

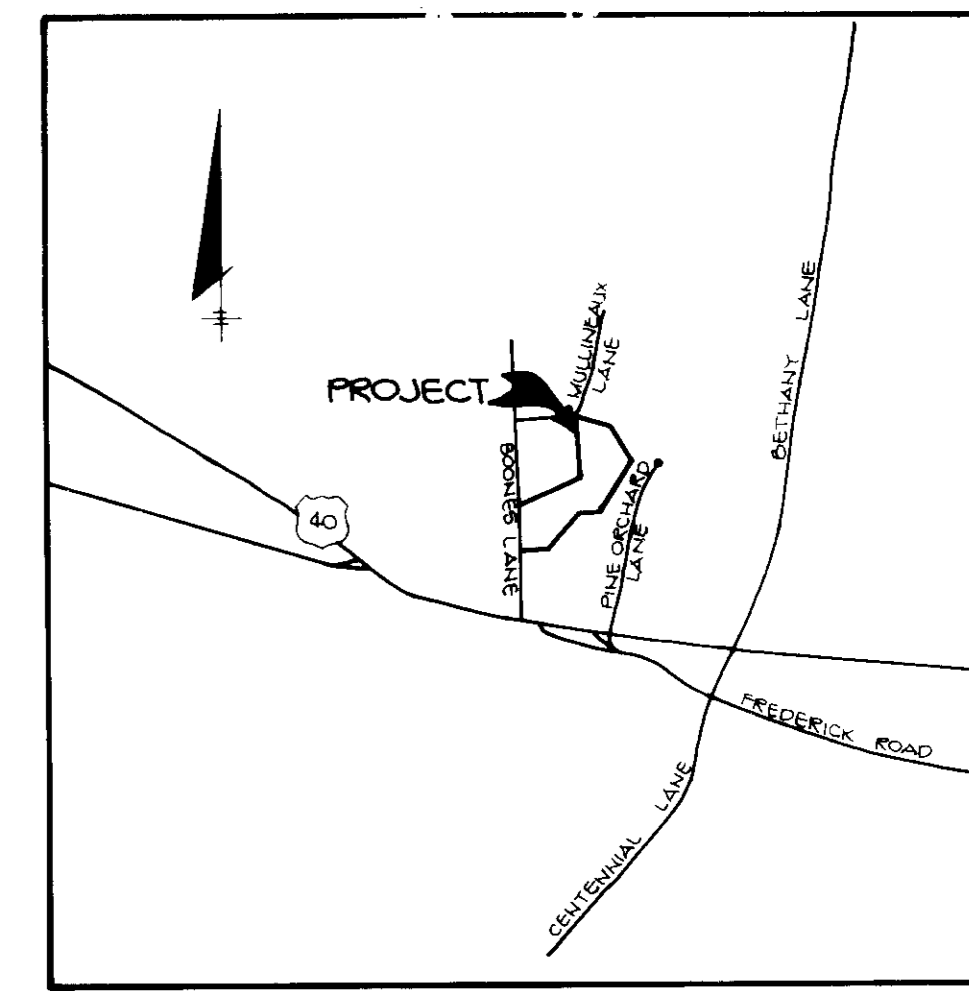
SHEET INDEX

NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	SITE DEVELOPMENT PLAN
4	SEDIMENT CONTROL PLAN
5	SEDIMENT CONTROL PLAN
6	RETAINING WALL DETAILS

SITE DEVELOPMENT PLAN THE BLUFFS AT PINE ORCHARD

LOTS 1 THROUGH 33

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1"=200'

SITE ANALYSIS

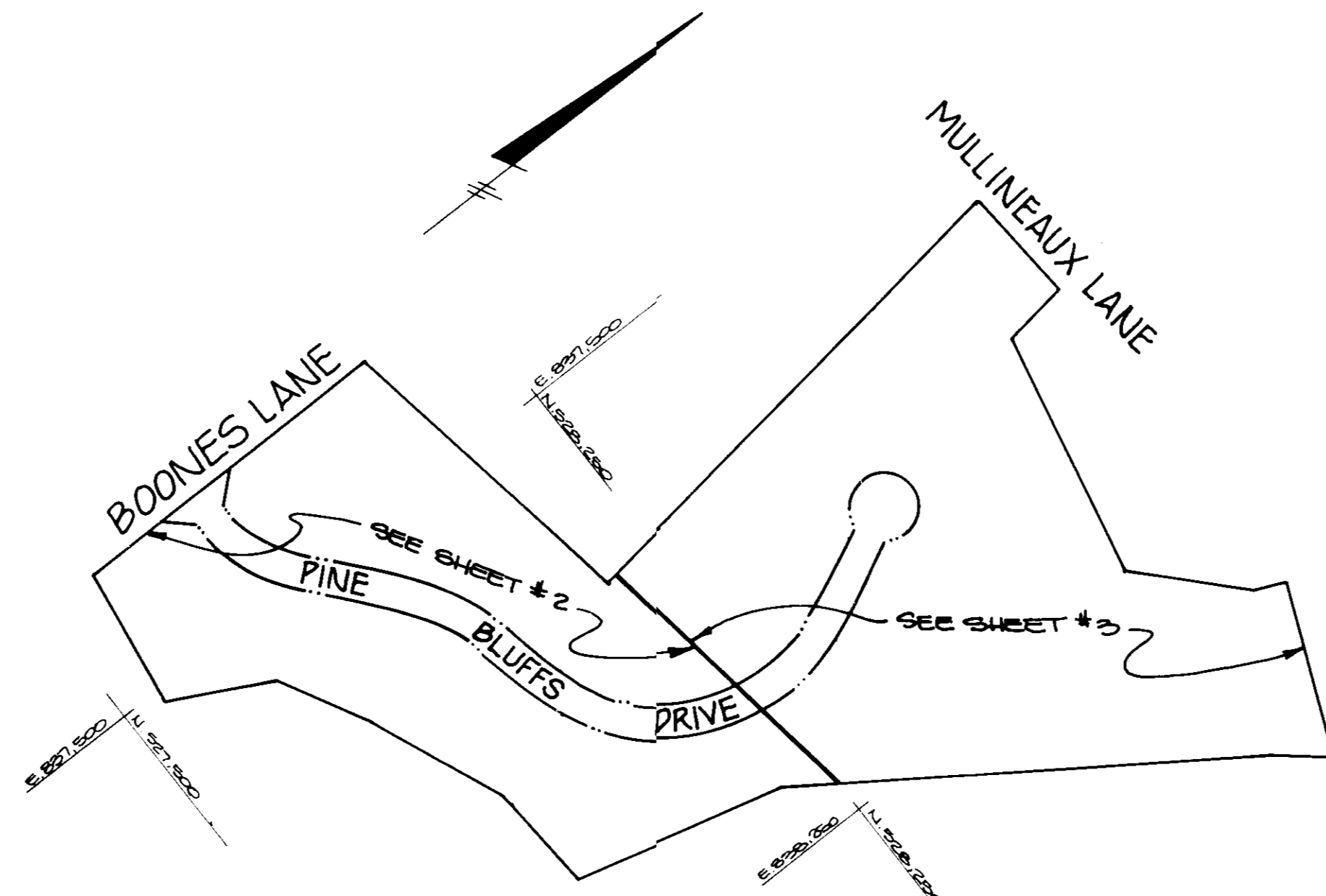
Area of Parcel	16,912 Ac. (736,000 SF)
Present Zoning	R-20 (DPZ File No. WP-88-122)
Proposed Use	Residential
Total No. of Units Allowed	34 D.U.
Total No. of Units Provided	28 D.U.
Open Space Required	2,386 Ac. (103,934 SF)
Open Space Provided	4,091 Ac. (178,204 SF)
	26% of net area
Dry Ground Area of Open Space	1,835 Ac. (79,933 SF)
	77% of Required Open Space

NOTE: LOTS 26, 27, & 28 ARE NOT INCLUDED IN THIS SUBMISSION.

GENERAL NOTES:

- ALL WATER LINES SHALL BE CONSTRUCTED A MINIMUM 18" COVER BELOW FINISHED GRADE.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.P.C., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, 1988 AMENDMENTS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS:

MISS UTILITY	1-800-252-7777
CAP TELEPHONE COMPANY	725-9926
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS & ELECTRIC COMPANY	485-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	792-7272
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO SUBGRADE.
- TOPO TAKEN FROM FIELD RUN SURVEY DATED MAY 1988 BY RIEMER MUEGGE & ASSOCIATES, INC.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL STORM DRAIN PIPE BEDDING SHALL BE 15' SHOWS IN DETAIL C7.01 (TRENCH IN ROCK OR TRENCH IN EARTH AS DETERMINED BY FIELD CONDITIONS) IN VOL. IV OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- THE OWNER SHALL PROVIDE A SEPARATE AND INDEPENDENT SEWER CONNECTION FOR EACH TENANT OR OCCUPANT OF ANY BUILDING, SHOWN ON THIS SITE DEVELOPMENT PLAN, WHO WILL DISCHARGE NON-DOMESTIC WASTE TO THE PUBLIC SEWERAGE SYSTEM IF THIS WASTE IS REGULATED UNDER SECTION 18.122A OF THE HOWARD COUNTY CODE. EACH SEPARATE AND INDEPENDENT SEWER CONNECTION SHALL INCLUDE A STANDARD MANHOLE AND OTHER WASTE PRETREATMENT DEVICES AS REQUIRED AND APPROVED BY HOWARD COUNTY. WASTE LINES ON THE INTERIOR OF THE BUILDING SHALL BE DESIGNED, CONSTRUCTED OR MODIFIED SUCH THAT NON-DOMESTIC WASTE WILL BE DISCHARGED TO THE SEPARATE AND INDEPENDENT SEWER CONNECTION. NO TENANT OR OCCUPANT OF ANY BUILDING SHOWN ON THIS SITE DEVELOPMENT PLAN SHALL DISCHARGE REGULATED NON-DOMESTIC WASTE TO THE PUBLIC SEWERAGE SYSTEM PRIOR TO INSTALLATION OF THE SEPARATE AND INDEPENDENT SEWER CONNECTION AND RELATED INTERIOR WASTE LINES. THE ABOVE REQUIREMENTS SHALL APPLY TO ALL INITIAL AND FUTURE OCCUPANTS OR TENANTS.
- THE CONSTRUCTION OF HOMES ON LOTS 30 & 31 WILL REQUIRE THE PLACEMENT OF SELECT FILL AND SUBSURFACE DRAINAGE INSTALLATION IN ACCORDANCE WITH THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER.
- STORM WATER MANAGEMENT FOR THIS DEVELOPMENT PROVIDED UNDER F 80.220 AND IS A RETENTION TYPE FACILITY.
- SOIL FLOODPLAIN FOR THIS DEVELOPMENT PROVIDED UNDER F 80.220.
- THE USE IN COMMON MAINTENANCE AGREEMENTS FOR LOTS 1, 2, 3, 11, 12, 13, 14, 15, 17, 18, 24, 25, 26 & 31 HAVE BEEN RECORDED. THE RECORDING REFERENCES ARE IN L, F



LOT NO.	GROSS AREA	FP/ S.F. AREA	NET AREA	PIPERSTEM AREA	MIN. NET LOT AREA
3	14,212 S.F.	---	14,212 S.F.	---	19,010 S.F.
4	19,994 S.F.	1,072 S.F.	18,922 S.F.	---	20,272 S.F.
5	19,555 S.F.	1,328 S.F.	18,227 S.F.	---	20,027 S.F.
6	19,855 S.F.	5,177 S.F.	14,678 S.F.	---	19,623 S.F.
7	21,507 S.F.	5,166 S.F.	16,341 S.F.	---	17,741 S.F.
11	15,761 S.F.	800 S.F.	14,961 S.F.	1,250 S.F.	15,111 S.F.
12	21,084 S.F.	3,100 S.F.	17,984 S.F.	2,079 S.F.	17,305 S.F.
14	17,317 S.F.	---	17,317 S.F.	2,969 S.F.	14,348 S.F.
15	17,193 S.F.	---	17,193 S.F.	813 S.F.	16,380 S.F.
18	19,210 S.F.	---	19,210 S.F.	3,363 S.F.	15,847 S.F.
20	14,488 S.F.	---	14,488 S.F.	4,885 S.F.	14,000 S.F.
22	16,522 S.F.	---	16,522 S.F.	1,421 S.F.	15,101 S.F.
26	15,275 S.F.	1,543 S.F.	13,732 S.F.	---	---
27	17,370 S.F.	4,220 S.F.	13,150 S.F.	---	---
28	14,431 S.F.	1,782 S.F.	12,649 S.F.	---	---

