

APPROVED: OFFICE OF PLANNING AND ZONING.
Wash St. Dept. - 2/2/89
 Chief, Division of Community Planning and Land Development Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Paul M. Segan 3/2/89
 Chief, Land Development Div. Date

Francis W. Heblaus 7/27/89
 Chief, Bureau of Highways Date

William E. King 8-4-89
 Chief, Bureau of Engineering Date

WOODBERRY

LOTS 1 THRU 22

ROAD AND STORM DRAIN CONSTRUCTION DRAWINGS

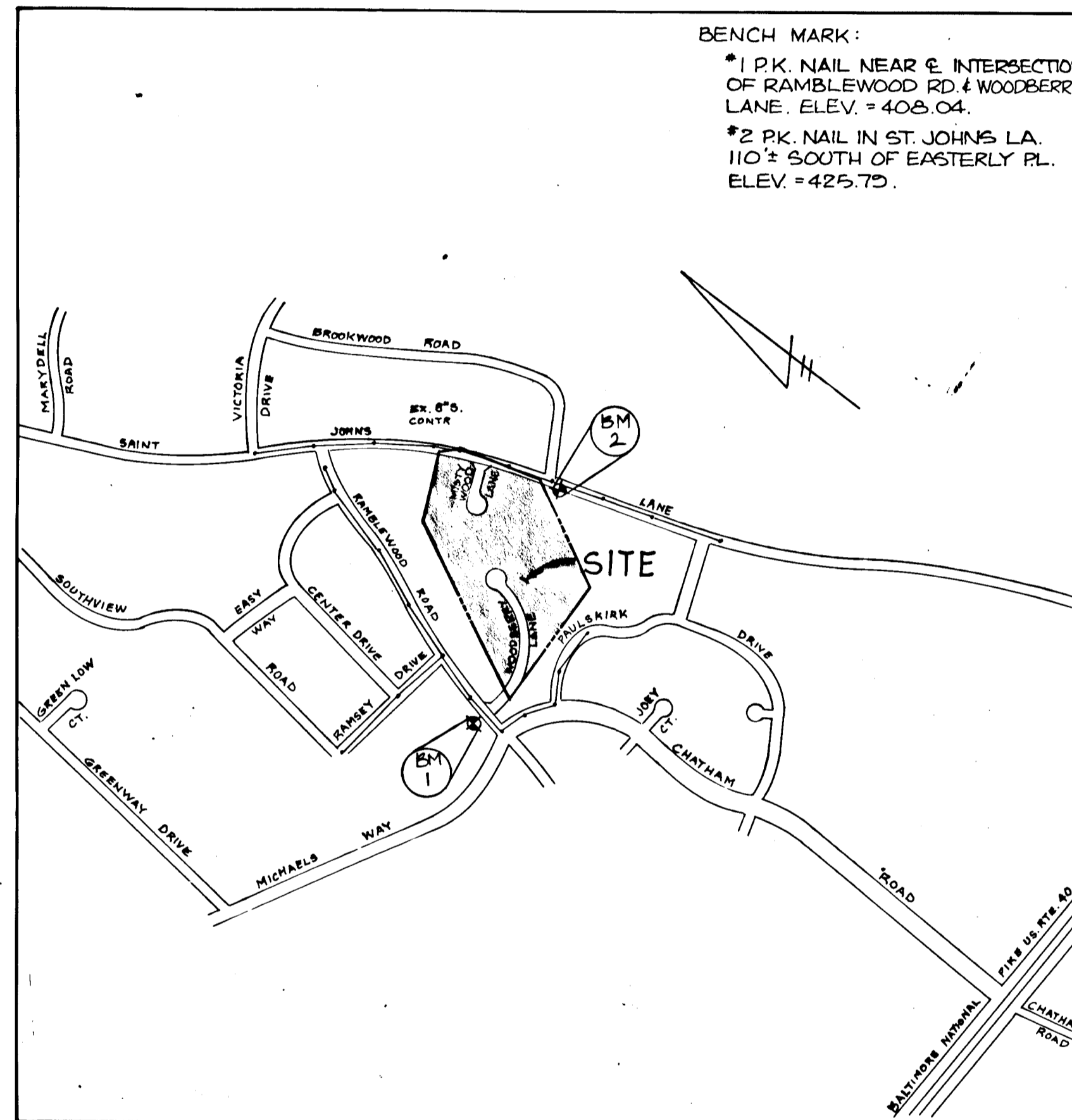
INDEX SHEETS

1. Cover sheet
2. Road Plan, St. John's Lane
3. Road Plan, Woodberry Lane
4. Road Plan, Misty Wood Lane
5. Sediment Control Phase I
6. Sediment Control Phase II
7. Grading Plan
8. Landscape and Drainage Map
9. Storm Drain Profiles/Schedules
10. Storm Water Management Profiles
11. Drainage area map/construction specs
12. Details/specs

GENERAL NOTES

1. Property zoned "R-20" as per 8/2/85 Comprehensive Zoning Plan.
 2. Total area of lots = 8.778 acres.
 3. Total area of road right-of-way = 1.631 acres.
 4. Total area of open space = 3.005 acres.
 5. Total area of the site = 11.296 acres.
 6. Total numbers of building lots = 21.
 7. Public water and sewer will be used for this subdivision.
 8. B.R.L. denotes building restriction line.
 9. For flag or pipestem lots, refuse collection, snow removal and road maintenance to be provided at the junction or flag or pipestem and the right-of-way and not onto the flag or pipestem driveway.
 10. Deed Reference: 355/61 & 221/445
 11. All coordinates shown are based upon the Maryland State Grid System and Howard County Grid Point.
- | | |
|---------|--------------|
| 3242001 | N: 526632.02 |
| | E: 850349.05 |
| 3242002 | N: 525789.10 |
| | E: 849475.77 |
12. All traffic control devices shall be installed in compliance with the manual on Uniform Traffic Control Devices for Streets and Highways, Current Edition.

O.P. & Z. FILE NO.: S-87-59, P-88-29
 TAX MAP: 17; BLOCK: 22; PARCEL: 144
 2nd ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 DATE: JAN., 1989



VICINITY MAP

SCALE: 1"=600'

GENERAL NOTES OF CONSTRUCTION

1. All work shall be performed in accordance with the Howard County Design Manual, Vol. IV, i.e., standard specifications and details for construction.
2. Approximate location of existing utilities are shown. 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.
3. The contractor shall test pit for existing utilities at least five (5) days prior to starting work shown on these drawings.
4. Contractor shall notify the following utilities at least five (5) days prior to beginning work shown on these drawings.

Miss utility	559-0100
Bell telephone system	393-3649
Long distance cable division	393-3553/3554
Baltimore Gas & Electric Company	539-8000
Howard County Bureau of Utilities	992-2366
Howard County Construction/Inspection Survey Division (24 hours notice prior of commencement of work)	792-7272
5. All inlets shall be constructed in accordance with Howard County standards.
6. All street curb returns shall have 30' radii unless otherwise noted.
7. Storm drain trenches within road rights-of-way shall be backfilled and compacted in accordance with Howard County Design Manual, Vol. IV, i.e., standard specifications and details for construction.
8. Installation of traffic control devices, marking, and signing shall be in accordance with the manual of uniform traffic control devices, 1984 edition (revised).
9. Pipe shall be installed by contractor until the length called for at each station has been approved by the engineer in the field.
10. Designed traffic speed in accordance with the American Association of State Highway official standards.

St. John's Lane - 30' 1/2 R/W (minor collector)
Misty Wood Lane - 50' R/W (Cul-de-sac)
Woodberry Lane - 50' R/W (Cul-de-sac)
11. All elevations shown are based on U.S.C. and G.S. mean sea level datum, 1929.
12. All fill areas within roadways and/or under structures to be compacted to a minimum 95% compaction.
13. All pipe elevations shown are invert elevations.
14. Profile stations shall be adjusted as necessary to confirm to plan dimensions.
15. Subject property zoned R-20 per 08-02-85 comprehensive zoning plan.
16. No pipe shall be laid in place until lines of excavation have been brought to within six (6) inches of finished grade elevations.
17. All storm drain pipe bedding shall be class "B" as shown in fig. 11.4 of the Howard County design manual, Vol. I, unless otherwise noted.

OWNER / DEVELOPER

CHATEAU HOMES, INC.
 8100 WOODEN GLEN CT.
 ELLICOTT CITY, MD.
 21043
 (301) 792-5001

D.S. THALER & ASSOC. INC.

CIVIL ENGINEERS LANDSCAPE ARCHITECTS

SURVEYORS & LAND PLANNERS

11 WARREN ROAD BALTIMORE, MD.

21208 (301) 484-4100



1456



Henry F. Sadler
HENRY F. SADLER
P.E. #17063
DATE 6/19/89

APPROVED:
HOWARD COUNTY OFFICE OF PLANNING & ZONING

Travis J. ...
CHIEF, DIVISION OF COMMUNITY
PLANNING & LAND DEVELOPMENT
DATE 6/19/89

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Paul D. ...
CHIEF, LAND DEVELOPMENT DIVISION
DATE 8/4/89

Lawrence W. ...
CHIEF, BUREAU OF HIGHWAYS
DATE 7/27/89

William S. ...
CHIEF, BUREAU OF ENGINEERING
DATE 8-4-89

WOODBERRY LOTS 1 THRU 22

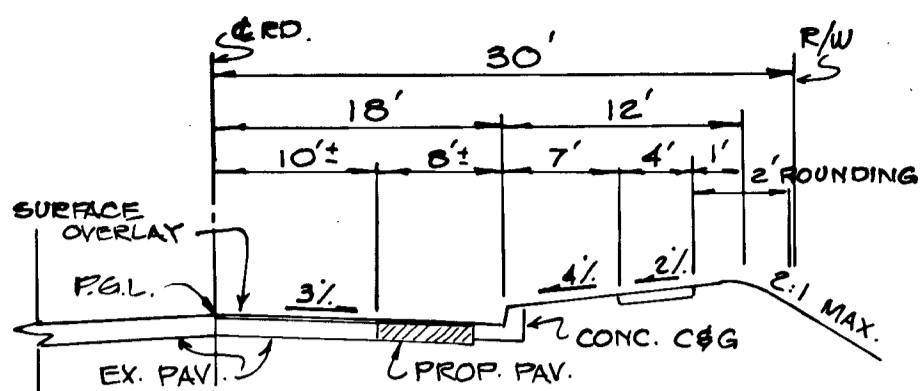
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

ST. JOHN'S LANE PLAN & PROFILE

OWNER/DEVELOPER
CHATEAU HOMES, INC.
800 WOODED GLEN CT.
ELLCOTT CITY, MD. 21043

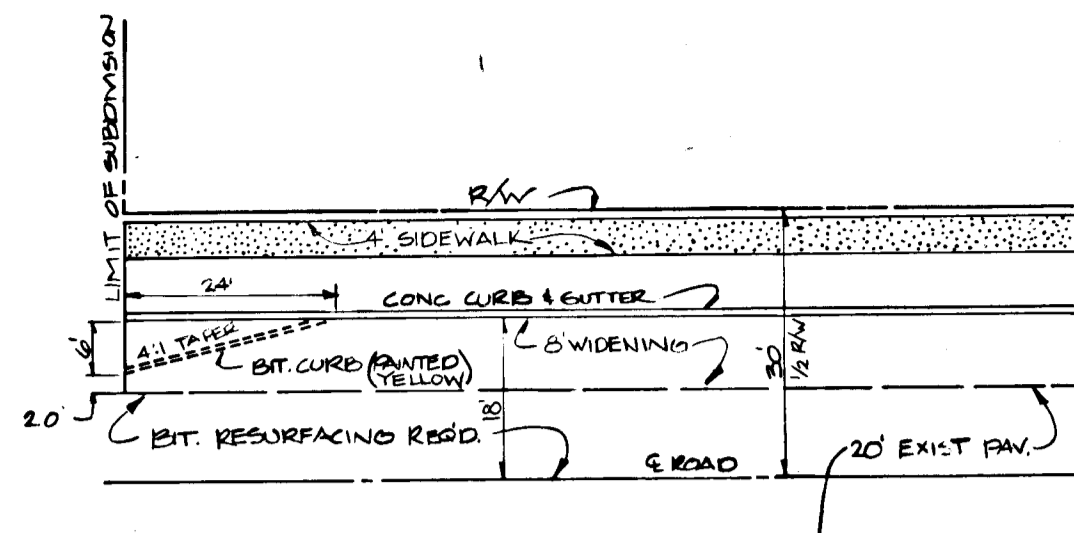
SCALE: 1"=50' DATE: JAN 1989 DWG. NO. 2 OF 12
DESIGNED: M.S. DRAWN: JLC/PLM CHECKED: J.T.N.

PI&A Inc.
11 WARREN ROAD BALTIMORE, MD. 21028 (301) 484-4100

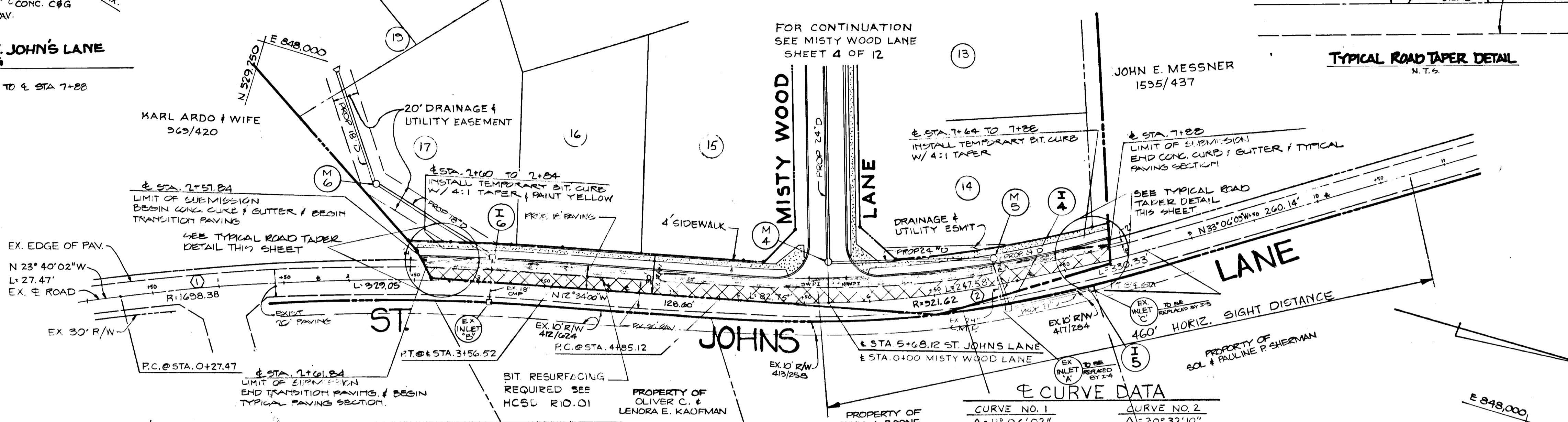


TYPICAL SECTION, ST. JOHN'S LANE WIDENING

1. ST. JOHN'S LANE @ STA 2+00 TO @ STA 7+88
2. MINOR COLLECTOR
3. EX. ZONING: R-20
4. PAVING SECTION: P-3
5. DESIGN SPEED: 35 M.P.H.



TYPICAL ROAD TAPER DETAIL

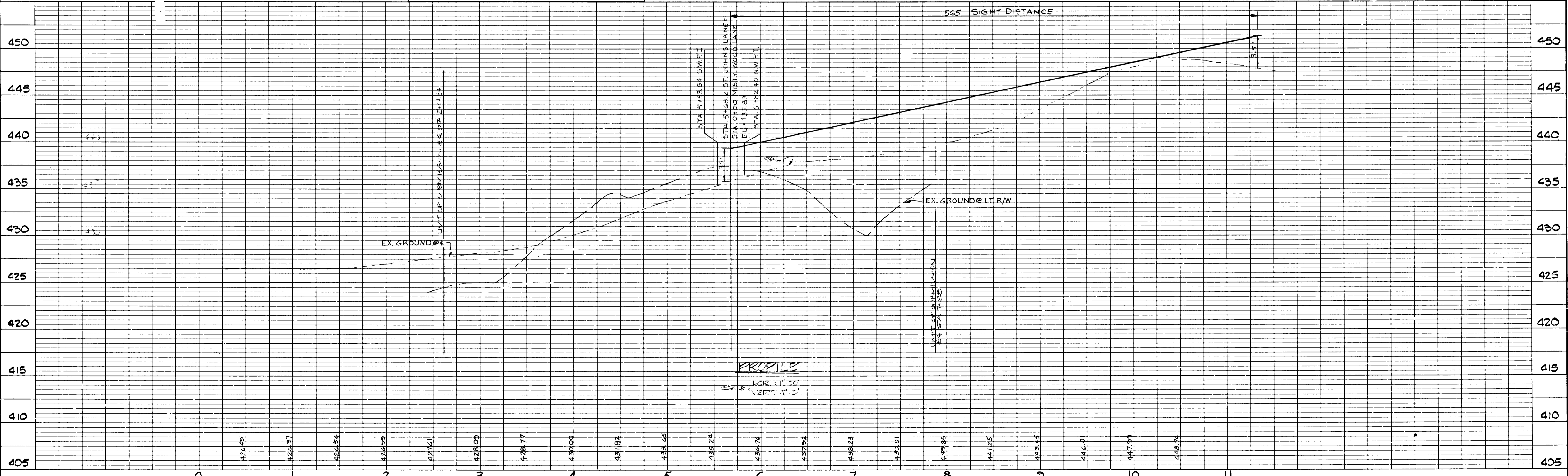


CURVE DATA

CURVE NO.	DELTA	RADIUS	LENGTH	TANGENT
CURVE NO. 1	11° 06' 02"	1698.38'	329.05'	165.04'
CURVE NO. 2	20° 32' 10"	921.62'	330.33'	166.06'

REVISION

NO.	DESCRIPTION	BY	DATE



PLAN SURVEYED...
NOTE BOOK...
NO.

PROFILE SURVEYED...
NOTE BOOK...
NO.

1456



Henry F. Sadler 6/17/89
HENRY F. SADLER DATE
P.E. # 17063

APPROVED:
HOWARD COUNTY OFFICE OF PLANNING & ZONING

Frank S. Ziegler 8/2/89
CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Robert Egan 8/6/89
CHIEF, LAND DEVELOPMENT DIVISION

Drumville W. Woodland 7/27/89
CHIEF, BUREAU OF HIGHWAYS

William S. Ray 8-4-89
CHIEF, BUREAU OF ENGINEERING

WOODBERRY LOTS 1 THRU 22 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

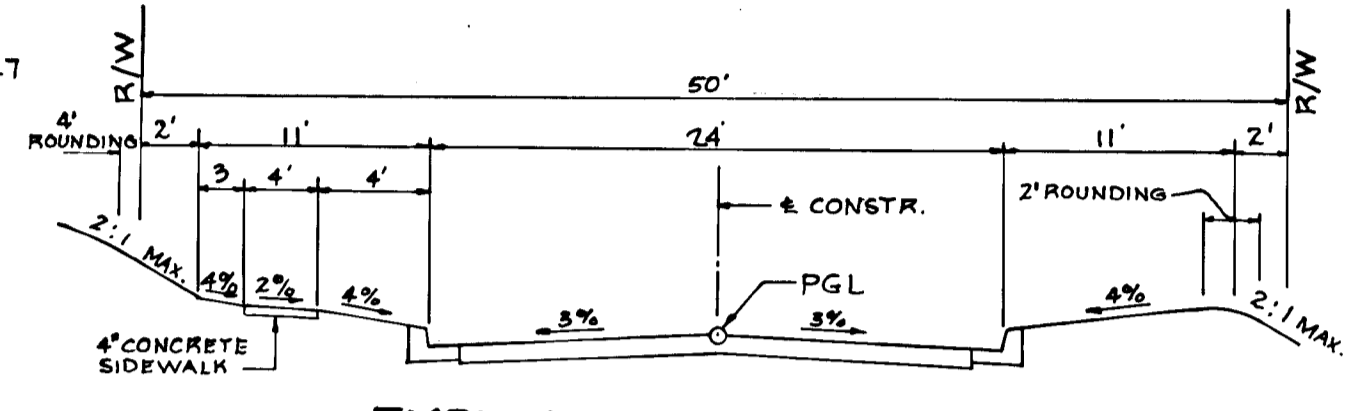
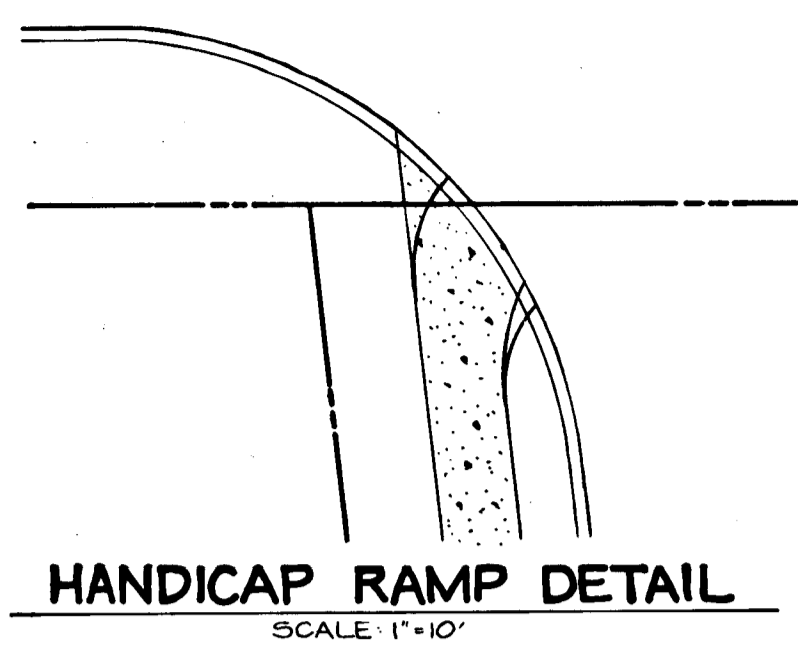
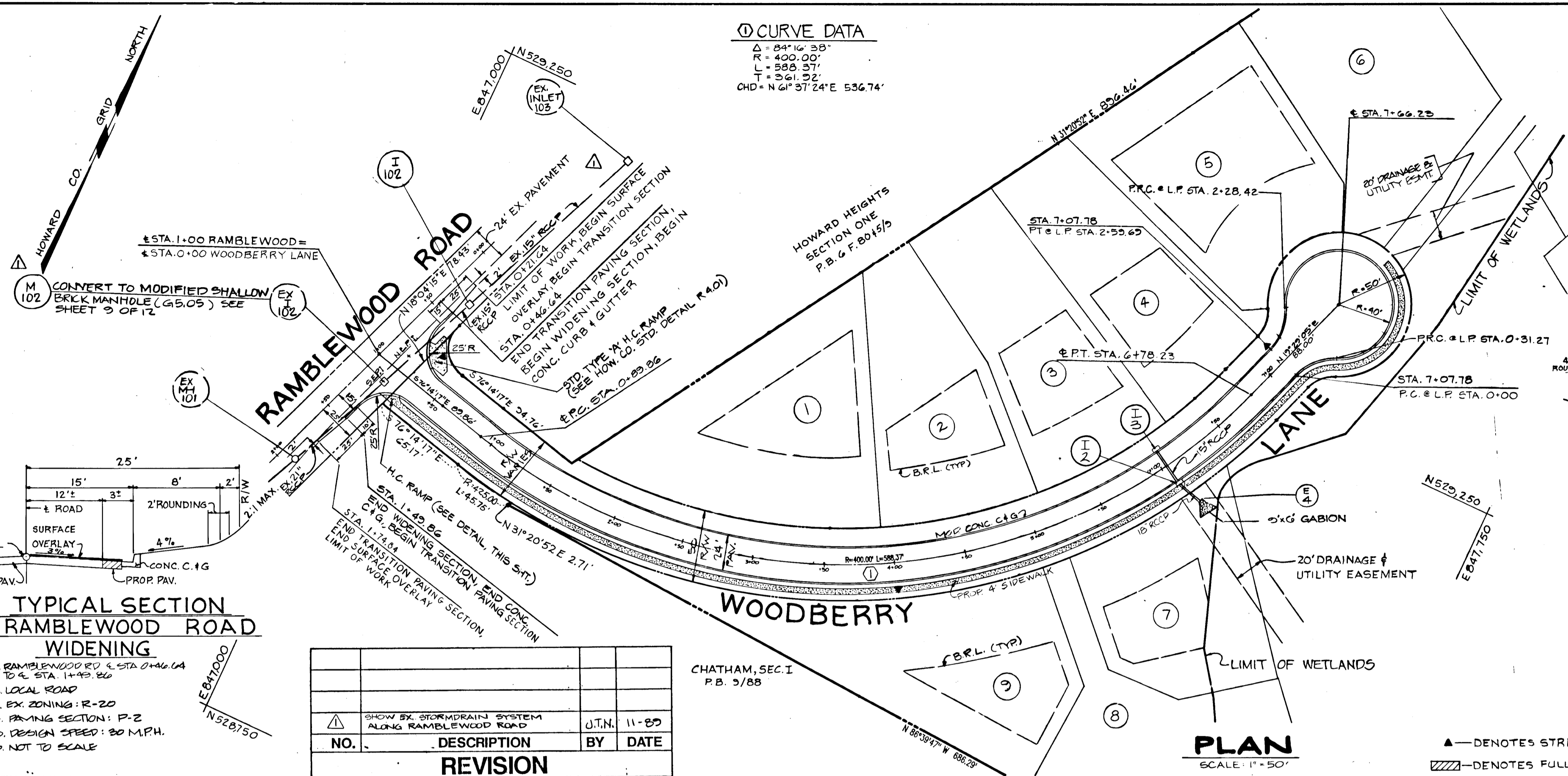
WOODBERRY LANE PLAN & PROFILE

OWNER / DEVELOPER
CHATEAU HOMES, INC.
810 WOODEN GLEN CT.
ELLCOTT CITY, MD 21043

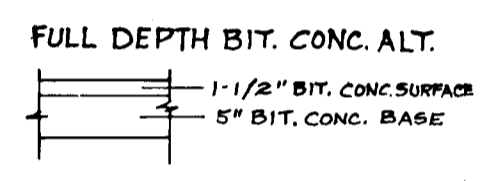
SCALE: 1" = 50' DATE: JAN 1989 DWG. NO. 3 OF 12
DESIGNED: BLC/JTH DRAWN: J.L.C. CHECKED: J.T.N.

