

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair

Ren Serey
Executive Director

STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338
www.dnr.state.md.us/criticalarea/

March 25, 2010

Mr. Shawn Krout
Harford County Planning and Zoning
220 South Main Street
Bel Air, Maryland 21014

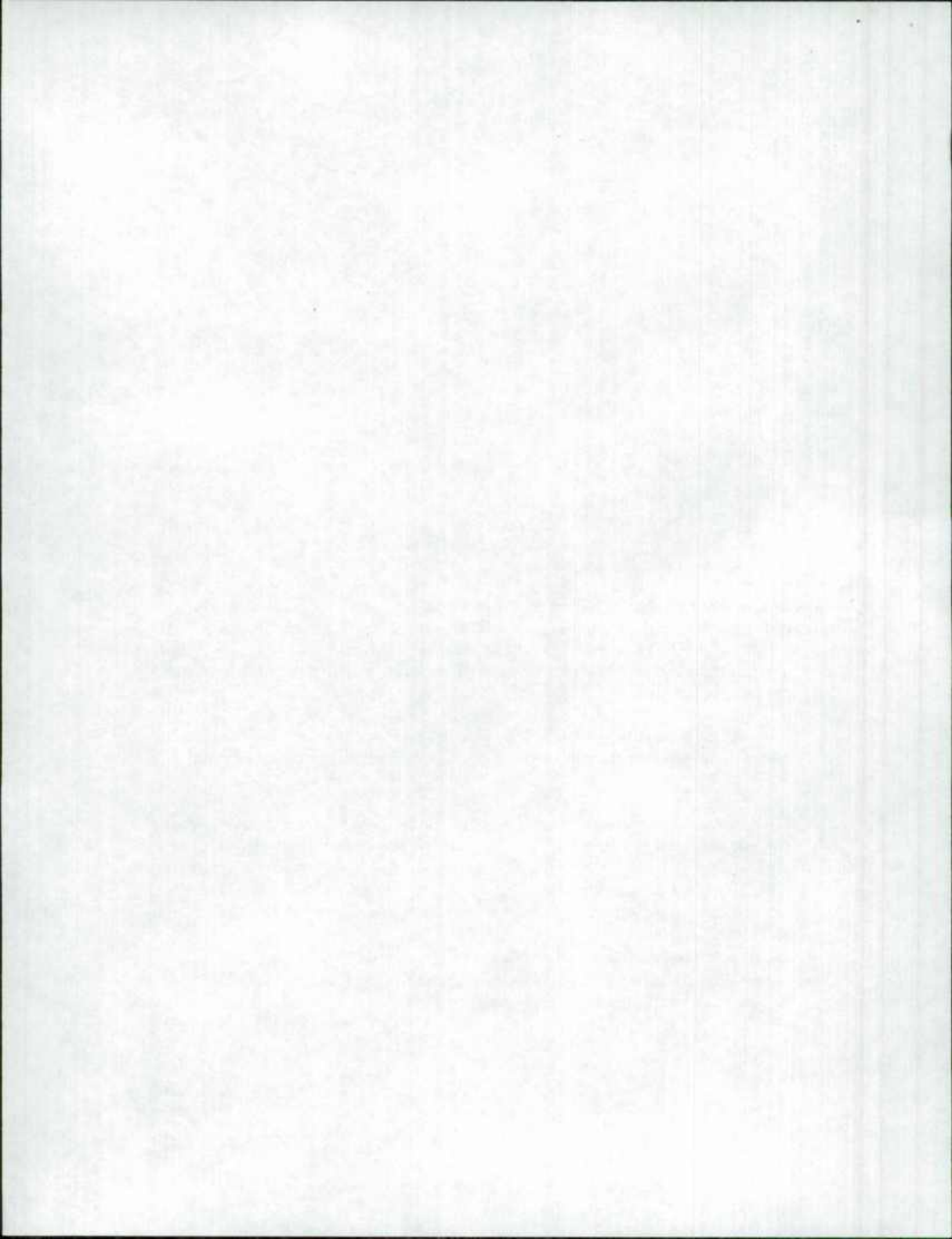
Re: Church Creek Pumping Station
Critical Area Consistency Report

Dear Mr. Krout:

I have received the Consistency Report for the above-referenced project. This office has reviewed this project per the requirements of COMAR 27.02.02 - State and Local Agency Actions Resulting in Development of Local Significance on Private Lands or Lands Owned by Local Jurisdictions. The County proposes to install new gravity sewer lines and remove and rebuild a pumping station.

After reviewing the consistency report and the accompanying site plan, this office agrees that the project is consistent with the Harford County Critical Area Program for the reasons outlined below.

- The portion of the project that will impact the Buffer is permitted since a public utility such as a sewer line may cross the Buffer when no feasible alternative exists.
- The County will provide 2:1 mitigation for the area disturbed in the Buffer, and 1:1 mitigation for clearing outside the Buffer.
- The 10% Pollutant Reduction Requirement is met on this site for the portion of the site in the Intensely Developed Area.
- Appropriate sediment and erosion control will be used during construction.
- The proposed planting plan provides the required 55 individual trees and the 36,645 square feet of mitigation, and the appropriate species.

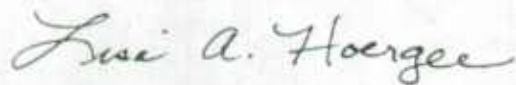


Mr. Krout
March 25, 2010
Page Two

Since the project is consistent with the local program, it will not require formal approval by the Critical Area Commission for the Chesapeake and Atlantic Coastal Bays, notwithstanding any other required resource agency approvals.

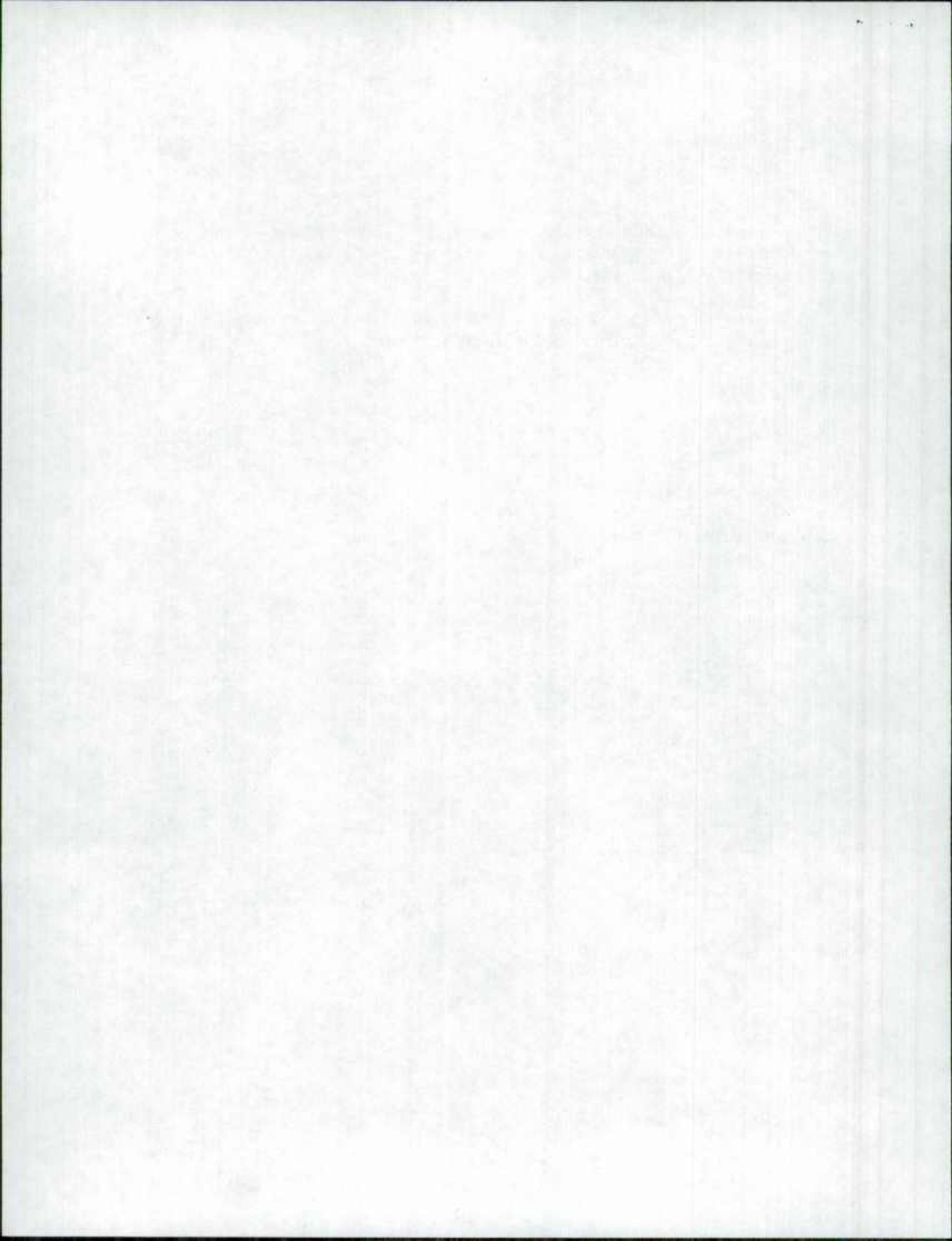
Thank you again for your cooperation and assistance with reviewing this project. If you have any questions, please telephone me at (410) 260-3478.