NOTE: THE PRELIMINARY PLAN APPROVAL FOR THIS PROJECT PREDATES THE FEB 1989 STEEP SLOPE / MIN. LOT AREA REVISION TO THE SUBDIVISION REGULATION

LOT NO.	STREET ADDRESS
1	3235 BOONES LANE
2	3231 BOONES LANE
3	3200 PINE BLUFFS DRIVE
4	3204 PINE BLUFFS DRIVE
5	3208 PINE BLUFFS DRIVE
6	3212 PINE BLUFFS DRIVE
7	3216 PINE BLUFFS DRIVE
8	3220 PINE BLUFFS DRIVE
9	3224 PINE BLUFFS DRIVE
10	3228 PINE BLUFFS DRIVE
11	3232 PINE BLUFFS DRIVE
12	3236 PINE BLUFFS DRIVE
13	3240 PINE BLUFFS DRIVE
14	3244 PINE BLUFFS DRIVE
15	3248 PINE BLUFFS DRIVE
16	3252 PINE BLUFFS DRIVE
17	3256 PINE BLUFFS DRIVE
18	3260 PINE BLUFFS DRIVE
19	3264 PINE BLUFFS DRIVE
20	3268 PINE BLUFFS DRIVE
21	3272 PINE BLUFFS DRIVE
22	3276 PINE BLUFFS DRIVE
23	3280 PINE BLUFFS DRIVE
24	3284 PINE BLUFFS DRIVE
25	3288 PINE BLUFFS DRIVE
26	3292 PINE BLUFFS DRIVE
27	3296 PINE BLUFFS DRIVE
28	3300 PINE BLUFFS DRIVE
29	3304 PINE BLUFFS DRIVE
30	3308 PINE BLUFFS DRIVE
31	3312 BOONES LANE
32	OPEN SPACE
33	OPEN SPACE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

James J. ... 4-26-91
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING.

Chris ... 5-1-90
DIRECTOR DATE

Mark ... 4-20-90
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

James ... 4-23-91
DIRECTOR DATE

William ... 4-20-90
CHIEF, BUREAU OF ENGINEERING DATE

OWNER/DEVELOPER

BOONES LANE JOINT VENTURE
8307 MAIN STREET
ELLCOTT CITY, MARYLAND 21043

PROJECT

THE BLUFFS AT PINE ORCHARD
SINGLE FAMILY DETACHED SUBD

AREA TAX MAP 17 & 24 PARCEL 6
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

TITLE SHEET

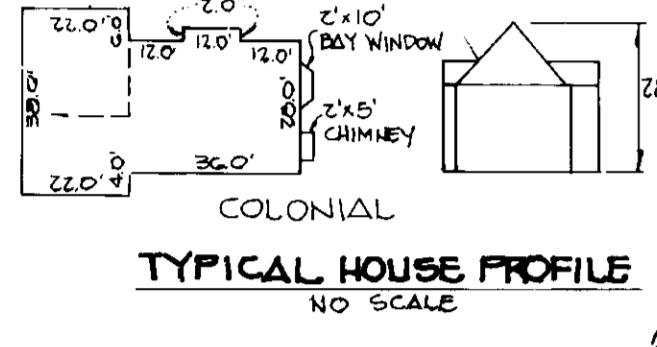
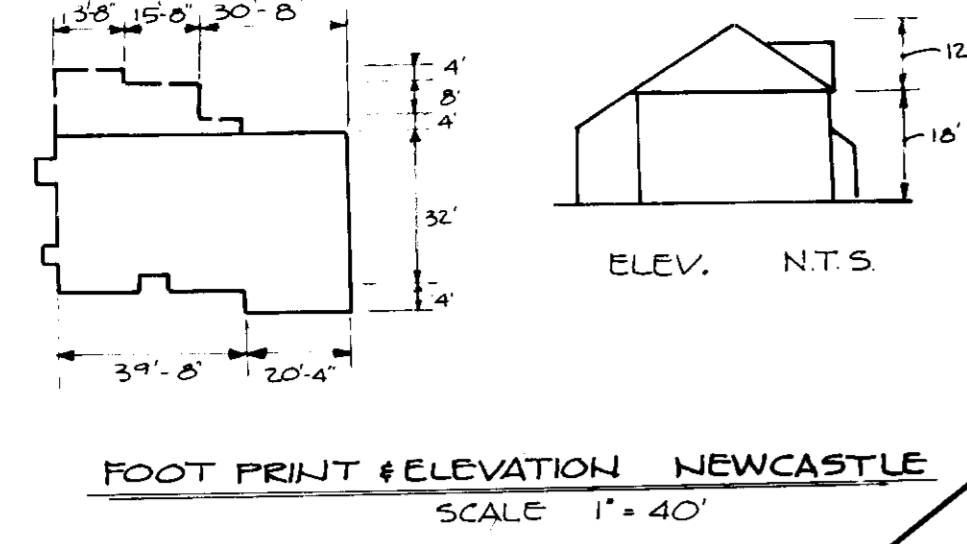
RIEMER MUEGGE & ASSOCIATES, INC.
A Land Planning, Engineering and Consulting Firm
3105 North Ridge Road Ellicott City, Maryland 21043
301-461-2690 FAX: 301-750-3176

DATE 4-7-91

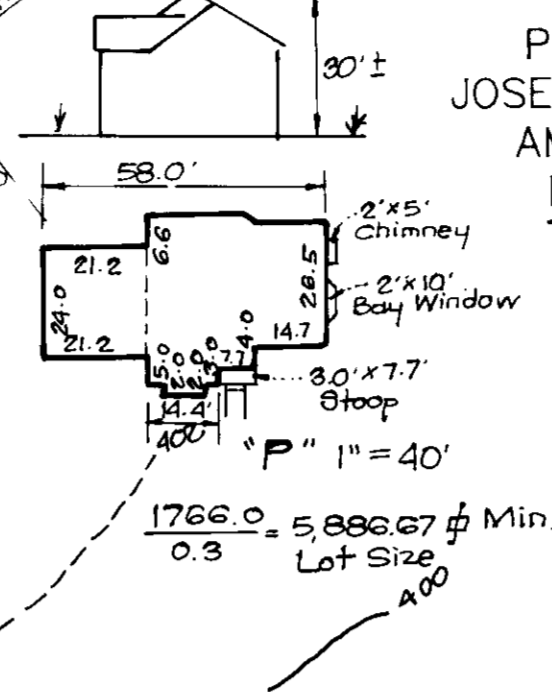
DESIGNED BY LJB
DRAWN BY DG
PROJECT NO 01112
DATE
SCALE AS SHOWN
DRAWING NO. 1 OF 2

SUBDIVISION NAME	SECT./AREA	LOT/PARCEL #
THE BLUFFS @ PINE ORCHARD	---	1-28
PLAT # OR L/F	BLOCK #	ZONE
2202-01	171	R-20
TAX/ZONE MAP	ELEC. DIST.	CENSUS TR
17 & 24	2	2022
WATER CODE	SEWER CODE	
HOB	5060000	

LOT NO.	MCE	ELEVATION AT PROPERTY LINE
1	412.45	411.40
2	413.18	411.18
3	413.18	411.15
4	409.10	406.66
5	406.86	404.86
6	405.97	403.97
7	403.21	397.61
8	393.60	391.20
9	386.64	384.40
10	382.86	380.86
11	377.82	375.33
12	373.94	371.64
13	368.82	367.42
14	366.64	362.34
15	364.92	362.92
16	364.98	364.38
17	365.87	363.89
18	364.98	362.88
19	364.98	362.23
20	360.98	358.38
21	360.02	358.62
22	358.76	356.96
23	356.20	356.59
24	353.10	353.30
25	349.64	349.04
26	348.03	346.23
27	346.15	347.39
28	345.08	347.08
29	345.08	347.60
30	345.08	347.60
31	345.22	347.92

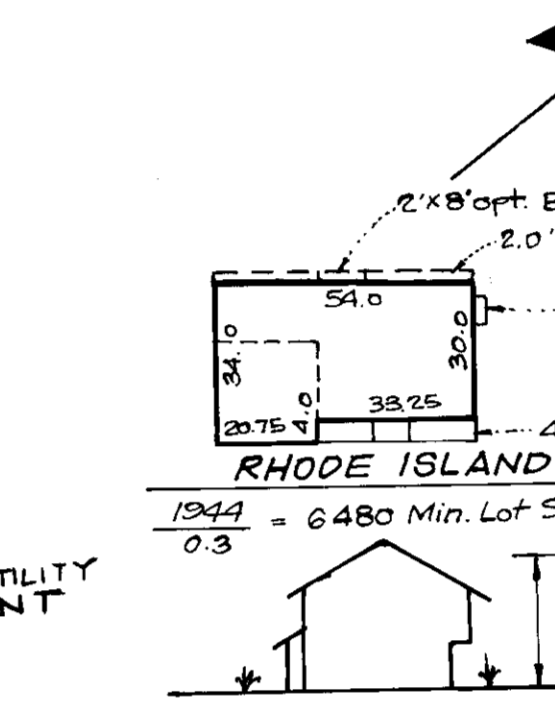


FOOTPRINT & ELEVATION - STRATTON
NO SCALE

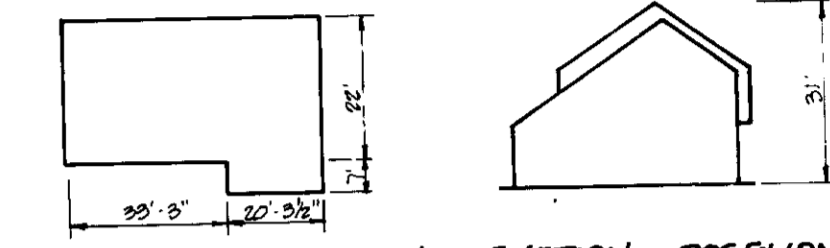


PROPERTY OF
JOSEPH E. BARTH &
AMY M. BARTH
L.216 F.432
ZONED R-20

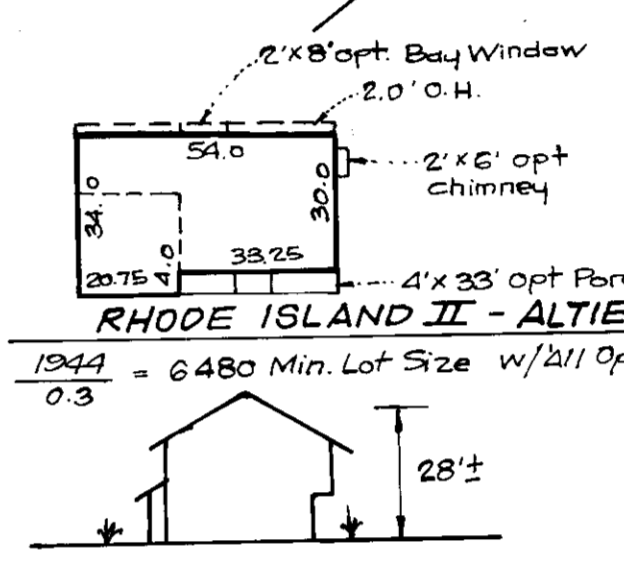
ELEVATION & FOOTPRINT - GRAYSON
NO SCALE



DRIVEWAY DETAIL
(NO SCALE)