DJA Inc.
11 WARREN ROAD BALTIMORE, MD 21208 (301) 484-4100

① CURVE DATA
Δ = 84°16'38"
R = 400.00'
L = 588.57'
T = 361.92'
CHD = N6°37'24"E 536.74'

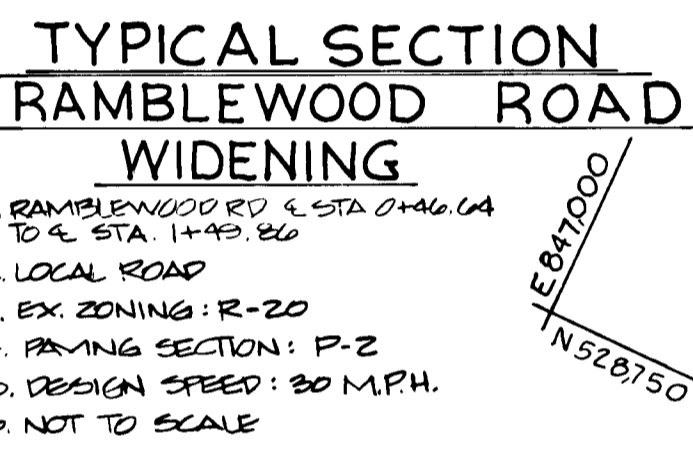


- TYPICAL CROSS-SECTION
WOODBERRY LANE**
- NOT TO SCALE
- DESIGN SPEED = 30 MPH WOODBERRY LANE
 - WOODBERRY LANE - STA. 0+00.00 TO STA. 7+66.23
 - EX. ZONING - R-20
 - CUL-DE-SAC



PAVING SECTION P-2 WOODBERRY LANE & MISTY WOOD LANE NOT TO SCALE

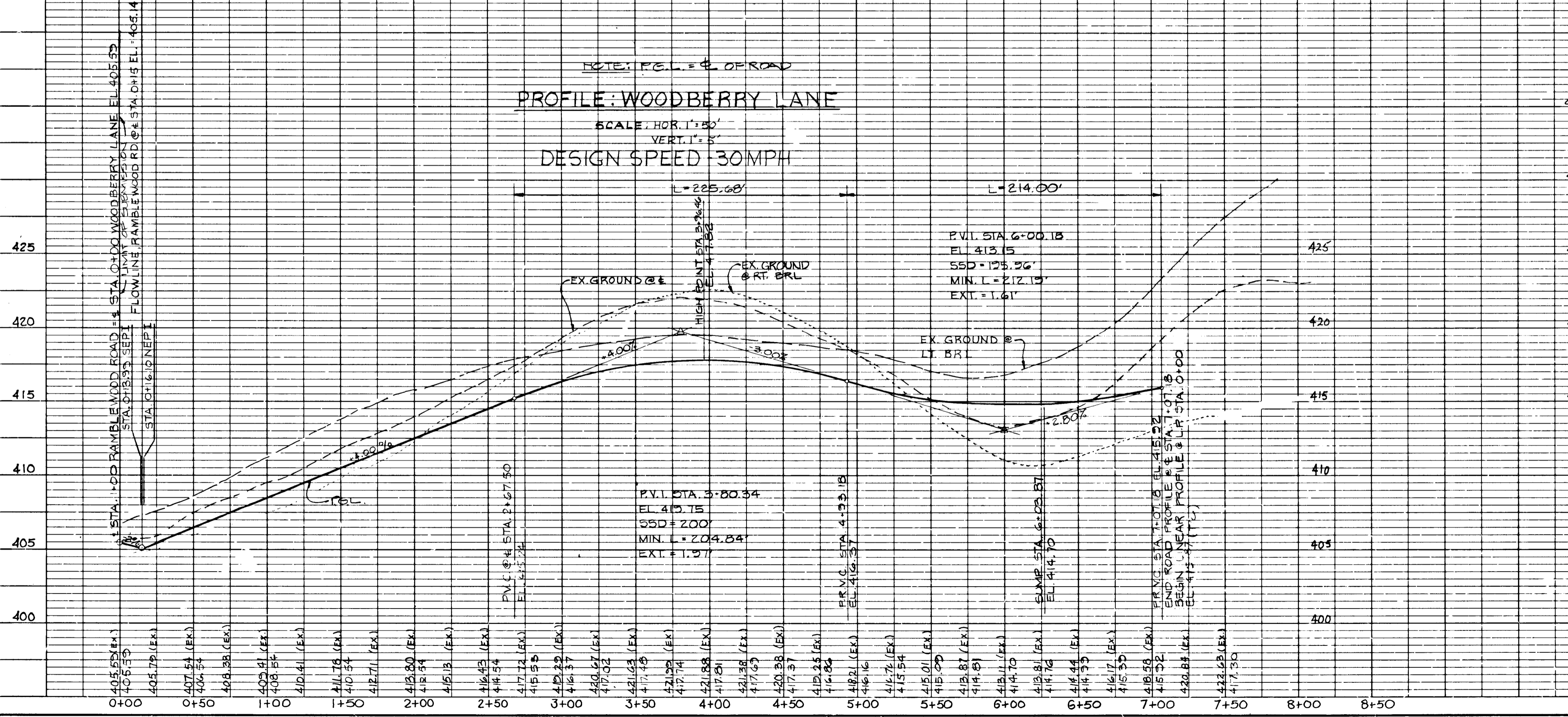
▲ - DENOTES STREET LIGHTS
▨ - DENOTES FULL DEPTH PAVEMENT WIDENING
B.R.L. - DENOTES BUILDING RESTRICTION LINE



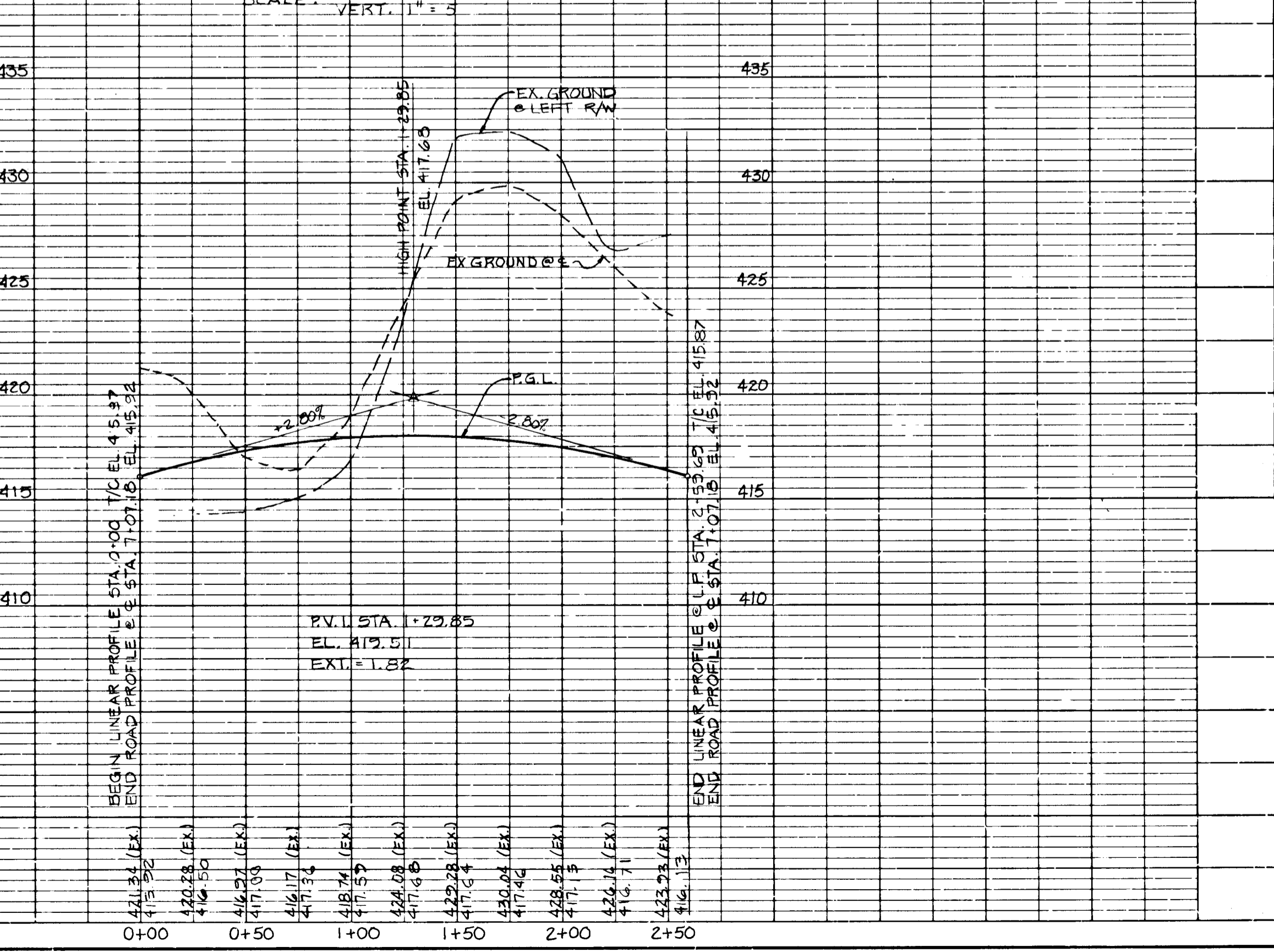
- TYPICAL SECTION
RAMBLEWOOD ROAD
WIDENING**
- RAMBLEWOOD RD. STA. 0+46.64 TO STA. 1+49.86
 - LOCAL ROAD
 - EX. ZONING - R-20
 - PAVING SECTION - P-2
 - DESIGN SPEED = 30 MPH.
 - NOT TO SCALE

NO.	DESCRIPTION	BY	DATE
1	SHOW EX. STORM DRAIN SYSTEM ALONG RAMBLEWOOD ROAD	J.T.N.	11-89

PROFILE: WOODBERRY LANE SCALE: HOR. 1" = 50' VERT. 1" = 5'



LINEAR PROFILE: WOODBERRY LANE SCALE: HOR. 1" = 50' VERT. 1" = 5'



1456

PLAN	DATE
NO.	

PROFILE	DATE
NO.	

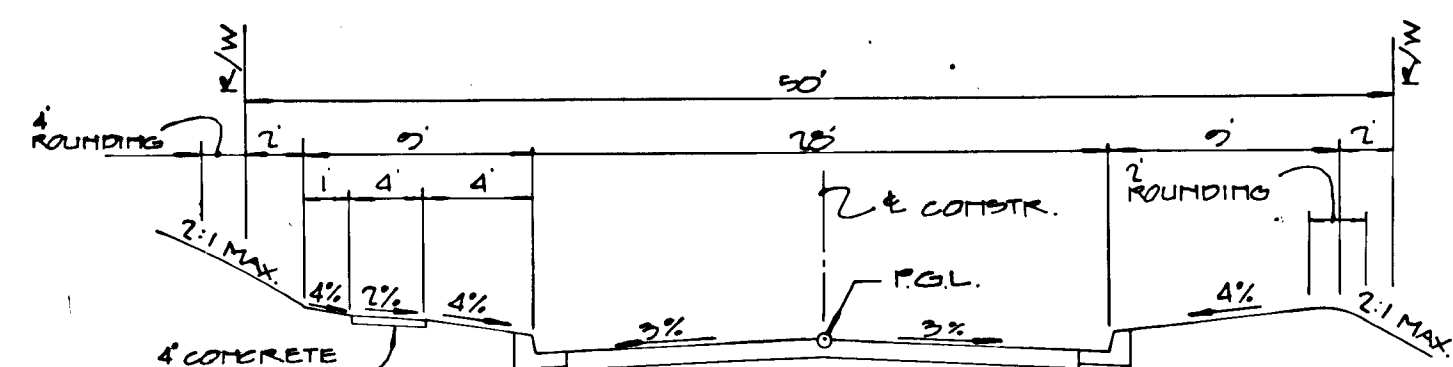
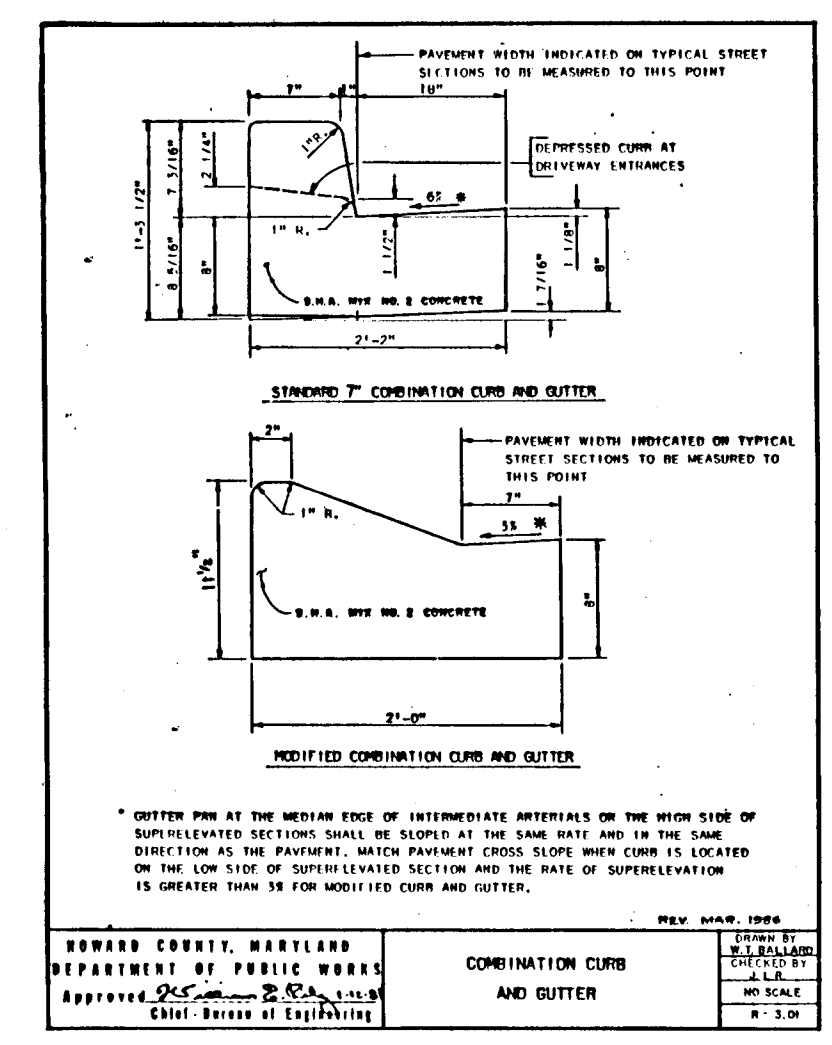
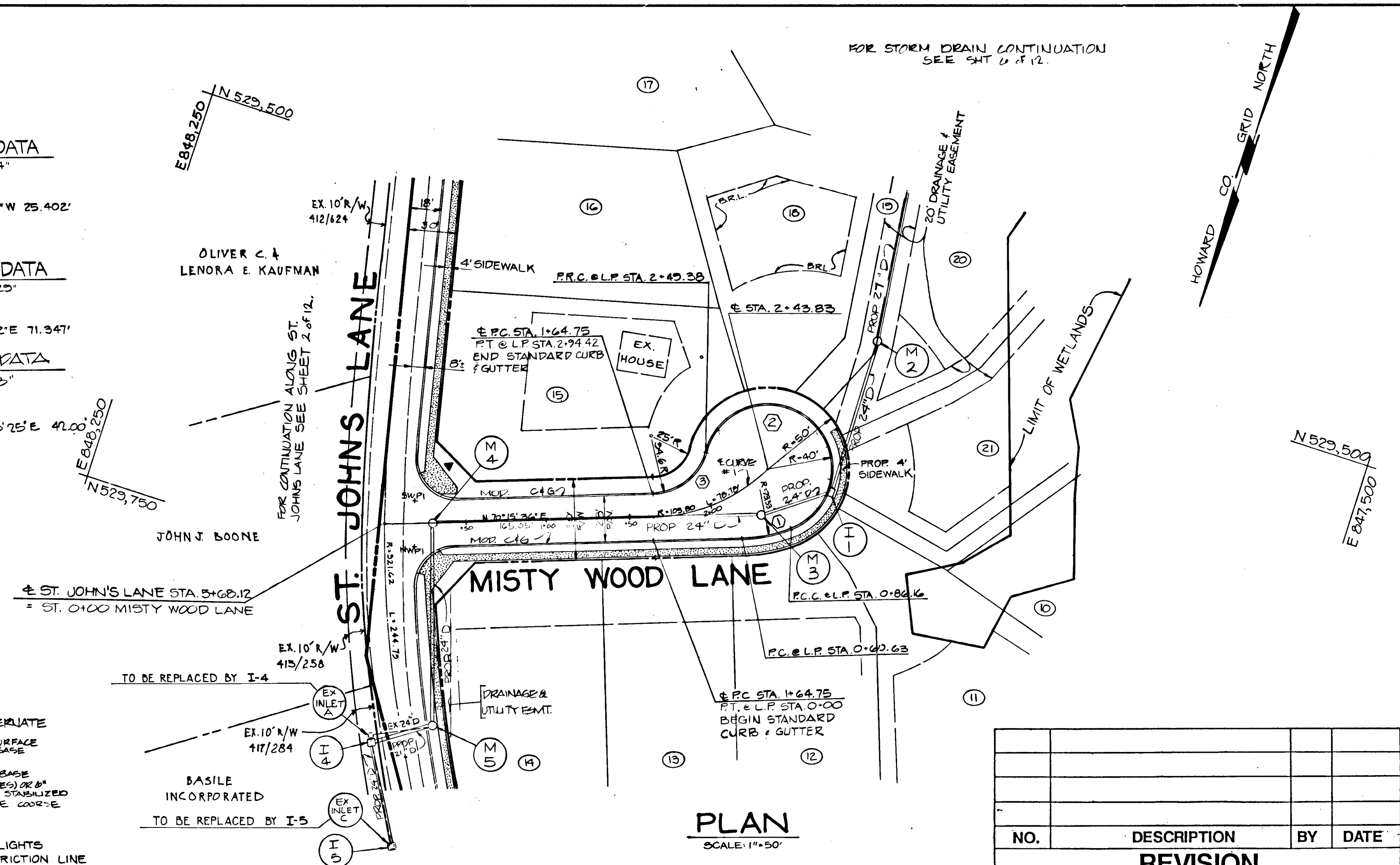
① CURVE DATA
 A = 191.536' 54"
 R = 73.833'
 L = 25.531'
 T = 12.093'
 CHD = 5.601103° W 25.402'

② CURVE DATA
 A = 235.41' 25"
 R = 40.00'
 L = 163.217'
 T = 78.853'
 CHD = 5.601103° E 71.547'

③ CURVE DATA
 A = 125.44' 725"
 R = 35.00'
 L = 45.05'
 T = 26.75'
 CHD = N 35° 23' 75" E 41.00'

GRANULAR BASE ALTERNATE
 1 1/2" BIT CONC SURFACE
 2 1/2" BIT CONC BASE
 PRIME
 8" COURSE RUN BASE
 COURSE (2 COURSES) OR 6"
 DENSE GRADED STABILIZED
 AGGREGATE BASE COURSE

▲ - DENOTES STREET LIGHTS
 B.R.L. - BUILDING RESTRICTION LINE



TYPICAL CROSS-SECTION
 MISTY WOOD LANE
 1. DESIGN SPEED = 25 MPH. MISTY WOOD LANE
 2. MISTY WOOD LANE - STA. 0+00 TO 1+64.75
 3. EX. ZONING - R-20

NO.	DESCRIPTION	BY	DATE

STATE OF MARYLAND
 COUNTY OF HOWARD
 ENGINEERING
 HENRY F. SADLER
 P.E. # 12069
 DATE 6/19/89

APPROVED:
 HOWARD COUNTY OFFICE OF PLANNING & ZONING
 MASH J. J. ...
 CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT
 DATE 5/12/89

APPROVED:
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 ...
 DATE 8/4/89

APPROVED:
 ...
 DATE 7/27/89

APPROVED:
 ...
 DATE 8-4-89

WOODBERRY
 LOTS 1 THRU 22
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

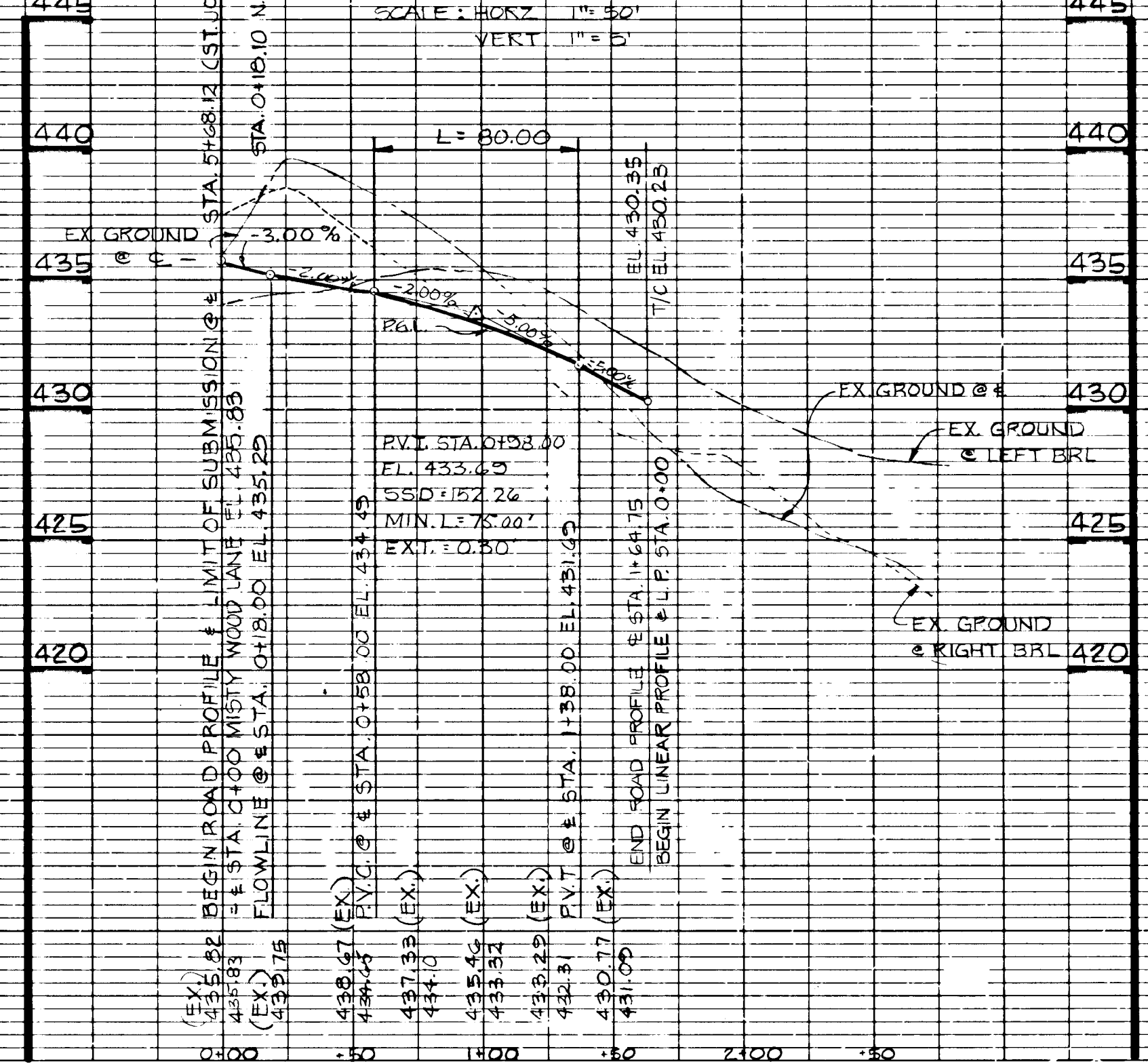
MISTY WOOD LANE
 PLAN & PROFILE

OWNER/DEVELOPER
 CHATEAU HOMES, INC.
 810 WOODED GLEN CT.
 ELLICOTT CITY, MD 21043

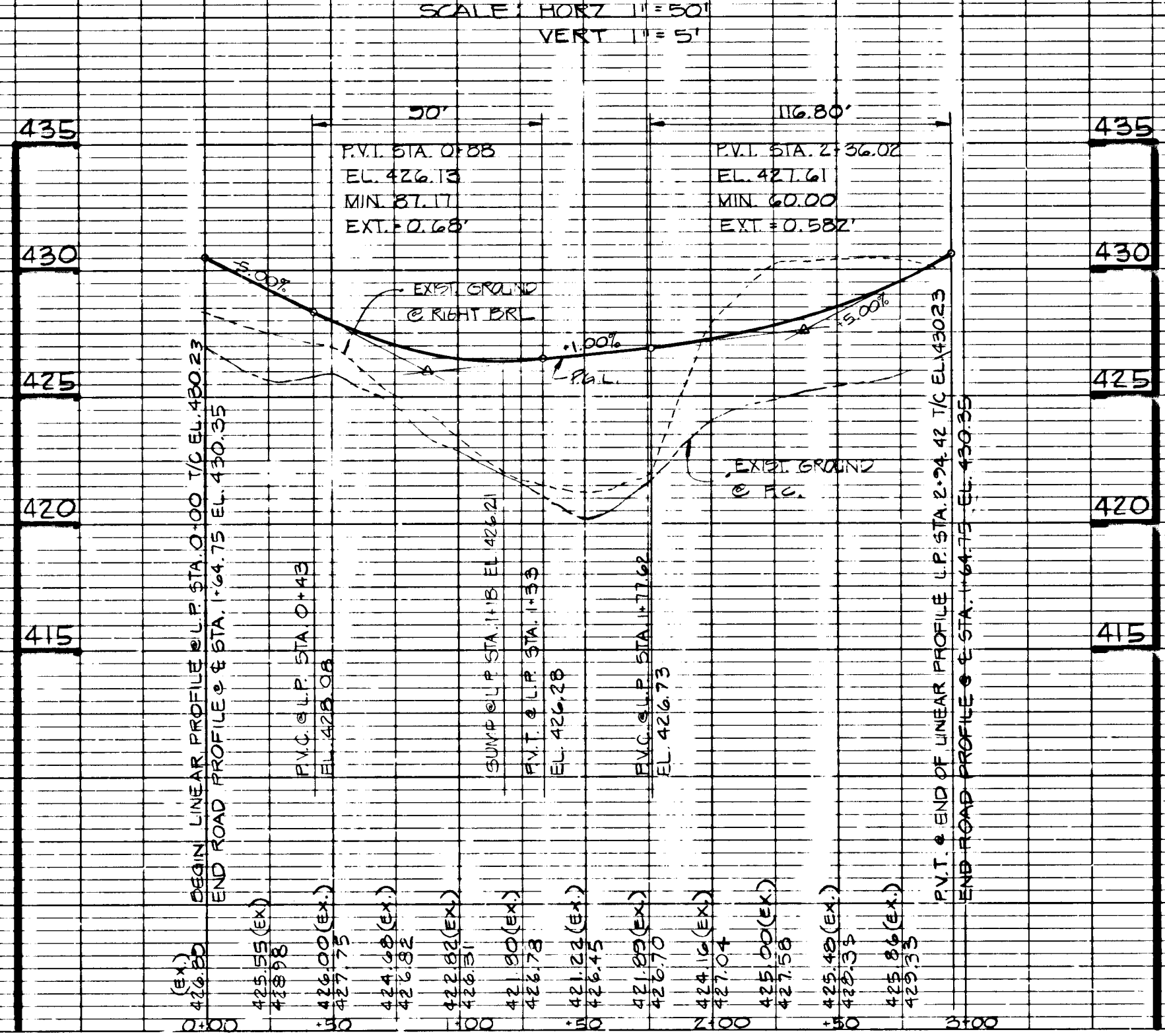
SCALE: 1" = 50' DATE: JAN 1989 DWG NO. 4 OF 12
 DESIGNED: BLC/JTN DRAWN: J.T.L.C. CHECKED: J.T.N.

