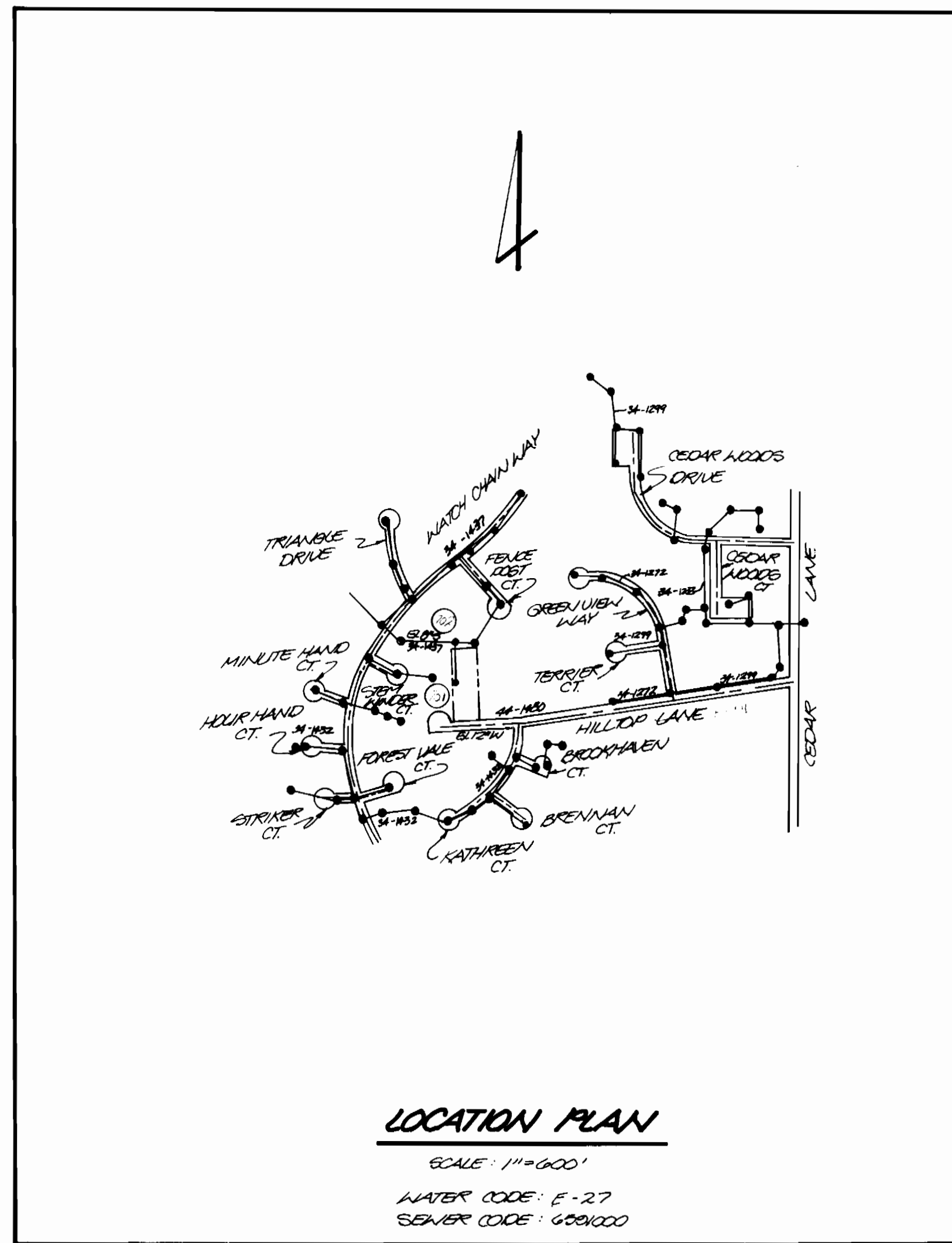


TYPE OF BUILDINGS	RESIDENTIAL
NUMBER OF LOTS	9
NUMBER OF SHC'S	4
NUMBER OF WHC'S	4
DRAINAGE AREA	MIDDLE RIVER

GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGED INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE INSPECTOR, AT THE CONTRACTORS EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATES COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6" CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. ANY COST INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING AT POLES SHALL BE INCLUDED IN UNIT PRICES. BID FOR EXCAVATION AND BACKFILL.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS USE HOWARD COUNTY STANDARD DETAILS.
- FOR MATERIAL AND CONSTRUCTION METHODS USE HOWARD COUNTY STANDARD SPECIFICATIONS, VOL. IV, 1980 AMENDMENTS.
- CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF (2) TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN THE VICINITY OF PROPOSED UTILITIES AT HIS OWN EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST (5) FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION: 331-5533
 - BALTO GAS & ELECTRIC CO. - UNDERGROUND GAS DISTRIBUTION CUSTOMER SERVICE: 605-0123
 - ENGINEERING - DAMAGE CONTROL: 234-5621
 - MISS UTILITY: 1-537-0100
 - CHESAPEAKE & POTOMAC (C.P.) TELEPHONE CO.: 725-2276
 - AMERICAN TELEPHONE & TELEGRAPH - CABLE LOCATION DIVISION: 353-3553
 - COLONIAL PIPELINE CO.: 781-9641
 - BUREAU OF UTILITIES HOWARD COUNTY: 222-2366
- TREES ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS, AND ROOTS ALONG LINE OF EXCAVATION AS DIRECTED BY INSPECTOR. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EXCAVATION AND BACKFILL.
- PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION & MAINTENANCE OPERATIONS.
- ALL WATER MAINS TO BE D.I.P. CLASS 52, UNLESS OTHERWISE NOTED.
- TOP OF ALL WATER MAINS TO HAVE A MINIMUM OF 3 1/2" COVER, UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TREES SHALL BE STRAPPED TO TREES.
- BLOCK ALL FITTINGS WITH CONCRETE.
- BURY LINE ELEVATIONS ON FIRE HYDRANTS SHALL BE SET TO THE ELEVATIONS SHOWN ON THE DRAWINGS.
