

MSA-S-1829-887

Comments

Nov 2000

Aug. 2000

Judge John C. North, II
Chairman



Ren Serey
Executive Director

**STATE OF MARYLAND
CHESAPEAKE BAY CRITICAL AREA COMMISSION**

1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338

August 7, 2000

Mr. Jeff Torney
Planner
City of Annapolis
160 Duke of Gloucester Street
Annapolis, Maryland 21401

RE: Port of Annapolis Project
7074 Bembe Beach Road

Dear Mr. Torney:

Thank you for submitting the 10 % calculations for the above project. After reviewing the calculations, this office has determined that the proposed development activity and the 10 % calculations are correct and consistent with the local Critical Area Program. If there are any questions, please feel free to call me at (410) 260-3483.

Sincerely,

A handwritten signature in cursive script that reads "Dawnn McCleary".

Dawnn McCleary
Natural Resources Planner

cc: Regina Esslinger
BA 328 - 00

Branch Office: 31 Creamery Lane, Easton, MD 21601
(410) 822-9047 Fax: (410) 820-5093

TTY FOR DEAF ANNAPOLIS-974-2609 D.C. METRO-586-0450





Judge John C. North, II
Chairman

Ren Serey
Executive Director

**STATE OF MARYLAND
CHESAPEAKE BAY CRITICAL AREA COMMISSION**

1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338

July 21, 2000

Mr. Jeff Torney
Planner
City of Annapolis P & Z
160 Duke of Gloucester Street
Annapolis, MD 21401

RE: Port Annapolis Project
7074 Bembe Beach Road

Dear Mr. Torney:

After reviewing the above project, this office does not oppose the project but the old version of Worksheet B is no longer being used. Please have the 10% calculations redone by submitting Worksheet A from the more recent Applicant's Guide. Please forward the revised worksheet to this office for review. I will provide comments at that time. If there are any questions, please feel free to call me at (410) 260 - 3483.

Sincerely,

Dawnn McCleary
Natural Resources Planner

cc: Regina Esslinger
AN 328 - 00

Branch Office: 31 Creamery Lane, Easton, MD 21601
(410) 822-9047 Fax: (410) 820-5093

AN 328-00

Worksheet A: Standard Application Process

Calculating Pollutant Removal Requirements *

Step 1: Project Description

A. Calculate Percent Imperviousness

- 1) Site Acreage = 1.31 acres
- 2) Site Imperviousness, existing and proposed, (See Table 1.0 for details)

	(a) Existing (acres)	(b) Post-Development (acres)
rooftop	<u>0.038</u>	
roads		
sidewalks		
parking lots		<u>0.78 ACRES</u>
pools/ponds	<u>0.002</u>	
decks		
other (CONC. PAD)	<u>0.004</u>	
Impervious Surface Area	<u>0.04 ACRES</u>	<u>0.78 ACRES</u>

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CRITICAL AREA COMMISSION

Imperviousness (I)

Existing Impervious Surface Area/Site Area = (Step 2a)/(Step 1) = 0.03
 Post-Development Impervious Surface Area/Site Area = (Step 2b)/(Step 1) = 0.60

B. Define Development Category (circle)

- 1) Redevelopment: Existing imperviousness greater than 15% I (Go to Step 2A)
- 2) New development: Existing imperviousness less than 15% I (Go to Step 2B)
- 3) Single Lot Residential: Single lot being developed or improved; single family residential; and more than 250 square feet being disturbed. (Go to Page 27- Single Lot Residential sheet for remaining steps).

* NOTE: All acreage used in this worksheet refer to areas within the IDA of the critical area only.

