

**ANCHORAGE
(FORMERLY KNOWN AS THE CIRI PROPERTY)
TAX MAP 11, PARCEL 609
INDIAN HEAD, MARYLAND**

**PRELIMINARY FOREST CONSERVATION PLAN
NARRATIVE
October 21, 2019**

PREPARED FOR:
Elm Street Development
181 Harry S. Truman Parkway, Suite 275
Annapolis, MD 21401

PREPARED BY:
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SITE SUMMARY

General Location & Conditions:

The subject property is located on the north side of MD Route 210, off Dr. Andrew's Way, in Indian Head, MD. It is shown on Charles County Tax Map 11 as Parcel 609. The property consists of 19.61 acres, and it is zoned TCMX (Town Center – Mixed Use). It is bounded to the north by the residential housing area of the Naval Surface Warfare Center, and to the south by MD Route 210. The Riverwatch Commons neighborhood and a public utility site (water tower) serving the Town of Indian Head are adjacent to the east. The Villages of Potomac development is adjacent to the southwest. The property is proposed for the development of 160 townhomes.

Site Topography

Topography shown on the plan is (2') contour interval based on aerial topography supplemented with field run topography and GIS data files from Charles County. From Dr. Andrew's Way, the site is entered on Diffenbach Road, an old road which runs across the entire property, from Dr. Andrew's Way to the Town's water tower site. A slopes analysis reveals that the site is generally flat along Diffenbach Rd. and through the central portion of the site. Steep slopes (>15%) occur in two areas of the site – on hillsides adjacent to the perennial stream channel that runs across the northern section of the property, and on hillsides adjacent to the smaller drainage channel running along the southern boundary and MD Route 210.

Environmental Features

This property is located within the Middle Potomac River watershed. There is no 100 Year Floodplain on the site, per FEMA FIRM Panel # 24017C0131D. The subject property contains four soil types as identified by the NRCS Web Soil Survey, and the layout and disposition of the soils are shown on the FSD plan. Three type "C" soils and one type "A" soil are found on the property, and a Table describing the hydric rating and 'k' factors (erodibility) for those soils has been provided on the FSD plan. A copy of the FEMA panel and the NRCS soils report may be found in the Appendices section of this report. Streams and non-tidal wetlands as shown on the FSD plan were field delineated by Bray Hill, LLC in March of 2019 and field located by Soltesz, Inc. in May 2019. Wetland and stream buffers have been shown in accordance with the requirements of the MD Dept. of the Environment and Section 2.51 of the Town of Indian Head Forest Conservation Ordinance.

General Forest Cover

The majority of the site (17.54 acres) is wooded, consisting of an open woodland mix of hardwood and softwood forest species growing in the higher, flatter areas of the site, and dense thickets of lowland canopy and understory species near the perennial stream and its adjacent wetlands. The woodland is generally in fair to good condition, with upland

and lowland species associations and stands as dictated by the topography and soils.

Structures

There are no existing structures on Parcel 609. Any remnants of pavement or curbing associated with Diffenbach Rd. will be removed during development.

Other

A letter of inquiry was sent to the Maryland Department of Natural Resources Wildlife and Heritage Service in October 2016, requesting any documented information pertaining to the presence of rare, threatened, or endangered (RTE) species on the site. A reply from DNR was received in November 2016, which verified that there is no documented presence of any RTE on the site. A copy of that correspondence may be found in the Appendices section of this report.

FOREST STAND DELINEATION

This FSD was performed in accordance with the current Town of Indian Head Forest Conservation Ordinance (effective date 7/22/12) and the State Forest Conservation Technical Manual (Third Edition, 1997). On-site forest coverage was determined using aerial photographs and field investigation. Seven forest stand sampling points were prepared in a 1/10 sampling basis. Forest structure data was collected on a 1/100 sampling basis.

The base plan was created and overlaid with identified environmental and man-made features including existing forest cover, existing utility structures, topography, and soil types. Forest sample points were preliminarily located on the base plan and then adjusted based on the actual site sampling investigation. The sampling intensity was prepared to meet the required 67% confidence level, as defined by the State Forest Conservation Manual.

Forest site investigation and field sampling were performed in June of 2019. The centers of the 7 sampling points have been identified in the field by double strands of (36") long pink flagging, labeled with the sample point number in black marker. The sample point flags were generally hung at eye-level from small under-story trees.

