



CRYSTAL SPRING - POINT BY POINT RESPONSE

Department of Neighborhood & Environmental Programs
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***Note:** To create this point-by-point response document, the .pdf forwarded by DNEP to the applicant on August 8, 2014 was converted to a Word document. Certain formatting irregularities and other inconsistencies resulted in the conversion process, but the applicant has attempted to preserve the August 8, 2014 transmittal in the process of creating a typeable document for enumeration of the applicant's point-by-point responses. All such responses are highlighted in grey herein to distinguish them from the applicant's June 25, 2014 responses and from City agencies' subsequent comments transmitted to the applicant on August 8, 2014.

August 8, 2014

Alan J. Hyatt, Esq.
Hyatt & Weber, P. A.
Severn Bank Building
200 Westgate Circle, Suite 500
Annapolis, Maryland 21401

RE: Crystal Spring Forest Conservation Plan

Dear Mr. Hyatt;

Enclosed are comments from the Department of Neighborhood and Environmental Programs, Planning and Zoning Department, and the Fire Department regarding the Forest Conservation Plan for Crystal Spring, received June 25, 2014. Note that revisions will be required to address these comments. Please contact me if you have any questions.

Sincerely,

Frank Biba, AICP, LEED AP
Chief, Environmental Programs
Dept. of Neighborhood and Environmental Programs
410 263-7946
fjb@annapolis.gov

cc: David Jarrell
Gary Elson
Maria Broadbent
Sally Nash
James Eagan
Marshall Breines



Annapolis

DEPARTMENT OF NEIGHBORHOOD & ENVIRONMENTAL
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DNEP responses to June 25, 2014 comments from Crystal Spring:

Crystal Spring Forest Conservation Plan
Crystal Spring Development (CSD) Point-By-Point Response to Comments from and
Revisions Requested by DNEP on June 28, 2013

DNEP, P&Z and Fire June 28, 2013 Comments are attached to this document
for cross reference

1. *CSD: DNEP's position is acknowledged.*
2. *CSD: Accomplished. In the accompanying document entitled "Forest Clearing Justification" filed herewith (the "Justification", detailed information is provided on projected tree canopy calculations. Additional information is set forth in a Tree Cover memorandum from Annapolis Landscape Architects dated June 3, 2014 attached hereto as Exhibit C.*

DNEP: Total tract area is 111 acres. Developer needs to demonstrate that there will be at least 50% canopy coverage (55.5 a) by the year 2036. It is understood that the City has the authority to require mitigation for trees removed under City Code 17.09.070.

How did the total tract change from 111 acres to 105:19 acres (used in Exhibit C)?

Response: The total tract area of 111 acres was reduced by the portion of the tract area within the critical area for the purpose of this calculation. The calculation has been revised to use the entire tract area of 111 acres and to include the portion of forest cover within the critical area to calculate the revised tree canopy calculation, attached as Exhibit C.

It is noted that under the FCA, the breakeven point represents the level of forest conservation above which no reforestation is required. The Crystal Spring Updated FCP submitted with this filing attains forest conservation of 38.78 acres. Using the City-requested 20% conservation threshold percentage instead of the 15% appropriate to this mixed-use project under the FCA, the conservation threshold is 21.03 acres, and the FCP achieves retention of 17.75 acres (84%) above the conservation threshold. Using

the 20% conservation threshold percentage, the breakeven point is 33.27 acres, and the FCP achieves retention of 5.51 acres (17%) above the breakeven point.

If the FCA's 15% mixed-use conservation threshold percentage is used, as is indicated to be used for the proposed Crystal Spring project under the FCA, the conservation threshold is 15.77 acres, and the breakeven point is 29.01 acres. Thus, the FCP achieves retention of 23.01 acres (146%) above the conservation threshold and 9.71 acres (33%) above the breakeven point.

Regarding the applicability of 17.09 and that Chapter's provisions on mitigation, see the applicant's response herein.

Please show how the numbers for the total area of forest to be cleared (44.24 ac.), retained (38.00 ac.), and reforested (6.84 ac.) were calculated?

Response: Please see the updated Forest Conservation Worksheet included in the plan set which illustrates by color coding the various components requested.

Please use the 50% projected tree loss factor for the 15' adjacent to the LOD and show how a number was calculated for this. Please use this number in the Forest Conservation Worksheet on sheet 2.

Response: Noted and implemented in calculations on updated Forest Conservation Worksheet.

Various questions arise related to the landscape plan included in exhibit C (Tree Cover Memorandum):

1. Why are some trees shown in a tree conservation easement area?

Response: This has been corrected.

2. Forest edges need to remain as natural as possible. Please only plant trees on the edges of existing forest if trees had to be removed or if there is an opening. Please use a natural pattern for planting as opposed to planting in straight lines.

Response: The proposed planting is designed to complement the natural woodland setting and is informal in layout. The "straight line" LOD will have a natural pattern for planting as the plan moves forward through final design.

3. 75% of the landscape trees will be large canopy trees. With the on site planting limitations such as proposed utilities and storm water management devices that number seems to be too high. Therefore, if is unlikely to have a landscape tree please include additional areas that will be preserved or planted.

Response: The proposed tree planting pattern has been developed to respond to the utility layout and stormwater management facilities to the extent possible in this pre-design phase of work. The ratio of street tree, other shade tree, and ornamental tree has been refined on the Estimated Proposed Landscape Trees sheet, referenced above and attached as Exhibit C.

Please use the Gerhold et al, eds. Street Tree Factsheets, 1993 (referenced in the Manual on page 3-42) as opposed to a Prince William County Buffer Management Cover document for calculating the landscape tree cover by 2036 using the size of the mature tree canopy of the proposed trees.

Response: Street Tree Factsheets, 2001 has been used for these calculations.

3. *CSD: Accomplished. In the Justification, hydrology information is provided. Additional biformation is set forth in the GreenVest hydrology study dated 6/6/14 as well as in the Annapolis Landscape Architects hydrology analysis dl,ted 8/29/11, attached as Exhibit D.*

DNEP: Please provide all the gathered data referenced in exhibit D (Hydrology Memo) including from the four ground water monitoring wells and show how the various conclusions were derived. All maps included as exhibits need to be on 24' by 36" sheets and clearly legible. An additional unidentified wetland may exist in the SW corner of the property. Please survey, delineate and determine status.

Response: Attached as Exhibit D is the requested data gathered through the well monitoring process as referred to in the prior June 25, 2014 Crystal Spring Preliminary Forest Conservation Plan submission.

It is acknowledged that all maps and plan exhibits are being presented in 24" x 36" format. Other exhibits that are reports or otherwise not engineering plans are attached in their original size.

The question of existence of a possible wetland in the SW corner of the property has been investigated. The Crystal Spring wetland delineation incorporated a "W" which appeared on an old county soil survey map which apparently indicated that at some prior time standing water at that location was present – but not causing the location to be designated as a wetland. At the time of the Crystal Spring wetland delineation there was no evidence of either standing water or other conditions that could cause that area to be

classified a wetland. Attached as Exhibit E is a December 8, 2011 letter from MDE stating “In particular, the area that is shown as ‘water’ on the mapping does not meet the mandatory criteria for regulated wetlands.”

Please provide a 100 ft buffer for wetlands and streams or provide a rational for smaller buffers.

Response: The updated Crystal Spring Preliminary Forest Conservation Plan was prepared in recognition of the DNEP request that, in excess of the state-required setbacks, a 100-foot buffer be provided for wetlands and streams, if possible. Attached as Exhibit F is an Environmental Asset Buffer plan that shows the perimeter of the intermittent drainage way and the mapped wetland and vernal pool located in the rear section of the property and the line which would designate a 100-foot buffer. The total perimeter of the environmental features is 7,573 feet and the area of disturbance invades that 100-foot buffer for only 463 feet or 6% of the total perimeter area. The exhibit demonstrates that the applicant’s 94% voluntary compliance with DNEP’s request results in the creation of buffers that average significantly greater than the requested 100 feet and on a buffer averaging basis would be multiples of the DNEP request.

It is noted that the DNEP-requested 100-foot stream buffer for this project exceeds the minimum required 50-foot stream buffer set forth under the State Forest Conservation Act. Furthermore, the applicant proposes to preserve a significant wildlife corridor through the center of property, which essentially expands the forested stream buffer well beyond 100 feet along both sides of most of the stream channel. With respect to nontidal wetland buffers, the Maryland Department of the Environment (MDE) requires 25-foot buffers around all nontidal wetlands, and a 100-foot buffer around the MDE-designated vernal pool wetland near the back of the property. For the wetland areas that are to be preserved, the applicant has established buffers that greatly exceed the minimum required buffer width in most areas, all of which underscores that techniques for retention of intermittent drainage way/buffers and nontidal wetlands, as well as of contiguous forest, 100-year floodplains, and steep slopes, have been exhausted (COMAR 08.19.04.03 B. (1)), and that the applicant has made reasonable efforts to protect them and the plan cannot reasonably be altered (State Code, Natural Resources Article, § 5-1607 (c) (1)).

4. *CSD: No longer applicable; building in question has been relocated.*

DNEP: MDE letter of May 30, 2012 from Judy Boersma to McCarthy and Associates references a submittal dated April 9, 2012. Please provide a copy to the City along with all associated wetlands documentation from MDE and Army COE. Exhibit K only consists of the letters from MDE and the Department of the Army. Please include all the requested information including the plans submitted to MDE on April 9, 2012

Response: The documentation from MDE and the Army COE is attached. The plan submitted was "March 2012" not April 9, 2012. No one has a plan dated April 9, 2012; and these wetlands are not longer being impacted by the development. The plan and submittal referred to above contained a preliminary site plan and other materials and is attached as Exhibit G.

5. CSD: *No longer applicable; building in question has been relocated.*

DNEP: Our comment is still applicable to other buildings in proximity to identified wetlands.

Priority for retention and protection of on-site resources includes contiguous forest. Regarding the location of the CCRC in a contiguous forest, please show that "reasonable efforts have been made to protect them and the plan cannot be reasonably be altered" (5-1607(c)(1)).

Response: The updated Preliminary Forest Conservation Plan included with this submission reflects the further relocation of proposed buildings. At the direction of staff from DNEP and DPZ, the current plan focuses building development in only two locations on the property: in the portion of the site between Forest Drive and the Intermittent Drainage Way (designated for high-density, mixed-use development in the Annapolis Comprehensive Plan), and in the meadow area (non-forested) in the rear portion of the property. Given the various building relocations, which were undertaken primarily to avoid wetland disturbances, only currently existing impacts remain which are confined to Wetland Area A and the Wetland Area B/D interface at the existing/proposed Crystal Spring Road crossing, which is already disturbed and is the best location for the road crossing. By implementing these building relocations, including the re-use of the existing Crystal Spring Farm Road as the main circulation to the rear of the property, the forested and critical areas from the midpoint of the intermittent drainage way to the rear tract property lines represent a total of 33.1 acres of which only 2.56 acres are being disturbed for roads and other development in mostly forested areas dominated by invasive species. A total of 92% of 33.1 acres are being retained while a 50+ acre wildlife corridor has been created. Separate specific responses have been provided in the associated Justification Narrative as to the matter of how "reasonable efforts have been made to protect [certain priority areas] and the plan cannot reasonably be altered" in accordance with State Code, Natural Resources Article, § 5-1607 (c) (1).

6. CSD: *No longer applicable; building in question has been relocated.*

DNEP: Our comment is still applicable to other buildings located in contiguous forest areas.

Response: See #5 above.

7. *CSD: The Technical Manual Checklist has been used to guide the submission of data, the majority of which has been provided within the materials filed herewith. It is acknowledged that all Checklist information shall be provided and is required in order to obtain a grading permit. As a result of discussions with DNEP, it has been acknowledged that a portion of the Checklist-required information is not practical to be provided at this time due to the large scope of the project. The following is a list of major items to be provided at a later date or which are not applicable:*
- a. Forest Protection Devices I Amended Sediment I Erosion Control Plan- This item will be detailed in the submission of the Planned Development Application which will follow the acceptance as complete of the Preliminary Forest Conservation Plan. It is acknowledged that this information is required to obtain a Grading Permit.
 - b. Planting Plan with Specifications. . . Site Prep. Planting Schedule w/species, Stocking (number, spacing or distribution) Size, Condition, Plant Source-It is acknowledged that this item will be detailed in the submission of the Planned Development Application which will follow the acceptance as complete of the Preliminary Forest Conservation Plan.
 - c. Management, Monitoring and Long Term Protection — Crystal Spring has provided a concept outline for a program to manage, monitor and provide Long Term Protection over forest preservation areas within 15 feet of the LOD as Exhibit G, however final binding agreements and financial security issues that relate to this area and the total areas to be placed in conservation easements will not be completed until submitted a part of a Planned Development Application.
 - d. Mitigation Measures-Not applicable.
 - e. Construction Sequence — To be provided following receipt of Planned Development Approval such that the scope of development would be known in detail.

The following items from the checklist will need to be submitted to constitute a complete preliminary forest conservation plan:

1. Environmental features map. PROVIDED: FSD .
2. Location/description of existing forest area. PROVIDED: FSD
3. Priority areas; priority retention areas. PROVIDED: FSD
4. Priority planting areas; specifications/details. PROVIDED: FSD
5. Building restriction lines. PROVIDE WITH THE GRADING PERMIT APPLICATION.
6. Utility easements, storm water management. (Locations only to be provided.) PROVIDED WITH THE STORM WATER CONCEPT PLAN.
7. Amended sediment/erosion plan. PROVIDE WITH THE GRADING PERMIT

APPLICATION. NOT BEING REVIEWED AS PART OF THE FCP.

