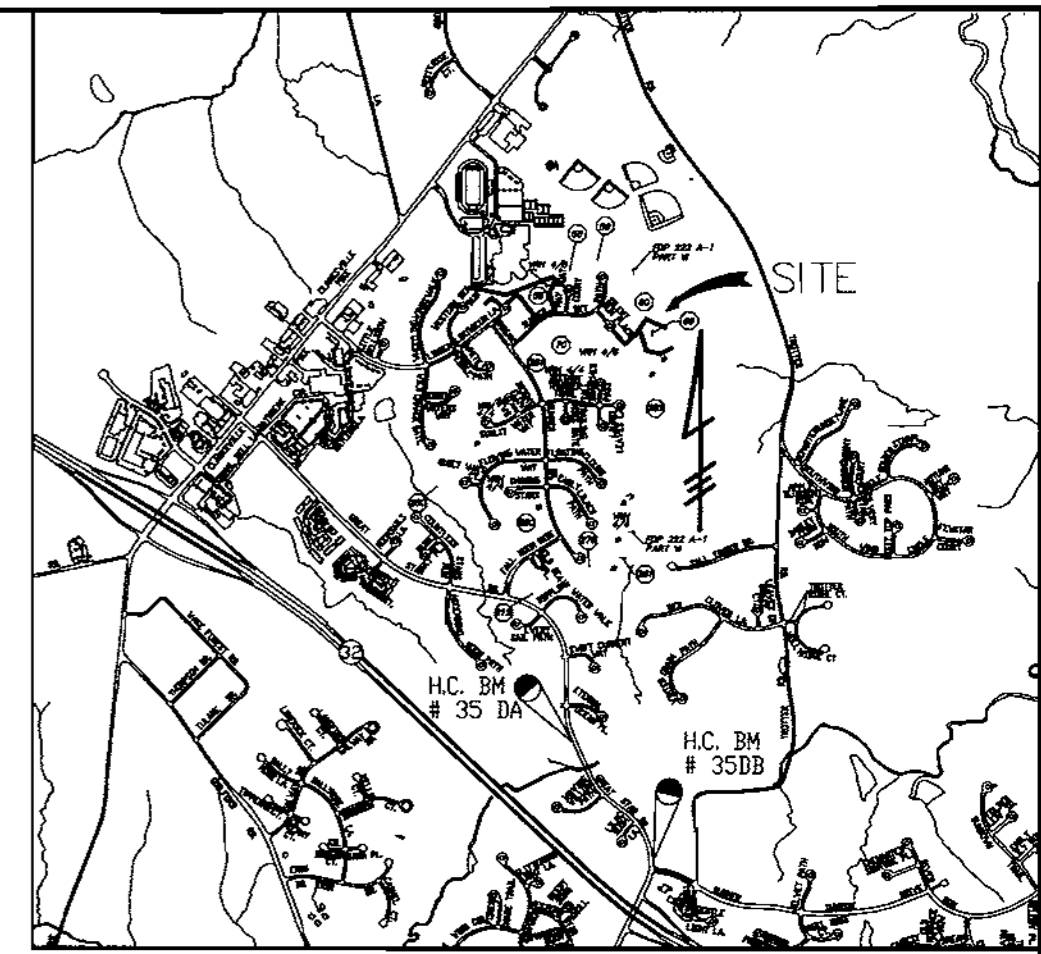


SHEET INDEX	
NO.	DESCRIPTION
1	COVER SHEET
2	PATHWAY PLAN I
3	PATHWAY PLAN II
4	SITE DETAILS
5	SEDIMENT CONTROL NOTES AND DETAILS

# VILLAGE OF RIVER HILL PHEASANT RIDGE PATHWAY CONNECTOR

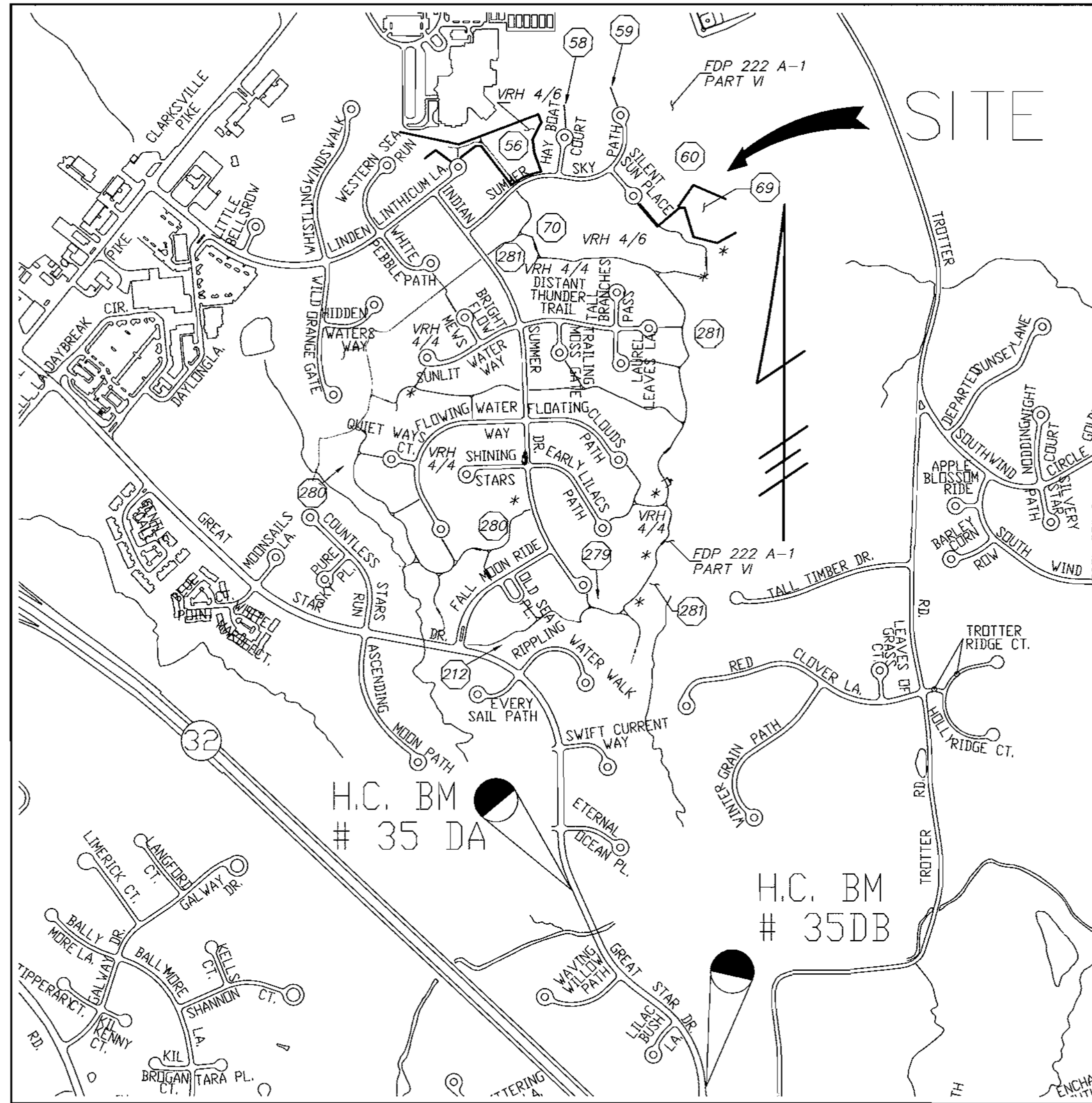
## 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP  
SCALE: 1" = 200'

- GENERAL NOTES
- TOPOGRAPHY SHOWN ON THESE DRAWINGS ARE BASED ON: ROAD PLANS (F-96-130, F-98-37) AND ON HOWARD COUNTY TOPOGRAPHY. THE INFORMATION SHOWN OR NOT SHOWN HEREON DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROPER COMPLETION OF GRADING.
  - ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
  - DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF PHOENIX ENGINEERING MAY CAUSE THE WORK TO BE UNACCEPTABLE.
  - THE LOCATION OF UTILITIES AND UTILITY EASEMENTS SHOWN ON THESE PLANS ARE FROM APPROVED SDP'S AND RECORDED PLATS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S ACTIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
  - THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND MAINTAIN MINIMUM COVER IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
 

MIN. COVER OVER WATER MAINS:	3.5'
MIN. COVER OVER SANITARY LINES:	2.5' ABOVE INVERT
MIN. COVER OVER STORM DRAIN:	18"
MIN. COVER OVER GAS LINES:	(AS PER BGE REQUIREMENTS)
MIN. COVER OVER ELECTRIC LINES:	(AS PER BGE REQUIREMENTS)
  - THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL SUPPLEMENT UTILITY MARKINGS WITH THOSE OF A PRIVATE COMPANY HIRED AND PAID FOR BY THE CONTRACTOR TO INSURE THAT ALL EXISTING UTILITIES ARE CLEARLY MARKED PRIOR TO EXCAVATION.
  - FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
  - ALL PROPOSED IMPROVEMENTS WILL BE MAINTAINED BY THE COLUMBIA ASSOCIATION.
  - A FEE SHALL BE PAID IN LIEU OF STORMWATER MANAGEMENT IN THE AMOUNT OF \$14,432.00 FOR THIS PROJECT.
  - THE CONTRACTOR SHALL CONTACT THE BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 48 HOURS IN ADVANCE OF THE COMMENCEMENT OF WORK.
  - PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL STAKE OUT ALL CONSTRUCTION AND VERIFY ALL OFFSETS, SETBACKS, EXISTING UTILITY LOCATIONS (HORIZONTAL AND VERTICAL) AND DIMENSIONS.
  - THE PAVEMENT DETAIL SHOWN ON THESE PLANS (3" BITUMINOUS SURFACE COURSE OVER 4" CRUSHED AGGREGATE BASE) IS NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING, THE FINAL PAVEMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE. ANY PAVEMENT SECTION DETERMINED BY THE GEOTECHNICAL ENGINEER THAT IS LESS THAN THE HOWARD COUNTY MINIMUM STANDARD SHALL FIRST BE APPROVED BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. THE TESTING AND GEOTECHNICAL ENGINEER SHALL BE PROVIDED BY THE OWNER.
  - ALL FILL SHALL BE ROLLED TO A MINIMUM DEGREE OF COMPACTION TO 95% MAXIMUM STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT BETWEEN 0 AND 3% OF OPTIMUM AS DETERMINED BY ASTM-D-698. FILL UNDER PAVED AREAS, SHALL BE COMPACTED TO 98% MAXIMUM STANDARD PROCTOR DENSITY PER ASTM-D-698.
  - ALL TREES 12" IN DIAMETER OR GREATER SHALL REMAIN PROTECTED AND UNDAMAGED AT ALL TIMES UNLESS OTHERWISE INDICATED. THE CONTRACTOR WILL ATTEMPT TO PROTECT ALL OTHER TREES THROUGH FIELD ADJUSTMENTS TO THE LAYOUT.
  - THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, OR RIGHTS-OF-WAYS THAT MAY BE REQUIRED TO COMPLETE THE WORK SHOWN HEREON.
  - CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES AND SAFETY PRECAUTIONS AND PROGRAMS.
  - THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN SEDIMENT AND EROSION CONTROL MEASURES AND NOTIFY THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410) 313-1855.
  - ADJUSTMENTS TO THE SEQUENCE OF CONSTRUCTION MUST BE APPROVED BY THE HOWARD COUNTY CONSTRUCTION AND INSPECTION DIVISION PRIOR TO SUCH ADJUSTMENTS.
  - ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH HOWARD COUNTY SPECIFICATIONS AND STANDARDS.
  - ALL ROADS SHOWN ON THESE PLANS ARE PUBLIC ROADS.
  - A PERMIT APPLICATION TO ALLOW CONSTRUCTION IN WETLANDS, WETLAND BUFFERS, WATERWAYS, AND FLOODPLAINS IS UNDER REVIEW BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT. THE TRACKING NUMBER IS 00-N1-0435/200067166 THIS PERMIT WILL BE GIVEN TO HOWARD COUNTY WHEN RECEIVED.
  - THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS BECAUSE IT IS PLANNED UNIT DEVELOPMENT WHICH HAS PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.
  - THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY WHITMAN REQUARDT AND ASSOCIATES, DATED 12/94, AND WAS APPROVED ON 1/20/95.
  - THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY EXPLORATION RESEARCH AND ASSOCIATES AND WAS APPROVED ON 1/20/95.
  - NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
  - THIS PLAN IS SUBJECT TO WP 01-96 WHICH WAIVES SECTIONS 16.116(a)(1) AND 16.116(a)(2)(ii) RESPECTIVELY PROHIBITING GRADING OR REMOVAL OF VEGETATIVE COVER WITHIN 25 FEET OF A WETLANDS AND WITHIN 75 FEET OF A PERENNIAL STREAM OFF OF EARLY LILACS PATH.



LOCATION MAP

SCALE: 1" = 600'

- 212 = OPEN SPACE LOT NUMBER (TYP.)
- X = EX. STORM WATER MANAGEMENT FACILITY

BM #35DA ELEV. 351.590  
ALUMINUM DISC ON CONCRETE MONUMENT SET FLUSH WITH GROUND 2.1' BEHIND FACE OF CURB ON WEST SIDE OF GREAT STAR DRIVE, 420+/- SOUTH OF TIDES TERRACE AND 1.6' NORTH OF A STORM DRAIN INLET  
NORTHING 558918.643  
EASTING 1333137.324

BM #35DB ELEV. 401.640  
ALUMINUM DISC ON CONCRETE MONUMENT SET FLUSH WITH GROUND 7.3' BEHIND FACE OF CURB ON EAST SIDE OF GREAT STAR DRIVE, AND 46.9' NORTH OF LIGHT POLE AT INTERSECTION OF SUMMER SUNRISE DRIVE  
NORTHING 557696.168  
EASTING 1333974.579

ADDRESS CHART	
LOT No.	STREET ADDRESS
OS LOT 281	5857 INDIAN SUMMER DRIVE
SUBDIVISION NAME: VILLAGE OF RIVER HILL	
SECT/AREA: 4/4 & 4/6	PARCEL OS LOTS: 56,58,59, 60,69,70,212,279,280 & 281
PLATS: 13285-90, 14014-19	BLOCK: 1 & 7
ZONE: NT-OS	TAX/ZONE: MAP 35
ELEC. DIST.: 5TH	CENSUS TR.: 6055
WATER CODE: I-10	SEWER CODE: 665300

PREVIOUS FILE NUMBERS				
SQUARE FEET	ACREAGE	LOT	FDP	F
53799	1.2351	212	222 A-1 PART VI	F-96-130
9311	0.2138	279		
532324	12.2204	280	222 A-1 PART VI	F-98-120
1112295	25.5348	281		
100025	2.2963	P/O 56		
2927	0.0672	58	222 A-1 PART VI	F-98-37
2539	0.0583	59		
256861	5.8921	60		
83149	1.4088	69	222 A-1 PART VI	F-00-09
415763	9.5446	70		

SITE ANALYSIS

TOTAL AREA OF OPEN SPACE LOTS: 58,9714 AC.  
TOTAL AREA OF THIS SUBMISSION: 58,9714 AC OR 2,568,793 S.F.

ZONING: NT-OS

PROPOSED USE: PEDESTRIAN PATHWAYS

LENGTH OF PATHWAYS: 14,432 L.F.  
LENGTH OF BOARDWALKS & BRIDGES: 172 L.F.

TOTAL LIMIT OF DISTURBANCE: 4.32 AC. OR 188,185 S.F.

PARKING REQUIRED: 0 SPACES  
PARKING PROVIDED: 0 SPACES

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION: *John R. Heinrichs* 5/31/01  
CHIEF, DIVISION OF LAND DEVELOPMENT: *Condy Stambler* 5/31/01  
DIRECTOR: *Lucy S. Rahn* 6/1/01

Date	No.	Revision Description

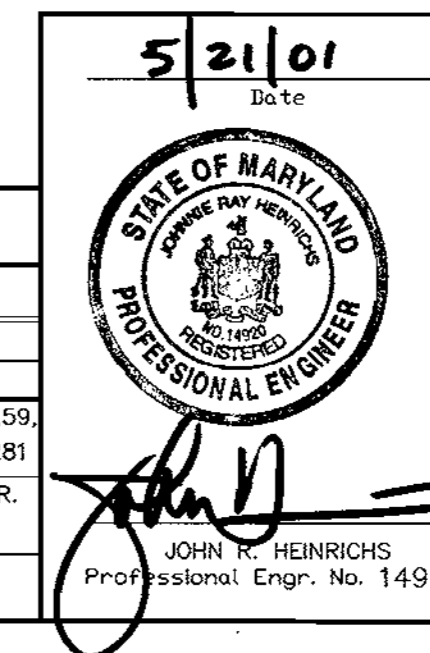
OWNER/DEVELOPER  
**THE COLUMBIA ASSOCIATION**  
ATTN: DENIS ELLIS  
10221 WINCOPIN CIRCLE SUITE 100  
COLUMBIA MARYLAND 21044-3410  
(410) 381-0383

PREPARED BY:  
**PHOENIX ENGINEERING, INC.**  
CONSULTING ENGINEERS  
813 MAIDEN CHOICE LANE, SUITE 300  
BALTIMORE, MARYLAND 21228  
(410) 247-8833 FAX 247-9397

AREA:  
COLUMBIA - VILLAGE OF RIVER HILL  
SECTION 4 AREA 6 OPEN SPACE LOTS 56,58,59,60,69,870  
SECTION 4 AREA 4 OPEN SPACE LOTS 212,279,280 & 281  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE:  
**COVER SHEET**

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE: 5-16-01



Des By: R.J.W.	Scale: AS SHOWN	Proj No: 00-006
Drn By: R.H.D.	Date: MAY 21, 2001	DRAWING NO: H01PRPW.dwg
Chk By: J.R.H.	SDP: 01-21	1 OF 5

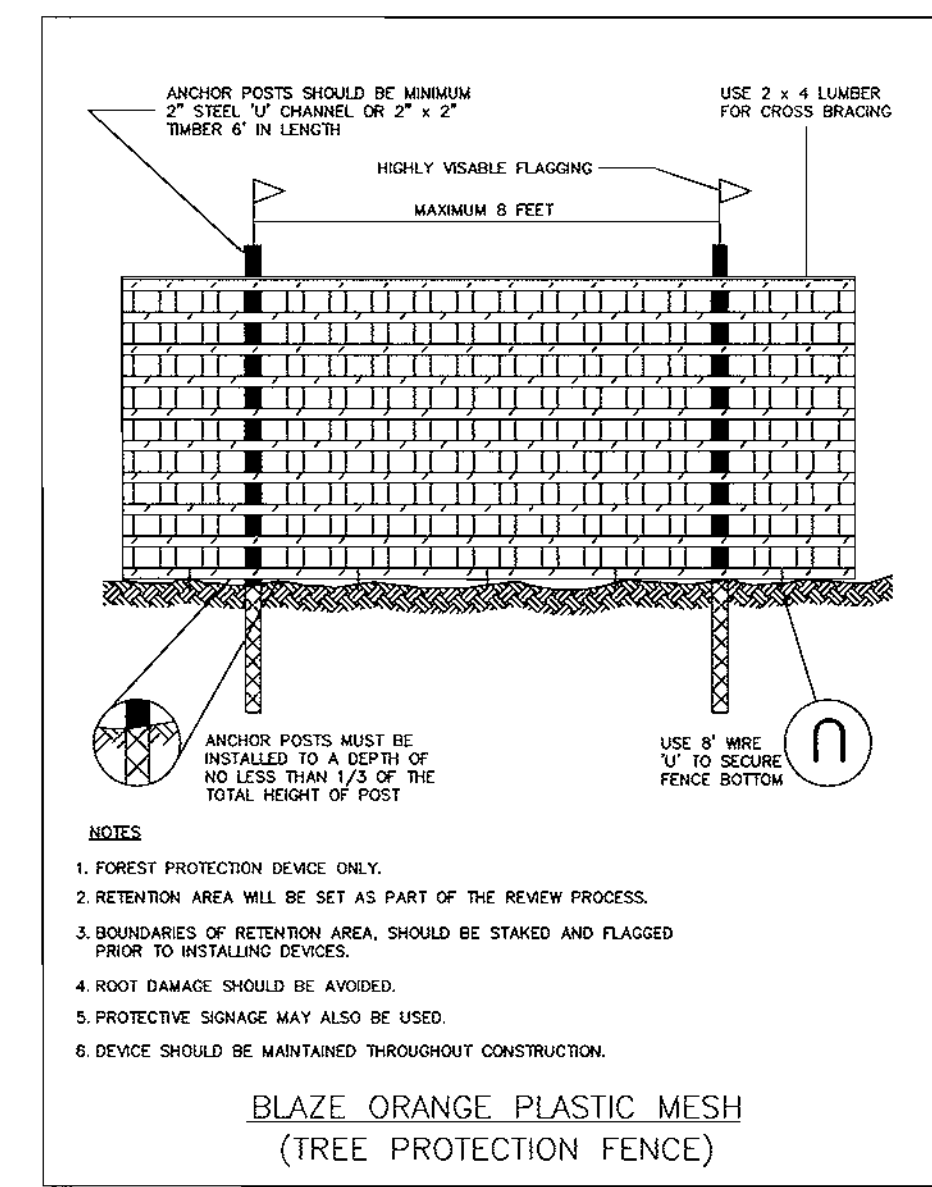
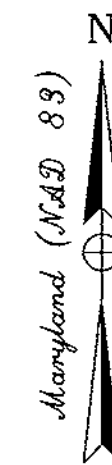
SDP 0121

**NOTE:**

- MIN. COVER OVER WATER MAINS: 3.5'
- MIN. COVER OVER SANITARY LINES: 2.5' ABOVE INVERT
- MIN. COVER OVER STORM DRAIN: 18"
- MIN. COVER OVER GAS LINES: (AS PER BGE REQUIREMENTS)
- MIN. COVER OVER ELECTRIC LINES: (AS PER BGE REQUIREMENTS)

