

# CATTAIL CREEK COUNTRY CLUB

## SECTION TWO

### FOURTH ELECTION DISTRICT

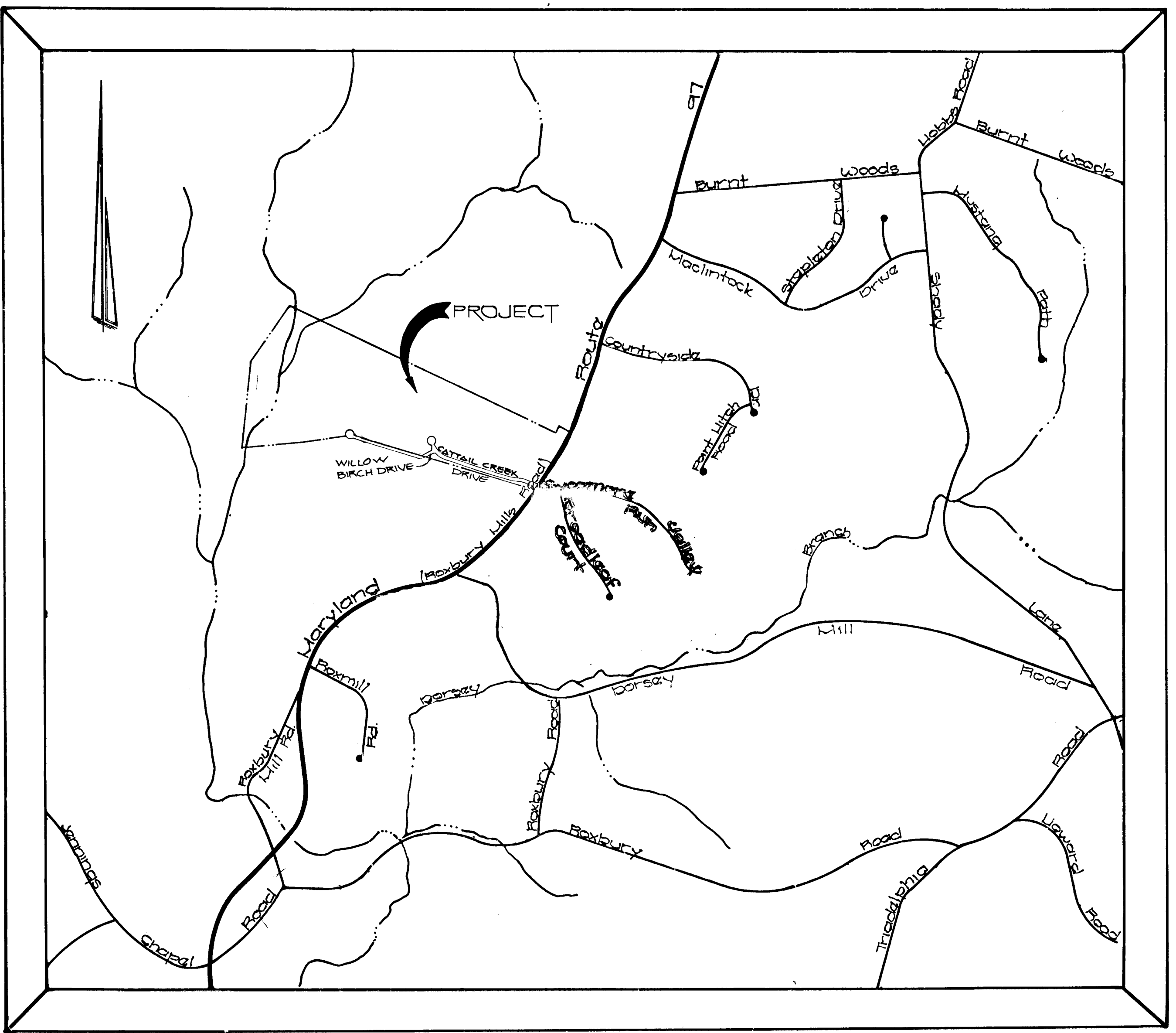
### HOWARD COUNTY, MARYLAND

APPROVED DEPARTMENT OF PUBLIC WORKS  
*Clara M. Pennington* 1/11/92  
 CHIEF, LAND DEVELOPMENT DIVISION DATE

APPROVED DEPARTMENT OF PUBLIC WORKS  
*Granville W. Weese* 1/25/91  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED DEPARTMENT OF PUBLIC WORKS  
*Richard S. Deane* 1-13-92  
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED DEPT. OF PLANNING AND ZONING  
*Emma Blomatt* 1/10/92  
 CHIEF, DIVISION OF COMMUNITY PLANNING DATE  
 AND LAND DEVELOPMENT 8/1/92



Vicinity Map  
 SCALE: 1" = 1200'

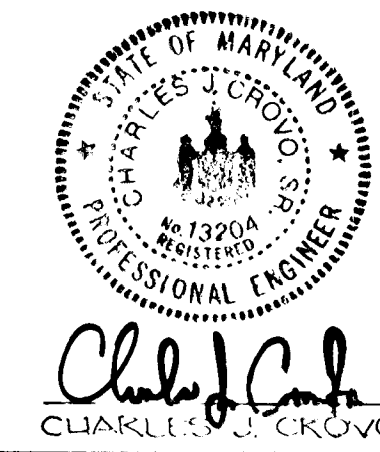
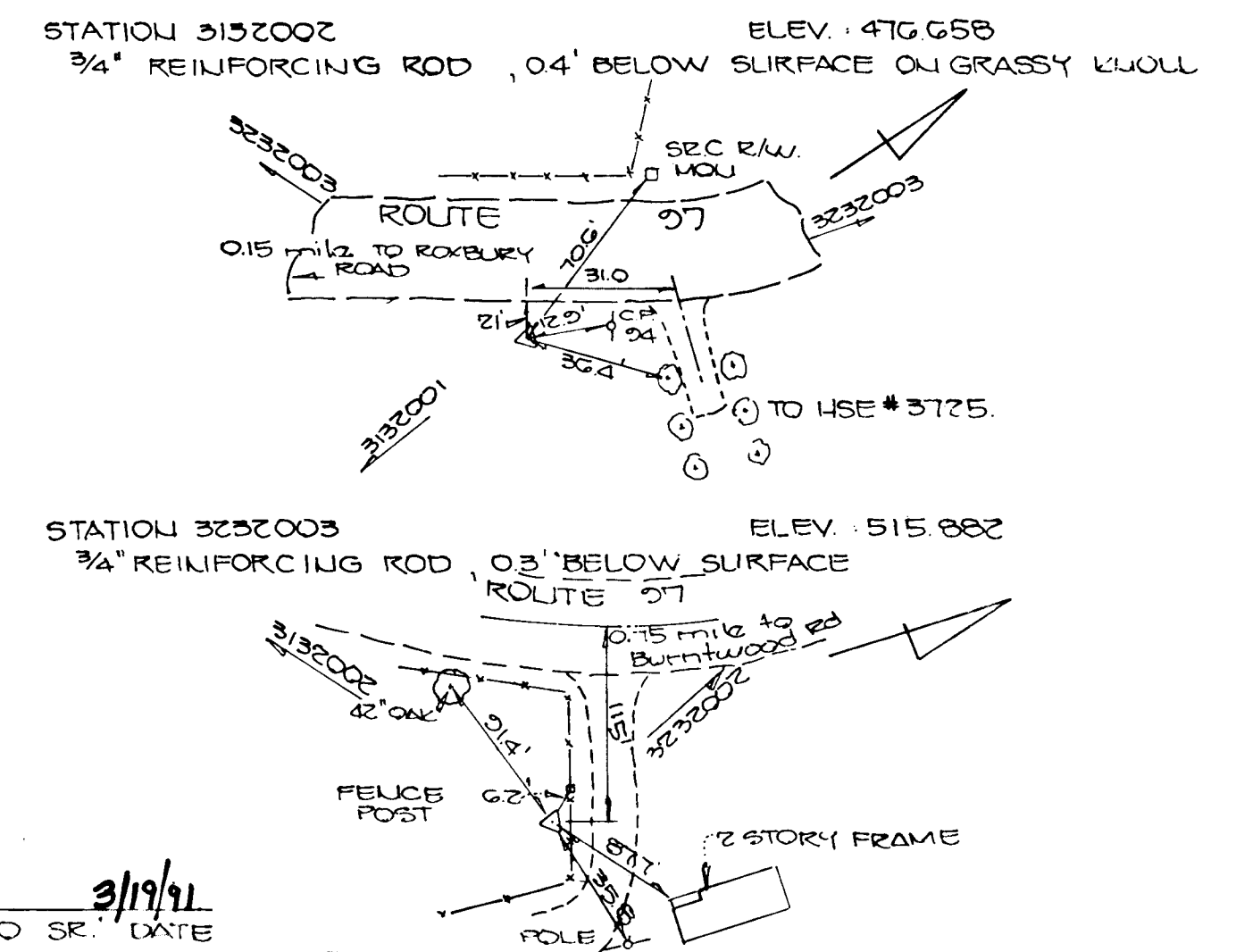
#### GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
2. ALL UTILITY COMPANIES MUST BE NOTIFIED 24 HRS. IN ADVANCE OF ANY CONSTRUCTION.
3. STORM DRAINAGE TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODES.
4. ANY DAMAGE TO PUBLIC RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
5. CONTRACTOR TO NOTIFY THE HOWARD COUNTY INSPECTION AND SURVEY DIVISION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE: 792-7272.
6. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION; CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
7. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES CURRENT REVISED EDITION.

#### SHEET INDEX

- 1) TITLE SHEET
- 2) ALUMINUM SLADE DRIVE - PLAN & PROFILE, MD ROUTE 97 - PLAN
- 3) ALUMINUM SLADE DRIVE - PLAN & PROFILE  
WILLOW BIRCH DRIVE - PLAN & PROFILE
- 4) WILLOW BIRCH DRIVE - PROFILE  
TYPICAL ROADWAY SECTION & DETAILS
- 5) STORM DRAIN PROFILES
- 6) DRAINAGE AREA MAP
- 7) GRADING & SEDIMENT CONTROL PLAN
- 8) GRADING & SEDIMENT CONTROL PLAN

#### BENCH MARKS



*Charles J. Crovo* 3/17/91  
 CHARLES J. CROVO SR. DATE

SYCAMORE VALLEY PARTNERSHIP  
 C/D LAND DESIGN AND DEVELOPMENT, INC.  
 10805 HICKORY RIDGE ROAD  
 COLUMBIA, MARYLAND 21044

Fisher, Collins & Carter, inc.  
 Civil Engineers & Land Surveyors  
 7171 Balto. Nat. Pike., Suite 100  
 Ellicott City, Maryland 21043  
 Telephone: (301) 461-2855  
 FAX: (301) 750-3784

1630

PLAN  
 SURVEYED  
 CHECKED  
 DATE

APPROVED  
 DEPARTMENT OF PUBLIC WORKS  
*Alan M. Tengstrom* 1/14/92  
 M.K.

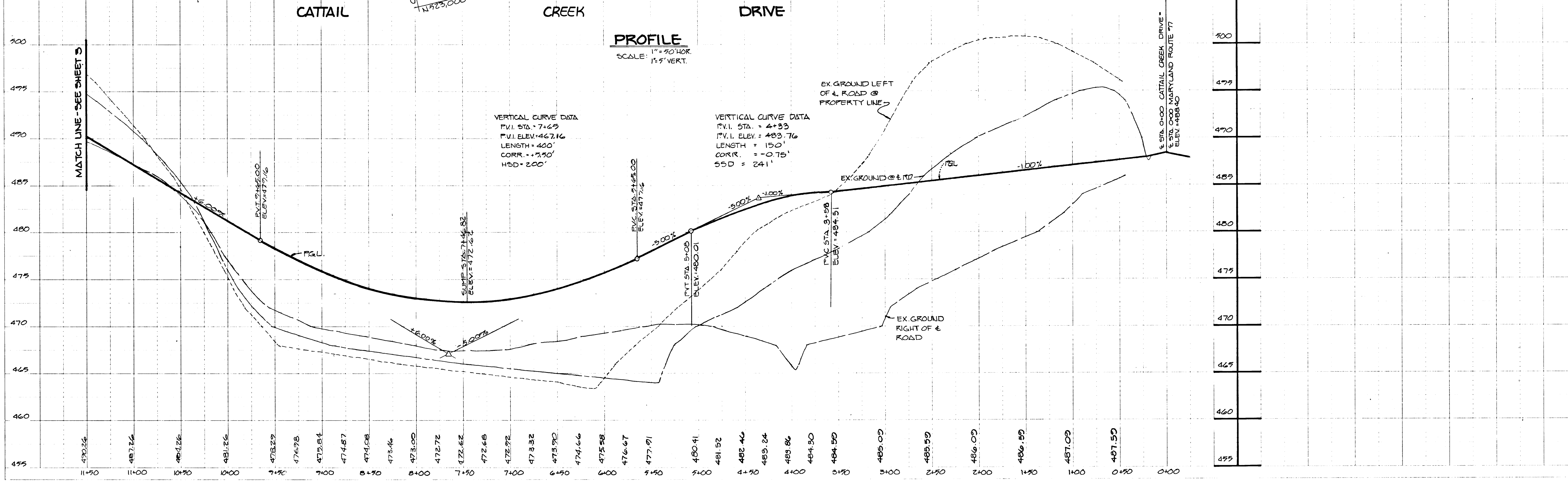
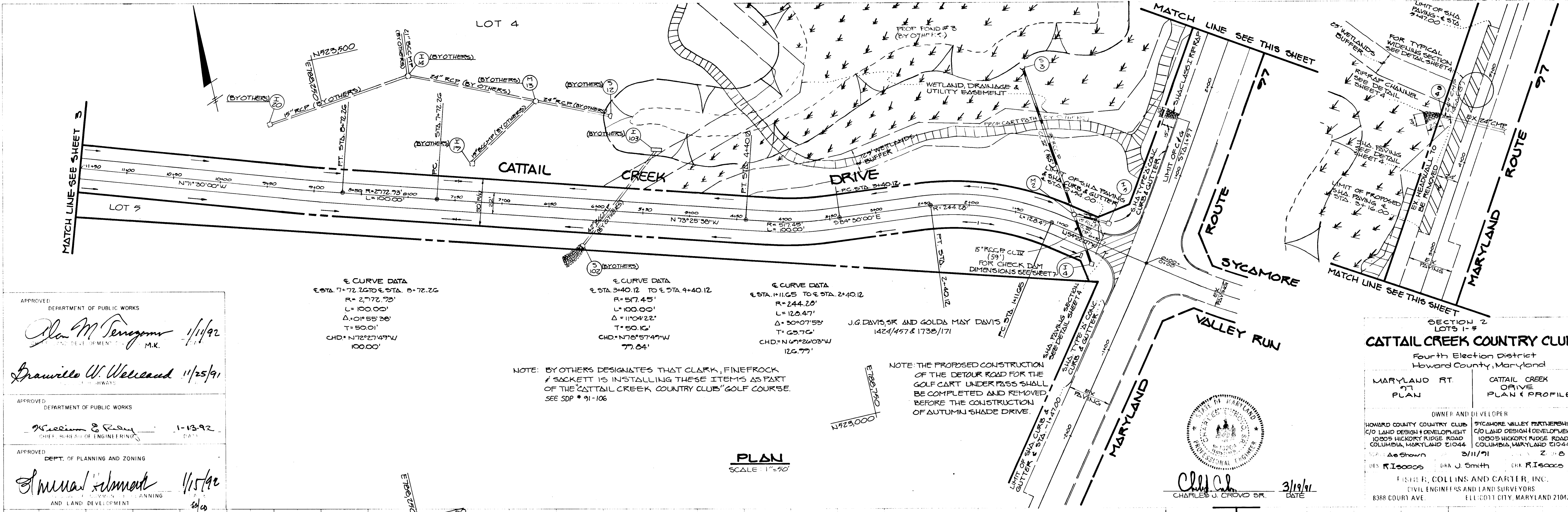
*Granville W. Wellwood* 11/25/91  
 M.K.