8. Construction sequence. PROVIDE WITH THE GRADING PERMIT APPLICATION.
9. Demonstration that priority areas cannot be retained. PROVIDE WITH PRELIMINARY FCP
10. Planting plan; specifications, site prep, planting schedule w/species, stocking (number, spacing or distribution) size, condition, plant source. PROVIDE WITH THE GRADING PERMIT APPLICATION.
11. Construction/planting sequence. PROVIDE WITH THE STORM WATER CONCEPT PLAN (To be provided with grading permit.)
12. Management and monitoring. PROVIDE WITH: PRELIMINARY FCP
13. Protection. PROVIDE WITH PRELIMINARY FCP
14. Reinforcement planting. PROVIDE WITH THE GRADING PERMIT APPLICATION
15. Long-term protection; agreement between parties. PROVIDE WITH THE GRADING PERMIT APPLICATION
16. Description of allowed activities. PROVIDE WITH THE GRADING PERMIT APPLICATION
17. Specifications/details for protection. PROVIDE WITH THE GRADING PERMIT APPLICATION.
18. Location of Retention and Planting Areas. PROVIDE WITH PRELIMINARY FCP

Response: The items above and their respective filing times are acknowledged. Certain sequencing requests are not reasonable at this time as the various components of the proposed project will proceed based on market and financing conditions which cannot be fully determined at this time – but would be incorporated into a development sequencing schedule at the time of grading permit.

- a. The entire LOD adjacent to trees will either need to have chain link tree protection fencing (possibly with root pruning), chain link tree protection fencing with filter log, or super silt fencing (possibly with root pruning) installed. Adding additional fencing may save additional trees and is therefore encouraged. All tree protection/super silt (adjacent to trees) fencing will need to be 4' high chain link fencing with round metal posts every ten feet. Please change exhibit F (Construction Manager Policy/Enforcement of LOD) accordingly.

Response: Agreed; please see Exhibit H. (to be finalized on letterhead)

- b. Various questions arise related to the landscape plan included in exhibit C (Tree Cover Memorandum):

1. Why are some trees shown in a tree conservation easement area?

Response: This has been corrected.

2. Forest edges need to remain as natural as possible. Please only plant trees on the edges of existing forest if trees had to be removed or if there is an opening. Please use a natural pattern for planting as opposed to planting in straight lines.

Response: The proposed planting is designed to complement the natural woodland setting and is informal in layout.

3. 75% of the landscape trees will be large canopy trees. With the on site planting limitations such as proposed utilities and storm water management devices that number seems to be too high. Please adjust the landscape plan accordingly.

Response: The proposed tree planting pattern has been developed to respond to the utility layout and stormwater management facilities to the extent possible in this pre-design phase of work. The ratio of street tree, other shade tree, and ornamental tree has been refined on the Estimated Proposed Landscape Trees sheet, referenced above and attached as Exhibit C.

- c. Please incorporate all components of DNEP's June 28, 2013 comment number ten in exhibit G (LOD Tree Management Plan), particularly invasive species control: *"A semi-annual forest conservation easement area (FCAE) report must prepared by a qualified professional for 5 years from the date of completion of the development project. The report must contain an overview of the maintenance performed in the previous six month, an overview of the maintenance proposed for the upcoming six month, a work log, and pictures of the condition of the FCEA. The report needs to particularly focus on control of invasive species, preservation of trees within 15' of the LOD, newly planted trees, and solutions to problems that arise in the FCEA. The report must be submitted to the Department of Neighborhood and Environmental Programs and the Planning and Zoning Department"*

Please apply the same criteria to the monthly tree monitoring report. Please submit tree monitoring reports to the Department of Neighborhood and Environmental Programs and the Planning and Zoning Department every month during construction and every six months after construction for a five year period.

- d. While not applicable in the context of the FCA issue, mitigation measures may be required as a result of further project reviews.

8. CSD: *Acknowledged. The overall directive is summarized as: "Therefore, please use all components of the approved FSD including the hydrology analysis, the forest quality*

analysis, and the natural resources inventory in appendix I, J and K to determine the best areas for retention and protection as per Natural Resources Article §5-1607 (c) and revise the site plan accordingly." DNEP's directive that the site plan be reconsidered in light of its review against a consolidated environmental mapping showing all of the environmental assets of the property was embraced. As explained in detail in the Justification, the consolidated environmental mapping was created, a priority ranking of environmental resources to be retained was established, and significant plan modifications reflecting the priority ranking were made. This mapping includes the following, as shown on the attached Exhibit E:

- *Hydrology*
- *Forest Stands*
- *Specimen Trees*
- *Steep slopes, wetlands and other natural resources per Article S5-1607 (c)*
- *Arborist identified individual tree stands with best survivability*

Once this mapping was completed, a priority ranking of environmental resources to be retained was established. The ranking order established was:

- *Intermittent Drainage Way*
- *MDE designated "vernal pool"*
- *Non-tidal wetlands*
- *Steep Slopes*
- *Wildlife Corridor*
- *Tree stands that connect Arborist identified tree stands*
 - *In addition, Exhibit J shows the revised' site plan overlaid on the Consolidated Environmental Mapping*

DNEP: Please focus on preserving the largest forested areas and to limit the LOD adjacent to forested areas:

- A. Please relocate the C 5 and C6 units (Exhibit H, Building Dimension Plan) and preserve that forested area.
- B. Please reconfigure the location of the proposed utilities near trees # 6, 11, A 82, A 83, A 84, 30, 31, 32, 33, A 118, A 120, 37, A 92, A 95, and A 96 to significantly lessen the impact on the existing forest.
- C. Please expand the 0.37 ac. forest retention area near the proposed grocery store significantly. The area in question is too small for

- preservation.
- D. Please expand the 0.37 ac. forest retention by merging it with the 2.09 ac. forest retention area. The area in question is too small for preservation.
 - E. Please eliminate the various retaining walls and construct at grade to reduce the impact on adjacent forest and non tidal wetland B.
 - F. Several specimen trees shown as preserved are not likely to survive the proposed disturbance: tree number 1, 11, 27, 28, 29, 33, 39, 41 and 48. Please provide detailed information as to how these trees will be preserved and change the LOD when necessary.

Response:

A. Accomplished.

B. The utilities and other plan modifications have been made to reduce the impacts noted.

C. This area could not be enlarged significantly. Furthermore, the State Forest Conservation Technical Manual defines a forest as a “biological community dominated by trees and other woody plants covering a land area of 10,000 square feet or greater.” The 0.37-acre forest retention area is approximately 16,100 square feet in size and, therefore, exceeds the minimum size requirement of a forest.

D. As discussed in item C. above, the 0.37-acre forest retention area exceeds the minimum size requirement of a forest.

E. Accomplished.

F. In the May 2013 Preliminary Forest Conservation Plan submittal, twenty-seven (27) specimen trees were proposed for removal. However, revisions to the prior plan have resulted in a significant reduction in impacts to existing specimen trees. Only eighteen (18) specimen trees are proposed to be removed in this updated submittal. The specimen trees to be removed are numbers 1, 6, 27, 28, 35, 36, 37, 38, 41, 42, 43, 44, 45, 46, 49, 52, 57, and 58. While minor disturbances to less than 20% of the critical root zones are also proposed to specimen trees 12, 26, 29, and 48, the applicant is proposing to preserve these trees. It is anticipated that these trees can be successfully preserved at the direction of a certified arborist by using one or more of the following methods: tree protection fencing, mulching, and root pruning. Regarding tree numbers 11, 33, 39, a larger portion of the critical root zones for these trees will now be undisturbed, which should allow for their successful preservation using the methods listed above.

Please overlay the revised site plan, including the LOD, the proposed

grading, utilities, forest conservation areas, and proposed plantings on the consolidated environmental map. Please change Exhibit J (Revised Site Plan Overlaid on Consolidated Environmental Mapping) accordingly. Please include a title block on Exhibit J. All maps included as exhibits need to be on 24' by 36" sheets and clearly legible.

Response: Acknowledged. See updated Exhibit I.

9. CSD: *Regarding the method of calculating the Limit-of-Disturbance (LOD) for the project in light of the potential tree loss within 15 feet of the building area LOD, and based on follow-up meetings with DNEP, the requests will be met with the following qualifications:*

- a. *DNEP has directed that an inventory of all trees within 15 feet of the LOD shall not be required to be provided.*
- b. *The applicant will calculate the acreage represented by 15 feet outside the LOD and apply a 50% tree loss percentage to this acreage as part of the Forest Conservation calculation.*
- c. *The applicant has provided a write-up of the construction oversight plan that avoids detrimental impacts to the 15-foot buffer area and suggests that the projected loss factor should be 25%. See attached Exhibit F*
- d. *The applicant has provided an outline for the monitoring and reporting requirements to govern the forest preservation measures within the 15-foot area beyond the building LOD, but the formal agreements will be submitted later in conjunction with other conservation easements and the Planned Development Application. See attached Exhibit G, Forest Buffer Management Plan letter from Tyler Balderson to Marshall Breines, dated May 24, 2014.*

DNEP: Please recalculate acreage within 15 feet of the LOD if the development footprint is changed.

Response: Acknowledged.

The forest conservation worksheet on sheet 2 shows the break even point as 33.27 acres and that 38.00 acres of forest will be retained on site.

a. and b. As opposed to identifying every tree within 15' of the LOD assume a 50 % tree mortality and account for additional acreage to be preserved. Please calculate the number of additional acres that need to be preserved using the 50% survival rate and adjust the Forest Conservation worksheet accordingly. If the development footprint changes, then the additional acreage will need to be recalculated.

Response: Acknowledged. See updated calculations on Forest Conservation Worksheet.

c. The entire LOD adjacent to trees will either need to have chain link tree protection fencing (possibly with root pruning), chain link tree protection fencing with filter log, or super silt fencing (possibly with root pruning) installed. Adding additional fencing may save additional trees and is therefore encouraged. All tree protection/super silt (adjacent to trees) fencing will need to be 4' high chain link fencing with round metal posts every ten feet. Please change exhibit F (Construction Manager Policy/Enforcement of LOD) accordingly.

Response: See updated Construction Manager Policy, referenced above and attached as Exhibit H.

d. Please incorporate all components of DNEP's June 28, 2013 comment number ten in exhibit G (LOD Tree Management Plan), particularly invasive species control: *"A semi-annual forest conservation easement area (FCAE) report must be prepared by a qualified professional for 5 years from the date of completion of the development project. The report must contain an overview of the maintenance performed in the previous six months, an overview of the maintenance proposed for the upcoming six months, a work log, and pictures of the condition of the FCEA. The report needs to particularly focus on control of invasive species, preservation of trees within 15' of the LOD, newly planted trees, and solutions to problems that arise in the FCEA. The report must be submitted to the Department of Neighborhood and Environmental Programs and the Planning and Zoning Department"*

Please apply the same criteria to the monthly tree monitoring report. Please submit tree monitoring reports to the Department of Neighborhood and **Environmental Programs and the Planning and Zoning Department every month during** construction and every six months after construction for a five year period.

Response: Acknowledged. See updated Tree Management Plan, attached as Exhibit J.

10. CSD: *Addressed at 9. d. above; it is acknowledged that complete and fully executed agreements will be required and that the applicant will provide the same as a condition of obtaining a grading permit.*

11. CSD: *Addressed at 8 above.*

DNEP: Revise your justification statements to reflect an amended development footprint as discussed herein. It is noted that a taking determination is a matter for the courts, not the City or the Developer, and will not be considered as part of CSD's justification for developing in a priority forest area.

Response: It is acknowledged that any legal determination with regard to the matter of a taking would be determined by a court of law, rather than by Crystal Spring or the City. However, without presuming the outcome of such a legal process, Crystal Spring maintains that one of its considerations in demonstrating that reasonable efforts have been made to protect priority areas and the plan cannot reasonably be altered (§ 5-1607 (c) (1)), and that techniques for retention have been exhausted (08.19.04.03 B. (1)), is that a determination that additional forest conservation would be required, above the 38.75 acres of land that are proposed for preservation and the voluntary 5.13 acres of on-site afforestation and further above the already-exceeded State FCA breakeven threshold by 73%, could be considered a taking. In order to achieve this level of forest conservation, the total proposed impervious surface for development of Crystal Spring covers only 30% of the tract. It is presumed that DNEP will properly take into account all such considerations in its evaluation of this preliminary FCP.

Some specific comments pertaining to the forest clearing justifications:

- a. Page 16 of the Forest Clearing Justification, just below *Summary of Forest Conservation Act Standard*: The *Manual* on page 3-6 item 4, states: "*If the areas located in (1) through (3) above are within the proposed limits of disturbance/ the applicant must demonstrate that ...*" Therefore, the demonstration is not only required for disturbance of contiguous forest. Please adjust your demonstration accordingly.
- b. Please show how the construction of living retaining walls significantly reduces the amount of forest clearing. It appears that the living retaining walls increase the amount of forest clearing.
- c. A number of the distinct environmentally sensitive areas as per exhibit E (Consolidated Environmental Mapping) will be within the proposed limit of disturbance. Please preserve non tidal wetland B in its entirety. Several specimen trees shown as preserved are not likely to survive the proposed disturbance: tree number 1, 11, 27, 28, 29, 33, 39, 41 and 48. Please provide detailed information as to how these trees will be preserved and change the LOD when necessary. Please see comment 8 for increasing and improving preservation of areas located in (1) through (3) above (from the *Manual*). Please adjust your plans and your demonstration accordingly.
- d. The forested area of the property upon which the development will occur is an area that is designated for retention and protection as intended by the Forest Conservation Act. The applicant notes that preservation of the entire priority forest could constitute an illegal taking of private property.

