
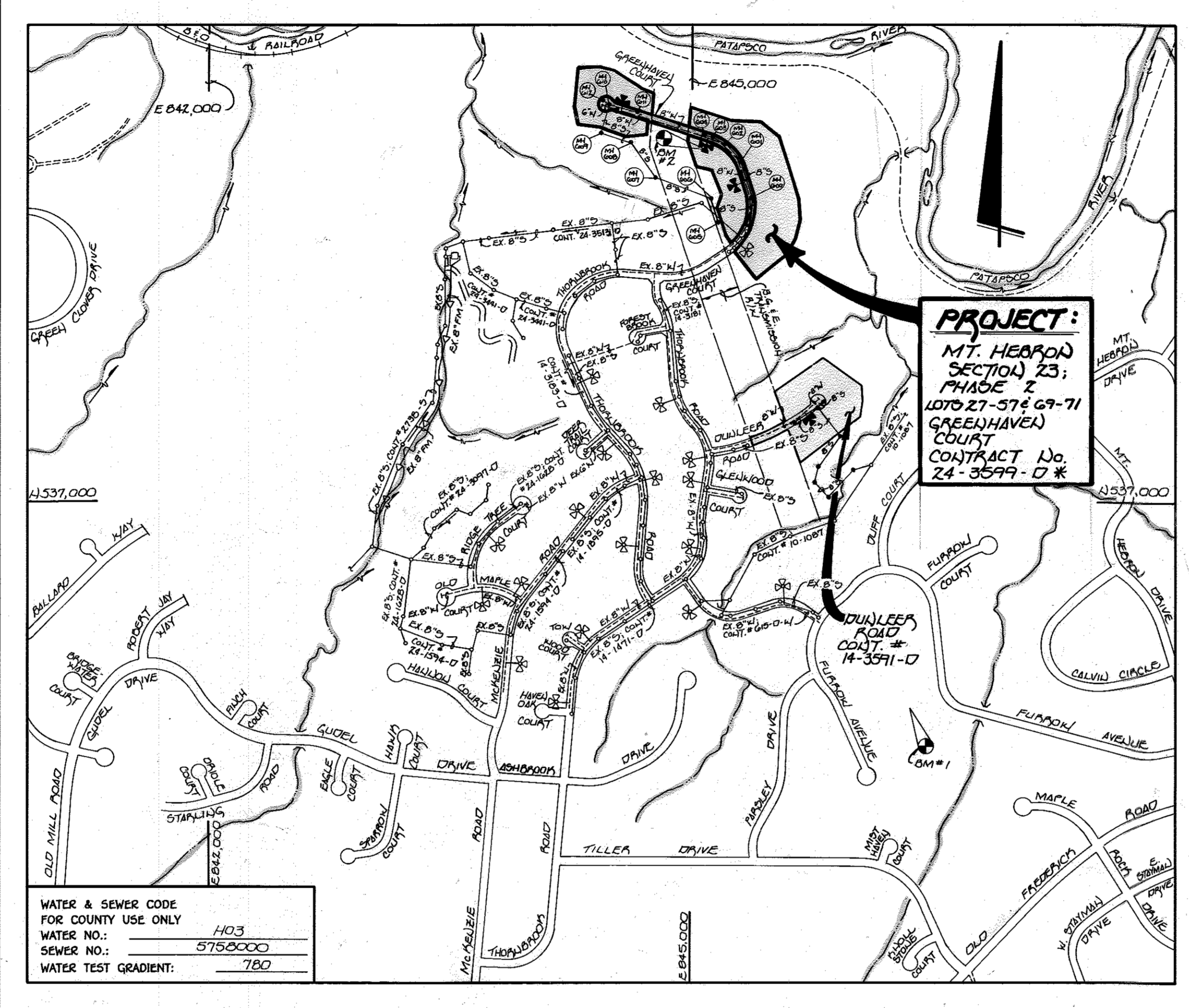


GENERAL NOTES

- 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 DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (1991 AMENDMENTS) THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL  AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION - 531-5533
 - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES - 850-4620
 - BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 787-9068
 - MISS UTILITY - 1-800-257-7777
 - COLONIAL PIPELINE CO. - 795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 313-4900
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- T.B. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52.
- WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL G5.51.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- ALL WATER MAINS SHALL BE D.I.P., CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W1.11 AND W2.13). SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, ☉ (410) 313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.11(a) OF THE HOWARD COUNTY CODE.

QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	SUPPLIER
B" SINKS	467 L.F.	462 L.F.	P.V.C.	J.M.
B" SINKS (O.I.P.)	1,573 L.F.	1,605 L.F.	O.I.P.	GRIFFIN
4" SINKS	686 L.F.	330 O.I.P. STAINL.		GRIFFIN/J.M.
MANHOLES	14 EACH	13	PRECAST	ATLANTIC
B" WATER	1,333 L.F.	1,324 L.F.	D.I.P.	GRIFFIN
G" WATER	87 L.F.	116 L.F.	D.I.P.	GRIFFIN
FIRE HYDRANTS	4 EACH	4 EA.		KENNEDY
AIR RELEASE VALVE	1 EACH	1 EA.		ATLANTIC
1" W.H.C.	224 L.F.	238 L.F.	K COPPER	READING
3/4" W.H.C.	565 L.F.	618 L.F.	K COPPER	READING
OUTSIDE METER SETTING	2 EACH			
B" X G" TEE	3 EACH	4 EA.		MUELLER
B" VALVE	1 EACH	1 EA.	R.S.	MUELLER
G" VALVE	3 EACH	4 EA.	R.S.	MUELLER
B" 1/2" H.B.	2 EACH	1 EA.		
B" 1/2" H.B.	1 EACH	2		
B" FLUG & BUTTRESS	1 EACH	1 EA.		

NAME OF UTILITY CONTRACTOR: C.C.S.
SURVEY & DRAFTING DIVISION AS-BUILT DATE:



WATER & SEWER CODE FOR COUNTY USE ONLY
 WATER NO.: H03
 SEWER NO.: 5758000
 WATER TEST GRADIENT: 780

TYPE OF BUILDING: RESIDENTIAL - SINGLE FAMILY DETACHED
 NUMBER OF LOTS: 42 (22 LOTS RESERVING) (BY RESERVATION CONTRACT)
 NO. OF WATER HOUSE CONNECTIONS: 28 EA.
 NO. OF SEWER HOUSE CONNECTIONS: 27 EA.
 DRAINAGE AREA: PATAPSCO
 TREATMENT PLANT: PATAPSCO W.W.T.P., CITY OF BALTIMORE VIA THE CHAMBERLAIN PUMPING STATION
 ** REMAINING IN 4 SACS WERE PROVIDED UNDER CONTRACT # 14-3591-D.

PLAN REFERENCE NUMBERS: F-97-7B

SCALE: 1"=600'

* SEE CONTRACT NO. 14-3591-D FOR THE REMAINING WATER & SEWER MAINS & FITTINGS TO SERVICE THE QUILBOLE LOTS IN QUAILCREEK ROAD.