APPROVED  
 DEPARTMENT OF PUBLIC WORKS  
*Kaelum E. Riley* 1-13-92  
 CHIEF, BUREAU OF ENGINEERING

APPROVED  
 DEPT. OF PLANNING AND ZONING  
*Anna M. Schmidt* 1/15/92  
 PLANNING AND LAND DEVELOPMENT

PROFILE  
 SURVEYED  
 CHECKED  
 DATE

1630



**SECTION 2**  
**LOTS 1-5**  
**CATTAIL CREEK COUNTRY CLUB**  
 Fourth Election District  
 Howard County, Maryland

MARYLAND RT. 97 PLAN  
 CATTAIL CREEK DRIVE PLAN & PROFILE

OWNER AND DEVELOPER  
 HOWARD COUNTY COUNTRY CLUB  
 10005 HICKORY RIDGE ROAD  
 COLUMBIA, MARYLAND 21044  
 DESIGNED BY: R. ISCOGS  
 DATE: 3/11/91

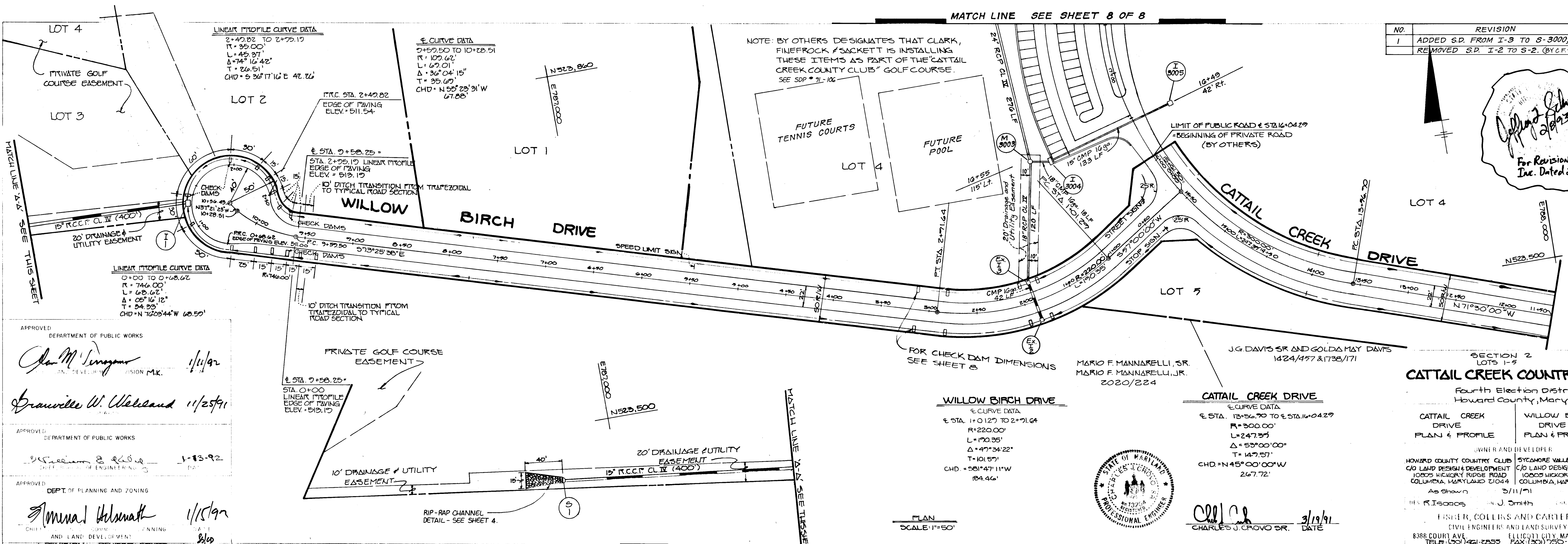
SYCAMORE VALLEY PARTNERSHIP  
 C/O LAND DESIGN + DEVELOPMENT  
 10005 HICKORY RIDGE ROAD  
 COLUMBIA, MARYLAND 21044  
 DESIGNED BY: Z. B. R. ISCOGS  
 DATE: 3/11/91

CHARLES J. COLLINS AND CARTER, INC.  
 CIVIL ENGINEERS AND LAND SURVEYORS  
 8388 COURT AVE. ELLICOTT CITY, MARYLAND 21103

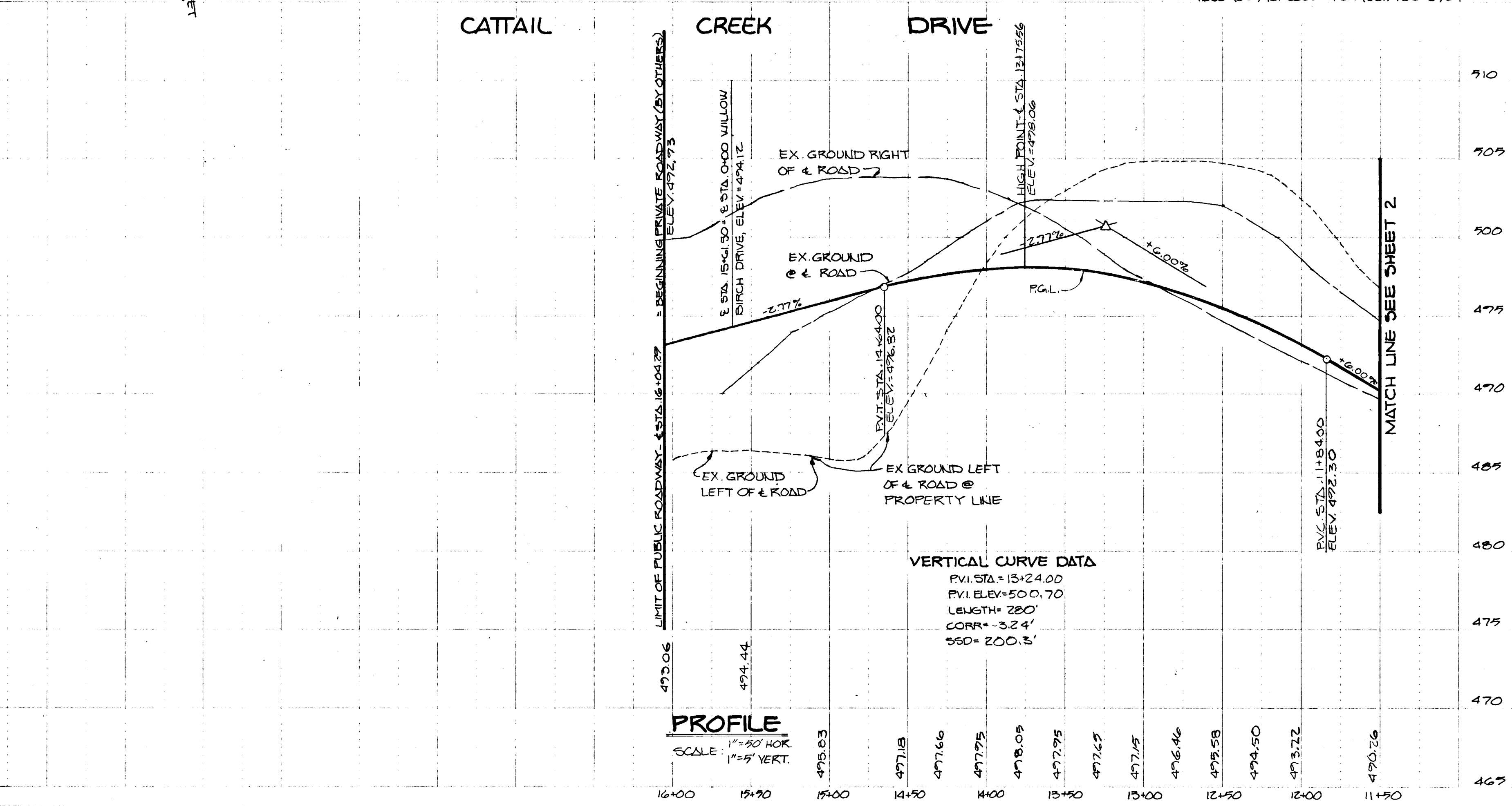
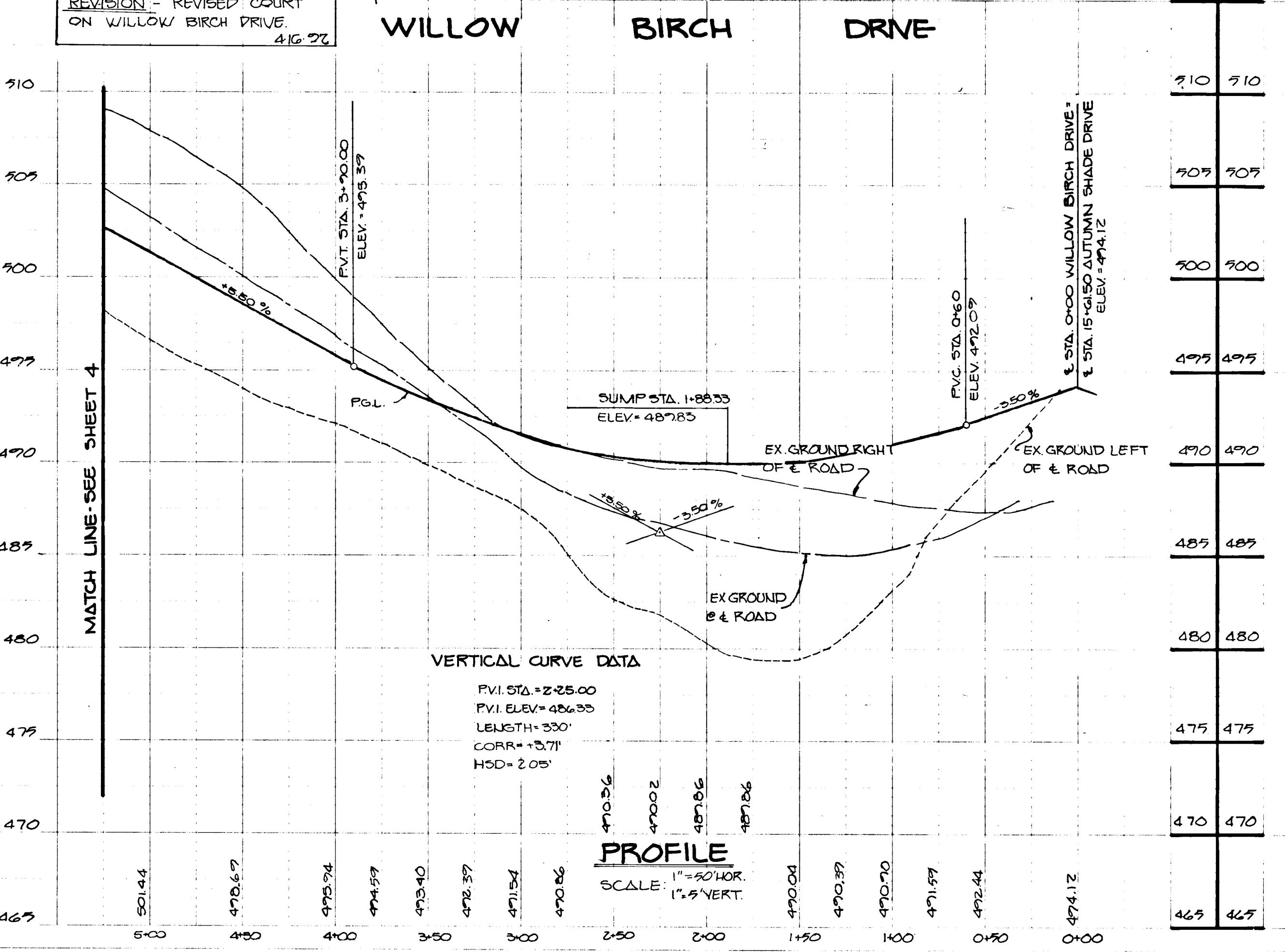
MATCH LINE SEE SHEET 8 OF 8