- ALL FIRE HYDRANTS SHALL BE STRAPPED & BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE HYDRANTS TO BE COMPACTED IN ACCORDANCE WITH SECTION 10.03.10.08 OF THE STANDARD SPECIFICATIONS.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR AN OUTSIDE METER SETTING.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.
- ALL SEWER MAINS SHALL BE C.S.P.X., V.C.P.X., PVC OR UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
- WATER MAIN & WATER HOUSE CONNECTION LINES MUST HAVE A MINIMUM OF ONE FOOT SEPARATION FROM THE SANITARY SEWER AND SEWER HOUSE CONNECTIONS AS THEY CROSS. EXCEPT AT CROSSINGS, WATER & SEWER LINES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 10'.
- ALL DIP FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATION C-153 DUCTILE IRON COMPACT FITTINGS, 3" THROUGH 12" FOR WATER AND OTHER LIQUIDS.



LOCATION PLAN
 SCALE: 1"=600'
 WATER CODE: F-27
 SEWER CODE: G09000

CEDAR ACRES
 CONTRACT NO. 34-1950-D
 HOWARD COUNTY, MARYLAND

NOTE: SEDIMENT CONTROL MEASURES FOR THIS CONTRACT SHALL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 210 OF THE SPECIFICATIONS AND WITH DRAWINGS 2 & 3 OF THIS CONTRACT, F-89-28.

DEVELOPER'S CERTIFICATE:

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 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 OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY.

DEVELOPER: _____ DATE: _____

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

[Signature] 11-6-89
 SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED SOIL EROSION / SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 4/6/89
 SOIL CONSERVATION DISTRICT DATE

ITEM	ESTIMD	AS-BUILT	MATERIAL / SUPPLIER
3/4" W.D.	35 LF	28 LF	CAMBRIDGE ILL
MANHOLES	3	5	MAYER BOLS, INC
1" W.H.C.	105 LF	95 LF	ATLANTIC CONCRETE PRODUCTS
4" S.H.C.	70 LF	69 LF	CAMBRIDGE ILL
SEWER MAIN	283 LF	283 LF	NATIONAL
			NATIONAL

DEPARTMENT OF PUBLIC WORKS

[Signature] 11/9/89
 DIRECTOR OF PUBLIC WORKS DATE

[Signature] 11/8/89
 CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 11-2-89
 CHIEF, BUREAU OF UTILITIES DATE

[Signature] 11/8/89
 CHIEF, LAND DEVELOPMENT DIV DATE

BOENDER ASSOCIATES, INC.
 ENGINEERS PLANNERS SURVEYORS
 3565 ELLICOTT MILLS DR
 ELLICOTT CITY, MARYLAND 21043
 (301) 465-7777