Sincerely,

A handwritten signature in cursive script that reads "Lisa A. Hoerger".

Lisa A. Hoerger
Regulations Coordinator

cc: Mr. Thomas Blair, MDE
HC 118-08



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March 28, 2008

Ms. Michele Bynum
Harford County Department of Planning and Zoning
220 South Main Street
Bel Air, MD 21014

**Re: Harford County – Mitchell Lane at US Rte 40, Perryman
Church Creek Sewer Pumping Station Redevelopment and Force Main**

Dear Mr. Hilton:

Thank you for forwarding the above-referenced project to this office per the requirements of COMAR 27.02.02 - State and Local Agency Actions Resulting in Development of Local Significance on Private Lands or Lands Owned by Local Jurisdictions. A Consistency Report from was submitted by the County, however, some additional information is needed in before consistency with the County program can be confirmed. The proposed redevelopment of the pumping station is in the IDA (Intensely Developed Area). The force main installation will occur partially in the IDA, RCA (Resource Conservation Area) and LDA (Limited Development Area) of the Critical Area. After reviewing the submitted materials, this office has the following comments.


1. Documentation that the 10% pollution reduction standard will be met is required for the portion within the IDA. Please submit Worksheet A from the 10% Rule manual, with calculations showing how the 10% stormwater pollutant reduction requirement is met. Because the requirement is for a reduction by 10% of the predevelopment phosphorous, a reduction in impervious surface does not automatically establish that the requirement has been met. Worksheet A must include the area that is within IDA of the project parcels or an otherwise designated "project area" that includes all construction activity at a minimum. The pre and post development impervious surface for the IDA alone must be provided for these calculations.
2. Where forest or other natural vegetation is removed in the Critical Area Buffer, mitigation must be provided at a 3:1 ratio. Where forest or other natural vegetation is removed outside the Buffer but in the LDA or RCA, mitigation must be provided at a 1:1 ratio. A recommended standard for mitigation planting is one two-inch-caliper tree and three two-gallon-potted shrubs per 400 square feet of required mitigation. Plantings

should occur at approximately this spacing (i.e. in clusters of one tree and three shrubs per 20 x 20 foot area). The mitigation should be planted on site in unvegetated areas of the Buffer to the extent possible. Only if there is no feasible alternative for planting on site in the Buffer may off site mitigation or fee in lieu be considered. Please submit a planting plan for the mitigation. A planting agreement has been attached to this letter. Please complete the agreement and attach a copy to the mitigation planting plan.

3. A portion of the force main line is on State Highway Administration (SHA) property. SHA has a Memorandum of Understanding (MOU) with the Critical Area Commission that allows projects on State lands to qualify for general approval under the MOU only if the project involves in-kind repair, replacement or removal of existing structures or surfaces within the Buffer. Projects which place new structures or impervious structures within the Buffer do not qualify for general approval. The plans submitted appear to include proposed new riprap or other structure on SHA property at the Gray's Run crossing. Please confirm whether this is the case, and if so, coordinate with SHA to submit for Commission review for this portion of the project. The SHA coordinator for this project should contact me as soon as possible to commence the Commission review process.

Thank you for the opportunity to comment. Once I receive the additional documentation as requested above, I will be able to provide further comments or notice of approval. Please contact me at (410) 260-3479 if you have any questions.

Sincerely,



Marshall Johnson
Natural Resources Planner


cc: Tom Hilton, Harford County Division of Water and Sewer
Steven Schulz, Harford County Division of Water and Sewer
Gary Green, SHA
HG 118-08

Consistency Report for Local Government Projects

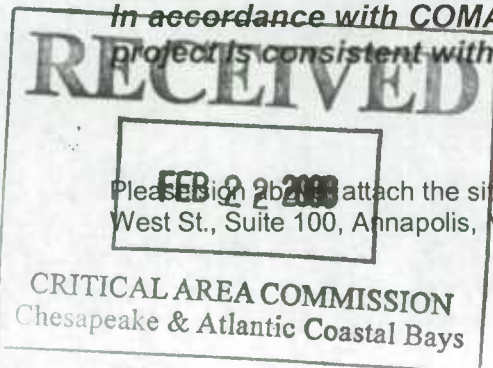
Project Name: Church Creek Pumping Station and Force Main	Jurisdiction: Harford County
Project Description: replace existing Church Creek Pumping Station and install new sanitary sewer force main.	
Local Agency proposing project: Harford County Department of Public Works Contact Name and Phone Number: Thomas Hilton, Chief Engineer 410-638-3300	
Project Location (include street address, tax map and parcel number): U.S. Route 40 Pulaski Highway and Mitchell Lane, Perryman, Maryland	
Critical Area acreage and designation: 3.53± acres total; 0.92 acres RCA; 0.36 acres LDA; 2.25 acres IDA	

Project Data	
Existing forest/woodland/trees: 0.44 acres	% of site: ~12.46%
Proposed clearing: 0.18 acres	% of existing forest: 40.98%
Mitigation to be provided: fee-in-lieu @ 3:1 ratio, or reforestation of offsite area	
Planting location & species (also show on site plan): Undetermined	
Existing impervious surface: 11,580 S.F. total	% of site: ~7%
Proposed new impervious: 9,220 S.F.	
Total impervious surface: net reduction of 2,360 SF % of site: ~1%	
If the % of impervious cover exceeds the permitted amount in the LDA or RCA, the project may need a Conditional Approval from the Critical Area Commission. Please contact your Commission planner for assistance.	
Total Area Disturbed: 3.53±	
Stormwater Management: (If site is in the IDA, the 10% worksheets must be attached. Otherwise, local stormwater requirements must be addressed.) Reduction of existing impervious surfaces	
Has project received local approval of SWM and sediment and erosion control plans? The plans are under review and are expected to be approved in March, 2008.	
Buffer impacts? .58 acres	Is project water dependent? no
If there are Buffer impacts proposed and the project is not water dependent, the project may need a Conditional Approval from the Critical Area Commission. Please contact your Commission planner for assistance.	
<u>Other Habitat Protection Areas:</u>	
Colonial Nesting Waterbird site? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Waterfowl Staging Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Endangered / threatened species? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Forest Interior Dwelling Bird Habitat? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Anadromous Fish Propagation Waters? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Non-tidal Wetland Impacts? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, MDE permit #: revised submittal by FWA: WRA App. #200761808/07-NT-0138	
Tidal Wetland Impacts? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, MDE permit #:	

In accordance with COMAR 27.02.02, we hereby certify that this local agency project is consistent with the requirements of the local Critical Area Program.

 (Signature)

Please sign and attach the site plan to this report and submit to the Critical Area Commission at 1804 West St., Suite 100, Annapolis, MD 21401



RECEIVED
FEB 21 1959
NATIONAL AREA COMMISSION
for the Atlantic Coast, Inc.