**LEGEND**

- wetlands
- wetlands buffer
- 75' stream buffer
- 100 year floodplain
- proposed pathway
- approved pathway (sdp 00-14)
- proposed foot bridge
- proposed BOARDWALK
- future tot lot
- STREET LIGHT



**APPROVED**  
**PLANNING BOARD**  
**OF HOWARD COUNTY**  
**DATE 5-16-01**

PATHWAY DISTURBANCE/CONSTRUCTION AND RESTABILIZATION IS TO OCCUR IN 200 LF SEGMENTS MAXIMUM

APPROVED: DEPARTMENT OF PLANNING AND ZONING		
CHIEF, DEVELOPMENT ENGINEERING DIVISION	<i>Alan W. Wynn</i>	5/3/01
CHIEF, DIVISION OF LAND DEVELOPMENT	<i>Candy K. Kuntz</i>	5/3/01
DATE		6/1/01

Date	No.	Revision Description

OWNER/DEVELOPER  
**THE COLUMBIA ASSOCIATION**  
 ATTN: DENIS ELLIS  
 10221 WINCOPIN CIRCLE SUITE 100  
 COLUMBIA MARYLAND 21044-3410  
 (410) 381-0383

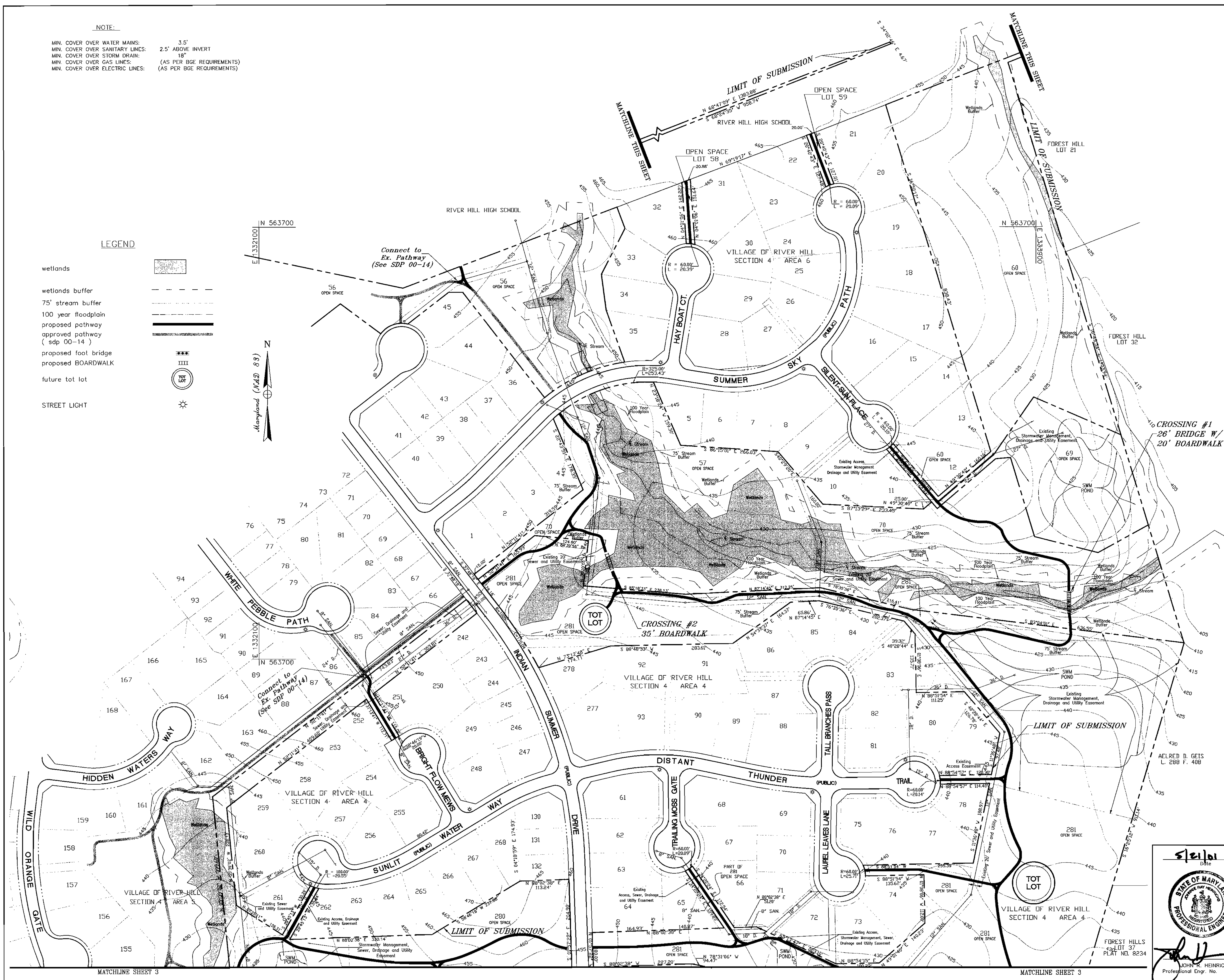
PREPARED BY:  
  
**PHOENIX ENGINEERING, INC.**  
 CONSULTING ENGINEERS  
 813 MAIDEN CHOICE LANE, SUITE 300  
 BALTIMORE, MARYLAND 21228  
 (410) 247-8833 FAX 247-9397

AREA:  
 COLUMBIA - VILLAGE OF RIVER HILL  
 SECTION 4 AREA 6 OPEN SPACE LOTS 56, 58, 59, 60, 69, & 70  
 SECTION 4 AREA 4 OPEN SPACE LOTS 212, 279, 280, & 281  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE:  
**PATHWAY PLAN I**

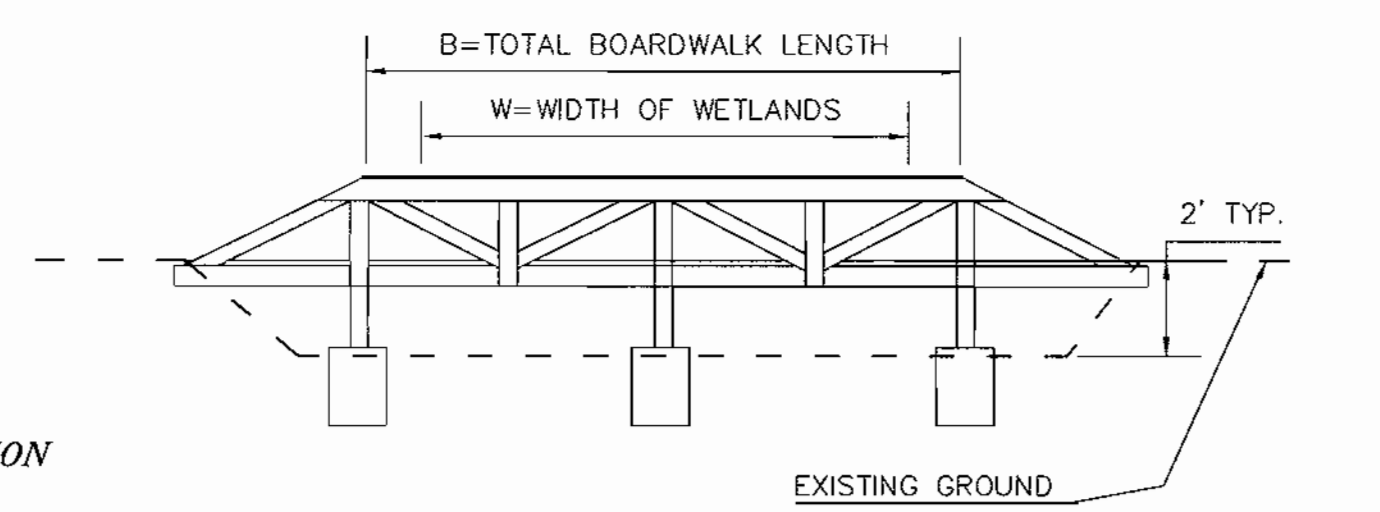
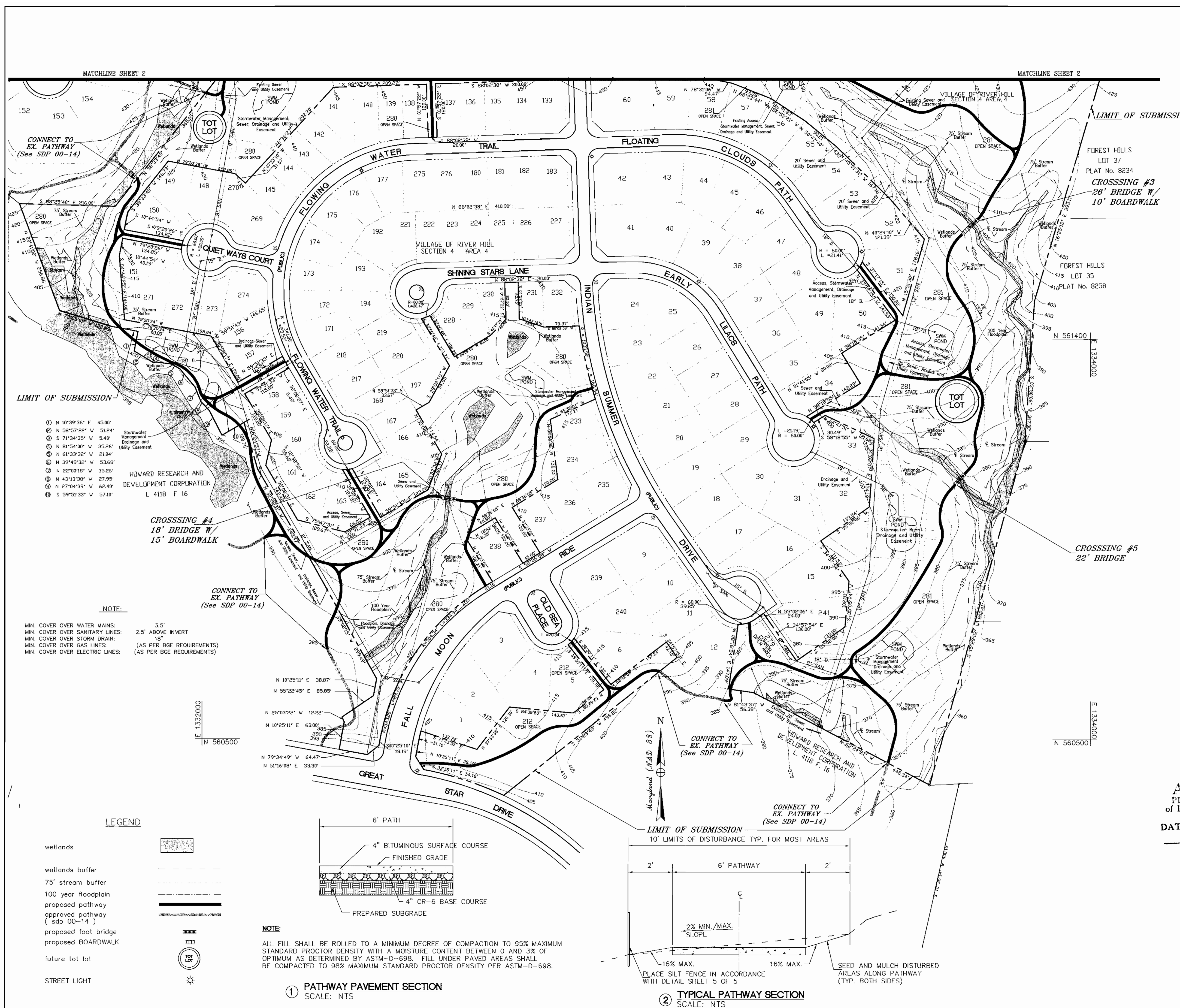
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Drn By	R.H.D.	Date	MAY 21, 2001	DRAWING NO	ps01PRPW.dwg
Chk By	J.R.H.	SDP	01-21		2 OF 5

*John R. Heinrichs*  
**JOHN R. HEINRICHS**  
 Professional Engr. No. 14920

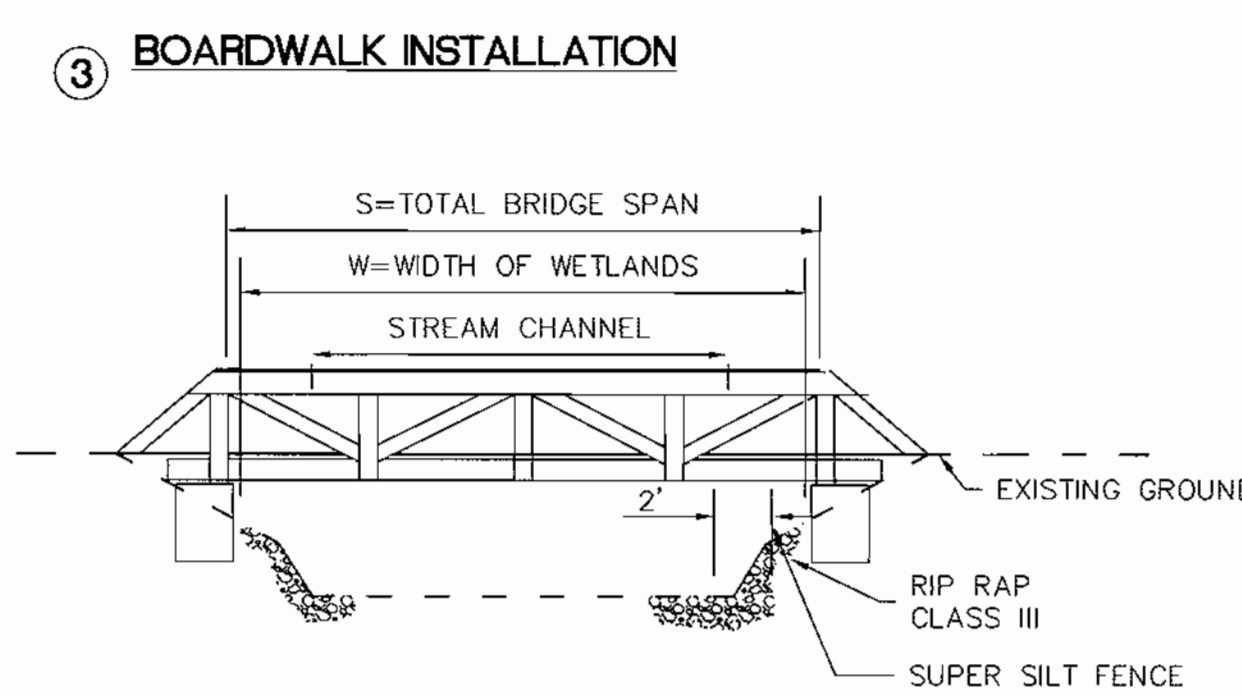


G:\00\00-006\ps01PRPW.dwg Mon May 21 08:38:03 2001

SDP 01-21



- NOTES:**
- SEE BOARDWALK DETAILS SHEET 4
  - LENGTH OF TYPICAL BOARDWALKS SHALL EXCEED WIDTH OF WETLAND AT THAT LOCATION.
  - SEE TYPICAL BRIDGE AND BOARDWALK INSTALLATION PLAN THIS SHEET FOR SILT FENCE PLACEMENT.



- NOTES:**
- SEE BRIDGE DETAILS SHEET 4
  - RIPRAP SHALL BE INSTALLED USING SANDBAG/STONE DIVERSION. SEE DETAIL THIS SHEET.
  - SPAN OF TYPICAL BRIDGES SHALL EXCEED WIDTH OF WETLAND AT THAT LOCATION.
  - SEE TYPICAL BRIDGE AND BOARDWALK INSTALLATION PLAN THIS SHEET.

PATHWAY DISTURBANCE/CONSTRUCTION AND RESTABILIZATION IS TO OCCUR IN 200 LF SEGMENTS MAXIMUM

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
CHIEF, DEVELOPMENT ENGINEERING DIVISION	5/21/01
CHIEF, DIVISION OF LAND DEVELOPMENT	5/31/01
DIRECTOR	6/1/01

Date	No	Revision Description

OWNER/DEVELOPER  
**THE COLUMBIA ASSOCIATION**  
 ATTN: DENIS ELLIS  
 10221 WINCOPIN CIRCLE SUITE 100  
 COLUMBIA MARYLAND 21044-3410  
 (410) 381-0383

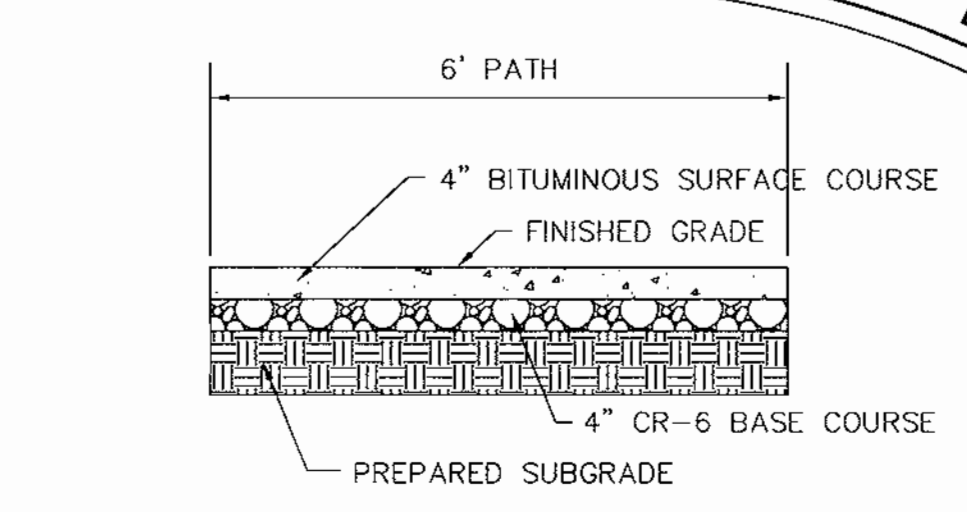
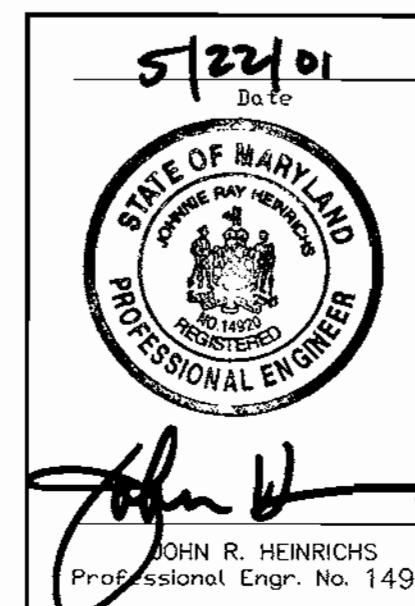
PREPARED BY:  
**PHOENIX ENGINEERING, INC.**  
 CONSULTING ENGINEERS  
 813 MAIDEN CHOICE LANE, SUITE 300  
 BALTIMORE, MARYLAND 21228  
 (410) 247-8833 FAX 247-9397

AREA:  
 COLUMBIA - VILLAGE OF RIVER HILL  
 SECTION 4 AREA 6 OPEN SPACE LOTS 56, 58, 59, 60, 69, & 70  
 SECTION 4 AREA 4 OPEN SPACE LOTS 212, 279, 280, & 281  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE:  
**PATHWAY PLAN II**

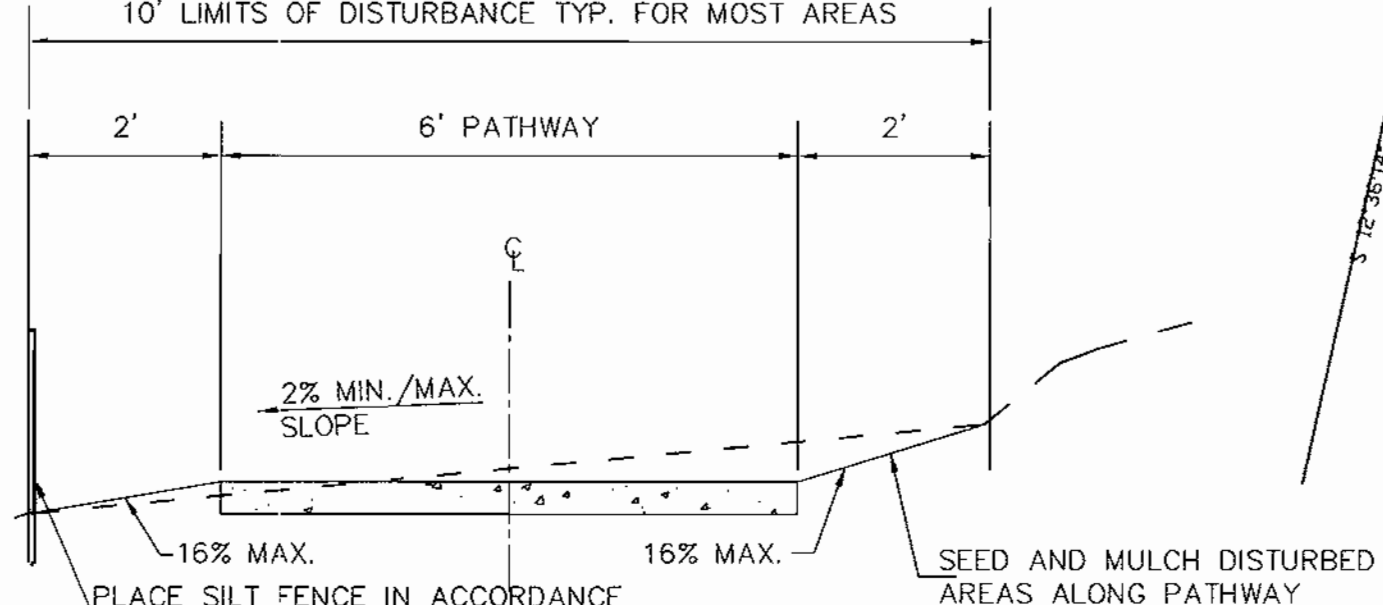
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Dwn By	R.H.D.	Date	MAY 21, 2001	DRAWING NO	ps02PRPW.dwg
Chk By	J.R.H.	SDP	- 01-21		3 OF 5

**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY.  
 DATE 5-16-01



**NOTE:**  
 ALL FILL SHALL BE ROLLED TO A MINIMUM DEGREE OF COMPACTION TO 95% MAXIMUM STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT BETWEEN 0 AND 3% OF OPTIMUM AS DETERMINED BY ASTM-D-698. FILL UNDER PAVED AREAS SHALL BE COMPACTED TO 98% MAXIMUM STANDARD PROCTOR DENSITY PER ASTM-D-698.