NO.	REVISION	DATE
1	ADDED S.D. FROM I-3 TO S-3000.	Feb. 8
	REMOVED S.D. I-2 TO S-2. (BY C.F. & S., INC.)	1993

*Jeffrey J. Schmitt*  
 For Revision by C.F. & S., Inc. Dated 2/8/93

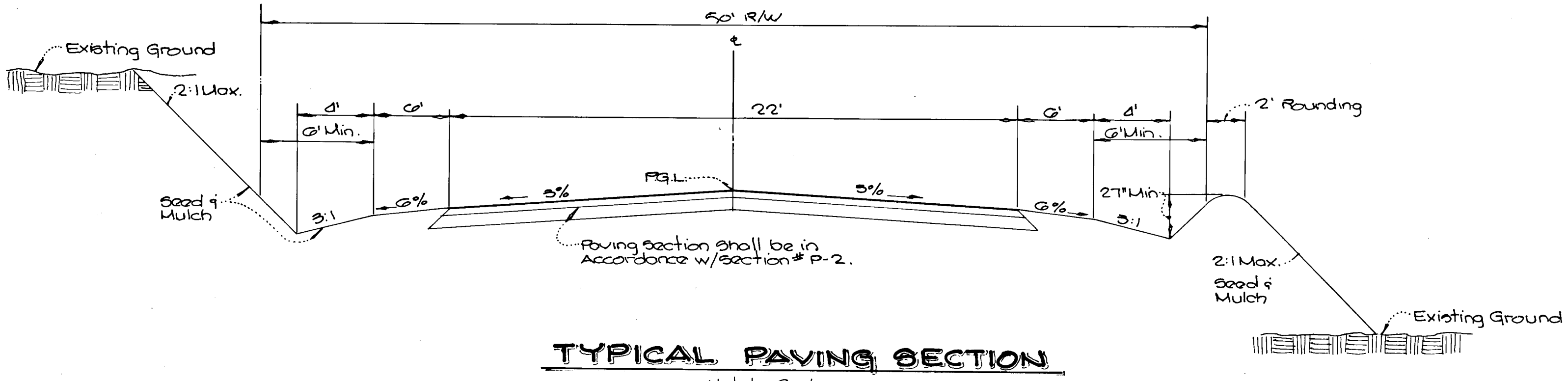


DEPARTMENT OF PUBLIC WORKS  
 APPROVED: *John M. Long* 1/11/92  
 DEPARTMENT OF PUBLIC WORKS  
 APPROVED: *William W. Weisand* 11/25/91  
 DEPT. OF PLANNING AND ZONING  
 APPROVED: *Anna M. Holmuth* 1/15/92  
 AND LAND DEVELOPMENT  
 APPROVED: *William W. Weisand* 8/10

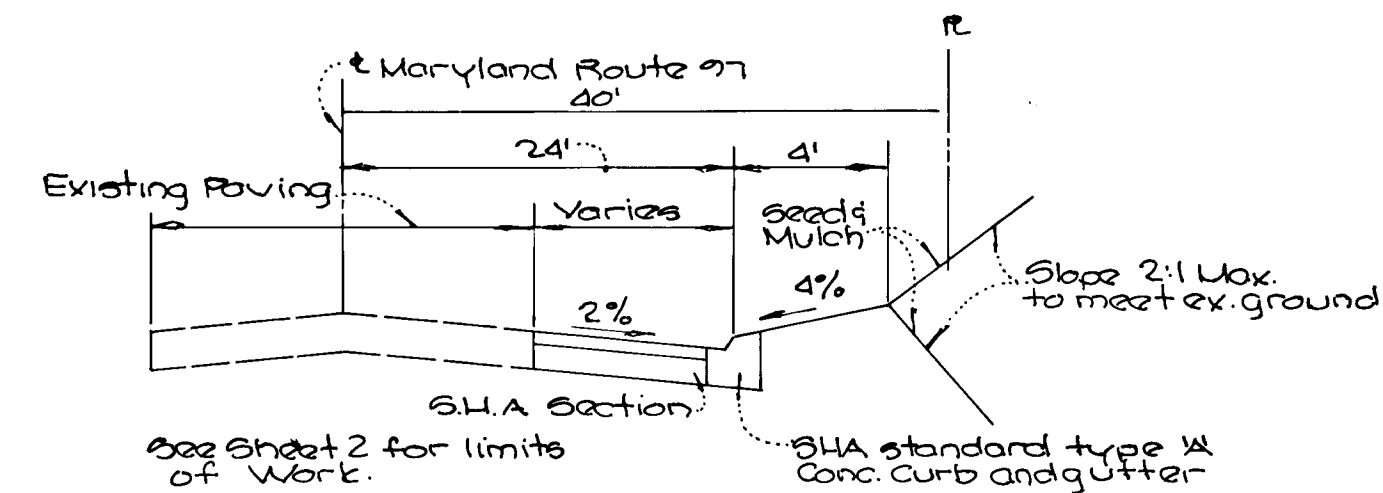


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CATTAIL CREEK Drive and Willow Birch Drive  
 Limit E. Sta. 0+00 to E. Sta. 1+00 Limit W. Sta. 0+00 to E. Sta. 1+71.40  
 Classification: Local Road Zoned: R  
 Design Speed = 30 U.P.H.



**TYPICAL PAVING SECTION**  
 Not to Scale



**TYPICAL WIDENING SECTION ALONG MARYLAND ROUTE 97**  
 Not to Scale

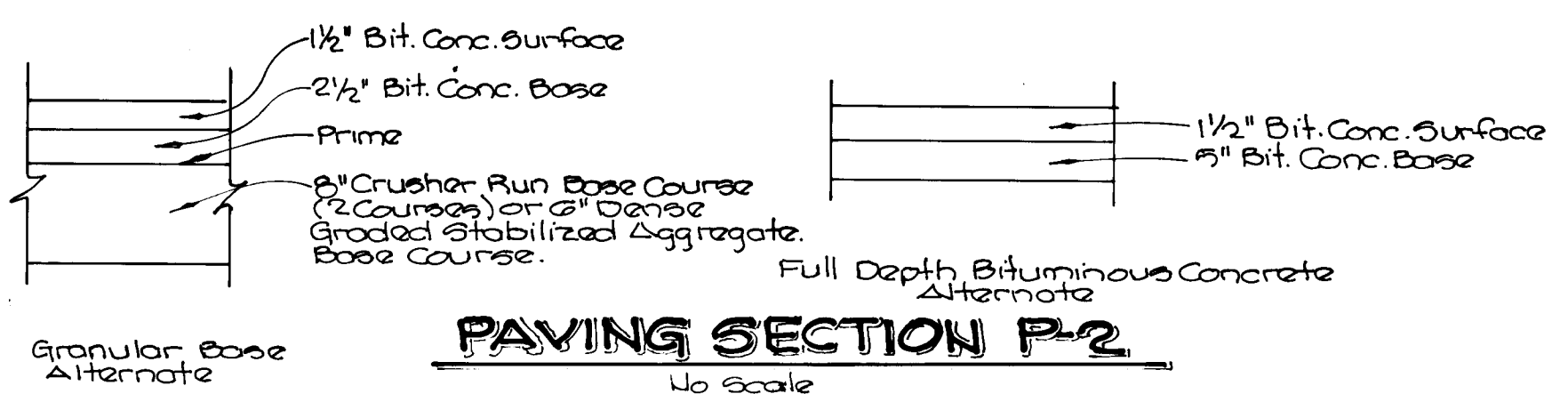
\* S.H.A. section shall be 3" (nominal) bituminous concrete surface in 2-1/2" layers utilizing a mix of 2-1/2" plus 4" (nominal) bituminous concrete base, plus 2" dense graded aggregate base.



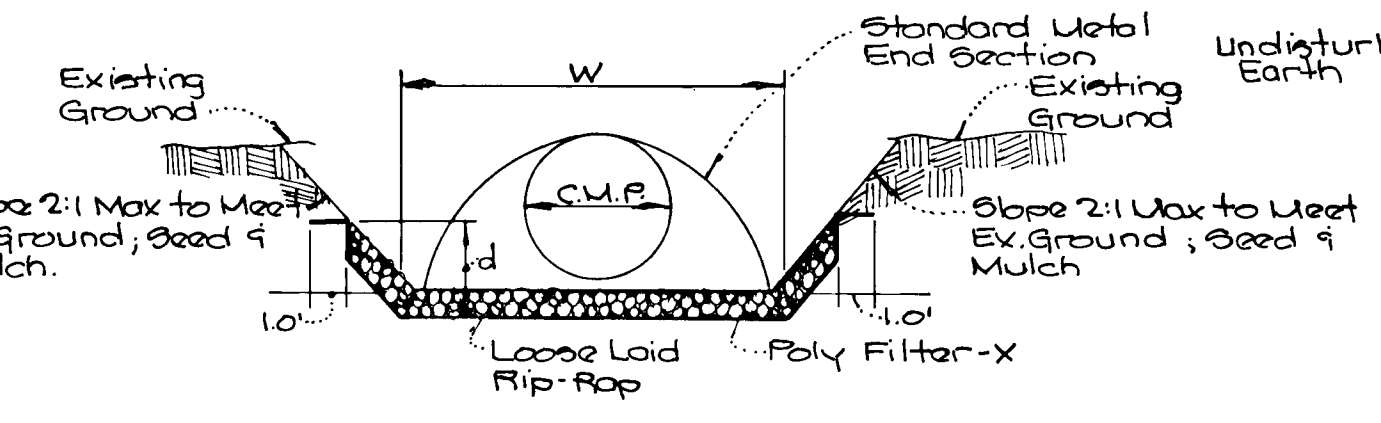
Charles J. Cravo, Sr. Date 3/19/92  
 SECTION 2  
 LOT 1-5

**CATTAIL CREEK COUNTRY CLUB**  
 Fourth Election District  
 Howard County, Maryland  
 WILLOW BIRCH DRIVE PROFILE  
 TYPICAL ROADWAY SECTIONS & DETAILS

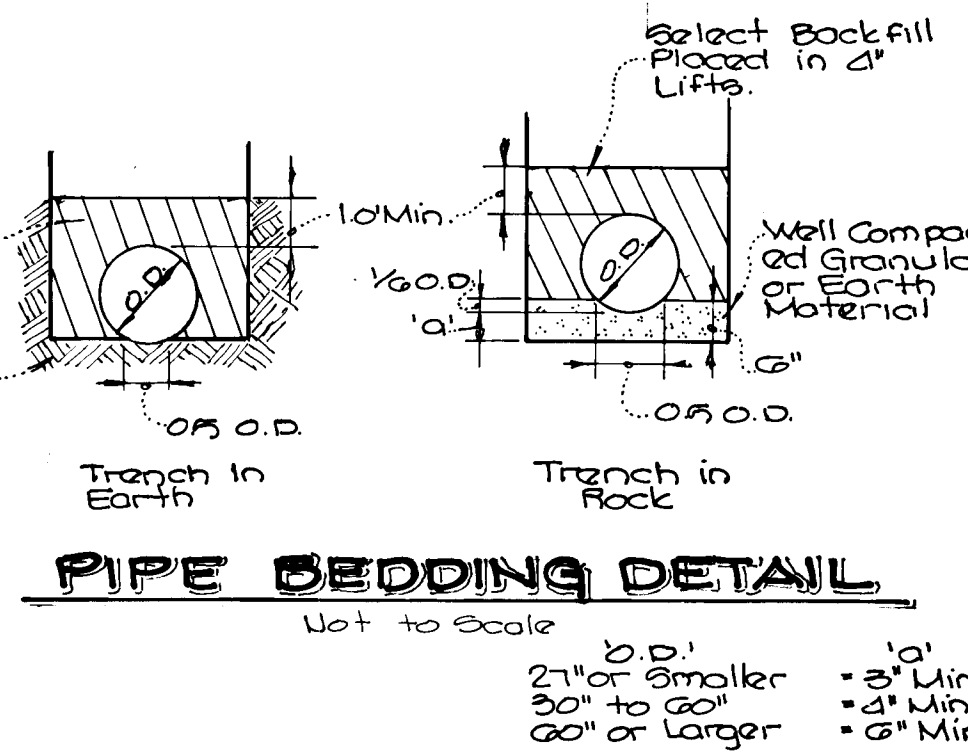
OWNER AND DEVELOPER  
 HOWARD COUNTY COUNTRY CLUB / SYCAMORE VALLEY PARTNERSHIP  
 C/O LAND DESIGN & DEVELOPMENT C/O LAND DESIGN & DEVELOPMENT  
 10505 HICKORY RIDGE ROAD 10505 HICKORY RIDGE ROAD  
 COLUMBIA, MARYLAND 21044 COLUMBIA, MARYLAND 21044  
 As shown 3/11/92 4 B  
 DR. R. Isaacs DR. J. Smith DR. R. Isaacs  
 FISHER, COLLINS AND CARTER, INC.  
 CIVIL ENGINEERS AND LAND SURVEYORS  
 8388 COURT AVE. ELLENDALE CITY, MARYLAND 21043  
 TEL: (301) 461-2855 FAX: (301) 750-3784