P&A Inc.
 11 WARREN ROAD BALTIMORE, MD 21028 (301) 484-4100

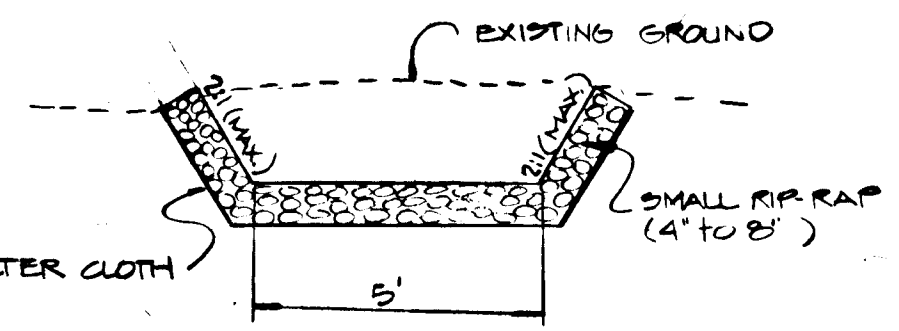
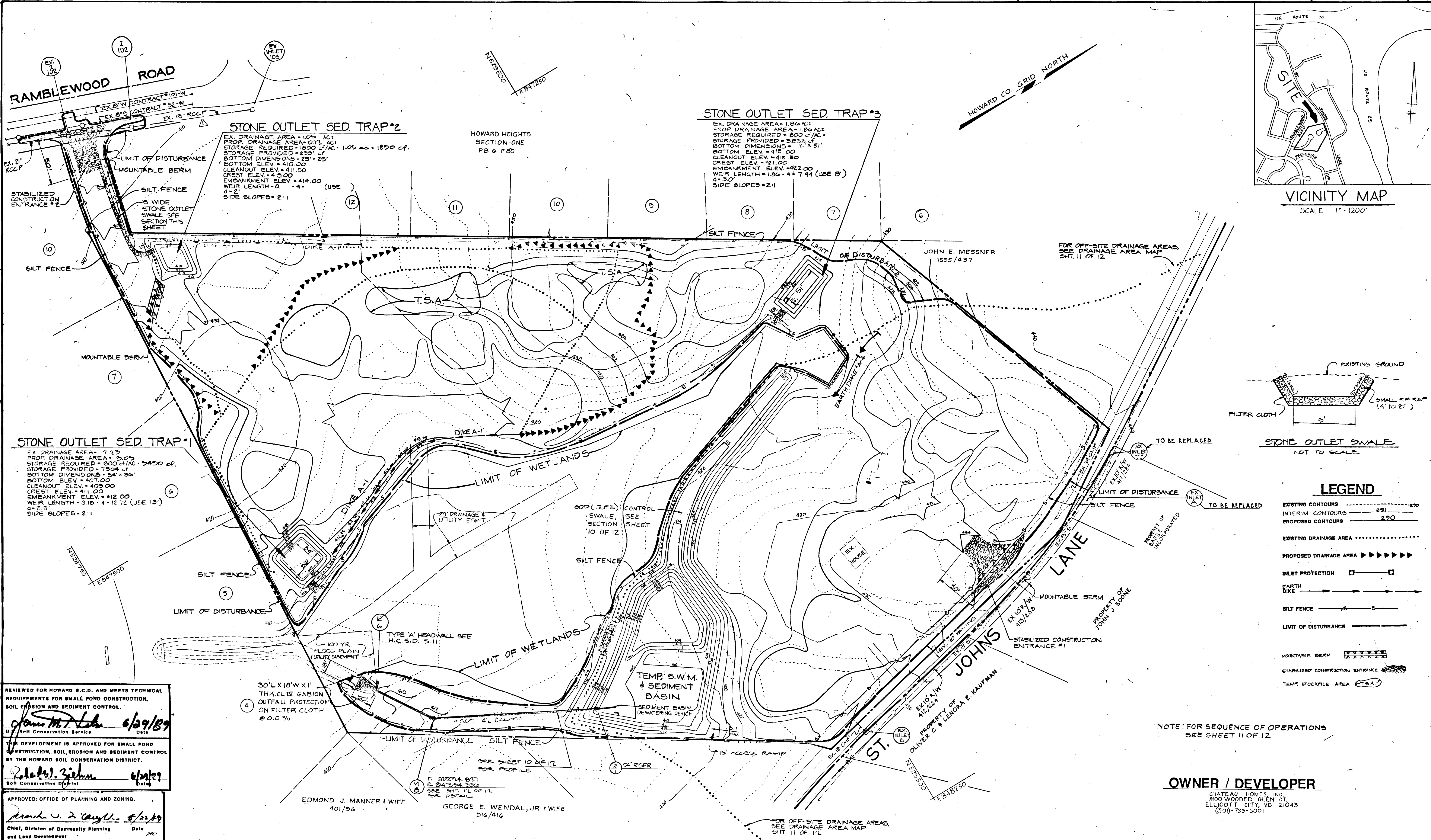
PROFILE
 MISTY WOOD LANE
 SCALE: HORIZ 1" = 50'
 VERT 1" = 5'



LINEAR PROFILE
 MISTY WOOD LANE
 SCALE: HORIZ 1" = 50'
 VERT 1" = 5'



1456



STONE OUTLET SWALE
NOT TO SCALE

LEGEND

- EXISTING CONTOURS ----- 290
- INTERIM CONTOURS ----- 221
- PROPOSED CONTOURS ----- 220
- EXISTING DRAINAGE AREA
- PROPOSED DRAINAGE AREA >>>>>>
- INLET PROTECTION []
- EARTH DIKE >>>>>
- SILT FENCE ---|---
- LIMIT OF DISTURBANCE -----
- MOUNTABLE BERM []
- STABILIZED CONSTRUCTION ENTRANCE []
- TEMP. STOCKPILE AREA (T.S.A.)

NOTE: FOR SEQUENCE OF OPERATIONS
SEE SHEET 11 OF 12

OWNER / DEVELOPER

CHATEAU HOMES, INC.
800 WOODEN GLEN CT.
ELLCOTT CITY, MD. 21043
(301) 799-5001

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

James M. Lahn 6/29/89
U.S. Soil Conservation Service Date

THIS DEVELOPMENT IS APPROVED FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Robert W. Ziehm 6/29/89
Soil Conservation District Date

APPROVED: OFFICE OF PLANNING AND ZONING.

Frank V. 2 Cayll 8/22/89
Chief, Division of Community Planning and Land Development Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Richard W. Ligon 8/4/89
Chief, Land Development Div. Date

Braunlee W. Ueland 7/27/89
Chief, Bureau of Highways Date

KS [Signature] 8-4-89
Chief, Bureau of Engineering Date

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

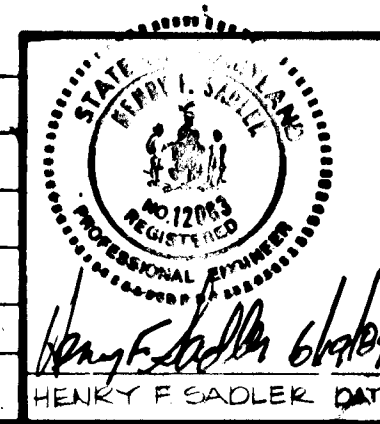
Henry F. Sladler 6/29/89
ENGINEER DATE

DEVELOPER'S CERTIFICATION

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Nicholas [Signature] 6/29/89
DEVELOPER DATE

NO.	DESCRIPTION	BY	DATE
1	SHOW EX. STORMDRAIN SYSTEM ALONG RAMBLEWOOD ROAD	J.T.N.	11-89
REVISION			



GRADING & SEDIMENT CONTROL PHASE I

PROJECT: **WOODBERRY LOTS 1 THRU 22**

O.P. & Z. FILE NOS.: S-87-59, E-88-29, F-88-179

TAX MAP: 17, BLOCK 22, PARCEL: 144

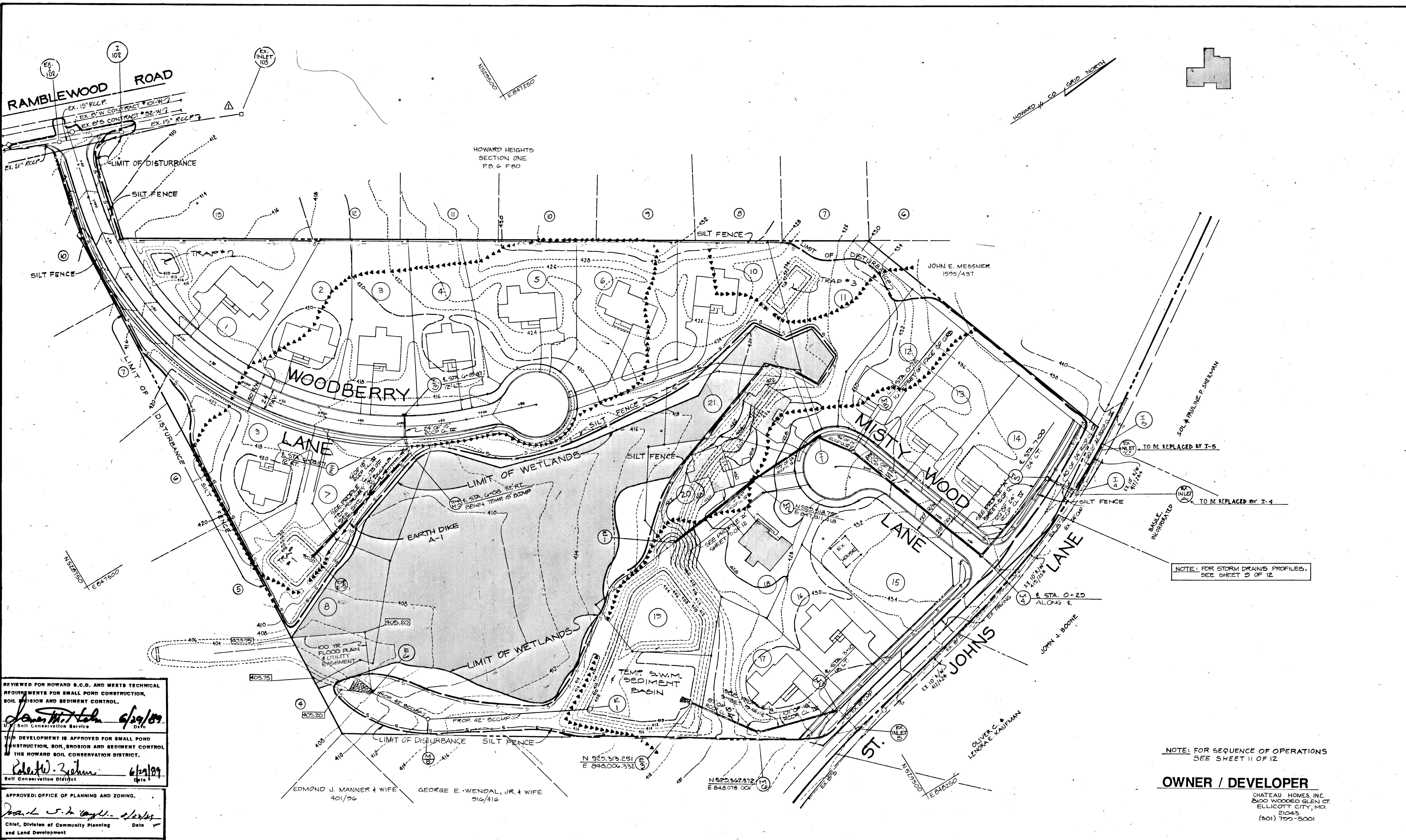
2ND ELECTION DISTRICT: HOWARD COUNTY, MD.

DES. BY: BLC/JTN
DRAWN BY: JLC
CHKD. BY: J.T.N.
DATE: JAN 1989

PAT & A Inc.

11 WARREN ROAD
BALTIMORE, MD. 21208
(301) 484-4100

SCALE: 1"=50'
SHEET 5 OF 12



REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

James M. Tolm 6/29/89
 Soil Conservation Service

THIS DEVELOPMENT IS APPROVED FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Robert W. Ziehm 6/29/89
 Soil Conservation District

APPROVED: OFFICE OF PLANNING AND ZONING.

David S. ...
 Chief, Division of Community Planning and Land Development

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Paul D. ... 8/14/89
 Chief, Land Development Div.

Bradley W. ... 7/27/89
 Chief, Bureau of Highways

... 8-4-89
 Chief, Bureau of Engineering

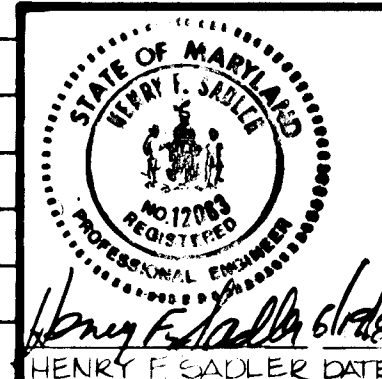
ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Henry F. ... 6/19/89
 ENGINEER DATE

DEVELOPER'S CERTIFICATION
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Richard ... 6/19/89
 DEVELOPER DATE

NO.	DESCRIPTION	BY	DATE
1	SHOW EX. STORMDRAIN SYSTEM ALONG RAMBLEWOOD ROAD.	J.T.N.	11-29
REVISION			



GRADING & SEDIMENT CONTROL PHASE II
 PROJECT: WOODBERRY LOTS 1 THRU 22
 O.P.&Z. FILE NOS.: S-87-50, P-88-25, F-88-179
 TAX MAP: 11, BLOCK 22, PARCEL: 144
 2nd ELECTION DISTRICT: HOWARD COUNTY, MD.

DES. BY: J.T.N./B.L.C. DRAWN BY: J.L.C. CHKD. BY: J.T.N. DATE: JAN 1989

D&A Inc.
 11 WARREN ROAD
 BALTIMORE, MD. 21208
 (301) 484-4100
 SCALE: 1"=50' SHEET 6 OF 12

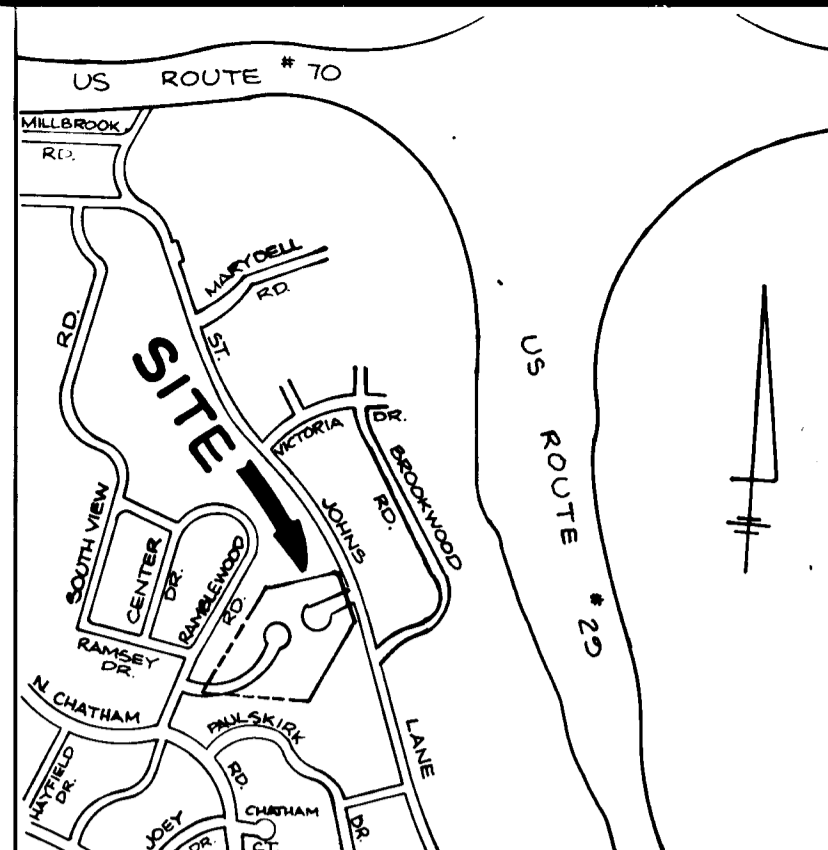
NOTE: FOR STORM DRAINS PROFILES, SEE SHEET 9 OF 12

NOTE: FOR SEQUENCE OF OPERATIONS SEE SHEET 11 OF 12

OWNER / DEVELOPER
 CHATEAU HOMES, INC.
 8100 WOODED GLEN CT.
 ELLICOTT CITY, MD. 21043
 (301) 755-5001

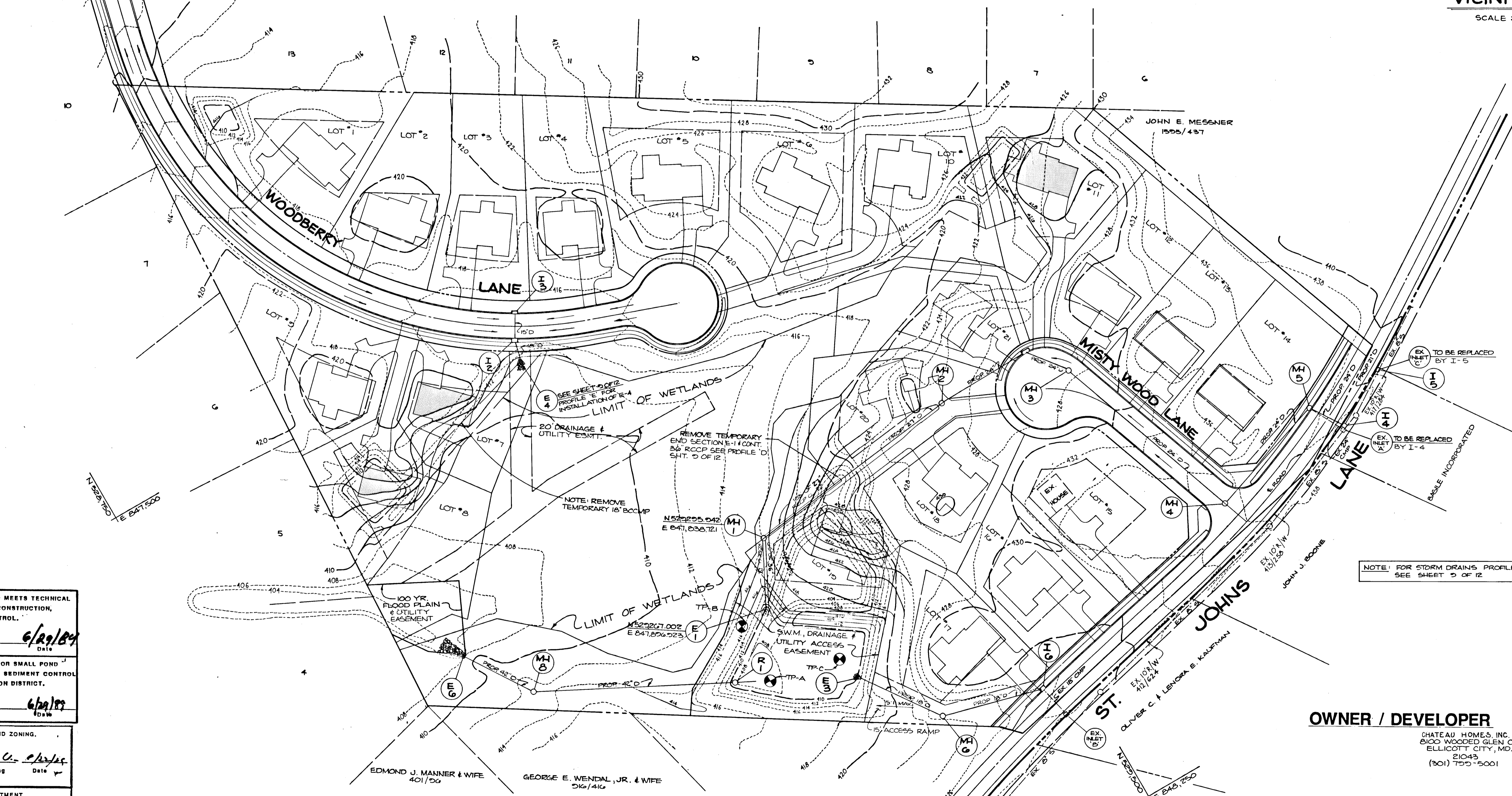
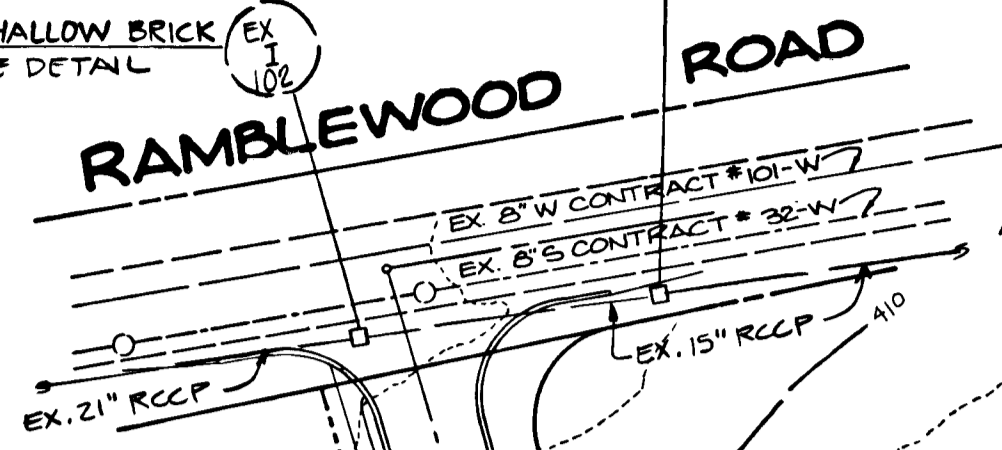
1456

M 102 CONVERT TO MODIFIED SHALLOW BRICK MANHOLE (65.05) SEE DETAIL SHEET 9 OF 12



VICINITY MAP

SCALE: 1"=1200'



REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

John M. T. ... 6/29/89
 Chief, Soil Conservation Service

THIS DEVELOPMENT IS APPROVED FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL IN THE HOWARD SOIL CONSERVATION DISTRICT.

Robert W. ... 6/29/89
 Chief, Soil Conservation District

APPROVED: OFFICE OF PLANNING AND ZONING.

Barbara J. ... 6/29/89
 Chief, Division of Community Planning and Land Development

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Donald ... 8/4/89
 Chief, Land Development Div.