Neither the Natural Resources Article, Title 5, Subtitle 16, nor the City's reviewers require preservation of all Priority Forest. The goal of the Article and City reviewers is to preserve the most environmentally sensitive areas not to prevent any development.

The City has determined that, according to applicable law, the revisions indicated in this document to the FCP do not constitute an illegal taking of private property. According to the applicant, the property to be developed is 111 acres, not taking into consideration 5.85 acres of the property which lies in the Resources Conservation Area, a Critical Area designation that is not governed by the requirements of the Forest Conservation Act. Also according to the applicant, the current forest cover is 82.24 acres, the total forest cover proposed for removal is 44.24 acres, and the total forest area proposed for conservation or preservation is 38 acres. The City has considered Sections 5-1607(c)(1) of the Natural Resource Article regarding priority of trees shrubs and plants for retention and protection, and Section 5-1611(a) of the Natural Resources Article regarding variances to the requirements of the Forest Conservation Act. Both sections create minimum standards.

Section 5-1607(c)(1) states as follows: "The flowing trees shrubs, plants, and specific areas shall be considered priority for retention and protection, and they shall be left in an undisturbed condition unless the applicant has demonstrated, to the satisfaction of the State or local authority, that reasonable efforts have been made to protect them and the plan cannot reasonably be altered..."

Section 5-1611(a) states as follows: "In the preparation of the State or local forest conservation programs, the State and local authorities shall provide for the granting of variances to the requirements of this subtitle, where owing to special features of site or other circumstances, implementation of this subtitle would result in unwarranted hardship to an applicant"

Regarding reasonable efforts to leave the priority forest area in an undisturbed state, the City has determined that although the applicant has scaled back its original development plan, there are further reasonable efforts that can be made to reduce disturbance of priority forest area. This is addressed elsewhere in this document To the extent that the applicant is requesting a variance of the requirements of the Forest Conservation Act, the applicant has failed to address any standards to establish unwarranted hardship. Those standards are cited in the Maryland Code of Regulation, 08.19.04.10, and have been cited by the Maryland Appellate Courts in *Belvoir Farms Homeowners Assn., Inc. v. North*, 355 Md. 259, 282 (1999). If the developer's contention is that a variance is not required, please state the rational.

Response:

a. Using the consolidated environmental mapping, the FSD, directives from staff, etc., the applicant has taken into account all environmental features across the site and comprehensively addressed the project's proposed impacts to such features in

accordance with Manual, page 3-6, item 4 and all other applicable criteria in the associated Forest Clearing Justification Narrative. As illustrated throughout that document and in the associated plans and materials, the applicant has exhausted techniques for retention, and has minimized impacts including to the features enumerated at Manual, page 3-6, items 1-3. In particular response to the comment above, the applicant has eliminated all impacts to Wetlands E, F, and G, while at the same time preserved forested buffers around these wetlands well in excess of the minimum 25-foot width required by the MDE. The applicant has also eliminated a proposed road crossing over the intermittent drainage way channel in the center of the property and provided a significantly wider forested buffer/wildlife corridor that encompasses the drainage way and Wetland B. Furthermore, the MDE-designated “vernal pool” wetland and its minimum 100-foot wide buffer have now been incorporated into the 50+ acre wildlife corridor. The revised layout also avoids any impacts to existing steep slopes and has further reduced the number of specimen trees to be cleared by a third from 27 to 18. Additional details regarding the minimization of environmental impacts are given in the Forest Clearing Justification Narrative.

b. The applicant does not agree with this statement as reflected in the current plan that vertical retaining walls may require less space to construct than living walls. The length and height of proposed retaining walls have been reduced such that the proposed overall grade change throughout the site is minimal. This makes the discussion on this point moot. With regard to the discussion about which retaining wall type uses more width, this can only be tested on a site-specific basis as the height of the wall and surrounding site conditions all contribute to establishing the actual site impact. The applicant will study the wall configuration that best compliments and protects the environment during the design phase of work.

c. Wetland B is now preserved in its entirety. The number of trees proposed to be removed has been reduced to eighteen (18), as mentioned above. Four (4) additional specimen trees (#'s 12, 26, 29, and 48) will also have minor critical root zone disturbances. However, the applicant proposes to preserve these four trees and to utilize preservation methods at the direction of a certified arborist.

d. The above comments indicate that DNEP and the applicant agree on the standards mandated in the FCA. DNEP may authorize impacts to contiguous forest, 100-year floodplains, intermittent drainage way/buffers, steep slopes, and nontidal wetlands, if it determines that “reasonable efforts have been made to protect them and the plan cannot reasonably be altered” per State Code, Natural Resources Article, § 5-1607 (c) (1). DNEP may also authorize the removal of 30”+ trees if the applicant qualifies for a variance, per State Code, Natural Resources Article, § 5-1607 (c) (2) (iii). Accordingly, because the site contains 82+ acres of DNEP-classified contiguous forest, as well as the intermittent drainage way, steep slopes, and wetlands, the project's impact to these areas is reviewed under the FCA's “reasonable efforts/plan cannot reasonably be altered” standard. For the removal of specific 30” trees, a variance is required. It has never been the applicant's contention that a variance is not required.

Local authorities may grant FCA variances in accordance with State Code,

Natural Resources Article, § 5-1611. For both local programs and the State program, an FCA variance does not mean a zoning variance, per COMAR, 08.19.01.03 B. (47) (b). Six (6) variance standards, including "unwarranted hardship," are articulated at COMAR, 08.19.04.10. The applicant is unaware of any Maryland case law or controlling precedent concerning FCA variances generally, or concerning application of the unwarranted hardship standard in such context. The *Belvoir Farms* case examined variances and unwarranted hardship given the standards adopted by Anne Arundel County in its local Critical Area program; it did not deal with the FCA or with variances issued thereunder. Accordingly, with no controlling precedent on the issue, DNEP should continue to administer the City's FCA program, and continue to consider FCA variances, as it has done in past applications over the years and in accordance with its standard processes of administration of the FCA, which presumably comport with all applicable State Code and COMAR provisions.

Regarding the comment above that "the applicant has failed to address any standards to establish unwarranted hardship," the administrative procedure surrounding the applicant's Preliminary FCP and associated variances should be recalled. In response to the Crystal Spring Preliminary FCP filed with DNEP in May 2013, which filing included variance requests for the removal of twenty-seven (27) trees covered by State Code, Natural Resources Article, § 5-1607 (c) (2) (iii), DNEP instructed the applicant on June 28, 2013, that "[i]t is too early in the development review process to consider an FCA Variance Request. Please submit the FCA Variance Request at a later date." DNEP has not notified the applicant since then that it is time in the development review process to consider the variance requests (which would now cover eighteen (18) as opposed to twenty-seven (27) trees). As such, and in accordance with DNEP's prior directive, the variance requests were not included in the applicant's subsequent updated Preliminary FCP submittal to DNEP of June 2014, and the variance requests are not included in this submittal.

12. CSD: Accomplished. The instruction to show 1.5' radius per dbh for specimen trees has been met.

DNEP: Sheet 2,3,and 4 use 1.0' radius per inch dbh in wooded area. Please use the critical root zone definition in the Manual (1.5' radius per dbh for specimen trees). Please provide appropriate preservation areas around all specimen trees that will be preserved.

Response: Acknowledged and implemented.

Tree #30, a 38" diameter southern red oak, is shown on sheet 3 with a preservation area of approximately 40'. The preservation area should be 57'. Please adjust the preservation areas for all the specimen trees on sheet 2,3, and 4 accordingly.

Response: Noted and implemented.

13.CSD: No longer applicable; DNEP waived this request during a follow up meeting.

DNEP: Refer to DNEP comments at # 9.

Response: Noted and implemented.

14. CSD: Accomplished. The revised site plan is shown on the consolidated inventory mapping.

DNEP: Please overlay the revised site plan, including the LOD, the proposed grading, utilities, forest conservation areas, and proposed plantings on the consolidated environmental map. Please change Exhibit J (Revised Site Plan Overlaid on Consolidated Environmental Mapping) accordingly. Please include a title block on Exhibit J with preparer's name and professional qualifications. All maps included as exhibits need to be on 24' by 36" sheets and clearly legible.

Response: Noted and implemented.

15. CSD: Accomplished. The forest conservation area previously shown on a portion of the Village Green has been removed. In its place, specific specimen trees will be retained as shown and no portion of the Village Green is claimed as part of the Forest Conservation acreage.

16. CSD: Accomplished. The appropriate scale has been added to all submitted plans.

17. CSD: A write-up has been submitted on the practice/enforcement process to insure that subcontractors do not violate the LOD. It is requested that, in light of the submitted policy, the stated requirements be relaxed and that the processes proposed be accepted. As mentioned above in 9. c., see attached Exhibit F.

DNEP: All tree protection fencing will need to be 4' high chain link fencing with round metal posts at least every ten feet. Please adjust the tree protection fencing details on sheet 5 accordingly.

Response: Policy has been updated as requested, referenced above and attached as Exhibit H.

18. CSD: Accomplished. Building dimension data are provided in attached Exhibit H.

Response: See Exhibit K attached, for updated building dimension data.

19. CSD: *It is acknowledged that surface parking will not be constructed except as part of a building permit on a portion of the project that specifically includes such parking. While the Code does not mandate that any portion of parking be provided underground, nor does it provide incentives that the project will take advantage of for providing underground parking, proposed parking has been modified and shifted in favor of more under-building parking such that nearly 40% is now provided under buildings. With regard to the number of proposed parking spaces compared to Code requirements, parking analysis is provided; see attached Exhibit I, .Crystal Spring Annapolis, Parking Analysis (retail / commercial zone). . The analysis calculates Code-required parking at 1,670 spaces. With total parking proposed at 1,729 spaces, the parking proposed is a slight amount in excess of the minimum Code requirements by 59 spaces (3.5%). In this regard, the applicant believes the minimum Code requirement is not adequate for the CCRC component in that it does not provide an allocation for staff or visitor parking and only .5 spaces for each independent living unit of the CCRC.*

Response: See Exhibit K referenced above and attached, regarding updated building dimension data and parking analysis. With regard to total parking provided, the applicant has reduced totals from the previous 1,729 to 1,702 – a reduction of 27 spaces.

20. CSD: *Acknowledged. The applicant will comply with DNEP's instruction that it submit the formal FCA Variance Request regarding specimen trees at a later date, however, certain information can be presented at this time which demonstrates significant improvement in the number of specimen trees able to be protected. The consequence of the site plan modifications was a significant reduction in the number of specimen trees impacted from the twenty-seven (27) trees proposed for removal in the previous request submitted on May 23, 2013, to only seventeen (17) under the updated plan. The applicant has worked diligently over the past year to reduce the specimen trees proposed to be impacted by 2/3 so as to preserve as many of such trees on the property, as possible.*

As enumerated on the Preliminary Forest Conservation Plan, trees 2, 6, 12, 35 through 38, 42 through 46, 52, 53, and 56 through 58 are each located inside the proposed

Limits-of-Disturbance (LOD) and will be impacted by proposed grading activities. Of the seventeen specimen trees that are proposed to be removal, four (4) are either in fair condition with declining health or in poor to very poor condition, seven (7) are rated in fair condition, and six (6) trees are rated in good condition. The four trees rated in fair with declining health or worse do not warrant preservation. It should also be noted that one of the trees in fair condition is a 24-inch Virginia pine that would pose a safety risk when the surrounding forest is cleared. Therefore, preservation of this tree is not recommended.

Of the remaining twelve (12) specimen trees rated in fair or better condition, eight(8) are located at the front half of the site near Forest Drive. Because of its close proximity to Forest Drive, this area has been designated for commercial/retail space and higher density residential development. Increasing density at the front of the property allows for the preservation of larger forested tracts at the center and rear portions of this site. Through careful planning and design, however; the applicant is still proposing to preserve thirteen (13) other specimen trees within this urban section of the development.

It should also be noted that when this variance request is formally submitted, it represents a significant reduction from the twenty-seven (27) trees proposed for removal in the previous request submitted to your office on May 23, 2013. The applicant has worked diligently to preserve as many existing specimen trees on the property as possible.

DNEP: Several specimen trees shown as preserved are not likely to survive the proposed disturbance: tree# 1, 11, 27, 28, 29, 33, 39, 41 and 48. Please provide detailed information as to how these trees will be preserved and change the LOD when necessary.

The City will require mitigation per City Code 17.09.070 for any trees that are allowed to be removed through the variance procedure. The City will also require mitigation per City Code 17.09.070 for all trees 24 inches or greater in diameter, although it is recognized that variances are not required for the removal of trees less than 30 inches in diameter.