1 PATHWAY PAVEMENT SECTION  
 SCALE: NTS



2 TYPICAL PATHWAY SECTION  
 SCALE: NTS

- NOTE:**
- MIN. COVER OVER WATER MAINS: 3.5'
  - MIN. COVER OVER SANITARY LINES: 2.5' ABOVE INVERT
  - MIN. COVER OVER STORM DRAIN: 1.5'
  - MIN. COVER OVER GAS LINES: (AS PER BGE REQUIREMENTS)
  - MIN. COVER OVER ELECTRIC LINES: (AS PER BGE REQUIREMENTS)

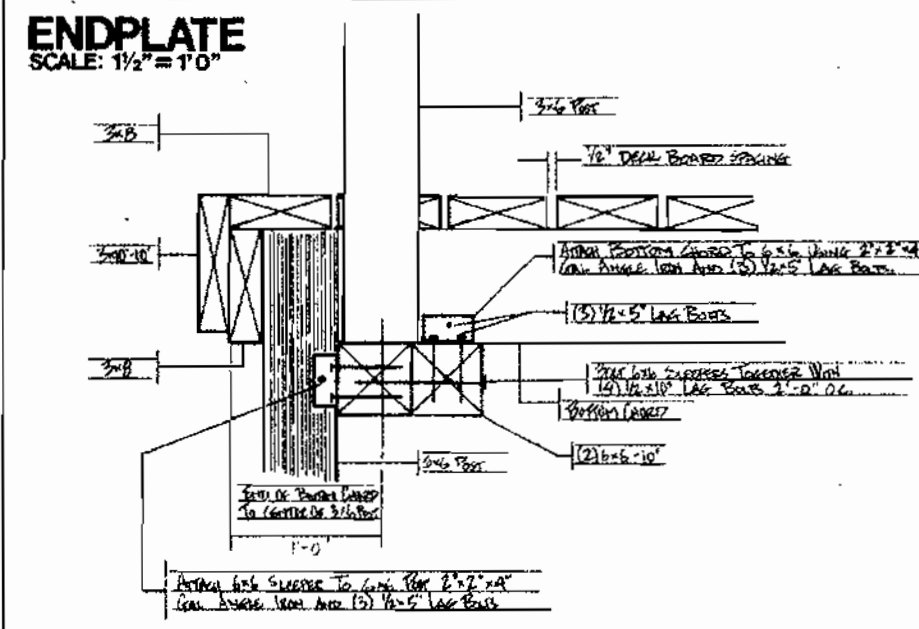
- ① N 10°39'36" E 45.00'  
 ② N 58°57'22" W 51.24'  
 ③ S 71°34'35" W 5.40'  
 ④ N 61°54'09" W 35.26'  
 ⑤ N 61°33'32" W 21.84'  
 ⑥ N 39°49'32" W 53.68'  
 ⑦ N 22°08'01" W 35.25'  
 ⑧ N 43°13'39" W 27.95'  
 ⑨ N 27°04'39" W 62.40'  
 ⑩ S 59°51'33" W 57.10'

- LEGEND**
- wetlands
  - wetlands buffer
  - 75' stream buffer
  - 100 year floodplain
  - proposed pathway
  - approved pathway (sdp 00-14)
  - proposed foot bridge
  - proposed BOARDWALK
  - future lot lot
  - STREET LIGHT

**OPEN SPACE PATHWAY BRIDGE DETAILS**  
SCALE AS NOTED



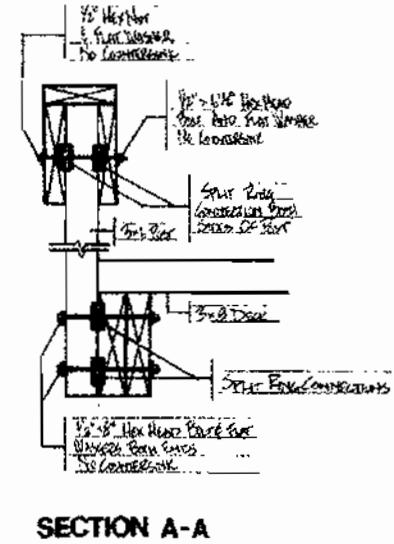
**FOOTING DETAILS**  
SCALE: 1/2" = 1'0"



**BRIDGE DETAILS**  
NO SCALE

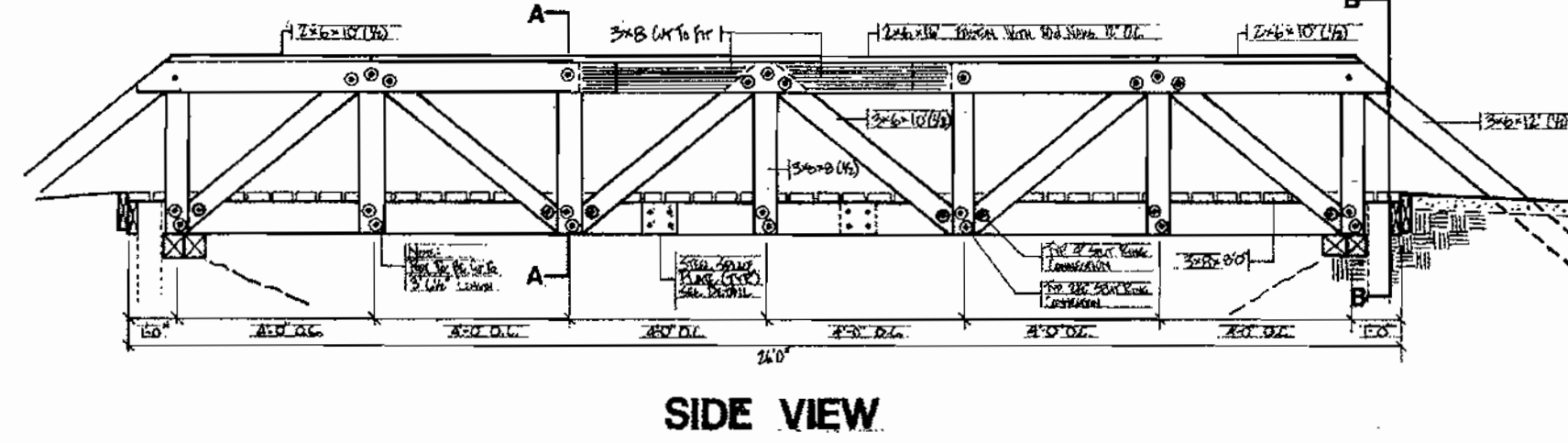
NOTE: THESE DETAILS HAVE BEEN PROVIDED BY THE COLUMBIA ASSOCIATION AND ARE GENERIC IN NATURE. THEY ARE INCLUDED ON THESE DRAWINGS TO ILLUSTRATE DETAILS THAT ARE PREFERRED BY THE COLUMBIA ASSOCIATION.

**SPLIT RING CONNECTION**  
Required for bridges over 18' only  
Scale: 1/2" = 1'0"

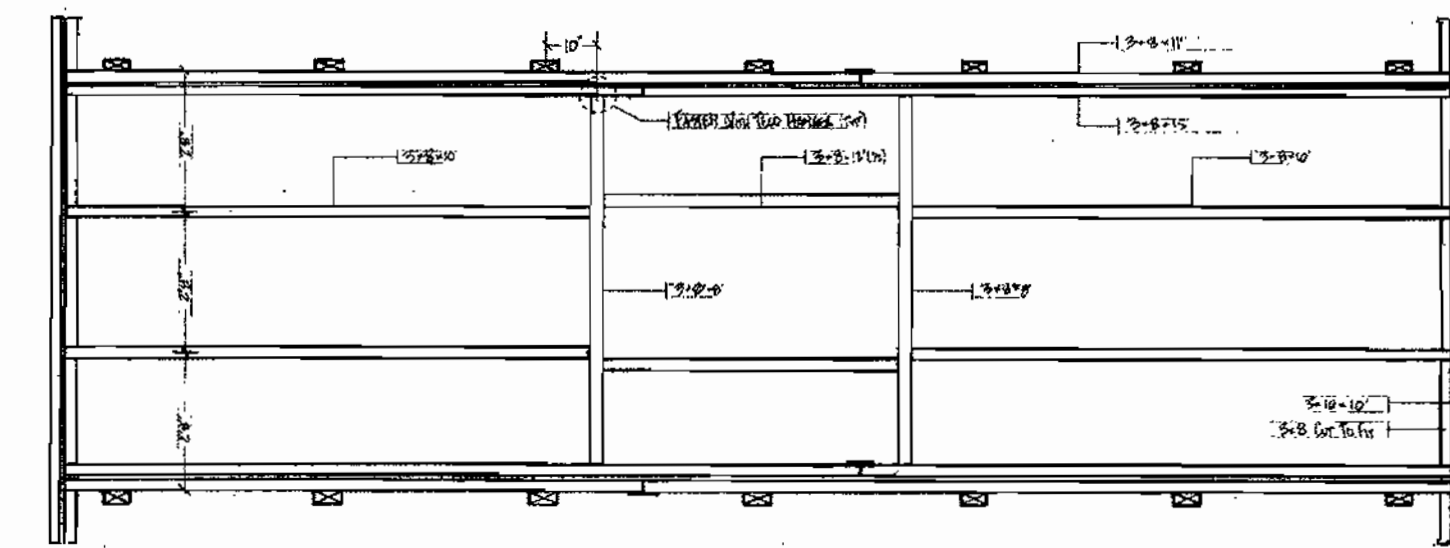


THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS REVIEWS THESE BRIDGE DRAWINGS FOR LINE, GRADE AND FLOODPLAIN IMPACT ONLY. THE DEPARTMENT OF LICENSES AND PERMITS PERFORMS STRUCTURAL REVIEW IN THE BUILDING PERMIT PROCESS.

**TYPICAL 26' BRIDGE**  
SCALE: 1/2" = 1'0"



**SIDE VIEW**

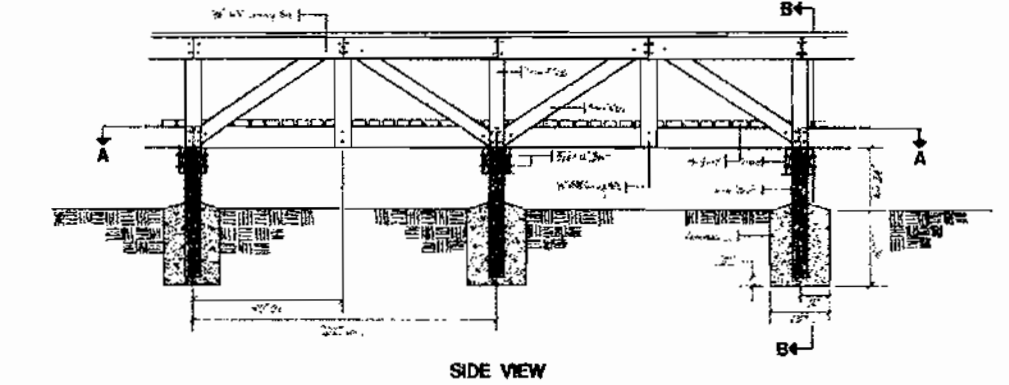


**DECK FRAMING PLAN**

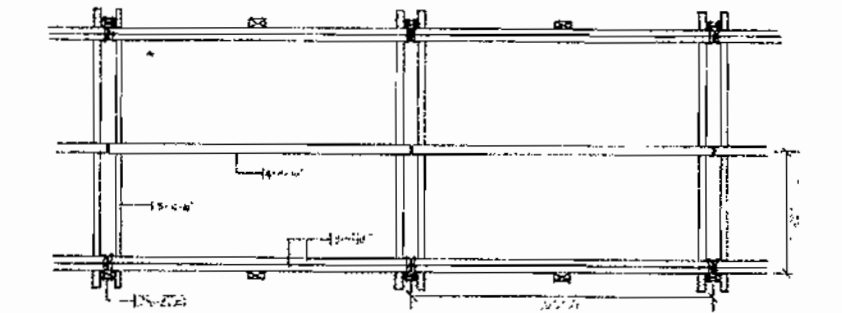


**TOP CHORD**

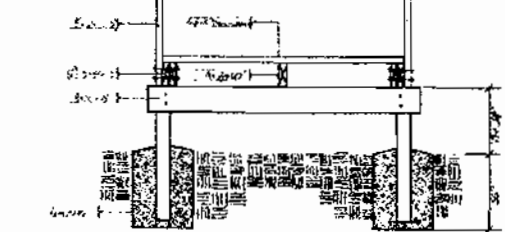
**TYPICAL BOARDWALK**  
SCALE: 1/2" = 1'0"



**SIDE VIEW**



**SECTION A-A**



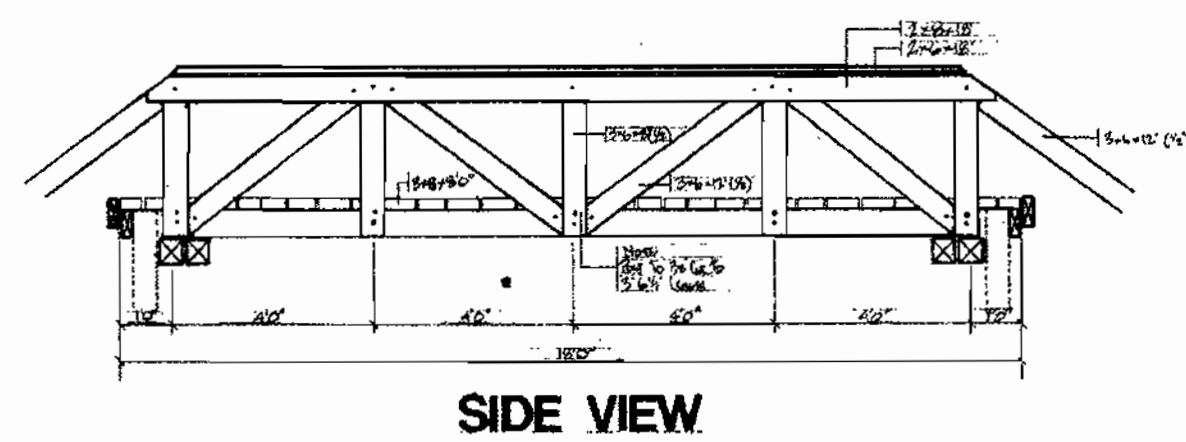
**SECTION B-B**

**BOARDWALK DETAILS**  
NO SCALE

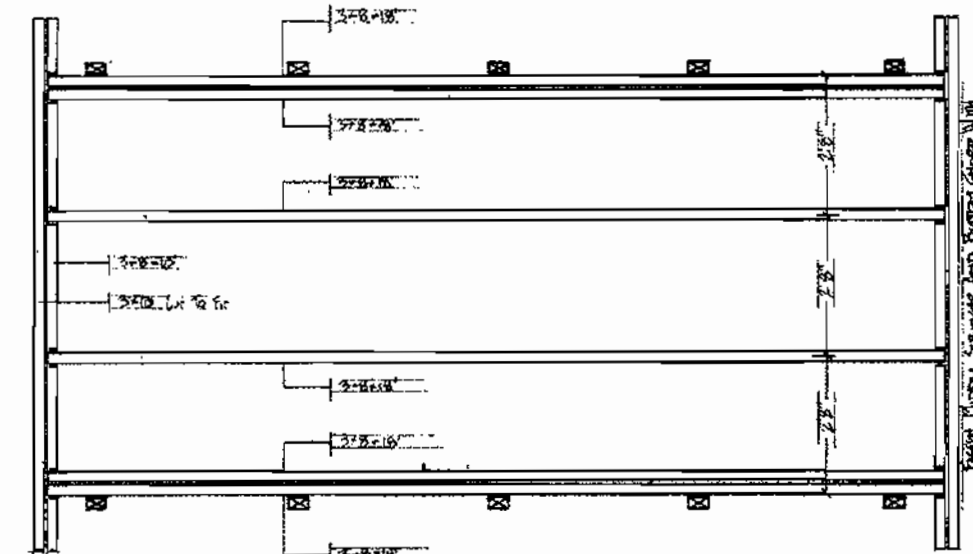
NOTE: THESE DETAILS HAVE BEEN PROVIDED BY THE COLUMBIA ASSOCIATION AND ARE GENERIC IN NATURE. THEY ARE INCLUDED ON THESE DRAWINGS TO ILLUSTRATE DETAILS THAT ARE PREFERRED BY THE COLUMBIA ASSOCIATION.

THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS REVIEWS THESE BRIDGE DRAWINGS FOR LINE, GRADE AND FLOODPLAIN IMPACT ONLY. THE DEPARTMENT OF LICENSES AND PERMITS PERFORMS STRUCTURAL REVIEW IN THE BUILDING PERMIT PROCESS.

**TYPICAL 18' BRIDGE**  
SCALE: 1/2" = 1'0"



**SIDE VIEW**

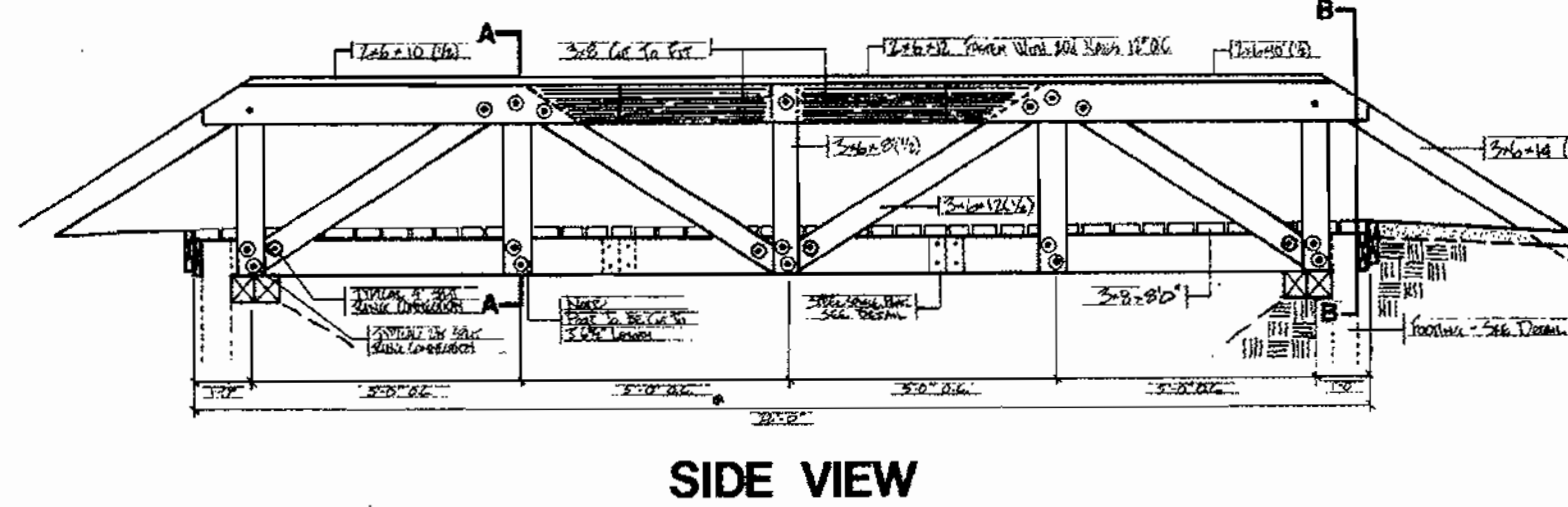


**DECK FRAMING PLAN**

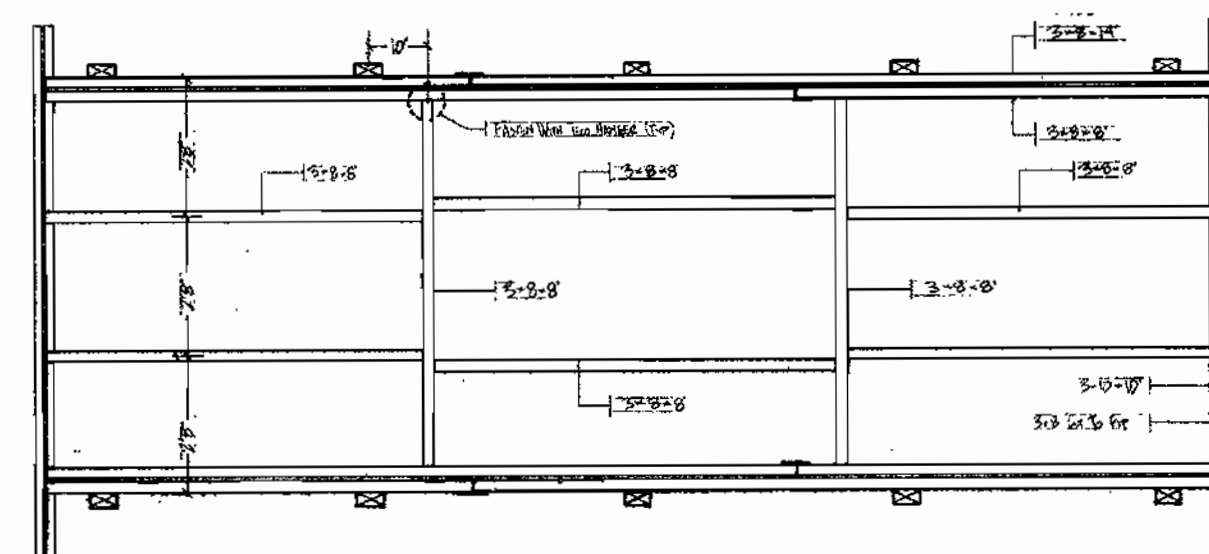


**TOP CHORD**

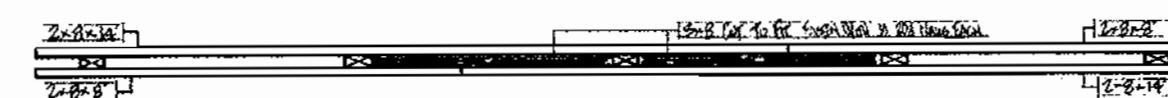
**TYPICAL 22' BRIDGE**  
SCALE: 1/2" = 1'0"