**PAVING SECTION P-2**  
 Not to Scale



**RIP-RAP CHANNEL DETAIL**  
 Not to Scale

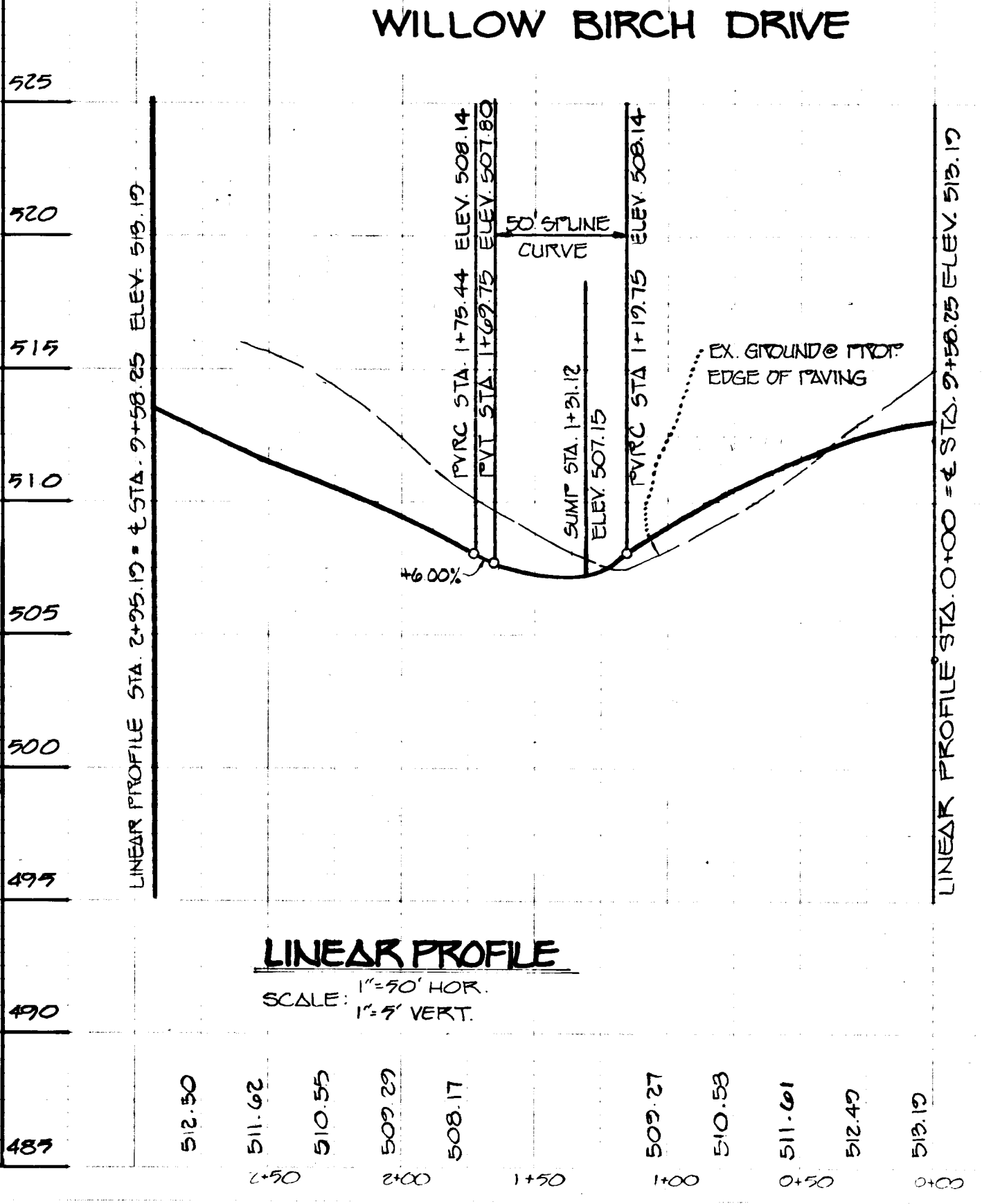


**PIPE BEDDING DETAIL**  
 Not to Scale

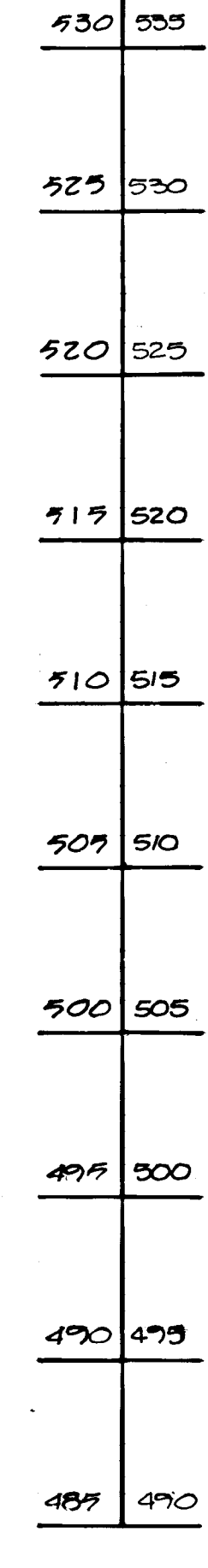
APPROVED DEPARTMENT OF PUBLIC WORKS  
 1/11/92  
 APPROVED DEPARTMENT OF PUBLIC WORKS  
 1-13-92  
 APPROVED Dept. OF PLANNING AND ZONING  
 1/15/92

Structure	A	P	R	R <sup>2</sup> /2	S	S <sup>1/2</sup>	n	q	V	d	w	Rip-Rap Size	a	b
S-1	286	631	0493	207889	0.005	0.071	0.04	4.01	1.55	0.59	3.67	4"	0'	0'
S-2	4.01	7.46	0.532	0.661	0.005	0.071	0.04	6.38	1.75	0.70	4.25	4"	0'	0'
S-4	768	1104	0.877	0.916	0.005	0.071	0.04	2083	2.42	1.20	5.67	6"	0'	14"

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**LINEAR PROFILE**  
 SCALE: 1"=30' HOR.  
 1"=2' VERT.



