Tree Preservation Report and are shown on Sheet 16-Landscape Tabulations. The calculations for Buffers 1 and 2 screening have been tabulated in the notes portion of the spreadsheet. For ease of showing tree preservation credit, the requirement for Buffer 1 has been shown as the linear feet of property adjacent to the Route 7 Bypass multiplied by 75' (the required buffer width). The required square footage of the buffer is 47,175. Of that, there is 9,625 square feet of tree preservation along the property line which is 20.4% of the required buffer. We have taken a credit for 20% and have calculated the remaining required trees at 80% of the requirement.

The same approach has been used on Buffer 2, where the linear feet of property along the southern boundary has been multiplied by the buffer width of 25'. 19,700 square feet of buffer area is required of which 15,557 sf is provided by the tree preservation. This is equal to 77.65% of the required buffer. We have taken a credit of 78% and have calculated the remaining required trees at 22% of the requirement.

**Comment 18: Limits of Clearing and Grading: Revise the Limit of Disturbance (LoD) to encompass all onsite tree planting areas as shown on Sheet 11 (confirm the revision to the LoD is also reflected on Sheets 4 and 10,) Installation of plant material constitutes land disturbance and cannot be shown in areas designated to remain undisturbed. This includes designated tree preservation areas. In addition, add a note on the Plat that reads "At time of Final Site Plan submission, supplemental understory plant material may be required in the Buffer Areas Supported By Tree Save to complete effective screening."**

**Response:** The limits of clearing and grading (LOD) shown in this Special Exception Plat have been included to indicate the limits of disturbance and to show what those impacts are as they relate to the existing conditions and the surrounding areas. Those impacts include the existing trees and vegetation and how those impacts affect and define the proposed tree preservation areas.

The recommended note has also been added to the plans regarding the supplemental understory plant material. See Sheet 14.

**Comment 19: Street Trees: Street Trees need to be depicted on Sheet 11 pursuant to Secs. 12.4.3 and 12.4.4 along the Childrens Center Road frontage. Street trees are to be provide in addition to required perimeter parking lot landscaping. Street Tree Tabulations will need to be provided on Sheet 12 (Landscape Tabulations) accordingly per TLZO Sec. 12.4.3.**

**Response:** Acknowledged and Revised. Street trees have been added to the Landscape Plan Sheet 14 and a tabulation has been added to the Landscape Tabulation, Sheet 16. The existing tree line has been credited by subtracting the length of tree line along the road frontage from the total road frontage length. The calculation was then based on the remaining frontage. This tabulation has been shown in the notes portion of the spreadsheet.

**Comment 20: Perimeter Parking Lot Landscaping:** Perimeter parking lot landscaping is not required where an S2 or S3 screen is required. As such, the label for perimeter parking lot screening on Sheet 11 adjacent to Buffer 2 can be removed because Buffer 2 is required to be an S2 screen.

**Response:** Acknowledged and Revised. The label for perimeter parking lot screening adjacent to Buffer 2 has been removed. See Sheet 14.

**Comment 21: Additional Buffer Screening:** Staff recommends added buffer screening near the proposed “Bio Retention B” pond to provide more thorough screening between Lots 81, 89 and 11 in Foxridge Subdivision and the Property.

**Response:** Acknowledged and Revised. Additional screening has been added where possible to screen Lots 81, 89, 90 and 91 in Foxridge. Trees have been removed from the embankment.

## LIGHTING

**Comment 22: Light Pole Heights:** Clarify that the proposed light pole heights will not exceed 25 feet in height including the base.

**Response:** Note 4 has been added clarifying the maximum proposed light pole height to be 25 feet including the base. See Sheet 11.

**Comment 23: Full-Cutoff Lighting:** Clarify that all proposed lighting fixtures shall be full-cutoff.

**Response:** Note 5 has been added clarifying all proposed lighting fixtures shall be full-cutoff. See Sheet 11.

**Comment 24: Childrens Center Road Frontage Requirements:** SLDR Section 3.18.(b)(1)((t)) states that “Wherever there exists a public street adjacent to a proposed development, the street shall be dedicated to the width prescribed in the Leesburg Design and Construction Standards Manual (DCSM) and shall provide such improvements as are necessary to bring said street up to the standards specified in the DCSM.” The improvements include full curb, gutter and sidewalk.