**SIDE VIEW**



**DECK FRAMING PLAN**



**TOP CHORD**

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>[Signature]</i>	5/21/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	5/21/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	6/1/01
DIRECTOR	DATE

Date	No	Revision Description

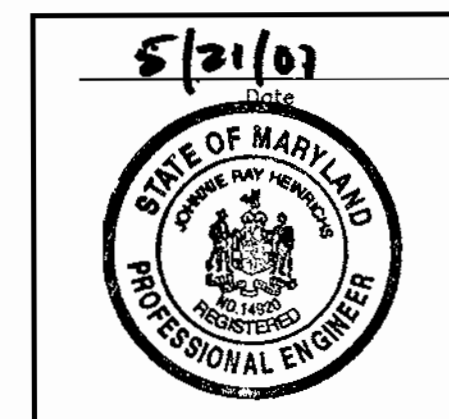
OWNER/DEVELOPER  
**THE COLUMBIA ASSOCIATION**  
ATTN: DENIS ELLIS  
10221 WINCOPIN CIRCLE SUITE 100  
COLUMBIA MARYLAND 21044-3410  
(410) 381-0383

PREPARED BY:  
**PHOENIX ENGINEERING, INC.**  
CONSULTING ENGINEERS  
813 MAIDEN CHOICE LANE, SUITE 300  
BALTIMORE, MARYLAND 21228  
(410) 247-8833 FAX 247-9397

AREA:  
COLUMBIA - VILLAGE OF RIVER HILL  
SECTION 4 AREA 6 OPEN SPACE LOTS 56,58,59,60,69,&70  
SECTION 4 AREA 4 OPEN SPACE LOTS 212,279,280,& 281  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE:  
**SITE DETAILS**

APPROVED  
PLANNING BOARD  
of HOWARD COUNTY  
DATE: 5-16-01



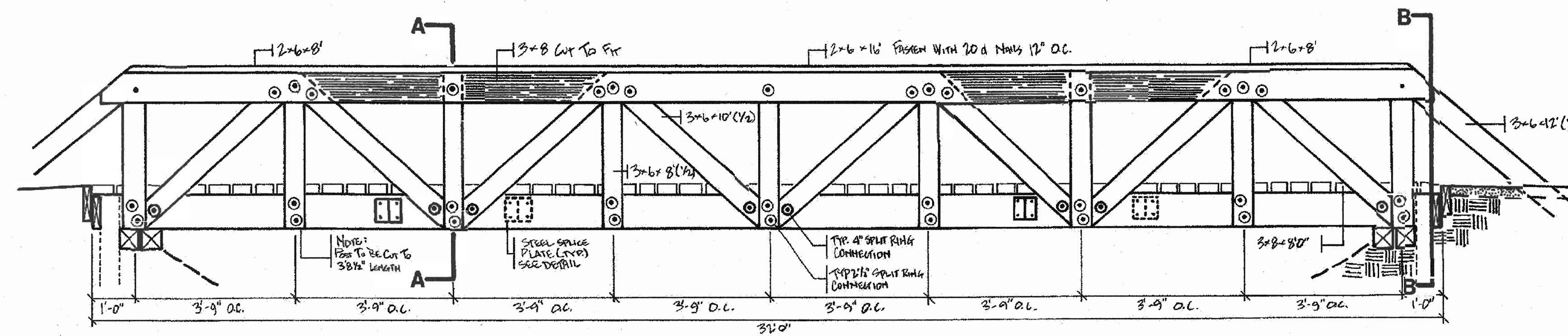
Des By	R.J.W.	Scale	AS SHOWN	Proj No	00-006
Drn By	R.H.D.	Date	MAY 21, 2001	DRAWING NO	de01PRPW.dwg
chk By	J.R.H.	SDP	01-21		4 OF 5

SDP.01.21

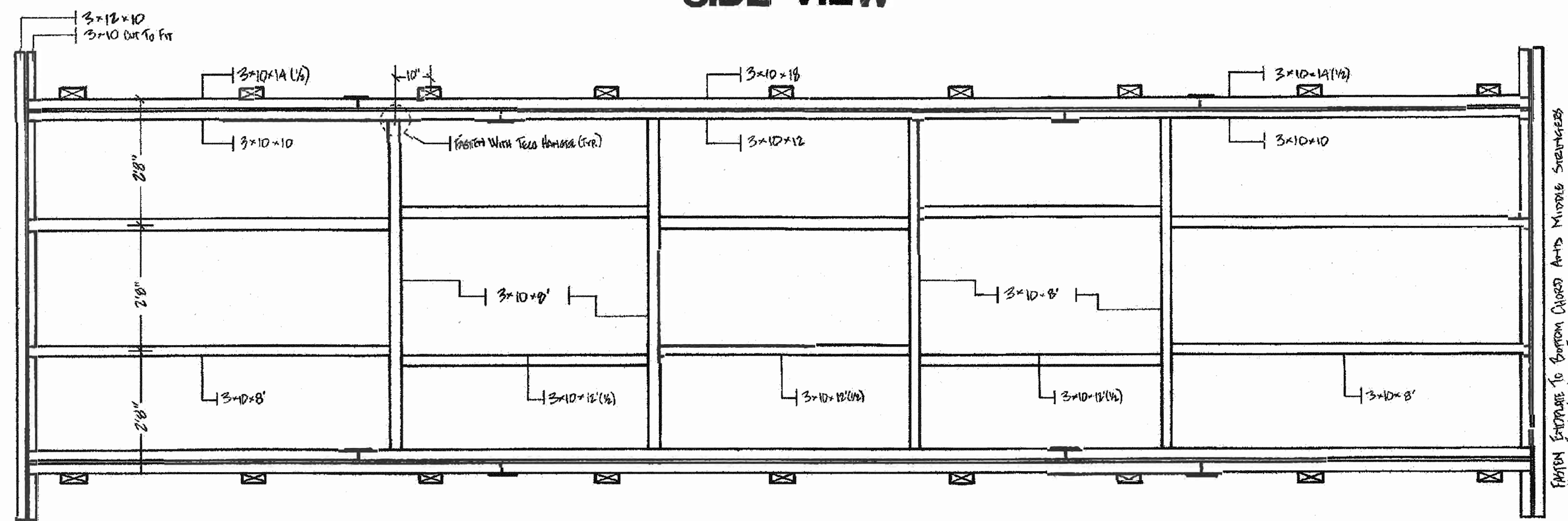


# TYPICAL 32' BRIDGE

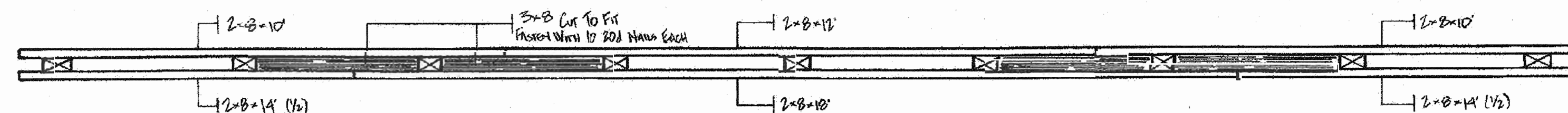
SCALE: 1/2" = 1'0"



SIDE VIEW

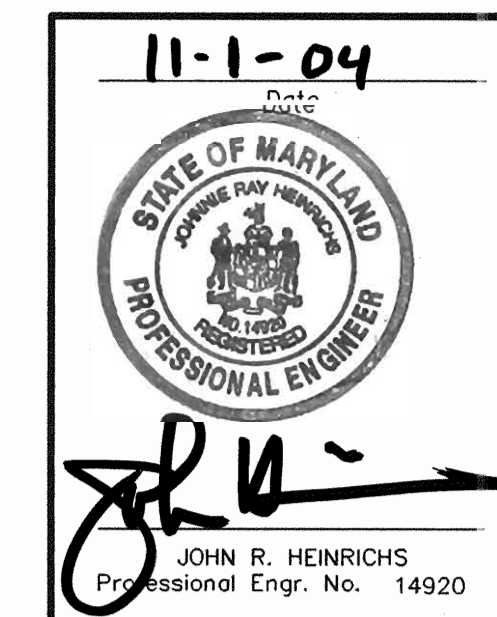


DECK FRAMING PLAN



TOP CHORD

10-12-04	△	Revised Pathway At Laurel Leaves Lane
Date	No	Revision Description
APPROVED DEPARTMENT OF PLANNING AND ZONING		
<i>John R. Heinrichs</i>		11/19/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION		DATE
<i>Chris Harris</i>		1/22/04
CHIEF, DIVISION OF LAND DEVELOPMENT AND RECEPTION		DATE
<i>Paul D. W. Jell</i>		1/24/04
DIRECTOR		DATE
OWNER/DEVELOPER:		
THE COLUMBIA ASSOCIATION 10221 WINCOPIN CIRCLE, SUITE 100 COLUMBIA, MARYLAND 21044-3410 ATTN: DENIS ELLIS (410) 381-0383		
 PHOENIX ENGINEERING, INC. CONSULTING ENGINEERS 1420-A JOH AVENUE BALTIMORE, MARYLAND 21227 (410) 247-8833 FAX 247-9397		
AREA: COLUMBIA - VILLAGE OF RIVER HILL SECTION 4 AREA 6 OPEN SPACE LOTS 56, 58, 59, 60, 69, & 70 SECTION 4 AREA 4 OPEN SPACE LOTS 212, 279, 280, & 281 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE: BRIDGE DETAIL		
Des by	R.J.W.	Scale AS SHOWN
Drn By	S.E.W.	Date OCTOBER, 2004
Chk By	J.R.H.	SDP 01-021
Professional Engr. No. 14920		Proj No 04-003
		DRAWING NO 6 OF 6

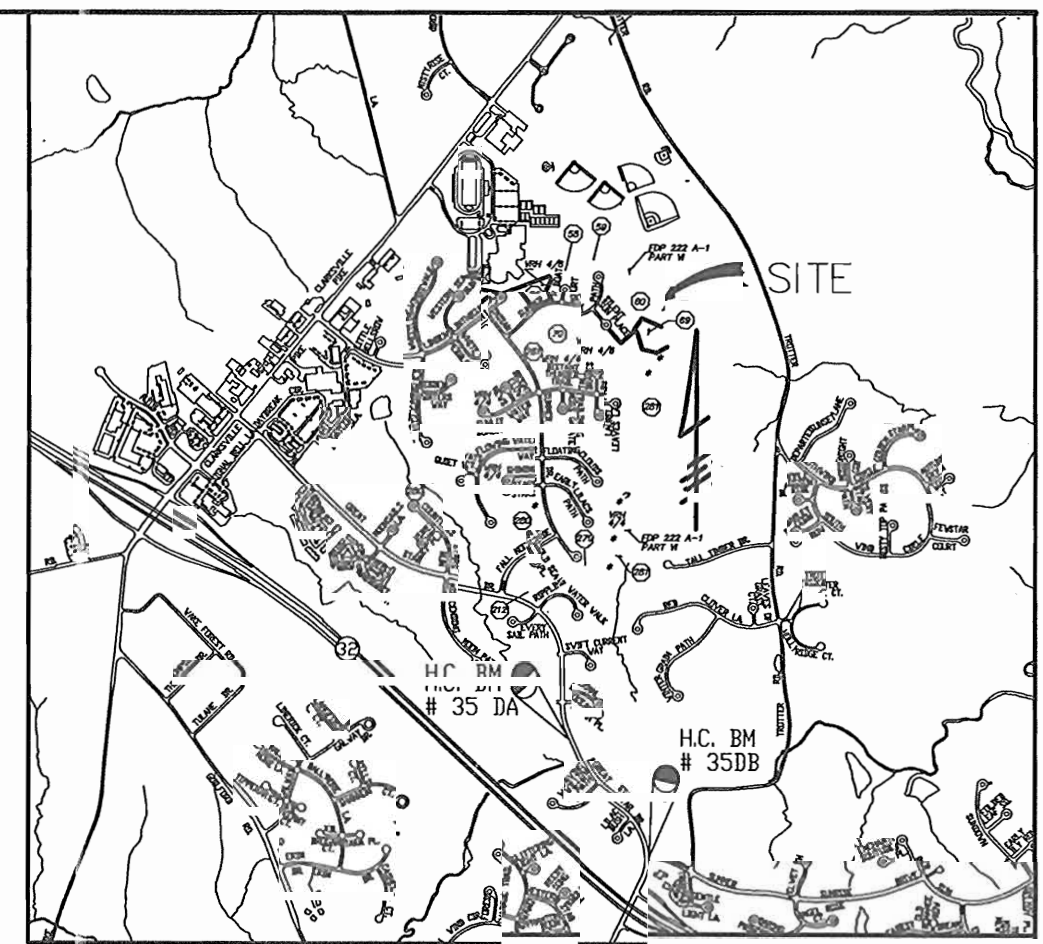


SP.01.21

SHEET INDEX	
NO.	DESCRIPTION
1	COVER SHEET
2	PATHWAY PLAN I - REV. SITE DEVELOPMENT PLAN
3	PATHWAY PLAN II
4	SITE DETAILS
5	SEDIMENT CONTROL NOTES AND DETAILS
6	BRIDGE DETAIL

# VILLAGE OF RIVER HILL PHEASANT RIDGE PATHWAY CONNECTOR

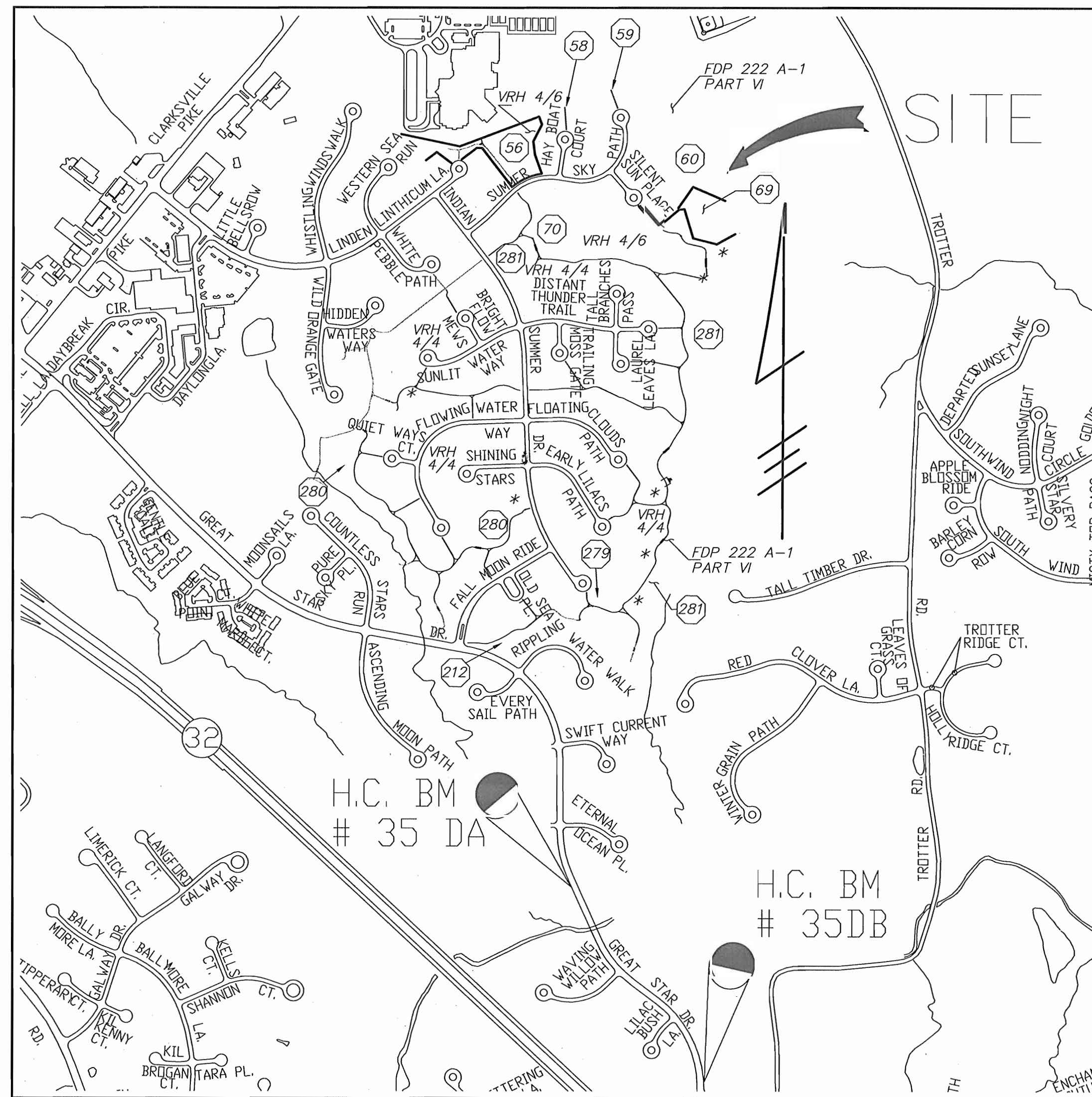
## 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP  
SCALE: 1" = 200'

- GENERAL NOTES
- TOPOGRAPHY SHOWN ON THESE DRAWINGS ARE BASED ON: ROAD PLANS (F-96-130, F-98-37) AND ON HOWARD COUNTY TOPOGRAPHY. THE INFORMATION SHOWN OR NOT SHOWN HEREON DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PROPER COMPLETION OF GRADING.
  - ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
  - DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF PHOENIX ENGINEERING MAY CAUSE THE WORK TO BE UNACCEPTABLE.
  - THE LOCATION OF UTILITIES AND UTILITY EASEMENTS SHOWN ON THESE PLANS ARE FROM APPROVED SDP'S AND RECORDED PLATS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S ACTIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
  - THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND MAINTAIN MINIMUM COVER IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
 

MIN. COVER OVER WATER MAINS:	3.5'
MIN. COVER OVER SANITARY LINES:	2.5' ABOVE INVERT
MIN. COVER OVER STORM DRAIN:	18"
MIN. COVER OVER GAS LINES:	(AS PER BGE REQUIREMENTS)
MIN. COVER OVER ELECTRIC LINES:	(AS PER BGE REQUIREMENTS)
  - THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL SUPPLEMENT UTILITY MARKINGS WITH THOSE OF A PRIVATE COMPANY HIRED AND PAID FOR BY THE CONTRACTOR TO INSURE THAT ALL EXISTING UTILITIES ARE CLEARLY MARKED PRIOR TO EXCAVATION.
  - FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
  - ALL PROPOSED IMPROVEMENTS WILL BE MAINTAINED BY THE COLUMBIA ASSOCIATION.
  - A FEE SHALL BE PAID IN LIEU OF STORMWATER MANAGEMENT IN THE AMOUNT OF \$14,432.00 FOR THIS PROJECT.
  - THE CONTRACTOR SHALL CONTACT THE BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 48 HOURS IN ADVANCE OF THE COMMENCEMENT OF WORK.
  - PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL STAKE OUT ALL CONSTRUCTION AND VERIFY ALL OFFSETS, SETBACKS, EXISTING UTILITY LOCATIONS (HORIZONTAL AND VERTICAL) AND DIMENSIONS.
  - THE PAVEMENT DETAIL SHOWN ON THESE PLANS (3" BITUMINOUS SURFACE COURSE OVER 4" CRUSHED AGGREGATE BASE) IS NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING, THE FINAL PAVEMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE. ANY PAVEMENT SECTION DETERMINED BY THE GEOTECHNICAL ENGINEER THAT IS LESS THAN THE HOWARD COUNTY MINIMUM STANDARD SHALL FIRST BE APPROVED BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. THE TESTING AND GEOTECHNICAL ENGINEER SHALL BE PROVIDED BY THE OWNER.
  - ALL FILL SHALL BE ROLLED TO A MINIMUM DEGREE OF COMPACTION TO 95% MAXIMUM STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT BETWEEN 0 AND 3% OF OPTIMUM AS DETERMINED BY ASTM-D-698. FILL UNDER PAVED AREAS, SHALL BE COMPACTED TO 98% MAXIMUM STANDARD PROCTOR DENSITY PER ASTM-D-698.
  - ALL TREES 12" IN DIAMETER OR GREATER SHALL REMAIN PROTECTED AND UNDAMAGED AT ALL TIMES UNLESS OTHERWISE INDICATED. THE CONTRACTOR WILL ATTEMPT TO PROTECT ALL OTHER TREES THROUGH FIELD ADJUSTMENTS TO THE LAYOUT.
  - THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, OR RIGHTS-OF-WAYS THAT MAY BE REQUIRED TO COMPLETE THE WORK SHOWN HEREON.
  - CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES AND SAFETY PRECAUTIONS AND PROGRAMS.
  - THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN SEDIMENT AND EROSION CONTROL MEASURES AND NOTIFY THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410) 313-1855.
  - ADJUSTMENTS TO THE SEQUENCE OF CONSTRUCTION MUST BE APPROVED BY THE HOWARD COUNTY CONSTRUCTION AND INSPECTION DIVISION PRIOR TO SUCH ADJUSTMENTS.
  - ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH HOWARD COUNTY SPECIFICATIONS AND STANDARDS.
  - ALL ROADS SHOWN ON THESE PLANS ARE PUBLIC ROADS.
  - A PERMIT APPLICATION TO ALLOW CONSTRUCTION IN WETLANDS, WETLAND BUFFERS, WATERWAYS, AND FLOODPLAINS IS UNDER REVIEW BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT. THE TRACKING NUMBER IS 00-NT-0435/200067166 THIS PERMIT WILL BE GIVEN TO HOWARD COUNTY WHEN RECEIVED.
  - THIS PROJECT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS BECAUSE IT IS PLANNED UNIT DEVELOPMENT WHICH HAS PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.
  - THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY WHITMAN REQUARDT AND ASSOCIATES, DATED 12/94, AND WAS APPROVED ON 1/20/95.
  - THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY EXPLORATION RESEARCH AND ASSOCIATES AND WAS APPROVED ON 1/20/95.
  - NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
  - THIS PLAN IS SUBJECT TO WP 01-86 WHICH WAIVES SECTIONS 16.116(a)(1) AND 16.116(a)(2)(i) RESPECTIVELY PROHIBITING GRADING OR REMOVAL OF VEGETATIVE COVER WITHIN 25 FEET OF A WETLANDS AND WITHIN 75 FEET OF A PERENNIAL STREAM OFF OF EARLY LILACS PATH.