Consistency Report for Local Government Projects

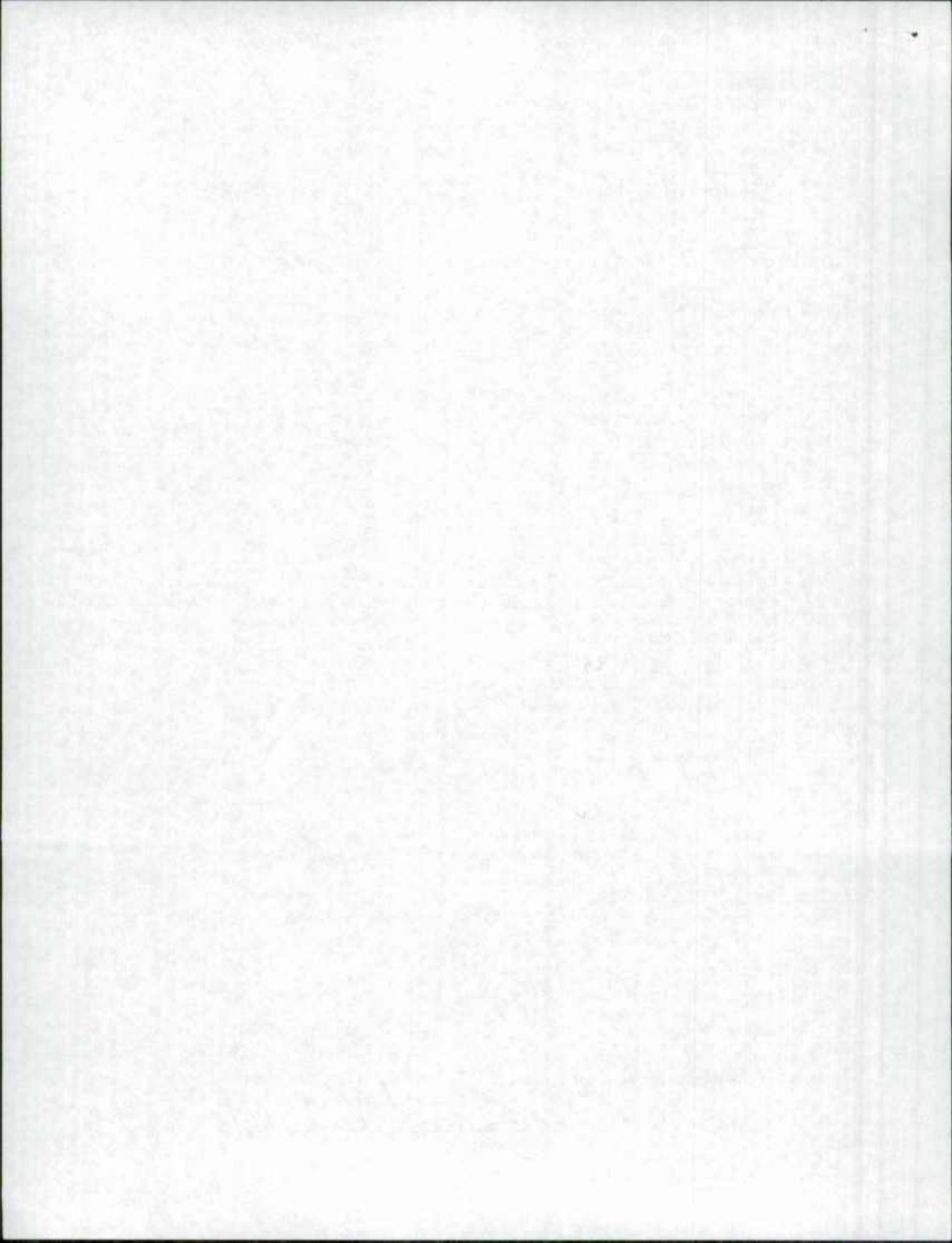
Project Name: Church Creek Pumping Station ✓	Jurisdiction: Harford County ✓
Project Description: To remove the existing house, structures, and pumping station and install upgraded pumping station and gravity sewer lines to the site. ✓	
Local Agency proposing project: Harford County DPW ✓	
Project Location (include street address, tax map and parcel number): Mitchell Lane Tax Map: 58✓ Parcels: 152✓ & 78 & easements	
Critical Area acreage and designation: RCA: 0.57 ac ✓ LDA: 0.00 ac IDA: 1.89 ac Total: 2.46 ac	

Project Data	
Existing forest/woodland/trees: 0.36 ac	% of site: 19%
Proposed clearing: (2,835 sf) 0.06 ac + 30 trees	% of existing forest: 17%
Mitigation to be provided: on-site planting	
Planting location & species (also show on site plan): On-site as shown on plan – replant disturbed areas	
Existing impervious surface: 11,240 sf ✓	% of site: 7%
Proposed new impervious: -1,895 sf ✓	
Total impervious surface: 9,345 sf ✓	% of site: 6%
If the % of impervious cover exceeds the permitted amount in the LDA or RCA, the project may need a Conditional Approval from the Critical Area Commission. Please contact your Commission planner for assistance.	
Total Area Disturbed: (74,919 sf) 1.72 ac ✓	
Stormwater Management: (If site is in the IDA, the 10% worksheets must be attached. Otherwise, local stormwater requirements must be addressed.) ✓	
Attached	
Has project received local approval of SWM and sediment and erosion control plans? Pending ✓	
Buffer impacts? 16,025 sf ✓	Is project water dependent? No ✓
If there are Buffer impacts proposed and the project is not water dependent, the project may need a Conditional Approval from the Critical Area Commission. Please contact your Commission planner for assistance.	
<u>Other Habitat Protection Areas:</u>	
Colonial Nesting Waterbird site? Yes <input type="radio"/> No <input checked="" type="radio"/>	Waterfowl Staging Area? Yes <input type="radio"/> No <input checked="" type="radio"/>
Endangered / threatened species? Yes <input type="radio"/> No <input checked="" type="radio"/>	Forest Interior Dwelling Bird Habitat? Yes <input type="radio"/> No <input checked="" type="radio"/>
Anadromous Fish Propagation Waters? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Non-tidal Wetland Impacts? Yes <input type="radio"/> No <input checked="" type="radio"/>	If yes, MDE permit #: 200761808
Tidal Wetland Impacts? Yes <input checked="" type="radio"/> No <input type="radio"/>	If yes, MDE permit #: 200761808

In accordance with COMAR 27.02.02, we hereby certify that this local agency project is consistent with the requirements of the local Critical Area Program.

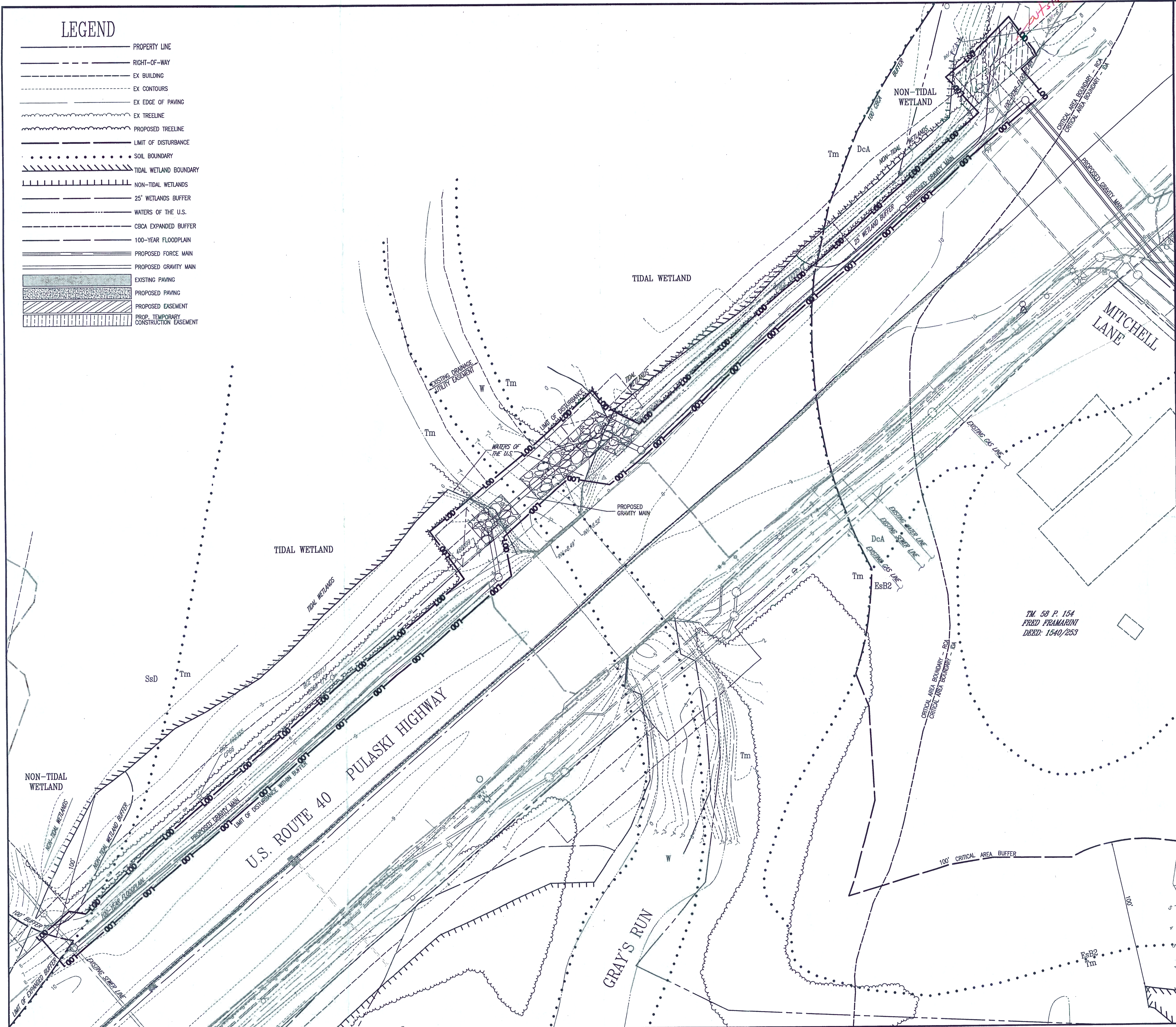
Shawn L. Keat 3/14/10 (Signature)

Please sign above, attach the site plan to this report and submit to the Critical Area Commission at 1804 West St., Suite 100, Annapolis, MD 21401