**Response:** Frontage improvements have been provided to include curb and gutter, sidewalk (up to the intersection with Wild Turkey Way), additional pavement for parallel parking, and storm sewer. See Sheet 3.

**Comment 25: Dumpster Location: Provide required dumpster(s) and related enclosure(s) on Sheets 3-11 in accordance with the design standards in TLZO Sec. 2.8.8. This is particularly important given the potential proximity to residential uses.**

**Response:** The dumpster enclosure and pad has been provided in accordance with the design standards in TLZO Sec2.8.8. See Sheet 3. Additionally, landscaping has been proposed in the area around the enclosure.

**Comment 26: HVAC Equipment: Provide a note on the Plat indicating that all ground-mounted air-conditioning units and rooftop HVAC and mechanical equipment shall be screened from view from public rights-of-way and adjoining properties.**

**Response:** A note has been added indicating that all ground-mounted air – conditioning units and rooftop HVAC and mechanical equipment shall be screened from view of public right-of-way and adjoining properties. See Sheet 1, Note 23.

**Comment 27: Building Square Footage: The proposed building gross floor area (GFA) provided on the Plat and in the Statement is 90,958 GSF in a two-story building. Simply doubling the GFA of the building depicted on the Plat yields a GFA over 100,000 SF. For clarity, it will be helpful to breakdown the GFA for each individual floor in the proposed building on the Plat.**

**Response:** We have included the overall building area as well as the breakdown for each floor on the Special Exception Plat. See Sheet 3.

**Comment 28: Entrance Sign: The existing entrance sign on the Property presently encroaches into the Childrens Center Road right-of-way. Any replacement for this sign must be moved out of the public right-of-way.**

**Response:** The entrance sign has been shown to be moved out of Childrens Center Road right-of-way. See Sheet 3.

**Comment 29: Noise Abatement Corridor (NAC): Update the application to include the Noise Abatement Corridor line and provide a noise study. Schools are identified as sensitive areas with regards to noise.**

**Please note that if there are any outdoor activities intended for the open area behind the sidewalk on the west side of the building. The maximum noise level permitted is 70 dBA measured at the closest point to the Bypass.**

**Response:** The application has been updated to show the Noise Abatement Corridor line. The building is setback 300 feet from the western property boundary. Building construction will

incorporate noise attenuation measures to provide a maximum background noise level for core learning spaces at or below 35 dBa per VA-CHPS and ANSI S12.60. Additionally, it is the architect's intent to provide an acoustic report during the design phase showing that the core learning spaces are designed to have background noise of less than 35 dBa per ANSI S12.60-2002. Please note that there will be no outdoor activities at this school.

## **STORMWATER MANAGEMENT**

**Comment 30: Add Stormwater Note: Add the following note to the Special Exception on Sheet 8: "Preliminary stormwater management calculations shown are adequate for the purposes of this Special Exception application only. The final stormwater management design shall comply with all Federal, State and Local requirements including, but not limited to, all Zoning Ordinance, DCSM, SLDR, VDOT, VSMP regulations, etc. in place at the time of Final Site Plan."**

**Response:** The Stormwater Note was added to the Plat. See Sheet 8.

**Comment 31: Easement: Provide a "SWM/BMP Easement – Privately Owned and Maintained" around all proposed SWM facilities (Sheets 3, 4 and 5).**

**Response:** A "SWM/BMP Easement – Privately Owned and Maintained" has been added around all proposed SWM facilities. See Sheets 3, 4, and 5.

**Comment 32: Comments related to Proposed Facilities: Staff is unable to verify that the Virginia Stormwater Management Act requirements for this site can be met with the proposed layout and treatment methods as shown. If the applicant plans to utilize treatment and or detention facilities currently shown on this application with the final construction drawings, the following items, at a minimum, must be addressed with the next submission:**

- a. **Quality Design: Address the following items concerning Stormwater Quality Design.**
  - i. **Revise the BMP analysis and narrative to use the New-Development criteria such that the application demonstrates that the project results in being site neutral.**

**Response:** A BMP analysis and narrative has been revised to use the New Development criteria as discussed at the post submission conference. Please note that although the SWM/BMP calculations are preliminary, we are confident that the proposed layout will not need to be modified at final site plan due to the SWM/BMP. See Sheet 8.