LOCATION MAP

SCALE: 1" = 600'

212 = OPEN SPACE LOT NUMBER (TYP.)

\* = EX. STORM WATER MANAGEMENT FACILITY

BM #35DA ELEV. 351.590  
ALUMINUM DISC ON CONCRETE MONUMENT SET FLUSH WITH GROUND 2.1' BEHIND FACE OF CURB ON WEST SIDE OF GREAT STAR DRIVE, 420'+/- SOUTH OF TIDES TERRACE AND 1.6' NORTH OF A STORM DRAIN INLET  
NORTHING 558918.643  
EASTING 1333137.324

BM #35DB ELEV. 401.640  
ALUMINUM DISC ON CONCRETE MONUMENT SET FLUSH WITH GROUND 7.3' BEHIND FACE OF CURB ON EAST SIDE OF GREAT STAR DRIVE AND 46.9' NORTH OF LIGHT POLE AT INTERSECTION OF SUMMER SUNRISE DRIVE  
NORTHING 557698.168  
EASTING 1333974.579

PREVIOUS FILE NUMBERS				
SQUARE FEET	ACREAGE	LOT	FDP	F
53799	1.2351	212	222 A-1 PART VI	F-96-130
9311	0.2138	279		
532324	12.2204	280	222 A-1 PART VI	F-98-120
1112295	25.5348	281		
100025	2.2963	P/O 56		
2927	0.0672	58	222 A-1 PART VI	F-98-37
2539	0.0583	59		
256661	5.8921	60		
83149	1.4088	69	222 A-1 PART VI	F-00-09
415763	9.5446	70		

SITE ANALYSIS

TOTAL AREA OF OPEN SPACE LOTS	58.9714 AC.
TOTAL AREA OF THIS SUBMISSION	58.9714 AC OR 2,568,793 S.F.
ZONING:	NT-OS
PROPOSED USE:	PEDESTRIAN PATHWAYS
LENGTH OF PATHWAYS:	14,377 L.F.
LENGTH OF BOARDWALKS & BRIDGES:	204 L.F.
TOTAL LIMIT OF DISTURBANCE:	4.32 AC OR 188,185 S.F.
PARKING REQUIRED:	0 SPACES
PARKING PROVIDED:	0 SPACES

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHEF, DEVELOPMENT ENGINEERING DIVISION

CHEF, DIVISION OF LAND DEVELOPMENT

DATE: 5/31/01

Date	No.	Revision Description
10-12-04	1	REVISED PATHWAY AT LAUREL LEAVES LANE

OWNER/DEVELOPER

**THE COLUMBIA ASSOCIATION**

ATTN: DENIS ELLIS

10221 WINCOPIN CIRCLE SUITE 100  
COLUMBIA MARYLAND 21044-3410  
(410) 381-0383

PREPARED BY:

**PHOENIX ENGINEERING, INC.**  
CONSULTING ENGINEERS  
813 MAIDEN CHOICE LANE, SUITE 300  
BALTIMORE, MARYLAND 21228  
(410) 247-8833 FAX 247-9397

AREA:

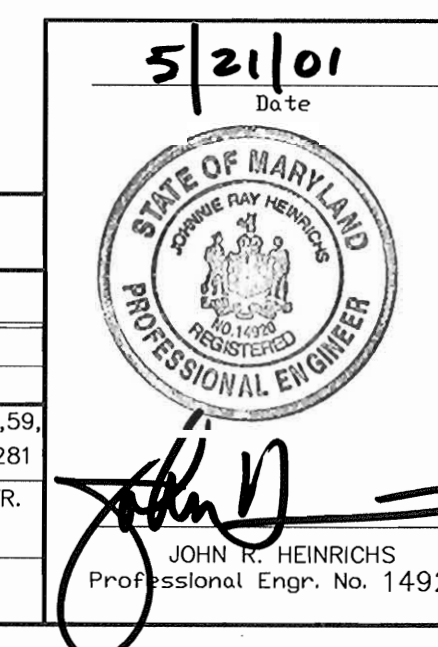
COLUMBIA - VILLAGE OF RIVER HILL  
SECTION 4 AREA 6 OPEN SPACE LOTS 56,58,59,60,69,&70  
SECTION 4 AREA 4 OPEN SPACE LOTS 212,279,280,& 281  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE:

**COVER SHEET**

Des By	R.J.W.	Scale	AS SHOWN	Proj No	00-006
Dwn By	R.H.D.	Date	MAY 21, 2001	DRAWING NO	101PRPW.dwg
Ckx By	J.R.H.	SDP	01-21		1 OF 6

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE: 5-16-01



ADDRESS CHART	
LOT No.	STREET ADDRESS
OS LOT 281	5857 INDIAN SUMMER DRIVE
SUBDIVISION NAME	SECT./AREA
VILLAGE OF RIVER HILL	4/4 & 4/6
PARCEL : OS LOTS	56,58,59, 60,69,70,212,279,280 & 281
PLATS	BLOCK
13285-90	1 & 7
14014-19	
WATER CODE	SEWER CODE
1-10	665300

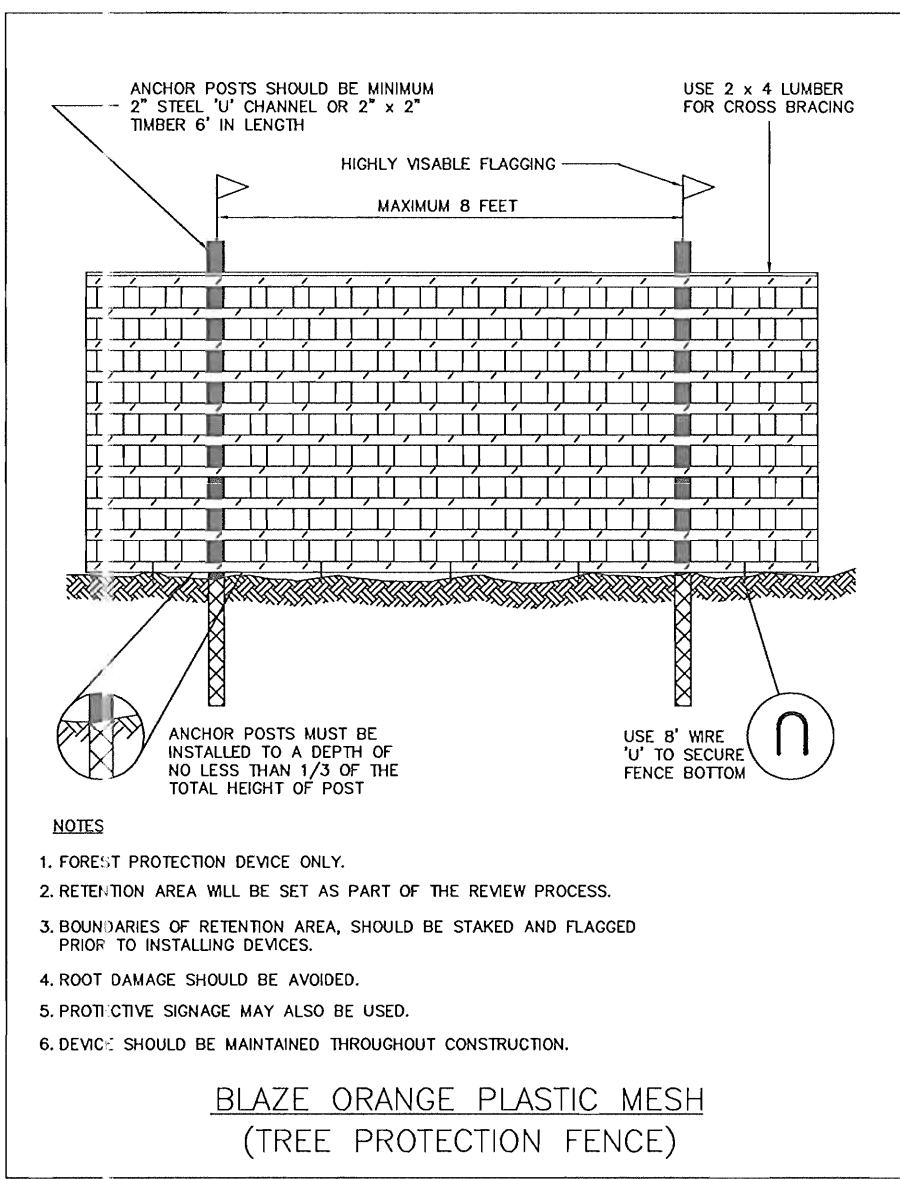
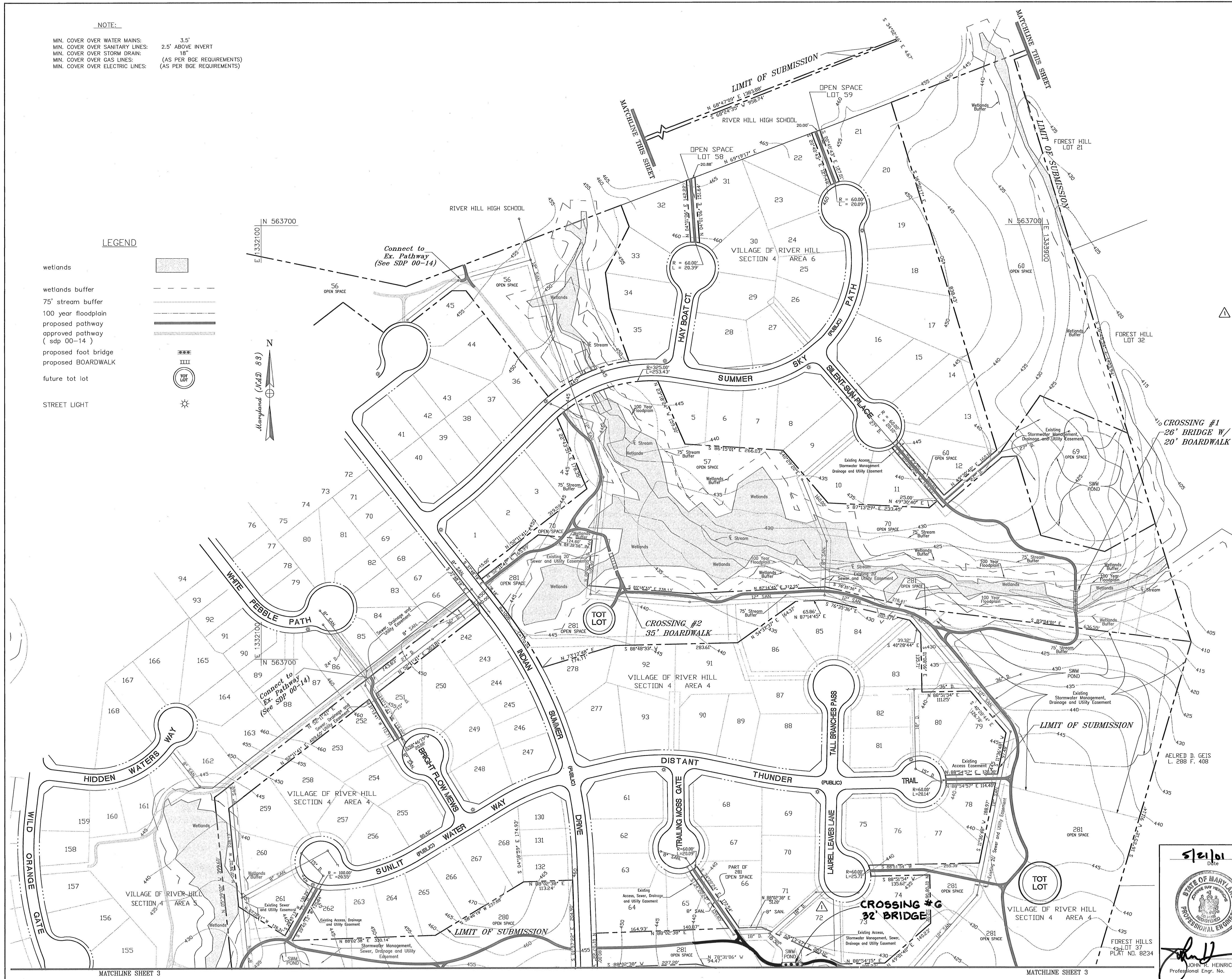
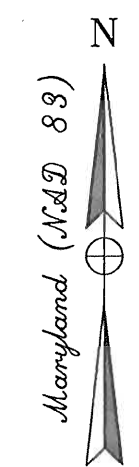
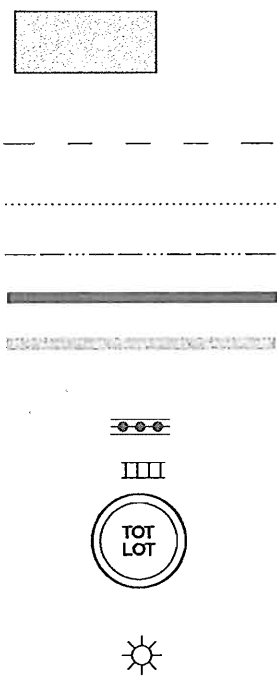
SDP-01-21

**NOTE:**

MIN. COVER OVER WATER MAINS: 3.5'  
 MIN. COVER OVER SANITARY LINES: 2.5' ABOVE INVERT  
 MIN. COVER OVER STORM DRAIN: 18"  
 MIN. COVER OVER GAS LINES: (AS PER BGE REQUIREMENTS)  
 MIN. COVER OVER ELECTRIC LINES: (AS PER BGE REQUIREMENTS)

**LEGEND**

- wetlands
- wetlands buffer
- 75' stream buffer
- 100 year floodplain
- proposed pathway
- approved pathway (sdp 00-14)
- proposed foot bridge
- proposed BOARDWALK
- future tot lot
- STREET LIGHT



**NOTE:** THE PURPOSE OF THIS REVISION IS TO MOVE THE PROPOSED AWAY FROM THE REAR OF LOT #72 LAUREL LEAVES LANE

**APPROVED**  
 PLANNING BOARD  
 of HOWARD COUNTY  
 DATE 5-16-01

PATHWAY DISTURBANCE/CONSTRUCTION AND RESTABILIZATION IS TO OCCUR IN 200 LF SEGMENTS MAXIMUM

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
CHIEF, DEVELOPMENT ENGINEERING DIVISION <i>Alan Dammann</i>	5/31/01 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT <i>Candy Stannard</i>	5/31/01 DATE
<i>John R. Heinrichs</i>	6/1/01 DATE

10-12-04	REVISION	REVISED PATHWAY AT LAUREL LEAVES LANE
----------	----------	---------------------------------------

OWNER/DEVELOPER  
**THE COLUMBIA ASSOCIATION**  
 ATTN: DENIS ELLIS  
 10221 WINCOPIN CIRCLE SUITE 100  
 COLUMBIA MARYLAND 21044-3410  
 (410) 381-0383

PREPARED BY:  
**PHOENIX ENGINEERING, INC.**  
 CONSULTING ENGINEERS  
 813 MAIDEN CHOICE LANE, SUITE 300  
 BALTIMORE, MARYLAND 21228  
 (410) 247-8833 FAX 247-9397

AREA:  
 COLUMBIA - VILLAGE OF RIVER HILL  
 SECTION 4 AREA 6 OPEN SPACE LOTS 56, 58, 59, 60, 69, & 70  
 SECTION 4 AREA 4 OPEN SPACE LOTS 212, 279, 280, & 281  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

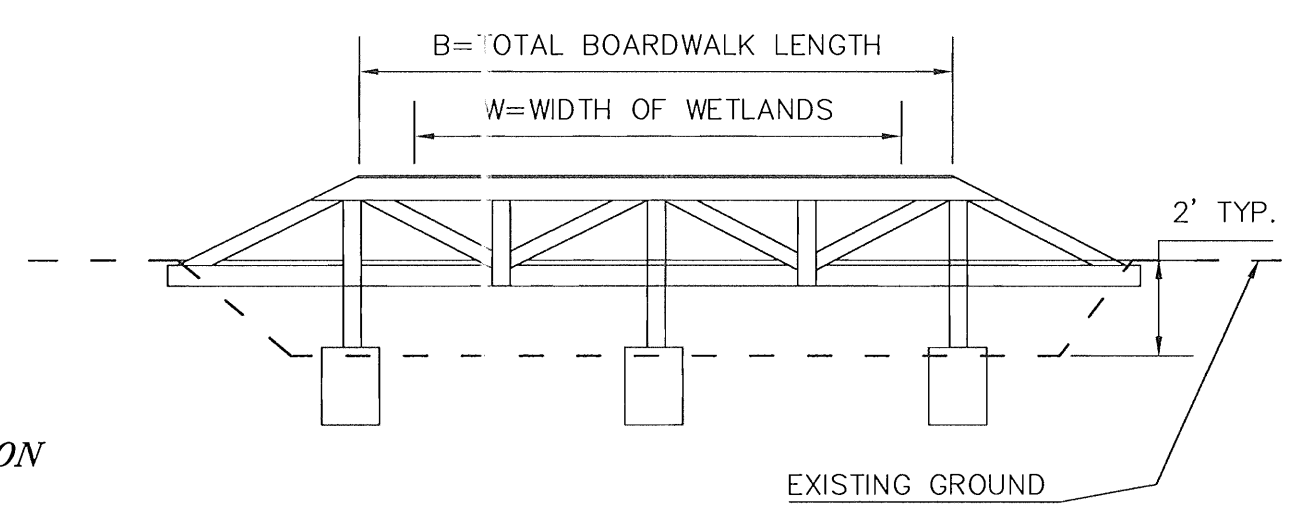
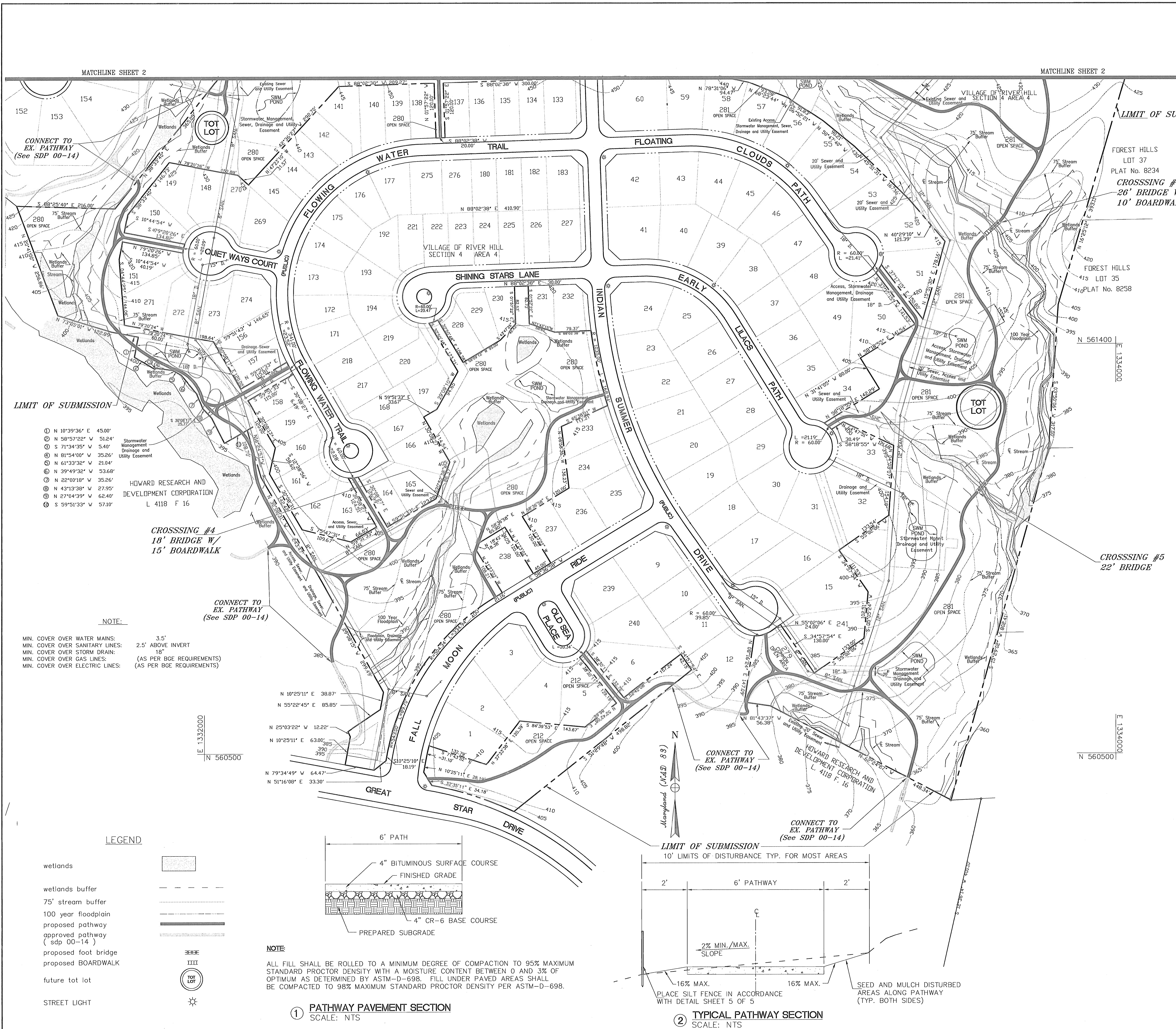
**PATHWAY PLAN I**  
 REVISED SITE DEVELOPMENT PLAN