CONTRACT NO. 24-3599-D *

MT. HEBRON

SECTION 23 - PHASE 2

LOT NOS. 27-57 & 69-71

GREENHAVEN COURT

WATER AND SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT & SHALL BE SUBJECT TO THE EROSION & SEDIMENT CONTROL PLAN FOR EROSION & SEDIMENT CONTROL THAT ALL NECESSARY PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENTATION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, WHO ARE CROWNED NECESSARY."
 Michael J. McEwen for H.J. Braker 9/24/97
 SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL APPROVED IS PRACTICALLY FEASIBLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS & THAT IT HAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 Paul W. Keibel 03/25/97
 SIGNATURE OF ENGINEER DATE

BENCHMARK INFORMATION

BM #1 4535,573.189 ELEV. = 466.8
 E 846,324.490
 HOWARD COUNTY MOUMENT # 3442011; 3/4" READING
 BM #2 4539,292.989 ELEV. = 476.8
 E 844,846.447
 HOWARD COUNTY MOUMENT # 3511004; 3/4" READING

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 Cheryl Simmons 4/25/97
 U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

APPROVED: John B. Chatter 9/24/97
 HOWARD SOIL CONSERVATION DISTRICT DATE

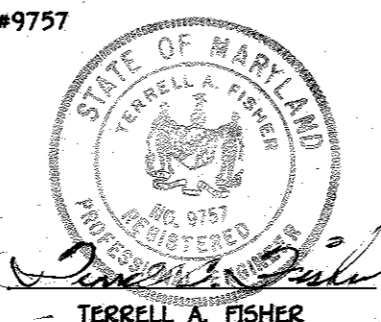
SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS AND UNDER

Michael J. McEwen for H.J. Braker 1-7-97
 SIGNATURE OF DEVELOPER DATE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 R. John Braker 4-15-97
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 Cheryl Simmons 4/25/97
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Fisher, Collins & Carter, Inc.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK
 10272 Baltimore National Pike
 Ellicott City, Maryland 21042
 (410) 461-2855

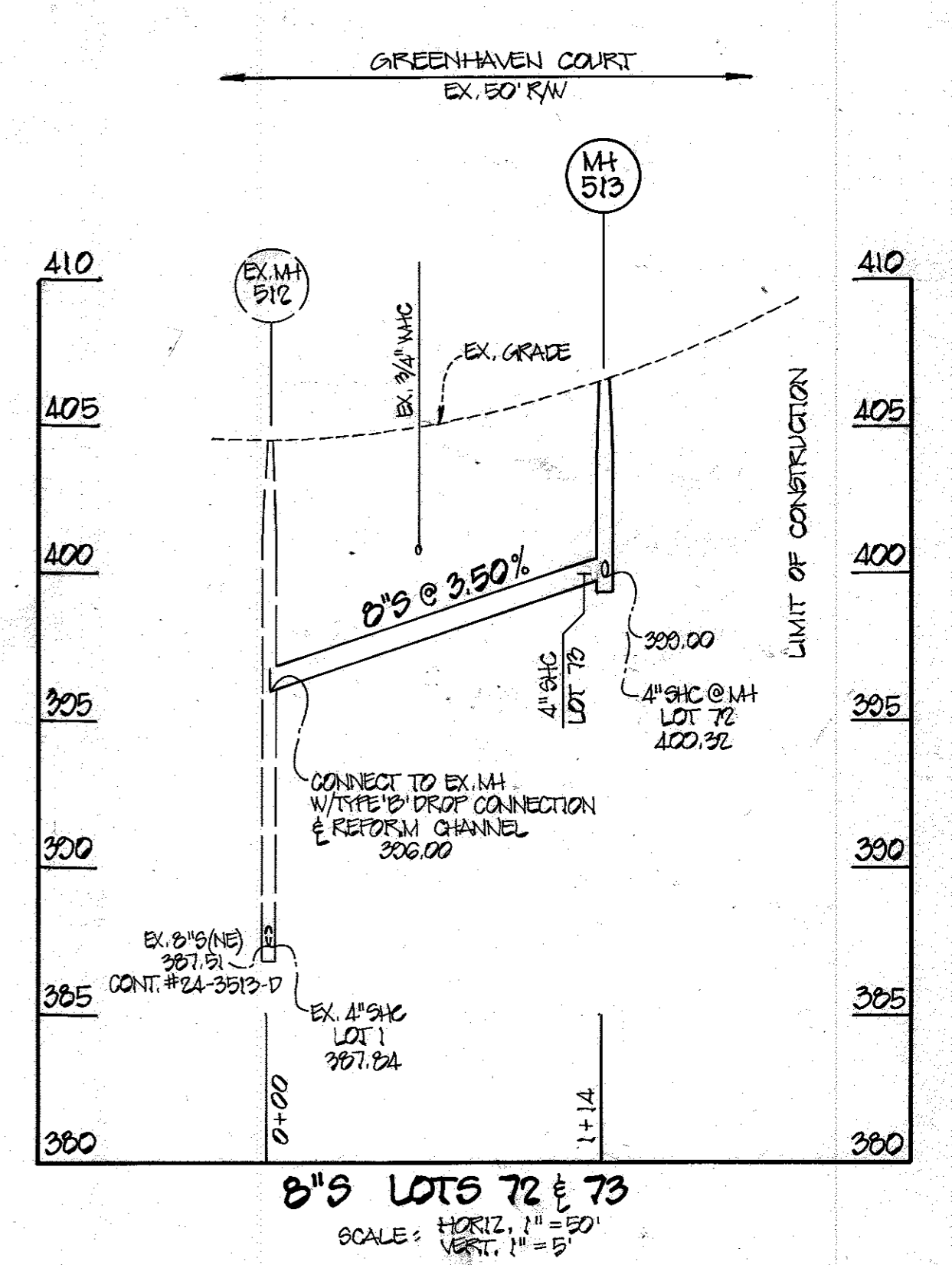
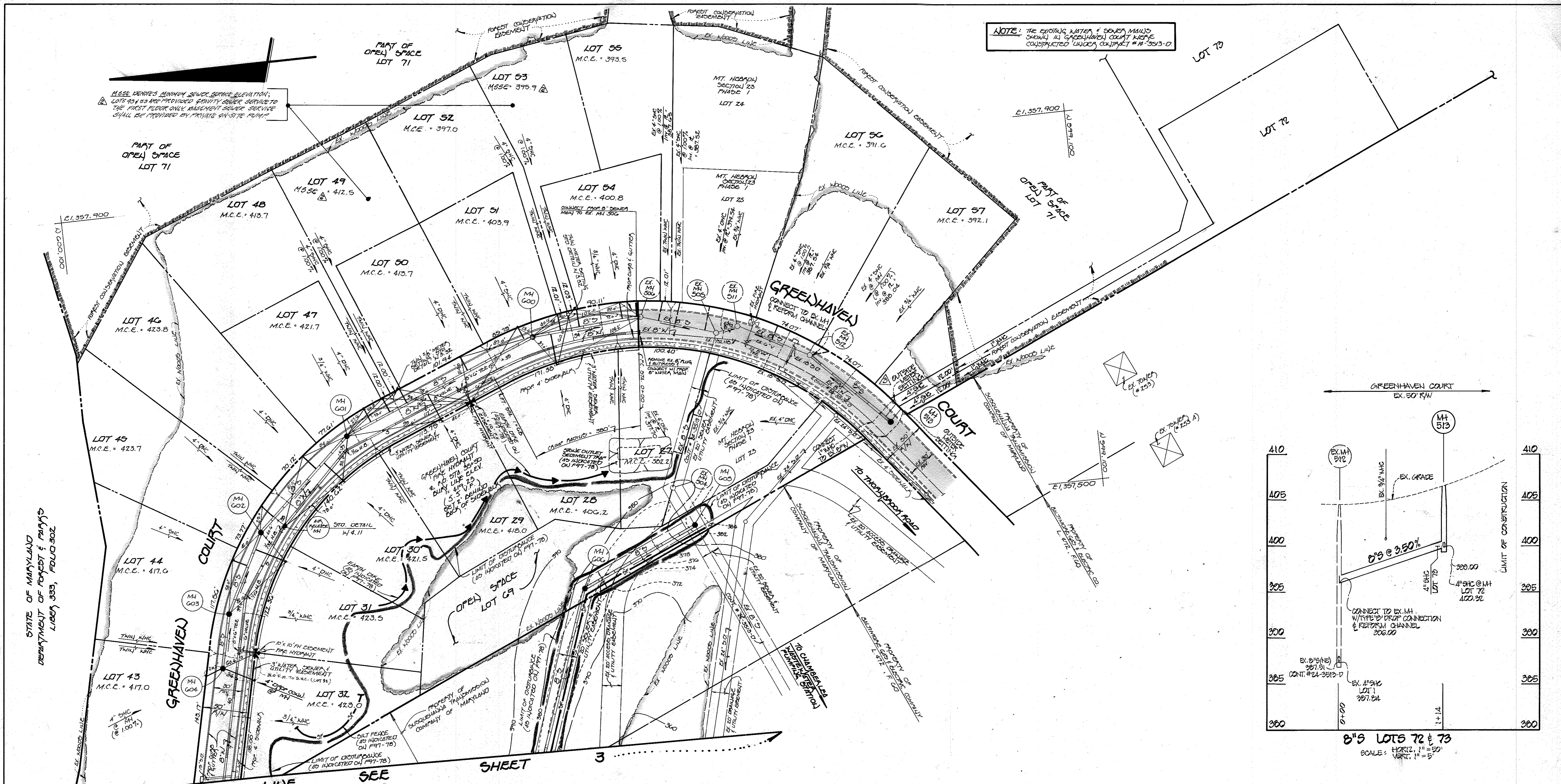