FOOTPRINT & ELEVATION - ROSEBUNT
NO SCALE



DATE	NO.	REVISION
8-27-02	6	REV. HOUSE & GRADING ON LOT 2
7/21/92	7	REV. HOUSE & GRADING ON LOT 21
5-27-92	8	REV. HOUSE & GRADING ON LOTS 4 & 7
5-15-92	5	REV. HOUSE & GRADING ON LOT 21
2/12/92	4	REV. HOUSE & GRADING ON LOT 7

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
[Signature] 4-26-91
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
[Signature] 5-1-90
DIRECTOR DATE

[Signature] 10-19-90
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 4-22-90
DIRECTOR DATE

[Signature] 4-20-90
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION
6-27-92	3	REV. HSE & GRADE LOT 6
10/17/90	2	RELIEVE NOTE & CROSSES IN LOTS 26-28
3-28-91	1	PROVIDED HOUSE & GRADING FOR LOT 5

OWNER / DEVELOPER
BOONES LANE JOINT VENTURE
8307 MAIN STREET
ELLICOTT CITY, MARYLAND 21043

PROJECT
THE BLUFFS AT PINE ORCHARD
AREA
SINGLE FAMILY DETACHED, S.I.P.D.
TAX MAP 17 & 24 PARCEL NO. 6
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

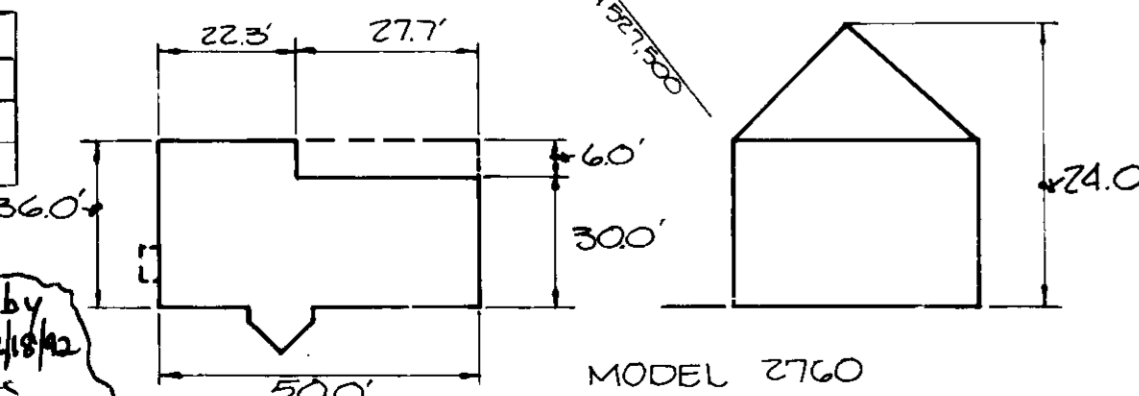
TITLE
SITE DEVELOPMENT PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
A Land Planning, Engineering and Consulting Firm
3105 North Ridge Road Elllicott City, Maryland 21043
301-461-2690 FAX: 301-750-3176

DATE
[Signature] 4-7-92

DESIGNED BY L.J.G.
DRAWN BY: M.A.D.
PROJECT NO 5112
DATE
SCALE 1" = 40'
[Signature] ARTHUR E. MUEGGE 11/07
DRAWING NO. 2 OF 6

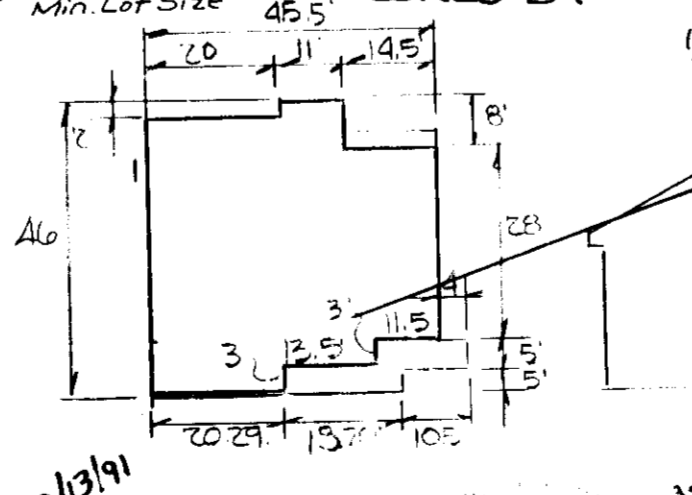
NO.	DATE	DESCRIPTION
4	10/6/92	MODEL REVISION ON LOT 4
3	6/19/92	MODEL REVISION ON LOT 24
2	10/6/92	DESCRIPTION
1	10/6/92	REVISION



NO.	DATE	DESCRIPTION
1	4/7/92	MODEL REVISIONS ON LOTS 2, 3, 23, 24 & 25
2	9/13/91	MODEL REV. LOT 5

LEGEND:
OK TOPO: - - - - -
NEAR TOPO: - - - - -
LIMIT OF WETLANDS:
TS' STREAM SETBACK:
FLOODPLAIN ELEV.:

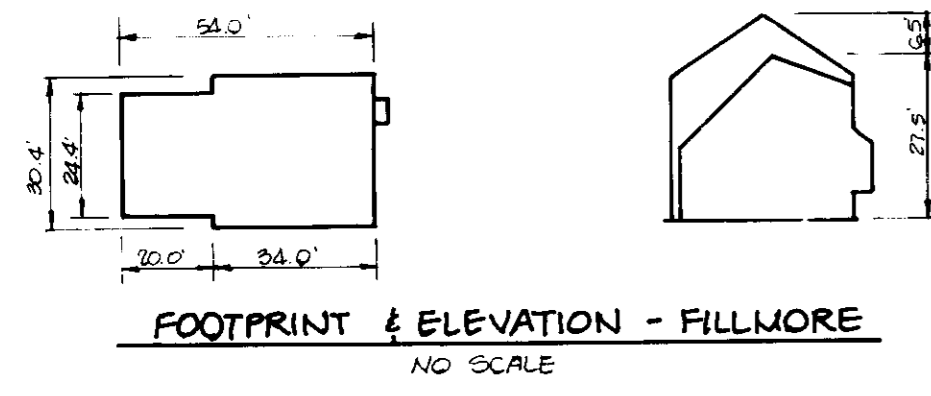
PROPERTY OF
EVELYN E. COLLINS
354/083
ZONED B-1



NO.	DATE	DESCRIPTION
1	9/13/91	MODEL REVISION LOTS
2	4/7/92	MODEL REVISIONS LOTS 2, 3, 23, 24 & 25
3	10/18/92	Revision to Lot 23 by C.F.S. dated 8-10-92

NO.	DATE	REVISIONS
9	10-4-93	Rev hse & grd lots 30 f 31 by C.F.S. Inc
8	12-18-92	Rev hse & grd lot 2 by C.F.S. Inc
7	5-28-92	Rev hse & grd lot 3 by Clark Pinebrook & Sackett, Inc
6	9-9-92	Rev hse & grd lot 25 by CLARK Pinebrook & Sackett, Inc
5	8-27-92	Rev hse & grd lots 1, 20, 28 Add hse. Typicals
4	8-10-92	Rev hse & grd lot 23, Add hse. typical by Clark Pinebrook & Sackett, Inc.



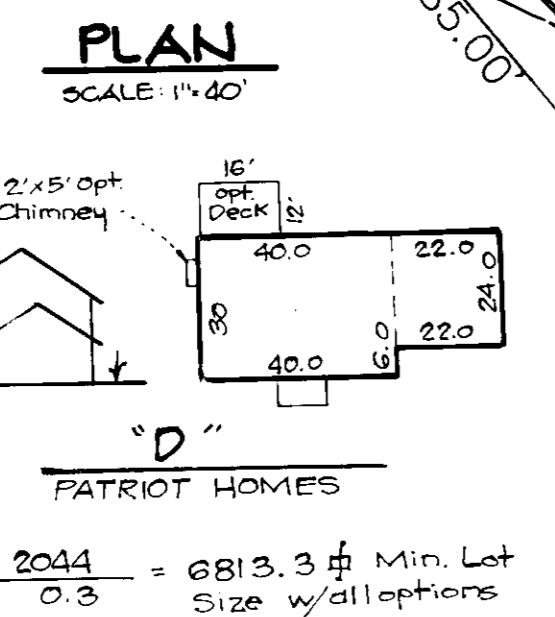


LOT NO.	MCE	ELEVATION AT PROPERTY LINE
1	412.45	411.40
2	413.18	411.18
3	413.18	411.15
4	408.16	406.65
5	409.86	404.86
6	405.97	403.97
7	400.21	397.61
8	393.60	391.20
9	386.41	384.40
10	382.86	380.86
11	381.13	379.33
12	377.82	375.82
13	378.84	377.04
14	369.82	367.42
15	366.64	362.34
16	364.82	362.92
17	366.98	364.38
18	365.89	363.89
19	364.98	362.88
20	364.03	362.23
21	360.38	378.38
22	366.92	362.82
23	366.76	366.96
24	368.39	396.59
25	405.10	403.30
26	406.64	405.04
27	408.03	406.23
28	407.19	407.39
29	409.08	407.08
30	406.40	407.60
31	406.22	407.92

PROPERTY OF
JOSEPH E. BARTH &
AMY M. BARTH
L.216 F.432
ZONED R-20

NOTE: SWM FACILITY WILL BE USED FOR WETLAND MITIGATION SEE PLAN BY EXPLORATION RESEARCH * GENAB-OP-RW "BLUFFS AT PINE ORCHARD" 88-2804 FOR DETAILS AND PLANTINGS.

2 THE 25 FOOT BUFFER FOR WETLAND MITIGATION AREA IS ENTIRELY CONTAINED WITHIN THE 75' STREAM BANK BUFFER.



For Revision to Lot 17 by CFS, Inc. Dated 11/8/95

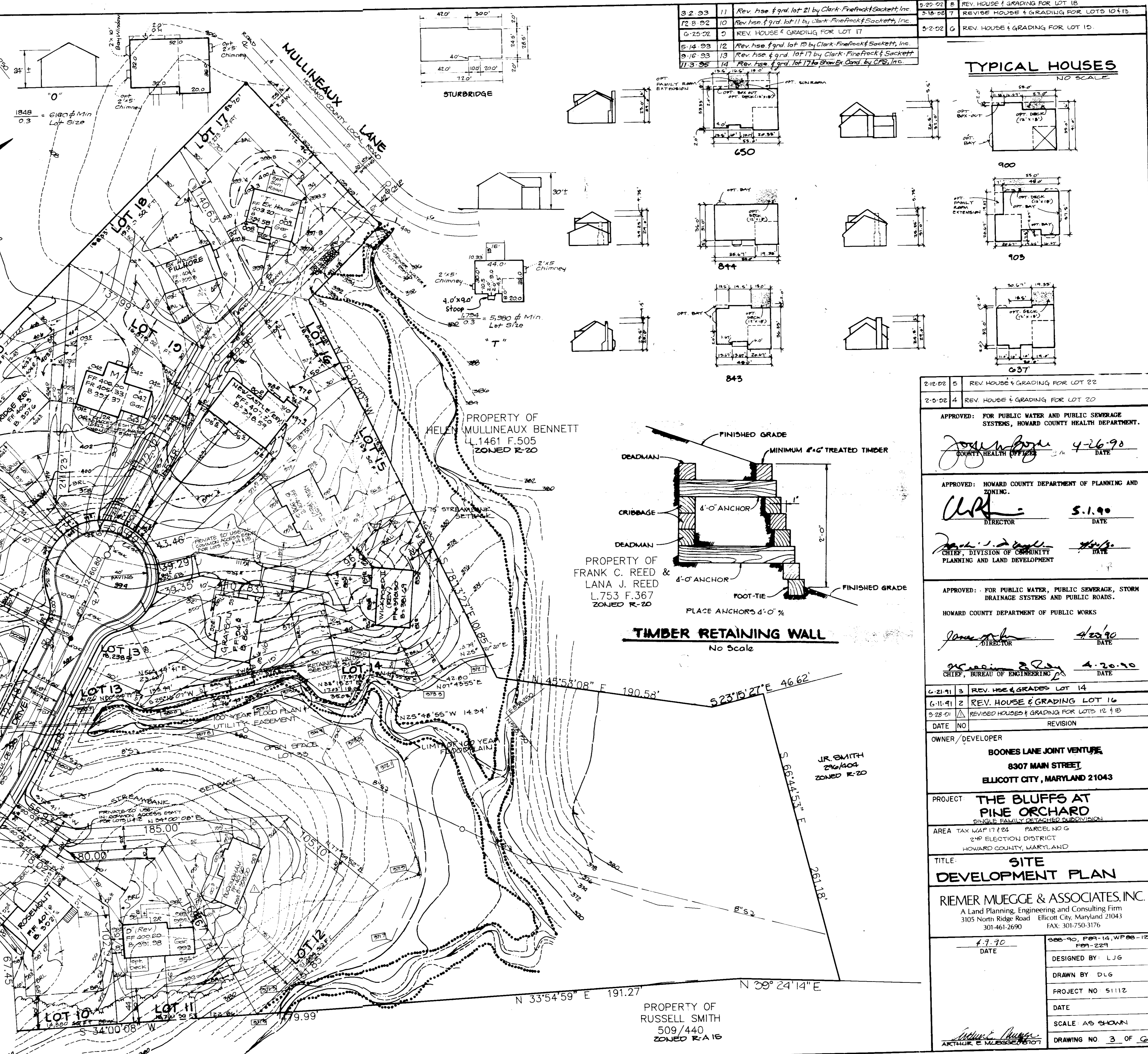
For Revision to Lot 11 by Clark, Finefrack & Sackett, Inc. Dated 12/1/92