- ii. **Provide a DEQ VRRM Spreadsheet (new development) to reflect the water quality removal requirements of the site and to verify that the removal requirements have been met through the provided onsite BMPs.**

**Response:** The results from the New-Development VRRM compliance spreadsheet has been provided. These calculations are preliminary. LCPS plans to purchase nutrient credits for any remaining nutrient deficit, as determined by State Code. A final number of nutrient credits provided on site or off site through purchase will be determined at final site plan. See Sheet 8.

- iii. **Provide the required treatment volumes from the VRRM spreadsheet and preliminary BMP stage storage tables to verify that the BMP sizing shown meet minimum design criteria and will not need to be significantly resized at time of site plan, which also allows staff to confirm that the layout as proposed will not need to be modified.**

**Response:** The preliminary BMP stage-storage tables have been provided. See Sheet 10 and Drainage Area Maps on Sheet 9.

**b. Quantity Design: Address the following items concerning Stormwater Quantity Design.**

- i. **Update the application to show all offsite contributing drainage areas on the Pre and Post Adequate Outfall Drainage Area Maps. Include this offsite area as a portion of the outfall analysis.**

**Response:** The preliminary BMP stage-storage tables have been provided. Also, see Sheet 10 and Drainage Area Maps on Sheet 9.

- ii. **The DCSM requires compliance with the Virginia Stormwater Management Act channel protection energy balance equation and/or onsite detention of the 2 year storm (if a manmade conveyance to the floodplain) in addition to providing onsite detention of the or 10 and 25 year storms to predevelopment levels within the Town Branch Sub basin, which this site is within, in addition to the channel and flood protection requirements of the Virginia Stormwater Management Act. All concentrated discharges of stormwater must also be analyzed from the point of discharge from the site to floodplain in order to verify that an adequate conveyance is provided for the entire run. Provide enough preliminary calculations to support the adequate outfall analysis determination in the adequate outfall narrative and meet the criteria listed above.**

**Response:** Preliminary calculations have been provided for the pre- and post-1-year, 2-year, 10-year, and 25-year storm events. In addition, energy balance

compliance has also been provided to support the adequate outfall narrative determination. See Sheets 9 and 10.

- iii. **The flow rate and drainage area at Point of Interest A is increased substantially in the post development condition but only provides a single bioretention facility to detain to predevelopment conditions. Review and revise the design to provide the required detention volume and provide preliminary routing calculations to verify the post development flow rate.**

**Response:** Preliminary routing summaries have been provided for the pre- and post- 1-year, 2-year, 10-year, and 25-year storm events for drainage area A. The routings indicate that the post-development runoff is less than the pre-development runoff. Additionally, the energy balance equation has also been provided to illustrate adequate outfall compliance. See Sheets 9 and 10.

**c. BMP Design: Address the following items concerning Stormwater BMP Design.**

- i. **Staff estimates the invert of the pipe which discharges into Bioretention A from the adjacent parking lot to be at approximately a maximum elevation of 391.5 ft. The bottom contour of the facility is at 394 ft., which is higher than the required elevation to accept the previously discusses pipe. Review and revise the BMP design to allow for adjacent pipe to discharge into the facility at or above the surface of the Bioretention facility.**

**Response:** The storm sewer pipe invert into Bioretention A has been shown at 391.50. The Bioretention elevations have been included to illustrate adequate discharge to the existing storm sewer outfall. See Sheet 4.

- ii. **Based on the depicted grading for Bioretention A, water may bypass the BMP through the adjacent channel along Childrens Center Road and into the existing crossing culvert. Revise the BMP design to more clearly delineate the drainage area intended to be treated by the BMP and to bypass the BMP.**

**Response:** The end section from this existing storm sewer has been shown as removed and the remaining drainage has been diverted to the bioretention. See Sheet 4. The BMP design has been revised to more clearly delineate the drainage area. See Sheets 8 & 9.

- iii. **The location of Bioretention B is located within 100 feet of the existing Foxridge homes on Lots 81, 89 and 90. The minimum setback for a bioretention facility that allows infiltration is 100' when located up gradient of a structure. In addition, this BMP will require a Dam Breach Analysis in this location due to the elevated nature of the BMP, its proximity to adjacent residencies, the fill dam embankment, and due to this location being an**

**overland relief point for a large portion of the site. Review and review the design to provide a minimum of 100 feet of setback from the nearest structure and meet the additional requirements set out above.**

**Response:** A dam breach analysis is not required since the drainage will be discharged through underdrains to an existing storm sewer. In addition, an impervious liner has been specified in the narrative to prevent infiltration. Further no dam or embankment is being created, therefore a dam breach analysis is not required per Town or State Code. See Sheet 8.