The Forest Stand Delineation Plan and Report were submitted to the Town of Indian Head on 8/7/19 and are currently under review. As stated in that report, the subject site is characterized by 2 stands, as summarized below:

Stand A (12.16 acres)

Stand A is a mature upland forest, characterized by a mix of hardwood species located in the flatter central area of the site, and it includes most of the forest area on the property. The dominant tree species found were White Oak, Red Oak, and Sweet Gum. The average size class for the dominant species in Stand A is within the (12-19") dbh range. There has been a substantial amount of storm damage to the Stand, and many large trees (>30" dbh) have fallen. In these areas of disturbance, the canopy has been broken and opened up enough to allow the growth of invasive species. The average basal area for the 4 study points in Stand A is 70 sf/ac. Average canopy closure was 85%. The common understory species found were young Sweet Gums, Dogwood, and American Holly. Understory coverage averaged 65%. Herbaceous species present included Virginia Creeper, Blackberries, and Greenbrier. Herbaceous cover averaged 50%. Invasive exotic species identified in the Stand included Japanese Stilt Grass and Japanese Honeysuckle. One standing dead tree greater than 6" in diameter was counted within the Stand.

Stand A was given a "fair" overall quality rating, and was determined to have a low to moderate retention value, due to the damaged condition of many of the trees, and the lack of environmentally sensitive features within the Stand.

Stand B (5.38 acres)

Stand B is a mature lowland forest, located in areas of the site that are in proximity to perennial streams and non-tidal wetlands. The dominant species found were Red Maples, Sycamores, and Yellow Poplars. The average size class for the dominant species is within the (12”–19”) dbh range. The average basal area for the 3 study points in Stand B is 67 sf/ac. Canopy closure averaged 87%. The common understory species found were Paw Paw, Ironwood, and young Red Maples. Understory coverage averaged 82%. Herbaceous cover included Virginia Creeper, assorted ferns, and Ground Ivy. Average herbaceous cover was 72%. Invasive exotic species identified within the Stand included Japanese Stilt Grass, Japanese Honeysuckle, Vinca minor (periwinkle) and Vinca major. No standing dead trees greater than 6” in diameter were noted within Stand B.

Stand B was given an overall quality rating of “good”, with a moderate to high retention value, due to the presence of sensitive environmental features (wetlands, streams, and steep slopes) within the Stand.

Specimen Trees

Twelve Specimen trees having a diameter exceeding 30” dbh were located on the subject property. Eight were found within Stand A, and four were found in Stand B. These trees have been individually flagged and numbered on the site and are described in a Table on the Preliminary Forest Conservation Plan sheet.

The retention value of the Specimen Trees was assessed based on species, location relative to sensitive environmental features, and individual condition. This rating has been shown in the Table on the FSD Plan. As proposed, Specimen Trees 2, 3, 6, 7, and 8 will be preserved in Forest Conservation Retention Easements. These trees have the highest retention value, due to their individual condition and proximity to sensitive environmental features or steep slopes.

PRELIMINARY FOREST CONSERVATION PLAN

This PFCP was prepared in compliance with the Maryland Forest Conservation Act (FCA, 1991), the 1997 MD State Forest Conservation Technical Manual, and the Town of Indian Head, MD Forest Conservation Ordinance. Please refer to the Preliminary Forest Conservation Plan drawing that accompanies this narrative.

The Subject Property has been proposed for development as a residential subdivision consisting of 160 lots for townhome dwellings. The development objectives include on-site forest retention concentrated to the maximum extent possible in those areas identified as “priority forest” on the FSD.

The areas to be placed in protective forest conservation easements are shown on the PFC Plan as FC Easements #1 and 2 (A and B). These easement areas consist of a combination of retention and natural regeneration, preserving 5.79 acres of existing

woodland on the site, and allowing for the natural regeneration of 0.22 acres of forest in areas located on the existing forest edge. Total on-site Forest Conservation equals 6.01 acres. The proposed FC Easements encompass all of the Resource Protection Zone and priority preservation areas on the site. The easements also include and will provide permanent protection for Specimen Trees #2, 3, 6, 7, and 8.