William ... 8-4-89
 Chief, Bureau of Engineering

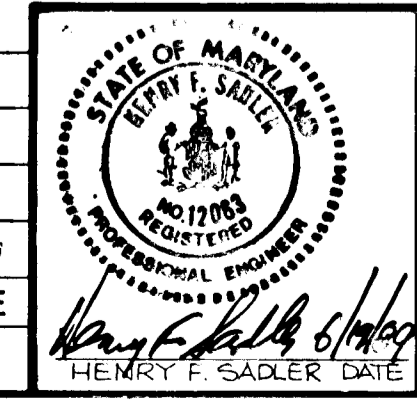
ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Henry F. ... 6/17/89
 ENGINEER DATE

DEVELOPER'S CERTIFICATION
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Richard ... 6/19/89
 DEVELOPER DATE

NO.	DESCRIPTION	BY	DATE
1	SHOW EX. STORM DRAIN SYSTEM ALONG RAMBLEWOOD ROAD	J.T.N.	11-89

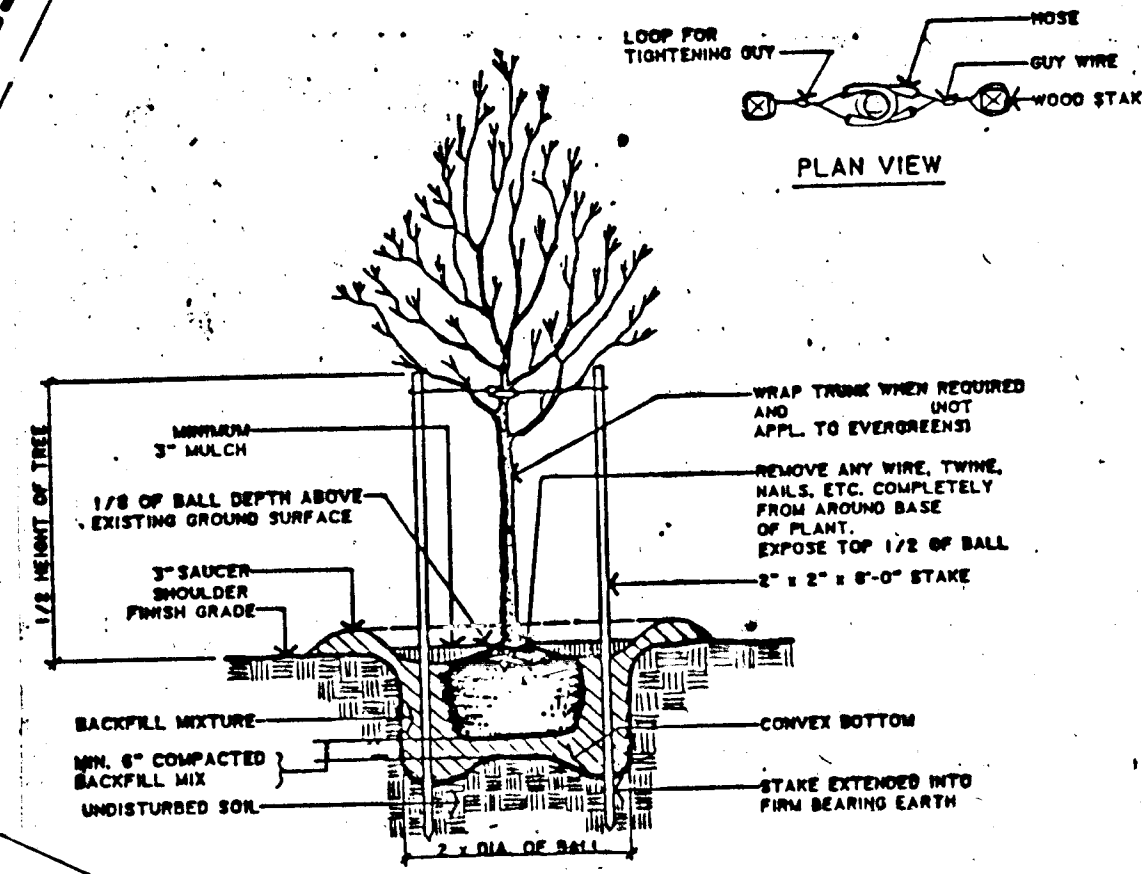
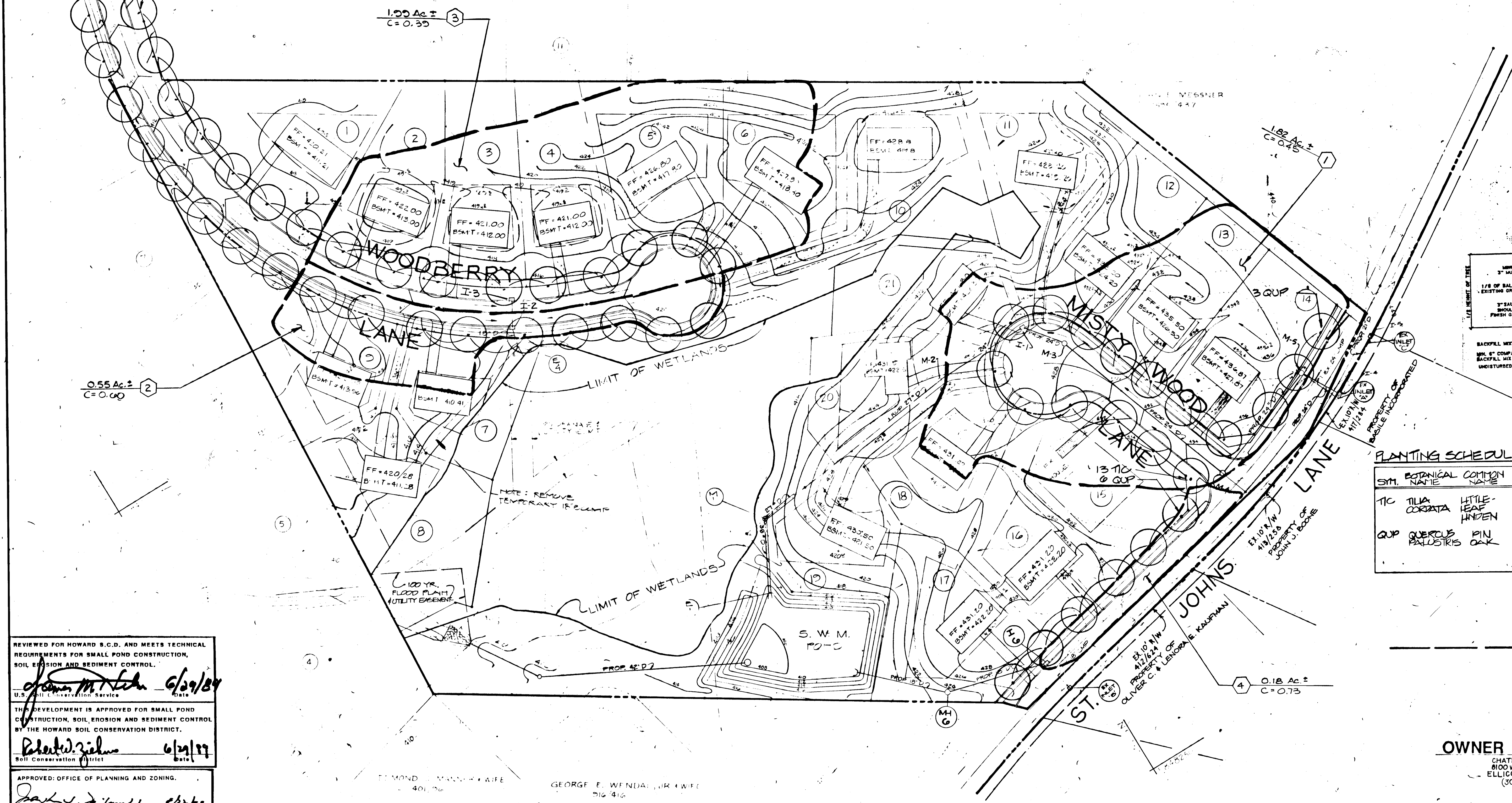
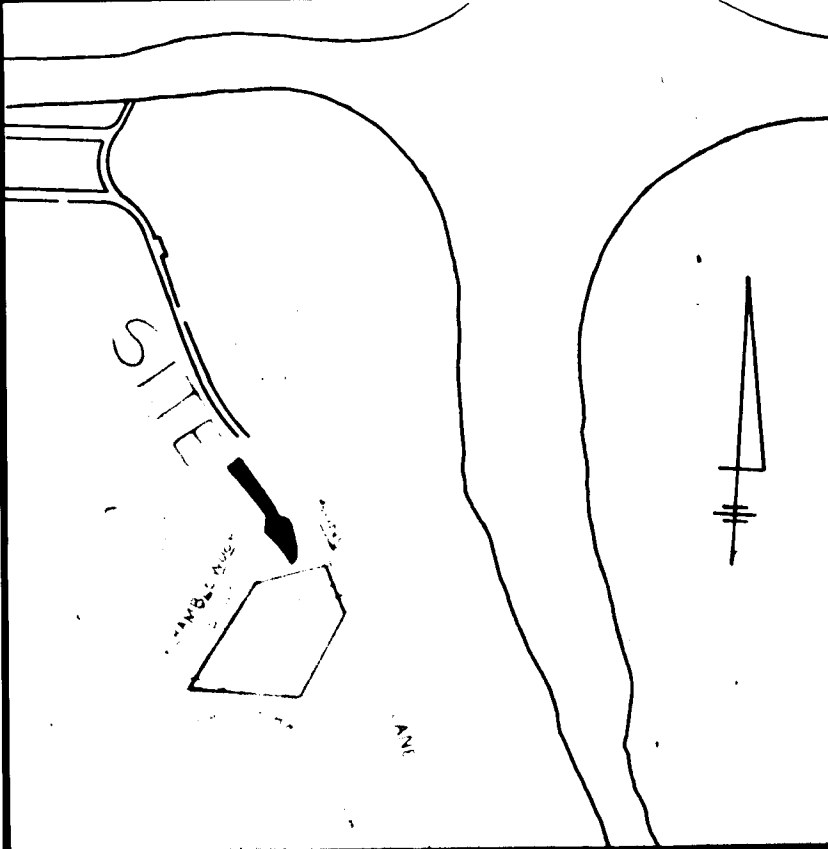
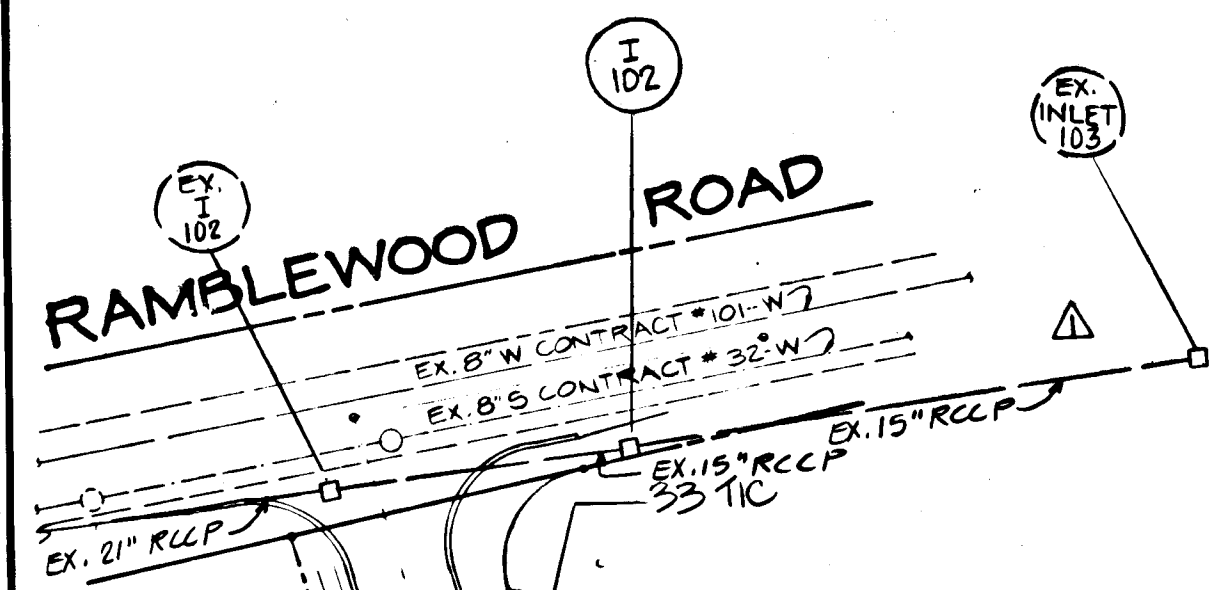


TITLE: GRADING PLAN
 PROJECT: WOODBERRY LOTS 1 THRU 22
 O.P. & Z. FILE NOS.: S-87-50, P-88-20, F-88-170
 TAX MAP: 11, BLOCK: 22, PARCEL: 144
 2ND ELECTION DISTRICT: HOWARD COUNTY, MD.
 DES. BY: J.T.N. DRAWN BY: L.R.C. CHKD. BY: J.T.N. DATE: JUNE, 1989

OWNER / DEVELOPER
 CHATEAU HOMES, INC.
 8100 WOODEN GLEN CT.
 ELLICOTT CITY, MD.
 21043
 (301) 755-5001

CIVIL ENGINEERS - SITE PLANNERS
D&A Inc.
 11 WARREN ROAD
 BALTIMORE, MD. 21208
 (301) 484-4100
 SCALE: 1"=50' SHEET 7 OF 12

1456



PLANTING SCHEDULE

SYM.	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	TYPE	SPACING
TIC	TILIA CORDATA	LITTLE-LEAF HINDEN	40	2 1/2\"/>		
QUP	QUERCUS PALUDOSIS	PIN OAK	9	2 1/2\"/>		

PROPOSED DRAINAGE AREAS TO STRUCTURES/DESIGN POINTS

OWNER / DEVELOPER
 CHATEAU HOMES, INC.
 8100 WOODEN GLEN CT
 ELLICOTT CITY, MD 21045
 (301) 755-5001

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
James M. Zich 6/29/89
 U.S. Soil Conservation Service

THIS DEVELOPMENT IS APPROVED FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Robert Zich 6/29/89
 Soil Conservation District

APPROVED: OFFICE OF PLANNING AND ZONING.
David W. Long 6/29/89
 Chief, Division of Community Planning and Land Development

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Donald J. Ryan 8/18/89
 Chief, Land Development

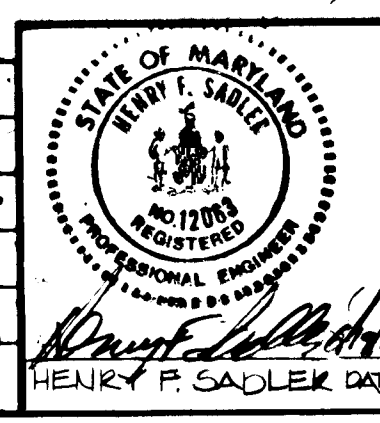
Bravante W. Williams 7/27/89
 Chief, Bureau of Highways

Gregory J. Day 8-4-89
 Chief, Bureau of Engineering

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
Wm. F. Siddle 6/19/89
 ENGINEER

DEVELOPER'S CERTIFICATION
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEFINED NECESSARY. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
Michael A. Neal 6/19/89
 DEVELOPER

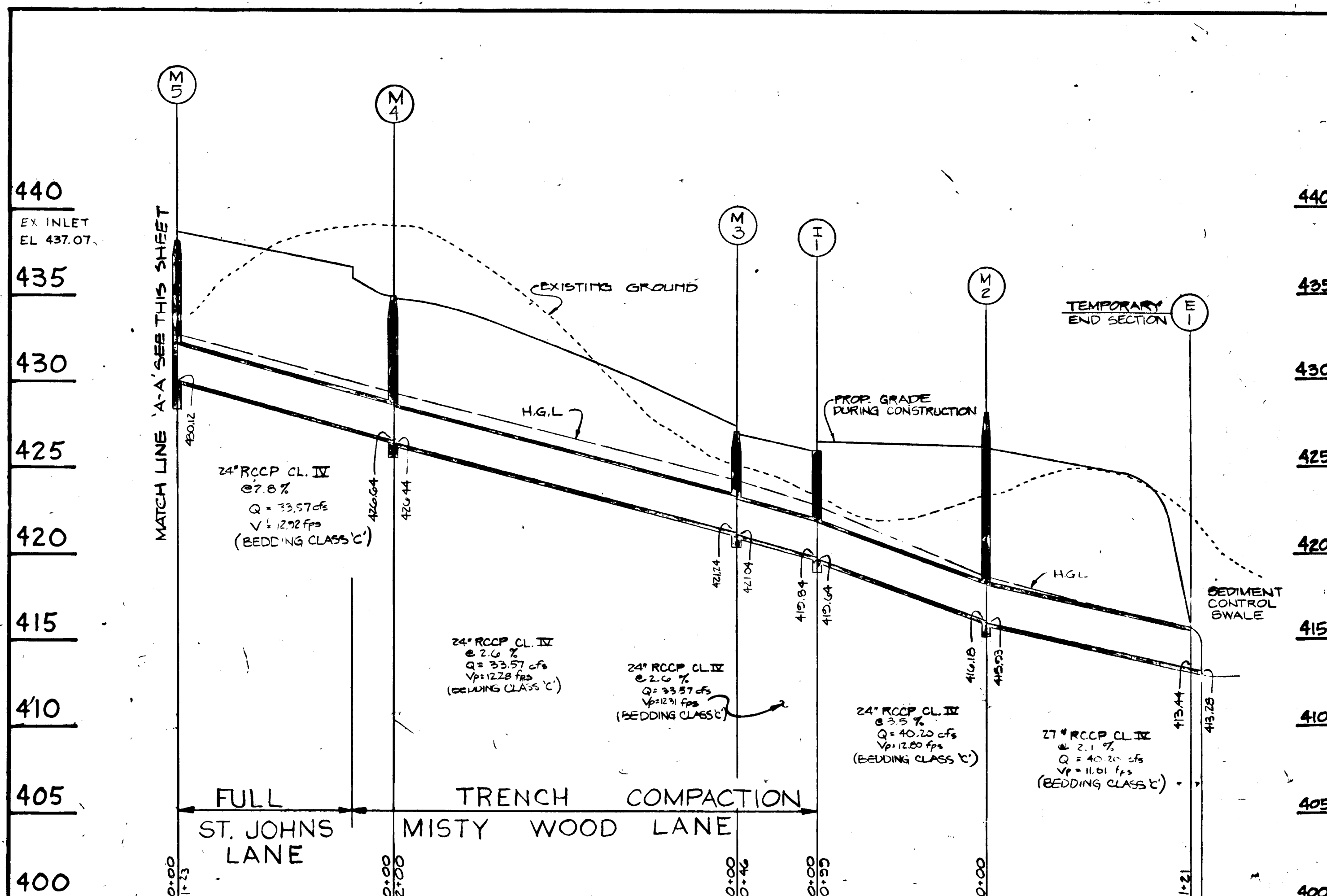
NO.	DESCRIPTION	BY	DATE
1	SHOW EX. STORM DRAIN SYSTEM ALONG RAMBLEWOOD ROAD	JTN	11-89
REVISION			



TITLE: ONSITE DRAINAGE AREA MAP FOR INLETS / LANDSCAPE PLAN
PROJECT: WOODBERRY LOTS 1 THRU 22
 O.P.#2: FILE NOS.: GP-88-671P-00-23/3-07-04/09-91
 TAX MAP: 51, BLOCK: 8, PARCEL: 551
 SECOND ELECTION DISTRICT: HOWARD COUNTY, MD.
 DES. BY: MDP, CHKD BY: JTN, DATE: JAN 1989

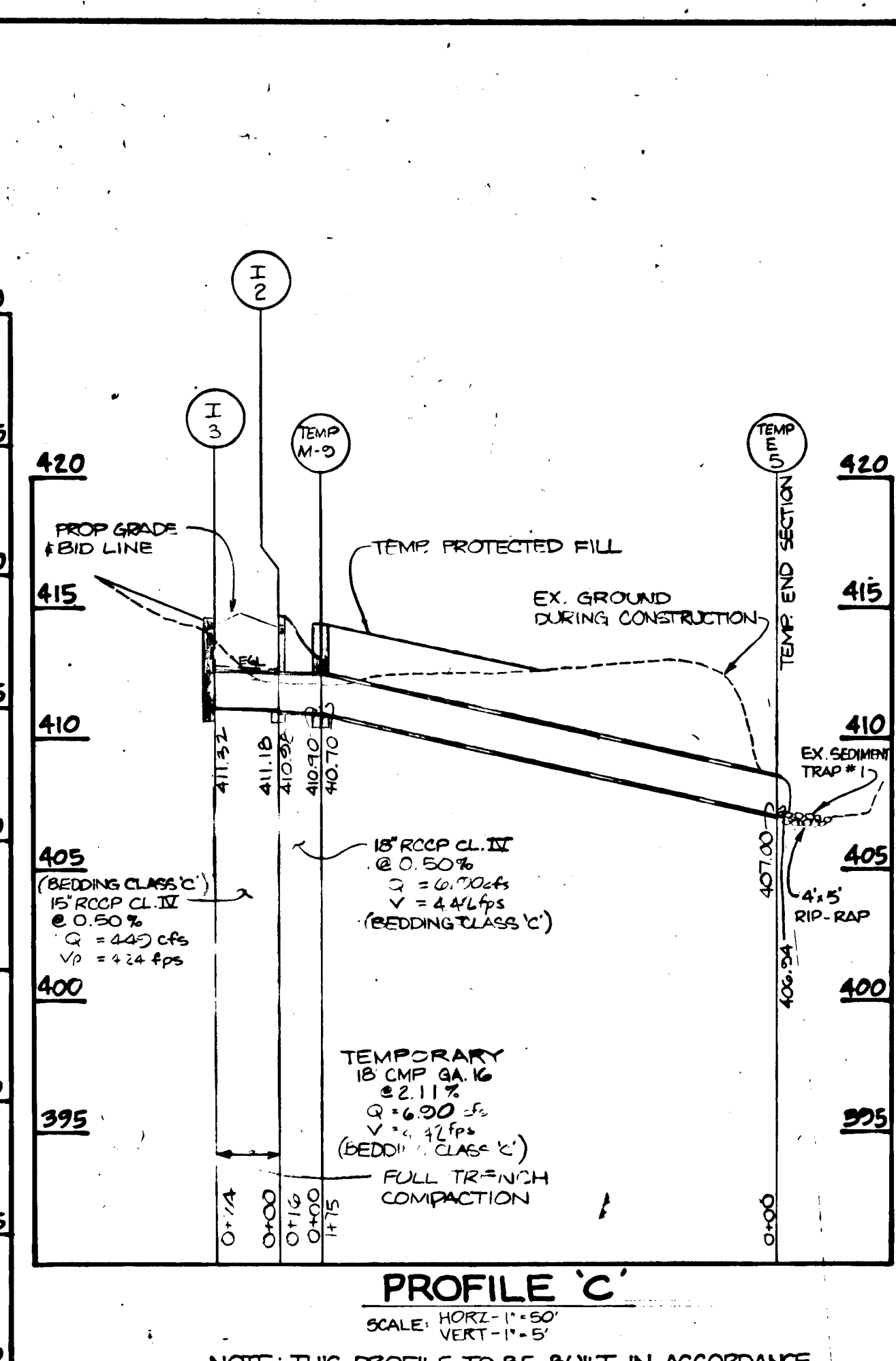
CIVIL ENGINEERS - SITE PLANNERS SURVEYORS
PST & A Inc.
 11 WARREN ROAD
 BALTIMORE, MD 21225
 (301) 484-4100
 SCALE: 1"=50' SHEET 3 OF 12

1456



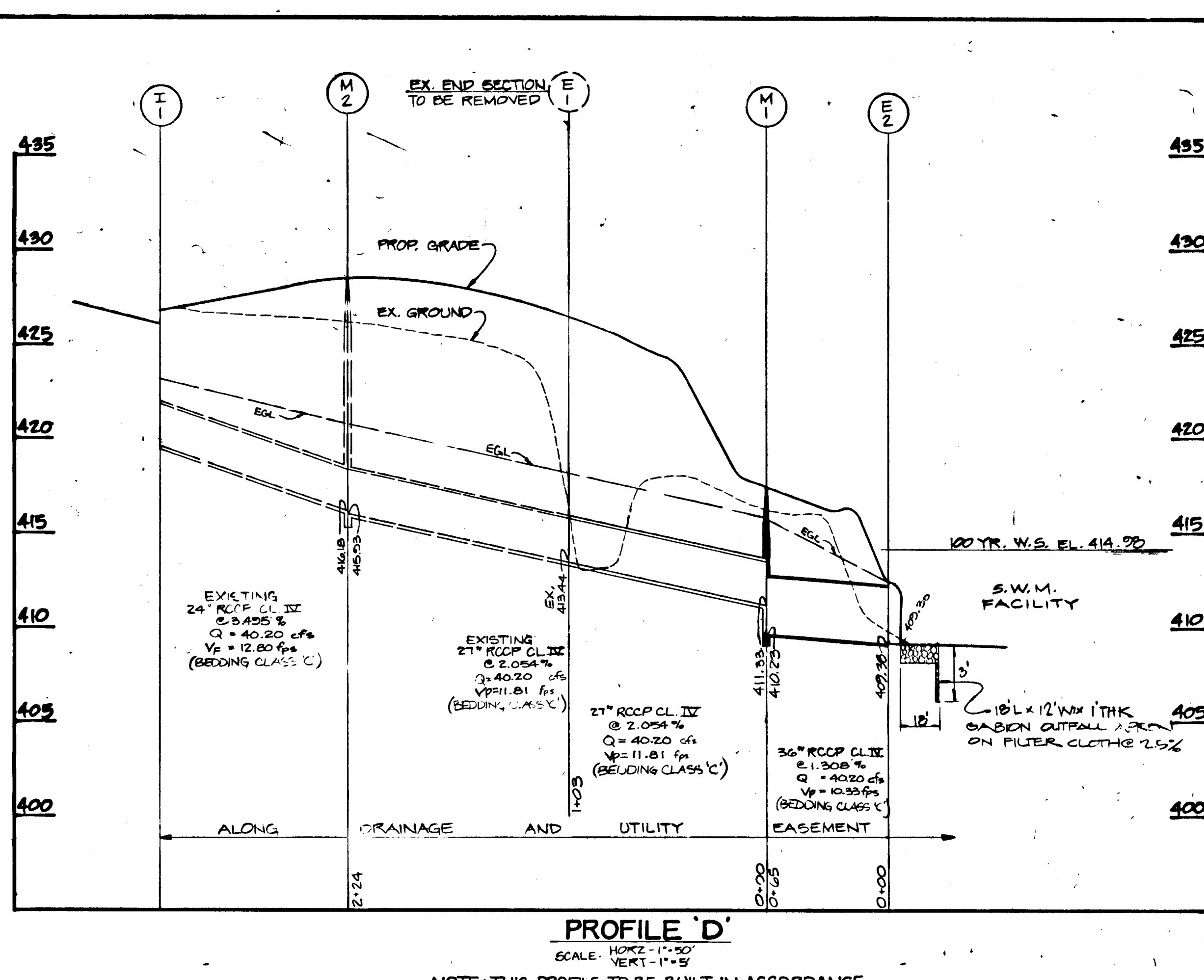
PROFILE 'A'
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

NOTE: THIS PROFILE TO BE BUILT IN ACCORDANCE WITH PLAN VIEW SHEET 8 OF 12. FOR SEQUENCE OF OPERATIONS SEE SHEET 11 OF 12.



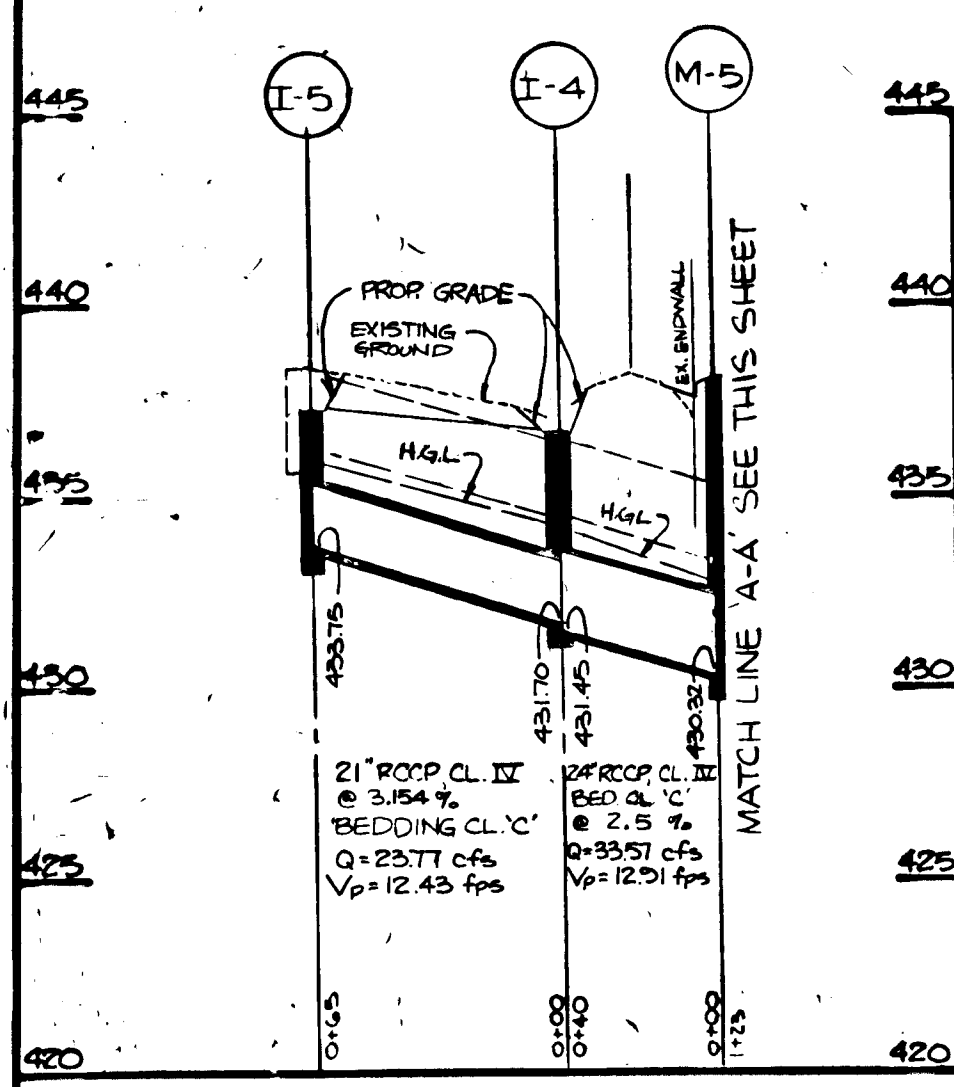
PROFILE 'C'
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

NOTE: THIS PROFILE TO BE BUILT IN ACCORDANCE WITH PLAN VIEW SHEET 8 OF 12. FOR SEQUENCE OF OPERATIONS SEE SHEET 11 OF 12.