The top of grade at Bioretention B has been lowered so that there is no portion of the bioretention that is elevated above existing grade; therefore, no embankment is being created. LCPS could not identify a Town or State Code requirement for a 100-foot setback to the nearest structure. See Sheet 4.

- iv. **The top of dam width for Bioretention B as shown does not allow for maintenance access to the BMP outfall structure. Revise design to provide adequate maintenance access to the outfall structure along the top of dam. [VA Clearinghouse SWM Design Specification 9, Section 6]**

**Response:** No dam is being created. The grading around Bioretention B has been adjusted to provide an adequate 12' wide maintenance access to the outfall structure. See Sheet 4.

- v. **The embankment grading of Bioretention B appears to conflict with the existing sanitary manhole where the 388 ft. contour ties into the existing topo. Review and revise the BMP design to allow for adequate offset to the manhole to ensure that any required maintenance of the manhole will occur outside of the embankment fill area.**

**Response:** The grading near the existing sanitary manhole has been adjusted to allow for adequate maintenance access to the existing manhole. Please note that no embankment is being created for Bioretention B. See Sheet 4.

- vi. **In lieu of redesigning the facilities or features, notes can be added to the plan and/or added to the narrative to discuss the following comments and discuss the design approach. These items must be fully designed and address at the time of site plan:**
- 1. Provide the appropriate pre-treatment measures on all BMPs to meet minimum clearinghouse standards, such that staff can verify that there is sufficient room for the measures proposed without requiring changes to the proposed layout.**

**Response:** Additional information has been provided to the narrative to address the design approach for the appropriate pre-treatment measures. Please note that although the SWM/BMP calculations are preliminary, we are confident that the proposed layout will not need to be modified at final site plan due to the SWM/BMP. See Sheets 8 & 9.

- 2. The design of Bioretention A appears to assume infiltration as there are no underdrains shown in the layout or discussed in the narrative. Removal of underdrains require a measured 0.5 in/hr. infiltration rate, which is not discussed in the design narrative. In addition, the minimum depth of the underdrain invert is 3.75 ft. below the surface of the bottom of the BMP (3" mulch layer + 24" Soil Media + 12" Gravel Layer above underdrain + 6" underdrain diameter), which would make the maximum elevation of the invert out of the facility 387.75 ft. This elevation provides only 2 feet of fall between the exit of the BMP and the invert elevation out of the existing storm sewer discharging into the existing concrete v ditch near the South Western corner of Childrens Center Road and Catoctin Circle. Review and revise the BMP design as necessary to provide underdrains or verify the infiltration rate of the soils in the location of the BMP. (Sheets 4, 5 and 8)**

**Response:** The BMP narrative has been revised to indicate that the proposed bioretention facilities will use underdrains. Additional information has been added to the Plat to indicate the different elevations within the proposed facility and conformance with the applicable standards. See Sheets 4 & 8.

**Comment 33: Storm Drainage Design: Address the following items concerning Storm Drainage Design.**

- a. Provide a detail for revised drainage design at the intersection of the proposed sidewalk and the existing concrete v ditch at the South Western corner of the Childrens Center Road and Catoctin Circle intersection.**

**Response:** Please note that the existing 8' trail will be used to provide pedestrian access to the school in order to preserve the existing concrete v-ditch at the south Western corner of the Childrens Center Road and Catoctin Circle intersection as well an existing tree and other underground utilities in the area. LCPS is proposing a trail connection onto the park site for this connection. Utilizing this

connection will eliminate the need for changes to drainage, relocation of utilities and tree removal.

- b. The offsite existing Concrete Channel which discharges from Childrens Center Road through the North Western corner of the site appears to flow through Bioretention A. Review and revise the on and offsite drainage design along Childrens Center Road to bypass the proposed BMP or revise the BMP to accommodate the drainage area for water quantity only.**

**Response:** Please note that this drainage area (which includes the existing concrete channel on the north western corner of the site) actually enters the site and combines with other onsite flows before reaching the storm sewer system under Childrens Center Road. These flows are being conveyed into the proposed Bioretention A. See Sheets 4 & 9.