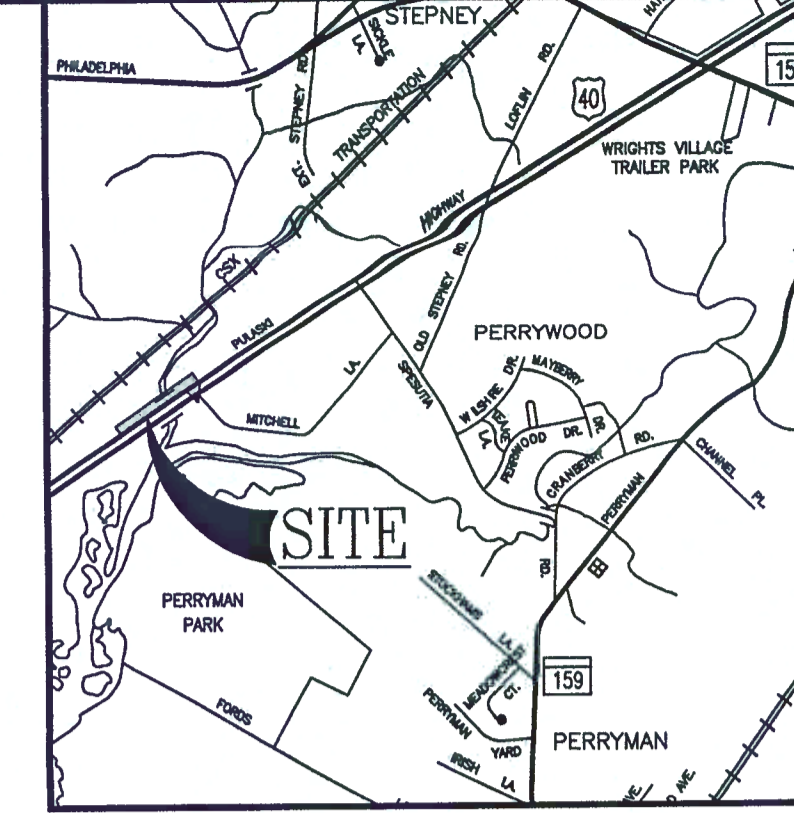


LEGEND

- PROPERTY LINE
- - - RIGHT-OF-WAY
- - - EX BUILDING
- - - EX CONTOURS
- - - EX EDGE OF PAVING
- - - EX TREELINE
- - - PROPOSED TREELINE
- - - LIMIT OF DISTURBANCE
- - - SOIL BOUNDARY
- - - TIDAL WETLAND BOUNDARY
- - - NON-TIDAL WETLANDS
- - - 25' WETLANDS BUFFER
- - - WATERS OF THE U.S.
- - - CBCA EXPANDED BUFFER
- - - 100-YEAR FLOODPLAIN
- - - PROPOSED FORCE MAIN
- - - PROPOSED GRAVITY MAIN
- - - EXISTING PAVING
- - - PROPOSED PAVING
- - - PROPOSED EASEMENT
- - - PROP. TEMPORARY CONSTRUCTION EASEMENT



MATCHLINE A - SEE SHEET 2 of 3



VICINITY MAP
1"=2000'

The project includes building a new pumping station to replace the existing one, which will be removed. A new sanitary sewer line (gravity main) will be installed along Route 40, cross Gray's Run, be directionally drilled beneath Route 40, and connect to the new pumping station. A future sewer force main alignment is shown on the plans, but will be installed at a later date. These plans do not address impacts created by the future installation of the sewer force main.

TOTAL SITE ACERAGE

LOCATION	RCA AREA	LDA AREA	IDA AREA	TOTAL ACERAGE
PARCEL 152			1.21 AC	1.21 AC
PARCEL 78			0.43 AC	0.43 AC
EASEMENTS	0.57 AC	0.00 AC	0.25 AC	0.82 AC
TOTAL	0.57 AC	0.00 AC	1.89 AC	2.46 AC

ROUTE 40 GRAVITY MAIN DEVELOPMENT SUMMARY

PROPOSED CLEARING:

OUTSIDE OF BUFFER:	500 SF ✓
WITHIN BUFFER:	1,760 SF ✓
SHA R/W CLEARING:	22 INDIVIDUAL TREES ✓

BUFFER IMPACTS:

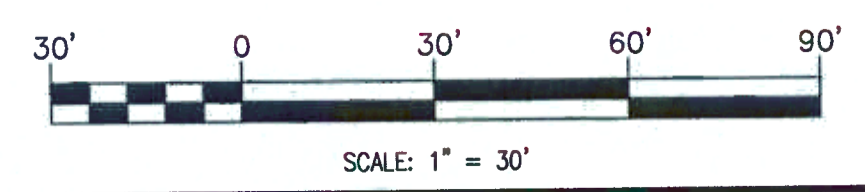
LOD WITHIN BUFFER:	13,565 SF
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MITIGATION REQUIRED:

CLEARING OUTSIDE BUFFER (500 SF @ 1:1):	500 SF ✓
CLEARING WITHIN BUFFER (1,760 SF @ 2:1):	3,520 SF ✓
SHA R/W CLEARING (22 TREES @ 2:1):	44 INDIVIDUAL TREES ✓
BUFFER IMPACT (13,565 SF @ 2:1):	27,130 SF ✓
TOTAL MITIGATION REQUIRED:	31,150 SF + 44 INDIVIDUAL TREES

PLAN TYPE: CA
 PLAN NO.: 10-999
 SERIES NO.: 3
 DATE: 3/15/10
 DAC/DUE:

Handwritten notes:
 13,565 + 2,460 = 16,025 total buffer disturbance
 36,645 total mitigation / 52 individual trees.



P.O. Box 727, 5 South Main Street
 Bel Air Maryland 21014 - 0727
 410-838-7800
 410-893-1243 fax
 www.frederickward.com