DES.	M.J.M.	R.C.F.	1	AS-BUILT CONDITIONS ADDED TO PLAN	7/96
DRN.	M.J.M./J.M.H.	FGC	2	REVERSE QUANTITIES, W&S SERVICE TO LOTS 72 & 73	2/98
CHK.	P.W.K.				
DATE:	9/24/97				
BY NO.				REVISION	DATE

TITLE SHEET
 600' SCALE MAP NO. 17 BLOCK NO. 3

MT. HEBRON
 SECTION 23 - PHASE 2
 LOT NOS. 27-57 & 69-71
 GREENHAVEN COURT
 CONTRACT NO. 24-3599-D *
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 1 OF 6



NOTE: SEE SHEET 3 FOR SHC INVERTS & PROPERTY LINE CURVE.

NOTE: "S" DENOTES SILT FENCE. SEE SHEET 3 FOR NOTES & DETAILS.

NOTE: SEDIMENT & EROSION CONTROL MEASURES SHOWN ON THIS CONTRACT ARE TO BE PROVIDED IN ADDITION TO THOSE SHOWN UNDER F-77-78.

GREENHAVEN COURT
PIPE HYDRANT
& NO. STA. 39450
BUY LINE ELEV.
= 421.94
(50' V.P.)
SET 2' BEHIND
BACK OF CIDERBUX

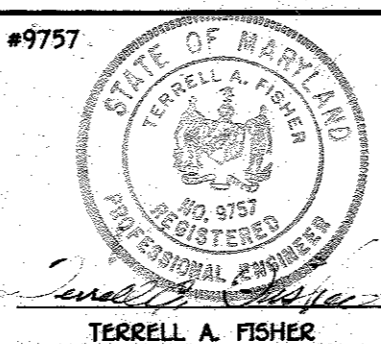
DEVELOPER'S CERTIFICATE
"I HEREBY CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT & PLAN FOR EROSION & SEDIMENT CONTROL & THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT & 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."
Michael W. Mann FOR H. J. BAKER 3/24/97
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE
"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL REPRESENTS A PRACTICAL & WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS & THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
Paul W. Kiechel 03/25/97
SIGNATURE OF ENGINEER DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert W. Baumer 4-16-97
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
4/16/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS &
LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 481-2855



DES.	CHK.	DATE	BY	NO.	REVISION	DATE
M.J.M.	K.C.I.	3/24/97		1	SEWER AS-BUILT CONDITIONS ADDED TO PLAN	7/98
J.H.M.	B.A.N.			2	ADD GRAVITY SEWER SERVICE, SEE ONLY NOTE, LOTS 40 & 49	2-4-01
P.W.K.	F.C.C.			3	EXTEND 6" S, PROVIDE W&S SERVICE TO LOTS 72 & 73	2/08
	F.C.C.			4	ADD 6" SEWER MAIN PROFILE, EX. MH 512 - MH 513	2/08

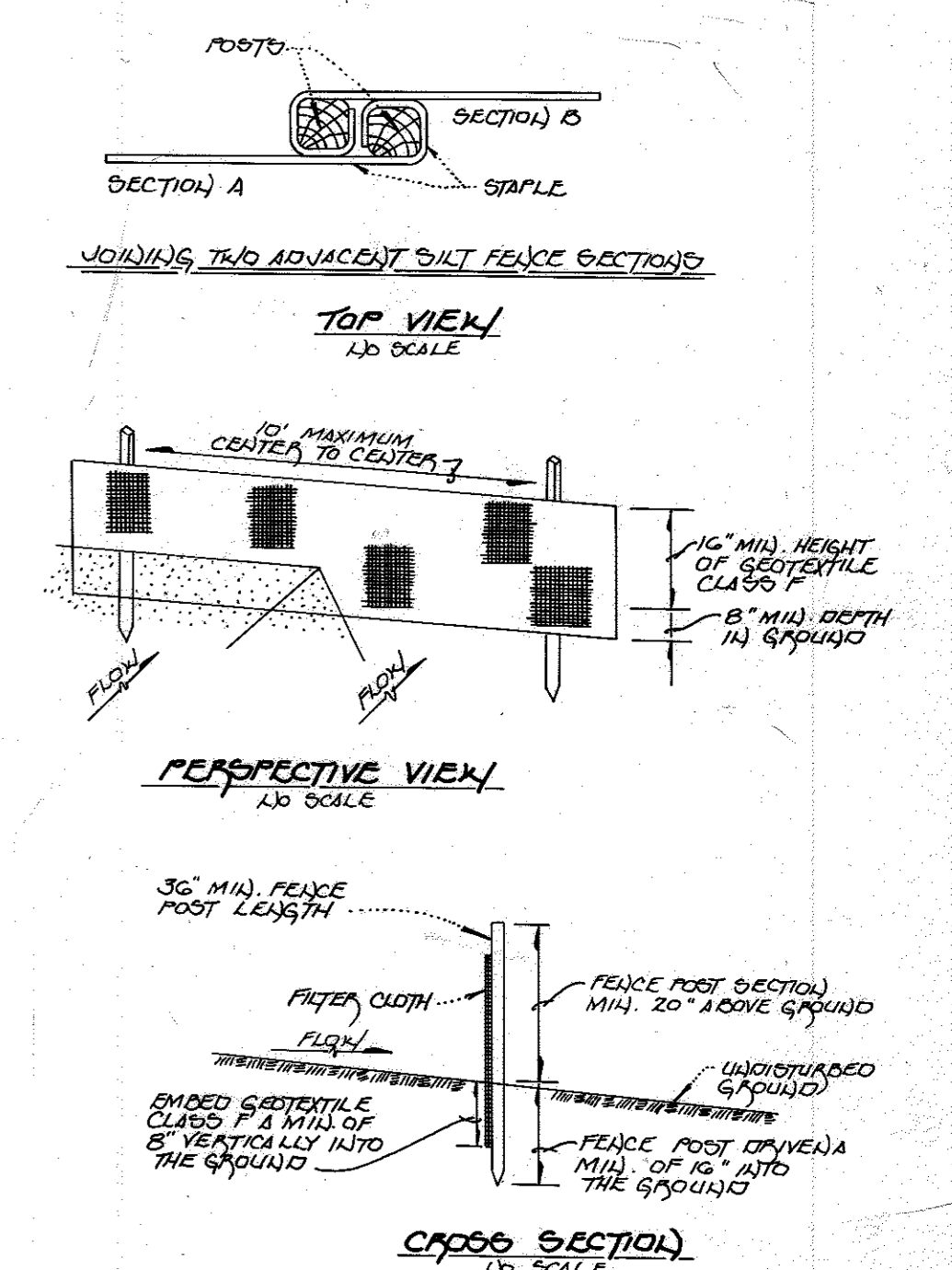
PLAN VIEW
WATER AND SEWER MAINS
"SEWER AS-BUILT"
600' SCALE MAP NO. 17 BLOCK NO. 3