PRELIMINARY FOREST CONSERVATION WORKSHEET

The Forest Conservation Worksheet attached to this report and shown on the PFC plan drawing provides figures for the proposed forest retention and natural regeneration areas. The computations have been based on a mixed-use zoning classification and land use designation. Per the Worksheet, the break-even point is 5.86 acres. As proposed, retention of 5.79 acres of existing forest and 0.22 acres of reforestation (via natural regeneration) in protective easements meets and exceeds the on-site conservation requirement by 0.15 acres, therefore no further plantings are required. The preliminary subdivision development plan has been overlaid on the PFC Plan, demonstrating how the proposed Forest Conservation Easement areas fit with the configuration of the proposed lots, the public street, and the required neighborhood park areas.

FOREST PROTECTION PLAN

Short term: For retention areas within 50' of proposed construction activity

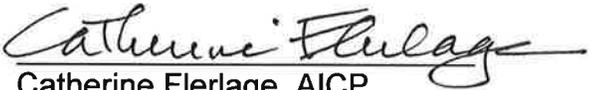
Determine if pre-construction stress-reduction procedures are warranted and implement as needed. Install temporary protective devices as shown in Forest Conservation Technical Manual Figure D-8, which has been provided on the PFC Plan.

Long-term:

The appropriate easement documents and maintenance agreement will be provided for the on-site Retention Areas and Natural Regeneration Areas (Forest Conservation Easements #1, 2A and 2B). Before construction begins, forest protection signage shall be placed along the perimeter of each Easement in accordance with Figure D-4 of the Forest Conservation Technical Manual, which has been provided on the PFC Plan. The five Specimen Trees that will remain on the site will also be identified and posted as shown in Figure D-4.

CERTIFICATION

This report and associated Preliminary Forest Conservation Plan are based on field inspections and a Forest Stand Delineation completed by Catherine Flerlage in June 2019. The provisions and standards of the Town of Indian Head Forest Conservation Ordinance and the State Forest Conservation Technical Manual (Third edition, 1997) were utilized in the preparation of this document and the Preliminary Forest Conservation Plan.



Catherine Flerlage, AICP
Qualified Professional
COMAR 08.19.06.01

BIBLIOGRAPHY

“State Forest Conservation Technical Manual”, Third Edition, 1997, Maryland Department of Natural Resources, Ginger Page Howell and Tod Ericson, editors.

Woody Plants of Maryland by R.G. Brown and M.L. Brown, the University of Maryland Book Center, College Park, MD 1992.

A Field Guide to Eastern Trees by George A. Petrides. Peterson Field Guide Series, Houghton Mifflin Company, Boston, MA 1988.

“Web Soil Survey”, United States Department of Agriculture, Natural Resources Conservation Service, 2008

“Charles County, Maryland Forest Conservation Ordinance”, Department of Planning & Growth Management

APPENDICES

Forest Conservation Worksheet 2.1

Note: Use 0 for all negative numbers that result from the calculations.

Net Tract Area

- A. Total Tract Area A = 19.61 Ac.
- B. Deductions (Critical Area, area restricted by local ordinance or program) B = 0.00 Ac.
- C. Net Tract Area $\text{Net Tract Area} = \text{Total Tract(A)} - \text{Deductions (B)}$ C = 19.61 Ac.

Land Use Category:

- D. Afforestation Threshold (Net Tract Area [C] x 15%) D = 2.94
- E. Conservation Threshold (Net Tract Area [C] x 15%) E = 2.94

Existing Forest Cover

- F. Existing Forest Cover within the Net Tract Area F = 17.54 Ac.
- G. Area of Forest Above Conservation Threshold
If the Existing Forest Cover (F) is greater than the Conservation Threshold (E), then $G = F - E$; Otherwise $G = 0$ G = 14.60 Ac.

Breakeven Point

- H. Breakeven Point (amount of forest that must be retained so that no mitigation is required)
 - 1. If the Area of Forest Above the Conservation Threshold (G) is greater than 0, then $H = (0.2 \times \text{the Area of Forest Above the Conservation Threshold (G)} + \text{the Conservation Threshold (E)})$; H = 5.86 Ac.
 - 2. If the Area of Forest Above the Conservation Threshold (G) is equal to 0, then $H = \text{Existing Forest Cover (F)}$
- I. Forest Clearing Permitted Without Mitigation
 $I = \text{Existing Forest Cover (F)} - \text{Breakeven Point (H)}$ I = 11.68 Ac.