For Revision to Lot 21 by CFS, Inc. Dated 3/1/93

For Revision to Lot 17 by CFS, Inc. Dated 5/1/93

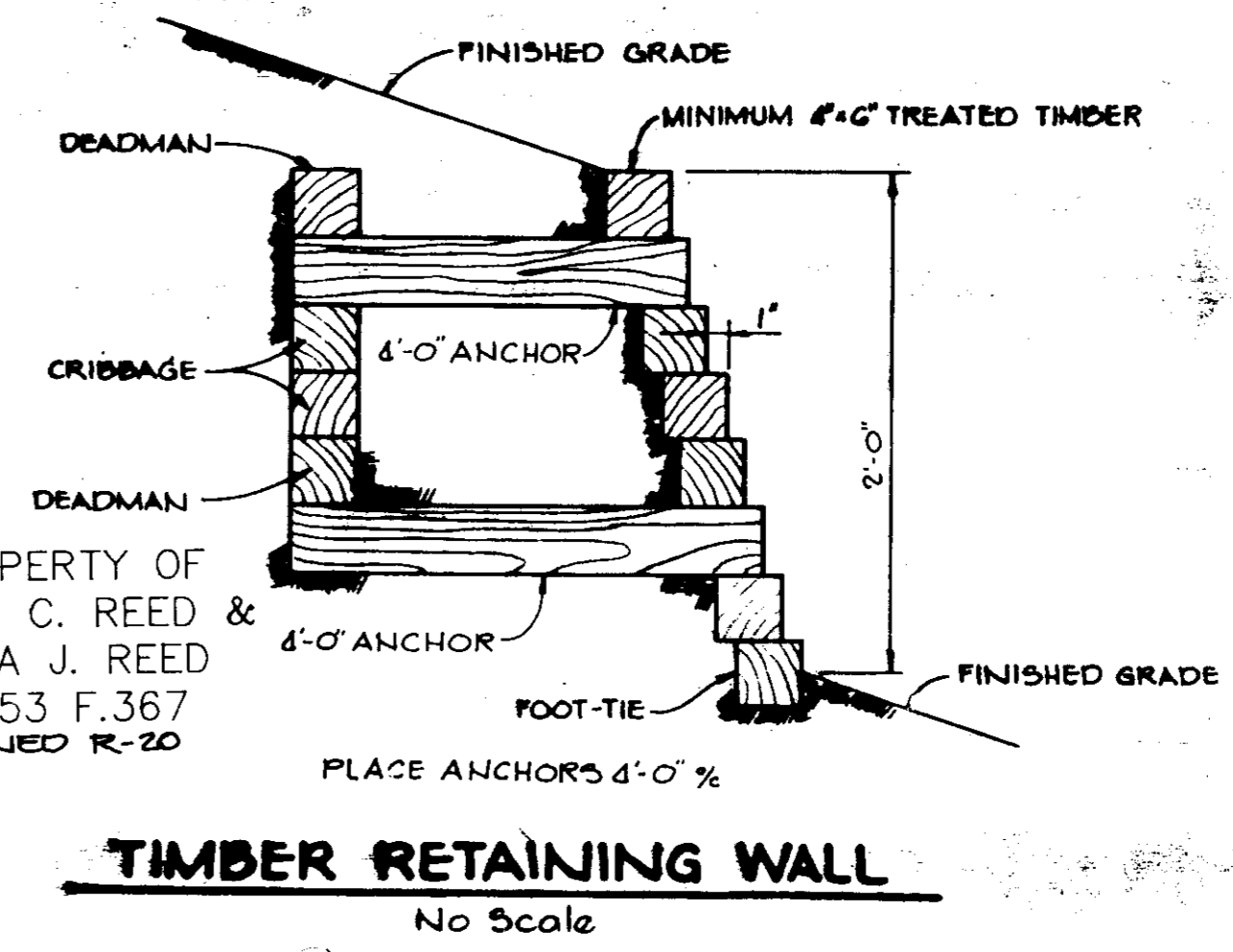
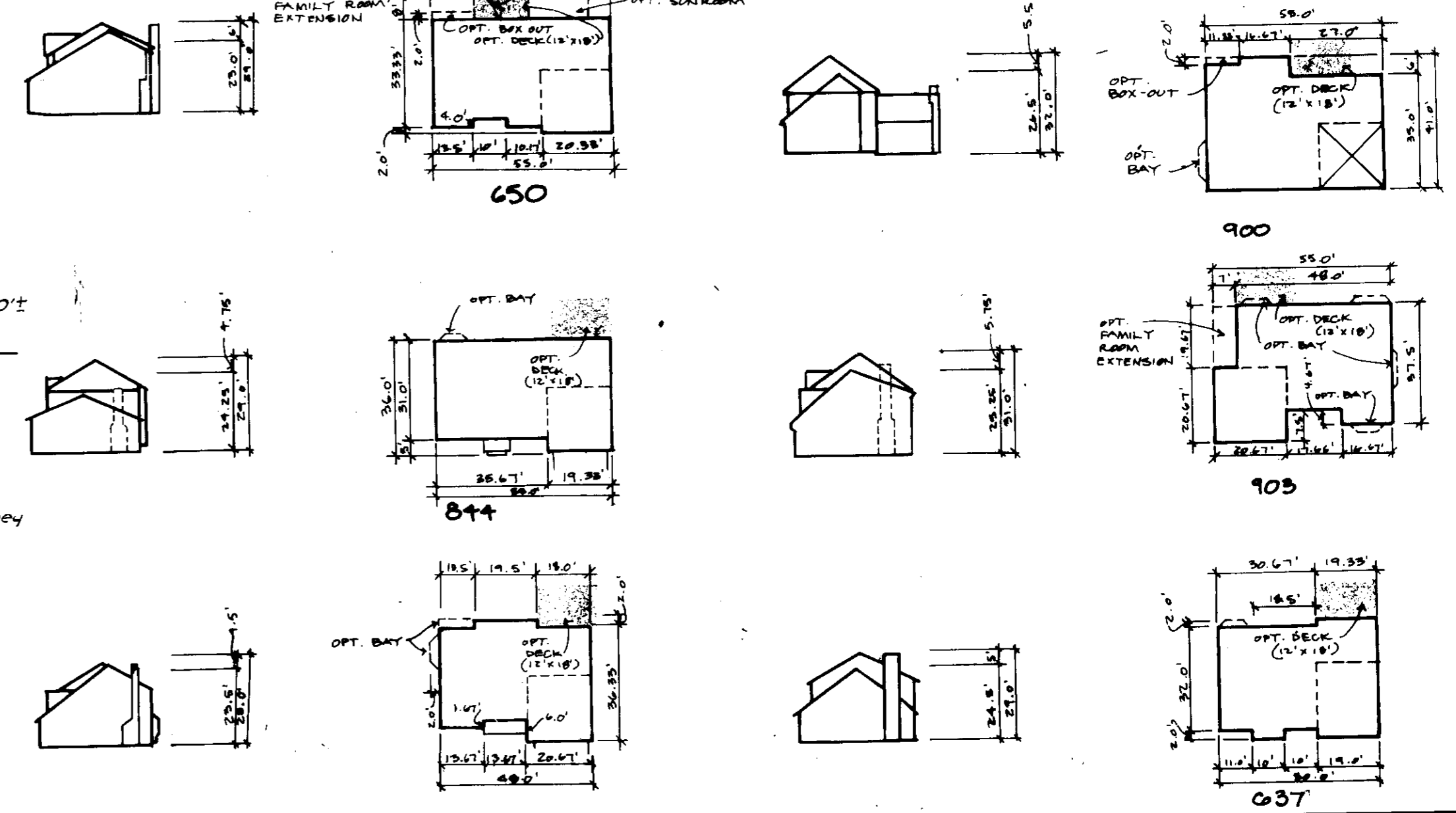
For Revision to Lot 17 by CFS, Inc. Dated 9/16/93

7/21/92 G REV HOUSE & GRADING FOR LOT 21



3-2-93	11	Rev. hse. & grad. lot 21 by Clark, Finefrack & Sackett, Inc.	5-20-92	8	REV. HOUSE & GRADING FOR LOT 18
12-8-92	10	Rev. hse. & grad. lot 11 by Clark, Finefrack & Sackett, Inc.	3-18-92	7	REVISED HOUSE & GRADING FOR LOTS 10 & 13
6-20-92	9	REV. HOUSE & GRADING FOR LOT 17	5-2-92	6	REV. HOUSE & GRADING FOR LOT 10
5-14-93	12	Rev. hse. & grad. lot 19 by Clark, Finefrack & Sackett, Inc.			
9-16-93	13	Rev. hse. & grad. lot 17 by Clark, Finefrack & Sackett			
11-3-95	14	Rev. hse. & grad. lot 17 by Show & Card, by CFS, Inc.			