**PROFILE**  
 Scale: 1"=50' Hor.  
 1"=2' Vert.

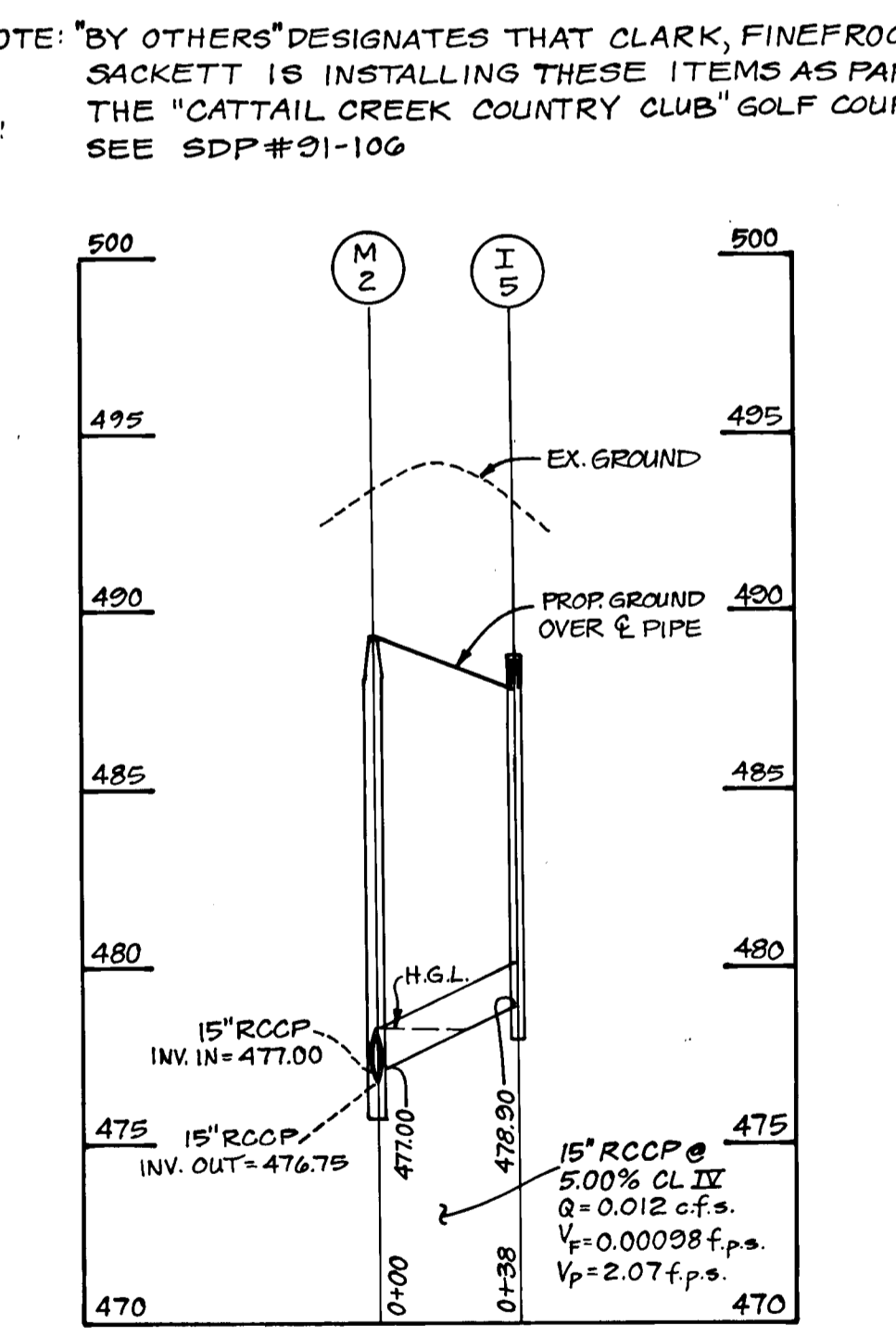
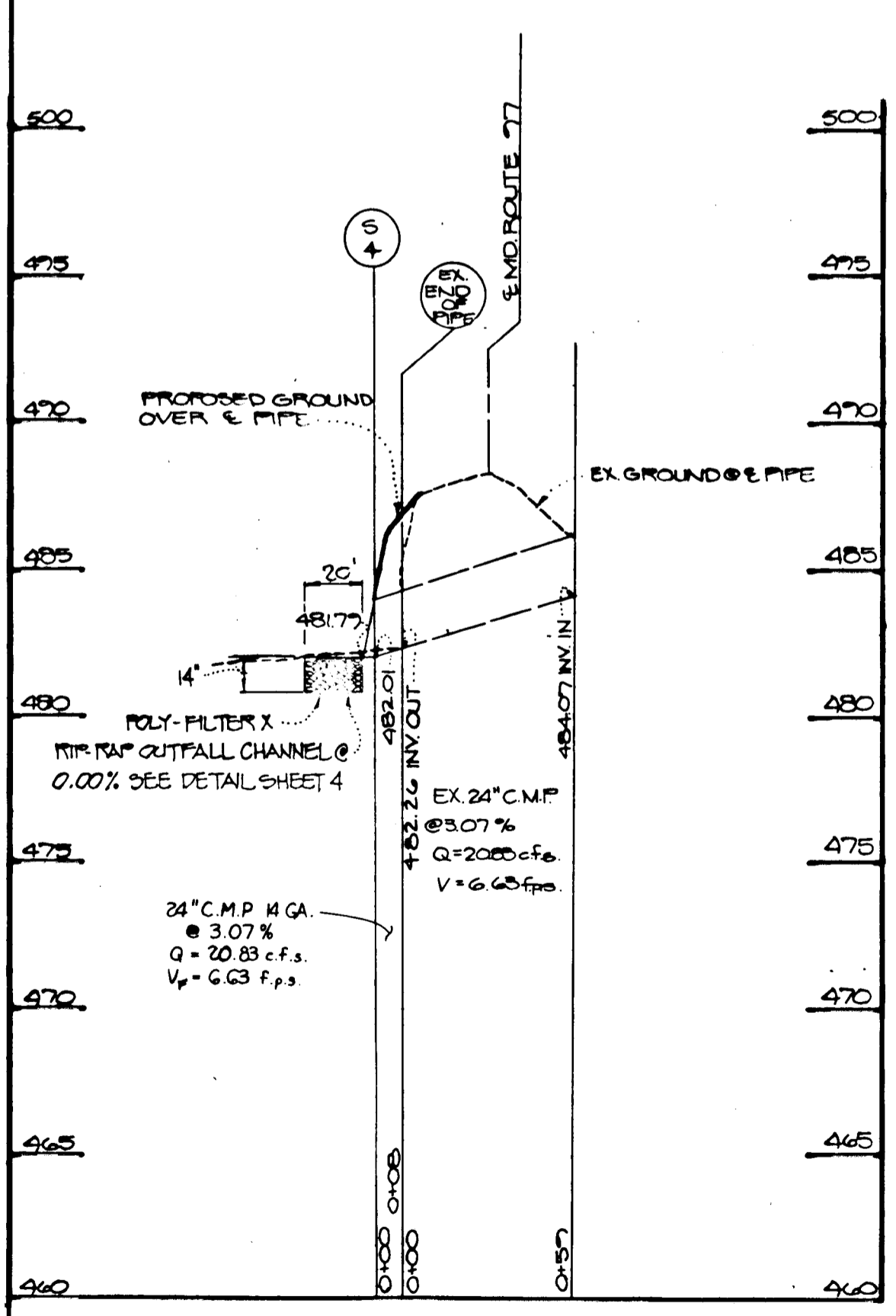
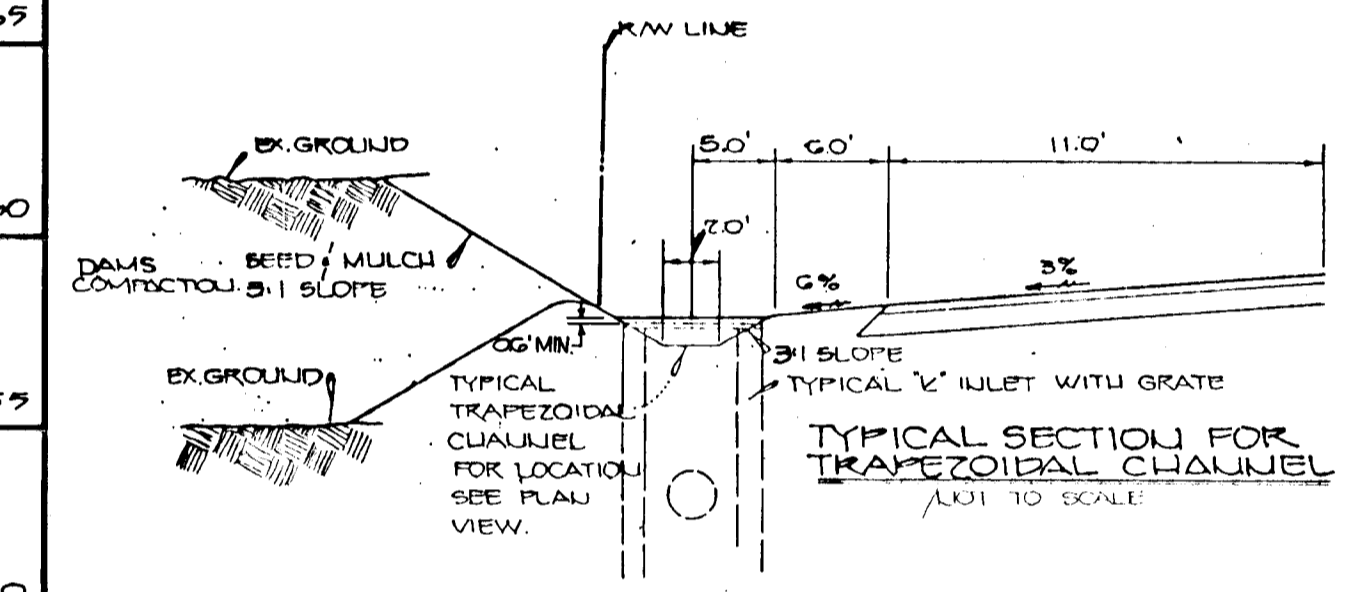
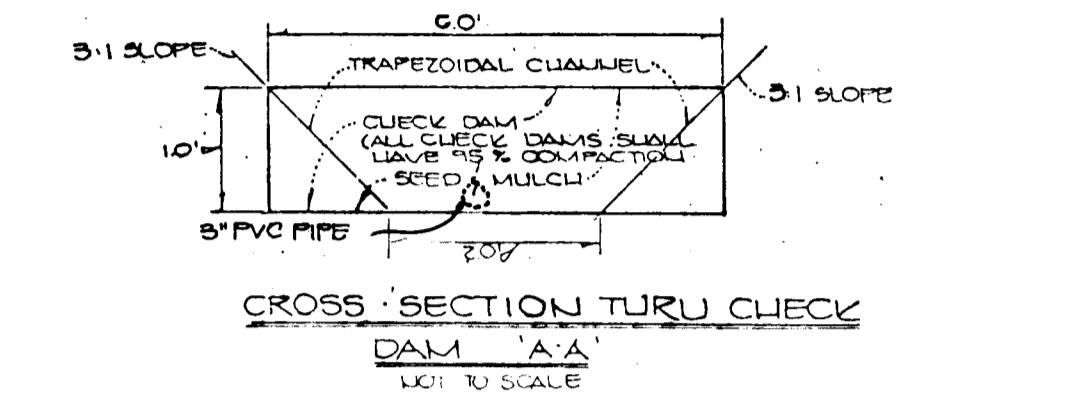
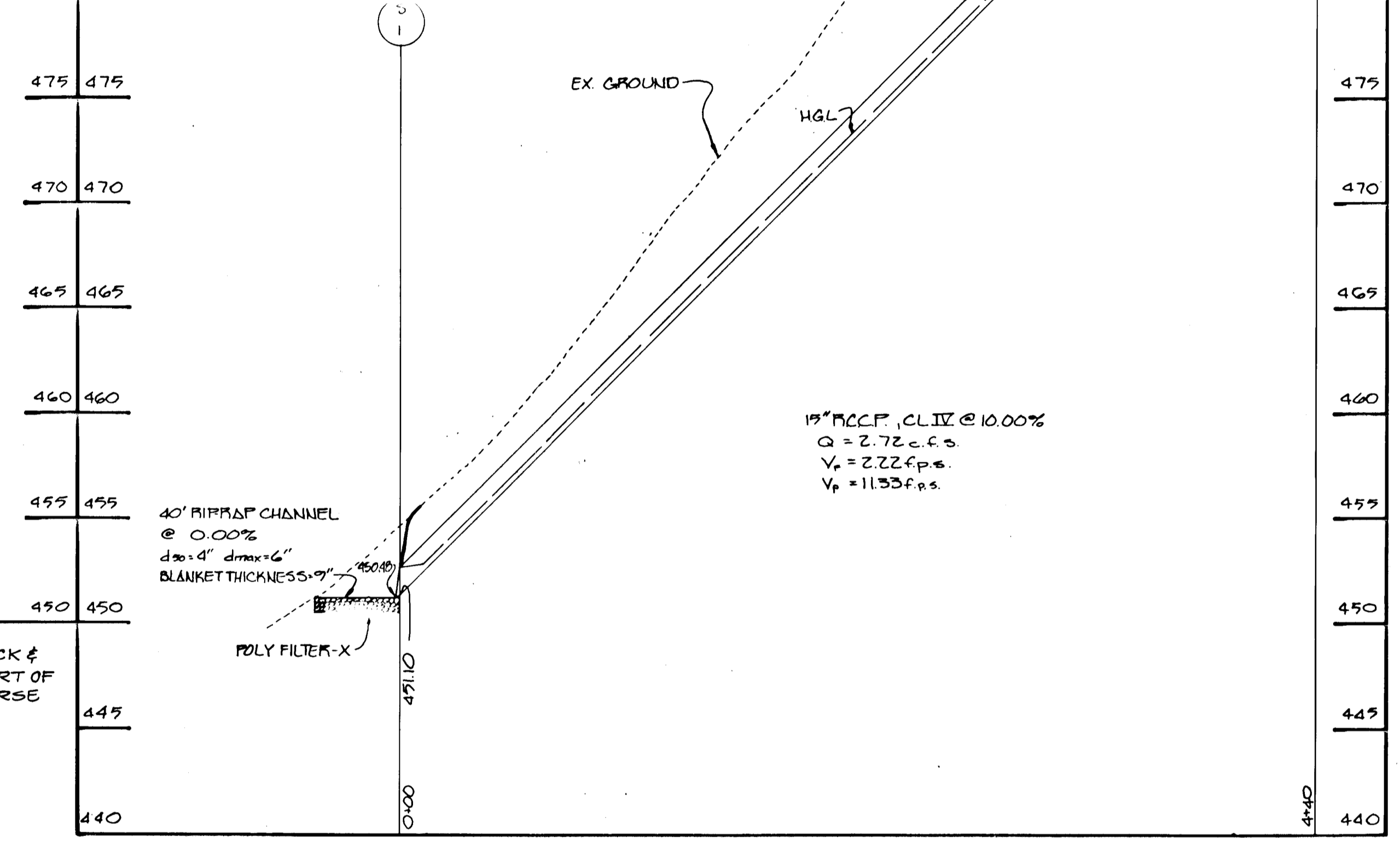
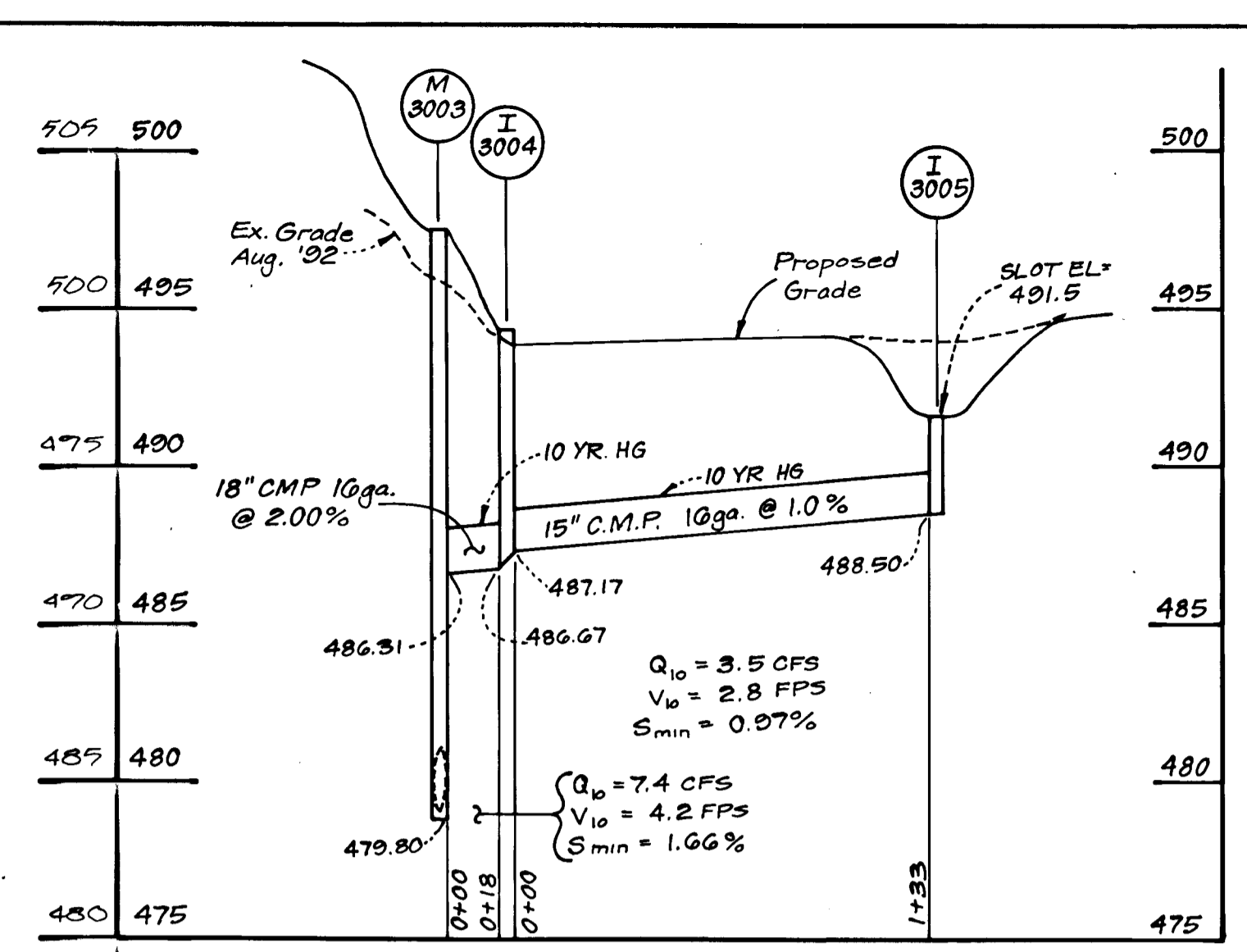
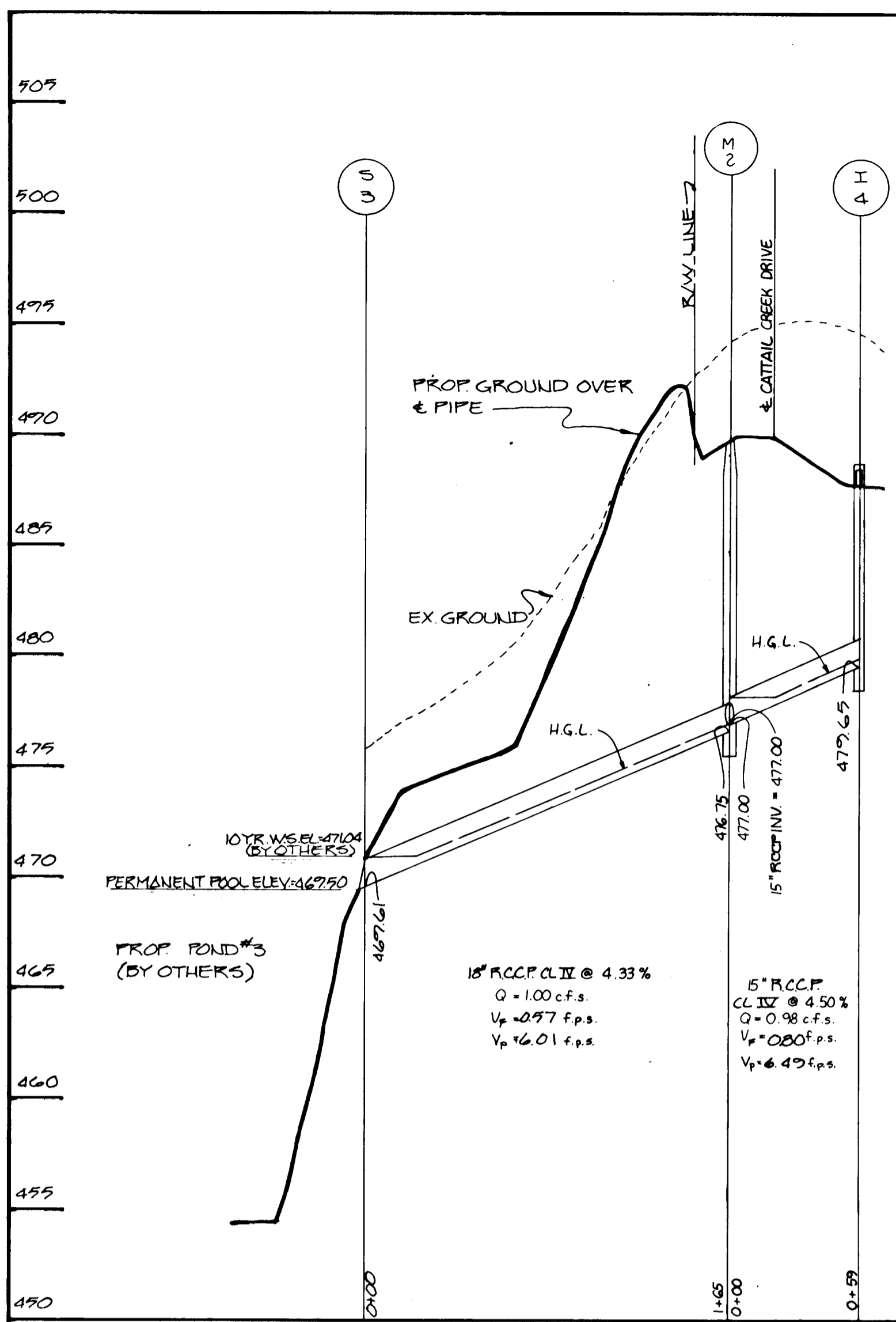
Number	Date	Revisions
1	4-16-92	REVISED PROFILES ON WILLOW BIRCH

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Murat Halimah* 8/15/92  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE 8/15/92