Step 2: Calculate the Pre-Development Load (L pre)

A. Redevelopment

$$\begin{aligned}
 L_{pre} &= (R_v)(C)(A)8.16 \\
 R_v &= 0.05 + 0.009(I_{pre}) \\
 L_{pre} &= (\quad) (\quad) (\quad) 8.16 \\
 &= \underline{\hspace{2cm}} \text{ lbs P/year}
 \end{aligned}$$

where:

- R_v = runoff coefficient, which expresses the fraction of rainfall which is converted into runoff.
- I_{pre} = site imperviousness (i.e., $I=75$ if site is 75% impervious)
- C = flow-weighted mean concentration of the pollutant in urban runoff (mg/1).
 - $C = 0.26$ if pre-development $I < 20\%$
 - $C = 1.08$ if pre-development $I \geq 20\%$
- A = area of the development site (acres in the Critical Area).
- 8.16 = includes regional constants and unit conversion factors.

OR

B. New Development

$$\begin{aligned}
 L_{pre} &= 0.5 \text{ lbs/year} * A \\
 &= (0.5)(1.31) \\
 &= \underline{0.66} \text{ lbs P/year}
 \end{aligned}$$

Step 3: Calculate the Post-Development Load (L Post)

A. New Development and Redevelopment:

$$\begin{aligned}
 L_{post} &= (R_v)(C)(A)8.16 \\
 R_v &= 0.05 + 0.009(I_{post}) \\
 &= 0.05 + 0.009(\underline{60}) = \underline{0.59} \\
 L_{post} &= (\underline{0.59})(\underline{0.26})(\underline{1.31}) 8.16 \\
 &= \underline{1.64} \text{ lbs P/year}
 \end{aligned}$$

where:

- R_v = runoff coefficient, which expresses the fraction of rainfall which is converted into runoff.
- I_{post} = site imperviousness (i.e., $I=75$ if site is 75% impervious)
- C = flow-weighted mean concentration of the pollutant in urban runoff (mg/1).
 - $C = 0.26$ if pre-development $I < 20\%$

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C = 1.08 if pre-development I >=20%
 A = area of the development site (acres).
 8.16 = includes regional constants and unit conversion factors.

Step 4: Calculate the Pollutant Removal Requirement (RR)

$$\begin{aligned}
 RR &= L_{\text{post}} - (0.9)(L_{\text{pre}}) \\
 &= (1.64) - (0.9)(0.106) \\
 &= \underline{1.05} \text{ lbs P}
 \end{aligned}$$

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Step 5: Identify Feasible Urban BMP

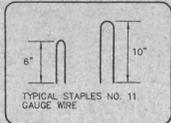
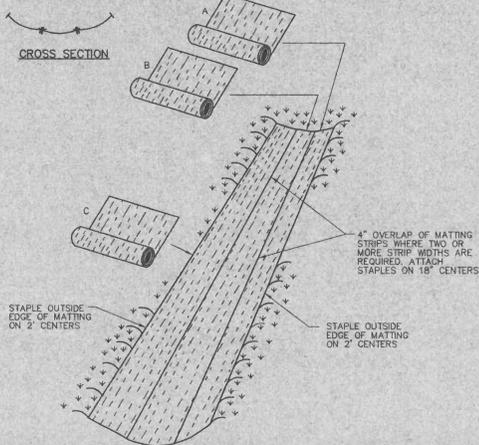
Select BMP Options using the screening tools and pollutant removal rates listed in the Applicant's Guide Tables 5.0, 5.1, 5.2, and 5.4 Calculate the load removed for each option.

BMP Type	(* Removal Efficiency)	x	(Fraction of Drainage Area Served)	x	(L post)	=	Load Removed
INFILTRATION TRENCH	0.65	x	100	x	1.64	=	1.07 lbs > RR = 1.05 OK
_____	_____	x	_____	x	_____	=	_____ lbs
_____	_____	x	_____	x	_____	=	_____ lbs
_____	_____	x	_____	x	_____	=	_____ lbs

If the Load Removed is equal to or greater than the pollutant removal requirement (RR) calculated in Step 4, then the on-site BMP option complies with the 10% Rule. (See Table 5.3, page 16) for submittal requirements for each BMP option.