TYPICAL HOUSES
NO SCALE

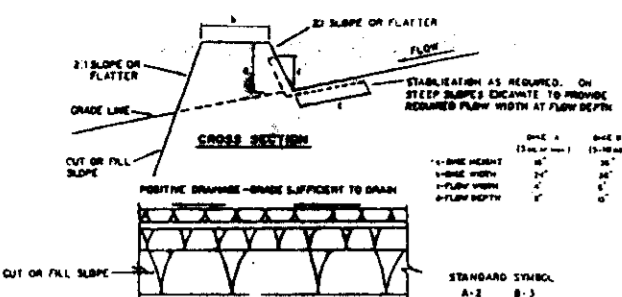


2-18-92	5	REV. HOUSE & GRADING FOR LOT 22
2-9-92	4	REV. HOUSE & GRADING FOR LOT 20
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.		
<i>Joseph B. Boyle</i>		4-26-90 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.		
<i>Clark</i>		5-1-90 DATE
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.		
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS		
<i>James</i>		4-22-90 DATE
APPROVED: CHIEF, BUREAU OF ENGINEERING		
<i>McCaig</i>		4-20-90 DATE
6-21-91	3	REV. HSE & GRADES LOT 14
6-11-91	2	REV. HOUSE & GRADING LOT 16
3-28-91	1	REVISED HOUSES & GRADING FOR LOTS 12 & 18
DATE	NO	REVISION

OWNER / DEVELOPER	
BOONES LANE JOINT VENTURE 8307 MAIN STREET ELICOTT CITY, MARYLAND 21043	
PROJECT: THE BLUFFS AT PINE ORCHARD SINGLE FAMILY DETACHED SUBDIVISION	
AREA TAX MAP 17 & 24	PARCEL NO G
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE: SITE DEVELOPMENT PLAN	
RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm 3105 North Ridge Road Elicott City, Maryland 21043 301-461-2690 FAX: 301-750-3176	
DATE: 4-9-90	DESIGNED BY: L.J.G.
	DRAWN BY: D.L.G.
	PROJECT NO: 51112
	DATE:
	SCALE: AS SHOWN
	DRAWING NO: 3 OF 6

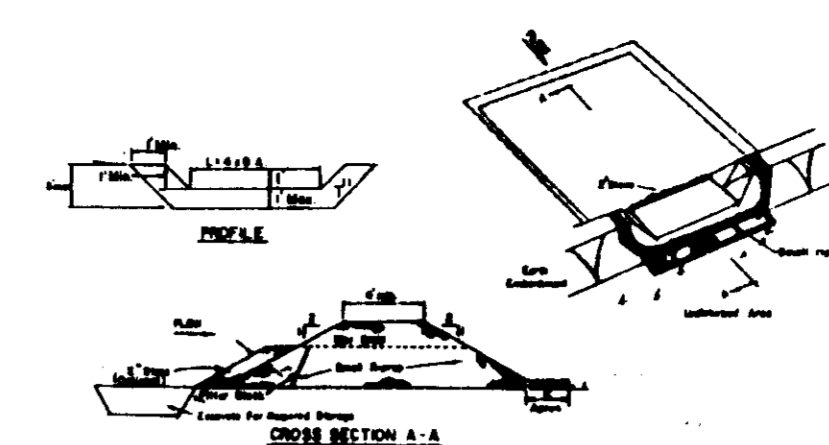
SDP-00-30

REVISIONS	DATE
Rev. hse & grd. lot 23, Add hse typical by Clark, Finebrock & Sackett, Inc.	8/10/92



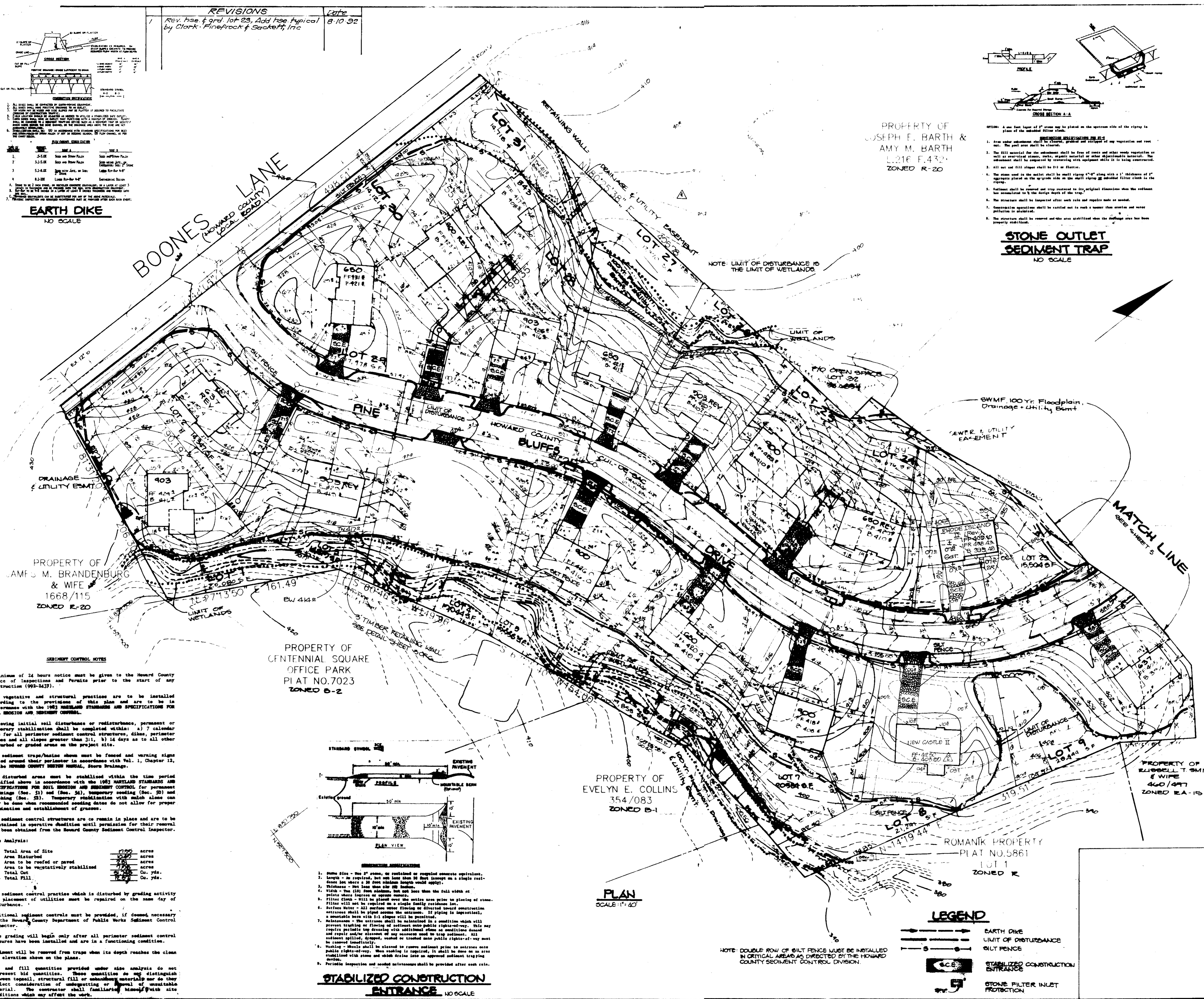
1. All dike shall be constructed of compacted earth.
2. The dike shall be constructed on a firm, stable foundation.
3. The dike shall be constructed to a minimum height of 4 feet above the ground level.
4. The dike shall be constructed to a minimum width of 4 feet at the top.
5. The dike shall be constructed to a minimum slope of 1:1.
6. The dike shall be constructed to a minimum length of 100 feet.
7. The dike shall be constructed to a minimum thickness of 12 inches.
8. The dike shall be constructed to a minimum density of 95%.
9. The dike shall be constructed to a minimum moisture content of 10%.
10. The dike shall be constructed to a minimum compaction of 95%.

EARTH DIKE
NO SCALE



1. The dike shall be constructed of compacted earth.
2. The dike shall be constructed on a firm, stable foundation.
3. The dike shall be constructed to a minimum height of 4 feet above the ground level.
4. The dike shall be constructed to a minimum width of 4 feet at the top.
5. The dike shall be constructed to a minimum slope of 1:1.
6. The dike shall be constructed to a minimum length of 100 feet.
7. The dike shall be constructed to a minimum thickness of 12 inches.
8. The dike shall be constructed to a minimum density of 95%.
9. The dike shall be constructed to a minimum moisture content of 10%.
10. The dike shall be constructed to a minimum compaction of 95%.

STONE OUTLET SEDIMENT TRAP
NO SCALE



PROPERTY OF
AMF & M. BRANDENBURG
& WIFE
1668/115
ZONED R-20

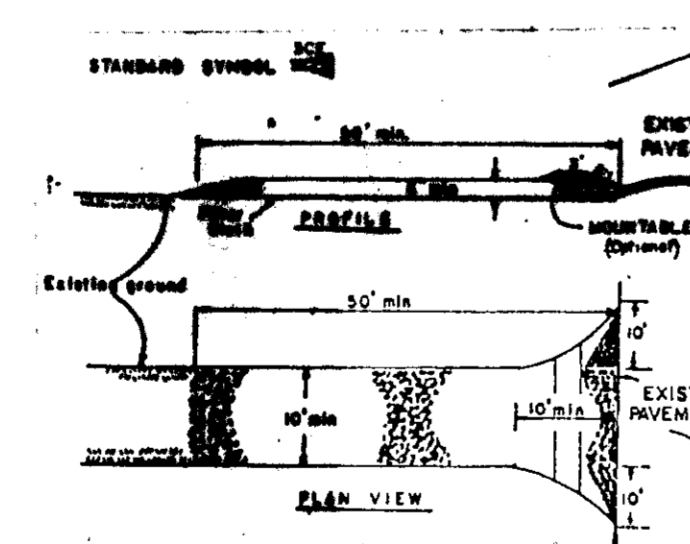
PROPERTY OF
CENTENNIAL SQUARE
OFFICE PARK
PLAT NO. 7023
ZONED B-2

PROPERTY OF
EVELYN E. COLLINS
354/083
ZONED B-1

PROPERTY OF
JOSEPH F. BARTH &
AMY M. BARTH
L216 F.432
ZONED R-20

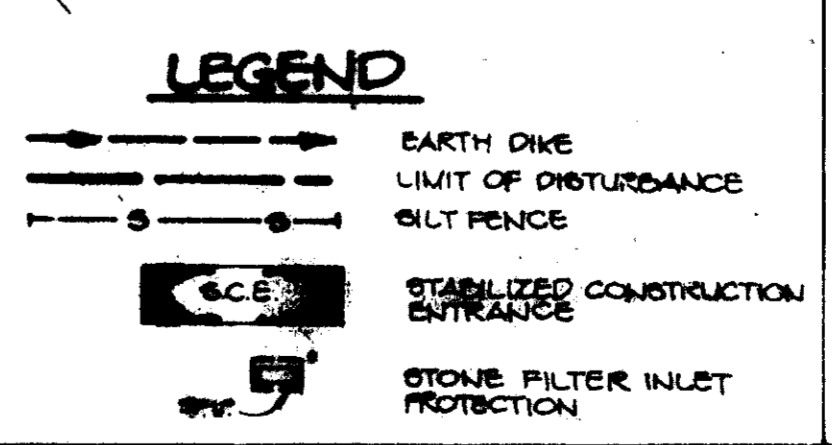
SWMF 100 Yr Floodplain,
Drainage & Utility Easement

MATCH LINE
SEE SHEET 5



STABILIZED CONSTRUCTION ENTRANCE
NO SCALE

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (992-2437).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1983 HANDBOOK STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter ditches and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY HEALTH DEPARTMENT, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 HANDBOOK STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 13) and (Sec. 24), temporary seedings (Sec. 20) and mulching (Sec. 21). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. All sediment control structures are to remain in place and are to be maintained in operative condition until removal for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:
Total Area of Site: 1700 acres
Area Disturbed: 1000 acres
Area to be roofed or paved: 200 acres
Area to be vegetatively stabilized: 200 acres
Total Cut: 1000 Cu. yds.
Total Fill: 1000 Cu. yds.
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment controls must be provided, if deemed necessary by the Howard County Department of Public Works Sediment Control Inspector.
10. Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.
11. Sediment will be removed from traps when its depth reaches the clean out elevation shown on the plans.
12. Cut and fill quantities provided under site analysis do not represent bid quantities. These quantities do not distinguish between topsoil, structural fill or subgrade material nor do they reflect consideration of unloading or removal of unsuitable material. The contractor shall familiarize himself with site conditions which may affect the work.



NOTE: DOUBLE ROW OF SILT FENCE MUST BE INSTALLED IN CRITICAL AREAS AS DIRECTED BY THE HOWARD COUNTY SEDIMENT CONTROL DIVISION.