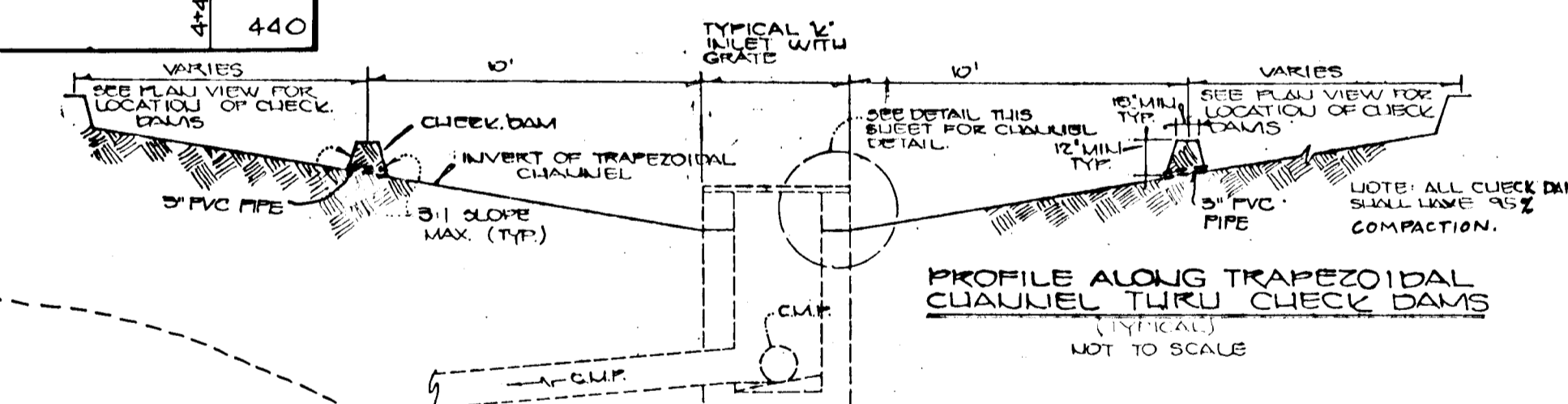
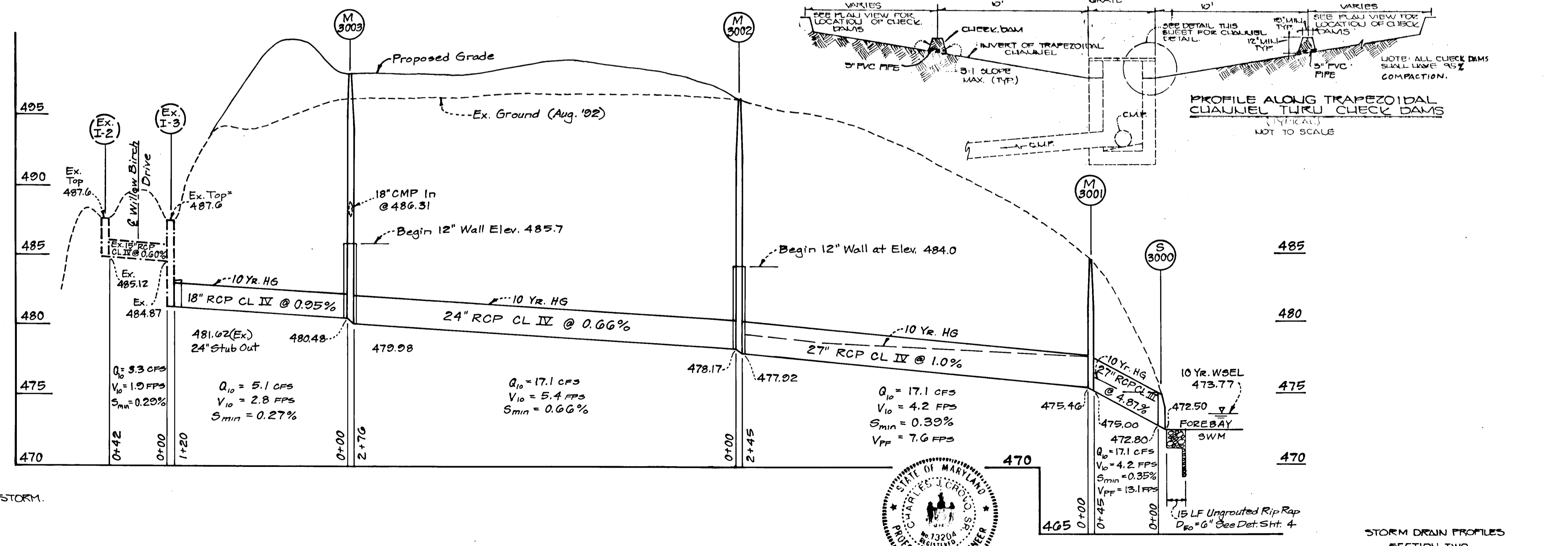
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Alan M. Teragami* 1/11/92  
 Chief, Land Development Division M.K. DATE 1/11/92

*Lawrence W. Weiland* 11/25/91  
 Chief, Bureau of Highways DATE 11/25/91

*Richard B. ...* 1-13-92  
 Chief, Bureau of Engineering DATE 1-13-92



NOTE:  
 1)  $V_p$  DENOTES PARTIAL FLOW VELOCITY  
 2)  $V_f$  DENOTES FULL FLOW VELOCITY  
 3) STORM DRAIN BEDDING TYPE CLASS "C" TO BE USED  
 4) HGL DENOTES HYDRAULIC GRADIENT LINE  
 5) STORM DRAIN PROFILES DESIGNED ON A 10 YEAR STORM.



1630

FISHER, COLLINS & CARTER, INC.  
 LAND SURVEYORS  
 SUITE 100, 9171 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21043  
 (301) 461-2855

For Revision by  
*Jeffrey Schaub*  
 C.F.S., Inc. Dated 3/19/93

NO.	REVISION	DATE
1	BY C.F.S., Inc. ADDED PROFILE I-2 THRU S-3000	Feb 8 1993
2	REVISION REVISOR PROFILE S-1 TO I-1 EXTENDED I-1 40'	4/15/92

OWNER  
 HOWARD COUNTY COUNTRY CLUB  
 LAND DESIGN AND DEVELOPMENT, INC.  
 10005 HICKORY RIDGE ROAD  
 COLUMBIA, MARYLAND 21044

DEVELOPER  
 SYCAMORE VALLEY PARTNERSHIP  
 C/D LAND DESIGN AND DEVELOPMENT, INC.  
 10005 HICKORY RIDGE ROAD  
 COLUMBIA, MARYLAND 21044



*Charles J. Crovo*  
 CHARLES J. CROVO, P.E.  
 3/19/93

CATTAIL CREEK COUNTRY CLUB  
 FOURTH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND  
 SCALE: AS SHOWN DATE: MAR 11, 1991  
 SHEET 5 OF 8

STRUCTURE SCHEDULE									
STRUCTURE	TOP ELEV.	INV. IN.	INV. OUT.	ROAD	ROAD STATION	OFFSET	TYPE	REMARKS	
I-1	504.69*	---	495.10	WILLOW BIRCH DR.	L.P. STA. 1+35.00	8' L.	*K' INLET	DWG S.D. -4.12	
EX. I-2	487.60*	---	486.12	WILLOW BIRCH DR.	1+88.33	21' L.	*K' INLET	DWG S.D. -4.12	
EX. I-3	487.60*	484.87	481.62	WILLOW BIRCH DR.	1+88.33	21' R.	*K' INLET	DWG S.D. -4.12	
I-4	487.154	---	479.65	CATTAIL CREEK DR.	0+55.00	22' L.	*K' INLET	DWG S.D. -4.12	
M-2	489.14	477.00	476.75	CATTAIL CREEK DR.	0+51.00	19' R.	STD. MH	DWG S.D. -4.12	
S-1	452.77	451.10	450.45	WILLOW BIRCH DR.	L.P. STA. 1+20.00	406' L.	CONCRETE END SECT.	DWG S.D. -5.51	
S-3	471.11	469.61	469.34	CATTAIL CREEK DR.	1+68.00	155' L.	CONCRETE END SECT.	DWG S.D. -5.51	
S-4	484.01	482.01	481.79	MD. ROUTE 97	4+38.00	39' L.	STD. METAL END SECT.	DWG S.D. -5.61	
I-5	487.15*	---	478.90	CATTAIL CREEK DR.	0+55.00	22' R.	*K' INLET	DWG S.D. -4.12	

\* PENOTES THROUGH ELEVATION

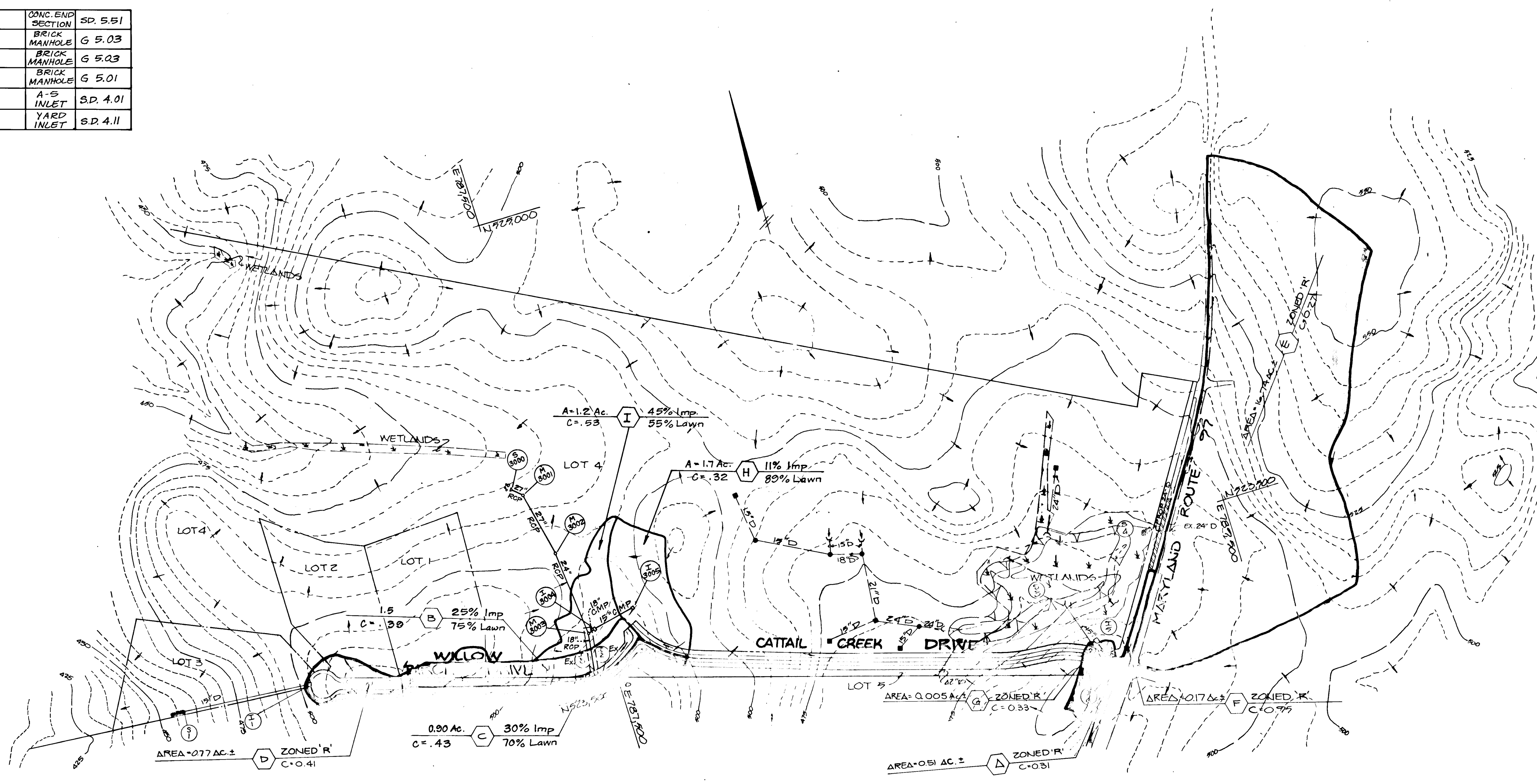
S-3000	---	472.80	472.50	See Plan View for Location	CONC. END SECTION	SD. 5.51
M-3001	484.5	475.46	475.00	"	BRICK MANHOLE	G 5.03
M-3002	486.0	478.17	477.92	"	BRICK MANHOLE	G 5.03
M-3003	497.5	480.31	479.82	"	BRICK MANHOLE	G 5.01
I-3004	495.14	487.17	486.67	"	A-S INLET	S.D. 4.01
I-3005	491.50	---	488.50	"	YARD INLET	S.D. 4.11

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Edward H. Hume* DATE 1/12/92  
 DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*William J. Hume* DATE 1-12-92  
 CHIEF, BUREAU OF ENGINEERING

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Shawville W. Walsand* DATE 1/12/92  
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Alan M. Ferguson* DATE 1/11/92  
 CHIEF, LAND DEVELOPMENT DIVISION M.K.

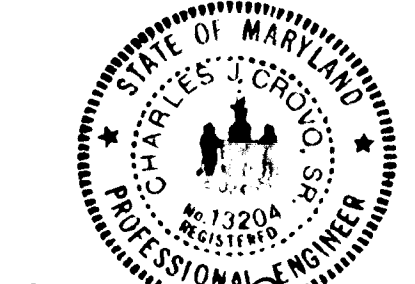


PLAN  
SCALE 1"=20'

LEGEND

- = PROPOSED INLET (BY OTHERS)
- = PROPOSED PIPE (BY OTHERS)
- = PROPOSED MANHOLE (BY OTHERS)
- = PROPOSED INLET UNDER THIS CONTRACT
- = PROPOSED PIPE UNDER THIS CONTRACT
- = PROPOSED MANHOLE UNDER THIS CONTRACT

NOTE: BY OTHERS DESIGNATES THAT CLARK, FINEFROCK & SACKETT IS INSTALLING THESE ITEMS AS PART OF THE CATTAIL CREEK COUNTY CLUB'S GOLF COURSE. SEE SDP#91-106



*Charles J. Crovo* 3/11/92  
 CHARLES J. CROVO, SR. DATE

DRAINAGE AREA MAP  
SECTION TWO  
CATTAIL CREEK COUNTRY CLUB

LOTS 1-5  
FOURTH ELECTION DISTRICT  
HOWARD COUNTY MARYLAND  
SCALE: AS SHOWN DATE: MAR. 11, 1991  
SHEET 6 OF 8

OWNER  
HOWARD COUNTY COUNTRY CLUB  
C/O LAND DESIGN AND DEVELOPMENT, INC.  
10005 HICKORY RIDGE ROAD  
COLUMBIA, MARYLAND 21044

DEVELOPER  
SYCAMORE VALLEY PARTNERSHIP  
C/O LAND DESIGN AND DEVELOPMENT, INC.  
10005 HICKORY RIDGE ROAD  
COLUMBIA, MARYLAND 21044

NUM.	DATE	DESCRIPTION
2	FEB 8, 1993	ADD S.D. STR. I-3 TO S-3000 CORRECTED STR. SCH. TO INCLUDE THEM ADDED D.D. FOR STR. I-3 TO S-3000 BY C.F.S., INC.
1	4/16/92	REVISED LOT LINE AND STRUCT. SCH.