* Use decimal for efficiency rating. (Example: Use 0.50 for a 50% removal efficiency rating.)

DETAIL 30 - EROSION CONTROL MATTING

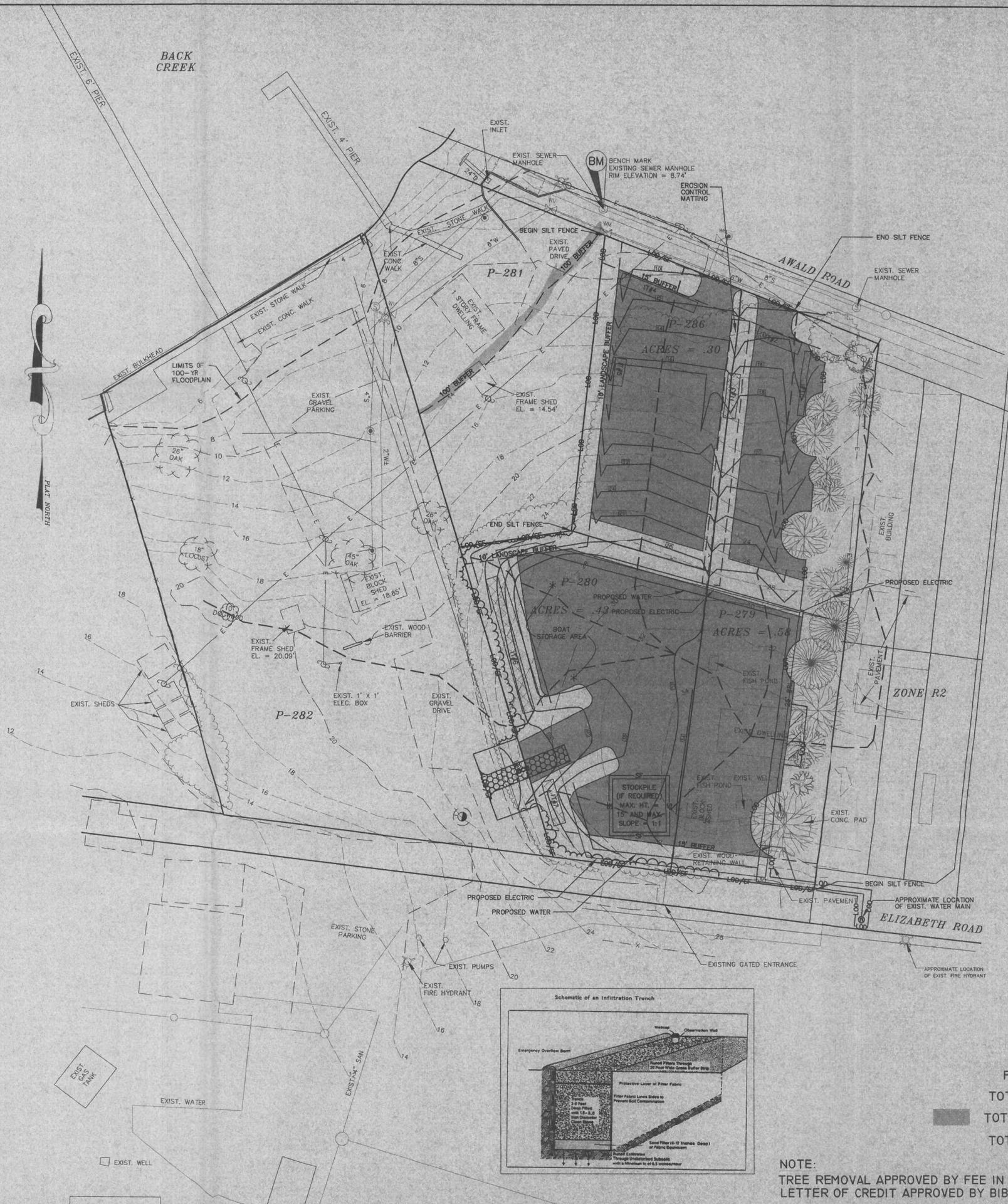


Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench. Backfill the trench and trench firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
 2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
 3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
 4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
 5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
 6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.
- Note: If flow will enter from the edge of the matting the area affected by the flow must be keyed-in.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE G-22-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NOTE: THIS ENTIRE SITE IS WITHIN THE "CRITICAL AREA" AS DEFINED BY "URBAN STORMWATER QUALITY GUIDANCE FOR THE MARYLAND CHESAPEAKE BAY CRITICAL AREA IN INTENSELY DEVELOPED AREAS (IDA)." THIS PROJECT COMPLIES WITH THE 10% RULE.



LEGEND

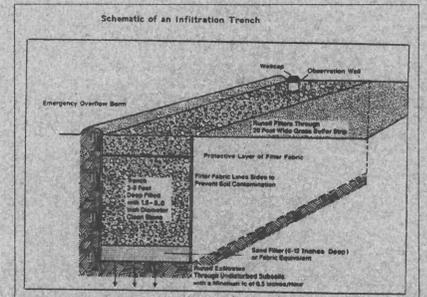
- LOD — LIMITS OF DISTURBED AREA
- SF — TEMPORARY SILT FENCE
- - - PROPOSED DRAINAGE AREA
- — — PROPERTY LINE
- ~ ~ ~ EXISTING TREE LINE
- ~ ~ ~ PROPOSED TREE LINE
- PROPOSED GRAVEL BOAT STORAGE/ PARKING
- - - EXISTING CONTOUR
- - - PROPOSED CONTOUR