DES: _____

DRN: D. WELSH

CHK: _____

DATE: 10-18-89

BY NO. REVISION DATE

TITLE SHEET

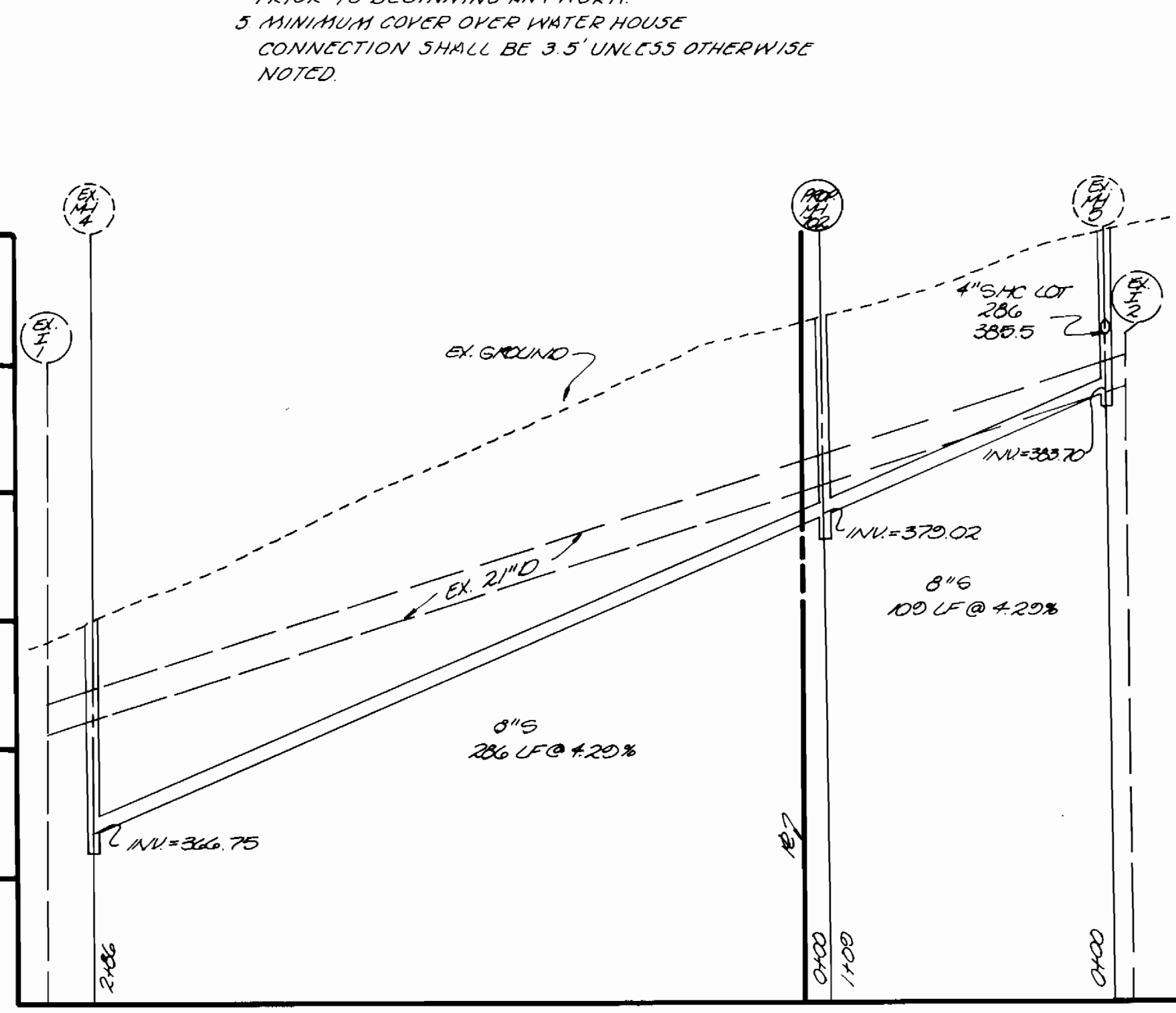
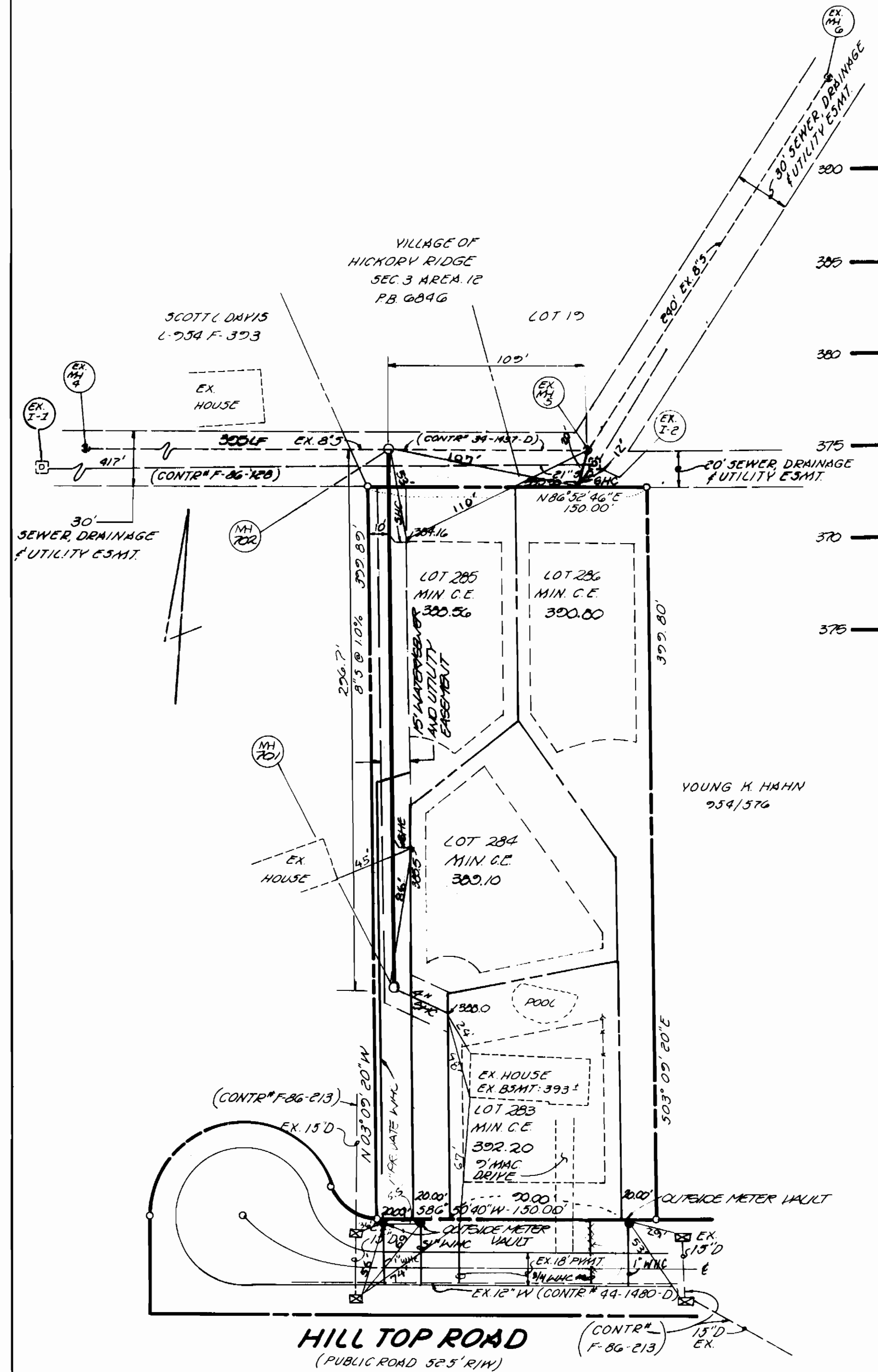
CEDAR ACRES LOTS 283-286
 5TH ELECTION DISTRICT
 CONTRACT NO. 34-1950-D
 F-89-28