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 DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."
V. Noel [Signature] 4/5/90
DEVELOPER DATE

BY THE ENGINEER:
"I 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 SOIL CONSERVATION DISTRICT."
Arthur E. Muegge [Signature] 4-9-90
ENGINEER DATE

REVIEWED FOR: HOWARD S.C.D.
AND MEETS TECHNICAL REQUIREMENTS
John H. [Signature] 4-18-90
S.O. SOIL CONSERVATION SERVICE DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
Joan [Signature] 4-26-90
COUNTY HEALTH DEPARTMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
[Signature] 5.1.90
DIRECTOR DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
James [Signature] 4-22-90
DIRECTOR DATE

10/17/90 REMOVE NOTE & CROSSES IN LOTS 26-28
3-28-91 REVISED HOUSE & GRADING FOR LOT 8
DATE NO REVISION

OWNER: DEVELOPER
BOONES LANE JOINT VENTURE
8307 MAIN STREET
ELLICOTT CITY, MARYLAND 21043

PROJECT: THE BLUFFS
AT PINE ORCHARD
AREA: TAX MAP 17 & 24 PARCEL NO. 6
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL PLAN
RIEMER MUEGGE & ASSOCIATES, INC.
A Land Planning, Engineering and Consulting Firm
3105 North Ridge Road, Ellicott City, Maryland 21043
301-461-2690 FAX 301-750-4176

4-9-90 DATE
DESIGNED BY: GJR
DRAWN BY: M.A.D.
PROJECT NO: 5112
DATE
SCALE: AS SHOWN
DRAWING NO: 4 OF 6
ARTHUR E. MUEGGE [Signature]

NOTES

as not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs./1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs./1000 sq ft).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs./1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (14 lbs./1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs./1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre of well-anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well-anchored straw.

Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 5 feet or higher, use 348 gallons per acre (8 gal./1000 sq. ft.) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseeding.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

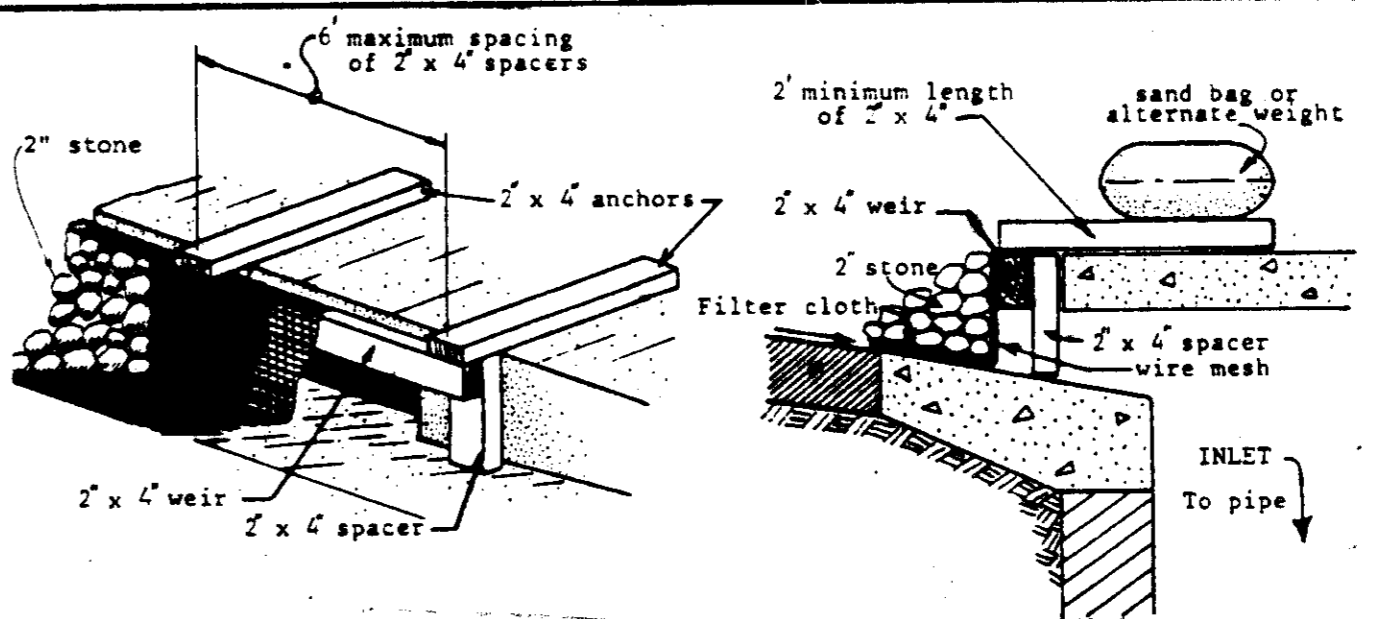
Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.).

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 25 bushel per acre of annual rye (3.2 lbs./1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 ft. or higher, use 348 gal. per acre (8 gal./1000 sq. ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PROPERTY OF
JOSEPH E. BARTH &
AMY M. BARTH
L.216 F.432
ZONED R-20

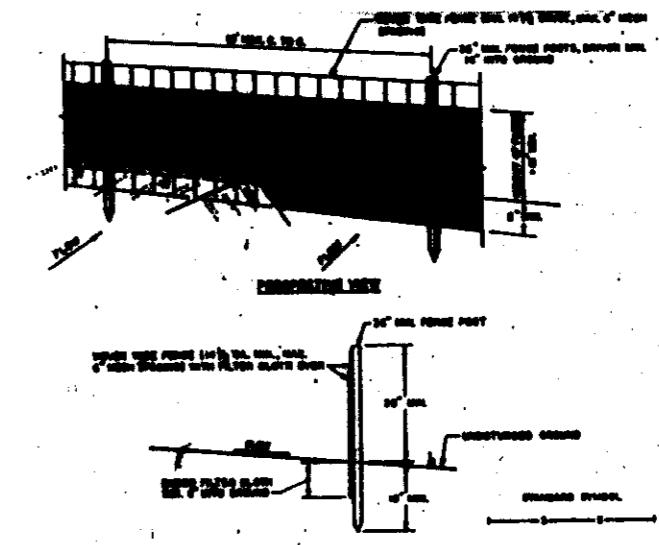


LEGEND

- EARTH DIKE
- LIMIT OF DISTURBANCE
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- STONE FILTER INLET PROTECTION

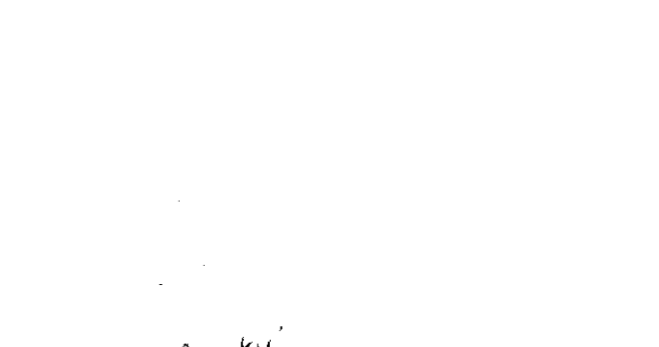
NOTE: DOUBLE ROW OF SILT FENCE MUST BE INSTALLED IN CRITICAL AREAS AS DIRECTED BY THE HOWARD COUNTY SEDIMENT CONTROL DIVISION.

STONE FILTER INLET PROTECTION
NO SCALE



1. Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
2. Place a piece of approved filter cloth (40-85 stone) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
3. Securely nail the 2" x 4" weir to 2" long vertical spacers to be located between the weir and inlet face (max. 4' apart).
4. Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by stonebags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 3" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when damaged with sediment.
8. Assume that storm flow does not bypass the inlet. Temporary earth or asphalt flow diversion shall be installed.

SILT FENCE
NO SCALE



1. INSTALLATION OF SILT FENCE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY SEDIMENT CONTROL DIVISION.
2. FABRIC SHALL BE 18" TO 24" HIGH AND SHALL BE 100% POLYPROPYLENE OR 100% POLYESTER.
3. FABRIC SHALL BE 18" TO 24" HIGH AND SHALL BE 100% POLYPROPYLENE OR 100% POLYESTER.
4. FABRIC SHALL BE 18" TO 24" HIGH AND SHALL BE 100% POLYPROPYLENE OR 100% POLYESTER.

PROPERTY OF
FRANK C. REED &
LANA J. REED
L.216 F.387
ZONED R-20

STONE OUTLET SEDIMENT TRAP #1

DRAINAGE AREA	2,500 AC
STORAGE VOLUME REQUIRED	4500 CF
STORAGE VOLUME PROVIDED	4700 CF
CREST ELEVATION	570.0
BOTTOM ELEVATION	564.0
BOTTOM DIMENSIONS	25'-0"
CREST WIDTH	15'
DEPTH	6'

JR SMITH
26404
ZONED R-20

SEQUENCE OF CONSTRUCTION

1. Obtain a grading permit 5 days
2. Install stabilized construction entrances, silt fence and stone filter inlet protection. Install a snow fence or equal barrier at the limit of wetlands prior to any disturbances. A double row of silt fence must be installed in critical areas as directed by the Howard County Sediment Control Division 5 days
3. Perform rough grading and then stabilize disturbed areas in accordance with the temporary seeding notes 3 weeks
4. Begin house construction and fine grading 1 week
5. Complete house construction including utility installation 1 week
6. Finish fine grading and stabilize disturbed areas in accordance with the permanent seeding notes 1 week
7. Upon approval of the Howard County Department of Public Works Sediment Control Inspector remove all sediment control devices and stabilize all areas disturbed in their removal in accordance with the permanent seeding notes 4 days

PLAN
SCALE 1"=40'

PROPERTY OF
RUSSELL SMITH
509/440
ZONED R-A 15

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 DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."
Kendall R. Reed
DEVELOPER
4/9/90
DATE

BY THE ENGINEER:
"I 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 SOIL CONSERVATION DISTRICT."
Arthur E. Muegge
ENGINEER
4-9-90
DATE

REVIEWED FOR
AND MEETS TECHNICAL REQUIREMENTS
Howard Muegge
SOIL CONSERVATION SERVICE
4-18-90
DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John P. Robertson
HOWARD S.C.D.
4/18/90
DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
James B. ...
COUNTY HEALTH OFFICER
4-20-90
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Arthur E. Muegge
DIRECTOR
5.1.90
DATE

APPROVED: DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
Mark J. ...
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT
4.5.90
DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC WORKS
Howard County Department of Public Works
4.23.90
DATE