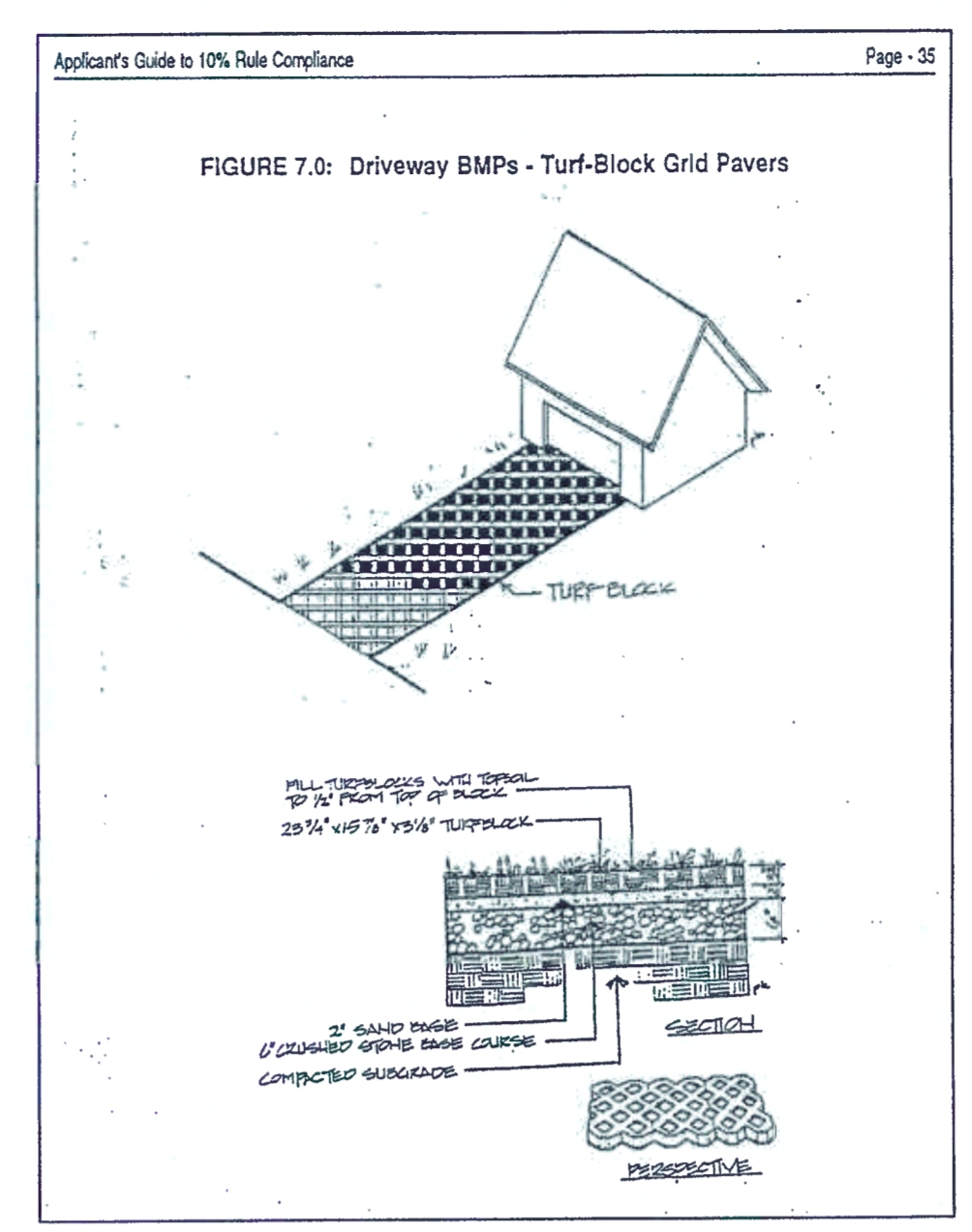
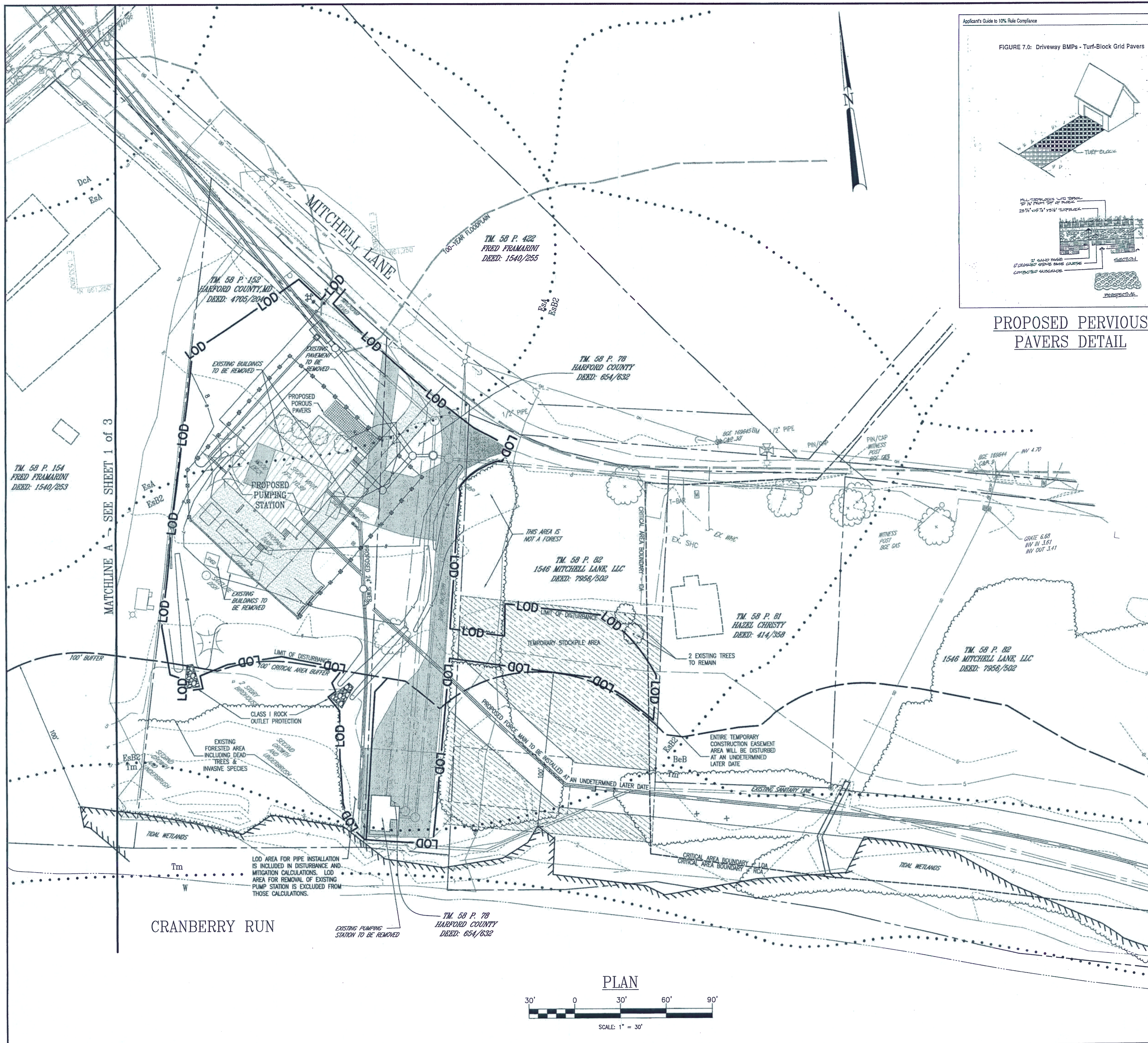


REV	DATE	DESCRIPTION

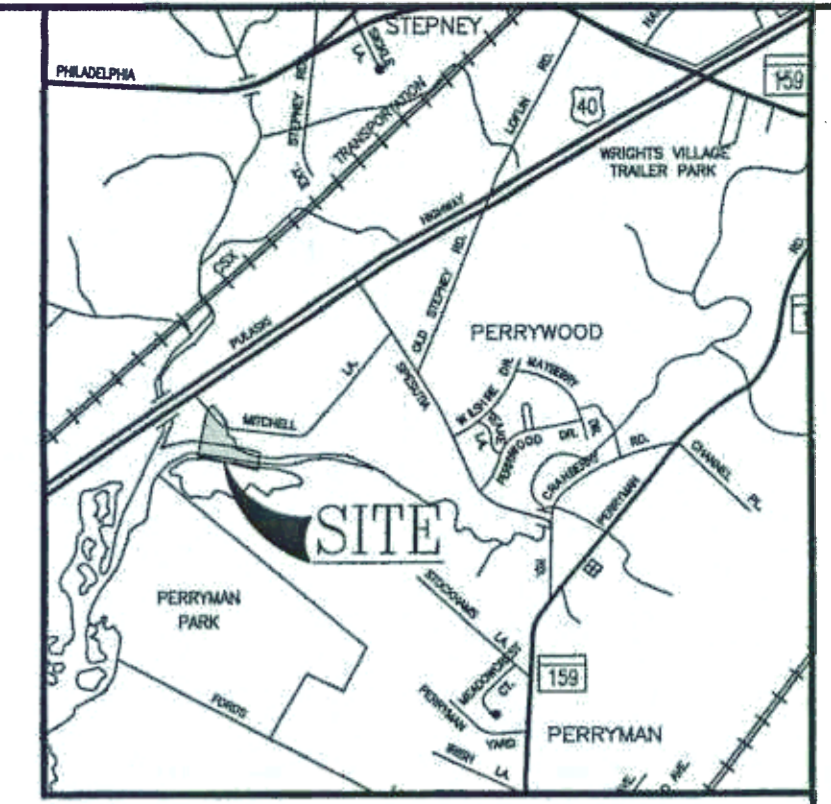


CRITICAL AREA ENVIRONMENTAL FEATURES PLAN
 CHURCH CREEK PUMPING STATION

DATE: 3/15/2010
 SCALE: 1" = 30'
 DESIGNED BY: ACS
 DRAWN BY: JRW
 DRAWING NO.: CA01
 SHEET 1 OF 3
 PWA JOB NUMBER: 2061274.01



PROPOSED PERVIOUS PAVERS DETAIL



VICINITY MAP
1"=2000'

PUMPING STATION DEVELOPMENT SUMMARY

PREMISES ADDRESS: (EXISTING HOUSE)
1565 MITCHELL LANE
ABERDEEN, MD 21001

TAX MAP: 58 PARCEL: 152 DEED: 4705/204 ACREAGE: 1.21 AC
TAX MAP: 58 PARCEL: 78 DEED: 654/632 ACREAGE: 0.43 AC
1.64 AC TOTAL ✓

EXISTING IMPERVIOUS SURFACE: 11,240 SF (7%) ✓
Pumping Station Building: 360 s.f.
Pumping Station Driveway: 6,410 s.f.
House/Sheds: 1,840 s.f.
House Driveway: 2,630 s.f.

PROPOSED IMPERVIOUS SURFACE: 9,345 SF (6%) ✓
Building: 4,190 s.f.
Parking Area: 5,155 s.f.

PROPOSED CLEARING:
WITHIN 100' BUFFER: NONE ✓
OUTSIDE 100' BUFFER: 575 SF + 8 INDIVIDUAL TREES

BUFFER IMPACTS:
LOD WITHIN BUFFER: 2,460 SF - proposed 24" sewer line
(+4,500 SF FOR REMOVAL OF EXISTING IMPERVIOUS SURFACE)

MITIGATION REQUIRED:
CLEARING (575 SF & 8 TREES @ 1:1): 575 SF + 8 INDIVIDUAL TREES
BUFFER IMPACT (2,460 SF @ 2:1): 4,920 SF ✓
TOTAL MITIGATION FOR PUMP STATION: 5,495 SF + 8 INDIVIDUAL TREES ✓

IMPERVIOUS SURFACE TABLE

SURFACE TYPE	EXISTING AREA	PROPOSED AREA	DIFFERENCE
DRIVEWAY	9,040 SQ.FT. (2,320 IN 100' BUFFER)	5,155 SQ.FT.	-3,885 SQ.FT.
BUILDING	2,200 SQ.FT. (1,360 IN 100' BUFFER)	4,190 SQ.FT.	+1,930 SQ.FT.
TOTAL	11,240 SQ.FT. (2,680 IN 100' BUFFER)*	9,345 SQ.FT.	-1,895 SQ.FT.