SCALE
1"=600'

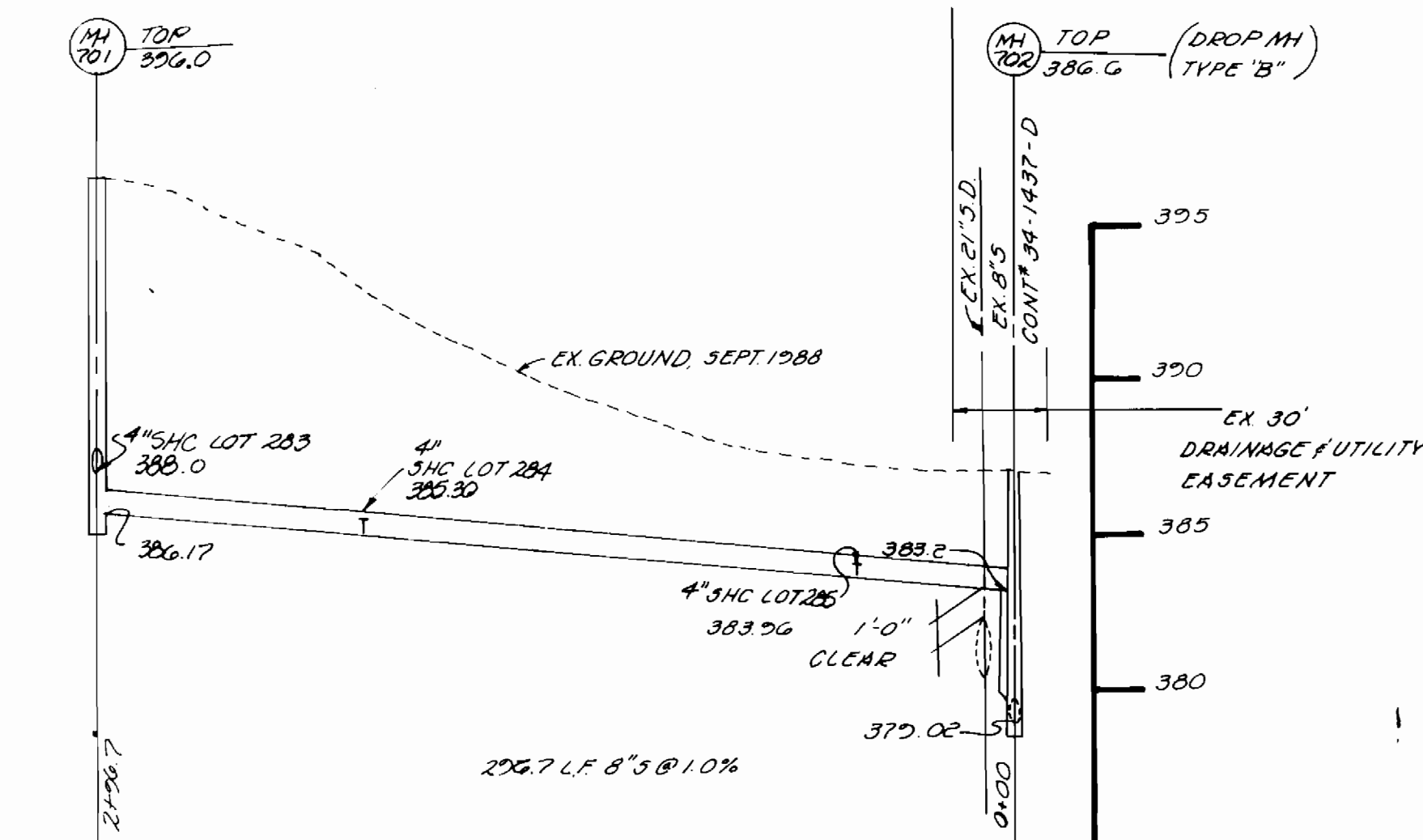
SHEET
1 OF 3

LOCATION SCHEDULE				LOT	INV @ MAIN	INV @ R/EASEMENT	MIN C.E.	HO CO STD
MH #	LOCATION	HO CO STD		283	388.00	388.60	388.2	5.2.11
MH-702	AS DIMENSIONED	6.5.11.51.32		284	385.30	385.50	388.1	5.2.11
MH-701	AS DIMENSIONED	6.5.12		285	383.96	384.16	388.56	5.2.11
				286	385.5	385.00	388.80	5.2.11

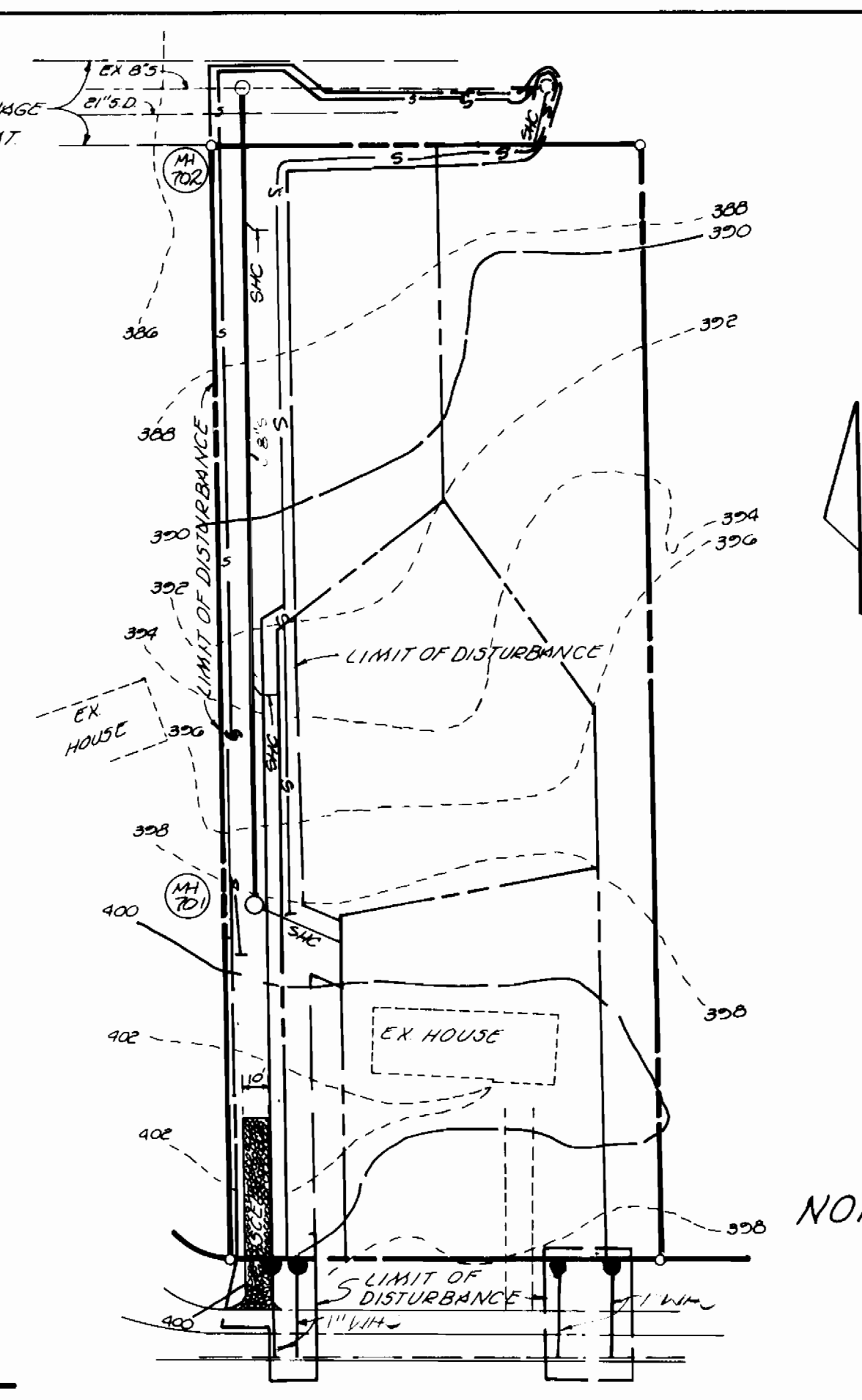
- NOTES:**
1. MANHOLE NUMBERS & TOP ELEVATIONS SHOWN AS (MH)
 2. SEWER HOUSE CONNECTION INVERTS SHOWN ON PROFILES ARE AT R/EASEMENT.
 3. UNLESS OTHERWISE NOTED, MHS ARE STD DETAIL 6.5.12
 4. CONTRACTOR SHALL TEST PIT AND VERIFY THE HORIZONTAL & VERTICAL LOCATION OF EXISTING SEWER, WATER & STORM DRAIN FACILITIES PRIOR TO BEGINNING ANY WORK.
 5. MINIMUM COVER OVER WATER HOUSE CONNECTION SHALL BE 3.5' UNLESS OTHERWISE NOTED.