- c. Verify the direction of flow of the 15” RCP that crosses under Childrens Center Road. The Utility Plan shows that it flows towards the North East, however the grading plan and Childrens Center Drive storm sewer geometry suggests that the pipe flows to the South West.**

**Response:** The Plat has been revised to show the entire pipe run from the existing 15” RCP that crosses under Childrens Center Road. Please note that this pipe actually flows towards the northwest as shown on Sheet 2.

- d. Verify the outfall of Bioretention A can outfall into the existing structure as shown due to the required depth of the Bioretention media if an underdrain is required.**

**Response:** The storm sewer outlet structure for Bioretention A has been shown with an invert out of 387.25. This pipe connects to an existing storm inlet which has an invert in of 386.78 , which provides adequate fall for the outfall system. Additionally, Bioretention elevations have been included in the Plat to indicate the different elevations within the proposed facility and conformance with the applicable standards. See Sheets 4 & 8.

- e. The outfall pipe of Bioretention B appears that it may require an offsite temporary construction easement near the connection of the existing storm sewer in the South Western corner of the site. Verify the depth and size of the outfall pipe in order to adequately determine the need for an offsite easement.**

**Response:** The outfall pipe from Bioretention B has been updated to include a storm structure which connects to the existing pipe. This proposed connection is

far enough away from the property line and will not require an offsite easement. Additionally, inverts of the existing structures have been provided.

**f. Coordinate extension of existing VDOT pipe and impacts within the corresponding 20-foot easement with VDOT.**

**Response:** The extension of existing VDOT pipe and impacts within the corresponding 20-foot easement will be coordinated with VDOT at development of the site plan.

**Comment 34: VRRM Compliance Sheet: Provide a redevelopment VRRM compliance spreadsheet to compute the phosphorus load reduction required to satisfy the water quality requirement for this site.**

**Response:** The results from VRRM compliance spreadsheet has been provided to illustrate water quality compliance for this site. See Sheet 8.

**Comment 35: Update the BMP map with legible legends to each drainage shed for coordination and analysis and label each drainage shed with total applicable area, post impervious area, and acres treated by each bioretention BMP.**

**Response:** The BMP map has been updated to include the information needed to coordinate with the VRRM compliance spreadsheet. See Sheet 8.

## **TRANSPORTATION**

**Comment 36: Graydon Manor Traffic: Update the traffic impact analysis (TIA) to incorporate the recent application to Loudoun County for the Graydon Manor project, which includes 231 residential cohousing units among other amenities (brewery, restaurant, agricultural structures, etc.). Also include updated information for the Rust wedding venue site that has recently had their occupancy limits substantially increased.**

**Response:** Trips for the Rust Manor venue have been added as a background development for build out (2021) conditions. The Graydon Manor proposed zoning permit has not been approved, and unapproved background developments are not typically included in traffic impact studies. However, as discussed with Leesburg transportation staff (Calvin Grow), the proposed Graydon Manor cohousing/brewery/restaurant application was included as a background development in the 2040 planning scenario only. With the above included background developments, the study intersections continue to operate at the Town's Level of Service Criteria for both build out and design year conditions. Please see updated traffic study.

Note: The Graydon Manor Zoning Permit was denied by Loudoun County on November 16, 2018. Because there is a thirty-day appeal period the proposed Graydon Manor uses have been added into the 2040 planning staff scenario per discussions with Town staff.

**Comment 37: Additional ROW Required: The provided ROW varies along the entire length of frontage on Childrens Center Road. The TIA already indicates more than 2000 vehicles per day (before the above noted comments are addressed) which would classify Childrens Center Road SW as a “Through Collector” requiring a minimum of 70 feet of right of way. Review and revise the Right of Way in accordance with the recommendations of the updated TIA as corresponding classification of Childrens Center Road SW.**

**Response:** The projected daily traffic on Childrens Center Road is 3,000 vpd, only for the portion east of the school entrance. West of the school entrance, the projected daily traffic is only 800 vpd. Hence, it is only for an approximate 250’ section of the road that the traffic is more than the 2000 vpd mentioned in the comment. Hence, we do not feel this road would classify as a “Through Collector”. In addition, this roadway is not classified as a through collector in the Town’s Plan. The existing ROW is greater than 70 feet along Childrens Center Road. See Sheet 3.