MT. HEBRON
SECTION 23-PHASE 2
LOT Nos. 27-57 & 69-71
GREENHAVEN COURT
CONTRACT No. 24-3599-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 2 OF 6

CONTRACT No. 24-3599-D
MT. HEBRON
SECTION 23-PHASE 2
LOT Nos. 27-57 & 69-71
GREENHAVEN COURT
CONTRACT No. 24-3599-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SHC INVERT @ PROPERTY LINE CHART

STATION	LOT	ELEVATION
0+20 ST.	EX. MH 50G TO MH 60D	395.40
0+68 ST.	54 (DHC)	390.98
0+88 ST.	53 (@ 100%)	391.13
1+00 LT.	52 (@ 100%)	400.66
	MH 60D TO MH 60I	
0+10 ST.	51	396.98
0+80 ST.	50 (DHC)	408.36
1+30 LT.	29 (DHC)	412.64
1+56 ST.	49 (@ 100%)	406.87
1+74 ST.	48 (@ 100%)	407.93
2+00 ST.	47 (DHC)	416.36
	MH 60I TO MH 60J	
0+40 LT.	30 (DHC)	416.10
0+30 ST.	46 (DHC)	418.42
1+20 ST.	45 (DHC)	418.98
	MH 60J TO MH 60K	
0+20 LT.	31 (DHC)	418.16
0+40 ST.	44	412.26
	MH 60K TO MH 60L	
@ MH 60L LT.	32 (DHC @ MH)	417.65
@ MH 60L ST.	43 (DHC @ MH @ 100%)	412.96
	MH 60L TO MH 60M	
0+30 ST.	34	379.20
0+40 LT.	35	375.31
	MH 60M TO MH 60N	
0+20 LT.	40	382.91
1+00 LT.	41	388.03
@ MH 60N LT.	42 (DHC @ MH)	393.74
@ MH 60N ST.	43 (DHC @ MH)	394.02
	MH 60N TO MH 60O	
0+45 ST.	39 (@ 100%)	376.46
@ MH 60O ST.	38 (DHC @ MH @ 100%)	376.49
@ MH 60O LT.	37 (DHC @ MH @ 100%)	376.53
@ MH 60O LT.	36 (DHC @ MH @ 100%)	376.55

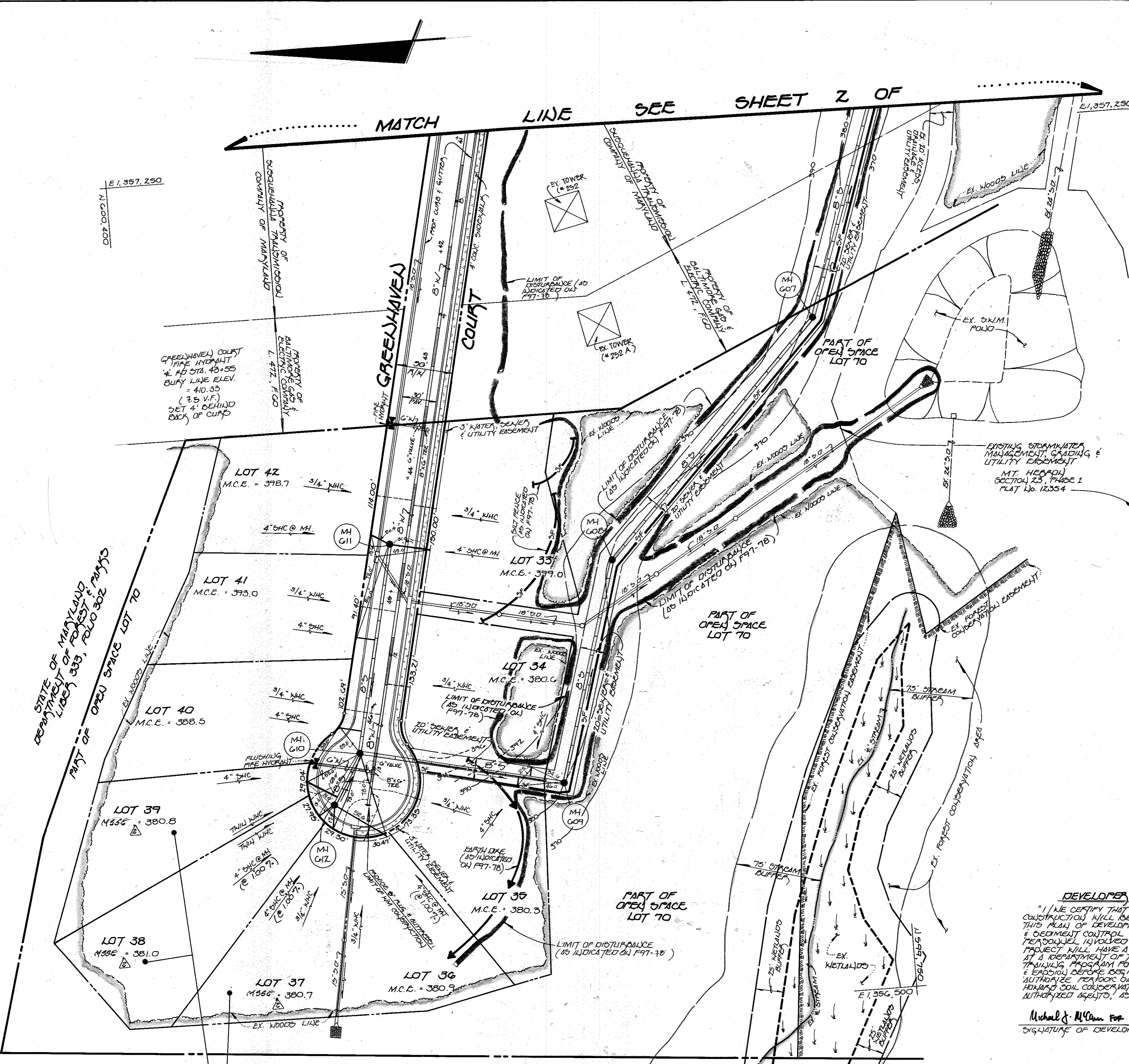


SILT FENCE

- FENCE POSTS SHALL BE A MINIMUM OF 36" LONG (MINIMUM 1/2" MINIMUM INTO THE GROUND). WOOD POSTS SHALL BE 1 1/2" x 1 1/2" (MINIMUM) OR 2" x 2" (MINIMUM) DIAMETER (MINIMUM) ROUND & SHALL BE OF SOLID QUALITY HEMLOCK, STEEL POSTS SHALL BE STANDARD 7" OR 1" SECTION WEIGHING NO LESS THAN 1.00 POUND PER LINEAR FOOT.
- GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIED OR STAPLES AT TOP & MID-SECTION & SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:
 TENSILE STRENGTH 50 LBS./IN. (MIN.) TEST: MOMT 509
 TENSILE MOODULUS 20 LBS./IN. (MIN.) TEST: MOMT 309
 FLOW RATE 0.3 GAL./FT.² TEST: MOMT 322
 FILTERING EFFICIENCY 75% (MIN.) TEST: MOMT 322
- WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED & STAPLED TO PREVENT SEWAGE BYPASS.
- SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT & MAINTAINED WHERE BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% OF THE FABRIC HEIGHT.

STANDARD SYMBOL

CONTRACT No. 24-3599-D
 MT. HEBRON
 SECTION 25 - PHASE 2
 LOT Nos. 27-31 & G9-71
 GREENHAVEN COURT
 CONTRACT No. 24-3599-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND



DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT & PLAN FOR EROSION & SEDIMENT CONTROL & THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT & EROSION BEFORE COMMENCING THE PROJECT. I ALSO AUTHORIZE REFERENCE TO THE INSTRUCTIONS OF THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Michael J. McLean FOR H.J. BAKER 3/24/97
 SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL REPRESENTS A PRACTICAL & FEASIBLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS & THAT IT HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Paul W. Keibel 03/25/97
 SIGNATURE OF ENGINEER DATE

NOTE: SEE THIS SHEET FOR SHC INVERT @ PROPERTY LINE CHART.