Des By	R.J.W.	Scale	1" = 100'	Proj No	00-006
Drn By	R.H.D.	Date	MAY 21, 2001	DRAWING NO	ps01PRPW.dwg
Chk By	J.R.H.	SDP	01-21		2 OF 6

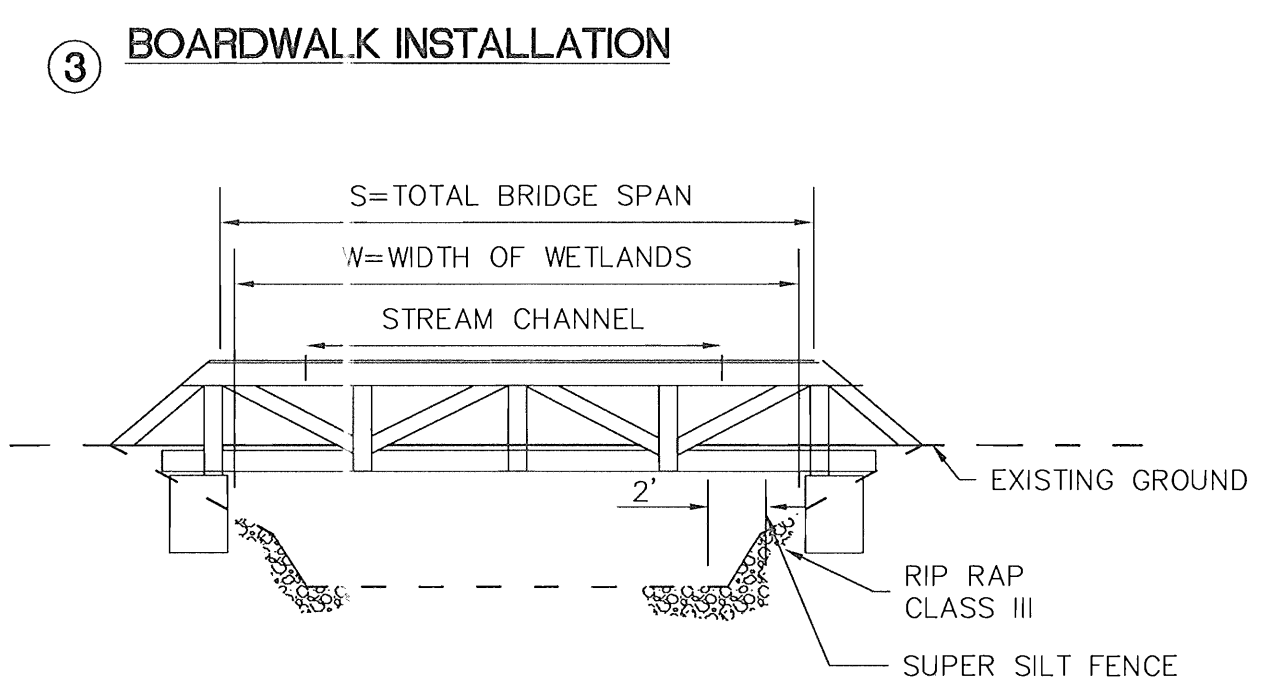
5/21/01  
 Date

**JOHN R. HEINRICHS**  
 Professional Engr. No. 14920





- NOTES:**
- SEE BOARDWALK DETAILS SHEET 4
  - LENGTH OF TYPICAL BOARDWALKS SHALL EXCEED WIDTH OF WETLAND AT THAT LOCATION.
  - SEE TYPICAL BRIDGE AND BOARDWALK INSTALLATION PLAN THIS SHEET FOR SILT FENCE PLACEMENT.



- NOTES:**
- SEE BRIDGE DETAILS SHEET 4
  - RIPRAP SHALL BE INSTALLED USING SANDBAG/STONE DIVERSION. SEE DETAIL THIS SHEET.
  - SPAN OF TYPICAL BRIDGES SHALL EXCEED WIDTH OF WETLAND AT THAT LOCATION.
  - SEE TYPICAL BRIDGE AND BOARDWALK INSTALLATION PLAN THIS SHEET.

PATHWAY DISTURBANCE/CONSTRUCTION AND RESTABILIZATION IS TO OCCUR IN 200 LF SEGMENTS MAXIMUM

APPROVED:	DEPARTMENT OF PLANNING AND ZONING	
CHIEF, DEVELOPMENT ENGINEERING DIVISION	<i>[Signature]</i>	5/21/01
CHIEF, DIVISION OF LAND DEVELOPMENT	<i>[Signature]</i>	5/31/01
DIRECTOR	<i>[Signature]</i>	6/1/01

Date	No	Revision Description

OWNER/DEVELOPER  
**THE COLUMBIA ASSOCIATION**  
 ATTN: DENIS ELLIS  
 10221 WINCOPIN CIRCLE SUITE 100  
 COLUMBIA MARYLAND 21044-3410  
 (410) 381-0383

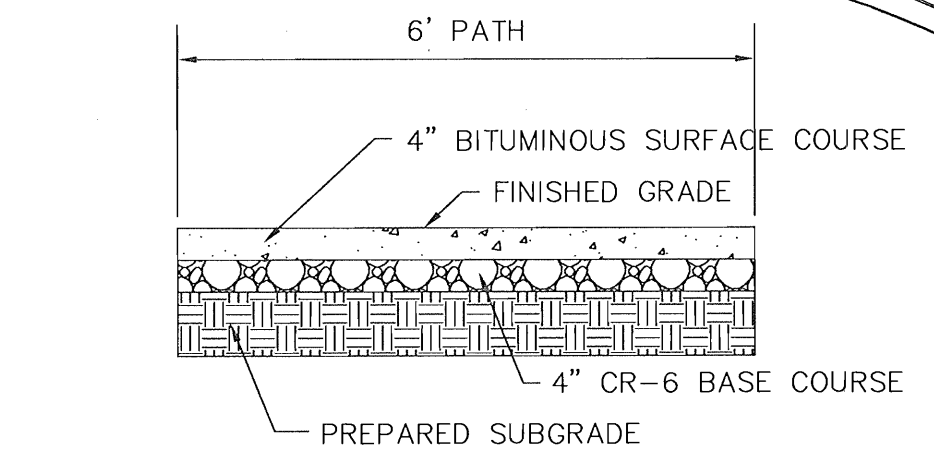
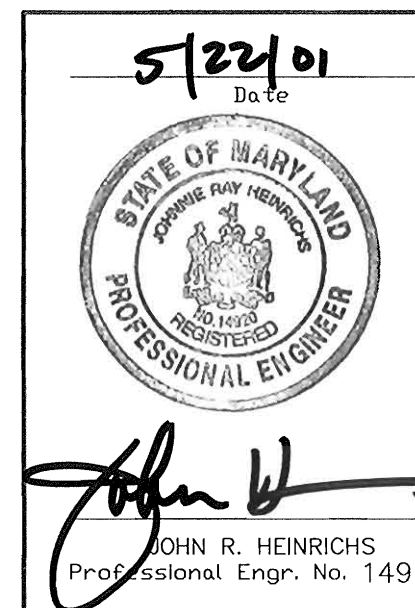
PREPARED BY:  
**PHOENIX ENGINEERING, INC.**  
 CONSULTING ENGINEERS  
 813 MAIDEN CHOICE LANE, SUITE 300  
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 (410) 247-8833 FAX 247-9397

AREA:  
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 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

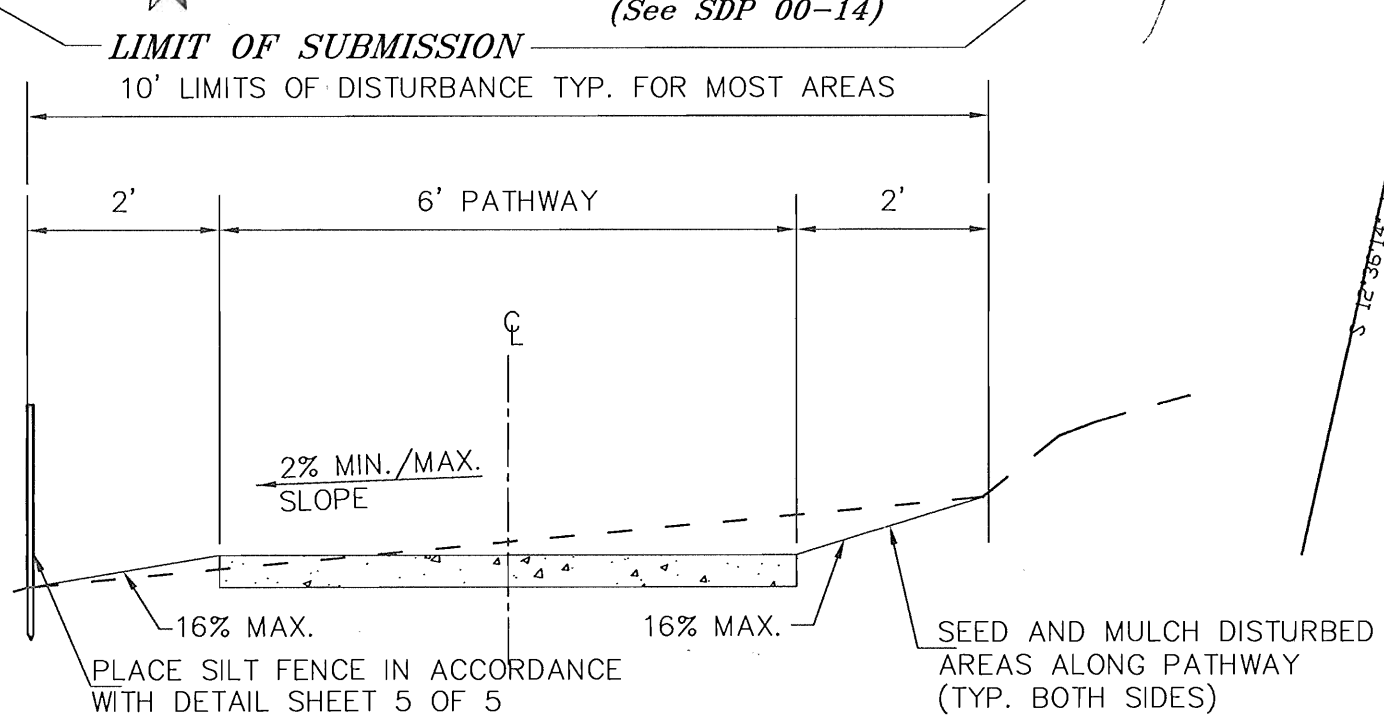
TITLE:  
**PATHWAY PLAN II**

Des By	R.J.W.	Scale	1" = 100'	Proj No	00-006
Drn By	R.H.D.	Date	MAY 21, 2001	DRAWING NO	ps02PRPW.dwg
Chk By	J.R.H.	SDP	- 01-21		3 OF 6

**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY.  
 DATE 5-16-01



**NOTE:**  
 ALL FILL SHALL BE ROLLED TO A MINIMUM DEGREE OF COMPACTION TO 95% MAXIMUM STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT BETWEEN 0 AND 3% OF OPTIMUM AS DETERMINED BY ASTM-D-698. FILL UNDER PAVED AREAS SHALL BE COMPACTED TO 98% MAXIMUM STANDARD PROCTOR DENSITY PER ASTM-D-698.



**2 TYPICAL PATHWAY SECTION**  
 SCALE: NTS

**1 PATHWAY PAVEMENT SECTION**  
 SCALE: NTS

**LEGEND**

- wetlands
- wetlands buffer
- 75' stream buffer
- 100 year floodplain
- proposed pathway
- approved pathway (sdp 00-14)
- proposed foot bridge
- proposed BOARDWALK
- future tot lot
- STREET LIGHT

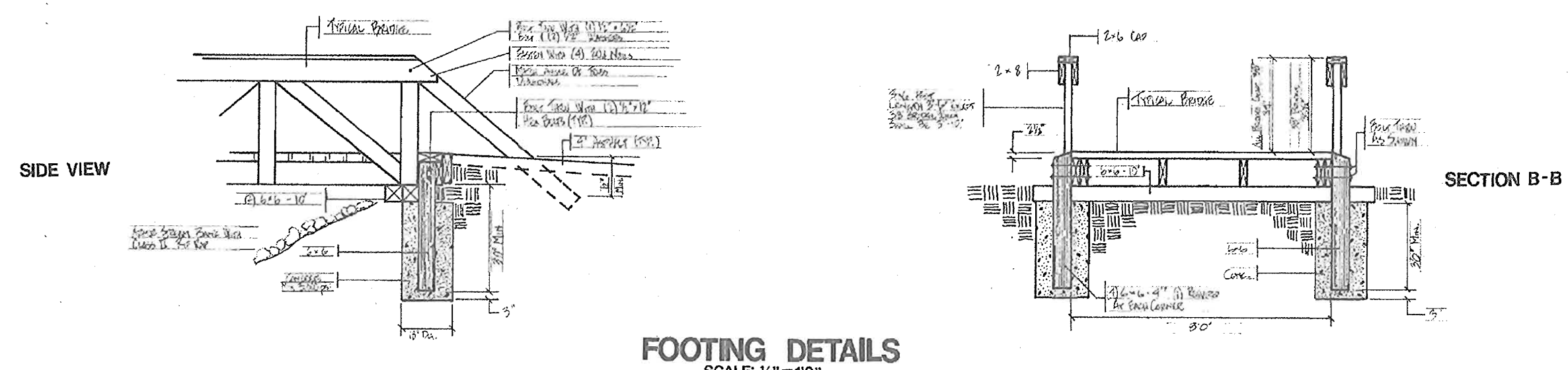
**NOTE:**

- MIN. COVER OVER WATER MAINS: 3.5'
- MIN. COVER OVER SANITARY LINES: 2.5' ABOVE INVERT
- MIN. COVER OVER STORM DRAIN: 18"
- MIN. COVER OVER GAS LINES: (AS PER BGE REQUIREMENTS)
- MIN. COVER OVER ELECTRIC LINES: (AS PER BGE REQUIREMENTS)

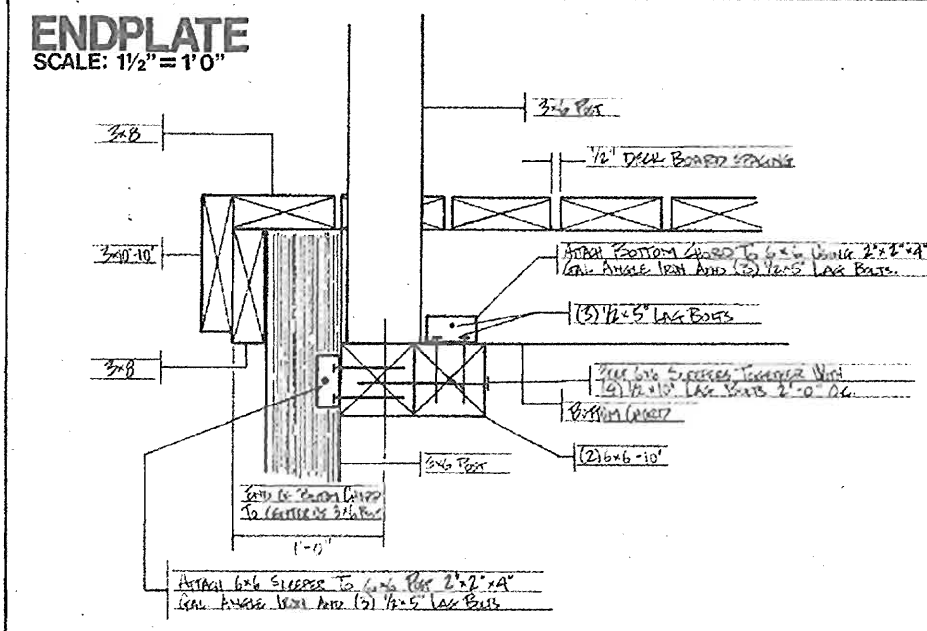
G:\00\00-006\006\006.dwg Mon May 21 08:48:47 2001

SDP01-21

**OPEN SPACE PATHWAY BRIDGE DETAILS**  
SCALE AS NOTED

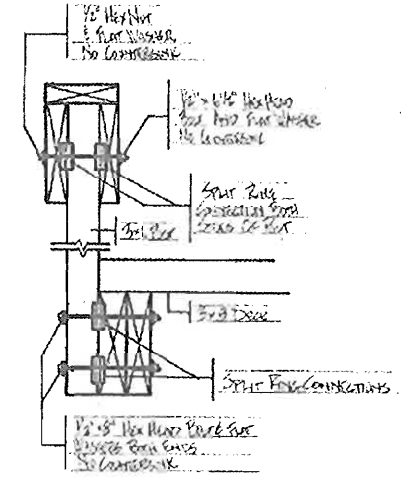


**FOOTING DETAILS**  
SCALE: 1/2" = 1'0"



**ENDPLATE**  
SCALE: 1/2" = 1'0"

**SPLIT RING CONNECTION**  
Required for bridges over 18' only  
Scale: 1/2" = 1'0"



**SECTION A-A**

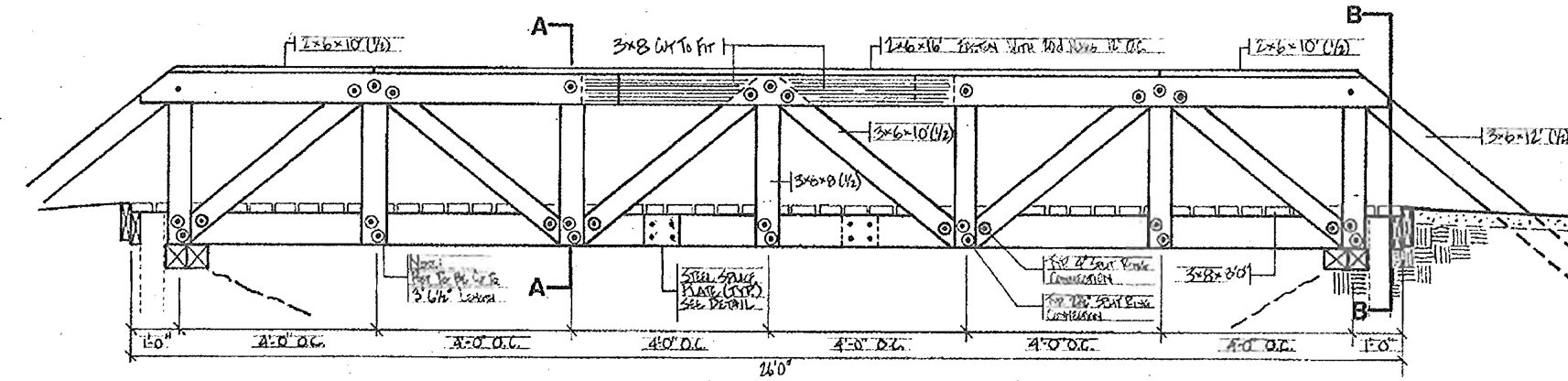
**BRIDGE DETAILS**  
NO SCALE

NOTE:  
THESE DETAILS HAVE BEEN PROVIDED BY THE COLUMBIA ASSOCIATION AND ARE GENERIC IN NATURE. THEY ARE INCLUDED ON THESE DRAWINGS TO ILLUSTRATE DETAILS THAT ARE PREFERRED BY THE COLUMBIA ASSOCIATION.

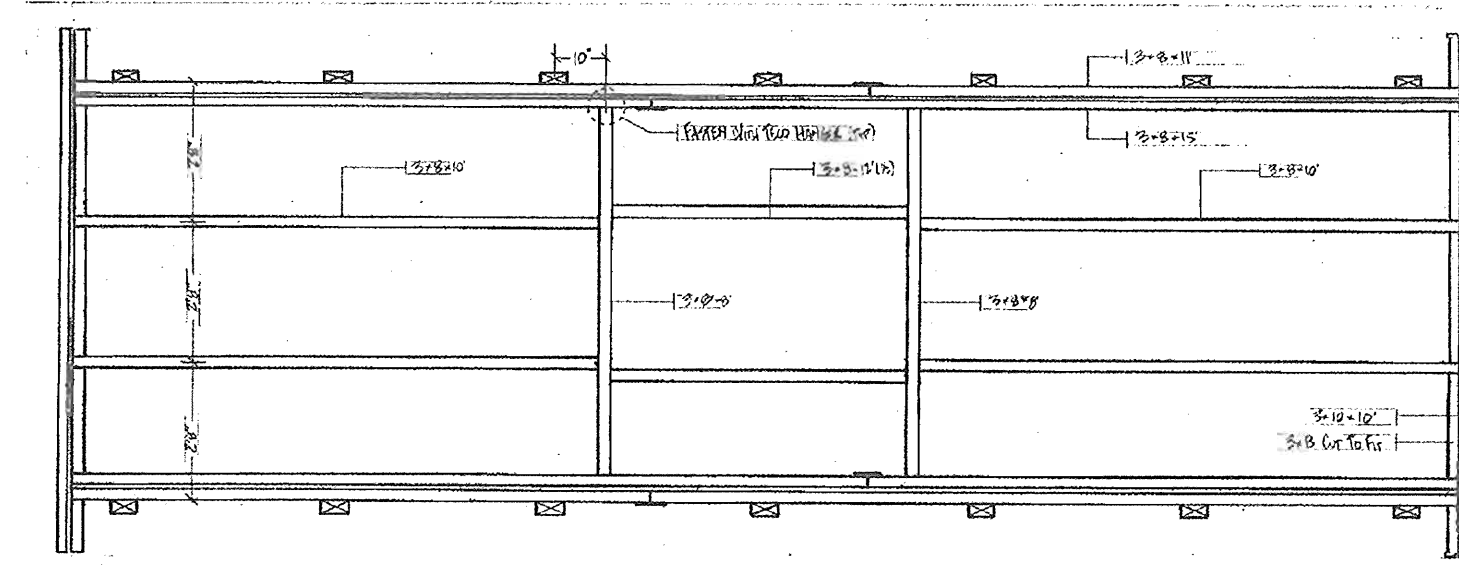
THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS REVIEWS THESE BRIDGE DRAWINGS FOR LINE, GRADE AND FLOODPLAIN IMPACT ONLY. THE DEPARTMENT OF LICENSES AND PERMITS PERFORMS STRUCTURAL REVIEW IN THE BUILDING PERMIT PROCESS.