**Comment 38: Frontage Improvements: Frontage improvements are required for the entire length of the parcel along Childrens Center Road SW. Revise the design to include increased ultimate pavement width as well as full curb, gutter, sidewalk, and storm drainage along the entire frontage of the site. Provide a typical section for any proposed improvements. However, due to site constraints and not wanting to divert pedestrians into the road at the existing bridge, Staff would be supportive of constructing curb, gutter and drainage improvements along the entire frontage of the property to a point where the existing bridge would prohibit continuation of these improvements. In addition, the applicant would also only be required to construct the sidewalk up to the western side of the Wild Turkey Way entrance (located on the north side of Childrens Center Road SW). At that point, a raised crosswalk would need to be proposed to connect to the existing CG-12 and sidewalk on the North West side of the Wild Turkey Way entrance. Staff would also support the associated required SLDR Variation Request (which could process concurrently with the Special Exception). As part of Staff’s recommendation, an Escrow to the Town would be due prior to Site Plan approval for any required frontage improvements that were relieved as part of the Variation Request.**

**Response:** As discussed and agreed at the Post Submission Conference, frontage improvements have been provided to include curb & gutter, sidewalk, additional pavement for parallel parking, and storm sewer. See Sheet 3. A typical roadway section for the proposed roadway improvements has been added to the Plat. See Sheet 3. Please note that the roadway improvements are being proposed up to a point east of the existing bridge and where the widening will not cause undue impacts to the existing tree line. The proposed sidewalk along

Childrens Center Road will be terminated where it aligns with the existing sidewalk on the western side of Wild Turkey Way. A crosswalk is being proposed at this location. See Sheet 3.

**Comment 39: Entrance Spacing #1: The School Bus Access entrance does not meet the minimum entrance spacing from Catoctin Circle. DCSM 7-361.5 requires the entrance to be located a minimum of 200' measured PC to PC away from Catoctin Circle as Catoctin Circle is classified as a "Minor Arterial" roadway within the Town of Leesburg. Revise the location of the entrance to meet this criteria.**

Response: A modification is hereby requested for Comments 39 & 40 based upon the following:

1. These entrances have been utilized since 1977. The changes for the proposed facility include separating car and bus traffic, which is now an LCPS standard. Since 1977 car and bus traffic has been mixed at the existing entrance location. Also, accident data from the Town of Leesburg Police Department shows no accidents have occurred at this driveway entrance over the last 5 years.
2. Sight distance profiles on Sheets 12 & 13 have been provided showing adequate sight distance at the proposed entrance locations.
3. J2 Engineers and LCPS staff independently studied the impact to the proposed building and determined that the first floor elevation (FFE) would need to be raised from 396.80 to either 400.80 or 401.80 respectively. The cost impact would be between \$760,000 to \$1.02 million in additional site costs (to raise the building as a result of aligning the entrance with Wild Turkey Way).
4. We believe the residents off of Wild Turkey Way would not be supportive of a shared intersection with the school, which would create potential conflicts and accidents at that intersection. It is our position that maintaining the existing entrance with the enhancement of separated car and bus traffic improves the overall flow of traffic in the vicinity of the school.
5. If the driveway is to be aligned with Wild Turkey Way, the building design concepts present with this package will need to be reconsidered including the entire building and floor plan per the architectural consultant and LCPS staff.
  - a) The building and site concepts proposed are anchored around the existing entrance location such that the approach to the building and site circulation is intuitive for users of the facility and visitors. The location of the main entrance to the building is sited based on approach from the existing entrance for clear wayfinding through the site. The current location of the main entrance is also sited to adequately serve and monitor the bus loop location.
  - b) A modified alignment with Wild Turkey Way would force drivers to pass the front of the building to enter the site, confusing driver expectations for those who do not use the facility regularly. It is important for the main entrance to the facility to be clearly marked as there are many visitors