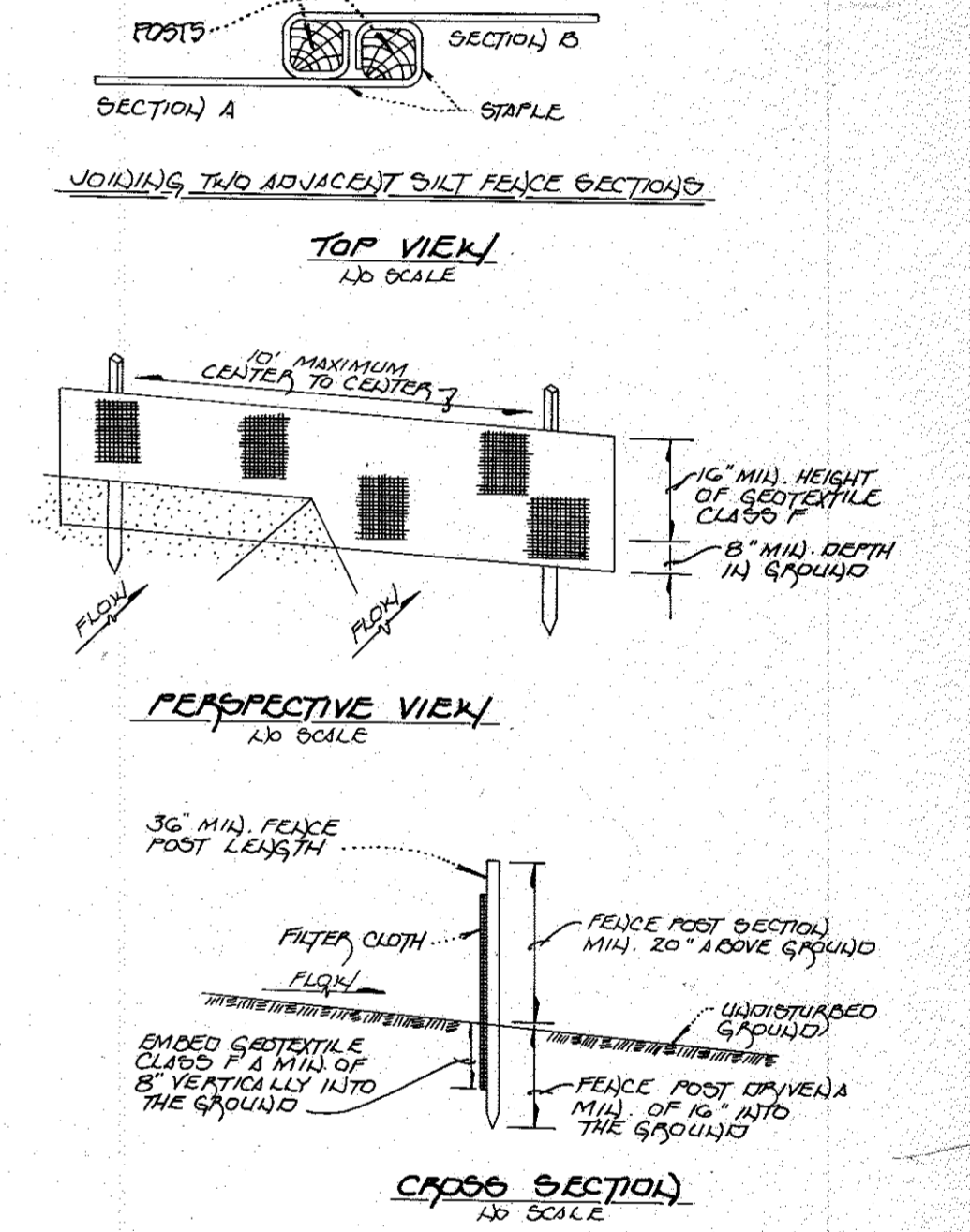
NOTE: "OF" DENOTES SILT FENCE; SEE THIS SHEET FOR NOTES & DETAILS.

NOTE: SEDIMENT & EROSION CONTROL MEASURES SHOWN ON THIS CONTRACT ARE TO BE PROVIDED IN ADDITION TO THOSE SHOWN UNLESS NOTED OTHERWISE.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Robert Bauman 4-16-97 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND Michael J. McLean 4/29/97 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 Baltimore National Pike Ellicott City, Maryland 21042 (410) 461-2856 Terrell A. Fisher	DES: M.J.M. 7/86 DRAWN: J.M.M. 6-4-91 CHK: P.W.K. DATE: 3-24-97	ASBUILT CONDITIONS ADDED TO PLAN ADD 6" DIA. SEWER SERVICE, PER ONLY NOTES, LOTS 37, 38, 139 BY NO. REVISION DATE	PLAN VIEW WATER AND SEWER MAINS SEWER ASBUILT 600' SCALE MAP NO. 17 BLOCK NO. 3	MT. HEBRON SECTION 25 - PHASE 2 LOT Nos. 27-31 & G9-71 GREENHAVEN COURT CONTRACT No. 24-3599-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE AS SHOWN SHEET 3 OF 6
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SHC INVERT @ PROPERTY LINE CHART

STATION	LOT	ELEVATION
EX. MH 506 TO MH 600		
0+20 ST.	54 (DHC)	395.40
0+68 ST.	53 (@1.00%)	390.38
0+88 ST.	52 (@1.00%)	391.15
1+00 LT.	28 (DHC)	400.66
MH 600 TO MH 601		
0+10 ST.	51	398.58
0+50 ST.	50 (DHC)	408.36
1+30 LT.	29 (DHC)	412.64
1+56 ST.	49 (@1.00%)	406.87
1+74 ST.	48 (@1.00%)	407.93
2+00 ST.	47 (DHC)	416.36
MH 601 TO MH 602		
0+40 ST.	30 (DHC)	416.10
0+50 ST.	46 (DHC)	418.42
1+20 ST.	45 (DHC)	418.38
MH 602 TO MH 603		
0+20 LT.	31 (DHC)	418.16
0+40 ST.	44	412.26
MH 603 TO MH 604		
@ MH 604 LT.	32 (DHC @ MH @ 1.00%)	417.65
@ MH 604 ST.	43 (DHC @ MH @ 1.00%)	412.96
MH 604 TO MH 605		
0+30 ST.	34	376.26
0+40 ST.	35	375.31
MH 605 TO MH 606		
0+20 LT.	40	382.91
1+00 LT.	41	388.03
@ MH 606 LT.	42 (DHC @ MH)	393.74
@ MH 606 ST.	43 (DHC @ MH)	394.02
MH 606 TO MH 607		
0+40 ST.	39 (@1.00%)	376.46
@ MH 607 ST.	38 (DHC @ MH @ 1.00%)	376.49
@ MH 607 LT.	37 (DHC @ MH @ 1.00%)	376.53
@ MH 607 LT.	36 (DHC @ MH @ 1.00%)	376.85
EX. MH 512 TO MH 513		
1+07 LT.	70	400.28
@ MH 513 LT.	72	400.66



SILT FENCE

1. FENCE POSTS SHALL BE A MINIMUM OF 36" LONG, DRIVEN TO A MINIMUM INTO THE GROUND. 4000 POSTS SHALL BE 1 1/2" DIA. SQUARE (MINIMUM) CUT ON 1/4" DIAMETER (MINIMUM) ROUND. IT SHALL BE OF SOLID QUALITY HARDWOOD. STEEL POSTS SHALL BE STAYED TO TOP OF SECTION INCLUDING UP LEAST 1.00 FEET FOR EACH SECTION.
2. GEOTEXTILE SHALL BE INSTALLED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP & MID SECTION. IT SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