Response: As a result of the site plan modifications made in this updated submission, the previously detailed tree impact discussion has been modified. Only eighteen (18) specimen trees, as opposed to twenty-seven (27), are now proposed to be removed. The specimen trees to be removed are numbers 1, 6, 27, 28, 35, 36, 37, 38, 41, 42, 43, 44, 45, 46, 49, 52, 57, and 58. While minor disturbances to less than 20% of the critical root zones are also proposed to specimen trees 12, 26, 29, and 48, the applicant is proposing to preserve these trees. It is anticipated that these trees can be successfully preserved at the direction of a certified arborist by using one or more of the following methods: tree protection fencing, mulching, and root pruning.

Regarding the applicability of Chapter 17.09 and the statement above that “The City will also require mitigation per City Code 17.09.070 for all trees 24 inches or greater in diameter”, it should be noted that 17.09.025 A. applies to projects requiring site design

plan review in accordance with the requirements of Chapter 21.22. Section 21.22.020 A. 1. excludes from Chapter 21.22 development approved as part of a planned development. Crystal Spring will proceed as a planned development so it does not require site design plan review, and it arguably need not comply with Chapter 17.09. Section 17.09.025 A. also provides that it applies to any application for a building and grading permit, which permits Crystal Spring will require, but the spirit of the Code seems to be to treat planned developments as separate land use mechanisms so as to allow greater flexibility in order to encourage more creative design for the development of land than is generally possible otherwise. It is meaningful that, had Chapter 17.09 been intended to apply to any and all projects requiring a grading or building permit, there would have been no need to exempt planned development applications. Regardless, this issue need not be resolved at this preliminary FCP stage and will be relevant at subsequent development application and permitting phases.

21. CSD: *Accomplished. See the updated plans filed herewith.*

DNEP: Please see stormwater management comments below.

Response: Noted.

22. CSD: *No longer applicable; building in question has been relocated and stormwater management has been updated.*

DNEP: Please see stormwater management comments below.

Response: Noted.

23. CSD: *Accomplished. The requested bicycle path is shown on the site plan.*

DNEP: The bicycle path is not apparent on any of the submitted site plans. Please show the bicycle path on the FCP.

Response: Noted and the plan has been updated as necessary.

Additional comments:

Stormwater

Management:

1. Please note that the City of Annapolis is expecting the developer will be incorporating Environmental Site Design (ESD) to the Maximum Extent Practicable (MEP) for this development. Use of ESD to the MEP will help mimic predevelopment conditions and to treat runoff closer to the source. This is required by the

Stormwater Management Act of 2007. These non structural practices (ESD) must be exhausted to the MEP before the use of any structural practices will be considered.

2. Please show how the development will be constructed to reduce the potential for erosion, and how the extent and duration of soil exposure will be minimized. A well designed plan will include phases or stages of development that ensure only areas under active development are exposed. Grading is to be completed and stabilized as soon as possible after it is initiated. In order to realize these goals, the establishment of grading units is required. As defined by regulation, a grading unit is the maximum area allowed to be graded at a given time and is limited to 20 acres (City Code, 17.04.503, adopted Oct. 14, 2013). Requiring adherence to a maximum disturbed area on a project will limit mass grading, improve phasing and sequencing, and encourage timely stabilization. A Project is to be sequenced so that grading activities begin on one grading unit at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized. Unless otherwise specified and approved by the City, no more than 30 acres cumulatively shall be disturbed at a given time. Please show how grading will be phased to meet these requirements.
3. Please provide a Stormwater Management Report which will contain a narrative that supports the concept and describes how the design achieves natural resource protection and enhancement, maintenance of natural flow patterns, reduction of impervious areas through better site design, alternative surfaces, and non structural practices, implementation of ESD planning techniques and practices to the MEP. Please provide the preliminary calculations for stormwater management for this project within this report. This should include the ESDv required and ESDv provided through the practices shown on the plans. More details about stormwater management reports can be found in Chapter 5 of the MDE Stormwater Management Manual. Additionally, please provide information regarding the anticipated flows at the outfalls from all drainage areas.
4. Please provide a proposed drainage area map for the development. This map is required to demonstrate how this development will maintain the natural flow patterns. In addition this will help with understanding how the site is incorporating the ESD practices and SWM management into the design.
5. Please provide the amount of impervious area proposed in each drainage area.
6. Please provide a map with the soil types showing the Hydrologic Soil Groups (HSG) overlaid with the proposed features.
7. The permeable pavement located in the parking lots appears to receive run-on from adjacent impervious areas. This is to be limited per the MDE manual on page 5.47

under drainage areas.

8. The permeable pavement in the areas of the parking lots might have an adverse effect on the groundwater causing contamination. The MDE manual on page 5.47 under hotspot runoff discourages permeable pavement usage in areas that generate higher concentrations of hydrocarbons, trace metals, or toxicants that are found in typical stormwater runoff. A parking lot for a retail store would have many vehicles coming and going that could leak oil or other fluids into the permeable pavement areas.
9. During inclement weather in the winter months, the permeable pavement for the parking lot will be required to use deicers in moderation. The deicers, when used will be required to be non-toxic, and organic and can be applied either as calcium magnesium acetate or as pretreated salt. Snow plowing should be done carefully with blades set one inch higher than normal. Plowed snow piles and snowmelt should not be directed to permeable pavement. All of these factors will shorten the lifespan of the permeable pavement.
10. There are several areas where the permeable pavement is shown prior to a bioswale or submerged gravel wetland, especially in the area of the parking lots. This is not a desirable situation as stated above that permeable pavement should not *receive* run-on and should only treat at source.
11. There appears to be many areas where new impervious is being placed and there is no stormwater management being provided. A particular example is the entrance between the two retail areas from Forest Drive. This area has a bio/grass swale and two submerged gravel wetlands closer to Forest Drive but after the intersection within the site, there are several inlets and manholes connected in the stormdrain system that runs southwest through the site before connecting to a manhole that leads south east towards the ultimate outfall from the site. The impervious area that is contributing to this system appears to be rooftops, parking lots, and roadways. There are no ESD facilities shown in this area.
12. Some of the stormdrain systems do not connect to any of the major outfalls, or appear to outfall anywhere. Please confirm these stormdrain lines either outfall somewhere, are connected to an existing system, or are to be connected to the main outfall line.
13. Submerged gravel wetlands with an enhanced filter would likely not work. Submerged gravel wetlands are intended to be installed in areas where the soils are of an HSG classification of Cor D, or a high groundwater table, hard pan or other confining layer to maintain submerged flow conditions. The enhanced filter is a

modification to practices like micro-bioretenion which allows for water quality treatment and groundwater recharge. The sizing of the stone reservoir is limited to the location of the groundwater. A submerged gravel wetland would want to have the high groundwater for nutrient uptake and the enhanced filter would dewater the submerged gravel wetlands.

14. On sheet 4 of 5 the non-tidal wetland shading is missing near the match line with sheet 3.
15. Please provide more information about the flood control/detention areas shown on sheet 4 of 5. Typically, these types of devices are used when ESDv required is not met with ESD to the MEP.
16. The large flood control area on the eastern side of the site on sheet 4 is shown to outfall near the top of an existing steep slope. This outfall could be detrimental to the stability of this slope. This practice could also seep through the steep slope and cause a failure of the slope. Please provide information showing the phreatic line and if it will intersect the steep slope.
17. Please revise the exhibit J to include the stormwater management features being proposed.
18. Sediment and Erosion control details are unnecessary at this time and should be submitted as part of a grading permit.

Response: The applicant has met with representatives of DNEP to discuss the comprehensive subject of stormwater management represented in the comments 1-18 above. The overall matter of stormwater management and the information that has been submitted in this updated Preliminary Forest Conservation Plan is based on the letter to Matt Waters dated September 5, 2014, attached as Exhibit L. A Preliminary Stormwater Management Computations report and drainage maps dated December, 2014 is attached as Exhibit M.

Specific responses to points 1-18 that are not fully covered by the updated submission of stormwater management plans are below.

#2: A Sequencing Plan will be provided in connection with the grading permit.

#5-11: No pervious pavement is being proposed in the updated plan.

#16: This outfall has been relocated.

Sewage Utilities:

1. The use of retaining walls to raise the grade to an elevation allowing gravity flow of sewage to Forest Drive is not a preferred design feature. Please contact Annapolis DPW to discuss installation of a sewage pump station so as to eliminate unnecessary grade elevations.
2. The residential cluster at the rear of the project proposes gravity sewage flow to the Hunt Meadow pump station. That station services all of Hunt Meadow and has significant groundwater infiltration which suggests that proposed additional sewage could exceed the design capacity of the pump station. Please contact Annapolis DPW to discuss the feasibility of your proposal.

Response: The updated Preliminary Forest Conservation Plan reflects the lowering of grade in the areas identified by DNEP and the installation of a sewage pump station shown on the updated Preliminary Forest Conservation Plan. An explanation of the engineering evaluation of alternatives that was undertaken which resulted in the selected approach to Crystal Spring's sewer utility plan is attached as Exhibit N.

Planning and Zoning and Fire Department comments are included as separate documents.



City of Annapolis

DEPARTMENT OF PLANNING AND ZONING

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SALLY NASH, PhD, AICP
ACTING DIRECTOR

August 1, 2014

MEMORANDUM

To: Frank Biba, Chief
Environmental Programs

From: E. Thomas Smith, Jr., RLA Chief of
Current Planning

Re: Crystal Spring Preliminary Forest Conservation Plan (2nd Review)

Planning staff reviewed the revised, Preliminary Forest Conservation Plan (FCP), Forest Clearing Justification, accompanying exhibits and plans. The following are comments rendered from our review:

- I. The Applicant did not address/provide a point-by-point response to Planning & Zoning's June 24, 2013 comment letter (included with DNEP's June 28, 2013 comment letter). That said, the revised plans do correct several previously identified issues;
 - Trees to be preserved within the Village Green no longer count toward the forest preservation credit, as the Green is proposed to look and function like the Harvard Yard,
 - Submerged gravel wetland conflicts with the urban plaza and rooftop of the main CCRC building have been eliminated,
 - Stormwater is no longer directed towards nor within the vernal pool or its buffers,
 - CCRC apartment buildings have been relocated out of the natural outfall point in the southwest corner,

However, all of the other bulleted points remain issues to be corrected, and should be taken as part of this revised, Preliminary FCP review,

Response: The applicant provides responses herein to Mr. Smith's June 24, 2013 comment letter, noting, as mentioned above, that a significant number of the points raised in that prior letter were addressed in the June 25, 2014 updated Preliminary FCP submittal and further that additional matters have been addressed in this current submission.

- 2, Page 1 of the Forest Clearing Justification (FCJ) notes efforts to rework/modify the previous site plans to respect environmental features and to minimize forest clearing in a manner consistent

with program objectives. Hence, the ongoing problem of conflict with an environmentally sensitive site and the developers program objectives. It would be helpful in our design review to better understand the program, and if said objectives were submitted as part of the Preliminary FCP,

Response: The applicant believes that the matter of program objectives being inconsistent with the referenced forest conservation objectives involved the program objective of the Continuing Care Retirement Community being located with access to the mixed-use portion of the project, but separated by the intermittent drainage way in a private and secure environment. The applicant was asked to consider relocation of elements of the CCRC that are in the "middle section" of the property so as to create a more significant wildlife corridor and to avoid proposed development in areas considered by DNEP as potentially impacting pocket wetlands.

In response to this request, and through careful planning and design, the main CCRC building and health care facility have been relocated to the mixed-use portion of the Crystal Spring project thus vacating the "middle section" of the property.

As such, this comment has been addressed in the subsequent revisions.

3. Page 2 of the FCJ includes a paragraph related to the *2009 Annapolis Comprehensive Plan*, which identifies this site as part of the Forest Drive Opportunity Area, and as such should be designed in the "Urban Center Low" character. This character, among other things, is defined as 2 to 4 stories, The CCRC Independent Living Building, as noted in Exhibit H, is up to 7 stories and 90 ft. to the mid-point of the roof. The City Code measures building height to the roof peak, which (if measured to the peak of the CCRC building) would put the structure at or above 100ft. Neither the Comprehensive Plan nor the City Code sanction such incompatible heights. This Department will not support any building height in excess of 6 stories, 65 ft.

Response: Through subsequent relocation and modification of the proposed building, it will no longer be taller than 6 stories or 65 feet.

4. Page 3 of the FCJ notes the main CCRC building as being significantly reconfigured with a much smaller building footprint than the original 4-story proposal. The August, 2011 4-story CCRC building scales a footprint of approximately 94,000 sq. ft. The revised Preliminary FCP scales approximately 97,000 sq. ft. Exhibit H notes the building as 1,546 linear ft. and 73ft. wide, equaling 112,859 sq. ft. Please clarify.

Response: The proposed main CCRC building has a footprint of 112,858 square-feet.

5. Page 4 of the FCJ notes innovative stormwater management features which achieve the State's environmental site design (ESD) to the maximum extent possible. Please explain in detail, with preliminary computations, how green roofs, pervious pavements, bio-swales, sub-terrarium water filtration, drywells and pocket wetland all work to sustain the natural ecosystems while converting much of the natural environment to a built environment. Please also explain how these SWM techniques are utilized to protect the Crab Creek watershed,

Response: The applicant has met with representatives of DNEP to discuss the comprehensive subject of stormwater management, as summarized in the letter to Matt Waters referenced above and attached as Exhibit L.