*For Revision by C.F.S., Inc. Dated 3/8/93*

FISHER, COLLINS & CARTER, INC.  
CONSULTING ENGINEERS AND LAND SURVEYORS  
SUITE 100, 9171 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21043  
TELEPHONE: (301) 461-2855

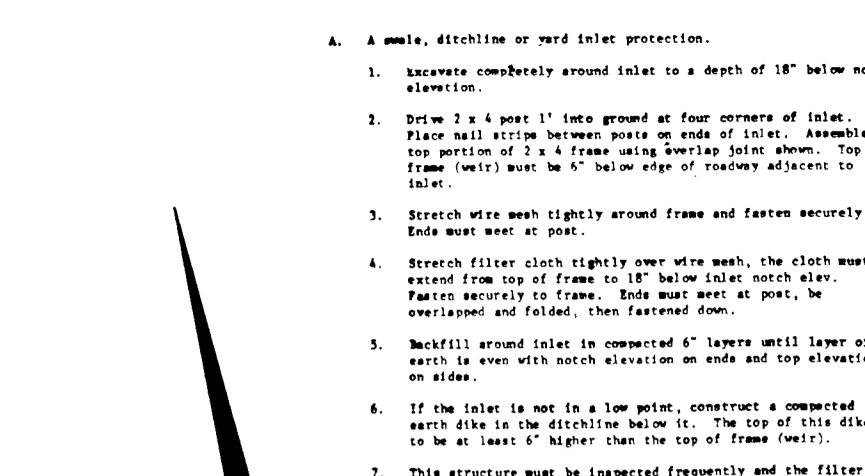
1630

**SEEDING CONTROL NOTES:**  
 1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTORS AND PERMITTED PRIOR TO THE START OF ANY CONSTRUCTION (CPR-2437).  
 2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.  
 3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERMITS UNDER STATE CONTROL STRUCTURES, DIVES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1. 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 DESIGN MANUAL, STORM DRAINAGE.  
 5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 52) AND TEMPORARY SEEDINGS (SEC. 53) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH 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 PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.  
 7. SITE ANALYSIS:  
 TOTAL AREA OF SITE 120.115 ACRES  
 AREA DISTURBED 4.210 ACRES  
 AREA TO BE ROOFED OR PAVED 2.533 ACRES  
 AREA TO BE VEGETATIVELY STABILIZED 2.533 ACRES  
 TOTAL CUT 7,600 CU. YDS.  
 TOTAL FILL 10,000 CU. YDS.  
 OFF-SITE WASTE/DRAINAGE LOCATION 2,000' TO NE  
 8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY WAITING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.  
 9) ADDITIONAL UTILITIES CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SOIL SEDIMENT CONTROL INSPECTOR.  
 10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMITTED EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE, GRADING, OTHER BUILDING OR GRAVING. INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

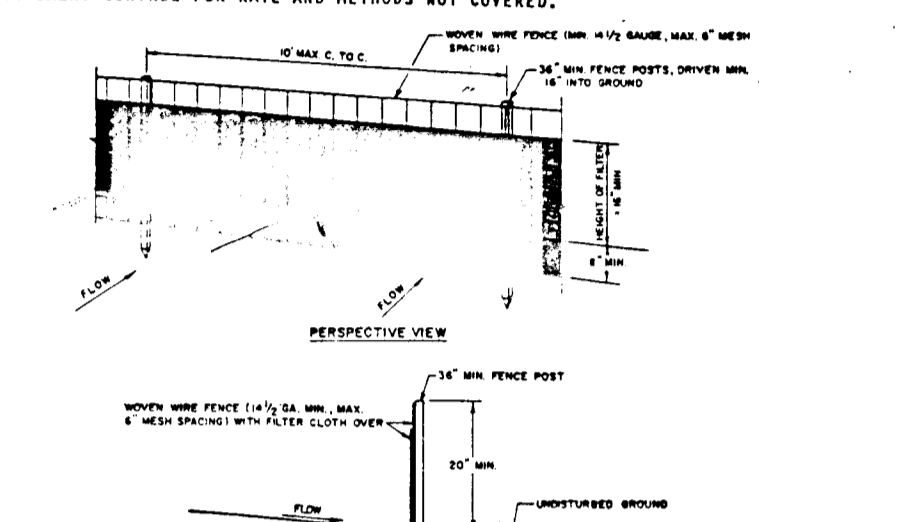
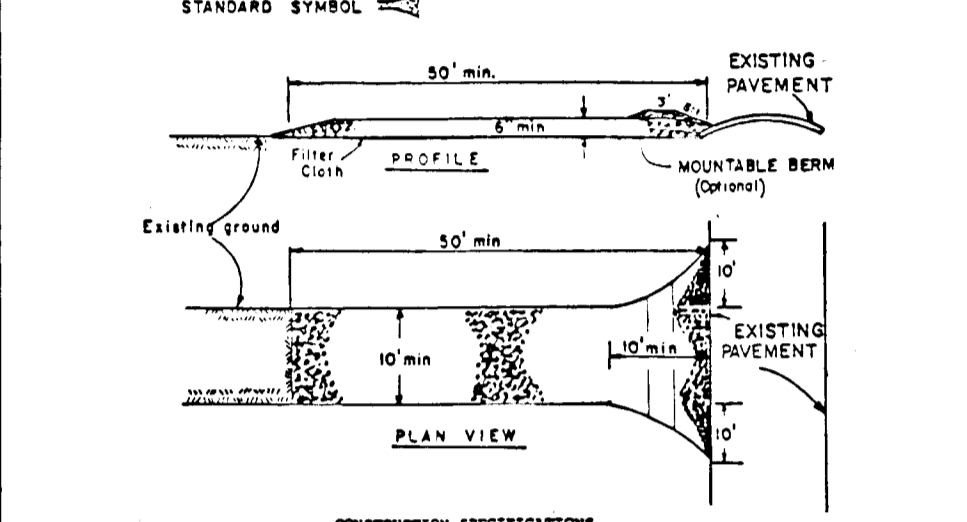
**PERMANENT SEEDING NOTES:**  
 APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-TERM VEGETATIVE COVER IS NEEDED.  
**SEEDING PREPARATION:** LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.  
 SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SOIL AMENDMENTS:  
 1) PREFERRED: APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) BEFORE SEEDING.  
 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. NARROW DR DISC INTO UPPER THREE-INCHES OF SOIL.  
**SEEDING:** FOR PERIODS MARCH 1 THRU APRIL 30 AND AUGUST 1 THRU OCTOBER 15, SEED WITH 80 LBS. PER ACRE (4 LBS./1000 SQ. FT.) OF BLEND (3) TALL FESCUE, PER FOR PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE, PER ACRE AND 7 LBS. PER ACRE OF ANNUAL RYE (1.2 LBS./1000 SQ. FT.) FOR PERIOD OCTOBER 16 THRU FEBRUARY 28. PROJECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OR USE MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNWOTED SMALL STRAW STRAW IMMEDIATELY BEFORE SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT OR FLAT AREAS, ON SLOPES 6 FT. OR HIGHER, USE 348 GALLONS 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.**

**TEMPORARY SEEDING NOTES:**  
 APPLY TO GRADED OR CLEARED AREAS SUBJECT TO BE REOCCUPIED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.  
**SEEDING PREPARATION:** LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.  
 SOIL AMENDMENTS: APPLY 800 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.)  
**SEEDING:** FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 1 THRU NOVEMBER 15, SEED WITH 2 1/2 TONS PER ACRE OF ANNUAL RYE (1.2 LBS./1000 SQ. FT.) FOR PERIOD MAY 1 THRU AUGUST 31, SEED WITH 1 LB5 PER ACRE OF KEEPING COVERINGS (LSP-1) LSP-1000 SQ. FT.), FOR PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OR USE MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ. FT.) OF UNWOTED SMALL STRAW STRAW IMMEDIATELY BEFORE SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT OR FLAT AREAS, ON SLOPES, 6 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.**

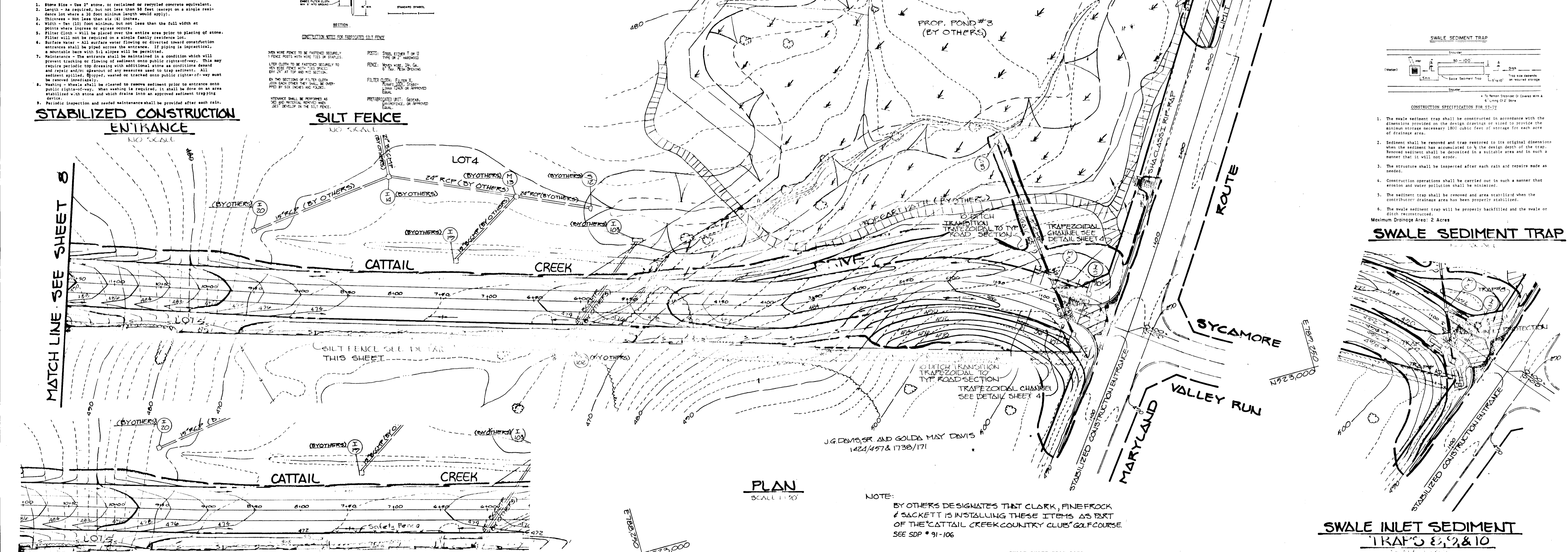
**CONSTRUCTION SEQUENCE**  
 1. OBTAIN GRADING PERMIT.  
 2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND SILT FENCE AS SHOWN ON PLAN.  
 3. CONSTRUCT SEDIMENT TRAPS AS SHOWN, STABILIZE WITH TEMPORARY SEEDING.  
 4. CONSTRUCT STORM DRAIN SYSTEM.  
 5. THE CONTRACTOR SHALL PLACE SILT FENCE DOWNGRADE OF ANY DISTURBED AREA DURING CONSTRUCTION OF THE STORM DRAIN SYSTEM AND CHANNEL CONSTRUCTION ALONG MARYLAND ROUTE 97.  
 6. GRADE ROADS TO SUBGRADE.  
 7. BEGIN BUILDING CONSTRUCTION. INSTALL BASE COURSE.  
 8. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT TRAPS WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED.  
 9. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT TRAPS AND SEDIMENT CONTROL STRUCTURES SHOWN HEREON. AFTER EACH RAINFALL AND ON A DAILY BASIS.  
 10. THE SEDIMENT TRAPS SHALL BE DETERMINED BY PUMPING. THE SEDIMENT FROM THE TRAPS SHALL BE PLACED UP-GRADE FROM THE SEDIMENT TRAPS IN SUCH A MANNER AS NOT TO INTERFERE WITH CONSTRUCTION OPERATIONS OR CAUSE EROSION DOWNGRADE FROM THE SEDIMENT TRAPS.  
 11. REMOVE SEDIMENT FROM ROADS AND DRESS STONE CONSTRUCTION ENTRANCE AS REQUIRED.  
 12. REMOVE INLET PROTECTION DEVICES AND FLUSH STORM DRAIN SYSTEM TO REMOVE ANY TRAPPED SEDIMENT. INSTALL RIP-RAP ARROWS.  
 13. REMOVE STONE CONSTRUCTION ENTRANCE AND SILT FENCE. CLEAN BASE COURSE. APPLY TACK COAT TO BASE COURSE AND LAY SURFACE COURSE.  
 14. ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED WITH PERMANENT SEEDING MIXTURE.  
 15. ALL SEDIMENT CONTROLS WILL BE REMOVED ONLY WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR.