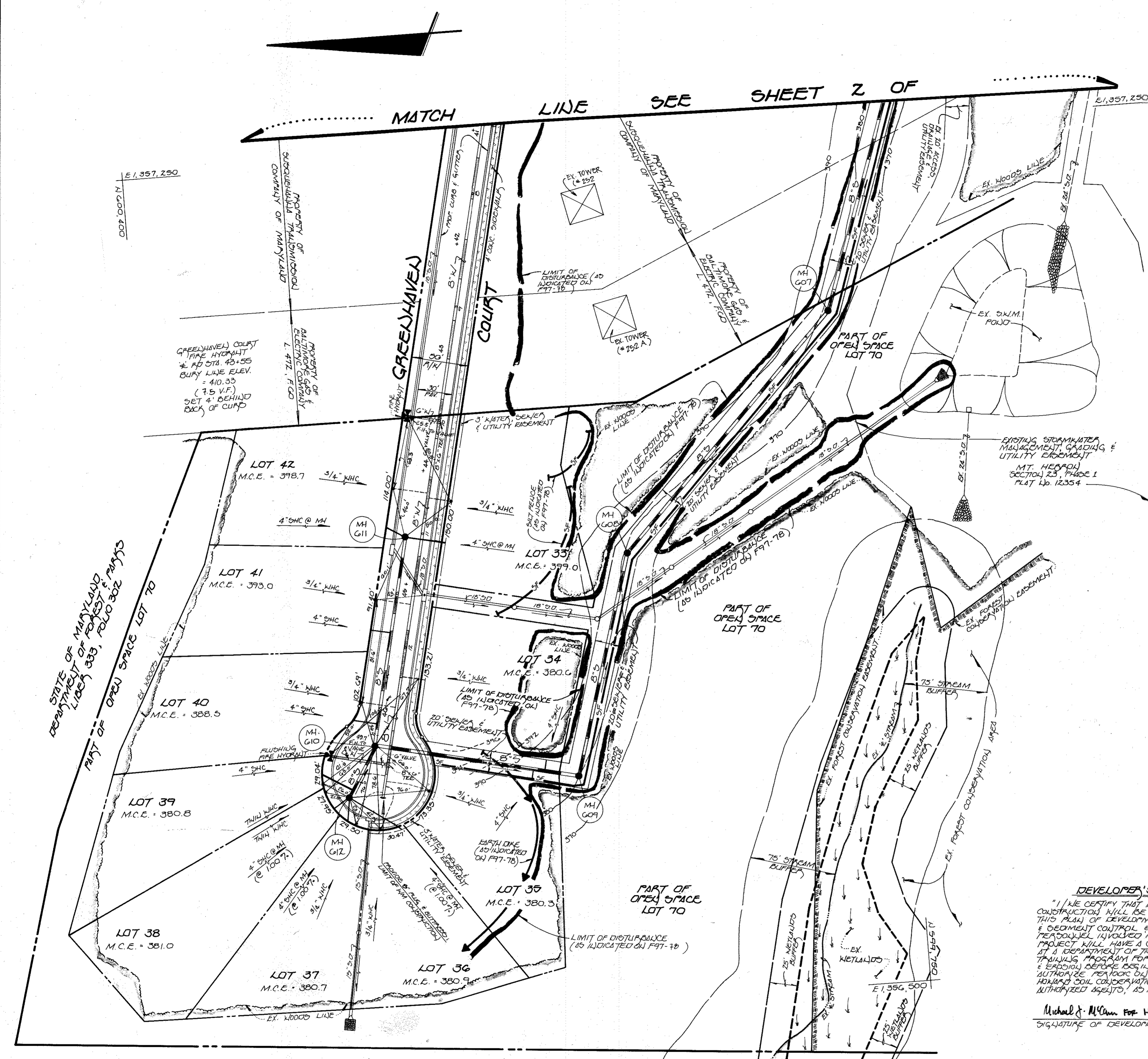
TENSILE STRENGTH	50 LBS./IN. (MIN.)	TEST: MSMT 509
TENSILE MODULUS	20 LBS./IN. (MIN.)	TEST: MSMT 509
FLOW RATE	0.3 GAL./FT. ² /MINUTE (MAX.)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN.)	TEST: MSMT 322
3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER THEY SHALL BE OVERLAPPED, FOLDED & STAPLED TO PREVENT SEDIMENT BYPASS.
4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT & MAINTAINED WHERE BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% OF THE FABRIC HEIGHT.



CONTRACT NO. 24-3599-D
 MT. HEBRON
 SECTION 23 - PHASE 2
 LOT NOS. 27-37 & 39-71
 GREENHAVEN COURT
 COUNTY LOT NO. 24-3599-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

DEVELOPER'S CERTIFICATE
 "I HEREBY CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT & PLAN FOR EROSION & SEDIMENT CONTROL & THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT & 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."
 Michael J. McLean FOR H.J. BAKER 3/24/97
 SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE
 "I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL REPRESENTS A PRACTICAL & WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS & THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 Paul W. Kuebel 9/25/97
 SIGNATURE OF ENGINEER DATE



NOTE: SEE THIS SHEET FOR SHC INVERT @ PROPERTY LINE CHART

NOTE: SEDIMENT & EROSION CONTROL MEASURES SHOWN ON THIS CONTRACT ARE TO BE PROVIDED IN ADDITION TO THOSE SHOWN UNDER P97-7B.

NOTE: "OF" DENOTES SILT FENCE; SEE THIS SHEET FOR NOTES & DETAILS.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert M. Beaman 4-16-97
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 Michael J. McLean 4/20/97
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Fisher, Collins & Carter, Inc.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK
 10875 Baltimore National Pike
 Ellicott City, Maryland 21042
 (410) 481-2855
 TERRELL A. FISHER

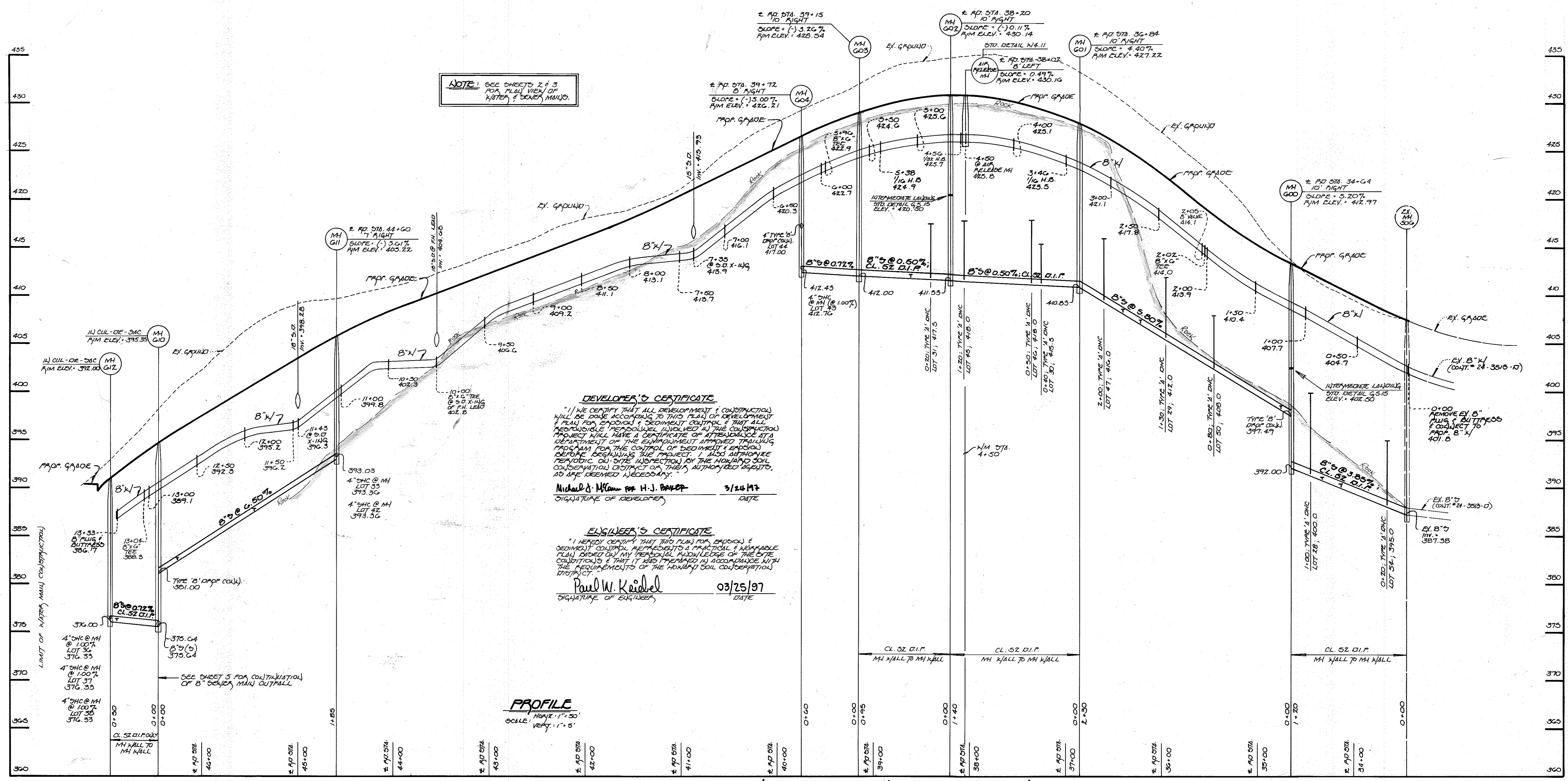
#9757
 DES: J.H.M.
 FOC
 DWN: J.H.M.
 CHK: P.W.K.
 DATE: 3-24-97