PROFILE 'D'
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

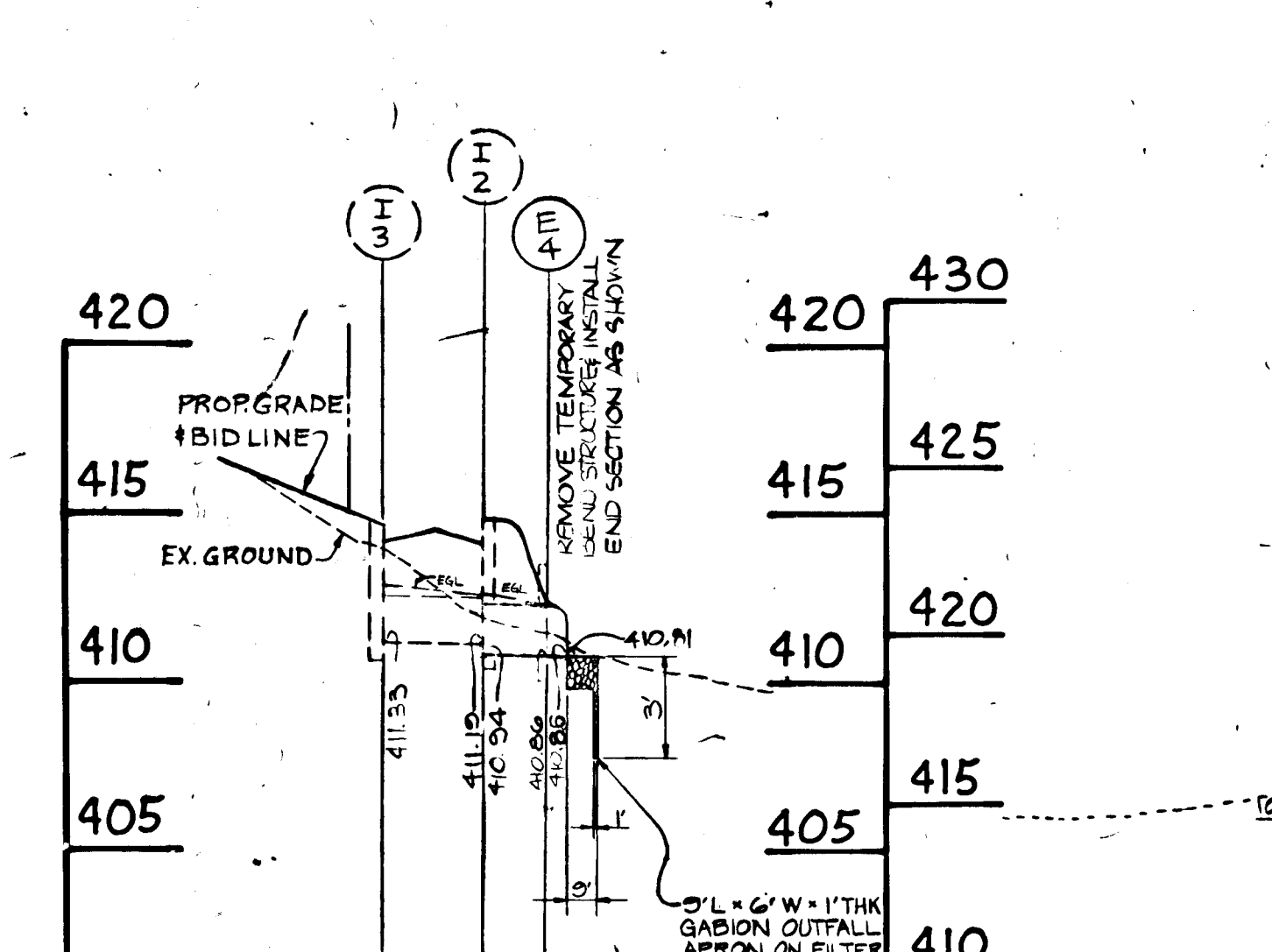
NOTE: THIS PROFILE TO BE BUILT IN ACCORDANCE WITH PLAN VIEW SHEET 5 OF 12. FOR SEQUENCE OF OPERATIONS SEE SHEET 11 OF 12.



NOTE: THIS PROFILE TO BE BUILT IN ACCORDANCE WITH PLAN VIEW SHEET 8 OF 12. FOR SEQUENCE OF OPERATIONS SEE SHEET 11 OF 12.

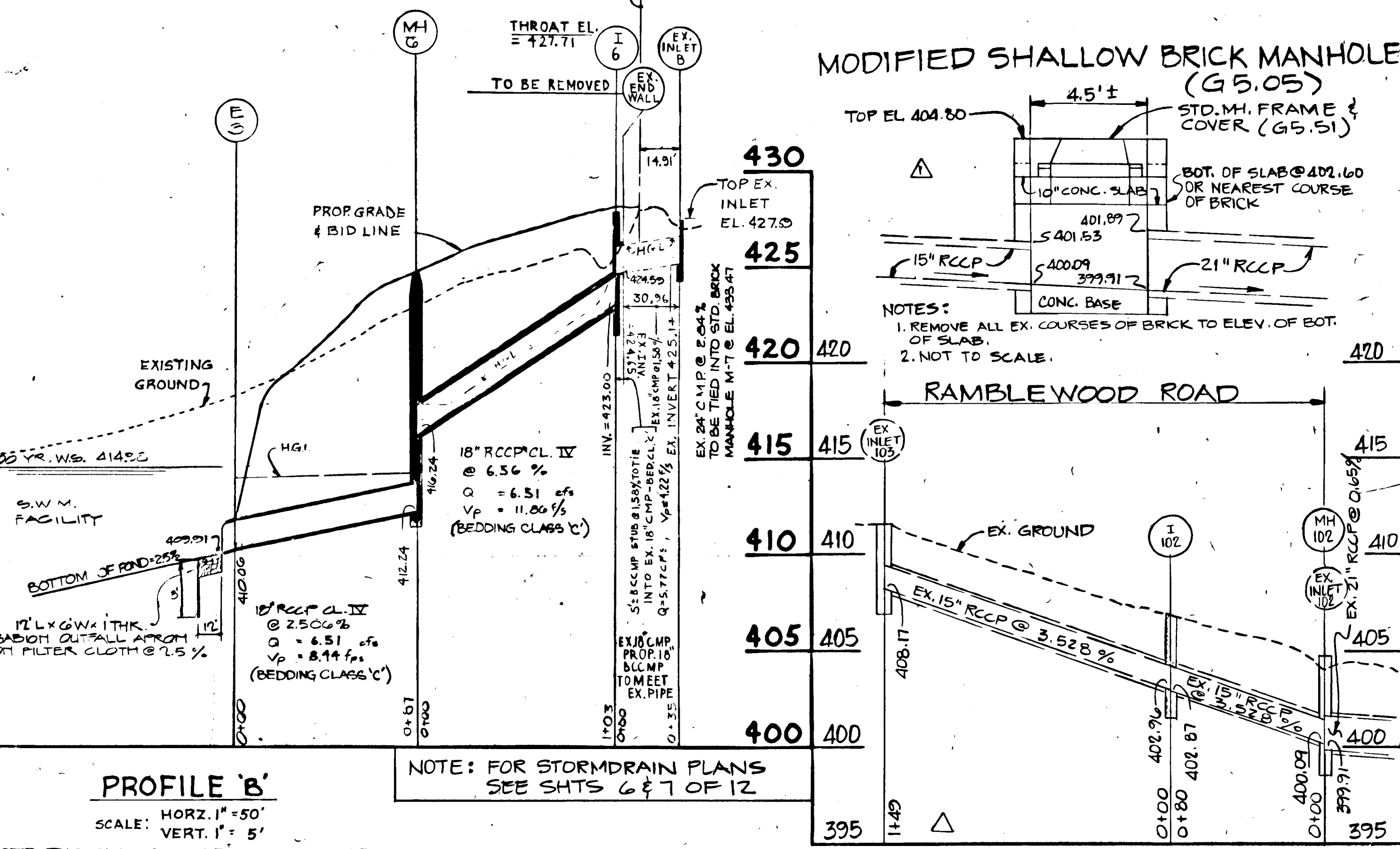
NO.	TYPE	LOCATION	INV. IN	INV. OUT	TOP EL.	REMARKS
I-1	A-5	L.P. STA. 1+18, @ 40'	419.84	419.44	425.91*	SEE HOWARD CO. STD. DETAIL SD-401
I-2	A-5	STA. 6+38.87, 12' RT. WOODBERRY LANE	411.10	410.09	414.34*	"
I-3	A-5	STA. 6+38.87, 12' LT. WOODBERRY LANE	---	411.35	414.34*	"
I-4	TYPE 'D'	STA. 7+02.15 RT. ST. JOHNS LANE	431.70	431.45	431.30*	SEE HOWARD CO. STD. DETAIL SD-4-11
I-5	TYPE 'D'	STA. 7+07.18 RT. ST. JOHNS LANE	---	433.75	436.75*	"
I-6	A-5	STA. 3+10.23 18' RT. ST. JOHNS LANE	424.50	424.30	427.71*	SEE HOWARD CO. STD. DETAIL SD-4-01
M-1	5'-0" BRICK MANHOLE	WOODBERRY LANE	410.40	410.10	414.5	SEE HOWARD CO. STD. DETAIL SD-5-12
M-2	"	"	411.23	410.23	417.50	SEE HOWARD CO. STD. DETAIL SD-5-02
M-3	"	"	416.18	415.23	428.10	"
M-4	"	"	421.24	421.04	427.00	"
M-4	BRICK MANHOLE	MISTY WOOD LANE STA. 6+29, @ 4'	426.64	426.44	434.00	SEE HOWARD COUNTY STD. DETAIL SD-5-03
M-5	5'-0" BRICK MANHOLE	MISTY WOOD LANE STA. 7+00, 24' LT.	430.32	430.12	438.10	SEE HOWARD COUNTY STD. DETAIL SD-5-02
M-5	5'-0" BRICK MANHOLE	ST. JOHNS LANE STA. 7+00, 24' LT.	430.32	430.12	438.10	SEE HOWARD COUNTY STD. DETAIL SD-5-02
M-6	STD. BRICK MANHOLE	ST. JOHNS LANE STA. 6+24, @ 4'	416.24	412.24	424.00	SEE HOWARD COUNTY STD. DETAIL SD-5-01
TEMP. E-1	CONC. END SECTION	---	407.0	406.94	---	SEE HOWARD CO. STD. DETAIL SD-5-11
E-1	CONC. END SECTION	---	413.44	413.28	---	SEE HOWARD CO. STD. DETAIL SD-5-11
E-2	CONCRETE END SECTION	---	409.38	409.30	---	SEE HOWARD CO. STD. DETAIL SD-5-11
E-3	CONCRETE END SECTION	---	410.00	409.23	---	SEE HOWARD CO. STD. DETAIL SD-5-11
E-4	CONC. END SECTION	---	410.90	410.86	---	SEE HOWARD CO. STD. DETAIL SD-5-11
M-102	MODIFIED SHALLOW BRICK MANHOLE	EX. TYPE K INLET @ JCT. OF RAMBLEWOOD ROAD & 32' NORTH ALONG EX. S.D. SYSTEM FROM M-102	400.09	399.91	404.80	SEE HOWARD CO. STD. DETAIL SD-5-01
I-102	TYPE 'D' INLET	---	402.96	402.87	406.50*	SEE HOWARD CO. STD. DETAIL SD-4-11

* DENOTES THROAT ELEVATION



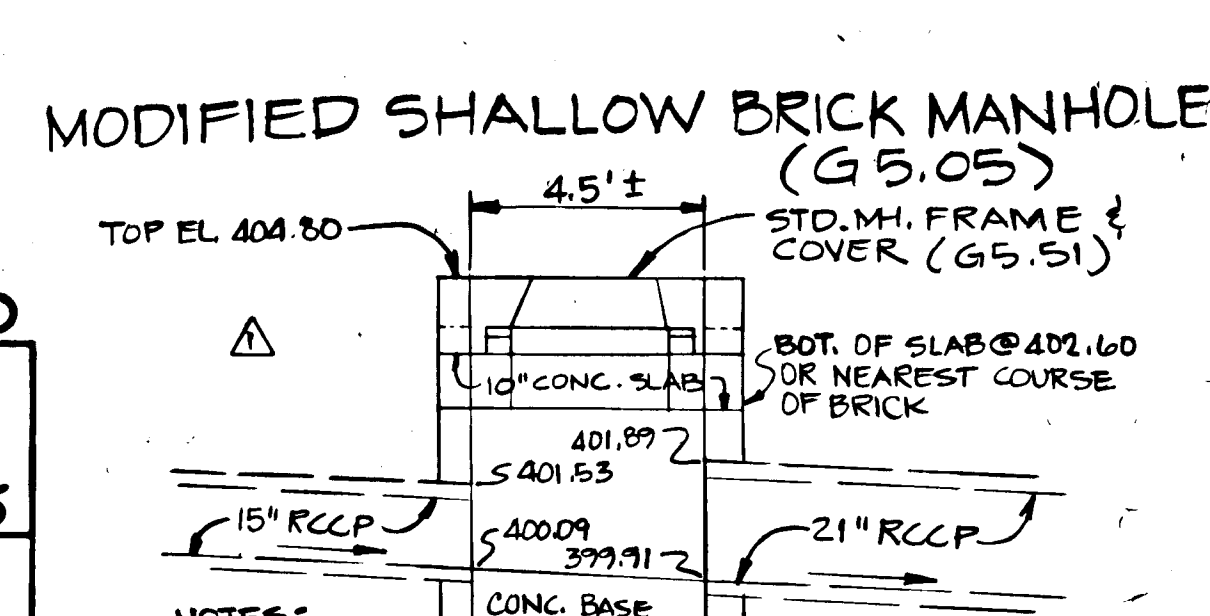
PROFILE 'E'
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

NOTE: THIS PROFILE TO BE BUILT IN ACCORDANCE WITH PLAN VIEW SHEET 5 OF 12. FOR SEQUENCE OF OPERATIONS SEE SHEET 11 OF 12.



PROFILE 'B'
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

NOTE: THIS PROFILE TO BE BUILT IN ACCORDANCE WITH PLAN VIEW SHEET 8 OF 12. FOR SEQUENCE OF OPERATIONS SEE SHEET 11 OF 12.



NOTES:
1. REMOVE ALL EX. COURSES OF BRICK TO ELEV. OF BOT. OF SLAB.
2. NOT TO SCALE.

APPROVED: OFFICE OF PLANNING AND ZONING.
David S. Taylor
Chief, Division of Community Planning and Land Development
Date: 8/16/89

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Paul J. Ryan
Chief, Land Development Div.
Date: 8/16/89

Lawrence W. Williams 7/27/89
Chief, Bureau of Highways
Date: 8/16/89

W. R. Ryan 8-4-89
Chief, Bureau of Engineering
Date: 8/16/89

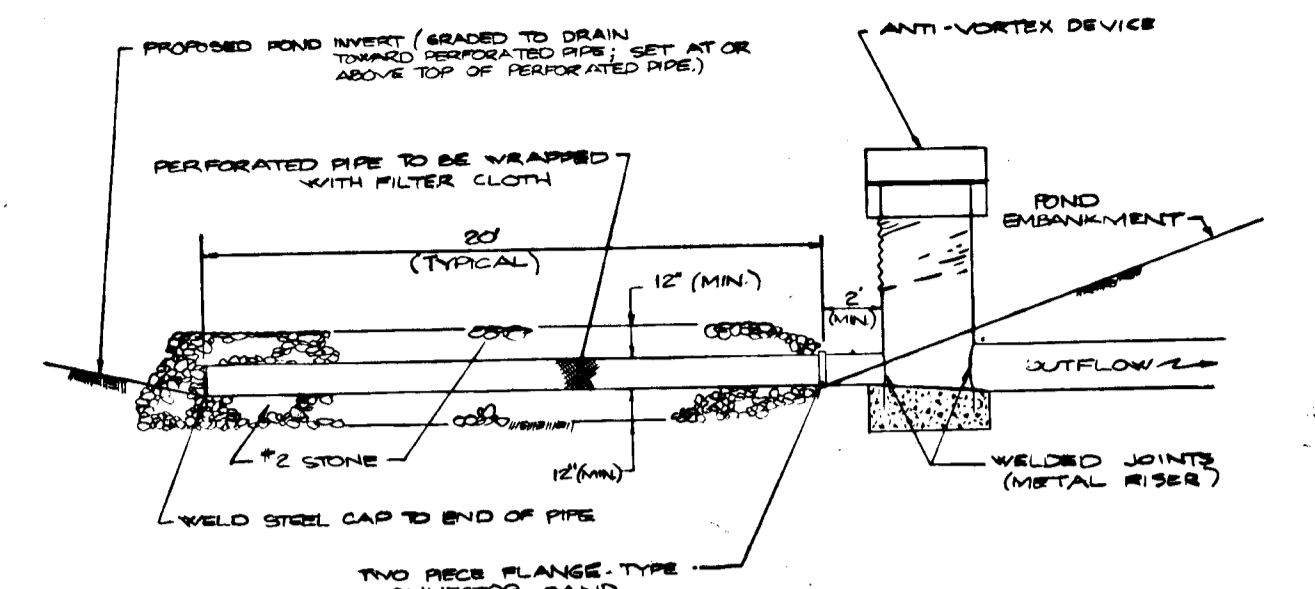
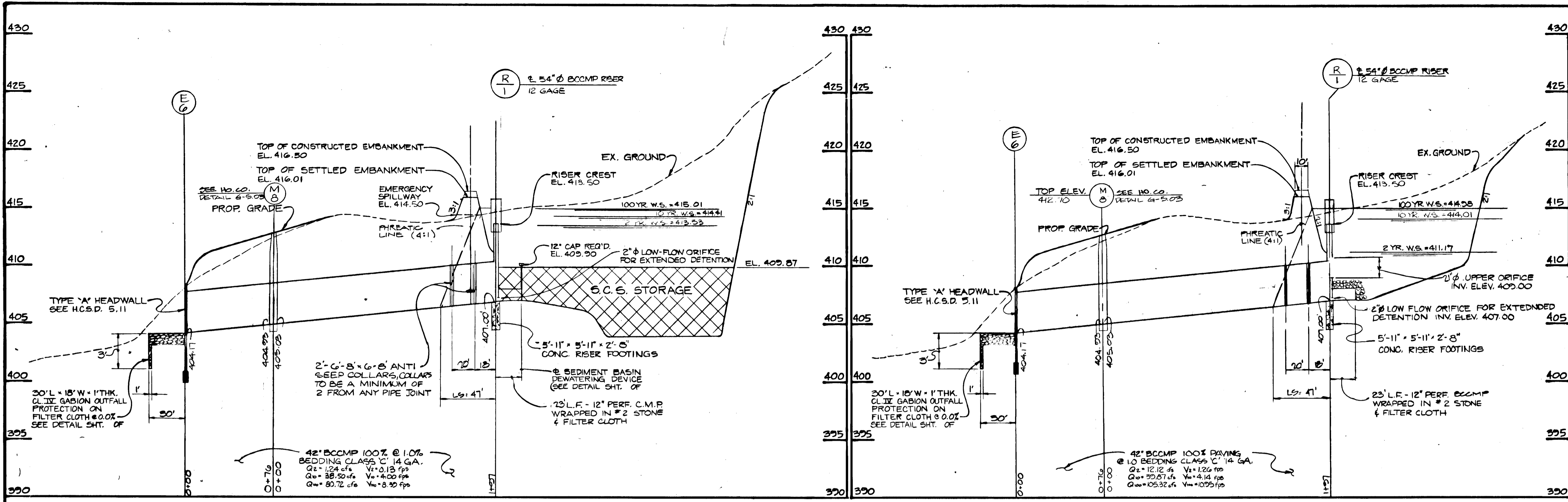
D.S. Taylor & Assoc., Inc.
11 WARREN ROAD
BALTO., MARYLAND 21208
(301) 484-4100

HENRY F. SALLER
REGISTERED PROFESSIONAL ENGINEER
No. 11784
DATE: 8/16/89

NO.	REVISION / DESCRIPTION	BY	DATE
1	REVISE FOR PROFILE OF EX. SD SYSTEM & INLET CONVERSION	JTN	11-89

OWNER/DEVELOPER
CHATEAU HOMES INC.
8100 WOODED GLEN CT
ELLCOTT CITY, MD 21043
(301)-799-5001

STORM DRAIN PROFILES & STRUCTURE SCHEDULE
WOODBERRY LOTS 1 THRU 22
22ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
TAX MAP 17, BLOCK 2, PARCEL 144
SCALE: 1"=50' DATE: JAN 1989
SHT. 5 OF 12



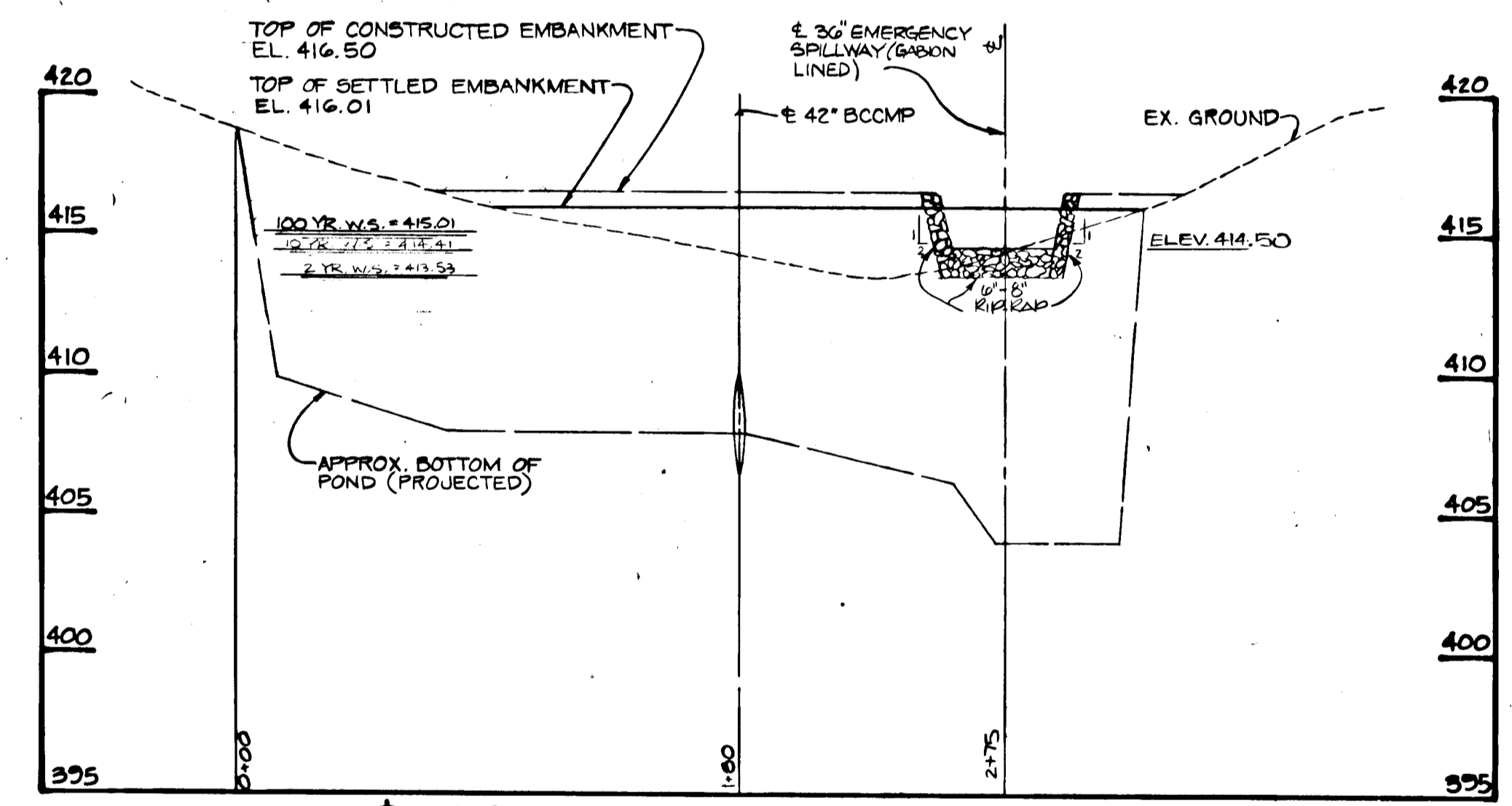
NOTE:

- PERFORATED PIPE SHALL BE Banded TO LOW FLOW PIPE AND HAVE METAL CAP WELDED ONTO OTHER END OF PIPE
- PERFORATED PIPE SHALL BE SECURELY WRAPPED WITH APPROVED FILTER CLOTH AND COVERED ON ALL SIDES WITH 12" MINIMUM OF #2 STONE.
- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED
- SET PERFORATED PIPE AT INVERTS SPECIFIED ON STORM WATER PLANS-PRINCIPAL SPILLWAY PROFILE.