*2,880 SF OF EXISTING IMPERVIOUS SURFACE TO BE REMOVED (Ex. Pumping Station Asphalt/Building)

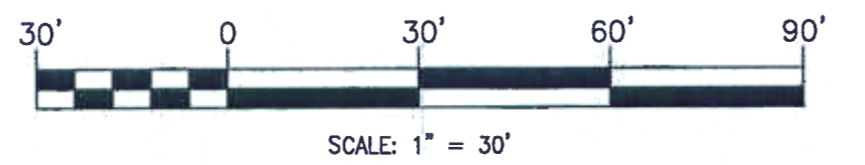
GENERAL NOTES

1. THE ENTIRE PROJECT AREA IS WITHIN THE CHESAPEAKE BAY CRITICAL AREA.
2. FLOODPLAIN FROM FEMA PANEL # 24025C 0277D, DATED 1/7/2007. THE 100-YEAR FLOODPLAIN LINE SHOWN REPRESENTS ZONE AE WITH A BASE FLOOD ELEVATION OF 10.
3. WETLANDS FIELD LOCATED BY FWA ON 11/6/2006, 2/22/2007, 6/7/2007, and 3/9/2009.
4. ALL EXISTING STRUCTURES ON PARCELS 152 AND 78 TO BE REMOVED.
5. THERE IS NO IMPERVIOUS SURFACE PROPOSED WITHIN THE CBCA 100' BUFFER.

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY
- - - EX BUILDING
- - - EX CONTOURS
- - - EX EDGE OF PAVING
- - - EX TREELINE
- - - PROPOSED TREELINE
- LOD — LIMIT OF DISTURBANCE
- SOIL BOUNDARY
- TIDAL WETLANDS
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- PROPOSED FORCE MAIN
- PROPOSED GRAVITY MAIN
- EXISTING PAVING
- PROPOSED PAVING
- PROPOSED PUMPING STATION
- PROP. TEMPORARY CONSTRUCTION EASEMENT

PLAN



P.O. Box 727, 5 South Main Street
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410-898-7900
410-893-1243 fax
www.frederickward.com

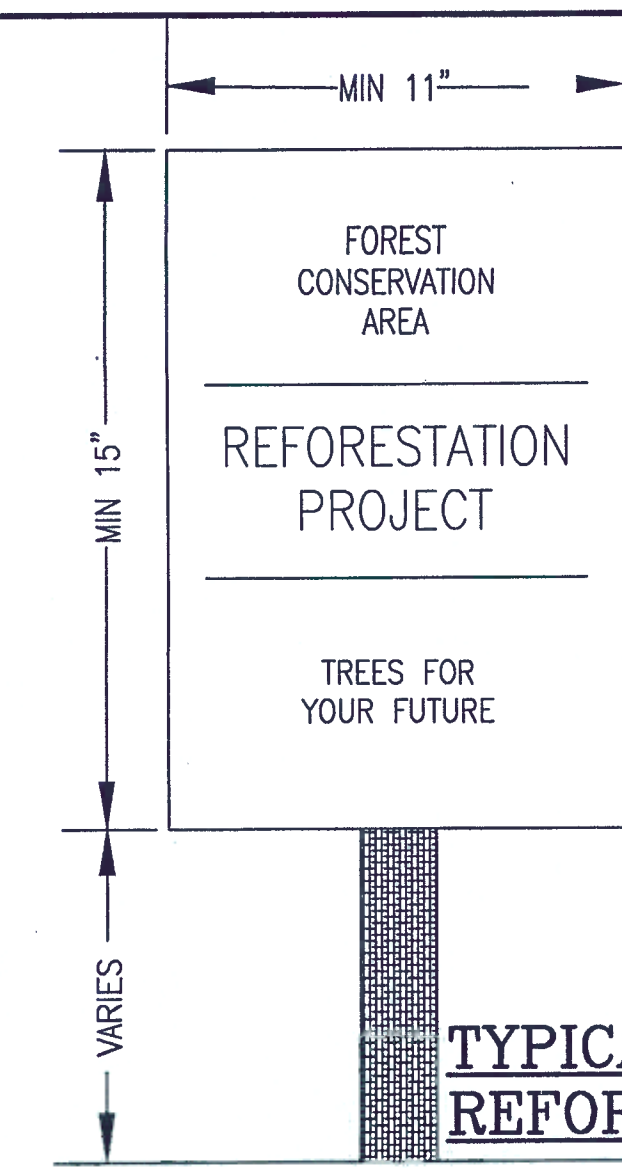
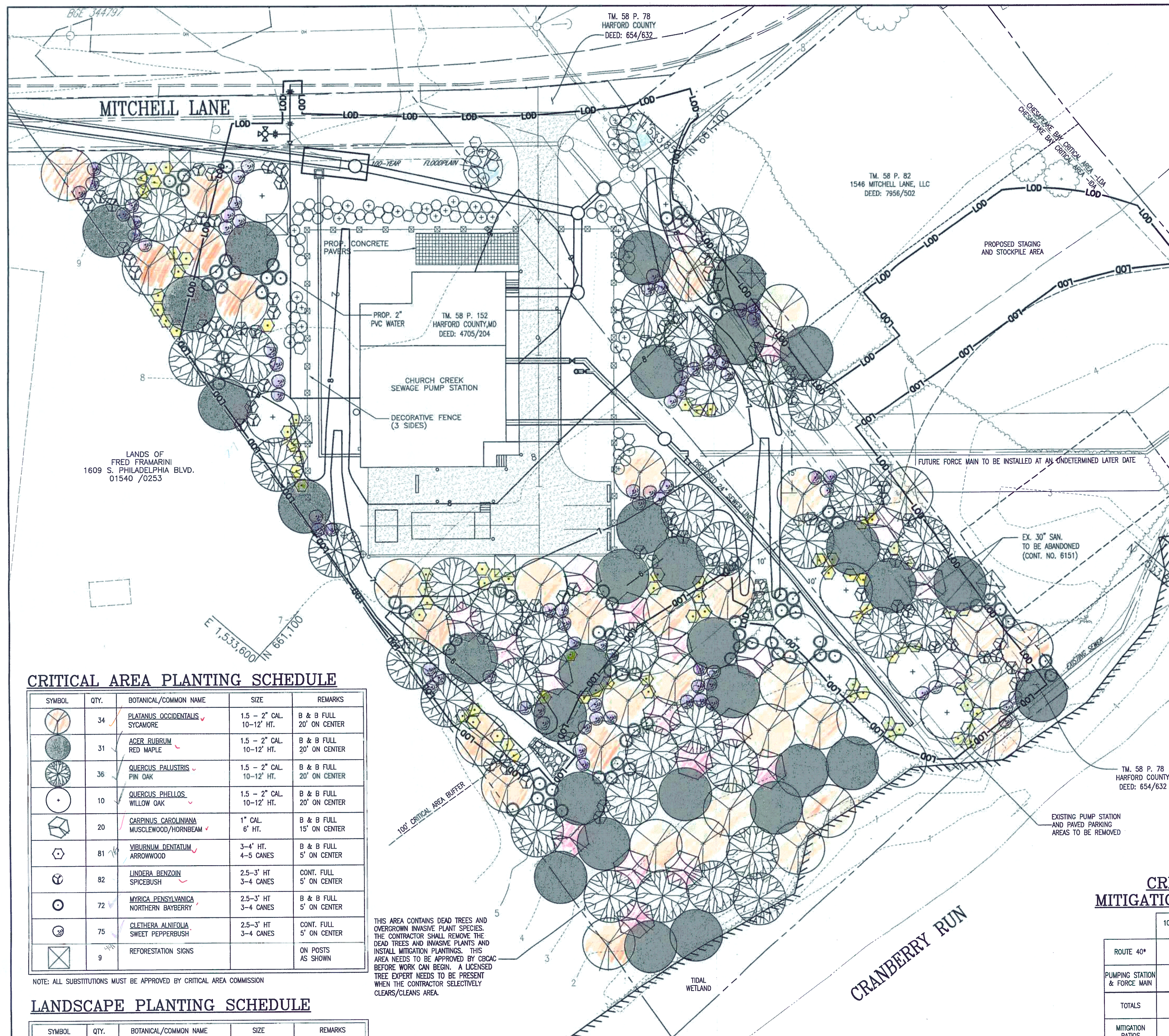
FWA
FREDERICK WARD ASSOCIATES
ARCHITECTS ENGINEERS PLANNERS SURVEYORS