NO.	REVISION	DATE
1	REBUILD CONDITIONS ADDED TO PLAN (WATER ONLY)	7/98
2	ADD SHC INFORMATION FOR LOTS 70 & 73	3/00

PLAN VIEW
 WATER AND SEWER MAINS
 WATER ASBUILT
 600' SCALE MAP NO. 17 BLOCK NO. 3

SCALE AS SHOWN
 SHEET 3 OF 6
 MT. HEBRON
 SECTION 23 - PHASE 2
 LOT NOS. 27-37 & 39-71
 GREENHAVEN COURT
 COUNTY LOT NO. 24-3599-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

GREENHAVEN COURT
(60' R_{1/4})



NOTE: SEE SHEETS Z & 3 FOR PLAN VIEW OF WATER & SEWER MAINS.

DEVELOPER'S CERTIFICATE

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Michael D. McLean FOR **H. J. BAKER** 3/24/97
 SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL REPRESENTS A PRACTICAL & WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS & THAT IT HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Paul W. Keibel 03/25/97
 SIGNATURE OF ENGINEER DATE

PROFILE
HORIZ. 1" = 50'
VERT. 1" = 5'

WATER & SEWER MAINS: GREENHAVEN COURT

CONTRACT NO. 24-3599-D
 MT. HEPRON
 SECTION 23, PHASE 2
 LOT NOS. 27-57 & 69-71
 GREENHAVEN COURT
 WATER AND SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert W. Beemer</i> CHIEF, BUREAU OF UTILITIES 4-16-97 DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND <i>Michael D. McLean</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION 4/28/97 DATE	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 Baltimore National Pike Ellicott City, Maryland 21042 (410) 461-2855	9757 TERRILL A. FISHER	DESIGNED BY: M.J.M. DRAWN BY: J.M.M. CHECKED BY: P.W.K. DATE: 3-24-97 BY: NO. REVISION DATE	ASBUILT CONDITIONS ADDED TO PLAN WATER AND SEWER MAINS PROFILES SEWER ASBUILT 600' SCALE MAP NO. 17 BLOCK NO. 3 F.C.C. WORK ORDER NO. 30482 FILE NAME: G/DRAWINGS/	MT. HEPRON SECTION 23, PHASE 2 LOT NOS. 27-57 & 69-71 GREENHAVEN COURT CONTRACT NO. 24-3599-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 4 OF 6
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DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT & PLAN FOR EROSION & SEDIMENT CONTROL & THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT & 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."

Michael J. McCann FOR H. J. BAKER
SIGNATURE OF DEVELOPER

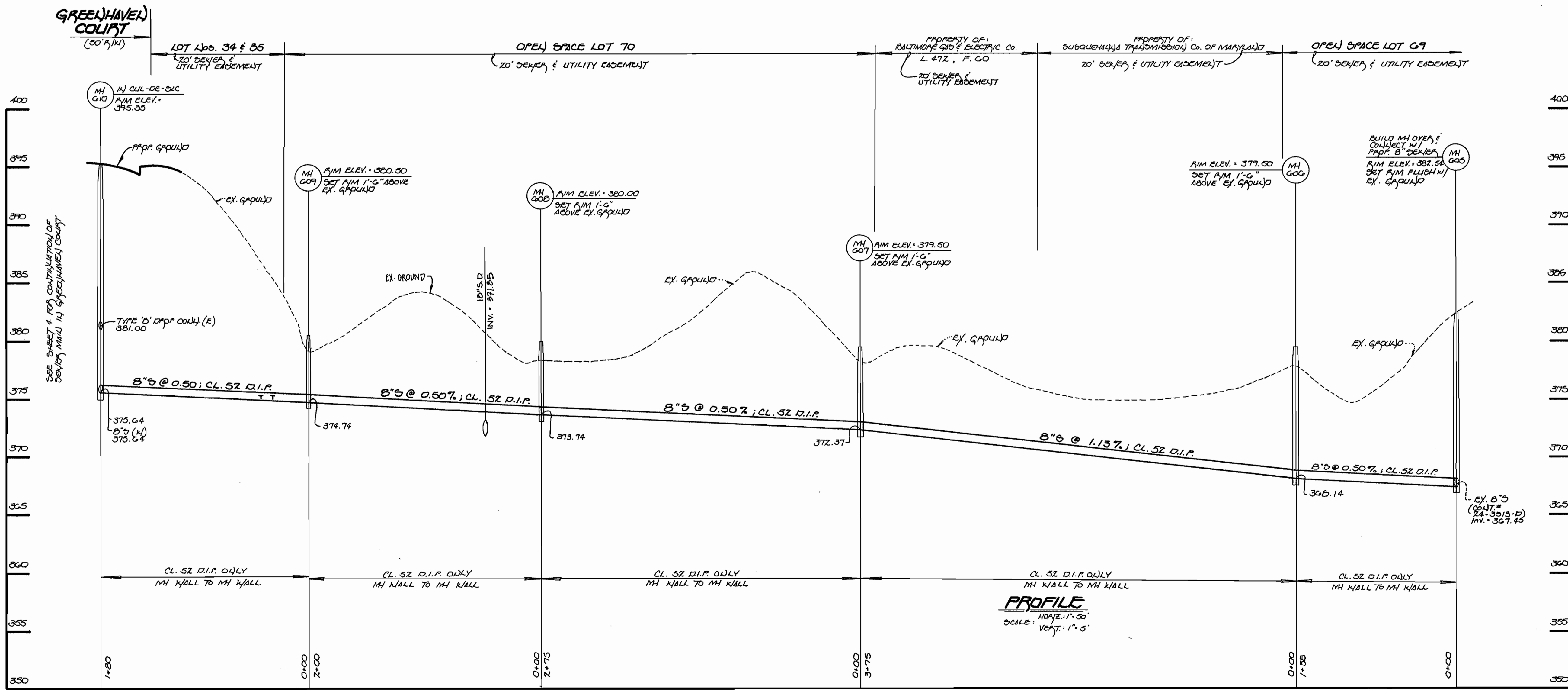
2/24/97
DATE

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL REPRESENTS A PRACTICAL & WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS & THAT IT HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOIL CONSERVATION DISTRICT."