6. Page 4 of the FCJ speaks to the character of Crystal Spring and its transition from urban to more natural. The Village Green, being the center and heart of this project, has tremendous potential for placemaking, with a public green encompassed by urban architecture, whereby people, not automobiles, are the primary design drivers. That said, the relocated main CCRC building fails to contribute to the Village Center concept. The primary corner within the Village (the most sun drenched, perfect for an outdoor cafe) remains vacant, not architecture to hold its edge and help define the space. With the exception of the Chapel, the majority of the CCRC building is located 160 ft. off of the road, with a suburban parking lot in the front. This building should be shifted significantly to the corner, thus addressing both the Village Green and Skipper Drive extended. This both enhances/corrects the Village Center concept and it also provides adequate separation from non-wetland 'B' with approximately 3 acres of additional forest preservation.

Response: The applicant will further study potential design refinements during the architectural review process for the project associated with the Planned Development application phase. The area of disturbance for the portion of the site occupied by the main CCRC building and health care facilities would be anticipated to remain the same if building elements were shifted and would therefore not affect the Preliminary Forest Conservation Plan submission.

7. Page 4 of the FCJ continues to speak about appropriate links with the surrounding neighborhood. Vehicular links include the extension of Skipper Drive through the site. This road is designed to be pedestrian and bicycle friendly. The western connection needs to be delineated and the eastern connection needs to be revised, relocated further south, to provide an appropriate future connection to Gemini Drive. Pedestrian and bicycle links are noted in the resubmittal point-by-point response (#23), yet the plans fail to delineate any path(Said path is a continuation from Safeway and the Village Greens of Annapolis, down Forest Drive and Spa Road to the entrance adjacent to the Hunt Meadows community. Please correct Skipper Drive extended and delineate the bicycle path on the site plans.

Response: The applicant has not relocated the extension of Skipper Drive south on Spa Road. The current location is within property under contract for acquisition by the Crystal Spring developers while the suggested location is not contract by the developers. In addition, the applicant has reviewed the suggested location and believes it does not present a superior solution in that it involves traversing a significant grade change between Gemini Drive and Spa Road as well as crossing an active stream on the opposite side of Spa Road. See plan attached as Exhibit O.

8. Page 4 of the FCJ also notes that the overall architectural approach, styles, elements and massing maintain continuity with the surrounding neighborhood, No architectural plans were included with the submittal. Certainly the main CCRC building at 100 plus feet is not in keep with the surrounding neighborhood,

Response: The CCRC building has been reduced in height.

9. Page 5 of the FCJ articulates site features, including linkages to open space areas as attractive and functionally efficient. It's difficult to understand how 3,120 ft. of retaining wall between 6 and 10 feet high provides effective linkages to the open space areas. The 6 ft. retaining wall along the entire eastern boundary of the Village Green completely disconnects the Green, at the pedestrian level, from the townhouse/Inn and Spa area. Please limit the use of structural retaining walls through the site and eliminate the 6 ft. wall adjacent to the Village Green.

Response: The use of significant retaining walls has been eliminated as illustrated in the updated Preliminary Forest Conservation Plan.

10. Page 5 of the FCJ notes safe and effective pedestrian and vehicular circulation. The Village Center proposes wide, urban sidewalks which help define the space and its character. Sidewalk treatments throughout the project appear to be appropriate. More study is needed to analyze the numerous vehicular crossings along Skipper Drive extended. Please also delineate transit, shuttle and school bus circulation with designated stops,

Response: On-site circulation is illustrated on the associated plans. Transit stops serving public buses, new shuttle routes, and school buses will be designated at a future date after review with authorities representing these entities to ensure appropriate access and routes. Ample planting strips and sidewalk areas along main roadways are sufficient to accommodate bus/shuttle pull out lanes and shelters when required. These changes may result in a minimal reduction of parking along designated roadways but will not impact the coverage delineated in the Preliminary Forest Conservation Plan.

Pedestrian circulation in the retail zone will be evaluated for crossing locations and anticipated vehicular volume to determine crossing type and any traffic calming measures. This circulation will also be structured into zones that control the number of points that pedestrian circulation crosses vehicular circulation paths.

The design of pedestrian circulation in the residential portion of the site will reflect a lower traffic density and encourage pedestrian connectivity. Further, it is acknowledged that circulation in general is a topic that will be evaluated as part of the planned development application to follow.

11. Page 6 of the FCJ notes the relocation of the main CCRC building from the middle section of the site to the front, Village area. It is further noted that all proposed development has been removed from potential impacts to identified environmental features. However, the relocated CCRC

building includes

disturbance to non-tidal wetland buffer 'B'. The newly relocated cottage units to the middle section also include disturbance to non-tidal wetland buffer 'B'. And, the re-grading of existing Crystal Spring Farm Drive, existing road grade elevate between 6 and 10ft., creates disturbance within non-tidal wetland 'B', its buffer steep slopes adjacent to the intermittent stream (wetland 'D') and specimen trees adjacent to steep slopes. It is recommended that Crystal Spring Farm Road retain its existing grade and that the 9 cottage units, with access road from the west, be relocated from the middle section entirely. Such relocation provides an additional 3.5 acres of forest preservation, and removes disturbance from two of the four sides adjacent to non-tidal wetland 'B',

Response: The suggested plan modifications have been made and are incorporated in the updated Preliminary Forest Conservation plan.

12. Page 7 of the FCJ lists major plan modifications reflected in the revised, Preliminary FCP. Number 3 notes that 2 Maison Court buildings and 24 cottage units have all been located in non-forested areas. However, the Preliminary Grading and SWM Concept Plan shows that 2.4 acres of existing forest will be cleared. A SWM pond facility is proposed within the mature forest and outfalls directly onto steep slopes leading into the intermittent stream and its wetlands. An outfall pipe in this area will undoubtedly create erosion, especially given the highly erodible soils. Additional SWM is proposed within the forested area, that serves as the site's major drainage outfall point. The soils in this area are noted as widewater and wet, thus should be protected.

Response: The suggested plan modifications have been made and are incorporated in the updated Preliminary Forest Conservation plan. The CCRC cottages, which were previously located in cleared forested areas in the middle of the property, have been relocated, and the referenced outfall has been relocated.

13. Page 8 of the FCJ continues to list major plan modifications and notes that the small independent cottages, with no basements, will be developed to insure that the existing hydrology continues to sheet flow to the intermittent stream. However, approximately 2.7 acres of mass forest clearing, proposing an elevated grade change of 4 to 10ft. with 750lineal feet of retaining wall, is sure to significantly alter the existing hydrology. In addition, this location proposes impacts within non-tidal wetland buffers 'B' and 'E'. To reiterate, it is recommended that Crystal Spring Farm Road retain its existing grade and that the 9 cottage units, with access road from the west, be relocated from the middle section entirely,

Response: The suggested plan modifications have been made and are incorporated in the updated Preliminary Forest Conservation plan.

14. Page 9 of the FCJ speaks to the hydrology study undertaken by GreenVest, applicant's Exhibit D. Page 9 states, "(1) that the site is comprised of two drainage areas, neither of which have surface or subsurface hydrologic connection to the isolated non-tidal wetland pockets, nor (2) that the subject non-tidal wetland pockets are not fed by groundwater." The GreenVest study states that these wetland areas are fed by shallow, perched, groundwater and supplemented by direct precipitation and to a lesser extent overland flow. The GreenVest study appears to contradict that which is quoted above from Page 9.

- Further, the GreenVest study continually uses the term-ephemeral to describe the stream channel labeled as wetland 'D'. However, the Army Corps of Engineers and the Applicant's wetland delineation identify the stream as intermittent. Please correct,
- The GreenVest study also incorrectly states that, "No direct impacts to wetlands or waterways will occur based upon implementing the current site plan as configured." As noted previously in these comments, numerous impacts are proposed within wetland areas,
- The GreenVest study concludes that although half of the drainage area tributary to non-tidal wetland 'B' will be disturbed as part of the proposed development, indirect impacts to the wetlands hydroperiod are not anticipated as roof runoff and pervious pavement will allow for infiltration. Please provide computations to support this statement,
- The last page of GreenVest study notes attached hydrographs, yet none are provided,

Response: An updated GreenVest summary memo is provided along with the well monitoring detail information, attached as Exhibit D with this updated filing.

15. Page 9 of the FCJ states that after relocating the CCRC building from the non-tidal wetland region of the site (middle section), the closest planned structures are located more than 125 ft. away from non-tidal wetland 'B'. The Preliminary Grading and SWM Concept Plan scale the relocated CCRC building at 54 ft. away and the closest cottage unit at 62ft. Please clarify,

Response: The cottage structures in question have been relocated to the meadow area of the property making this comment no longer applicable.

16. Page 9 of the FCJ begins the multi-page analysis of Smart Growth and how the Crystal Spring design achieves the principles listed by The Smart Growth Network. The Maryland Department of Planning gives the background for Smart Growth as:

Smart growth concentrates new development and redevelopment in areas that have existing or planned infrastructure to avoid sprawl. Smart growth is sustainable and is characterized by compact, transit-oriented, bicycle-friendly land use, with neighborhood schools, walkable streets, mixed-use development and wide range of housing choices. Its purpose is to conserve valuable natural resources through the efficient use of land, water and air; create a sense of community and place; expand transportation, employment, and housing choices; distribute the costs and benefits of development in an equitable manner; and promote public health.

Smart Growth has four straightforward goals:

- Support existing communities by targeting resources to support development in areas where infrastructure exists;
- Save our most valuable natural resources before they are forever lost;
- Save taxpayers from the high cost of building infrastructure to serve development that has spread far from our traditional population centers; and
- Provide Marylanders with a high quality of life, whether they choose to live in a rural community, suburb, small town or city.

Maryland Smart Growth legislation encourages growth and development within State Priority Funding Areas (PFA), which includes Annapolis. Crystal Spring meets many of the State's Smart Growth goals; mixed-use development, walkable streets, sense of place, use of existing infrastructure, among others. Where the Crystal Spring could be improved relative to Smart Growth is; the conservation of additional natural resources, defined transit opportunities, efficient use of land and more compact mixing of land uses.'

While clearly a mix of land uses are proposed, the Crystal Spring design suffers from segregated land uses. The prior Preliminary FCP proposed CCRC units' over retail and the earliest site plans proposed office over retail. By combining land uses and limiting suburban land use forms, i.e., drive-thru banks and standalone retail, a more urban plan would garner higher preservation levels of the site's sensitive natural resources. That said, the revised Preliminary FCP should be commended for proposing 40% structured parking and for its green development initiatives.

Response: This updated Preliminary Forest Conservation Plan demonstrates further improvement in the Smart Growth approach in part by further concentrating the cottage and Maison Court elements of the CCRC in one cluster design in the meadow area of the property, in contrast to the previous approach where the elements were separated into two distinct areas. It should also be noted that, in accommodating staff preferences to move the CCRC from out of the middle section of the property, the proposed plan still has 24,000 square-feet of office over retail but the reduced footprint of the retail is no longer adequate to also support residential over retail.

17. Page 12 of the FCJ states, "All identified wetlands, their existing hydrology and drainage areas, and an intermittent drainage way are protected." This statement is inaccurate, as noted in prior comments,

Response: The modifications reflected in the updated Preliminary Forest Conservation Plan address and mitigate comments regarding the potential impact on the hydrology between pocket wetlands by the relocation of the 9 cottages from the area near the pocket wetlands to the meadow area of the property. And as mentioned previously in this document, given the various building relocations to avoid wetland disturbances, impacts are now confined to Wetland Area A and the Wetland Area B/D interface at the existing/proposed Crystal Spring Road crossing, which is already disturbed and is the best location for the road crossing.

18. Page 17 of the FCJ begins the list of priority forest preservation techniques.
 - Number 1 states that the design proposes living retaining walls to reduce forest clearing. As stated previously, 3,120 lineal feet of retaining wall between 6 and 10 ft. high does not conserve existing drainage patterns nor integrate the proposed built environment with the existing natural environment,
 - Number 2 states that minimum road widths are used minimize clearing. However, road grade changes of 6 and 10 feet serve to increase forest clearing,
 - Number 3 states that the plan proposes to preserve all of the distinct environmentally sensitive areas of the site. Again this is an inaccurate statement,
 - Number 5 states that forest clearing in the rear portion of the site is limited to immature forest with invasive species. Again, not completely accurate as priority forest is impacted

and drainage outfalls are proposed on steep slopes. The entire area may be best served with an invasive removal program, reforestation and relocation of the CCRC units. While the southern portion of the site contains the largest non-forested area, it also serves as two of the

three natural drainage outfalls, adjacent to Resource Conservation critical area. The southern area should be protected from development and used as justification, through reforestation, to support development in the northern site area,

- Number 6, please state how many trees greater than 24" dbh will be preserved,
- Number 7 notes that SWM features have been incorporated to minimize impacts. These facilities shall not be located adjacent to steep slopes, within the three site drainage outfalls (intermittent stream and two southern areas vernal and 1open, wet area) nor within the Forest Drive forested buffer. This forested buffer shall retain a minimum 100 ft. section of trees, both east and west of the Crystal Spring Farm Drive intersection. Supplemental reforestation shall be planted in place of existing commercial adjacent to Forest Drive,
- Number 12 notes the height of the CCRC building has been increased to reduce the building footprint. As previously commented upon, the Planning Department will not support building heights in excess of 6-stories, 65ft. Please also clarify the prior 4-story footprint versus the revised 6-story footprint,

Response: The issues raised with regard to the use of retaining walls, drainage outflows, height of Crystal Spring Farm road and height of the main CCRC building are addressed in prior responses herein and revisions are incorporated in the updated Preliminary Forest Conservation Plan. The environmental concerns raised about these matters have been addressed and avoided by the changes integrated into the updated Preliminary Forest Conservation Plan, in no small part due to the fact that an entire Maison Court building and its 20 units have been consolidated into the main CCRC building. Regarding the relocation of the cottages from the middle section of the site and out of the wildlife corridor, the applicant believes that the relocated cottages, which are sited in the non-forested meadow areas of the property, properly reflect the Comprehensive Plan's "Clustered Residential (preserving forested character)" vision for this area of the site.