- (primarily the adult education users, both day and evening) to the site that do not visit on a routing basis.
- c) Operationally, should the entrance modification to the location at Wild Turkey Way be required, the circulation on the property does not work effectively without redesigning the building and site. We estimate that 30+/- parking spaces would be lost in order to effectively redesign the site entrance sequence and that only one way in and out to the front door could be provided. The building floor plan including entrance location would also need to be redesigned to reorient the building and the entire program to adjust the site entrance location.
  - d) Equally significant, raising the finished floor elevation of the new building would create a non-desirable impact for the adjacent residential homes at Fox Ridge. The approximate 5' in additional building height, from that vantage point, will create the appearance of a much larger building footprint overall. The current conceptual design has been sensitive to the nearby residences to minimize this potential impact and maintains the proposed finished floor elevation within a foot and a half of the existing floor elevation.
  - e) The modified finished floor elevation would be approximately 9'-10' below the (relocated) driveway entrance, creating an undesirable visual impact upon approach to the building from Catoctin Circle. To adequately manage the grade change at the entrance, retaining walls would be required, which to design with aesthetic sensitivity, will add cost to the project. Further, to enter the site notably higher than the finished floor elevation of the building creates an undesirable overall aesthetic, additional site design considerations including managing the grade changes relative to parking and circulation design and impacts to overall site circulation.
6. Keeping the driveway entrances where they exist today provides immediate front door access for visitors and operates more naturally for drivers.

**Comment 40: Entrance Spacing #2: The school bus entrance and the main entrance into the site do not meet the required minimum spacing of 200' between the corresponding centerline alignments. The proposed spacing as depicted would require a DCSM modification, which would require further coordination with the Director of Plan Review to be considered. A meeting with Town Staff to discuss options and possible DCSM Design Modifications is encouraged. Review and revise the entrance as necessary.**

**Response:** See response to Comment 39 above.

**Comment 41: Dimensions: Revise the application to include geometric dimensions for all parking, travel aisle, entrances, radius, etc.**

**Response:** Geometric dimensions for all parking, travel aisle, entrances and radius have been added to the Plat. See Sheet 3.

**Comment 42: Handicap Ramps: Update the application to depict handicap ramps on each side of the site entrance, and as part of the on-site sidewalks.**

**Response:** Handicap ramps have been depicted on each side of the site entrances. On-site handicapped ramps will be provided at final site plan design. See Sheet 3.

**Comment 43: Sight Distance: Provide sight distance analysis for both proposed site entrances once final locations are determined.**

**Response:** The requested sight distance plans and profiles have been provided for both site entrances. See Sheets 12 and 13.

**Comment 44: Bus Lane Emergency Access: The bus lane emergency access autoturn analysis appears to directly conflict with the bus parking areas shown on Sheet 3. Revise the bus lane geometry to provide parallel parking for the school busses on each side in addition to the adequate travel aisle width for two way traffic in order to provide adequate emergency access. The Zoning Ordinance requires a minimum access aisle for 2 way traffic of 20' (with 0 degree parking angle) exclusive of parallel parking spaces, unless more is required per the applicable Fire Code.**

**Response:** The bus parking space locations have been provided for informational purposes only to illustrate potential bus staging locations for arrival and dismissal. The school bus access is not intended to be a storage location for buses. In addition, please note that the width of this lane has been revised to 30' FC to FC to comply with Fire Code requirements.

**Comment 45: Autoturn Analysis: The Autoturn Analysis at the top left of Sheet 7 shows the vehicle exiting the site making a left turn out of the right turn lane. Revise the analysis to make all movements within the intended travel aisle/lane once final locations are determined.**

**Response:** The Autoturn analysis has been revised so that all movements are within the intended travel aisle/lanes. See Sheet 7.

## **UTILITIES**

**Comment 46: Waterline Location: To reduce the overall linear footage of watermain needed for the project, designers should extend the waterline shown along the west side of the building north and connect to the existing 8" watermain in Childrens Center Road to create two water sources to serve the new building. This will afford an additional factor of safety and provide uninterrupted water to the facility should one water source require future shut off and repair. Adjust proposed landscaping accordingly.**

**Response:** The reduction in the overall linear footage of watermain needed is minimal and the additional connection will require additional expenses as well as impacts to Childrens Center Road during construction. The existing connection is adequate for LCPS facilities and LCPS does not require a redundant connection.

**Comment 47: Existing Fox Ridge Park Waterline: Designers must show the existing 1" water service to the Fox Ridge Park bathrooms connecting to the proposed watermain. Verify if an easement exists or include a waterline easement encompassing the water service with this project.**

**Response:** The existing 1" water line has been shown as requested. We're in the process of verifying whether an easement exists and will be providing one with final site plan if one does not exist. See Sheet 5.

**Comment 48: Connections Locations: If known at this juncture and if building will be sprinklered, show the proposed location of the combined fire line and domestic service connections per DCSM Detail Drawing WS-30 with the next submission.**

**Response:** The proposed locations of the combined fire line and domestic service connections are not known at this time as the design has not been started by the architect during this phase of the project. The locations will be determined at final building design and provided at site plan review stage. However, please note that the building will be sprinklered.