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



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



SEDIMENT CONTROL PLAN
SCALE: 1"=50'

- NOTE:**
1. ALL MATERIAL EXCAVATED FOR PIPELINE CONSTRUCTION SHALL BE PLACED ON THE HIGH SIDE OF TRENCH.
 2. FOR SEDIMENT CONTROL NOTES AND DETAILS SEE DRAWING 30F3.

- CONSTRUCTION SEQUENCE**
1. OBTAIN GRADING PERMIT AND BUILDING PERMIT
 2. NOTIFY THE HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS AND PERMITS PRIOR TO BEGINNING GRADING OPERATIONS.
 3. CLEAR & GRUB AS NECESSARY TO INSTALL TEMPORARY SEDIMENT CONTROL DEVICES
 4. INSTALL TEMPORARY SEDIMENT CONTROL DEVICES AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR (S.C.E., S.F.)
 5. CONSTRUCT SANITARY SEWER & WATER HOUSE CONNECTIONS. ALL MATERIAL EXCAVATED DURING CONSTRUCTION SHALL BE PLACED ON THE HIGH SIDE OF TRENCH.
 6. APPLY PERMANENT STABILIZATION
 7. WITH PERMISSION REMOVE SEDIMENT CONTROL DEVICES

WATER & SEWER PLAN
SCALE: 1"=30'

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE DATE

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

SOIL CONSERVATION DISTRICT DATE

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION SHALL 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

DEVELOPER 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.

ENGINEER DATE

AS-BUILT
6-10-89

DEPARTMENT OF PUBLIC WORKS

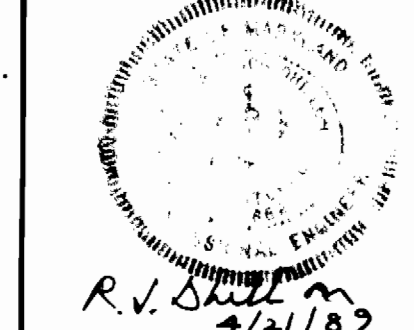
James P. ... 11/9/89 DATE
DIRECTOR OF PUBLIC WORKS

Michael A. ... 11-2-89 DATE
CHIEF, BUREAU OF UTILITIES

Michael ... 11/8/89 DATE
CHIEF, LAND DEVELOPMENT DIV.

BOENDER ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS

3565 ELLICOTT MILLS DR
ELLICOTT CITY, MARYLAND 21043
(301) 465-7777



DES:			
DRN:			
CHK:			
DATE:	BY	NO.	REVISION

**WATER & SEWER
PLANS AND DETAILS**

CEDAR ACRES LOTS 283-286
5TH ELECTION DISTRICT
CONTRACT NO. 34-1950-D
F-80-88

SCALE AS NOTED
SHEET 2 OF 3

SEDIMENT CONTROL NOTES

- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection 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 conformance with the 1983 MARYLAND 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 slopes 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 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. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). 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 permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- 7) Site Analysis:

Total Area of Site	1.377 Acres
Area Disturbed	0.88 Acres
Area to be roofed or paved	0.0 Acres
Area to be vegetatively stabilized	0.68 Acres
Total Cut	1.00 Cu.Yds.
Total Fill	1.00 Cu.Yds.
Offsite waste/borrow area location	0
- 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 DPW 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 perimeter erosion and sediment control. All activities proceeding with any other earth disturbance or grading, other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