With regard to the number of 24-inch trees that would be impacted under the updated plan, seventy-two (72) 24-inch trees are now proposed for preservation, while seven (7) additional 24-inch trees that are located within the 15-foot LOD are proposed to be preserved as well. Ninety-nine (99) 24-trees are located within the proposed LOD and will be removed.

19. Page 18 of the FCJ refers to the four neighborhood nodes: the CCRC, the Village Green, the commercial retail, and the townhomes. The design intent is to create an active village center, whereby the proposed uses compliment one another and integrate with the natural landscape. The vocabulary is defined as urban, centered on the social use and enjoyment of a Village Green. Said arrangement gives identity and character, while more importantly creating a sense of place, Please clarify why the synergistic objective of the development could not be achieved with less disturbance--wouldn't a more compact urban design help strengthen the core vocabulary and sense of place?

Response: The updated Preliminary Forest Conservation Plan does further consolidate the overall development by eliminating the portion of development proposed for the middle of the property, which correspondingly increases preservation of the wildlife corridor in that area and simultaneously concentrates mixed-use activities in and around the Village Center.

20. Planning Zoning will provide a more detail reviewed of the parking analysis, Exhibit I, as the project moves beyond the FCP review and into the Planning Development/Site Design review. That said, it should be noted some land uses appear to be under-parked, i.e., townhouses at 2 space/unit and others appear to be over parked, i.e. the CCRC at 1.08 space/unit,

Response: Noted.

21. With regard to the Tree Cover Memorandum, Exhibit C, the Planning Department believes that too much credit is given to the large canopy tree cover proposed. If stormwater management were a design driver, part of an ecologically sound system With the natural drainage patterns and grading held to a minimum (thus tree preservation to a maximum), then approximately 250 trees adjacent to forest preservation areas would not be needed. A reduction of 250 large canopy trees equates to 2.3 acres less of proposed landscape trees. That said, the increased tree preservation as a result of the aforementioned SWM/grading design should more than offset the loss of proposed trees,

Response: The updated plan increases the amount of forest preservation. Proposed trees adjacent to existing woodlands are desirable to provide a visual transition from tall existing forest to the built environment since newly created forest edges are typically barren of lower tree branches.

22. The current site plan, delineated as May 2014 on Exhibit A, provides for an increased wildlife corridor with the relocated CCRC building from the middle area to the northern, village center area. However, changes to northern, village center area push the development as a whole further south towards non-tidal wetland 'B' and the intermittent stream 'D'. The Planning Department agrees the with the Department of Neighborhood and Environmental Programs and the Annapolis Environmental Commission, in that, a 100 ft. buffer should be maintain to both sensitive areas to provide adequate protection,

Response: Noted; please refer to the applicant's prior buffer responses.

23. Please describe, in detail, how the revised, Preliminary FCP comports with Resolution No. R-12-05 Revised, Annexation of Katherine Properties. Please include reference to the Katherine Properties, Crystal Spring Development Concept in your compliance description. This Concept Plan, labeled as Exhibit 1, October 6, 2005 (referenced in Condition 19 of R-12-05 Revised), was relied upon throughout the entire annexation process as the applicant's intension for development. Since being approved, the Concept Plan was further relied upon as justification for the subdivision of Pony Club Estates, as this subdivided area was not included in the proposed 75 acre conservation easement,

The updated *Crystal Spring* Preliminary Forest Conservation Plan comports with Resolution No. R-12-05 Revised, Annexation of Katherine Properties. The status of the twenty-two (22) conditions set forth in the legislation is explained below. Many of the conditions concern development issues which will be more fully illustrated in the subsequent planned development application phase.

1. A Public Facilities Agreement has been recorded among the land records at Book 18034, Page 544, in compliance with the condition.
2. Connections will be made at the time of construction in the vicinity in connection with the planned development.
3. Public services will be provided in compliance with the condition.
4. Water will be provided in compliance with the condition.
5. Utilities and infrastructure will be provided in compliance with the condition.
6. Stormwater management will be provided in compliance with the condition.
7. Sidewalks will be provided in compliance with the condition.
8. Traffic signals and signs will be provided in compliance with the condition.
9. Street lighting will be provided in compliance with the condition.
10. Roads will be designed in compliance with the condition.
11. Infrastructure will be bonded in compliance with the condition.
12. It is acknowledged that the City will not provide maintenance until release of the bond.
13. It is acknowledged that, at the time of development, the City will assess its capacity to deliver adequate municipal services.
14. Prior to and at the time of annexation almost 10 years ago, it was assumed that a functional vehicular Relief Road would be built within the next several years. The route envisioned to be constructed at that time would have branched off from Aris T. Allen Boulevard near the headwaters of Church Creek, heading in a southeasterly direction and continuing generally parallel to Forest Drive and south of the existing Newtowne 20 neighborhood, bisecting the property in the vicinity of the proposed wildlife corridor and conservation easement. During subsequent years, the City's planning vision was further refined and, as illustrated in its 2009 Comprehensive Plan, it was recognized that not only was a vehicular Relief Road questionable because of its cost and adequate return for the City's investment in terms of actual traffic relief, but it was acknowledged that constructing a vehicular Relief Road would implicate important natural resources in the area. Accordingly, and aimed at satisfaction of this condition of the annexation, it was directed by DPZ that the property owner provide an easement for the Relief Road concept and further that the developer make an equitable contribution toward the extension and connection of Skipper Drive, a public right-of-way, to and across the property as an "East/West Road" through Crystal Spring's Village Center and main retail area in order to create road network redundancy and traffic relief along the Forest Drive corridor.
15. R-12-05 Revised was adopted by the City Council on November 28, 2005. Since that time several road improvements have been constructed along the Forest Drive corridor, including lane widening from two to three lanes in each

direction from Bywater Road to Hilltop Lane and the addition of dual left-turn lanes onto Hilltop Lane. Anne Arundel County is also in the process of installing an adaptive signal control system along the Forest Drive corridor, which upgrade when finalized is expected to further improve traffic flow. Accordingly, given the projects that have been completed over the 9 years since the City Council adopted the annexation resolution, the Planning Director and the Planning Commission can determine this condition to have been satisfied.

16. Bike and pedestrian connections will be provided in compliance with the condition.
17. Vehicular and pedestrian connections will be provided in compliance with the condition.
18. It is acknowledged that during the development phase DPZ may work with the Department of Recreation & Parks regarding analysis of recreational facilities.
19. A conservation easement of the required size and in the required general vicinity is part of the Crystal Spring plan. Regarding the comment above that the “the Katherine Properties, Crystal Spring Development Concept...labeled as Exhibit 1, October 6, 2005 (referenced in Condition 19 of R-12-05 Revised), was relied upon throughout the entire annexation process as the applicant’s intension for development,” the applicant disagrees. R-12-05 includes no condition regarding intentions for development, nor does it tie future development to any concept plan or mix of uses, which would arguably have been illegal. The Planning Commission’s Findings on R-12-05 dated October 20, 2005, considered a fiscal impact analysis of 669 dwellings on the property and confirmed that “this is a theoretical build-out scenario and does not imply any commitment on the City’s part to approval any particular development project.” The Department of Planning & Zoning, in its August 29, 2005 memorandum to the Planning Commission regarding R-12-05, likewise acknowledged that “[n]o plans for the development of the property have been submitted to the City to date.” The graphic labeled Exhibit 1 was not offered by the annexation petitioner throughout the annexation process as an intended development layout, and it was used by the Council in R-12-05 only to fix the location of the future conservation easement. Accordingly, the project plan is in compliance with this condition.
20. It is acknowledged that subdivision of Parcel 246 shall explore public access to the water. It should be noted that Parcel 246 is not included in the Crystal Spring project.
21. It is acknowledged that, at the time of development, the City will assess the adequacy of public facilities. It should be noted that, subsequent to this condition, the City adopted adequacy of public facilities laws against which the project will be evaluated.
22. It is acknowledged that the conditions are applicable to owners, developers, successors, and assigns.

24. As the Crystal Spring development proposal moves from Forest Conservation Act review into Planning Development, Subdivision and Site Design review; please be mindful of the comprehensive review criteria and standards. Site Design includes criteria that require a site

plan to, "achieve a maximum compatibility," and, "minimal modification of existing natural geological and topographic features." The Site Design Standards, Zoning Code Sections 21.62.010 to 21.62.190, provide a specific list of design standards relating to every aspect of new development. These standards include, among others: building bulk and scale, architectural character, tree preservation, buffer restrictions, open space design, archaeological protection, preservation of natural drainage patterns and wetlands, erosion and watershed protection, traffic impacts, street and parking design, pedestrian and bicycle circulation, and utility services.

All of the review criteria and accompanying standards should be taken into consideration with the conceptual site design as part of the Preliminary Forest Conservation Plan.

Response: Acknowledged.



410-260-2202

ANNAPOLIS FIRE DEPARTMENT
Office of the Fire Marshal

145 Gorman Street, 3^d Floor
ANNAPOLIS, MARYLAND 1401

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See Next Page

Ms. Maria Broadbent, Director
Department of Neighborhoods and Environmental Programs
145 Gorman Street, 3'd Floor
Annapolis, MD 21401

10 July 2014

Re: Crystal Springs FCP2013-001

Ms. Broadbent:

Thank you for the opportunity to review the latest revised site plan for the Crystal Spring development project. It should be noted that as the project evolves, and continued revisions are submitted, that changes to site layout could result in certain review processes being started anew. In an effort to expedite these processes and the project in totality, we urge the applicants to consider comments of all City of Annapolis agencies and fuse the comments when revising the site plan. Several of the comments offered by Battalion Chief Menassa, in his memo to you dated 19 June 2013, have not yet been addressed by the applicant, and are echoed in this document. However, in fairness, the project is most likely not yet at a point to submit some of the specific detail which the Fire Department has requested. It is just the intent to remind the applicant to fuse and meld the comments, as to not delay their project with additional reviews and revisions.

In preliminary review of the revised Forest Conservation Plan, received in the Office of the Fire Marshal, on 25 June 2014:

1) The codes which the City of Annapolis has adopted and enforces can be found in Title 17 of the City of Annapolis Code of Ordinances. As related to fire and life safety, The City of Annapolis has adopted as referenced, amended, and promulgated by the State Fire Prevention Commission, *NFPA I – Uniform Fire Code*, and *NFPA I 01 -Life Safety Code*.

2) We note the inclusion of storm ponds and the desire to keep certain forest areas intact. The building code contains provisions for increasing the allowable building area based upon open perimeter. Trees, ponds, or other storm water management mechanism, which may inhibit firefighting operations will not be considered open spaces in the area around the perimeter of the buildings. Section 506 of the IBC spells out the open space calculations which we will follow.

Response: Noted, however, the allowable building area calculated under this Special Mixed Planned Development framework does not have any relation to the amount of open space shown on the site plan. Further, the proposed density is significantly below the maximum that could be allowed.



ANNAPOLIS FIRE DEPARTMENT

Office of the Fire Marshal

145 Gorman Street, 3rd Floor
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3) Plans and specifications for fire hydrant systems shall be submitted to the Fire Department for review and approval, prior to construction.

Response: Agreed. Hydrants shall be shown on the Planned Development Application plans.

4) Prior to the delivery of combustible materials and the start of any building construction, the water supply for fire protection shall be acceptable to the AHJ and shall be available for use.

Response: Agreed.

5) The number and type of fire hydrants and connections to other approved water supplies shall be capable of delivering the required fire flow and shall be provided at approved locations.

Response: Agreed. These elements will be shown at the appropriate time.

6) A clear space of three feet (3') shall be maintained around the circumference of fire hydrants except as otherwise noted or approved.

Response: Noted.

7) Plans for fire apparatus access roads shall be submitted to the Fire Department for review and approval, prior to construction.

Response: Agreed. All roads will be shown on the Preliminary Forest Conservation Plan. Specifications will be provided with the Planned Development Application.

8) The Fire Department will require access to the site during construction and after occupancy. Key boxes and chain locks are required and supplied through the Knox Rapid Entry System.

Response: Agreed.

9) Approved fire department access roads shall be provided for every facility, building, or portion of a building hereafter constructed or relocated.

Response: Agreed.

10) Fire department access roads shall consist of roadways, fire lanes, parking lot lanes, or a combination thereof. Road names shall be provided on permanent noncombustible signs and names shall be phonetically distinct.

Response: Noted.

11) A fire department access road shall extend to within fifty feet (50') of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. Where a one- or two-family dwelling, or townhouse, is protected with an approved automatic sprinkler system that is installed in accordance with NFPA 13D or NFPA 13R, as applicable, the distance shall be permitted to be increased to one hundred fifty feet (150').