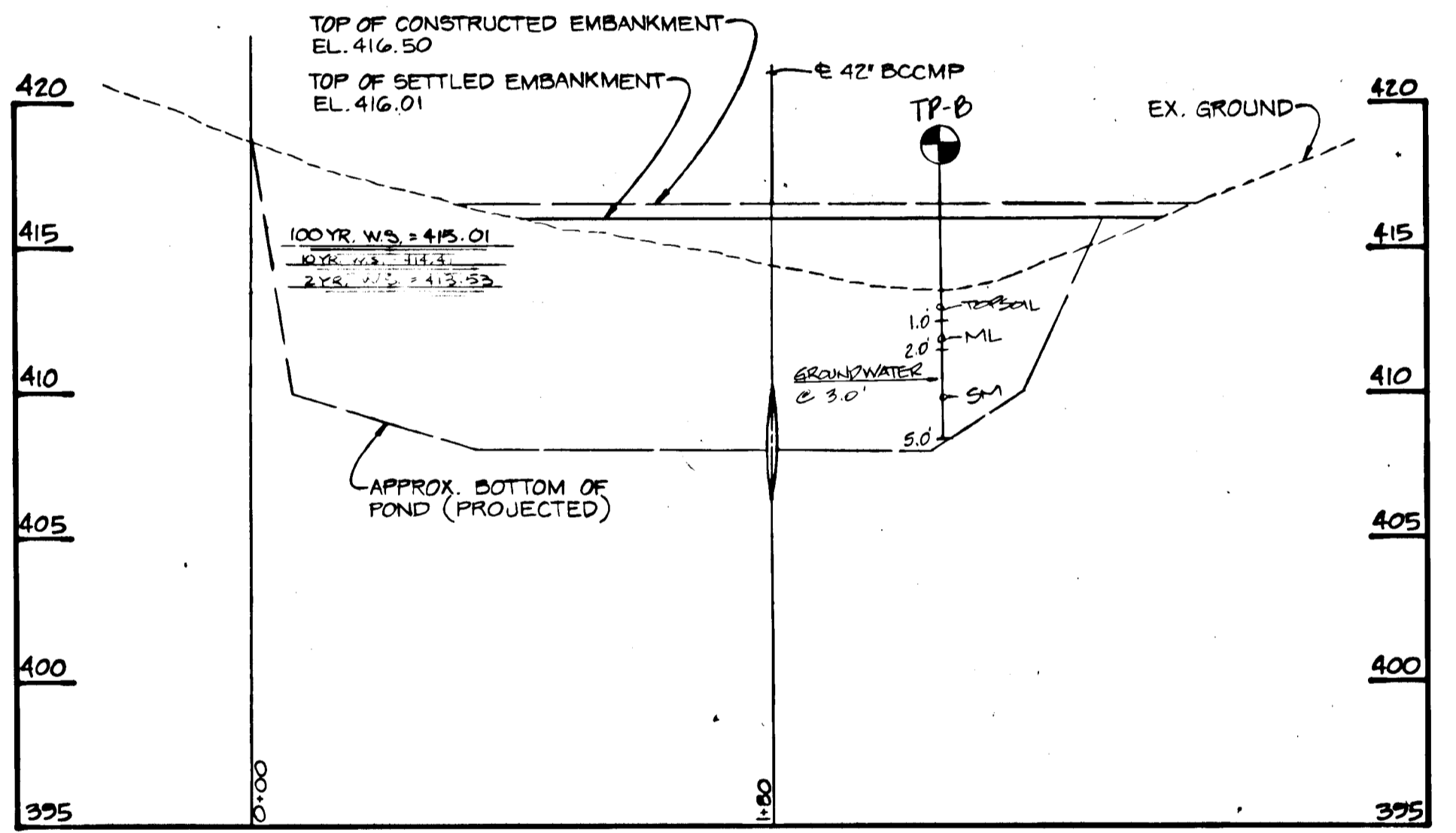
EXTENDED DETENTION POND DEWATERING DEVICE
NOT TO SCALE
(TYPICAL DETAIL)

PRINCIPAL SPILLWAY (TEMPORARY POND)
SCALE: HORIZ. 1"=50' VERT. 1"=5'

PRINCIPAL SPILLWAY (PERMANENT POND)
SCALE: HORIZ. 1"=50' VERT. 1"=5'



☐ OF EMBANKMENT PROFILE (TEMPORARY POND)
SCALE: HORIZ. 1"=50' VERT. 1"=5'



☐ OF EMBANKMENT PROFILE (PERMANENT POND)
SCALE: HORIZ. 1"=50' VERT. 1"=5'

NOTE: THIS POND IS A HAZARD CLASSIFICATION "A" FACILITY

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

[Signature] 6/29/89
U.S. Soil Conservation Service Date

THIS DEVELOPMENT IS APPROVED FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 6/29/89
Soil Conservation District Date

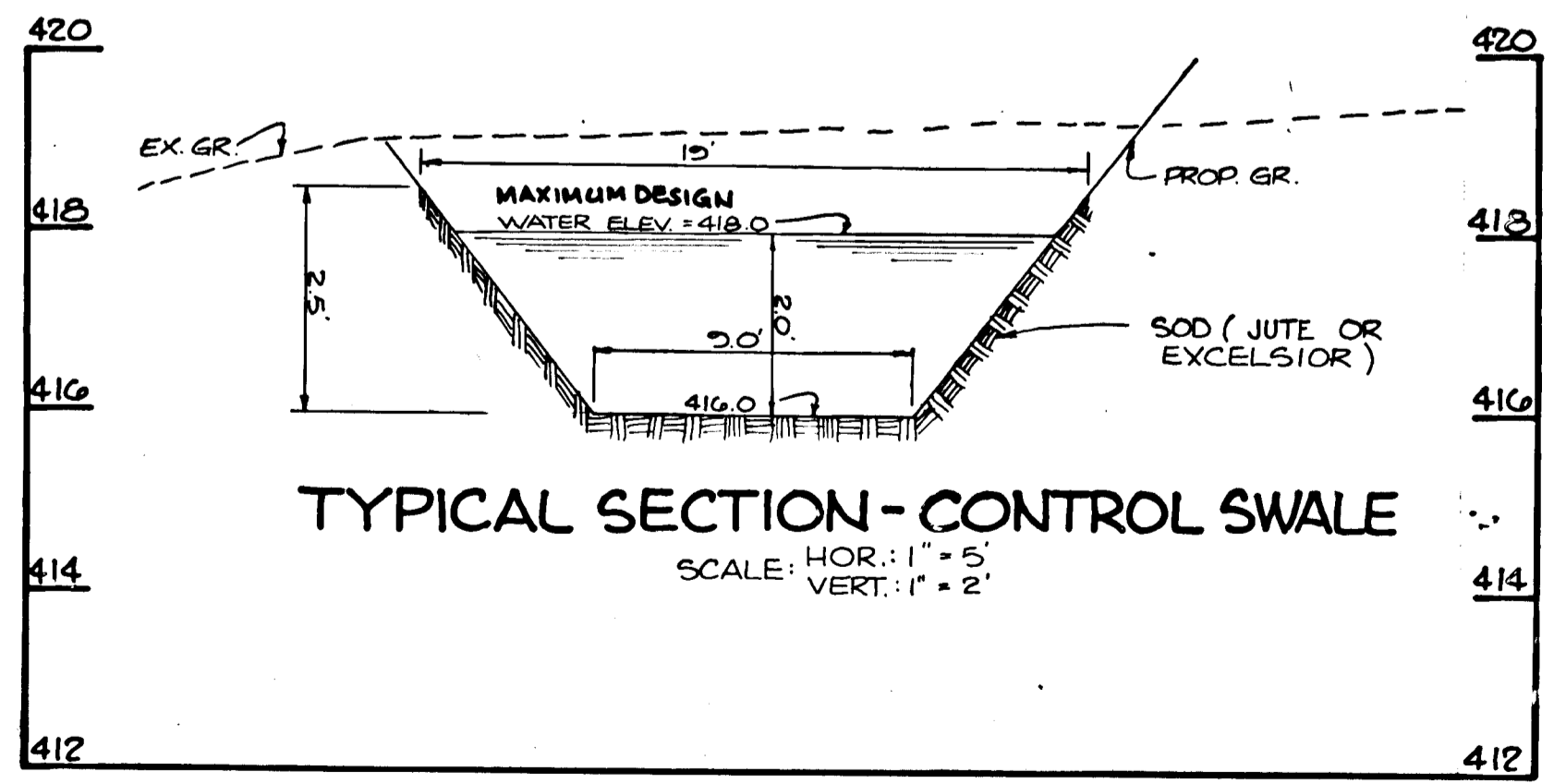
APPROVED: OFFICE OF PLANNING AND ZONING.

[Signature] 8/4/89
Chief, Division of Community Planning and Land Development Date

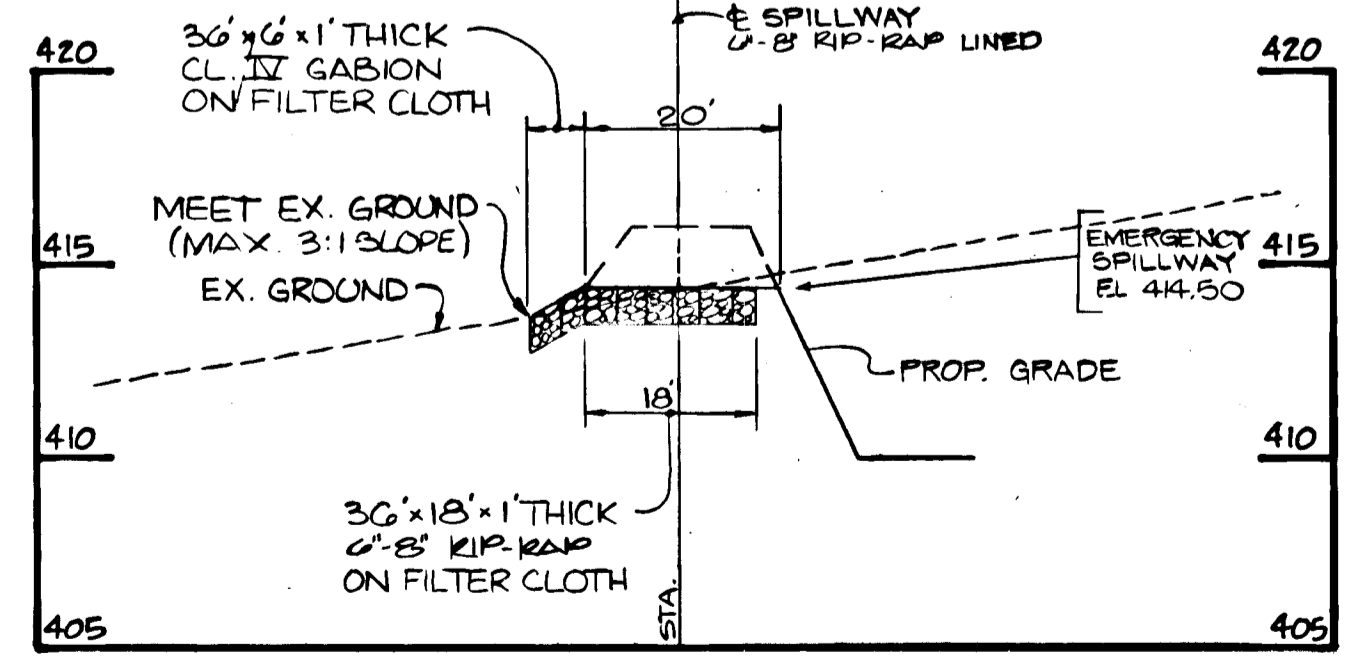
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

[Signature] 8/4/89
Chief, Bureau of Highways Date

[Signature] 8-4-89
Chief, Bureau of Engineering Date



TYPICAL SECTION - CONTROL SWALE
SCALE: HOR. 1"=5' VERT. 1"=2'



EMERGENCY SPILLWAY PROFILE (TEMPORARY POND)
SCALE: HORIZ. 1"=20' VERT. 1"=5'

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 6/19/89
ENGINEER DATE

DEVELOPER'S CERTIFICATION

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 6/19/89
DEVELOPER DATE

OWNER / DEVELOPER
CHATEAU HOMES, INC.
8100 WOODED GLEN CT.
ELLICOTT CITY, MD 21043
(301)-795-5001

S.W.M. PROFILES
PROJECT: **WOODBERRY LOTS 1 THRU 22**

O.P. & Z. FILE NOS.: S-87-59; P-88-29; F-88-179
TAX MAP: 17, BLOCK 22, PARCEL 144
2ND ELECTION DISTRICT: HOWARD COUNTY, MD.

DES. BY: JLC
DRAWN BY: JLC
CHKD. BY: JTN
DATE: JAN 1989

CIVIL ENGINEERS • SITE PLANNERS SURVEYORS
D&A Inc.
11 WARREN ROAD
BALTIMORE, MD 21208
(410) 484-4100
SCALE: NOTED SHEET 10 OF 12

NO.	DESCRIPTION	BY	DATE

REVISION

1456

I. SITE PREPARATION

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surfaces.

All cleared and grubbed material shall be disposed of outside and below the 1 mile of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

II. EARTH FILL

The fill material shall be taken from approved designed borrow area or areas. It shall be free of roots, stumps, wood, rubbish, oversized stone, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height shall be increased above the design elevation (including freeboard) as shown on the plans.

Placement Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 6-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portion of the embankment.

Compaction The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Where a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density and is to be verified by the Engineer.

Cutoff Trench Where specified, a cutoff trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be shown on the drawings with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

III. STRUCTURAL BACKFILL Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe structure or a compacted fill of twenty-four inches or greater over the structure or pipe.

IV. PIPE CONDUITS All pipes shall be circular in cross section.

A. Corrugated Metal Pipe 1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating compound.

Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (25 mil) on both sides of the pipe. The following coatings are commercially available: Neom, Plasticoat, Bi-Ad, and Beth-Cology. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials - (Aluminized Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274-791 with watertight coupling bands or flanges.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-190 or M-211 with watertight coupling bands or flanges. Coupling bands, anti-seep collars, and sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pit of the surrounding soils shall be less than 9 and greater than 4.

2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to the completely watertight. Dimple bands are not considered to be watertight.

3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spogy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

5. Backfilling shall conform to structural backfill as shown above.

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

B. Reinforced Concrete Pipe

1. Materials - Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-301. An approved equivalent is AWA Specification C-301.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3" or as shown on the drawings.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled and shall be extended to prevent any deviation from the original line and grade of the pipe.

4. Backfilling shall conform to the structural backfill as shown above.

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

C. For pipes of other materials, specific specifications shall be shown on the drawings.

V. CONCRETE

1. Materials a. Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.

b. Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other deleterious substances.

c. Sand - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a one-quarter inch sieve. Limestone sand shall not be used.

d. Coarse Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1-1/2) inches.

e. Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

2. Design Mix - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-1/2 to 6 U.S. gallons of water per 94 pound bag of cement. The proportion of materials for the mix shall be 1:2:3-1/2. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

3. Mixing - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes. All the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the speed of rotation of the mixer and the introduction of the materials, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operation. Excessive overmixing requiring the addition of water to structure the required concrete consistency shall not be permitted. Truck mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.

4. Forms - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

5. Reinforcing Steel - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coating. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.

6. Consolidating - Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be supplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.

7. Finishing - Defective concrete, honeycombed areas, voids left by the removal of tie rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-patching mortar.

8. Protection and Curing - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also be used.

9. Placing Temperature - Concrete may not be placed at temperatures below 37 degrees F with the temperature falling, or 34 degrees with the temperature rising.

VI. STABILIZATION All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, berms shall be stabilized by seeding, liming, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

VII. EROSION AND SEDIMENT CONTROL Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

SEQUENCE OF OPERATIONS

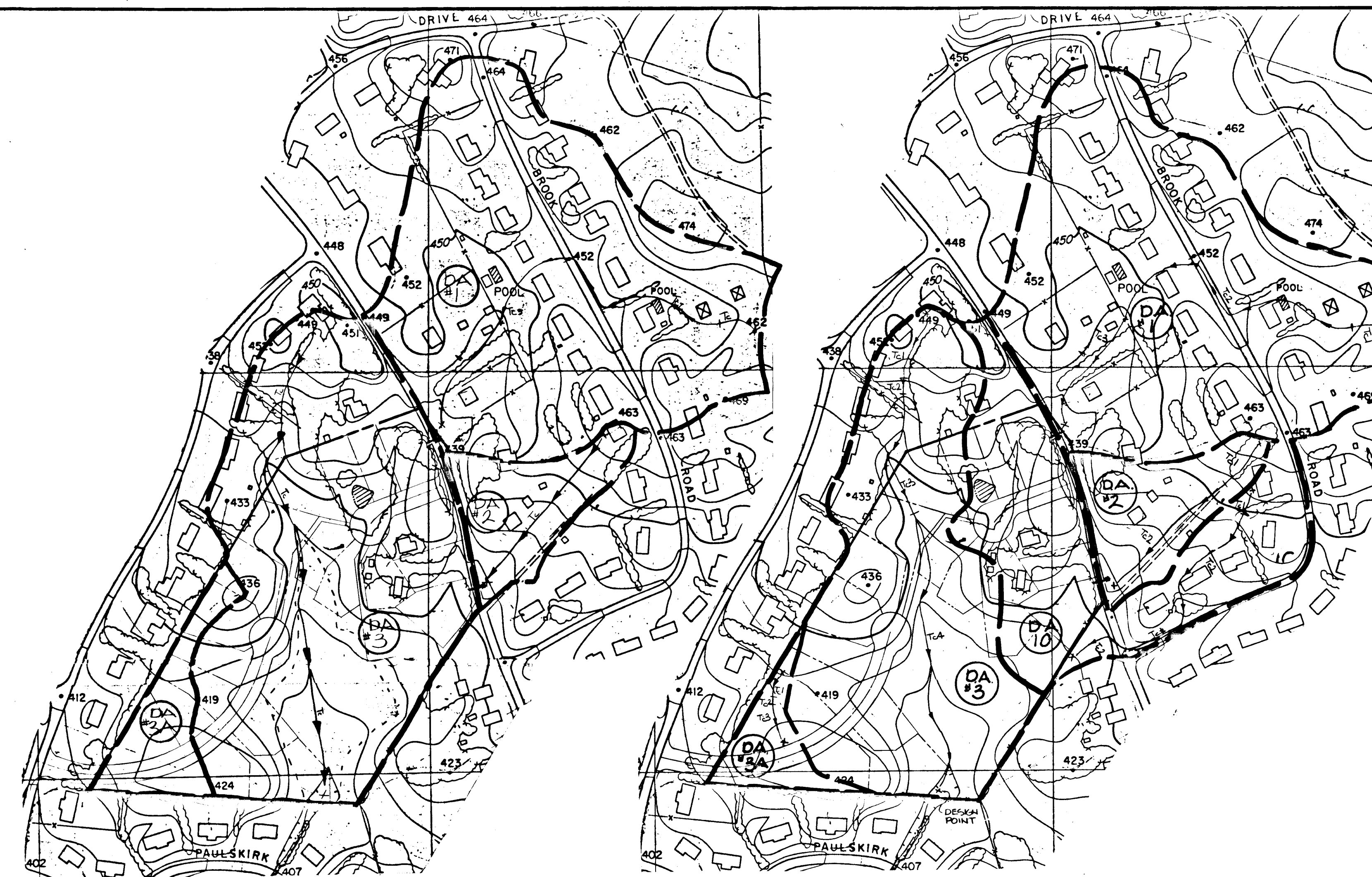
- 1. OBTAIN GRADING PERMIT.
2. NOTIFY THE HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS AND PERMITS AND THE CONSTRUCTION INSPECTIONS/SURVEYS DIVISION AT LEAST 24 HOURS PRIOR TO BEGINNING GRADING OPERATIONS.
3. NOTIFY D.S. THALER & ASSOCIATES, INC. OR A CIVIL ENGINEER APPROVED BY THE DEVELOPER AT LEAST 3 BUSINESS DAYS PRIOR TO BEGINNING GRADING OPERATIONS.
4. THERE ARE WETLANDS ON SITE. THE WETLANDS ARE DESIGNATED ON THESE DRAWINGS AS SUCH. UNDER NO CIRCUMSTANCES ARE THESE WETLANDS TO BE DISTURBED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY SUCH DISRUPTIONS.

PHASE I

- 5. CLEAR AND GRUB AS NECESSARY TO INSTALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON THESE PLANS. 1 WEEK
6. INSTALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON THESE PLANS AND AS DIRECTED BY THE SEDIMENT INSPECTOR (S.F., S.C.E., E.D., CONTROL SWALE, TRAPS, AND TEMPORARY S.W.M.). 3 WEEKS
7. ROUGH GRADE SITE - DO NOT DISTURB SEDIMENT CONTROL DEVICES. FINE GRADE ALL HOUSE PADS EXCEPT LOTS 7, 8, 11, 18, 19, 20, AND 21 AS SHOWN ON SHEET 5 OF THESE PLANS. 3 WEEKS
8. APPLY TEMPORARY STABILIZATION TO ALL DISTURBED AREAS OTHER THAN THOSE INVOLVED IN CONTINUING CONSTRUCTION. 2 DAYS
9. INSTALL SEWER MAIN AND WATER MAIN. 4 WEEKS

PHASE II

- 10. INSTALL STORM DRAINS AS SHOWN ON SHEET 6 OF THESE PLANS. 2 WEEKS
11. BRING ROAD AREAS TO SUBGRADE. 1 WEEK
12. INSTALL CURB AND GUTTER AS SHOWN ON THE ROAD CONSTRUCTION PLANS. 1 WEEK
13. PAVE ROADS AND HAVE HOWARD COUNTY INSPECT AND ACCEPT. 1 WEEK
14. BEGIN HOUSE CONSTRUCTION FOR ALL LOTS EXCEPT LOTS 7, 8, 11, 18, 19, 20, AND 21 AS SHOWN ON SHEET 5 OF THESE PLANS. 3 MONTHS
NOTE - INDIVIDUAL LOT SEDIMENT CONTROL MEASURES FOR HOUSE CONSTRUCTION ARE SHOWN ON SMP-89-172 AND SHOULD BE FOLLOWED DURING HOUSE CONSTRUCTION.
15. REMOVE THE CONTROL SWALE FROM LOTS 20 & 21. GRADE LOTS 18, 20, AND 21 TO HOUSE PADS AS SHOWN ON SHEET 6 OF THESE PLANS AND BEGIN HOUSE CONSTRUCTION ON THESE LOTS. 3 MONTHS ON GOING
16. APPLY PERMANENT STABILIZATION TO ALL COMPLETED AREAS.
17. AFTER THE WOODBERRY LANE HOUSES HAVE BEEN CONSTRUCTED AND PERMANENT STABILIZATION HAS BEEN APPLIED, AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE STONE OUTLET TRAPS 1 AND 2 BY:
A. FLASH STORM DRAINS CLEAN.
B. PUMP ANY STANDING WATER ONTO A STABILIZED OUTFALL.
C. REMOVE ANY SEDIMENT AND DEPOSIT AT A SITE WITH APPROVED SEDIMENT CONTROL MEASURES.
D. GRADE OUT TRAP.
E. INITIAL PERMANENT STORM DRAIN SYSTEM AT 1-2 AS SHOWN ON SHEET 7 OF THESE PLANS. 1 WEEK
18. GRADE LOTS 7 & 8 TO HOUSE PADS AS SHOWN ON SHEET 7 OF THESE PLANS AND BEGIN HOUSE CONSTRUCTION OF THESE LOTS. 3 MONTHS
19. WITH THE APPROVAL OF THE SEDIMENT INSPECTOR, REMOVE STONE OUTLET TRAP 3 BY:
A. PUMP ANY STANDING WATER ONTO A STABILIZED OUTFALL.
B. REMOVE ANY SEDIMENT AND DEPOSIT AT A SITE WITH APPROVED SEDIMENT CONTROL MEASURES.
C. GRADE OUT TRAP.
20. GRADE LOT 11 TO HOUSE PAD AS SHOWN ON SHEET 7 OF THESE PLANS AND BEGIN HOUSE CONSTRUCTION OF THIS LOT. 1 MONTH
21. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CONVERT THE TEMPORARY STORM WATER MANAGEMENT AND SEDIMENT BASIN TO THE PERMANENT STORM WATER MANAGEMENT FACILITY BY:
A. FLASH STORM DRAINS CLEAN.
B. PUMP ANY STANDING WATER ONTO A STABILIZED OUTFALL.
C. REMOVE ANY SEDIMENT AND DEPOSIT AT A SITE WITH APPROVED SEDIMENT CONTROL.
D. REGRADE POND AS SHOWN ON THE FINAL GRADING PLAN (SEE SHEET 7 OF 12) & REMOVE EMERGENCY SPILLWAY.
E. INSTALL REMAINING STORM DRAINS AS SHOWN ON FINAL GRADING PLAN (SEE SHEET 7 OF 12).
F. REMOVE DESAVERING DEVICE AND CONVERT OUTLET STRUCTURE TO PERMANENT CONDITIONS AS SHOWN ON SHEET 12 OF THESE PLANS. 3 DAYS
22. APPLY PERMANENT STABILIZATION TO ALL REMAINING DISTURBED AREAS. 1 WEEK
23. WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ANY REMAINING SEDIMENT AND EROSION CONTROL DEVICES AND APPLY PERMANENT STABILIZATION. 1 WEEK



EXISTING CONDITIONS - S.W.M. DRAINAGE AREA MAP SCALE: 1" = 200'

AFTER DEVELOPMENT - S.W.M. DRAINAGE AREA MAP SCALE: 1" = 200'

APPROVED: OFFICE OF PLANNING AND ZONING.