APPROVED: BUREAU OF ENGINEERING
William E. ...
CHIEF, BUREAU OF ENGINEERING
4.20.90
DATE

REVISED HOUSES & GRADING FOR LOTS 14-15
BOONES LANE JOINT VENTURE
8307 MAIN STREET
ELICOTT CITY, MARYLAND 21043

THE BLUFFS AT PINE ORCHARD

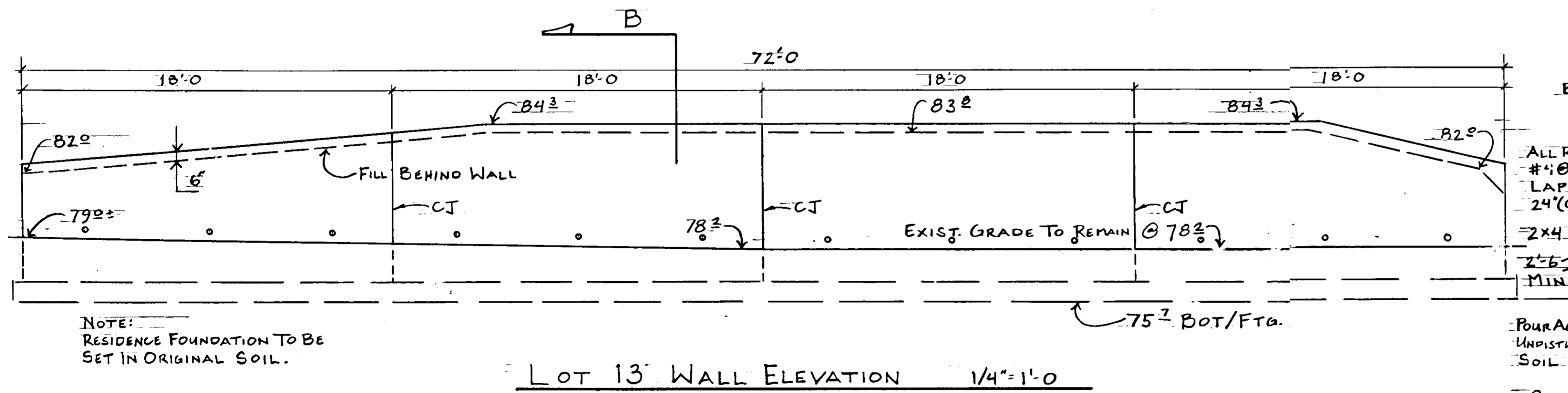
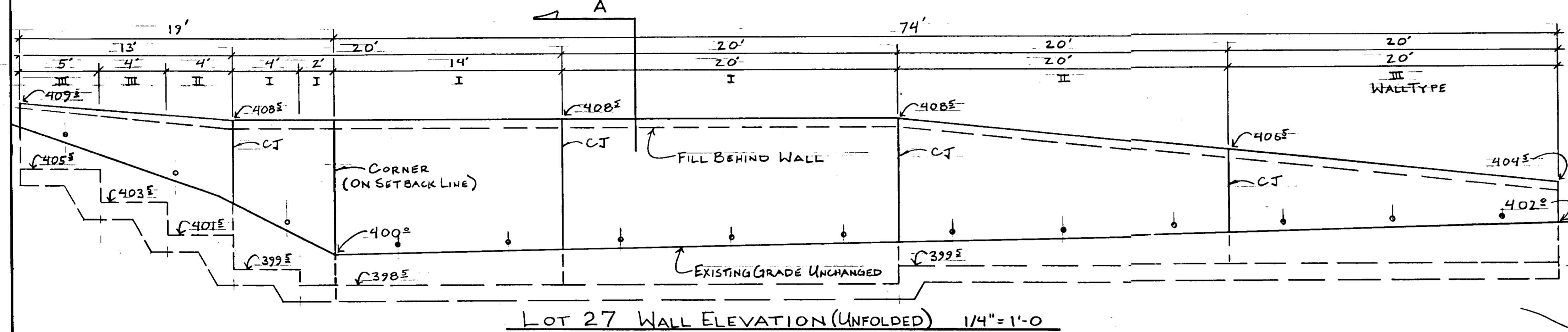
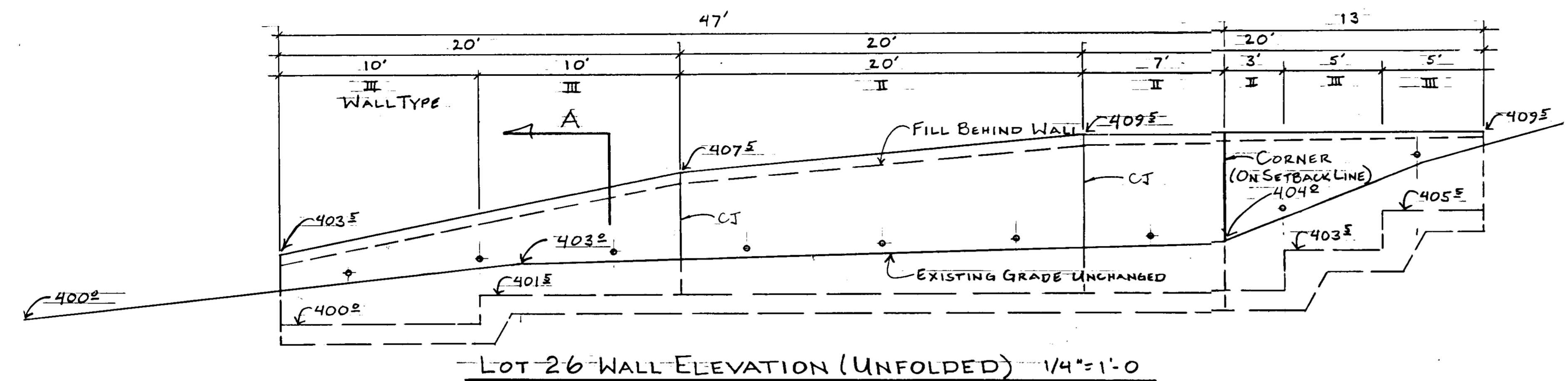
TITLE
SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
A Land Planning, Engineering, and Consulting Firm
105 North Ridge Road, Ellicott City, Maryland 21043
801-461-2690 FAX 801-740-0130

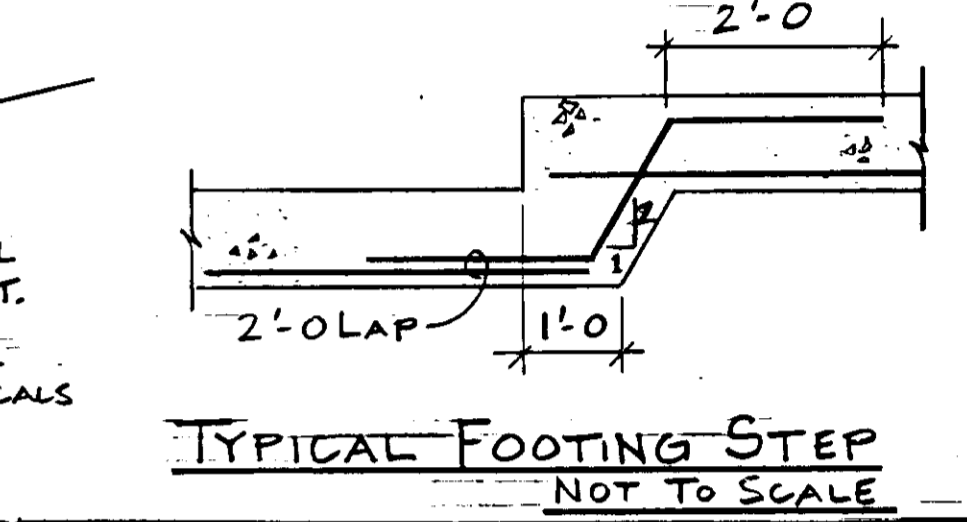
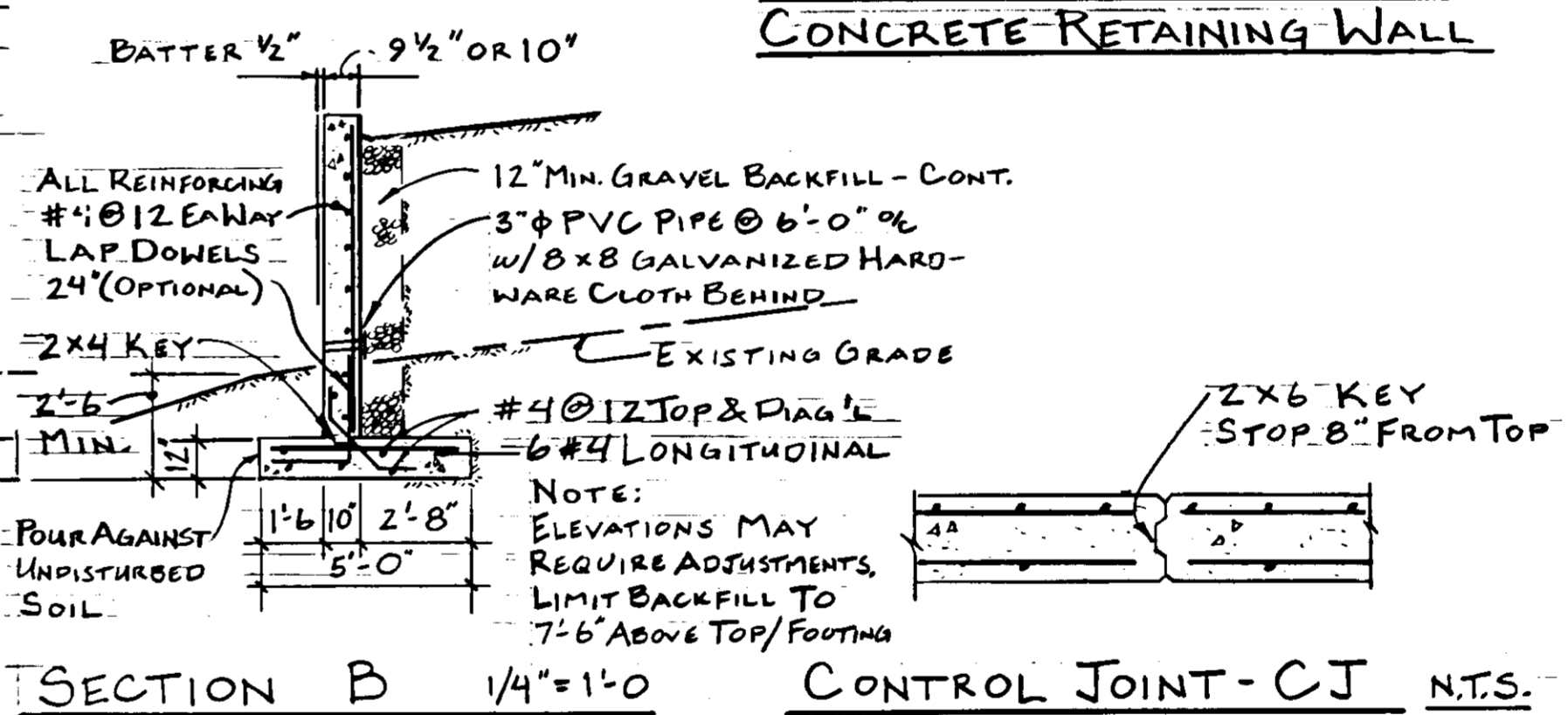
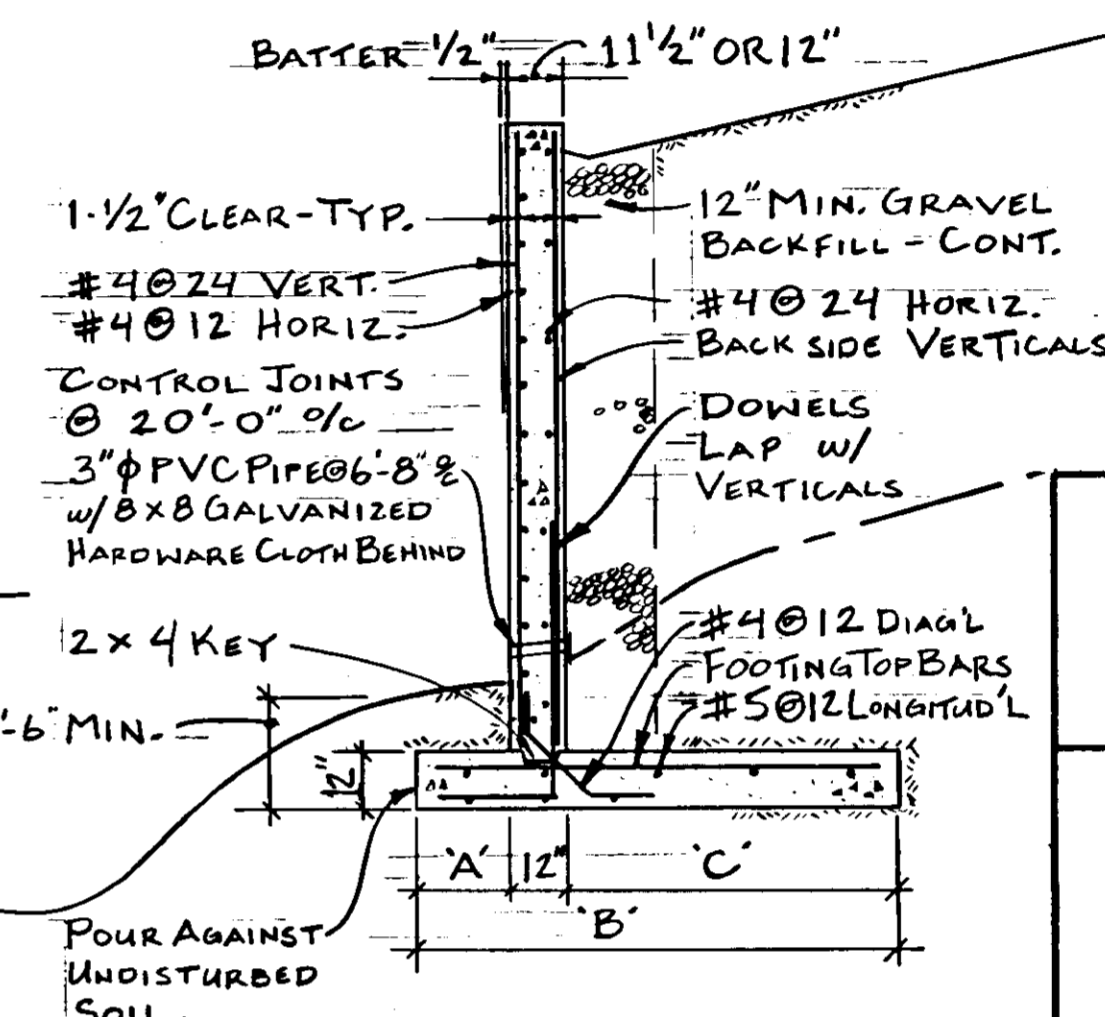
4-9-90
DATE
DESIGNED BY: C.M.R.
DRAWN BY: M.A.D.
PROJECT NO.: 8100
DATE: 4/9/90
SCALE: AS SHOWN
DRAWING NO.: 5 OF 6