REV	DATE	DESCRIPTION

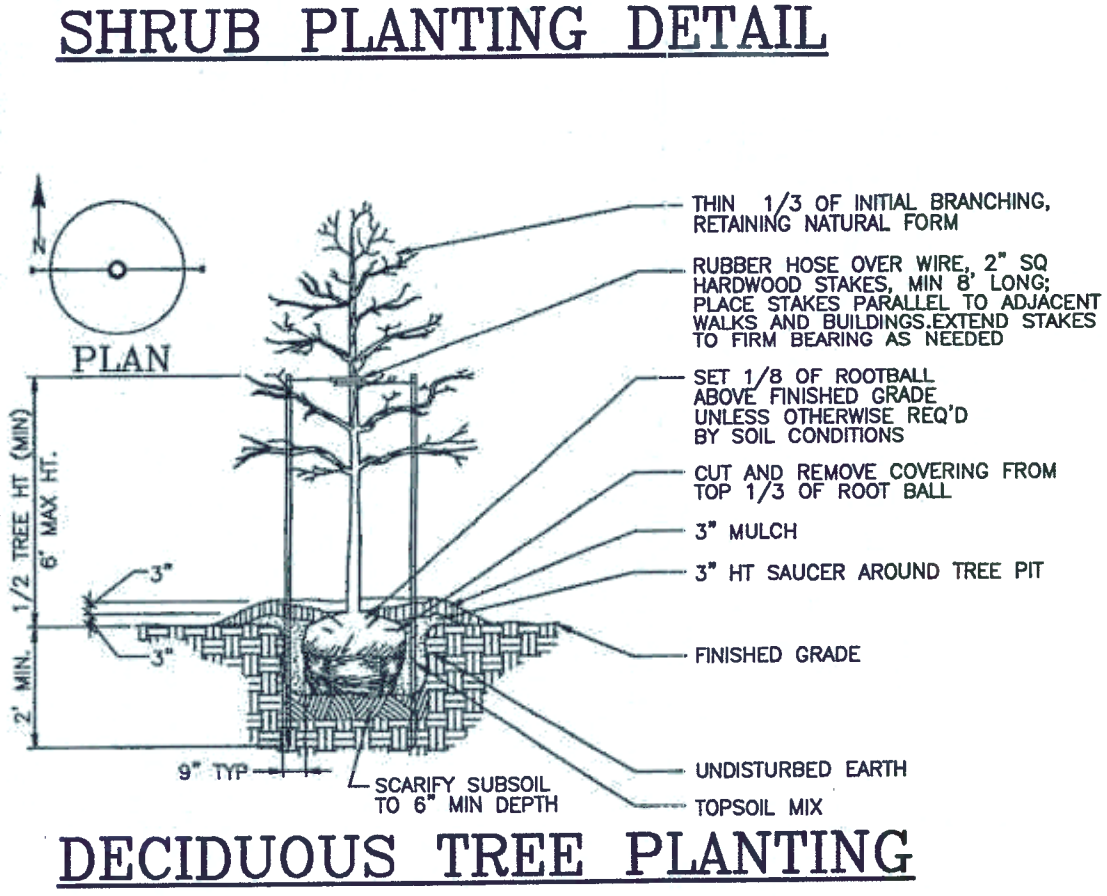
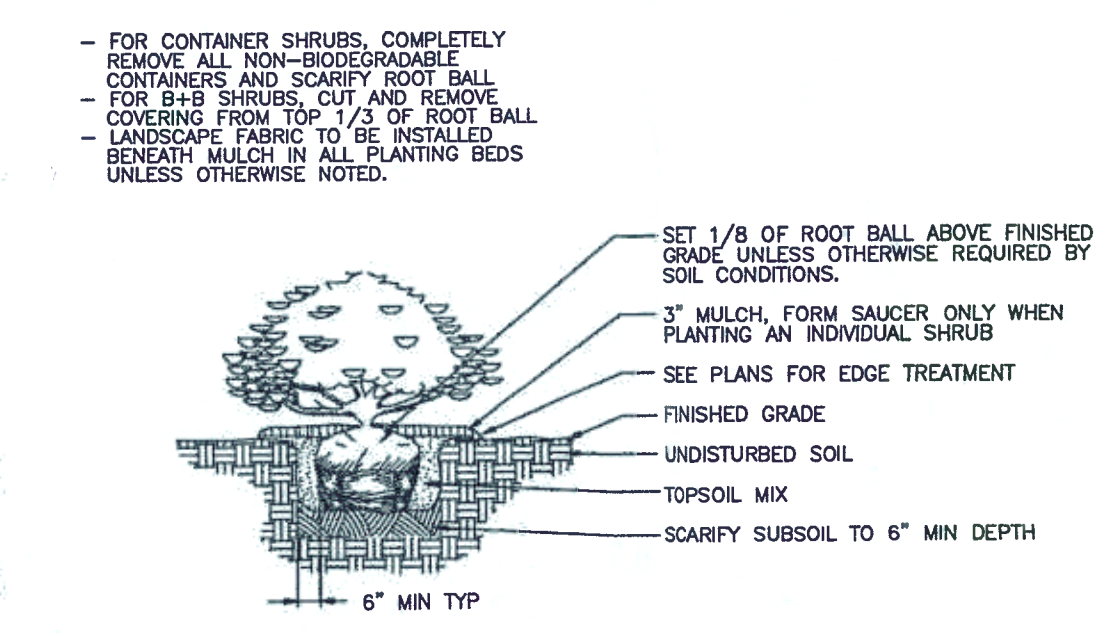
RECEIVED
MAR 10 2010
CRITICAL AREA COMMISSION
Chesapeake & Atlantic Coastal Bays

CRITICAL AREA ENVIRONMENTAL FEATURES PLAN
CHURCH CREEK PUMPING STATION

DATE: 3/15/2010
DRAWING NO.: CA02
SCALE: 1" = 30'
DESIGNED BY: ACS
DRAWN BY: JRW
SHEET 2 OF 3
FWA JOB NUMBER: 2061274.01



- NOTES:
1. THE SIGNS NOTIFY CONSTRUCTION WORKERS AND FUTURE RESIDENTS OF THE NEWLY PLANTED MATERIAL, IMPROVING THE TREE SURVIVAL RATES.
 2. SIGNS MAY BE ADAPTED BY RESIDENTS FOR IDENTIFICATION OF FOREST RETENTION AREAS.



NOTE: LANDSCAPE FABRIC TO BE INSTALLED BENEATH MULCH IN ALL PLANTING BEDS UNLESS OTHERWISE NOTED.

AS-BUILT REVIEWED BY: _____

GENERAL PLANTING NOTES

1. ALL PLANT MATERIAL SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE "USA STANDARD FOR NURSERY STOCK," LATEST EDITION.
2. ALL PLANTING SHALL BE IN ACCORDANCE WITH STANDARD AMERICAN ASSOCIATION OF NURSERYMEN PROCEDURES AND SPECIFICATIONS.
3. CLEARING ACTIVITIES TO OCCUR ONLY WITHIN THE LIMITS OF DISTURBANCE EXCEPT FOR SELECTIVE CLEARING WITHIN THE MITIGATION PLANTING AREA TO REMOVE DEAD OR INVASIVE PLANT MATERIAL. SUCH CLEARING SHALL BE DONE IN THE PRESENCE OF A LICENSED TREE EXPERT.
4. VERIFY THE CORRECT LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO INSTALLATION OF ANY PLANT MATERIALS.
5. PLANT MATERIAL LOCATION TO BE STAKED IN THE FIELD AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
6. ALL PLANT BEDS AND PLANTING AREAS TO BE MULCHED TO A DEPTH OF 3" SHREDDED HARDWOOD BARK UNLESS OTHERWISE NOTED ON DRAWINGS OR SPECIFICATIONS.
7. ALL AREAS DISTURBED BY PLANTING OPERATIONS SHALL BE FINE GRADED AND SEEDED.
8. OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE, HARFORD COUNTY DEPARTMENT OF PLANNING & ZONING, AND CRITICAL AREA COMMISSION BEFORE MAKING ANY SUBSTITUTIONS OR CHANGES.
9. ALL PLANT BEDS SHALL BE CONTAINED WITH A SPADED EDGE UNLESS OTHERWISE NOTED ON DRAWINGS.
10. QUANTITIES SHOWN ON PLANT LIST ARE FOR THE CONTRACTORS CONVENIENCE ONLY AND ARE NOT GUARANTEED TO BE ACCURATE. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLAN AND QUANTITIES SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN SHALL APPLY.
11. PROVIDE ALL MATERIALS AND LABOR INCLUDING PLANTS, PLANTER FILL MATERIALS, MULCHES, SOIL PREPARATION, DECORATIVE ITEMS, INSPECTION, AND TRANSPORTATION.
12. AFTER REMOVAL OF EXISTING IMPERVIOUS SURFACE, SUBSOIL SHALL BE CULTIVATED TO A 24" DEPTH. ADDITIONAL TOPSOIL THAT IS CLEAR OF DEBRIS SHOULD BE BROUGHT IN AND SPREAD ACROSS THE AREA TO A DEPTH OF 24".
13. TOPSOIL TO A DEPTH OF 4" IN ALL AREAS TO BE SEEDED OR SODDED.
14. EACH PLANTING BED AREA IS TO RECEIVE A MINIMUM OF 6" OF PREPARED SOIL CULTIVATED TO A 12" DEPTH. PREPARED SOIL SHALL BE MIXED AS FOLLOWS: 2/3 SANDY LOAM TOPSOIL FREE OF ROOTS, ROCKS, WEEDS, AND OTHER DEBRIS AND 1/3 PEAT MOSS OR APPROVED ORGANIC MULCH.
15. SOIL ADDITIVES TO BE GRANULAR FERTILIZER OF A 1:2:1 RATIO. SOIL OUTSIDE RANGE OF 5.0 - 7.0 PH SHALL BE TREATED APPROPRIATELY TO CORRECT FOR HIGH ALKALINITY OR ACIDITY.
16. THE USE OF ON-SITE TOPSOIL MUST BE APPROVED IN ADVANCE BY LANDSCAPE ARCHITECT.
17. ALL BEDS TO BE TREATED WITH GRANULAR PREEMERGENT WEED CONTROL PER MANUFACTURER'S SPECIFICATIONS. LANDSCAPE FABRIC TO BE INSTALLED BENEATH MULCH IN ALL PLANTING BEDS EXCLUDING GROUND-COVER AND PERENNIAL COVERS. USE TREFLAN OR EQUAL AS APPROVED BY LANDSCAPE ARCHITECT.
18. SODDED AND SEEDED AREAS SHALL BE PROPERLY PREPARED, FINISH GRADED AND HAND ROLLED PRIOR TO SOD PLACEMENT OR SEEDING. SEEDED AREAS SHALL BE RE-SEEDED AS NECESSARY TO PROVIDE AN EVEN STAND OF GRASS.
19. PROVIDE A WARRANTY ON ALL WORK FOR A MINIMUM OF TWO YEARS INCLUDING TWO CONTINUOUS GROWING SEASONS. COMMENCE WARRANTY ON THE DATE IDENTIFIED IN THE CERTIFICATE OF SUBSTANTIAL COMPLETION. WARRANTY TO INCLUDE COVERAGE OF PLANTS FROM DEATH OR UNHEALTHY CONDITIONS. REPLACEMENT PLANTS SHALL BE THE SAME SIZE AND SPECIES AS SPECIFIED, PLANTED IN THE NEXT GROWING SEASON WITH A NEW WARRANTY COMMENCING WITH THE DATE OF THE REPLACEMENT. FROM DATE OF OPERATIONAL ACCEPTANCE.
20. MAINTAIN PLANT LIFE IMMEDIATELY AFTER PLACEMENT AND CONTINUE MAINTENANCE UNTIL TERMINATION OF WARRANTY. MAINTENANCE TO INCLUDE WEEDING, APPLICATIONS OF PESTICIDES, WATERING, TRIMMING AND PRUNING, DISEASE CONTROL, AND MAINTENANCE OF PLANT BRACING EQUIPMENT.
21. ALL PLANT MATERIALS TO BE PLANTED AFTER FINAL GRADING AND STABILIZATION ACTIVITIES ARE COMPLETE.