- x-23.1 SPOT ELEVATION
- - - 25' LANDSCAPED ZONING BUFFER

- RED OAK (EX. TREE TO REMAIN)
- WILLOW OAK (EX. TREE TO REMAIN)
- WILD CHERRY (EX. TREE TO REMAIN)
- HOLLY (EX. TREE TO REMAIN)
- DOGWOOD (EX. TREE TO REMAIN)
- HICKORY (EX. TREE TO REMAIN)
- IT#1 (INFILTRATION TRENCH #1)

NOTE: ALL EXISTING STRUCTURES ON PARCEL 279 WITHIN THE LOD ARE TO BE REMOVED.

SITE DATA

- TOTAL SITE ACREAGE = 1.31 ACRES
- CLEARING = 1.27 ACRES
- EARTH CUT/FILL = 821 CY/ 1,101 CY
- PERMITTED IMPERVIOUS AREA = 45,683.2 SF
- TOTAL EXISTING IMPERVIOUS AREA = 1,940.32 SF
- TOTAL PROPOSED IMPERVIOUS AREA = 34,110.76 SF
- TOTAL NUMBER OF TREES TO BE REMOVED = 292



NOTE: TREE REMOVAL APPROVED BY FEE IN LIEU OF PLANTING AND ON SITE REPLACEMENT BY LETTER OF CREDIT APPROVED BY BIBA/BIRNEY CONVERSATION 3-20-2000.

DATE: 3-22-00
SCALE: 1" = 30'
JOB NO.: 980250
DRAWN BY: W.BARNHART
DWC NAME: 980250SESP3
APPROVED:

Lane Engineering, Inc.
Civil Engineers - Land Planning - Land Surveyors

E-mail: md@laneinc.com
408 N. Washington St., Easton, MD 21601 (410) 822-8003 FAX (410) 822-2024
15 Washington St., Cambridge, MD 21613 (410) 221-0818 FAX (410) 478-9942

FOR
PORT ANNAPOLIS MARINA
CITY OF ANNAPOLIS

ANNE ARUNDEL COUNTY, MARYLAND

REVISIONS PER PLANNING AND ZONING - 5-18-00
APPROVED: J.E.P.
DATE: 6-14-00

SHEET No. 2 OF 4
FILE No. 8872