**SWALE INLET PROTECTION**  
NO SCALE



**ENGINEER'S CERTIFICATE**  
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY CONSERVATION DISTRICT.  
 3/1/91 DATE  
**DEVELOPER'S CERTIFICATE**  
 I HEREBY CERTIFY THAT THIS PLAN OF 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 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 INSPECTION BY THE HOWARD COUNTY CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.  
 3/1/91 DATE  
**TECHNICAL REVIEW**  
 APPROVED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MISS. REVIEWED BY:  
 4/2/91 DATE  
 APPROVED BY:  
 4/20/91 DATE  
 APPROVED BY:  
 11/5/92 DATE  
 APPROVED BY:  
 1-13-92 DATE  
 APPROVED BY:  
 APPROVED BY:  
 1/1/92 DATE



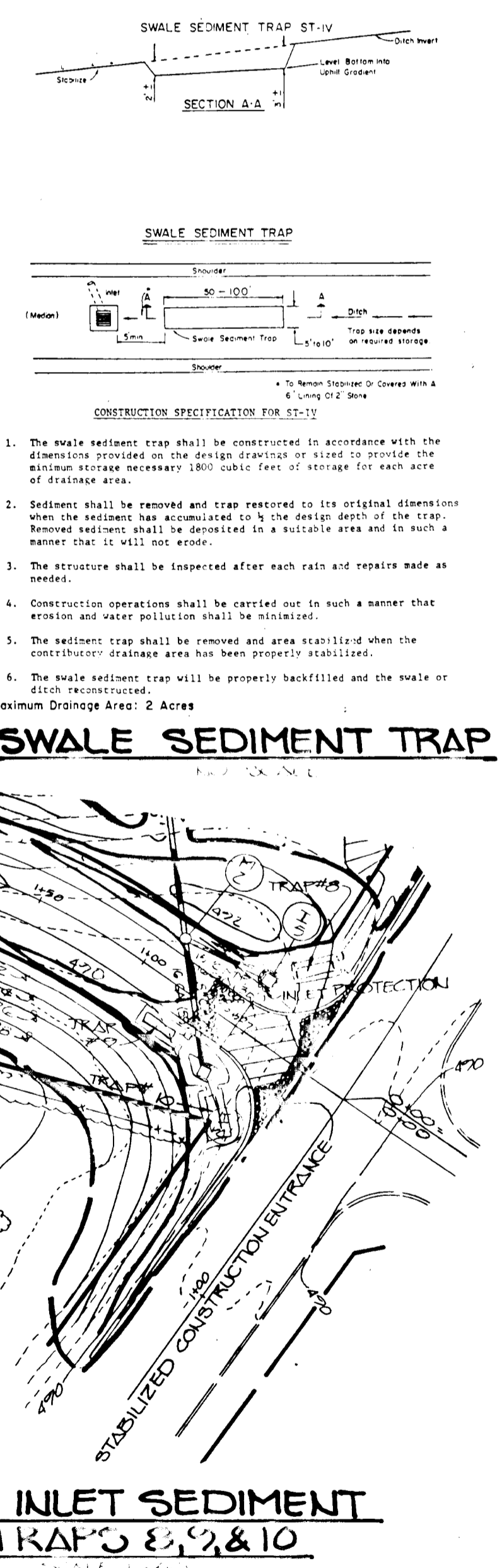
**TRAP # 7 (S.O.S.T.) ST-IV**  
 Drainage Area 0.75 Ac  
 Storage Required 1350 cu ft  
 Storage Provided 2348 cu ft  
 Weir Crest EL 469.0  
 Cleanout EL 464.0  
 Bottom EL 463.0  
 Depth 2'  
 Side Slope 1:1  
 Top Embankment 4070  
 Weir Length 4'  
 Bottom Dimensions 8x115'

**SEDIMENT TRAP # 7**  
SCALE: 1"=30'

**PLAN**  
SCALE: 1"=50'

**OWNER**  
HOWARD COUNTY COUNTRY CLUB  
C/O LAND DESIGN AND DEVELOPMENT, INC.  
10805 HICKORY RIDGE ROAD  
COLUMBIA, MARYLAND 21044

**DEVELOPER**  
SYCAMORE VALLEY PARTNERSHIP  
C/O LAND DESIGN AND DEVELOPMENT, INC.  
10805 HICKORY RIDGE ROAD  
COLUMBIA, MARYLAND 21044



**SWALE INLET TRAP DATA**

TRAP LOCATION	TRAP #	DRAINAGE AREA	VOLUME REQUIRED	VOLUME PROVIDED	TOP LENGTH	TOP WIDTH	DEPTH	BOTTOM ELEV.	WEIR ELEV.	CLEANOUT ELEVATION
1-5	8	0.10AC.	6.67CU.YDS.	8.30CU.YDS.	8'	20"	2'	485.50	487.50	486.50
1-4	9	0.21AC.	14.00CU.YDS.	14.22CU.YDS.	10'	20"	3'	485.50	488.50	487.00
1-4	10	0.21AC.	14.00CU.YDS.	14.22CU.YDS.	10'	20"	3'	485.50	488.50	487.00



**GRADING & SEDIMENT CONTROL PLAN**  
SECTION TWO  
**CATTAIL CREEK COUNTRY CLUB**  
FOURTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: MARCH 11, 1991  
SHEET 7 OF 8

**ENGINEER'S CERTIFICATE**  
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Charles J. Crow*  
 3/19/91  
 SIGNATURE OF ENGINEER DATE

**DEVELOPER'S CERTIFICATE**  
 I/WE 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 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

*James M. Helms*  
 2/19/91  
 SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*James M. Helms* 11/21/91

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*John R. Robinson* 11/20/91

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Anna J. Hilsenrath* 11/15/92  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Gregory W. Keller* 1-13-92  
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Colin M. Longman* 1/1/92  
 CHIEF, LAND DEVELOPMENT DIVISION DATE

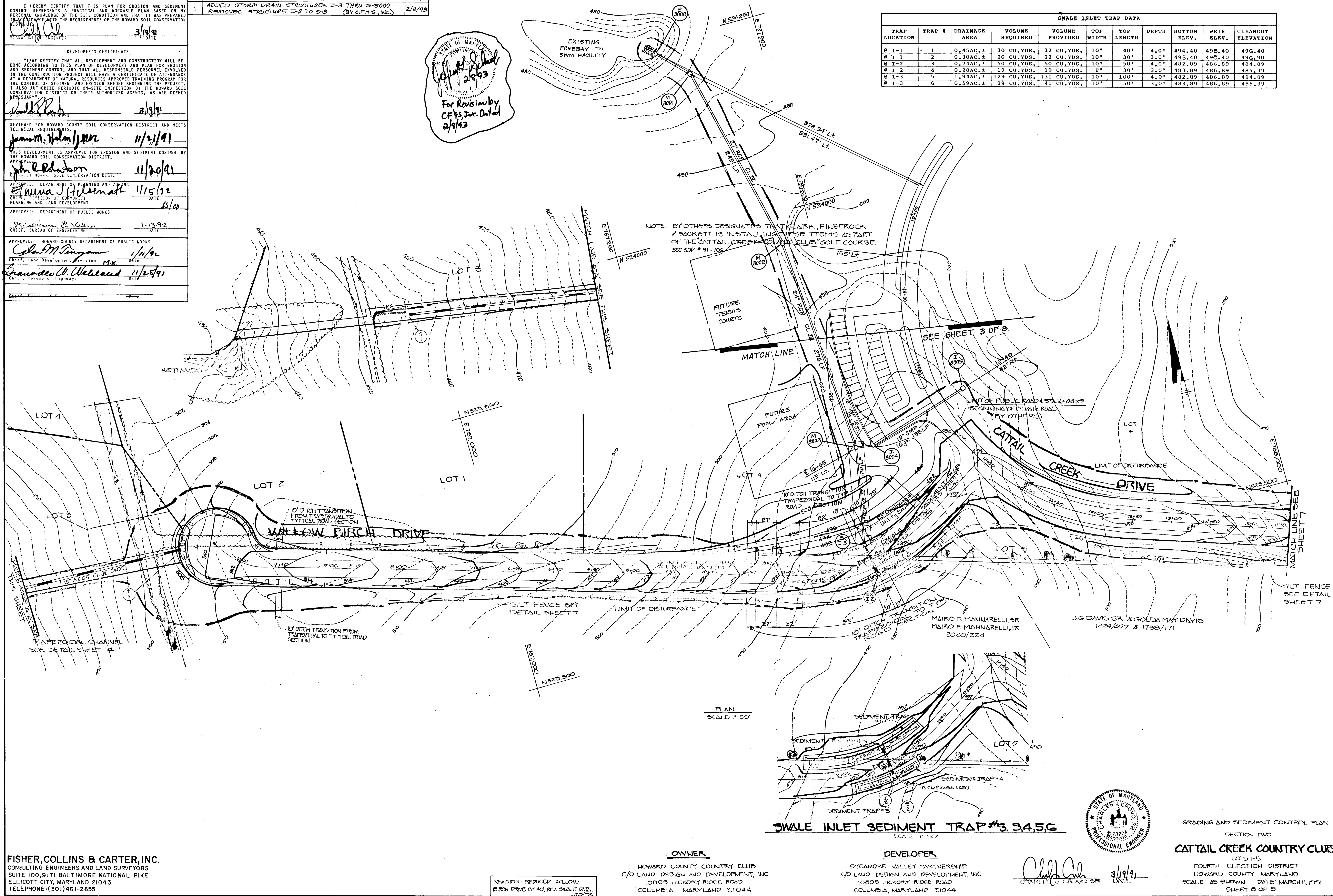
*Stanley W. Weiland* 11/25/91  
 CHIEF, BUREAU OF HIGHWAYS DATE

No. 1  
 REVISION  
 ADDED STORM DRAIN STRUCTURES I-3 THRU 5-3000  
 REMOVED STRUCTURE I-2 TO S-3 (BY C.F.S., INC.)  
 DATE 2/8/93

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
*Charles J. Crow*  
 21893  
 For Revision by  
 C.F.S., Inc. Dated  
 2/8/93

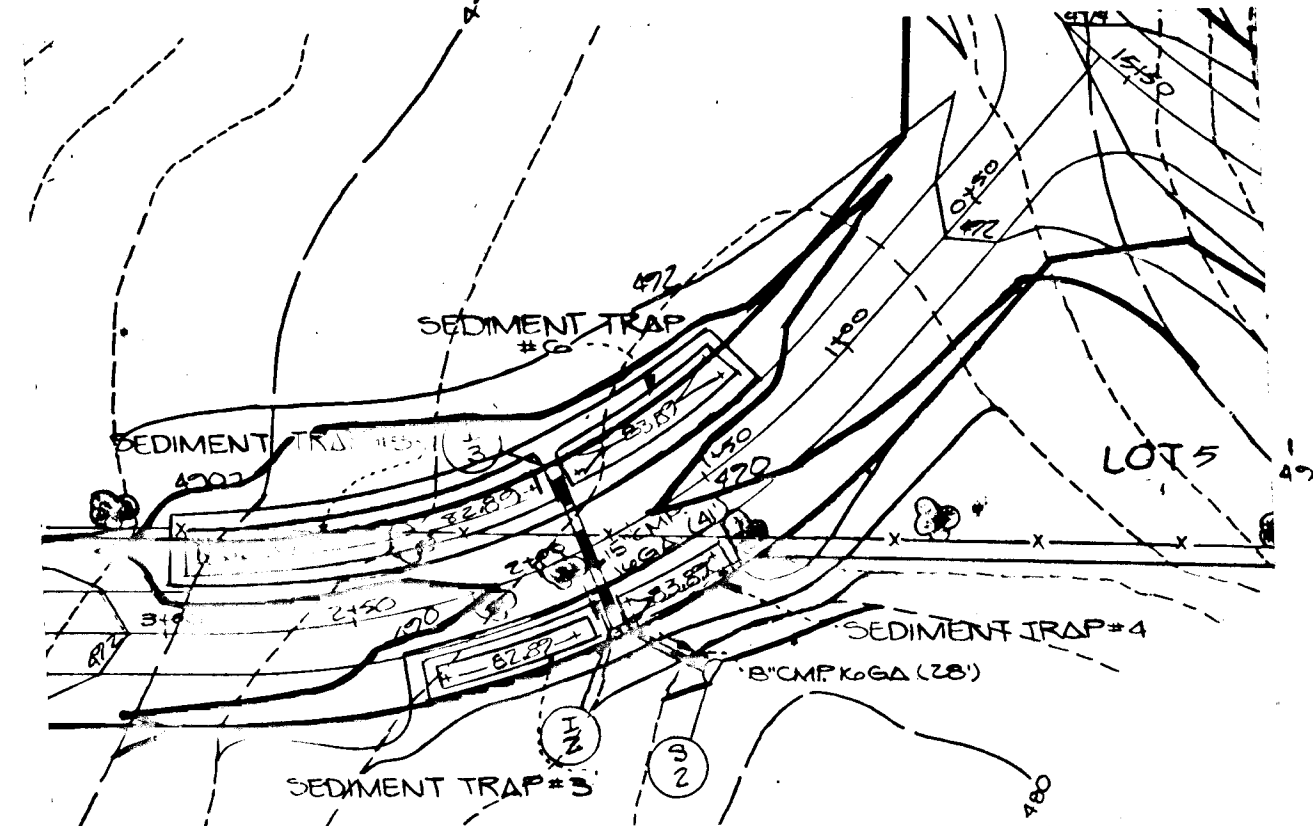
**SWALE INLET TRAP DATA**

TRAP LOCATION	TRAP #	DRAINAGE AREA	VOLUME REQUIRED	VOLUME PROVIDED	TOP WIDTH	TOP LENGTH	DEPTH	BOTTOM ELEV.	WEIR ELEV.	CLEANOUT ELEVATION
0 I-1	1	0.45AC.±	30 CU.YDS.	32 CU.YDS.	10"	40'	4.0'	494.40	495.40	496.40
0 I-1	2	0.30AC.±	20 CU.YDS.	22 CU.YDS.	10"	30'	3.0'	495.40	496.40	497.40
0 I-2	3	0.74AC.±	50 CU.YDS.	50 CU.YDS.	10"	50'	4.0'	482.89	486.89	484.89
0 I-2	4	0.28AC.±	19 CU.YDS.	19 CU.YDS.	8"	30'	3.0'	483.89	486.89	485.39
0 I-3	5	1.94AC.±	129 CU.YDS.	131 CU.YDS.	10"	100'	4.0'	482.89	486.89	484.89
0 I-3	6	0.59AC.±	39 CU.YDS.	41 CU.YDS.	10"	50'	3.0'	483.89	486.89	485.39



NOTE: BY OTHERS DESIGNATES THAT CLARK, FINECROCK / SACKETT IS INSTALLING THESE ITEMS AS PART OF THE CATTAIL CREEK GOLF COURSE. SEE SDP # 91-106.

PLAN SCALE 1"=50'



SWALE INLET SEDIMENT TRAP #3, 3A, 5, 6  
 SCALE 1"=50'



GRADING AND SEDIMENT CONTROL PLAN  
 SECTION TWO  
**CATTAIL CREEK COUNTRY CLUB**  
 LOTS 1-5  
 FOURTH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND  
 SCALE: AS SHOWN DATE: MARCH 11, 1991  
 SHEET 8 OF 8

**FISHER, COLLINS & CARTER, INC.**  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
 SUITE 100, 9171 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21043  
 TELEPHONE: (301) 461-2855

**OWNER**  
 HOWARD COUNTY COUNTRY CLUB  
 C/O LAND DESIGN AND DEVELOPMENT, INC.  
 10805 HICKORY RIDGE ROAD  
 COLUMBIA, MARYLAND 21044

**DEVELOPER**  
 SYCAMORE VALLEY PARTNERSHIP  
 C/O LAND DESIGN AND DEVELOPMENT, INC.  
 10805 HICKORY RIDGE ROAD  
 COLUMBIA, MARYLAND 21044

*Charles J. Crow* 3/19/91  
 CHARLES J. CROW SR. DATE

REVISION - REDUCED WILLOW DITCH DRIVE BY 40', REV. SWALE DATA 4/10/93

1630