Response: Noted.

12) Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than one hundred fifty feet (150') from the fire department access roads as measured by an approved route around the exterior of the building or facility. This distance may be increased to four hundred fifty feet (450') where NFPA 13, NFPA 13D, or NFPA 13R sprinkler systems are provided as appropriate.

Response: Noted.

13) Fire department access roads shall have an unobstructed width of not less than twenty feet (20') and a vertical clearance of not less than thirteen feet six inches (13' 6").

Response: Noted.

14) Dead end fire department access roads in excess of one hundred fifty feet (150') in length shall be provided with approved provisions for the fire apparatus to turn around.

Response: Noted.

15) Bridges shall be designed in accordance with nationally recognized standards and bridges shall be designed with a live load sufficient to carry the imposed loads of fire apparatus.

Response: There is no longer a bridge spanning the intermittent drainage way. Where the rebuilt Crystal Spring Farm road crosses the intermittent drainage way, culverts and possibly a weir will be constructed at grade and will be designed to carry the load of all fire apparatus.

16) The developer shall submit CAD drawings demonstrating that all fire department access roads are compliant with the minimum turning radius of fire apparatus. For turns, the minimum

inside radius is thirty two feet (32'); the minimum outside radius is forty five feet (45').

Response: All fire department access roads with the proper turning radius will be shown on the plan.

17) Where required by the AHJ, approved signs or other approved notices shall be provided and maintained to identify fire department access roads or to prohibit the obstruction thereof or both.

Response: Agreed.

Thank you again for the opportunity to provide input. Should you have any further questions, please feel free to contact us.

Regards,

R. Nathan Powell, IV
Battalion Chief, Planning Section/ Office of the Fire Marshal



Chartered
1708

City of Annapolis
DEPARTMENT OF PLANNING AND ZONING

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JON ARASON, AICP
DIRECTOR

June 24, 2013

MEMORANDUM

To: Frank Biba, Chief
Environmental Programs

From: E. Thomas Smith, Jr., RLA
Chief of Current Planning

Re: Crystal Spring Preliminary FCP

Absent a complete FCP with a Natural Resources Inventory (NRI) to guide, delineate and rank potential priority retention areas, a comprehensive/detailed review is premature. The following bullet points reference many of the items discussed in our **June 12th** meeting:

- The main, six-story, CCRC structure impacts 2 sensitive wetland areas which both appear to drain into the adjacent intermittent stream. Pre & post drainage analysis shall be required to evaluate impacts and thus set the limit of disturbance in and around these wetland areas,

Response: The building has been moved.

- Large stormwater management ponds appear to impact sensitive areas (forested steep slopes), drainage areas adjacent to the intermittent stream and interfere with proper building location (chapel to be used as a vista/focal point),

Response: The ponds no longer exist.

- A tree preservation/buffer area adjacent to Forest Drive is nonexistent. The entire buffer is graded and contains stormwater infrastructure. The site plan still does not include the deceleration lane, etc. widening for Forest Drive. Can not evaluate buffer impacts until said widening is shown. A guideline for a minimum preservation, buffer width is 100 ft.,

Response: This has been corrected.

- I question the specimen tree and forest preservation within the central open/green space,

The graphics do not make sense; what is being retained within the narrow graphic yet the LOD is far beyond the narrow graphic, A detailed individual tree inventory should be required for this area. Grading within this area should be designed to the half-foot contour,

Response: This has been corrected.

- Submerged-gravel wetlands appear to conflict with urban plaza areas and are proposed on the rooftop of the main CCRC building parking garage. Please relocate these BMP's to proper infiltration areas or utilize a more structured system in these areas,

Response: This has been corrected.

- Submerged gravel wetlands encroach into the 100 ft. vernal pool, wetland buffer. These devices appear to capture runoff from both the adjacent street and parking lot. I question the impacts of water volume, pollutants and water temperature on amphibian habitat,

Response: This has been corrected.

- Within the comprehensive Watershed Analysis, each wetland area and natural drainage area shall be delineated for pre and post construction impacts.

. Both seasonably high water table and perched surface water should be included and evaluated for impacts. The existing wetlands and drainage areas should be considered within the highest priority ranking for preservation,

Response: This is addressed in the updated GreenVest analysis.

- The CCRC apartments in the southwest corner of the property encroach upon the main drainage flow and the natural outfall point for the site. This area was also delineated with high K-factor soils. The private soils report that was performed early on should be utilized in the priority ranking,

Response: This has been corrected.

- Sheet 7 of 7, May 2013 plan takes significant liberties within the rendering of undisturbed area--either is proposed for clearing or is currently cleared. Further, this site plan does not match that that of Sheets 3 and 4,

Response: This has been corrected.

- Engineering items such as 880 foot long retaining walls, averaging 4' to 10' in height, should be eliminated. Grading, including for gravity-flow sewers, shall be held as close to existing grade as possible, especially along the proposed forest edge and the central green space,

Response: This has been corrected.

- There are numerous design elements that required modification, such as the relocation of the bypass road (Skipper Drive extended) to align with Gemini Drive, which P&Z will provide comment as the FCP is detailed,

Response: This has been addressed in an above comment.

- The submission appears to be incomplete as per 5-1605 of State Natural Resources Article. Priority retention and protection is not followed per 5-1607(c),

Response: This has been addressed.

- Priority ranking of the site's most sensitive areas to she's least sensitive areas

shall be delineated and thus used as a guide for preservation areas versus developable areas,

Response: This has been addressed.

- Once the application is complete and the preliminary, site plan adjusted per the FCA, *Annapolis Comprehensive Plan*, urban tree canopy goals (included mitigation), can the application be evaluated for justification in clearing priority forest and for requested specimen tree variances,

Response: This has been addressed.

- I suggest that the applicant submit the NRI, with the various wetland analyses, and with the priority rankings for review prior to amending the site plan. Once the ranking of priority preservation areas is properly delineated, then site planning should be designed accordingly to retain these areas.

Response: This has been addressed.

{Hyatt Files/E7734/0034/00393901-4}

DNEP, P&Z and Fire
June 28, 2013
Comments



City of Annapolis

**DEPARTMENT OF NEIGHBORHOOD & ENVIRONMENTAL
PROGRAMS**

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Chartered 1708

June 28, 2013

Alan J. Hyatt, Esq.
Hyatt & Weber, P. A.
Severn Bank Building
200 Westgate Circle, Suite 500
Annapolis, Maryland 21401

RE: Crystal Spring Preliminary Forest Conservation Plan

Dear Mr. Hyatt,

Enclosed are comments regarding the Preliminary Forest Conservation Plan for Crystal Spring, received May 28, 2013, from the Department of Neighborhood and Environmental Programs, the Department of Planning and Zoning, and the Fire Department. Given the size and complexity of the project, the review comments are extensive. Please contact me with any questions or comments.

Sincerely,


Frank Biba, AICP, LEED AP
Chief, Environmental Programs
Dept. of Neighborhood and Environmental Programs
410 263-7946
fjb@annapolis.gov

cc: Mike Mallinoff
Karen Hardwick
Maria Broadbent
Jon Arason
James Eagan
Marshall Breines



City of Annapolis

DEPARTMENT OF NEIGHBORHOOD & ENVIRONMENTAL
PROGRAMS

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Chartered 1704

Crystal Spring Preliminary Forest Conservation Plan

1. The City of Annapolis adopted by reference Natural Resources Article Title 5 Subtitle 16 and refers to this regulation as the primary reference when reviewing development proposals for which the Forest Conservation Act applies. COMAR Title 08 Subtitle 19 implements the provisions of the Natural Resources Article Sec.5-1601-1612: Chapter 01 enumerates general provisions; Chapter 02 defines State review and approval of a local program; Chapter 03 is the model forest conservation ordinance; Chapter 04 is the State forest conservation program. COMAR is referred to as a secondary reference, with the understanding that Chapter 03, model forest conservation ordinance, has not yet been incorporated into City regulations. The State Forest Conservation Manual, which is without the force of law, is referred to for guidance where necessary.
2. Total tract area is 111 acres. Developer needs to demonstrate that there will be at least 50% canopy coverage (55.5 a) by the year 2036. The narrative on Sheet 6 under *Tree Canopy* states that the tree canopy coverage will be 56.7 acres by 2036 with no accompanying indication of how that will be attained.
3. Developer must provide hydrogeology of wetlands to be retained to show their continued viability as wetlands.
4. MDE letter of May 30, 2012 from Judy Broersma to McCarthy and Associates references a submittal dated April 9, 2012. Please provide a copy to the City for review along with all associated wetlands documentation from MDE and Army COE.
5. The footprint of the proposed CCRC encroaches into the wetland at the SW corner and does not respect any MDE setback, if applicable, and will certainly alter the hydrology of the wetland to the point where its inviability is assured. In addition, the soils in the area of the wetland may prove to be inappropriate for the proposed foundation support.
6. Priority for retention and protection of on-site resources includes contiguous forest. Regarding the location of the CCRC in a contiguous forest, please show that "reasonable efforts have been made to protect them and the plan cannot be reasonably be altered" (5-1607(c)(1)).
7. Please use the checklist on pages 3-3 and 3-4 of the *State Forest Conservation Technical Manual* (Third Edition, 1997) (*Manual*) to submit a complete preliminary forest conservation plan. Please provide a written justification for any item that is not included and indicate when the item will be submitted.

The following items from the checklist will need to be submitted to constitute a complete preliminary forest conservation plan:

- Environmental features map.
- Location/description of existing forest area
- Priority areas; priority retention areas
- Priority planting areas; specifications/details
- Building restriction lines
- Utility easements, storm water management
- Amended sediment/erosion plan
- Construction sequence
- Demonstration that priority areas cannot be retained
- Planting plan; specifications, site prep, planting schedule w/species, stocking (number, spacing or distribution) size, condition, plant source
- Construction/planting sequence
- Management and monitoring
- Protection
- Reinforcement planting
- Long-term protection; agreement between parties
- Description of allowed activities
- Specifications/details for protection

8. Natural Resources Article §5-1604 (b) (1) states: “The forest stand delineation shall be used during the preliminary review process to determine the most suitable and practical areas for forest conservation.”

The *Manual*, page 2-1, section 2.0 states: “The purpose of a Forest Stand Delineation is to determine the most suitable and practical areas for forest conservation during the preliminary design and review stages of development.”

The May 24, 2013 Crystal Spring preliminary forest conservation plan contains, on sheet 7, a March 2011 site plan. The Crystal Spring forest stand delineation was approved in 2013. Please submit updated sheet.

Therefore, please use all components of the approved FSD including the hydrology analysis, the forest quality analysis, and the natural resources inventory in appendix I, J and K to determine the best areas for retention and protection as per Natural Resources Article §5-1607 (c) and revise the site plan accordingly.

The high priority forest stands and specimen trees shown in the forest quality analysis and the wetlands and buffers/the intermittent stream and buffer/steep slopes shown in the natural resources inventory need to be preserved to the maximum extent possible. Please move development/roads away from these priority areas for retention and protection. Development concentration should be in open space, low and medium quality forest before proposing development in high quality forest.

Please be advised that, based on existing site conditions, a wetland buffer of more than 25' may be required.

Natural Resources Article §5-1607 (c) considers contiguous forest that connects the largest undeveloped or most vegetated tracts of land within and adjacent to the site a priority for retention and protection. Natural Resources Article §5-1607 (d) considers establishing or increasing forested corridors to connect existing forests within or adjacent to the site a priority for afforestation or reforestation. Furthermore, §5-1607 (d) states that forested corridors, where practical, should be a minimum of 300 feet in width to facilitate wildlife movement. Please show the contiguous forest on the preliminary forest conservation plan that is at least 300' wide that may serve as a wildlife corridor where practical.

Please use Natural Resources Article §5-1607 (d) in selecting areas for afforestation, reforestation, and replanting.

9. In determining the critical root zone of trees please use the definition used by the *Manual*: "... For the purpose of this manual, critical root zone is one foot of radial distance for every inch of tree diameter (DBH) measured at 4.5 feet above the ground, with a minimum radius of 8 feet. For specimen trees the critical root zone shall be 1.5 feet for every inch of tree diameter."

The *Manual*, page 3-26, under Critical Root Zone Protection, states: "When 30% or less of a Critical Root Zone in a Forest Retention Area is disturbed by clearing, grading, or construction, the following additional protection measures will be required unless waived by the approving authority." The additional protection measures include root pruning, crown reduction or pruning, watering, aeration, matting, fertilizing, mulching, tree removal by arborist, and other measures as needed. Please include in the FCP specifications for pre-construction stress reduction as well as a five year maintenance and monitoring agreement (as per the *Manual*, page 3-45/46) for trees within 15' of the LOD.

The *Manual*, page 3-27, under Post Construction Measures, states: "When more than 30 percent of the Critical Root Zone is disturbed by grading, clearing or construction, the FCP and Retention Area calculations will require modifications to reflect the disturbances and show that these are no longer acceptable as Forest Retention Areas." The LOD will need to be staked out in the field. The LOD will need to be field verified by City staff and representatives of the developer (licensed arborist, landscape architect, civil engineer, and possibly contractors). Trees within 15' (more if needed) of the LOD will be evaluated based on the type of species and size, the percentage disturbance of the critical root zone, the health of the tree, environmental stresses, and other factors to determine whether the tree will be preserved. Appropriate tree preservation measures will include, but not be limited to, root pruning, crown reduction or pruning, watering, fertilizing, mulching, and tree removal by arborist. The LOD will have to be adjusted on all the plans prior to approval based on the site visit.