SECTION 'A' RETAINING WALL SCHEDULE								
WALL TYPE (PER ELEV)	DIMENSIONS				REINFORCING			
	MAX. HT. OFFILL ±	WIDTH 'B'	TOE 'A'	HEEL 'C'	FOOTING TOP BARS	DOWELS	VERT. LAPS W/DOWELS	BACKSIDE VERTICALS
I	10'	8'-6"	2'-9"	4'-9"	#5@12	#6@12	38"	#5@12
II	8'	7'-0"	2'-4"	3'-8"	#4@12	#5@12	20"	#5@12
III	6'	5'-6"	1'-6"	3'-0"	#4@12	#4@12	16"	#4@12

NOTES:
 1) FOOTING ELEVATIONS MAY REQUIRE ADJUSTMENTS IN FIELD. REVISE WALL TYPES ACCORDINGLY.
 2) RIP-RAP OVER TOE AS REQUIRED TO PREVENT SCOURING.
 3) PROVIDE CORNER BARS OUTSIDE FACE; #4@12 (24/24)



NOTE: RESIDENCE FOUNDATION TO BE SET IN ORIGINAL SOIL.



APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
 COUNTY HEALTH OFFICER: [Signature] 4-26-90 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 DIRECTOR: [Signature] 5-1-90 DATE

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT: [Signature] 4/25/90 DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: [Signature] 4-23-90 DATE

CHIEF, BUREAU OF ENGINEERING: [Signature] 4-20-90 DATE

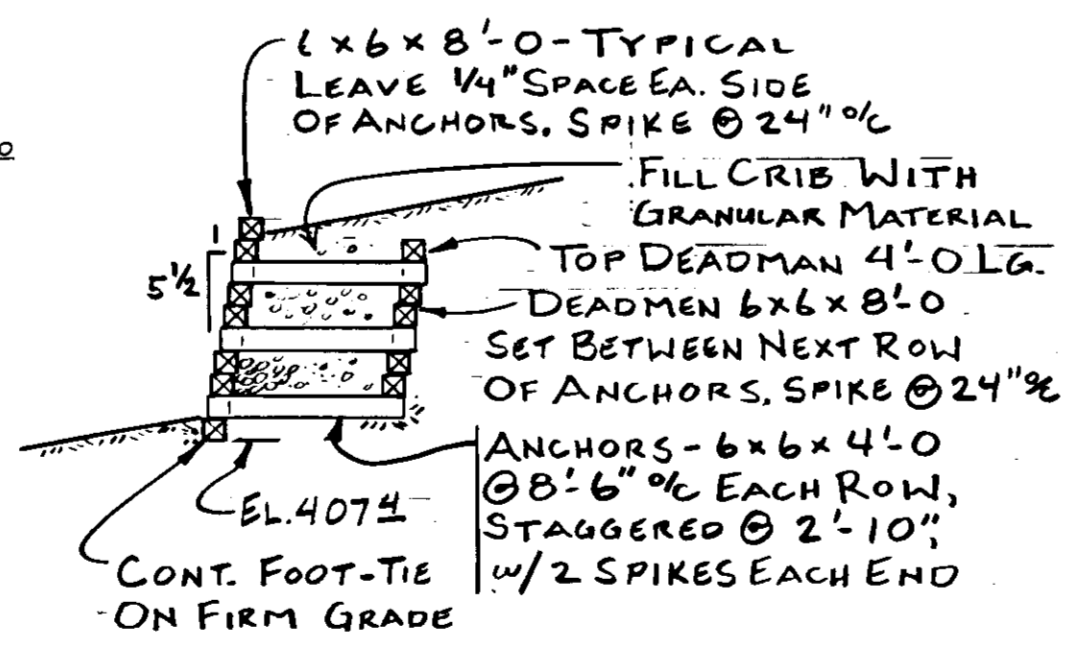
OWNER/DEVELOPER
 BOONES LANE JOINT VENTURE
 8307 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043

PROJECT: THE BLUFFS AT PINE ORCHARD
 AREA: SINGLE FAMILY DETACHED 60' x 120' TAX MAP 17 & 24 PARCEL NO. 6
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: LOTS 13, 26, 27 & 31
 RETAINING WALL DETAILS

DONALD SIMMONS ASSOCIATES
 Consulting Engineers (301) 465-7354
 4637 South Leisure Court
 ELLICOTT CITY, MARYLAND 21043

DATE: 4-5-90
 DESIGNED BY: Des, Jr.
 DRAWN BY: Des, Jr.
 PROJECT NO: 9108
 DATE: 4/5/90
 SCALE: 1/4" = 1'-0"
 DRAWING NO. 6 OF 6



REINFORCED CONCRETE RETAINING WALLS

FOUNDATIONS AND EARTH WORK:

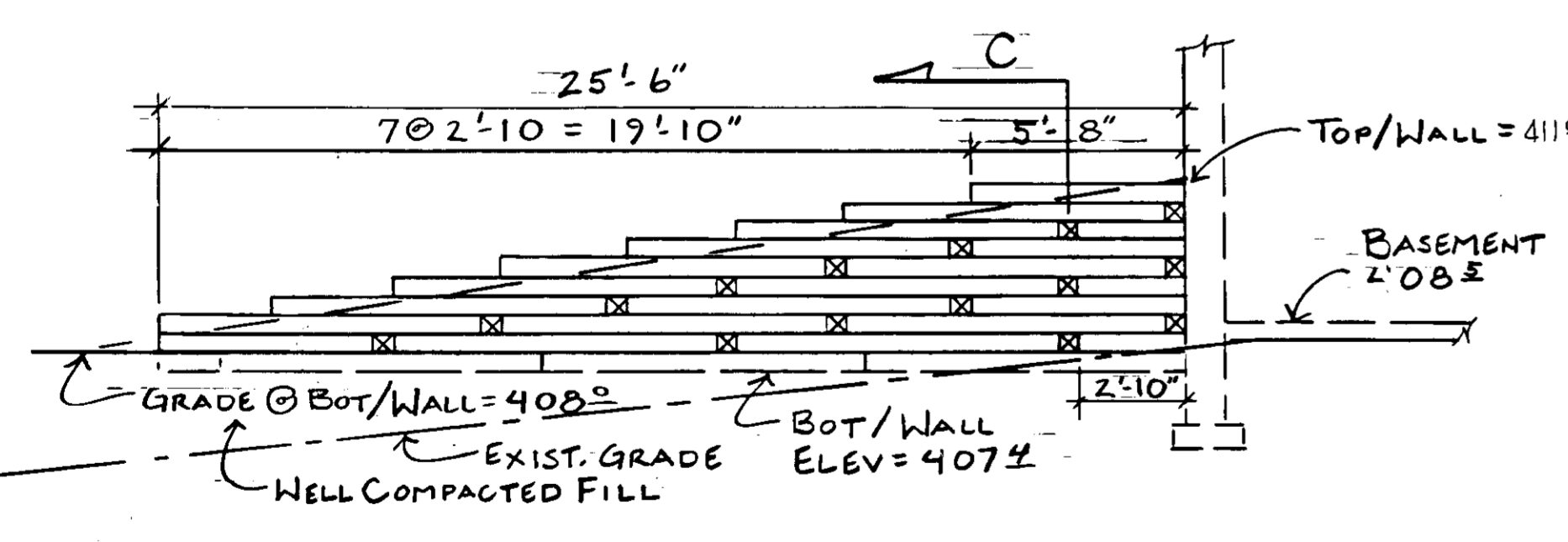
- FOOTINGS ARE DESIGNED FOR AN ALLOWABLE BEARING CAPACITY OF 3000 PSF. THE CONTRACTOR SHALL ASCERTAIN PROPER BEARING AT FOOTING ELEVATIONS AND ADJUST DEPTHS AS REQUIRED.
- BACKFILL SHALL CONSIST OF CLEAN POROUS MATERIAL, PLACED IN 8" LAYERS AND COMPACTED WITH APPROPRIATE EQUIPMENT.

CONCRETE:

- ALL CONCRETE SHALL DEVELOP COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS, AND SHALL HAVE 5% AIR ENTRAINMENT.
- CONCRETE WORK SHALL CONFORM TO BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, A.C.I. 318, BY THE AMERICAN CONCRETE INSTITUTE, LATEST EDITION.
- REINFORCING STEEL SHALL BE ASTM A 615 GRADE 60.
- PROVIDE SPACERS, CHAIRS AND TIES AS REQUIRED TO SUPPORT REINFORCING IN POSITION. PROVIDE 2" CLEARANCE TO FOOTING STEEL AND 1-1/2" COVER ON WALL REINFORCING.
- CONTINUOUS REINFORCING SHALL BE LAPPED A MINIMUM OF 36 BAR DIAMETERS AT SPLICES.
- PATCH ALL TIE HOLES AND PROVIDE HAND RUBBED FINISH.
- PROVIDE 3/4" CHAMFER AT EXPOSED EDGES AND JOINTS.
- THREE CONCRETE CYLINDERS SHALL BE FORMED AND TESTED FOR EACH DAY'S POUR.

TIMBER CRIB WALL

- TIMBERS SHALL BE SOUTHERN PINE, PRESSURE TREATED IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVERS ASSOCIATION STANDARD ANWB LP-22 TREATMENT SHALL BE CCA, CHROMATED COPPER ARSENATE, APPLIED TO .40 RETENTION. EACH PIECE SHALL BEAR A GRADE MARK INDICATING THIS TREATMENT.
- SPIKES SHALL BE 3/8 INCH DIAMETER X 10 INCH, HOT DIPPED GALVANIZED. WHERE SPIKES ARE WITHIN 4 INCHES OF TIMBER'S END, DRILL 9/32 INCH PILOT HOLE, TO PREVENT SPLITTING.



STRUCTURAL NOTES

CODE: 1987 BOCA

LATERAL EARTH LOAD: EQUIVALENT FLUID PRESSURE OF 40 PSF / FOOT OF DEPTH

SEDIMENT AND EROSION CONTROL SHALL BE MAINTAINED AT ALL TIMES.

- A WOOD FENCE, NOT SHOWN IN SECTIONS, SHALL BE INSTALLED AT THE TOP OF EACH WALL.
- CONSTRUCTION SHALL BE IN ACCORDANCE OF SECTION 827.0 OF THE BOCA CODE, 42 INCHES HIGH, MIN.
- POSTS SHALL BE 4 X 6 MINIMUM, PRESSURE TREATED SOUTHERN PINE AT 8'-0" ON CENTER, SET 2'-6" INTO COMPACTED GRADE.