TEMPORARY SEEDING NOTES

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

Seedbed 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 2 1/2 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 (0.7 lbs/1000 sq ft). For the period November 1 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 b70 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 gal 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.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

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

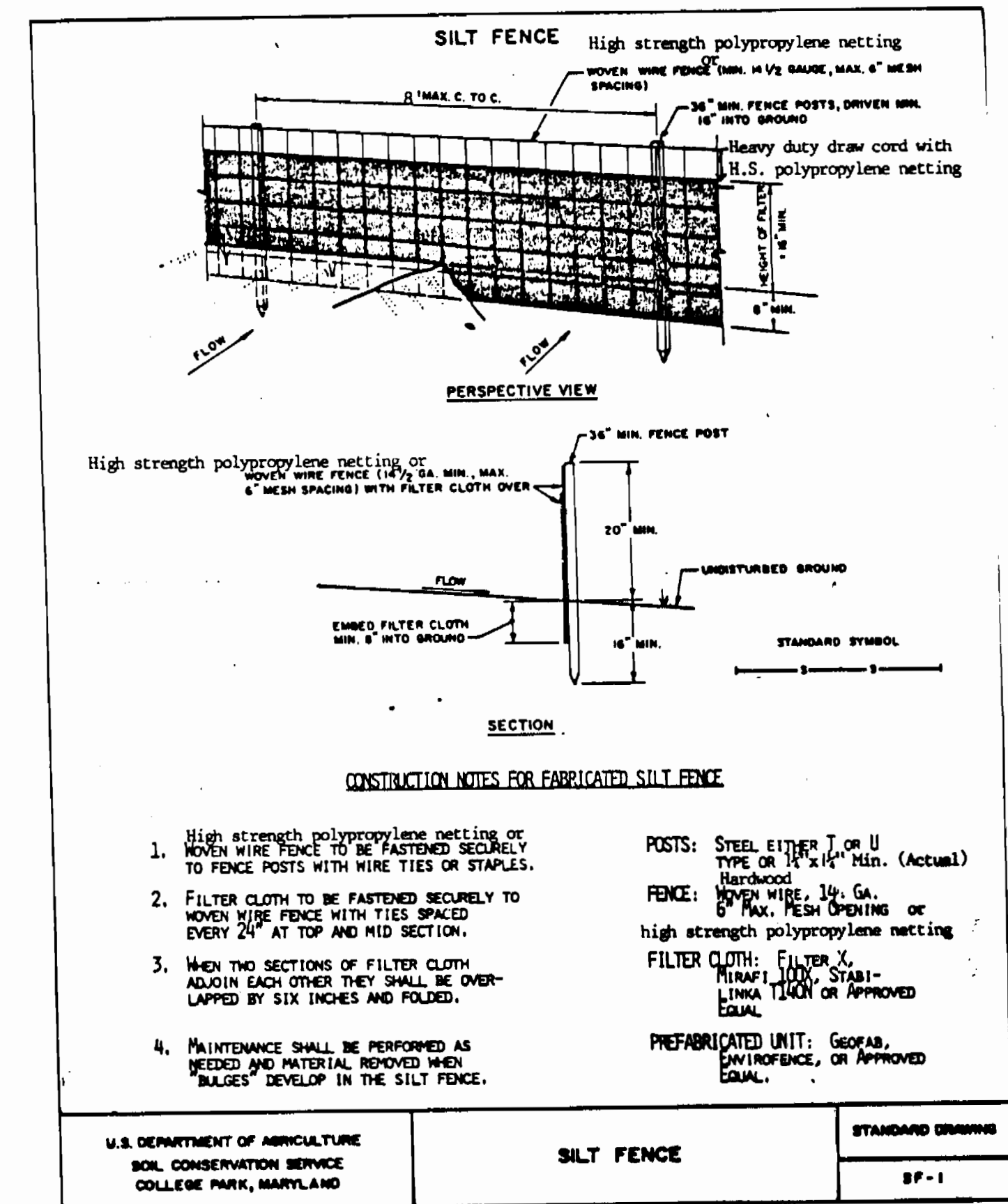
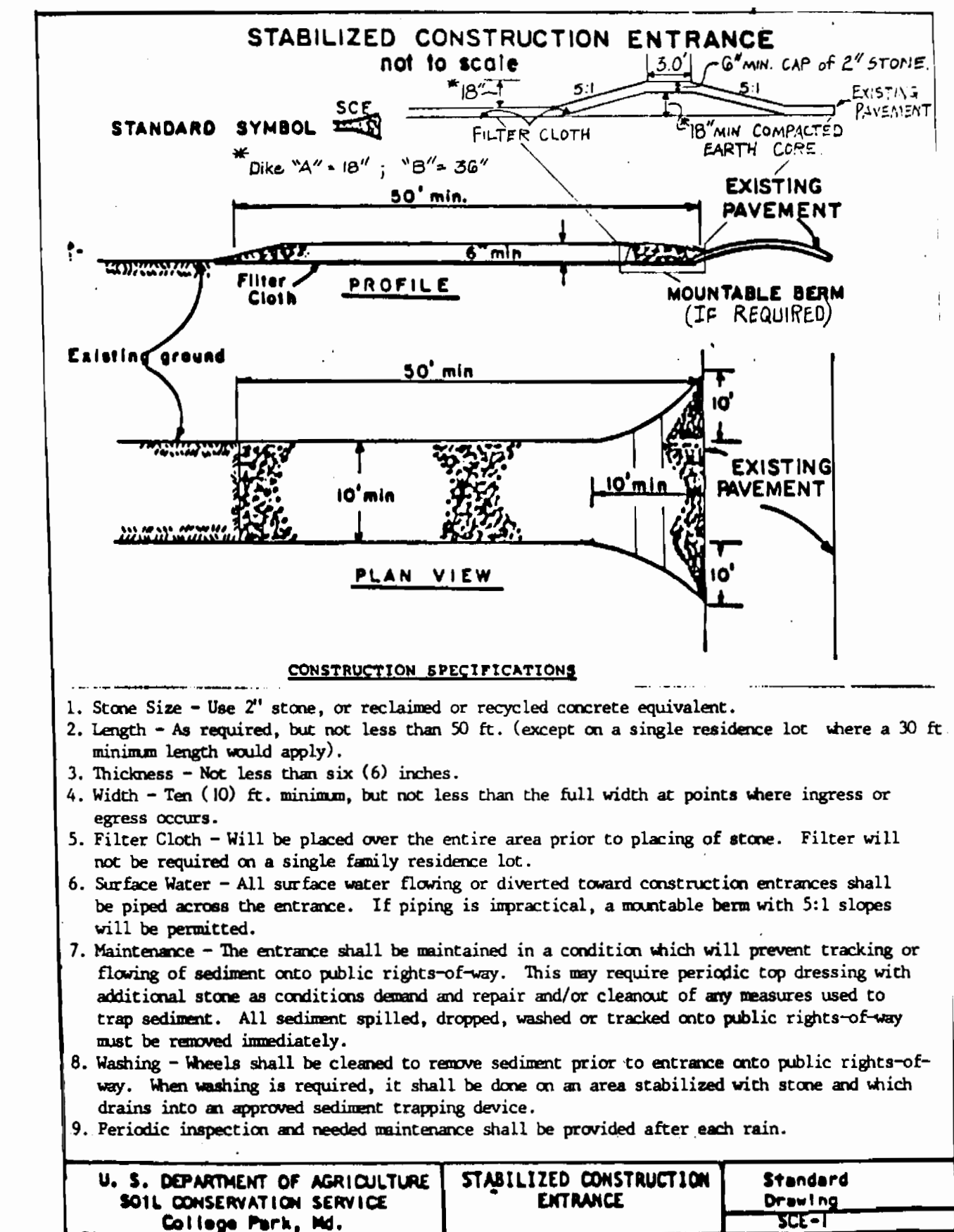
Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) 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 (1.4 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 1 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 8 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 reseedings.