**TYPICAL 26' BRIDGE**

SCALE: 1/2" = 1'0"



**SIDE VIEW**



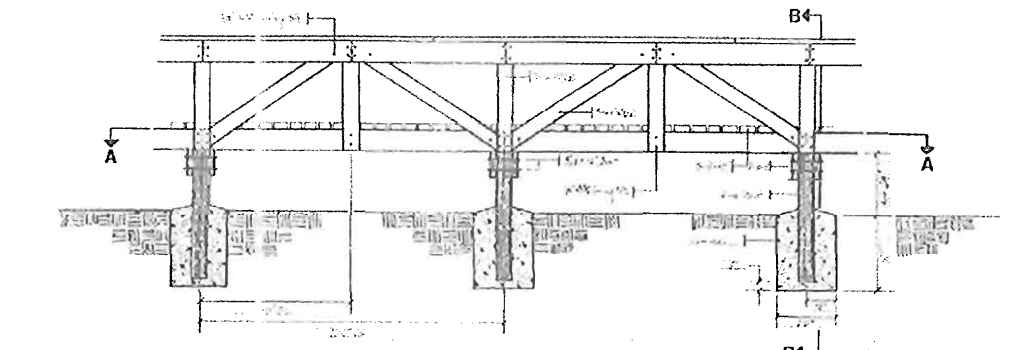
**DECK FRAMING PLAN**



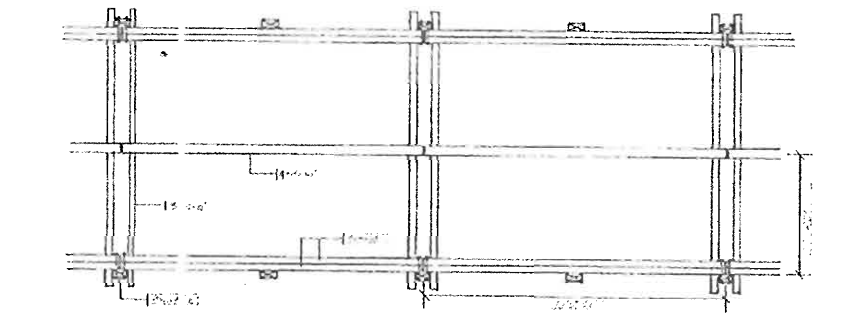
**TOP CHORD**

**TYPICAL BOARDWALK**

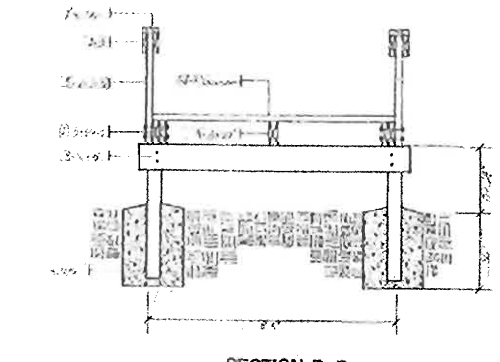
SCALE: 1/2" = 1'0"



**SIDE VIEW**



**SECTION A-A**



**SECTION B-B**

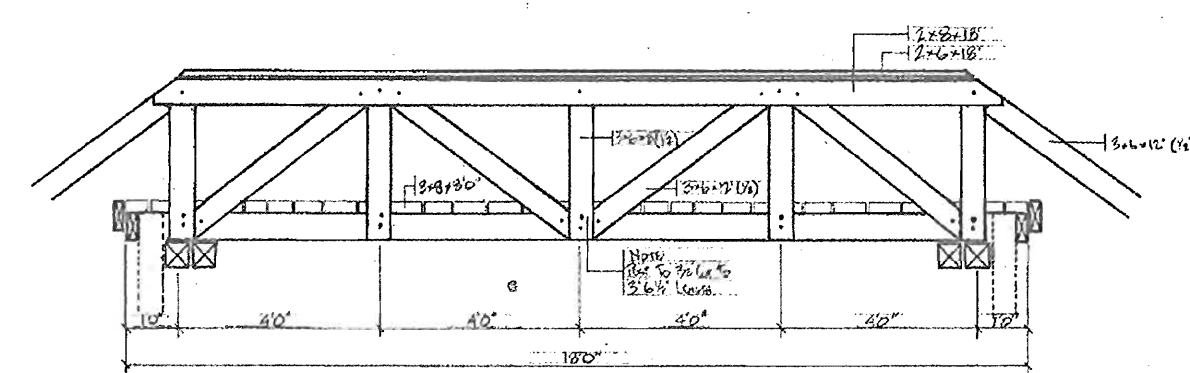
**BOARDWALK DETAILS**  
NO SCALE

NOTE:  
THESE DETAILS HAVE BEEN PROVIDED BY THE COLUMBIA ASSOCIATION AND ARE GENERIC IN NATURE. THEY ARE INCLUDED ON THESE DRAWINGS TO ILLUSTRATE DETAILS THAT ARE PREFERRED BY THE COLUMBIA ASSOCIATION.

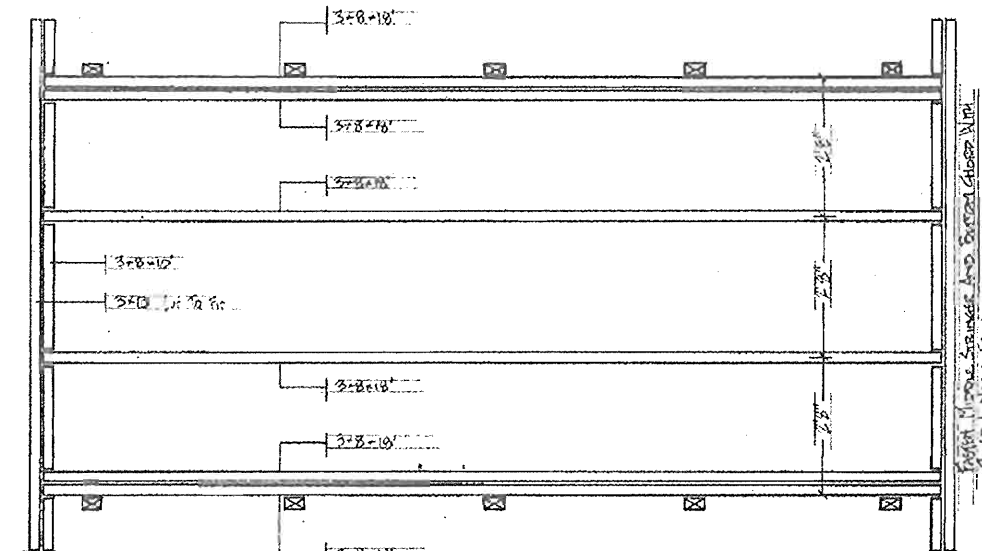
THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS REVIEWS THESE BRIDGE DRAWINGS FOR LINE, GRADE AND FLOODPLAIN IMPACT ONLY. THE DEPARTMENT OF LICENSES AND PERMITS PERFORMS STRUCTURAL REVIEW IN THE BUILDING PERMIT PROCESS.

**TYPICAL 18' BRIDGE**

SCALE: 1/2" = 1'0"



**SIDE VIEW**



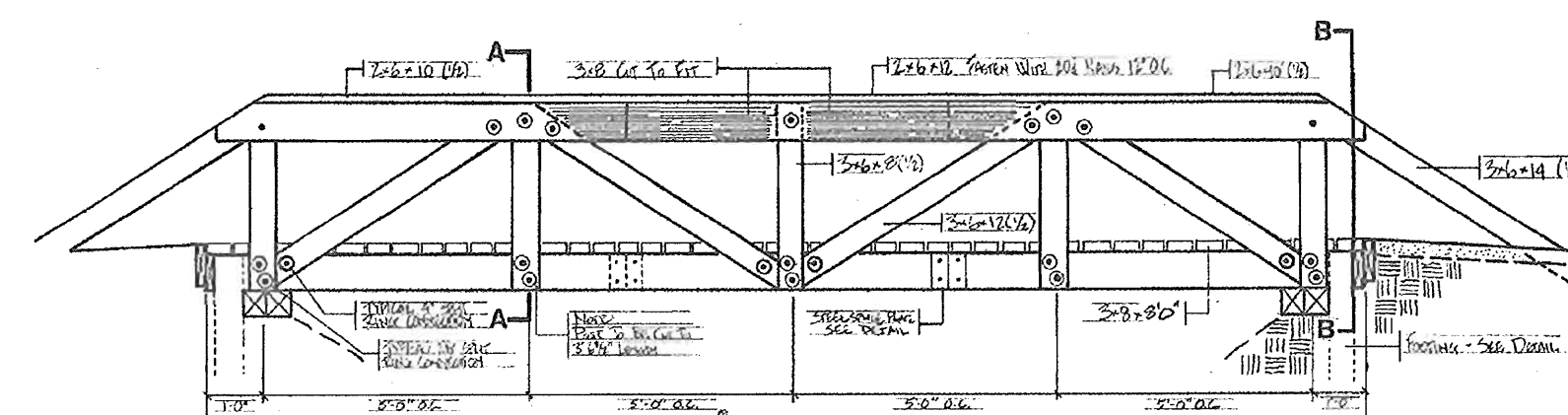
**DECK FRAMING PLAN**



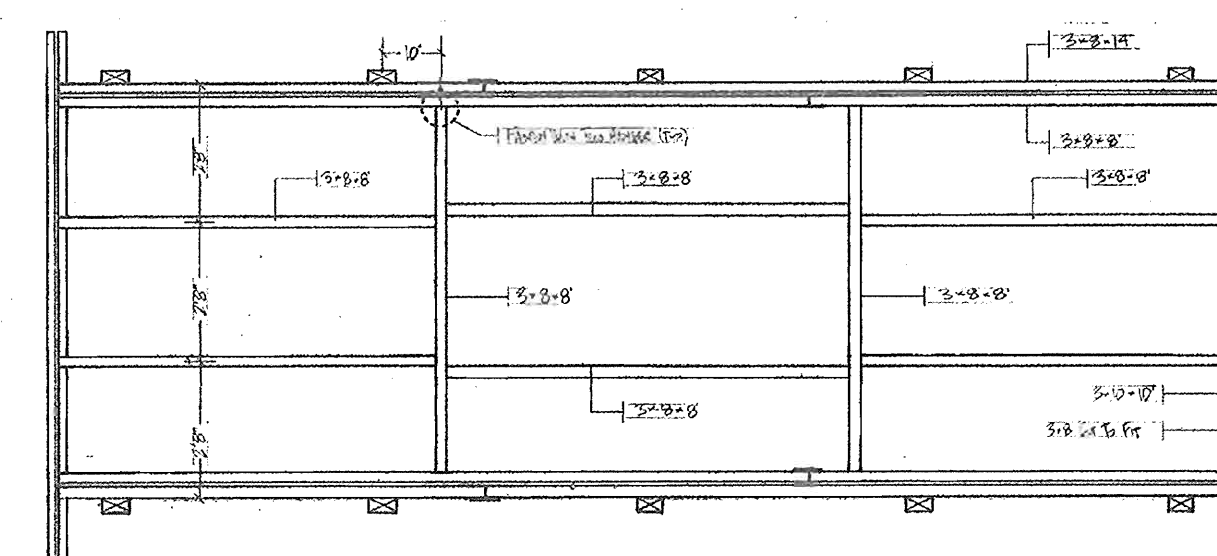
**TOP CHORD**

**TYPICAL 22' BRIDGE**

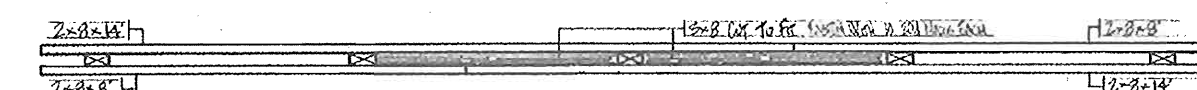
SCALE: 1/2" = 1'0"



**SIDE VIEW**



**DECK FRAMING PLAN**



**TOP CHORD**

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>Chris DeLeon</i>	5/31/01
CHEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Andy Hunter</i>	5/31/01
CHEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Joseph R. Rutter</i>	6/1/01
DIRECTOR	DATE

Date	No.	Revision Description

OWNER/DEVELOPER  
**THE COLUMBIA ASSOCIATION**  
ATTN: DENIS ELLIS  
10221 WINCOPIN CIRCLE SUITE 100  
COLUMBIA MARYLAND 21044-3410  
(410) 381-0383

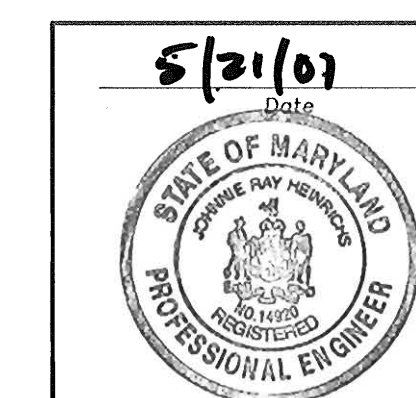
PREPARED BY:  
**PHOENIX ENGINEERING, INC.**  
CONSULTING ENGINEERS  
813 MAIDEN CHOICE LANE, SUITE 300  
BALTIMORE, MARYLAND 21228  
(410) 247-8833 FAX 247-9397

AREA:  
COLUMBIA - VILLAGE OF RIVER HILL  
SECTION 4 AREA 6 OPEN SPACE LOTS 56,58,59,60,69,&70  
SECTION 4 AREA 4 OPEN SPACE LOTS 212,279,280,& 281  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE:  
**SITE DETAILS**

Des By	R.J.W.	Scale	AS SHOWN	Proj No	00-006
Dim By	R.H.D.	Date	MAY 21, 2001	DRAWING NO	de01PRPW.dwg
Chk By	J.R.H.	SDP	- 01-21		4 OF 6

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE 5-16-01



*John R. Heinrichs*  
Professional Engr. No. 14920

SDP.01.01

Table 25 - Permanent Seeding For Low Maintenance Areas. Table with 6 columns: MIX, SEED MIX (USE CERTIFIED MATERIAL IF AVAILABLE), PLANTING RATE (LBS/AC, LBS/1000 SQ. FT.), SITE CONDITIONS, USDA HARDINESS ZONES, and RECOMMENDED PLANTING DATES (3/1-5/15, 3/15-6/1, 5/16-8/14, 6/2-7/31, 8/1-10/1, 8/15-10/15, 8/15-11/15).

NOTES: A/ USED BY SHA ON SLOPED AREAS. ADD A LEGUME FOR SLOPES > THAN 3:1. B/ USED IN MEDIAN AREAS BY SHA. SHADE TOLERANT. C/ POPULAR MIX - PRODUCES PERMANENT GROUND COVER QUICKLY. BLUEGRASS THICKENS STAND. D/ BEST USE ON SHADY SLOPES, NOT ON POORLY DRAINED FIELDS. E/ USE ON LOW MAINTENANCE, STEEP SLOPES. USE TALL FESCUE IN DRAUGHTY COND. CROWN VETCH BEST FOR 5b, 6a, 6b. F/ SUITABLE FOR SEEDING IN MID - SUMMER.

Table 25 - Permanent Seeding For Low Maintenance Areas (Cont'd). Table with 6 columns: MIX, SEED MIX (USE CERTIFIED MATERIAL IF AVAILABLE), PLANTING RATE (LBS/AC, LBS/1000 SQ. FT.), SITE CONDITIONS, USDA HARDINESS ZONES, and RECOMMENDED PLANTING DATES.

NOTES: G/ WEEPING LOVEGRASS MAY BE SEEDING WITH TALL FESCUE IN MID-SUMMER. SERICIA LESPEDEZA IS BEST SUITED FOR ZONES 7a AND 7b. H/ USE ON POORLY DRAINED SOILS - DITCHES OR WATERWAYS. BIRDSFOOT TREFOILS BEST FOR ZONES 5b, 6a, ABOVE 2000 FT. I/ USE IN AREAS OF MOIST SHADE. POA TRIVIALS THRIVES IN WET SHADY AREAS. J/ TALL FESCUE MAY BE SEEDING ALONE. THE HARD FESCUE PROVIDES BETTER SHADE TOLERANCE AND PRODUCES A BETTER STAND. K/ LOW FERTILITY GRASS. REQUIRES INFREQUENT MOWING. GOOD COMPANION FOR WILDFLOWERS.

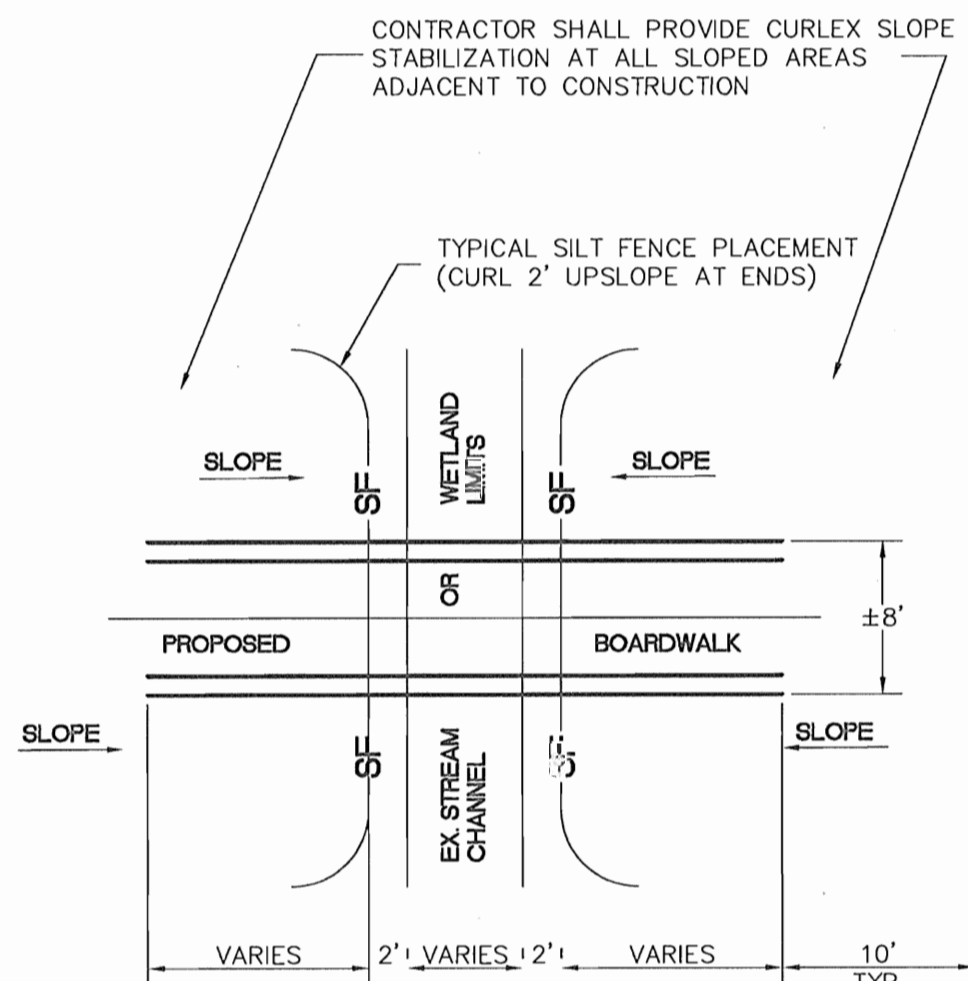
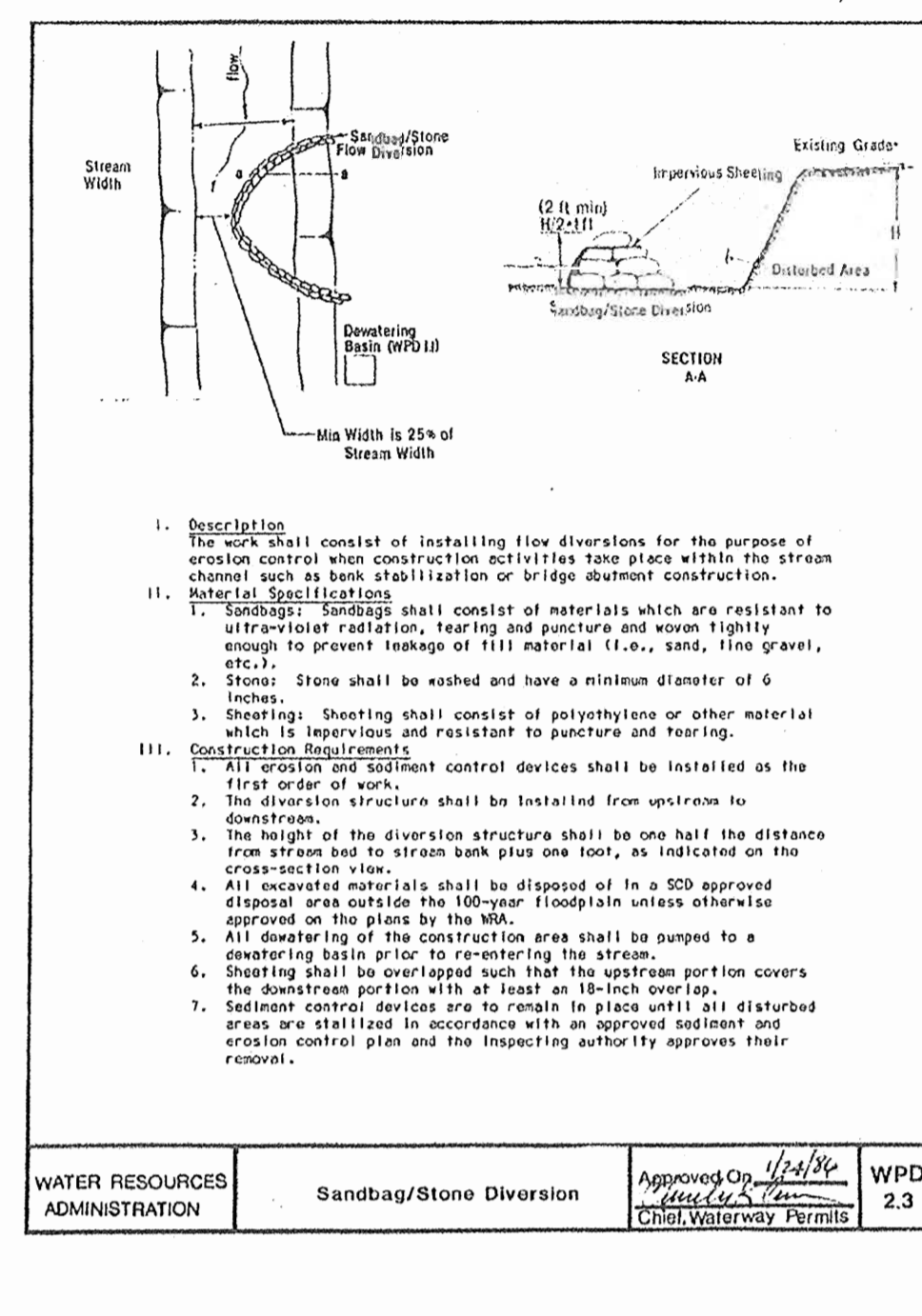
Permanent Seeding Summary

Table with 5 columns: No., Species, Application Rate (lb/oc), Seeding Dates, Seeding Depths, Fertilizer Rate (10-20-20) (N, P2O5, K2O), Lime Rate.