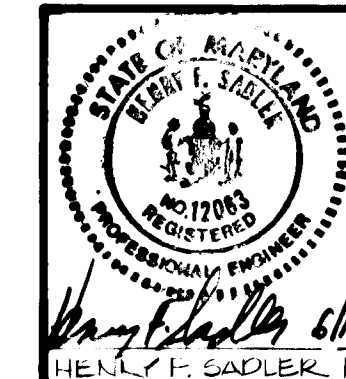
David J. Langley, Director, Division of Community Planning and Land Development, Date 1/24/89

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Ronald W. Spason, Chief, Land Development Div., Date 2/4/89

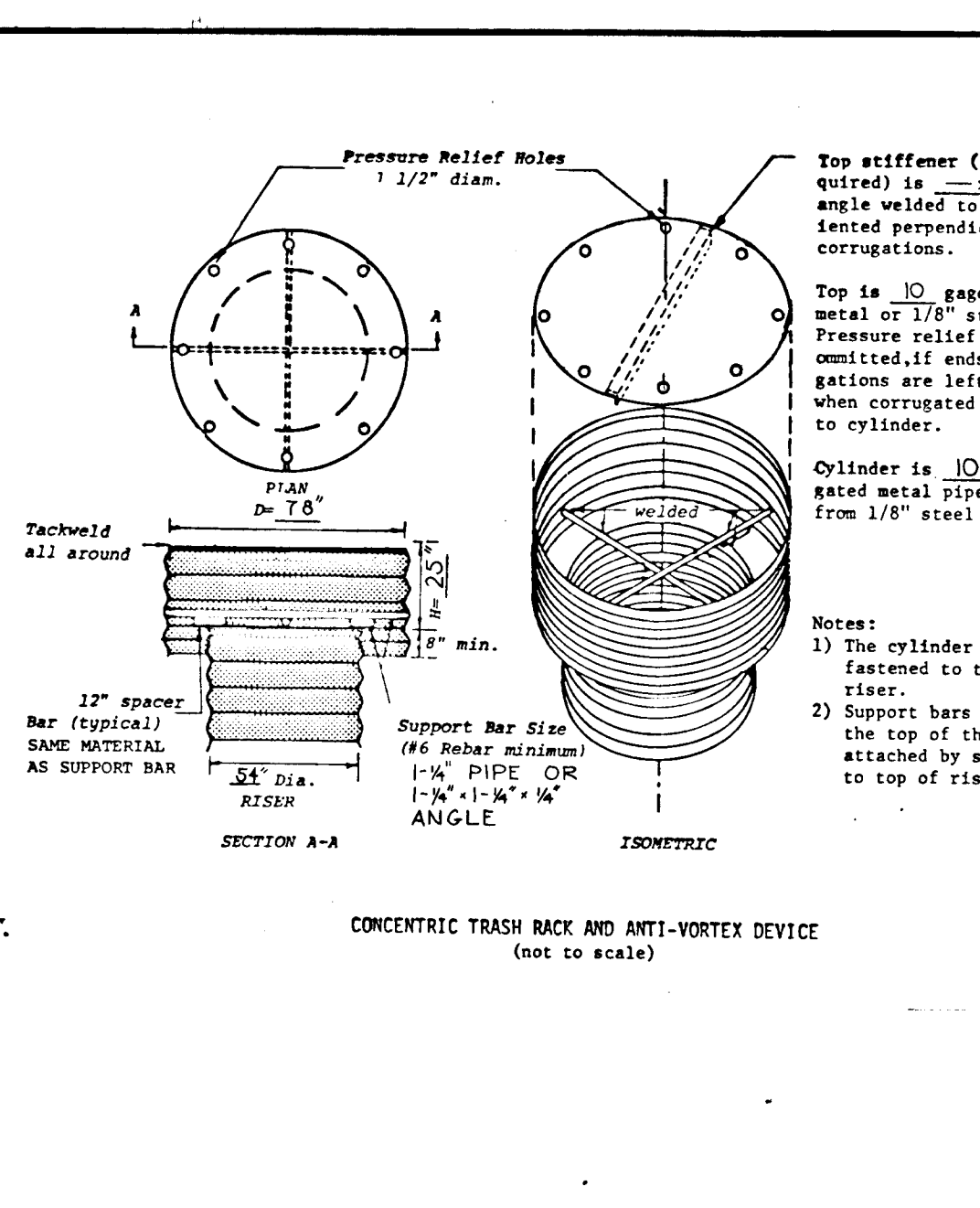
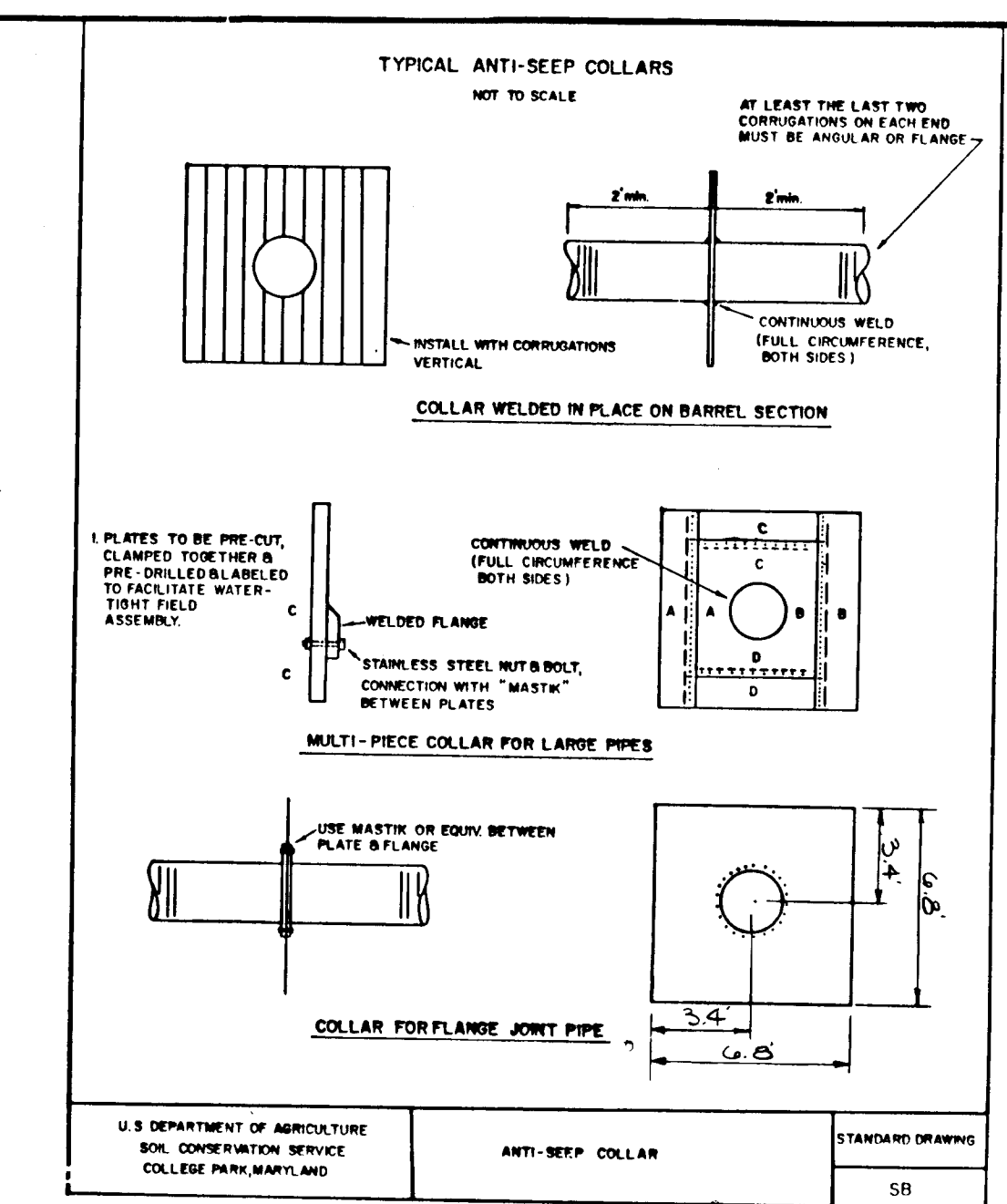
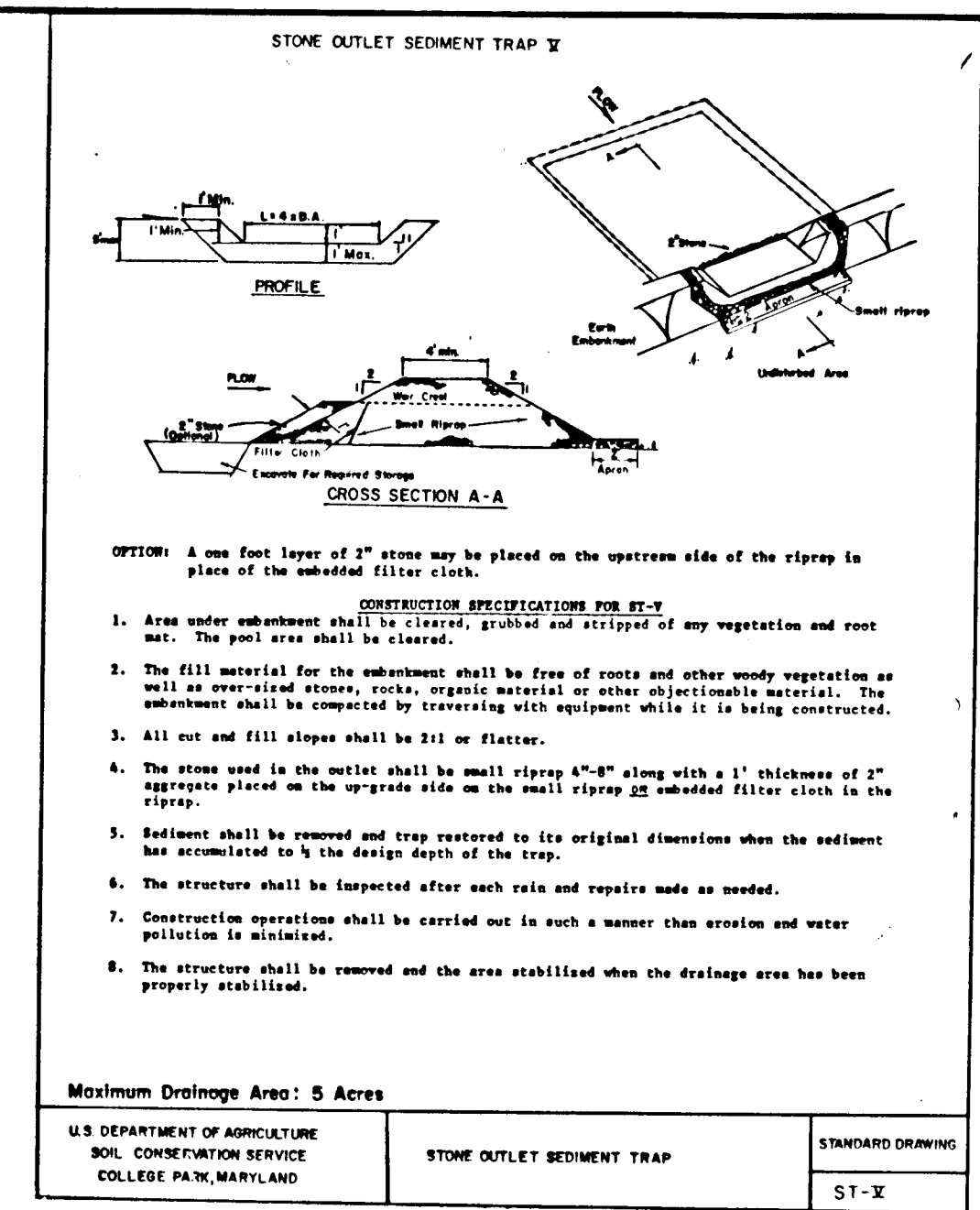
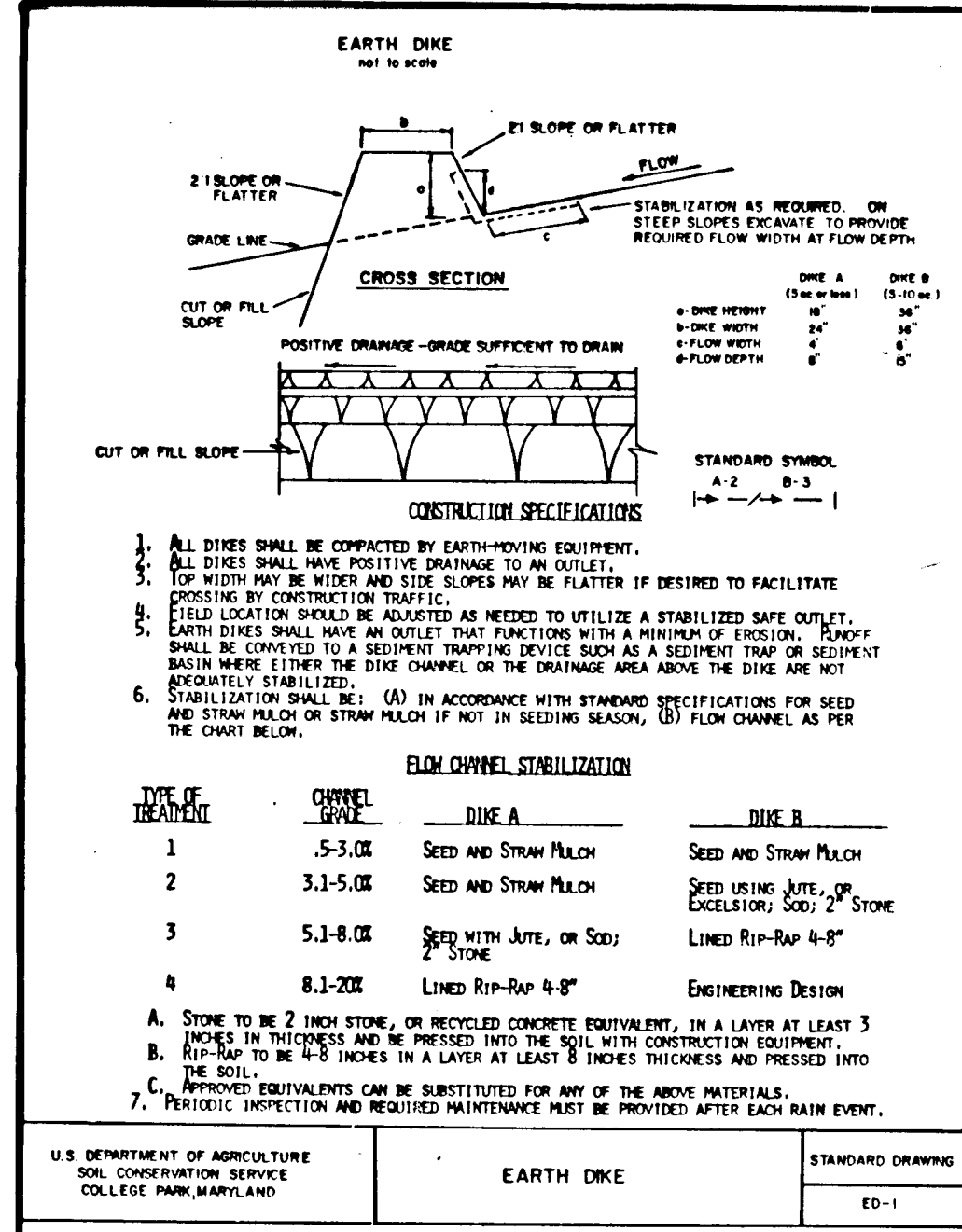
Granville W. Williams, Chief, Bureau of Highways, Date 2/4/89

William S. Riley, Chief, Bureau of Engineering, Date 2-4-89



TITLE: SPECIFICATIONS & DRAINAGE AREA MAPS
PROJECT: WOODBERRY LOTS 1 THRU 22
O.P.A.Z. FILE NOS.: 2-87-59 (P&Z)
TAX MAP: 17, BLOCK: 22, PARCEL: 144
2nd ELECTION DISTRICT: HOWARD COUNTY, MD.
DES. BY: BLC/JTN
DRAWN BY: JLC
CHKD. BY: JTN
DATE: JAN 1989

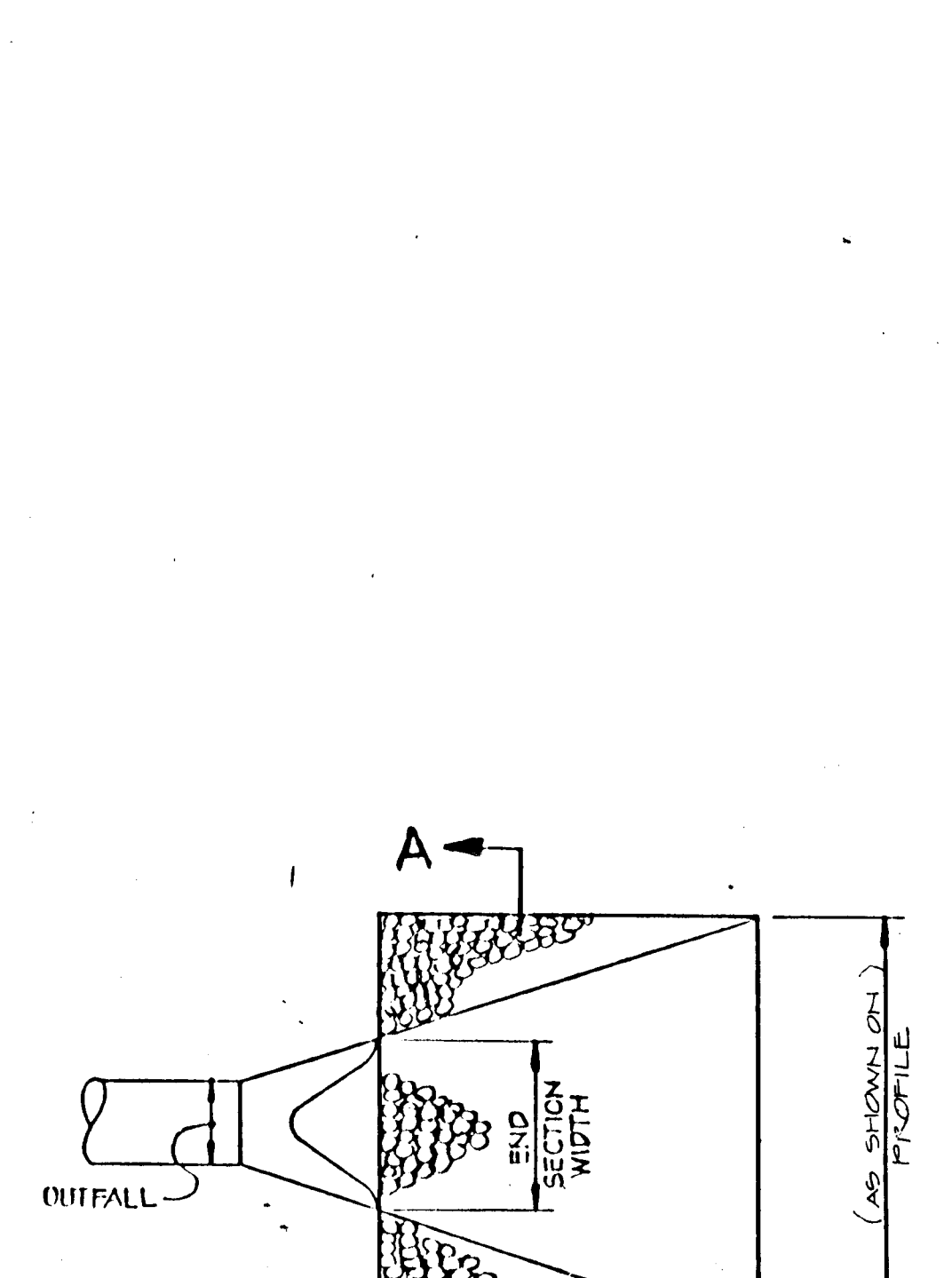
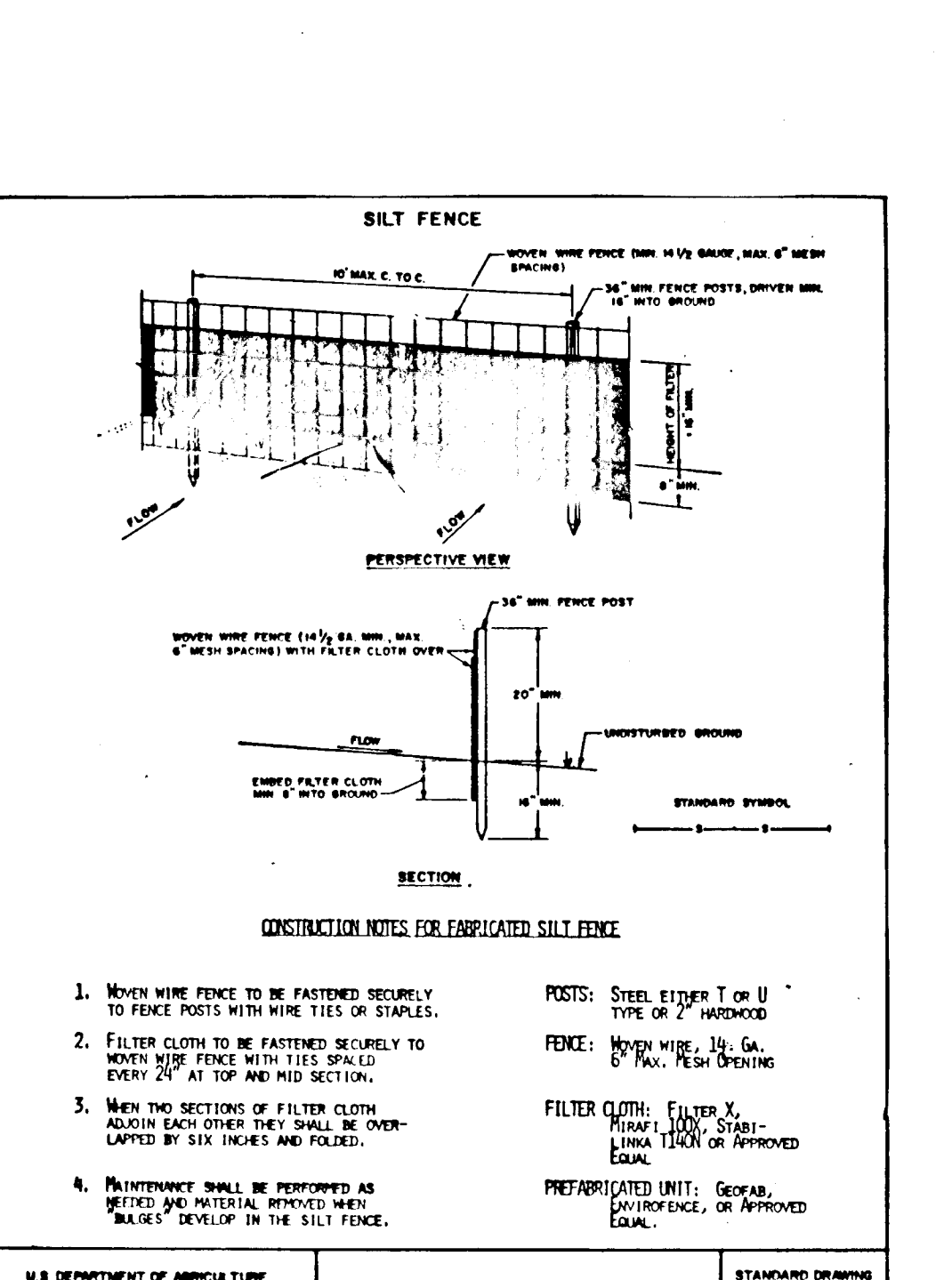
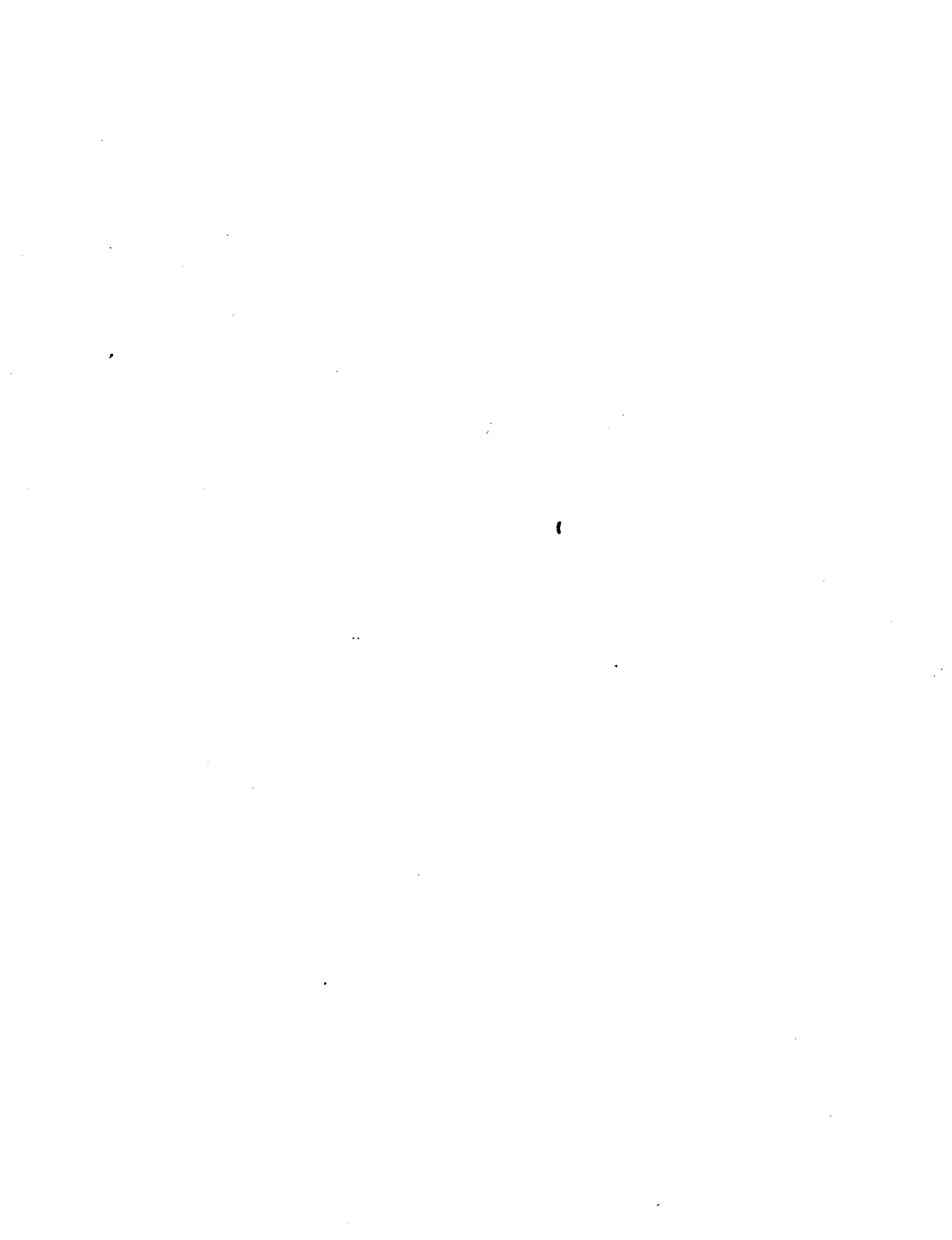
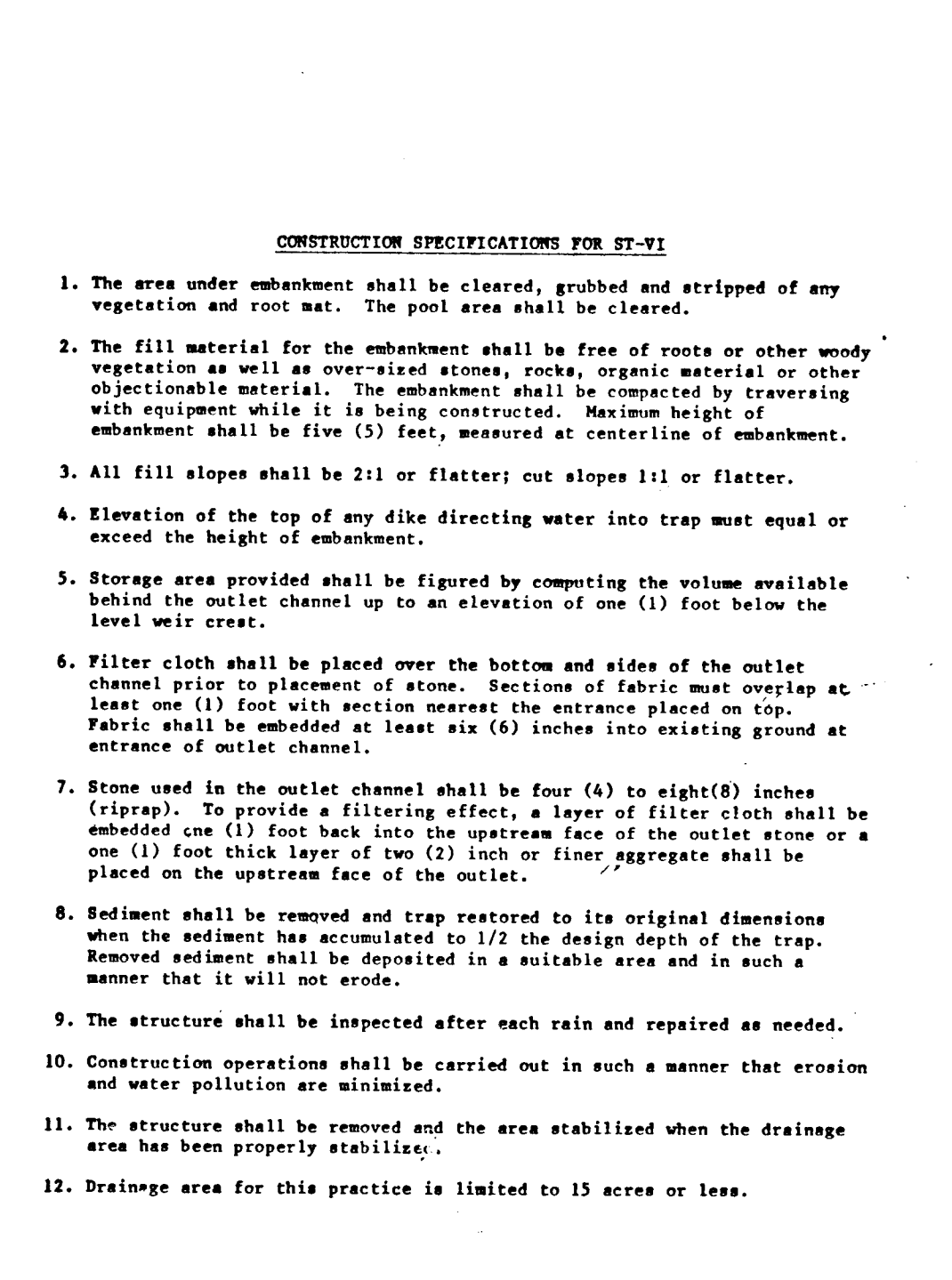
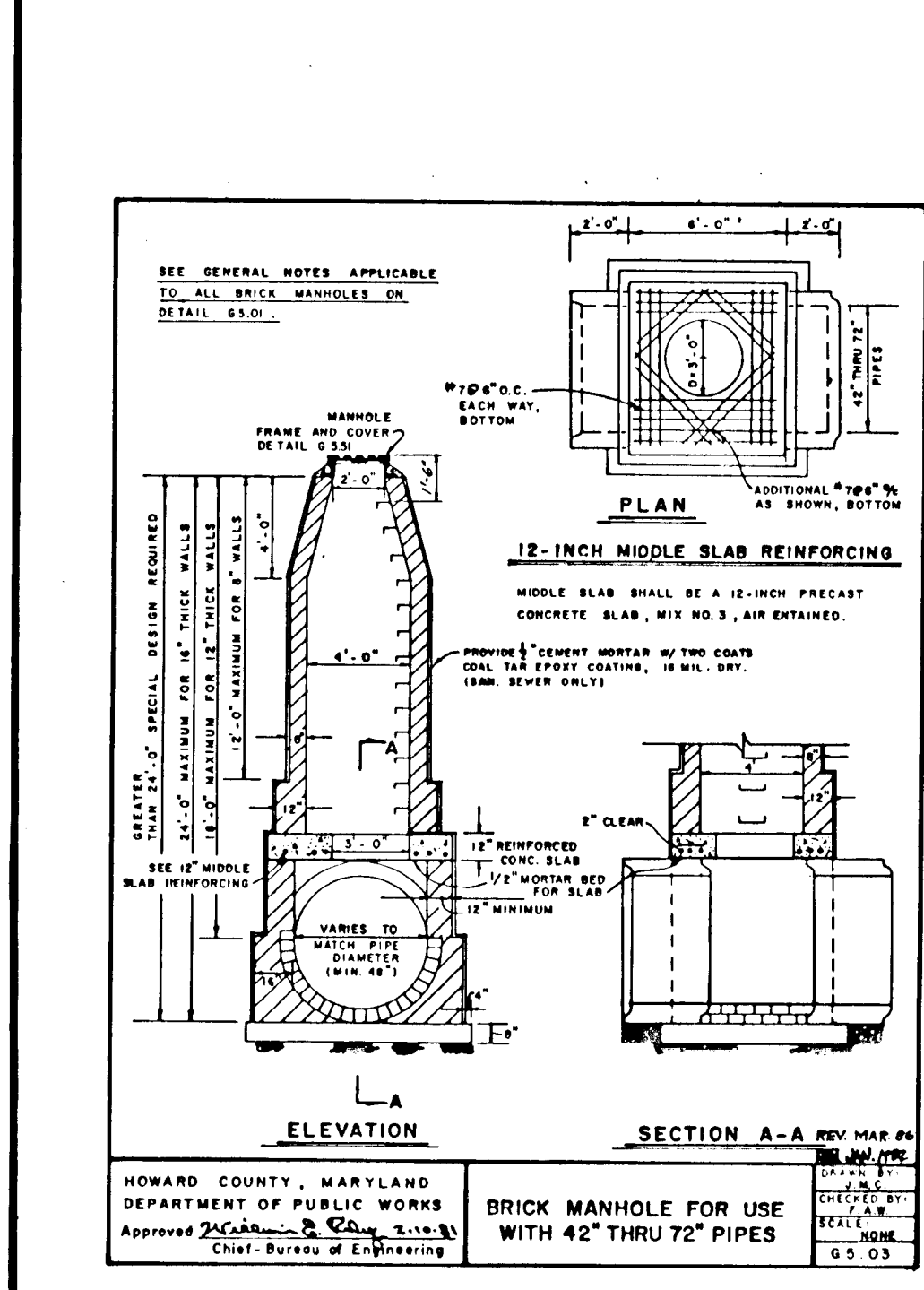
OWNER / DEVELOPER: CHATEAU HOMES, INC. 8100 WOODD GLEN CT. ELLICOTT CITY, MD. 21043 (301)-795-5001
SURVEYORS: D.S. Thaler & Associates, Inc. 11 WARREN ROAD BALTIMORE, MD. 21208 (301) 484-6100
SCALE: NOTED SHEET 11 OF 12