CRITICAL AREA PLANTING SCHEDULE

SYMBOL	QTY.	BOTANICAL/COMMON NAME	SIZE	REMARKS
	34	PLATANUS OCCIDENTALIS SYCAMORE	1.5 - 2" CAL. 10-12' HT.	B & B FULL 20' ON CENTER
	31	ACER RUBRUM RED MAPLE	1.5 - 2" CAL. 10-12' HT.	B & B FULL 20' ON CENTER
	36	QUERCUS PALUSTRIS PIN OAK	1.5 - 2" CAL. 10-12' HT.	B & B FULL 20' ON CENTER
	10	QUERCUS PHELLOS WILLOW OAK	1.5 - 2" CAL. 10-12' HT.	B & B FULL 20' ON CENTER
	20	CARPINUS CAROLINIANA MUSCLEWOOD/HORNBEAM	1" CAL. 6' HT.	B & B FULL 15' ON CENTER
	81	VIBURNUM DENTATUM ARROWWOOD	3-4" HT. 4-5 CANES	B & B FULL 5' ON CENTER
	82	LINDERA BENZOIN SPICEBUSH	2.5-3" HT. 3-4 CANES	CONT. FULL 5' ON CENTER
	72	MYRICA PENNSYLVANICA NORTHERN BAYBERRY	2.5-3" HT. 3-4 CANES	B & B FULL 5' ON CENTER
	75	CLETHRA ALNIFOLIA SWEET PEPPERBUSH	2.5-3" HT. 3-4 CANES	CONT. FULL 5' ON CENTER
	9	REFORESTATION SIGNS		ON POSTS AS SHOWN

NOTE: ALL SUBSTITUTIONS MUST BE APPROVED BY CRITICAL AREA COMMISSION

LANDSCAPE PLANTING SCHEDULE

SYMBOL	QTY.	BOTANICAL/COMMON NAME	SIZE	REMARKS
	2	CHIONANTHUS VIRGINICUS WHITE FRINGE TREE	5-6' HT.	B & B FULL AS SHOWN
	31	ILEX GLABRA "SHAMROCK" INKBERRY	2-3' HT 2-3' SPD	B & B FULL 4' O.C.
	34	VIBURNUM ACERIFOLIUM MAPLE LEAVED VIBURNUM	3-4" HT 4-5 CANES	B & B FULL 4' O.C.
	30	ILEX VERTICILLATA WINTERBERRY	3-4" HT. 4-5 CANES	B & B FULL 4' O.C.

NOTE: ALL SUBSTITUTIONS MUST BE APPROVED BY LANDSCAPE ARCHITECT

THIS AREA CONTAINS DEAD TREES AND OVERGROWN INVASIVE PLANT SPECIES. THE CONTRACTOR SHALL REMOVE THE DEAD TREES AND INVASIVE PLANTS AND INSTALL MITIGATION PLANTINGS. THIS AREA NEEDS TO BE APPROVED BY CSAC BEFORE WORK CAN BEGIN. A LICENSED TREE EXPERT NEEDS TO BE PRESENT WHEN THE CONTRACTOR SELECTIVELY CLEARS/CLEANS AREA.

SEWAGE PUMP STATION CRITICAL AREA PLANTING/LANDSCAPE PLAN

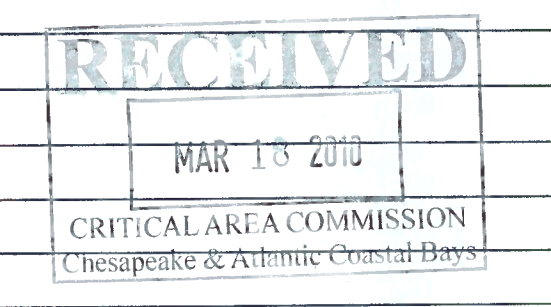
SCALE: 1"=20'

CRITICAL AREA MITIGATION REQUIREMENTS

	100' BUFFER CLEARING	CLEARING OUTSIDE 100' BUFFER (net in SHA R/W)	100' BUFFER DISTURBANCE
ROUTE 40*	1,760 sf	500 sf	13,565 sf
PUMPING STATION & FORCE MAIN	0 sf	8 individual trees + 575 sf	2,460 sf
TOTALS	1,760 sf	8 individual trees + 1,075 sf	16,025 sf
MITIGATION RATIOS	2:1	1:1	2:1
MITIGATION REQUIRED	3,520 sf	8 trees + 1,075 sf	32,050 sf
* 22 trees to be cleared lie within the 100' Buffer and the State Highway Administration Right-of-Way along Route 40. 44 trees (2:1) are required as mitigation.			
TOTAL MITIGATION	52 individual trees & 36,645 sf		

CRITICAL AREA PLANTING CALCULATIONS

TYPE OF PLANTING	NUMBER OF PLANTING UNITS	MITIGATION CREDIT PER UNIT	TOTAL MITIGATION CREDIT
CLUSTER OF 1 TREE + 3 SHRUBS	59 units (59 trees & 177 shrubs)	400 sf	23,600 sf
INDIVIDUAL LARGE TREES	52 trees	---	52 INDIVIDUAL TREES
UNDERSTORY TREES	22 trees	75 sf	1,650 sf
LARGE SHRUBS	228 shrubs	50 sf	11,400 sf
TOTALS PROVIDED ON-SITE	111 canopy trees 22 understory trees 405 shrubs		36,650 sf + 52 individual trees



APPROVED	REV. NO.	DATE	REVISION	BY
PLANNING				
ENGINEERING				
MAINTENANCE CHIEF				
OPERATIONS CHIEF				
PROPERTY MANGEMENT				
CONST. MGMT.				
SEDIMENT CONTROL				
TRAFFIC CONTROL				

AS-BUILT PER INSPECTOR
TRANS. BY: _____
DATE: _____
RESIDENT INSPECTOR: _____

HARFORD COUNTY MARYLAND

DEPUTY DIRECTOR, DIVISION OF WATER AND SEWER

THIRD ELECTION DISTRICT
HARFORD COUNTY, MARYLAND
CHURCH CREEK SEWAGE PUMP STATION AND FORCE MAIN REPLACEMENT CRITICAL AREA PLANTING / LANDSCAPE PLAN
SEWER CONTRACT NO. 6613

Hatch Mott MacDonald
11019 McCormick Road, Suite 260
Hunt Valley, MD 21031 Phone: 866-363-1471

DESIGNED:	SCALE	TAX MAP	SHEET	JOB NO.
JRW	AS NOTED	25	NO. 10	231391
JIK		ADC MAP NO. 25	OF 66	C-8
ACS		ADC GRID E6, F6, G7		