**Comment 49: Fire Dept. Connection Location: If known at this juncture and as applicable, show the FDC location and show a fire hydrant 50' to 100' from the connection.**

**Response:** The proposed location of the FDC is not known at this time. The location will be provided at site plan review stage. Fire hydrants will be adjusted as necessary during site plan review.

**Comment 50: Fire Hydrant: Relocate the fire hydrant 50' or farther from the south corner of the building so it can be used for building fire coverage.**

**Response:** The fire hydrant location has been adjusted so that is 50' feet from the south corner of the building. See Sheet 5.

**Comment 51: Sanitary Lateral: On the existing 6" sanitary lateral, provide a cleanout at the limit of existing sanitary sewer easement to define the limit of Town Maintenance responsibility. See Attachments 3, 3a & 3b.**

**Response:** A cleanout has been provided at the limit of existing sanitary sewer easement as requested. See Sheet 5.

**Comment 52: Grease Interceptor: If culinary and / or automotive repair infrastructure are integrated into the building design, a grease interceptor and / or oil / grit separator will be required with the final site plan submission.**

**Response:** A grease interceptor and/or oil/grit separator will be provided at site plan review stage as applicable.

**Comment 53: Minor Correction: In General Landscaping Note, #13, change “Loudoun Water” to “Town”.**

**Response:** The General Landscaping Note, #13 has been changed from “Loudoun Water” to “Town” as requested.

## **FIRE RESCUE AND FIRE MARSHAL**

**Comment:** None

## **ITEMS FOR SITE PLAN REVIEW:**

- 1. Provide an analysis of the downstream storm sewer to verify adequacy from the point of site discharge to the discharge point into the floodplain for all site outfalls.**

**Response:** Comment Acknowledged and to be examined further at the site plan review stage.

- 2. The Impervious Area draining to Bioretention B is equal to the maximum allowable impervious area per the 2013 DEQ Clearinghouse Specifications. Verify that the maximum allowable impervious area is not exceeded by the contributing drainage area.**

**Response:** Comment Acknowledged and to be examined further at the site plan review stage.

- 3. Verify horizontal and vertical offsets are provided for the waterline crossings at the north and south west side of the building as well as the sanitary and light pole foundation at the southern edge of the parking lot near Bioretention B.**

**Response:** Comment Acknowledged and to be examined further at the site plan review stage.

- 4. Revise the existing 15 foot sanitary sewer easement in the South Eastern corner of the site to meet all current easement requirements and center the pipe within the easement.**

**Response:** Comment Acknowledged and to be examined further at the site plan review stage and revised as necessary.

- 5. Resolve conflicts between interior parking lot landscape trees and light poles.**

**Response:** Comment Acknowledged and to be examined further at the site plan review stage.

- 6. Proposed streetlight shown within the existing 20ft VDOT easement at the South Western corner of the site.**

**Response:** Comment Acknowledged and to be examined further at the site plan review stage.

- 7. Provide an analysis of the adequacy for the 2 and 10 yr. storm on outfall channel the existing VDOT discharge pipe and provide channel improvements for capacity and erosion protection as necessary.**

**Response:** Comment Acknowledged and to be examined further at the site plan review stage.

- 8. The grading between the sidewalk and the property line at the north east corner of the site is steeper than 3:1 from the edge of the sidewalk to the 394 contour line. Review and revise grading to meet maximum allowable slopes or provide a retaining wall.**

**Response:** Please note that this sidewalk is no longer proposed and has been removed from the Plat.

- 9. Revise and relocate the Bench Marks to be outside of the LOD in the proposed conditions.**

**Response:** The benchmarks have been adjusted to ensure that they are outside of the LOD in the proposed condition. See Sheet 3.

**10. At the time of final site plan, the design must meet all requirements discussed in the Town of Leesburg DCSM, SLDR, Zoning Ordinance and any other applicable local, state or federal requirements and regulations.**

**Response:** Comment Acknowledged.

**11. Water Usage/Fees: Should future water usage exceed the current water usage as specified on the original Public Facilities Permit, the tenant / owner will be assessed applicable availability fees at the time of final site plan approval.**

**Response:** Comment Acknowledged and to be examined further at the site plan review stage.