The forest conservation worksheet on sheet 2 shows the break even point as 33.72 acres and that 33.80 acres of forest will be retained on site.

Preserved trees within 15' of the LOD will typically be under a lot of stress and quite often will not survive. The preliminary FCP shows that 6.20 acres of the forest conservation areas are within 15' of the LOD. As a rule of thumb 50% of the trees in those areas will not survive. Therefore, an additional 3.10 acres of forest conservation area will need to be preserved in order to meet the break even point. If the development footprint changes, then the additional acreage will be recalculated.

10. Please include the following as part of the maintenance and monitoring agreement: A semi-annual forest conservation area report must be prepared by a qualified professional for 5 years from the date of completion of the development project. The report must contain an overview of the maintenance performed in the previous six months, an overview of the maintenance proposed for the upcoming six months, a work log, and pictures of the condition of the FCEA. The report needs to particularly focus on control of invasive species, preservation of trees within 15' of the LOD, newly planted trees, and solutions to problems that arise in the FCEA. The report must be submitted to the Department of Neighborhood and Environmental Programs and the Planning and Zoning Department.

11. Information pertaining to priority areas for retention and protection, as per the approved Forest Stand Delineation and as per Natural Resources Article §5-1607 (c), has not been sufficiently used to determine the areas for development that minimize the impact on such priority areas. Once this has been done the forest clearing justifications will need to be rewritten and will subsequently be reviewed by City staff.

The forest clearing justifications need to clearly conform with Natural Resources Article §5-1607 (c) and page 3-5/6 of the *Manual*.

Some general comments pertaining to the forest clearing justifications:

- a. Natural Resources Article §5-1607 (c) Priority for retention and protection (1) (ii) states: "Contiguous forest that connects the largest undeveloped or most vegetated tracts of land within and adjacent to the site." Please eliminate the language pertaining to contiguous forest and the *Manual*.
- b. Please use the information in the approved FSD to determine the best areas for preservation and adjust the site plan and forest clearing justifications accordingly.
- c. Voluntary Water quality Improvements to Crab Creek:

Only comments pertaining to the development site will be considered.

- d. Tree Canopy

Section a:

The approved FSD is the primary document that needs to be used to determine the most sensitive areas on the site. Please change the forest clearing justification accordingly.

Please see previous comments pertaining to trees within 15' of the LOD. Please change the forest clearing justification accordingly.

Section b:

The high priority forest stands and specimen trees shown in the forest quality analysis and the wetlands and buffers/the intermittent stream and buffer/steep slopes shown in the natural resources inventory need to be preserved to the maximum extent possible. Please move development/roads away from these priority areas for retention and protection. If any of these areas will be disturbed then justify in detail why they cannot be preserved.

Contiguous forest, as delineated in the approved FSD, needs to be preserved to the maximum extent possible. If contiguous forest will be disturbed then justify in detail why they cannot be preserved.

Section c:

Only comments pertaining to the development site will be considered.

Please use Natural Resources Article §5-1607 (d) in selecting areas for afforestation, reforestation, and replanting and provide detailed information about areas on-site that will be replanted.

12. Sheet 3 uses 1.0' radius per inch dbh in wooded area. Please use the critical root Zone definition in the *Manual* (1.5' radius per dbh for specimen trees). Please provide appropriate preservation areas around all specimen trees that will be preserved
13. Please show all trees (including critical root zones) within 15 ft outside of the LOD, even if on adjacent parcels, that will be impacted by the proposed development.
14. Please show the Natural Resources Inventory as an overlay on the development plans.
15. The forest conservation area in the "Village Green" will need to be staked out in the field to determine if the area can be included in the forest conservation area calculations. The area may be too small for preservation.
16. Please add the appropriate scale to all the submitted plans.
17. All tree protection fencing will need to be 6' high chain link fencing with round metal posts at least every ten feet. Please adjust the tree protection fencing detail accordingly.

18. Please provide more info on the plans regarding all the buildings on site (height, depth). The information will be used to assess the environmental impact of any building on site.

19. On site parking should not exceed the minimum requirements. Please maximize the use of underground parking. Surface parking should not be constructed unless part of a building permit.

20. It is too early in the development review process to consider an FCA Variance Request. Please submit the FCA Variance Request at a later date. Please submit a tree risk assessment form (including pictures) for each specimen tree with any future FCA Variance Request and provide detailed documentation, as required by Natural Resources Article §5-1607 (c) (2), as to why the specimen tree cannot be preserved. City staff will inspect all specimen trees slated for removal. Please identify on the plans and in the field which specimen trees will be removed.

21. Regarding proposed stormwater management:

Please submit concept plans as outlined in the 2000 Maryland Stormwater Design Manual volume I Stormwater Management Criteria in Chapter 5 starting on page 5.10. This includes:

- i. A map of all site resources shown in Table 5.1 on page 5.7, which includes
 - wetlands
 - major waterways
 - floodplains
 - tidal and non-tidal wetlands
 - wetlands of special state concern
 - wetland buffers
 - stream buffers
 - perennial streams
 - forests
 - forest buffers
 - critical areas
 - highly erodible soils
 - enhanced stream buffers
 - topography/slopes
 - springs
 - seeps
 - intermittent streams
 - vegetative cover
 - soils
 - geology
 - existing drainage areas

- ii. Field verification from the project engineer of the natural resource map.
- iii. Proposed limits of clearing and grading
- iv. Location of proposed impervious areas in each drainage area
- v. Location of existing and proposed utilities
- vi. Preliminary estimate of stormwater requirements, with calculations supporting the estimated requirements and how they are being met per drainage area.
- vii. Preliminary location of the ESD practices
- viii. Stable conveyance of stormwater at potential outfall locations.
- iv. A narrative that supports the concept and describes how the design will achieve:
 - Natural resource protection and enhancement
 - Maintenance of natural flow patterns
 - Reduction of impervious area through better site design, alternative surfaces and non-structural practices
 - Integration of erosion and sediment controls into the stormwater strategy
 - Implementation of ESD planning techniques and practices to the maximum extent practicable.

22. Submerged gravel wetlands should be located in areas with hydrologic soil groups of C or D, or in areas where there is a high groundwater table, hard pan, or other confining layer to maintain submerged flow conditions. With the placement of the submerged gravel wetland on the rooftop of the main CCRC building parking garage, there could be potential issues with leaking into the parking garage. Additionally, it would not be a good idea to have the submerged gravel wetlands so close to the CCRC building in that pollutant removal is achieved with biological uptake from algae and bacteria in the filtering media.

23. The City's Bicycle Master Plan shows that a 10 ft shared use path will be required along the frontage of the Crystal Spring site along Forest Drive and Spa Road. This path would provide the continuation of the shared use path along Forest Drive that currently exists from Bywater Road to the intersection with Hilltop Lane.



City of Annapolis

DEPARTMENT OF PLANNING AND ZONING

145 Gorman Street, 3rd Floor, Annapolis, Maryland 21401

Chartered 1708

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JON ARASON, AICP
DIRECTOR

June 24, 2013

MEMORANDUM

To: Frank Biba, Chief
Environmental Programs

From: E. Thomas Smith, Jr., RLA
Chief of Current Planning

Re: Crystal Spring Preliminary FCP

Absent a complete FCP with a Natural Resources Inventory (NRI) to guide, delineate and rank potential priority retention areas, a comprehensive/detailed review is premature. The following bullet points reference many of the items discussed in our June 12th meeting:

- The main, six-story, CCRC structure impacts 2 sensitive wetland areas which both appear to drain into the adjacent intermittent stream. Pre & post drainage analysis shall be required to evaluate impacts and thus set the limit of disturbance in and around these wetland areas,
- Large stormwater management ponds appear to impact sensitive areas (forested steep slopes), drainage areas adjacent to the intermittent stream and interfere with proper building location (chapel to be used as a vista/focal point),
- A tree preservation/buffer area adjacent to Forest Drive is nonexistent. The entire buffer is graded and contains stormwater infrastructure. The site plan still does not include the deceleration lane, etc. widening for Forest Drive. Can not evaluate buffer impacts until said widening is shown. A guideline for a minimum preservation, buffer width is 100 ft.,
- I question the specimen tree and forest preservation within the central open/green space. The graphics do not make sense; what is being retained within the narrow graphic yet the LOD is far beyond the narrow graphic. A detailed individual tree inventory should be required for this area. Grading within this area should be designed to the half-foot contour,
- Submerged gravel wetlands appear to conflict with urban plaza areas and are proposed on the rooftop of the main CCRC building parking garage. Please relocate these BMP's to proper infiltration areas or utilize a more structured system in these areas,
- Submerged gravel wetlands encroach into the 100 ft. vernal pool, wetland buffer. These devices appear to capture runoff from both the adjacent street and parking lot. I question the impacts of water volume, pollutants and water temperature on amphibian habitat,

- Within the comprehensive Watershed Analysis, each wetland area and natural drainage area shall be delineated for pre and post construction impacts. Both seasonably high water table and perched surface water should be included and evaluated for impacts. The existing wetlands and drainage areas should be considered within the highest priority ranking for preservation,
- The CCRC apartments in the southwest corner of the property encroach upon the main drainage flow and the natural outfall point for the site. This area was also delineated with high K-factor soils. The private soils report that was performed early on should be utilized in the priority ranking,
- Sheet 7 of 7, May 2013 plan takes significant liberties within the rendering of undisturbed area—either is proposed for clearing or is currently cleared. Further, this site plan does not match that that of Sheets 3 and 4,
- Engineering items such as 880 foot long retaining walls, averaging 4' to 10' in height, should be eliminated. Grading, including for gravity-flow sewers, shall be held as close to existing grade as possible, especially along the proposed forest edge and the central green space,
- There are numerous design elements that required modification, such as the relocation of the bypass road (Skipper Drive extended) to align with Gemini Drive, which P&Z will provide comment as the FCP is detailed,
- The submission appears to be incomplete as per 5-1605 of State Natural Resources Article. Priority retention and protection is not followed per 5-1607(c),
- Priority ranking of the site's most sensitive areas to site's least sensitive areas shall be delineated and thus used as a guide for preservation areas versus developable areas,
- Once the application is complete and the preliminary site plan adjusted per the FCA, *Annapolis Comprehensive Plan*, urban tree canopy goals (included mitigation), can the application be evaluated for justification in clearing priority forest and for requested specimen tree variances,
- I suggest that the applicant submit the NRI, with the various wetland analyses, and with the priority rankings for review prior to amending the site plan. Once the ranking of priority preservation areas is properly delineated, then site planning should be designed accordingly to retain these areas.



ANNAPOLIS FIRE DEPARTMENT
Fire Marshal's Office

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FAX: 410-260-2237

June 19, 2013

To: Maria Broadbent, Director
Department of Neighborhoods and Environmental Programs

From: John Menassa, Battalion Chief 
Fire Marshal

RE: Crystal Spring

In preliminary review and for attachment to your review comments:

1. We note the inclusion of storm ponds and the desire to keep certain forest areas intact. The building code has provisions for increasing the allowable building area based on open perimeter. Trees and ponds that inhibit firefighting operations will not be considered open space in the area around the perimeter of buildings. Section 506 of the IBC spells out the open space calculations we will follow.
2. Plans and specifications for fire hydrant systems shall be submitted to the fire department for review and approval prior to construction.
3. Prior to the delivery of combustible materials and the start of any building construction, the water supply for fire protection shall be acceptable to the AHJ and shall be available.
4. The number and type of fire hydrants and connections to other approved water supplies shall be capable of delivering the required fire flow and shall be provided at approved locations.
5. A 3 foot clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved.
6. Plans for fire apparatus access roads shall be submitted to the fire department for review and approval prior to construction.
7. The fire department will require access to the site during construction and after occupancy. Key boxes and chain locks are required and supplied through the Knox Rapid Entry System.

Committed to Excellence



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June 19, 2013

Crystal Spring Project page 2.

8. Approved fire department access roads shall be provided for every facility, building or portion of a building hereafter constructed or relocated.
9. Fire department access roads shall consist of roadways, fire lanes, parking lot lanes, or a combination thereof. Road names shall be provided on permanent noncombustible signs and names shall be phonetically distinct.
10. A fire department access road shall extend to within 50 feet of at least one exterior door that can be opened from the outside and that provides access to the interior of the building.
11. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet from fire department access roads as measured by an approved route around the exterior of the building or facility. This distance may be increased to 450 feet where NFPA 13, NFPA 13D or NFPA 13R sprinkler systems are provided as appropriate.
12. Fire department access roads shall have an unobstructed width of not less than 20 feet and a vertical clearance of not less than 13 feet 6 inches.
13. Dead-end fire department access roads in excess of 150 feet in length shall be provided with approved provisions for the fire apparatus to turn around.
14. Bridges shall be designed in accordance with nationally recognized standards and bridges shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.
15. The developer shall submit CAD drawings demonstrating all fire department access roads comply with the minimum turn radius of the fire apparatus. For turns, the minimum inside radius is 32 feet; the minimum outside radius is 45 feet.



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16. Where required by the AHJ, approved signs or other approved notices shall be provided and maintained to identify fire department access roads or to prohibit the obstruction thereof or both.