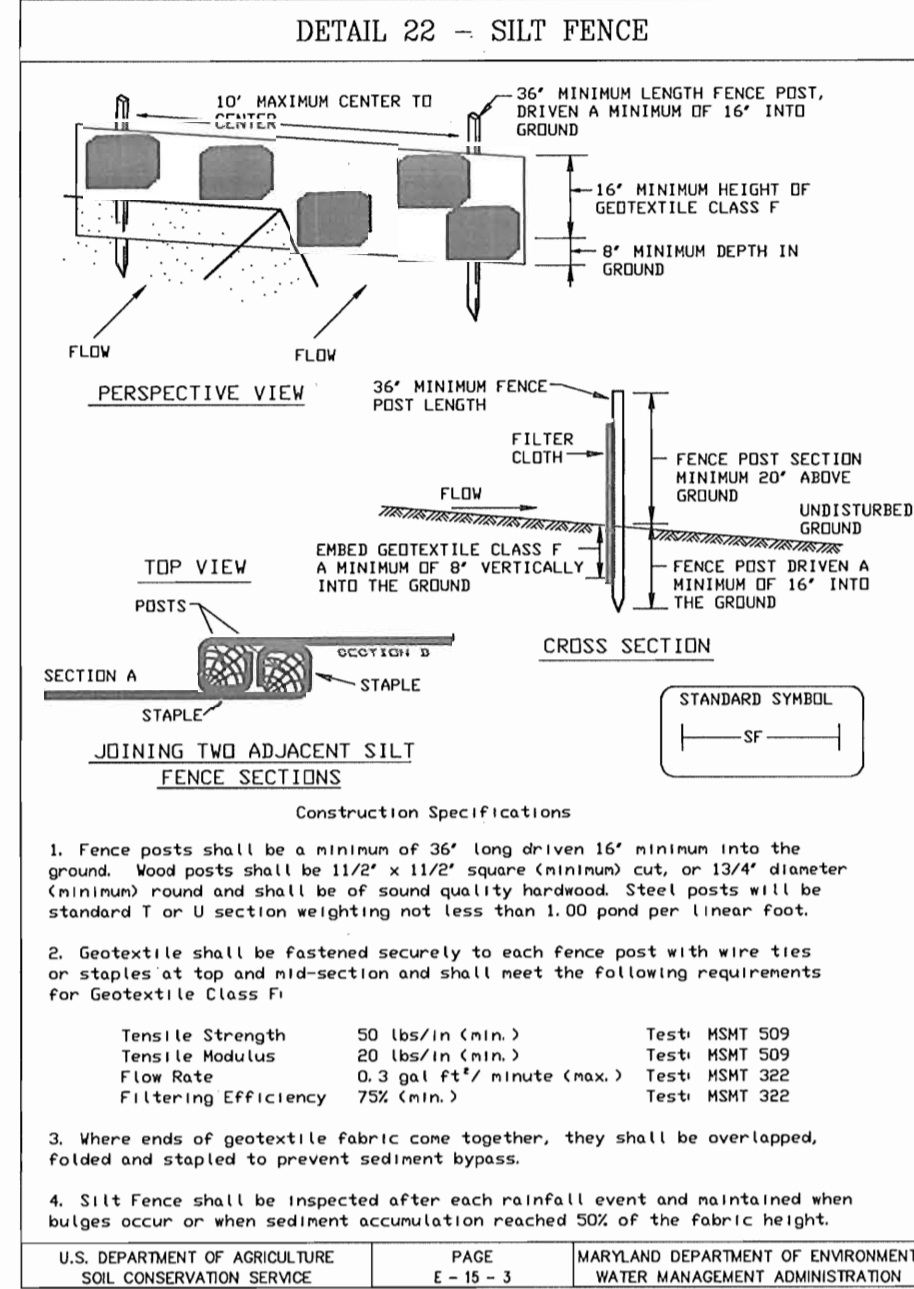
Section III: Permanent Seeding. Seeding grass on legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance.

- A. Seed Mixtures - Permanent Seeding. i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SGS Technical Field Office Guide, Section 342 - Critical Area Planting. For special low maintenance areas, see Sections IV Sod and V Turfgrass. ii. For sites having disturbed area over 5 acres, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in. iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

G-20-9



BOARDWALK AND BRIDGE INSTALLATION PLAN SCALE: NTS



SILT FENCE

Silt Fence Design Criteria. Table with 3 columns: Slope Steepness, (Maximum) Slope Length, (Maximum) Silt Fence Length.

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class III), maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

Table with 2 columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE (PAGE E-15-3) and MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION (PAGE H-26-3).

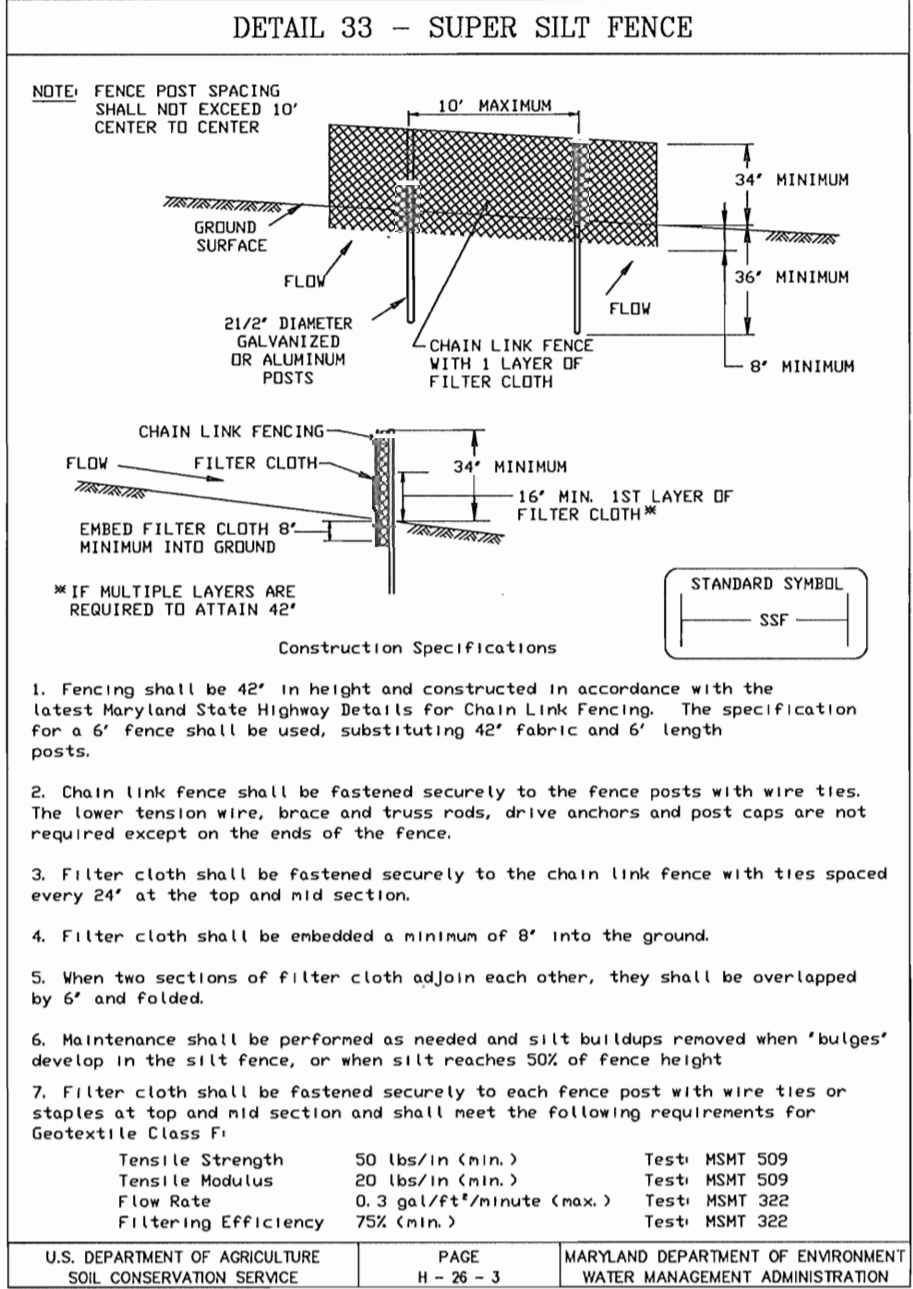
Table 26 Temporary Seeding Rates, Depths, and Dates

Table with 5 columns: SPECIES, MINIMUM SEEDING RATES (PER ACRE, LBS/1000 SQ. FT., INCHES), PLANTING DEPTH (INCHES), HARDINESS ZONES AND SEEDING DATES (7a and 7b, 6b, 6a and 5b).

- 36. Applicable on slopes of 3:1 or flatter. 37. Refer to figure A - Adopted from USDA, ARS Miscellaneous Publication #1475, January 1990. 38. Between fall and spring seeding dates, use mulch only if ground is frozen and reseed when thawed. 39. May be used as a nurse crop for late fall/early winter permanent seedings, add 56 lbs./ac. to the permanent seeding mixture. 40. Maryland State Highway Administration Temporary Seed Mix. 41. May be used as a nurse crop for mid-summer permanent seedings. Add 2 lbs./ac. to permanent seed mix. 42. May be used as a nurse crop for mid-summer permanent seedings. Add 10 lbs./ac. to the permanent seed mix.

Table 24 Maintenance Fertilization for Permanent Seedings Use Soil Test Results or Rates Shown Below

Table with 6 columns: Seeding Mixture, Type, lb/ac, lb/1000 sf, Time, Mowing.



SUPER SILT FENCE

Super Silt Fence Design Criteria. Table with 3 columns: Slope Steepness, (Maximum) Slope Length, (Maximum) Silt Fence Length.

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class III), maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

Table with 2 columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE (PAGE H-26-3) and MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION (PAGE H-26-3).

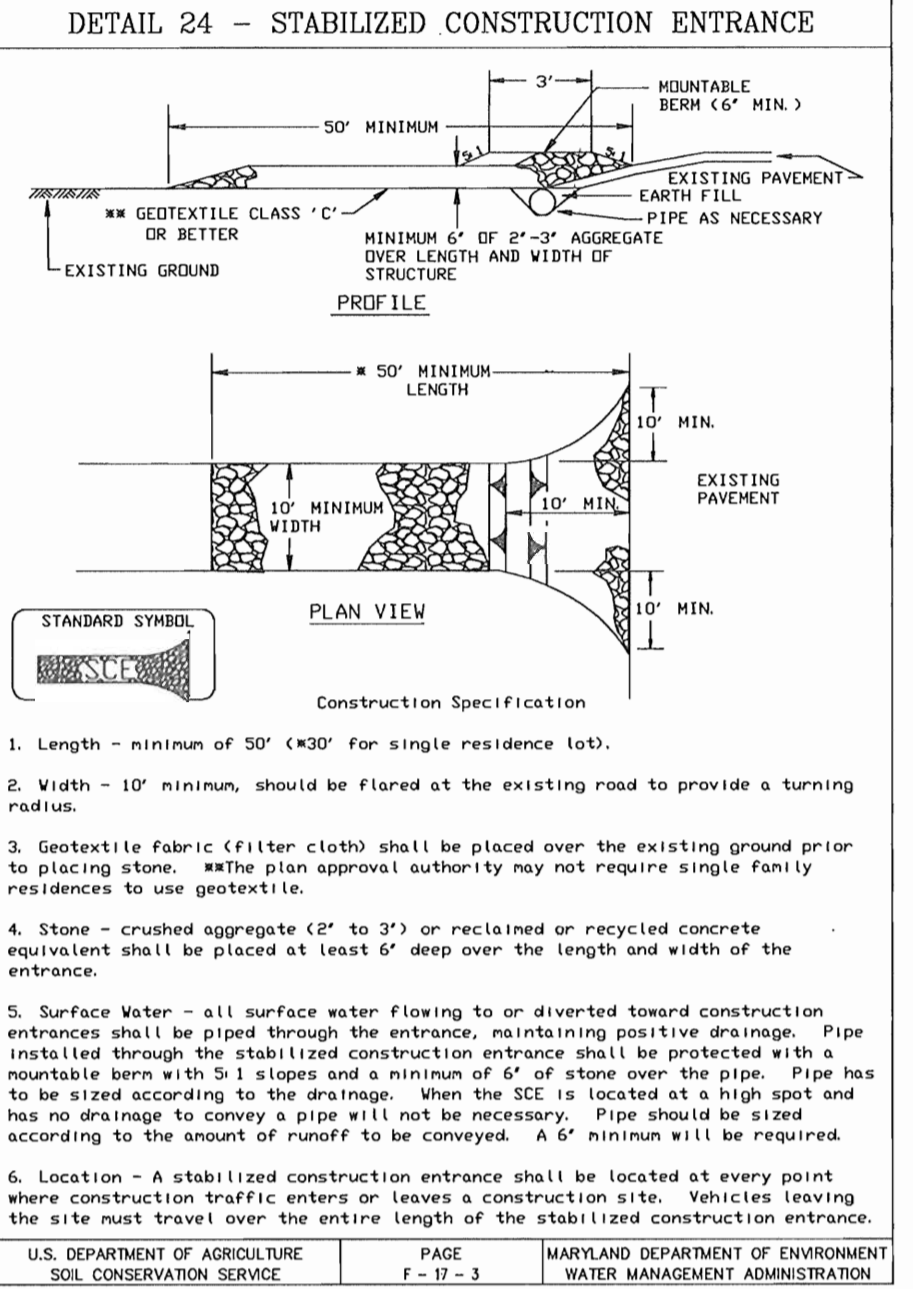
Table 24 Maintenance Fertilization for Permanent Seedings Use Soil Test Results or Rates Shown Below

Table with 6 columns: Seeding Mixture, Type, lb/ac, lb/1000 sf, Time, Mowing.

- 36. Applicable on slopes of 3:1 or flatter. 37. Refer to figure A - Adopted from USDA, ARS Miscellaneous Publication #1475, January 1990. 38. Between fall and spring seeding dates, use mulch only if ground is frozen and reseed when thawed. 39. May be used as a nurse crop for late fall/early winter permanent seedings, add 56 lbs./ac. to the permanent seeding mixture. 40. Maryland State Highway Administration Temporary Seed Mix. 41. May be used as a nurse crop for mid-summer permanent seedings. Add 2 lbs./ac. to permanent seed mix. 42. May be used as a nurse crop for mid-summer permanent seedings. Add 10 lbs./ac. to the permanent seed mix.

Table 24 Maintenance Fertilization for Permanent Seedings Use Soil Test Results or Rates Shown Below

Table with 6 columns: Seeding Mixture, Type, lb/ac, lb/1000 sf, Time, Mowing.



STABILIZED CONSTRUCTION ENTRANCE

- 1. Length - minimum of 50' (+30' for single residence lot). 2. Width - 10' minimum, should be flared at the existing road to provide a turning radius. 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. (The plan approval authority may not require single family residences to use geotextile.) 4. Stone - crushed aggregate (2\"/>

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class III), maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

Table with 2 columns: U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE (PAGE F-17-3) and MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION (PAGE F-17-3).

Table 24 Maintenance Fertilization for Permanent Seedings Use Soil Test Results or Rates Shown Below

Table with 6 columns: Seeding Mixture, Type, lb/ac, lb/1000 sf, Time, Mowing.

- 36. Applicable on slopes of 3:1 or flatter. 37. Refer to figure A - Adopted from USDA, ARS Miscellaneous Publication #1475, January 1990. 38. Between fall and spring seeding dates, use mulch only if ground is frozen and reseed when thawed. 39. May be used as a nurse crop for late fall/early winter permanent seedings, add 56 lbs./ac. to the permanent seeding mixture. 40. Maryland State Highway Administration Temporary Seed Mix. 41. May be used as a nurse crop for mid-summer permanent seedings. Add 2 lbs./ac. to permanent seed mix. 42. May be used as a nurse crop for mid-summer permanent seedings. Add 10 lbs./ac. to the permanent seed mix.

Table 24 Maintenance Fertilization for Permanent Seedings Use Soil Test Results or Rates Shown Below

Table with 6 columns: Seeding Mixture, Type, lb/ac, lb/1000 sf, Time, Mowing.

- SEQUENCE OF CONSTRUCTION 1. Obtain a grading permit and all other necessary permits - 1 Day. 2. Notify the Howard County Bureau of Licenses, Inspections and Permits at least 48 hours before beginning any work. Determine stabilized construction entrances and project phasing - 2 Days. 3. All work in wetland wetlands, wetland buffers, waterways and 100 year floodplain shall be in conformance with the Best Management Practices given on this sheet and with the Letter of Authorization for this project issued by the Maryland Department of the Environment. 4. After the completion of steps 1 & 2 comply with the following steps for each phase of construction: 5. Install stabilized construction entrances - 1 Day. 6. Stake out pathway - 2-3 Days. 7. Install silt fence, tree protection fence and other perimeter controls. Pathway disturbance/construction and restoration is to occur in 200 LF segments maximum. -3-4 Days. 8. Begin clearing and grubbing for construction - 1 Week. 9. Grade pathway maintaining positive drainage at all times - 1-2 Weeks. 10. Compact subgrade and install aggregate base for pathway - 1 Week. 11. Install perimeter controls for bridges and boardwalks. In-stream work for the installation of riprap shall be in accordance with the detail for Sandbag / Stone diversion on this sheet - 1 Week. 12. Install bridges and boardwalks - 1-2 Weeks. 13. Install pathway pavement - 1-2 Weeks. 14. Stabilize all disturbed areas with seed and mulch within 14 days of disturbance. Note seed restrictions in the Best Management Practices - 1-2 Weeks. 15. Upon stabilization of the site and approval of the Howard County Sediment Control Inspector, remove sediment and erosion controls.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Jin Annes/cos 5/29/01 DATE

USDA NATURAL RESOURCE CONSERVATION SERVICES

BY THE ENGINEER: I/WE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Johannes Heinrichs, P.E. 5/29/01 DATE

ENGINEER: JOHN R. HEINRICHS, P.E. PROFESSIONAL ENGINEER, INC.

BY THE DEVELOPER: I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

John Ellis 5-21-01 DATE

DEVELOPER: DENIS ELLIS COLUMBIA ASSOCIATION

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

R. Rowton/cos 5/29/01 DATE

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 5/29/01 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT 5/29/01 DATE

APPROVED: 6/1/01 DATE

APPROVED: PLANNING BOARD OF HOWARD COUNTY DATE 5-16-01

OWNER/DEVELOPER

THE COLUMBIA ASSOCIATION

ATTN: DENIS ELLIS

10221 WINDOPIN CIRCLE SUITE 100 COLUMBIA MARYLAND 21044-3410

(410) 381-0383

PREPARED BY: PHOENIX ENGINEERING, INC. CONSULTING ENGINEERS

813 MAIDEN CHOICE LANE, SUITE 300 BALTIMORE, MARYLAND 21228

(410) 247-8833 FAX 247-9397

AREA: COLUMBIA - VILLAGE OF RIVER HILL

SECTION 4 AREA 6 OPEN SPACE LOTS 56, 58, 59, 60, 69, & 70 SECTION 4 AREA 4 OPEN SPACE LOTS 212, 279, 280, & 281

5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

Des By: R.J.W. Scale: AS SHOWN Proj No: 00-006

Drn By: R.H.D. Date: MAY 21, 2001 DRAWING No: De03prw

Ck By: J.R.H. SDP-01-21 5 OF 6

John R. Heinrichs Professional Engr. No. 14920

5/21/01