Proposed Forest Clearing

- J. Total Area of Forest to be Cleared (not protected) J = 11.75 Ac.
- K. Total Area of Forest to be Retained (in protective esmt.)
 $K = \text{Existing Forest Cover (F)} - \text{Forest to be Cleared (J)}$ K = 5.79 Ac.

Planting Requirements

If the Total Area of Forest to be Retained (K) is at or above the Breakeven Point (H), no planting is required and no further calculations are necessary (L=0, M=0, N=0, P=0); Otherwise, calculate the planting requirement(s) as follows:

- L. Reforestation for Clearing Above the Conservation Threshold L = 2.94 Ac.
 - (1) If the total area of Forest to be Retained (K) is greater than the Conservation Threshold (E), then $L = \text{the Area of Forest to be Cleared (J)} \times 0.25$;
 - (2) If the Forest to be Retained (K) is less than or equal to the Conservation Threshold (E), then $L = \text{Area of forest Above Conservation Threshold (G)} \times 0.25$
- M. Reforestation for Clearing Below the Conservation Threshold M = 0.00 Ac.
 - (1) If Existing Forest Cover (F) is greater than the Conservation Threshold (E) and the Forest to be Retained (K) is less than or equal to the Conservation Threshold (E), then $M = 2.0 \times (\text{Conservation Threshold (E)} - \text{Forest to be Retained [K]})$
 - (2) If Existing Forest Cover (F) is less than or equal to the Conservation Threshold (E), then $M = 2.0 \times \text{Forest to be Cleared (J)}$.
- N. Credit for Retention Above the Conservation Threshold (E)
If the area of Forest to be Retained (K) is greater than the Conservation Threshold (E), then $N = K - E$. N = 2.85 Ac.
- P. Total Reforestation Required $P = L + M - N$ P = 0.09 Ac.
- Q. Total Afforestation Required
If Existing Forest Cover (F) is less than the Afforestation Threshold (D), then $Q = \text{Afforestation Threshold (D)} - \text{Existing Forest Cover (F)}$ Q = 0.00 Ac.
- R. Total Planting Requirement $R = P + Q$ R = 0.09 Ac.

ADDITIONAL ON-SITE FOREST CONSERVATION VIA NATURAL REGENERATION 0.22 Ac.

Notes: **TOTAL ON-SITE FOREST CONSERVATION = 6.01 ACRES**

" ANCHORAGE "

Figure B-2 Forest Stand Summary Worksheet

Property Name: CRI - TAX MAP 11, P. 609
 Location: RT 210 @ DR. ANDREW'S WAY IN INDIAN HEAD, MD.
(Town, County, ADC Map #, and Grid Coordinates)
 Prepared By: CATHY FLERLAGE Date: 6/17/19

Stand Variable	Stand # <u>A1</u> acres	Stand # <u>B1</u> acres
1. Dominant species/Codominant species	WHITE OAK RED OAK SWEET GUM	RED MAPLE SYCAMORE
2. Successional stage	MATURE UPLAND	MATURE LOWLAND
3. Basal area in s.f. per acre	AVG. = 70 S.F.	AVG. = 67 S.F.
4. Size class of dominant species	12-19" dbh	12-19" dbh
5. Percent of canopy closure	AVG. = 85%	AVG. = 87%
6. Number of tree species per plot	3-5	3-5
7. Common understory species 3' to 20' tall	YOUNG SWEET GUM DOGWOOD AM. HOLLY	PAW PAW IRONWOOD YOUNG MAPLES
8. Percent of understory cover 3' to 20' tall	AVG. = 65%	AVG. = 82%
9. Number of woody plant species 3' to 20' tall	3-5	2-3
10. Common herbaceous species 0' to 3' tall	VA. CREEPER GREENERIER BLACKBERRIES STILT GRASS	VA. CREEPER FERNS STILT GRASS GROUND IVY
11. Percent of herbaceous & woody plant cover 0' to 3' tall	AVG. = 50%	AVG. = 72%
12. List of major invasive plant species & percent of cover	STILT GRASS HONEYSUCKLE (20%)	STILT GRASS PERIWINKLE (20%)
13. Number of standing dead trees 6" dbh or greater	1	0
14. Comments	STUDY POINTS 1, 4, 6, & 7	STUDY POINTS # 2, 3, & 5
Sheet ___ of ___		Source: DNR