TYPE OF TREATMENT	CHANNEL GRAZE	DIKE A	DIKE B
1	5-5.00	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.00	SEED AND STRAW MULCH	SEED AND STRAW MULCH
3	5.1-8.00	SEED WITH MULCH, OR SOY 2:1 SIDE	LINED RIP-RAP 4-8\"/>
4	8.1-200	LINED RIP-RAP 4-8\"/>	ENGINEERING DESIGN

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND

STANDARD DRAWING
EARTH DIKE
ED-1

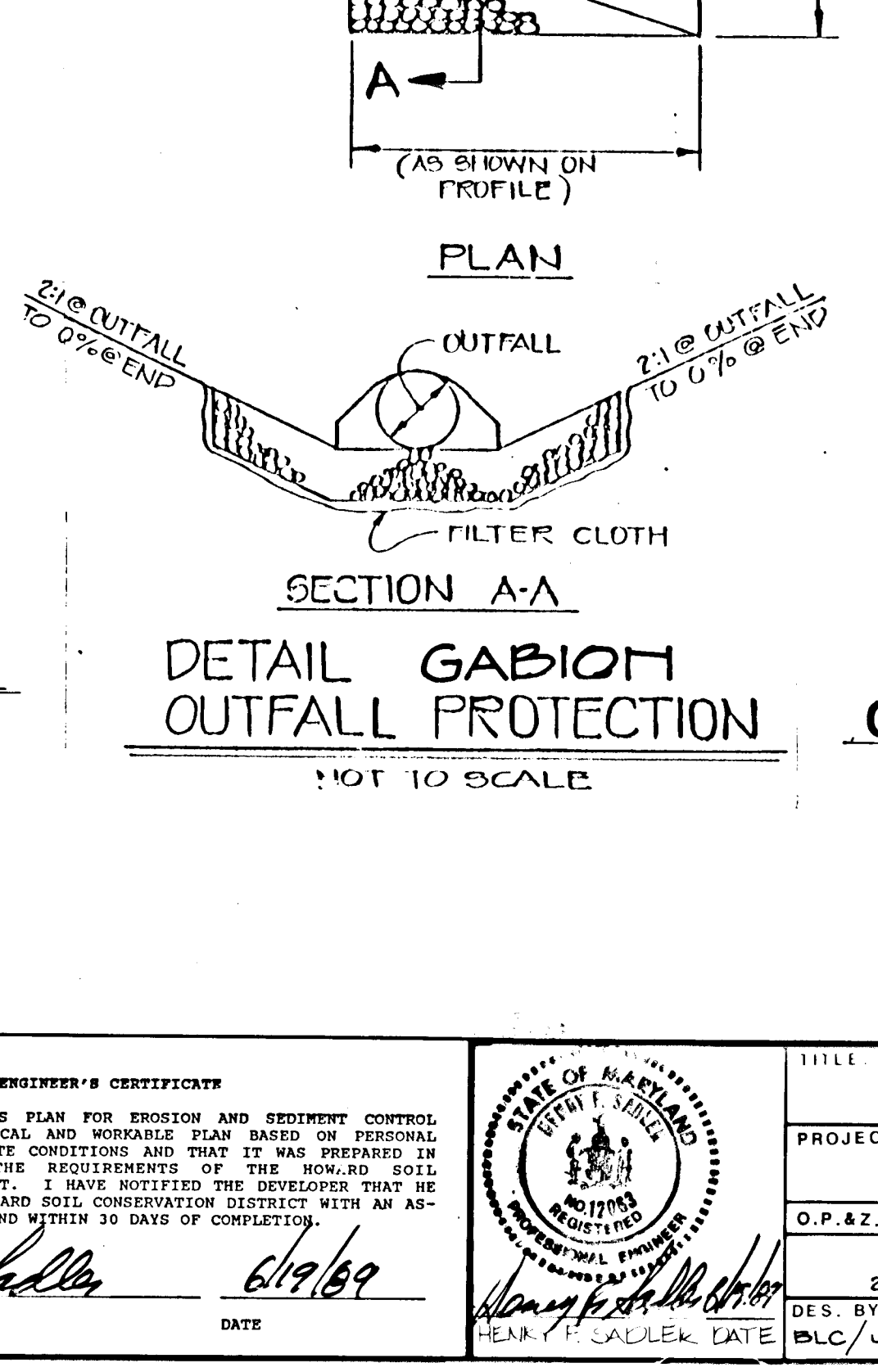
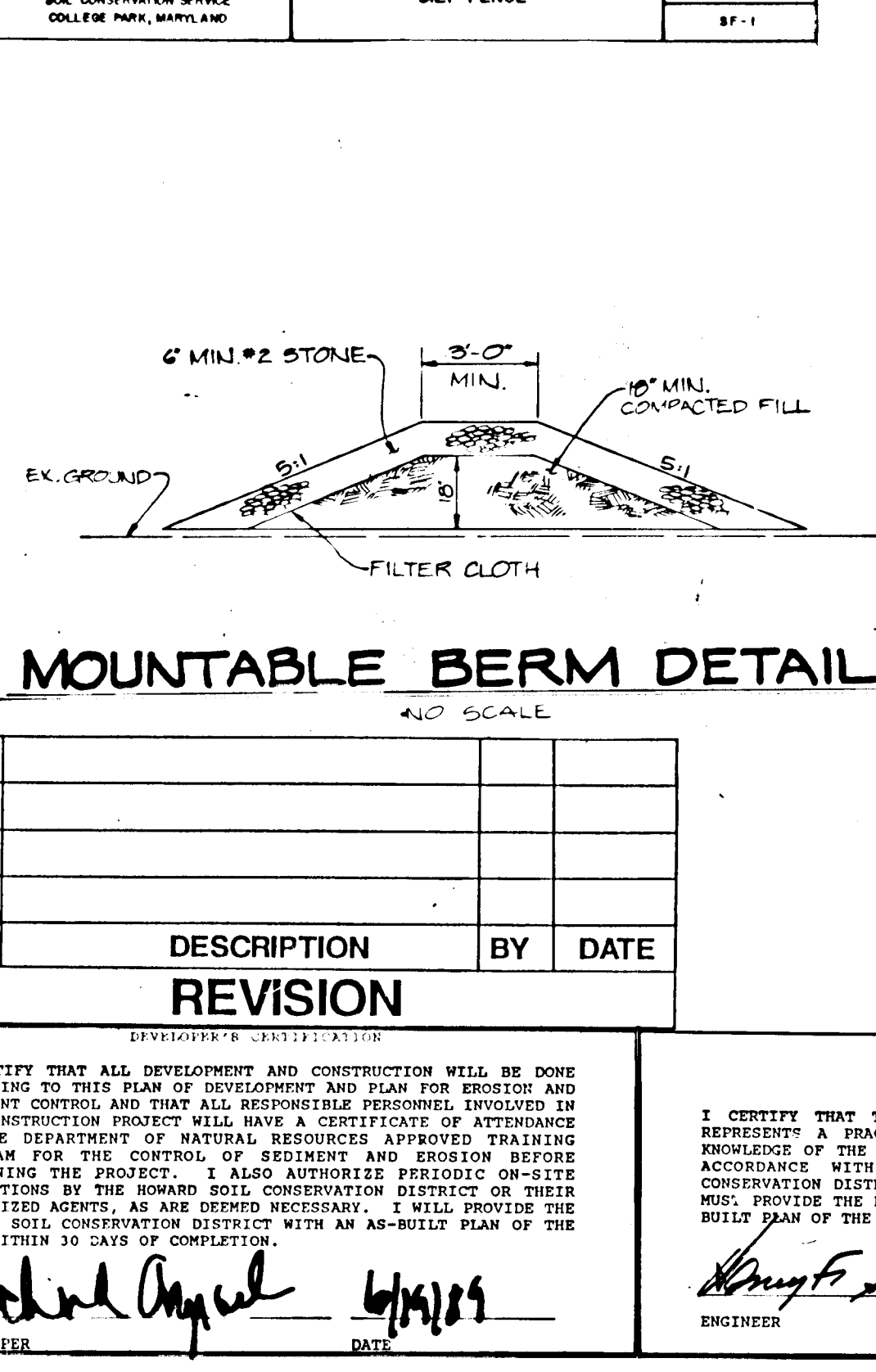
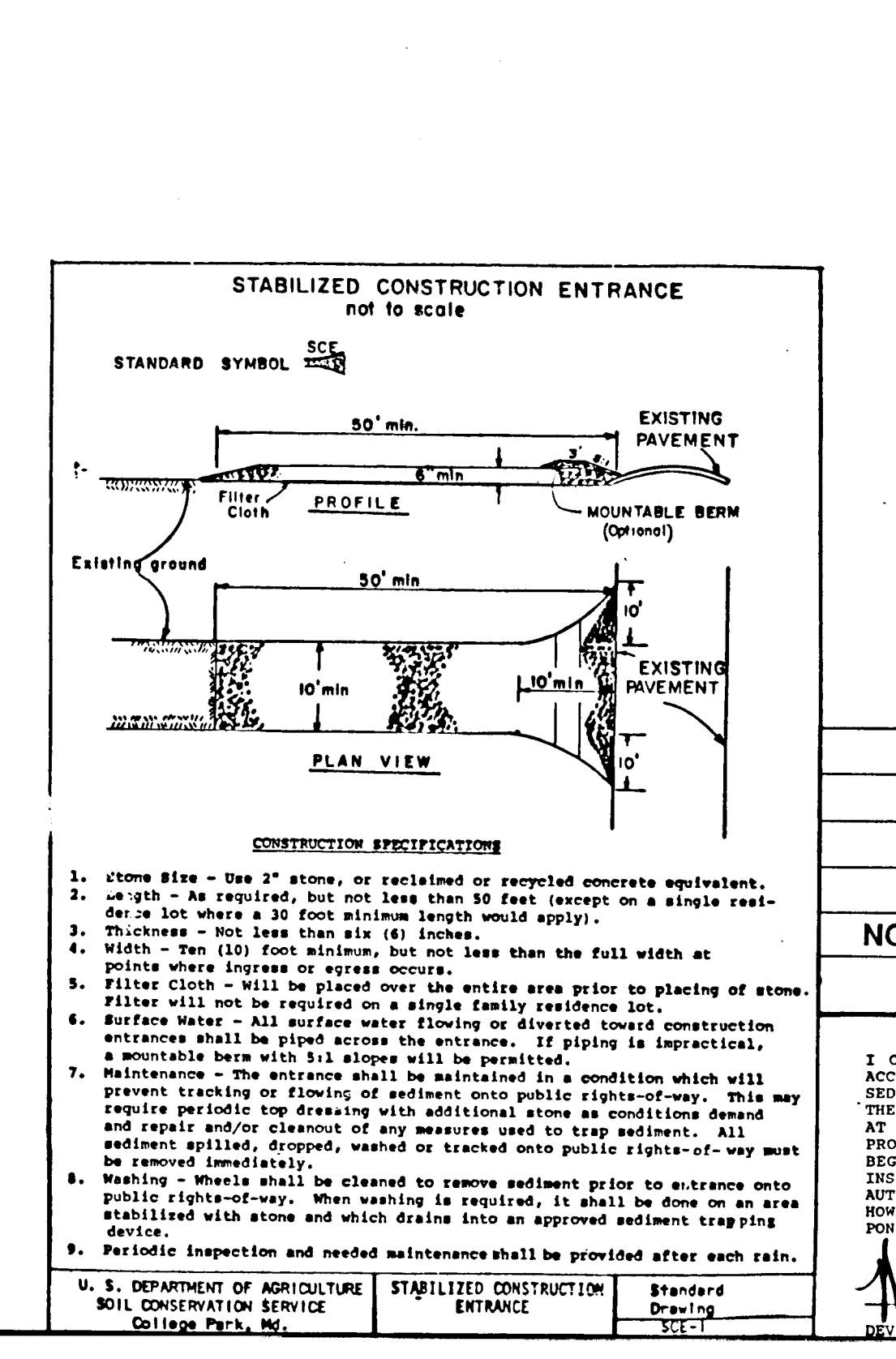
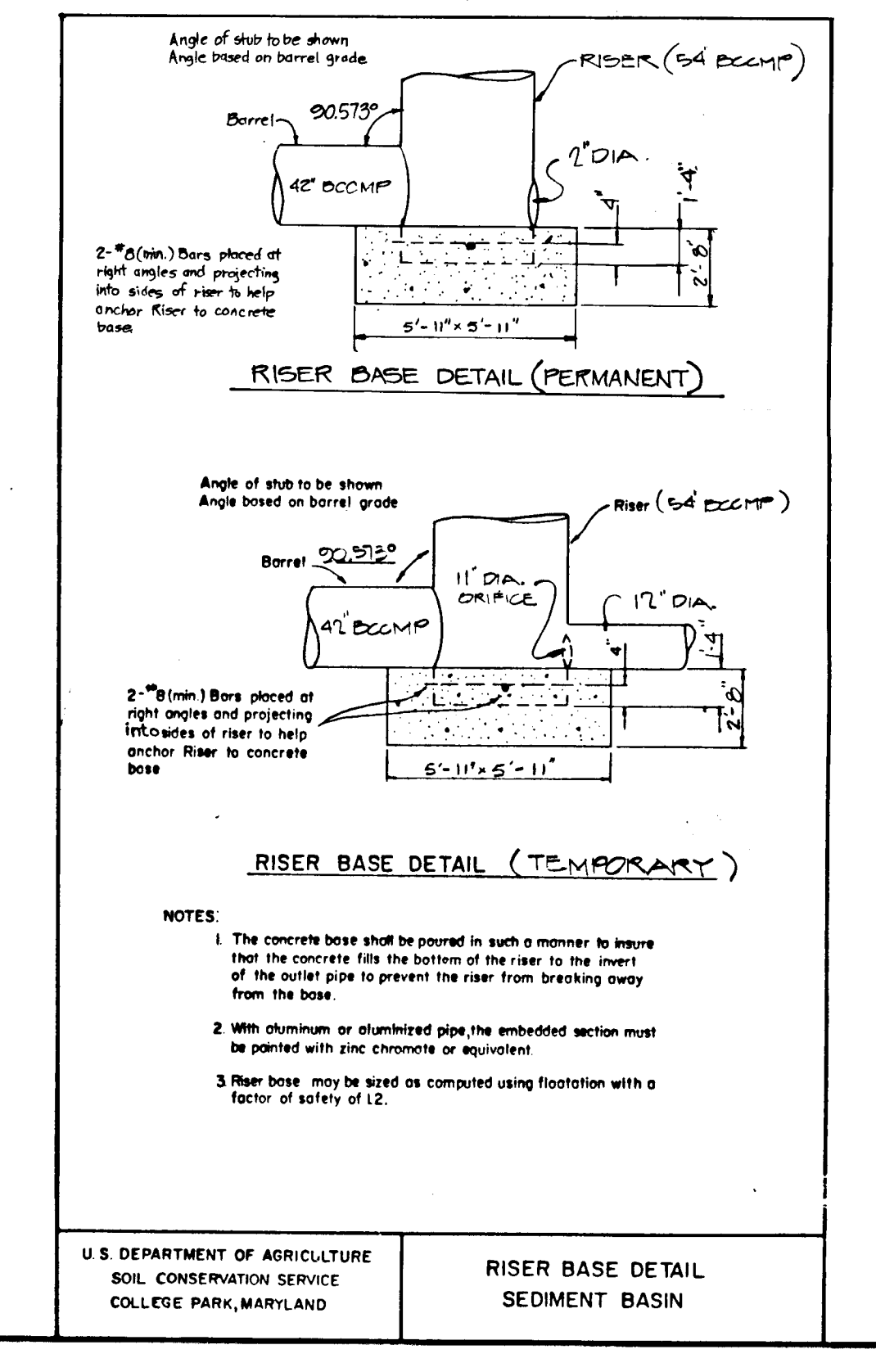
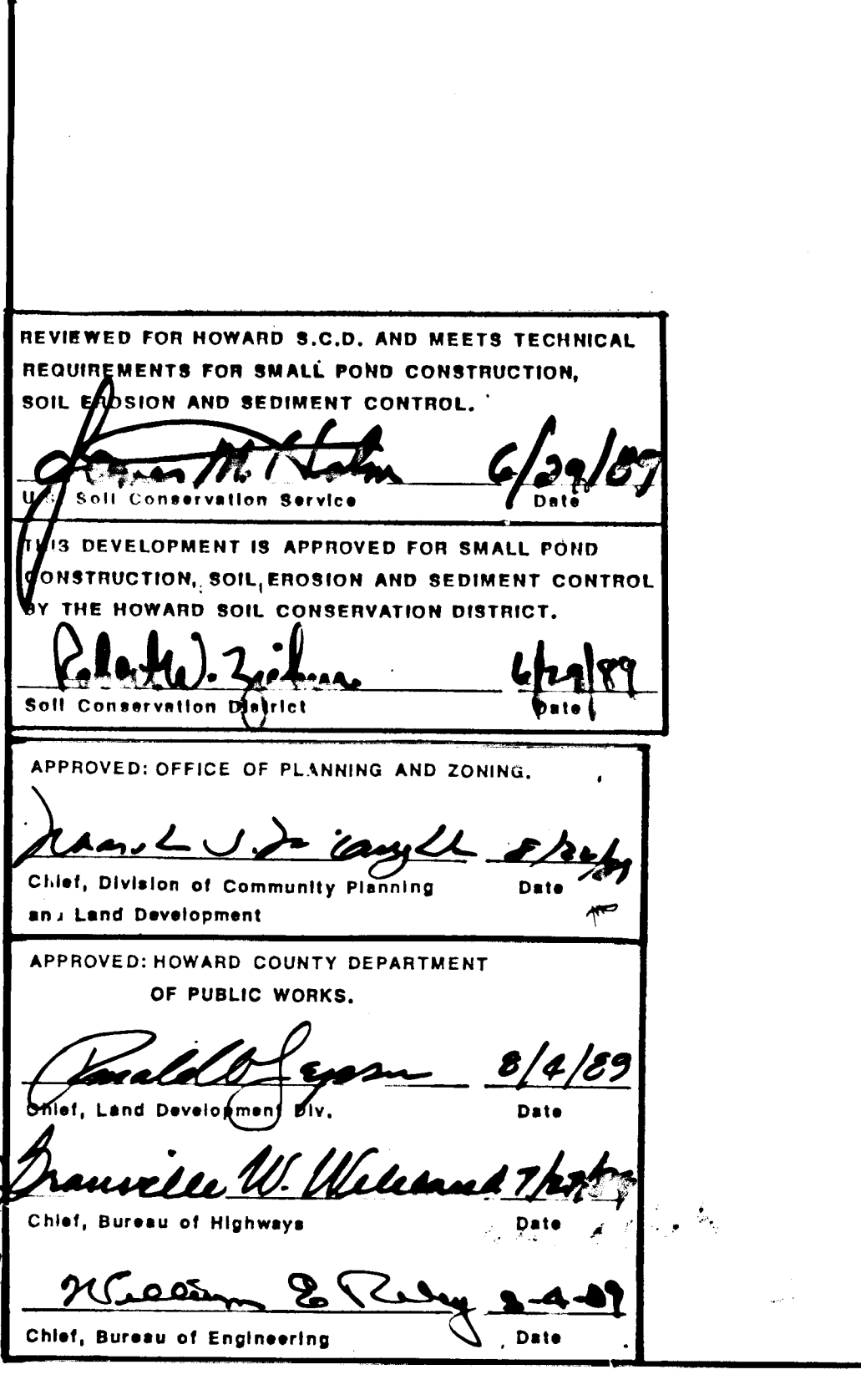


NO.	DESCRIPTION	BY	DATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND

STANDARD DRAWING
OWNER / DEVELOPER
OWNER / DEVELOPER



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