DEVELOPER'S CERTIFICATE

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 AS 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

DEVELOPER _____ 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.

ENGINEER _____ DATE _____

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

U.S. SOIL CONSERVATION SERVICE _____ DATE _____

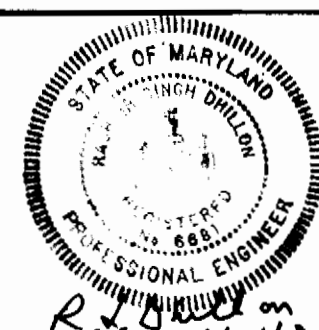
THIS DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

SOIL CONSERVATION DISTRICT _____ DATE _____

DEPARTMENT OF PUBLIC WORKS

James P. Kelly 11/9/89 DIRECTOR OF PUBLIC WORKS DATE
Michael A. Horvath 11-2-89 CHIEF, BUREAU OF UTILITIES DATE
K. Reid B. Ray 11/8/89 CHIEF, BUREAU OF ENGINEERING DATE
Franklin J. Spivey 11/8/89 CHIEF, LAND DEVELOPMENT DIV. DATE

BOENDER ASSOCIATES, INC.
ENGINEERS PLANNERS - SURVEYORS
3565 ELLICOTT MILLS DR.
ELLICOTT CITY, MARYLAND 21043
(301) 465-7777



DES:				
DRN:				
CHK:				
DATE:				
BY:	NO.	REVISION	DATE	

**SEDIMENT CONTROL
DETAIL SHEET**

CEDAR ACRES LOTS 283-286
5TH ELECTION DISTRICT
CONTRACT NO. 34-1950-D
1-30-88

SCALE
AS NOTED
SHEET
3 of 3