Paul W. Kordel
SIGNATURE OF ENGINEER

03/25/97
DATE



8" SEWER MAIN OUTFALL: OPEN SPACE LOT Nos. 69 & 70

CONTRACT NO. 24-3599-D
MT. HEBRON
SECTION 23, PHASE 2
LOT NOS. 27-57 & 69-71
GREENHAVEN COURT
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>Robert M. Berger</i> CHIEF, BUREAU OF UTILITIES</p> <p>4-16-97 DATE</p>	<p>DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND</p> <p><i>Michael J. McCann</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION</p> <p>4/23/97 DATE</p>	<p>Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 Baltimore National Pike Billets City, Maryland 21042 (410) 461-2855</p>	<p>49757</p> <p>TERRELL A. FISHER</p>	<p>DESIGNED BY: M.J.M. DRAWN BY: J.H.M. CHECKED BY: P.W.K. DATE: 3-24-97</p>	<p>WATER AND SEWER MAINS PROFILES</p> <p>600' SCALE MAP NO. 17 BLOCK NO. 3 F.C.C. WORK ORDER NO. 30482 FILE NAME: G/DRAWINGS/</p>	<p>MT. HEBRON SECTION 23, PHASE 2 LOT NOS. 27-57 & 69-71 GREENHAVEN COURT CONTRACT NO. 24-3599-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND</p> <p>SCALE AS SHOWN SHEET 5 OF 6</p>
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STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION
Using vegetation as cover for barren soil to protect it from forces that cause erosion.

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to show infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary soil stockpiles, debris piles, and construction paths, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY
Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Vegetation over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seeded preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. Site Preparation

1. Install erosion and sediment control structures (either temporary or permanent) such as diversion, grade stabilization structures, berms, waterways, or sediment control basins.
2. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
3. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 2 acres.

B. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 2 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Fertilizer may be substituted for fertilizer with prior approval from the appropriate authority. Fertilizers shall all be delivered to the site fully banded according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty of the producer.
3. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides calcium oxide plus magnesium oxide. Limestone shall be ground to such fineness that at least 50% will pass through a 400 mesh sieve and 90-100% will pass through a 20 mesh sieve.
4. Incorporate lime and fertilizer into the top 3-5" of soil by disk or other suitable means.

C. Seeded Preparation

i. Temporary Seeding

1. Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or ripers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
2. Apply fertilizer and lime as prescribed on the plans.
3. If appropriate lime and fertilizer into the top 3-5" of soil by disk or other suitable means.

ii. Permanent Seeding

1. Minimum soil conditions required for permanent vegetative establishment:
 - a. Soil pH shall be between 6.0 and 7.0.
 - b. Soluble salts shall be less than 500 parts per million (ppm).
 - c. The soil shall contain less than 40% clay, but enough fine grained material (30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if loess or loess-like soils are to be planted, then a silty soil (50% silt plus clay) would be acceptable.
 - d. Soil shall contain minimum organic matter by weight.
 - e. Soil must contain sufficient pore space to permit adequate root penetration.
 - f. If these conditions cannot be met by soils on site, adding topsoil is required.
2. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
3. Apply soil amendments as per soil test or as included on the plans.
4. Mix soil amendments into the top 3-5" of topsoil by disk or other suitable means. Lawn areas should be rolled to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seeded preparation soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-2" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

D. Seed Specifications

1. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a regional seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
2. Seed tags shall be made available to the inspector to verify type and rate of seed used.
3. **Incubant** - The incubant for treating legume seed in the seed mixtures shall be a pure culture of *Rhizobium* spp. appropriate to the species of legume to be sown. Add fresh incubant as directed on package. Use four times the recommended amount to insure sufficient to keep the soil moist until used. Temperatures above 75°-80° F. can weaken bacteria and make the incubant less effective.

E. Methods of Seeding

1. **Hydroseeding** - Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer, broadcast or drop seeded, or a cultipacker seeder).
 - a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous) 200 lbs. per acre; K2O (potassium) 200 lbs/acre.
 - b. Lime - use only ground agricultural limestone. Up to 3 tons per acre may be applied by hydroseeding. Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
2. **Dry Seeding** - This includes use of conventional drop or broadcast spreaders.
 - a. Seed spreader shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 26. The seeded area shall be tracked with a lighted roller to provide good seed to soil contact.
 - b. When multiple seeding rates are to be applied in two directions perpendicular to each other, apply the seeding rate in each direction.
3. **Drill or Cultipacker Seeding** - Mechanized seeders that apply and cover seed with soil.
 - a. Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 - b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Mulch Specifications (in order of preference)

1. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be overly moist, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
2. **Wood Cellulose Fiber Mulch (WCFM)**
 - a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - b. WCFM shall be dried green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniform spread slurry.
 - c. WCFM including dye shall contain no preservative or growth inhibiting factors.
 - d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application having moisture absorption and sequestration properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - e. WCFM material shall contain no elements or compounds at concentration levels that will be phytotoxic.
 - f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1% minimum, and water holding capacity of 50% minimum.

Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

1. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
2. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
3. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

H. Securing Straw Mulch (Mulch Anchoring) - Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference, depending upon size of area and erosion hazard):

1. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely.
2. Wood cellulose fiber binder may be used for anchoring fiber. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be applied uniform after binder application. Synthetic binders such as Acrylic DAK (Unger-Tadco) or Terra-Tack (Terra-Tax) or Terra-Tack AR or other approved equal may be used at rates recommended by the manufacturer's anchor mulch.
4. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF CONSTRUCTION (03-10-1979).
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 MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DICES, PERIMETER AREAS, MULCH, OTHER BUILT UP MEASURES, AND 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR PERMANENT SEEDING (SEC. 20), SOIL (SEC. 44), 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 PERMISSON FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. **SITE ANALYSIS:**

TOTAL AREA OF SITE	47.73 ACRES
AREA DISTURBED	17.47 ACRES
AREA TO BE ROOFED OR PAVED	4.12 ACRES
AREA TO BE VEGETATIVELY STABILIZED	6.12 ACRES
TOTAL CUT	16,080 CU.YDS.
TOTAL FILL	16,080 CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A
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 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 CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILT UP MEASURES AND PERMITS APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

STANDARD AND SPECIFICATIONS FOR TOPSOIL

1. DEFINITION: PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.
2. PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
3. SPECIFICATIONS:
 - A. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND.
 - B. TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING SUBSOILS.
 - C. TOPSOIL SHALL CONTAIN LESS THAN 5% BY VOLUME OF CONCRETES, GRAVEL, SLACKS, SCOTTS, TRASH OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 - D. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4" - AVOID SURFACE IRREGULARITIES.
 - E. PLACE TOPSOIL AND APPLY SOIL AMENDMENTS AS SPECIFIED IN STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION.
 - F. TOPSOIL SHALL NOT BE PLACED DURING FROZEN, MUDDY, OR EXCESSIVELY WET CONDITIONS.
4. APPLICATION:

SEQUENCE OF CONSTRUCTION

1. OBTAIN THE REQUIRED GRADING PERMIT.
2. NOTIFY MISS UTILITY 48 HOURS BEFORE BEGINNING ANY WORK (E-800-277-7777). NOTIFY HOWARD COUNTY CONSTRUCTION/INSPECTION DIVISION 24 HOURS BEFORE STARTING ANY WORK (410)313-1870.
3. INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES AS INDICATED ON SHEETS 2 AND 3 OF THIS CONTRACT.
4. CLEAR AND GRUB AS NECESSARY ONLY AS REQUIRED FOR EXCAVATION AND INSTALLATION OF TREATMENT AND SEWER MAINS, AND ONLY WITHIN THE DESIGNATED WATER, SEWER AND UTILITY EASEMENTS.
5. NOTE: THE LENGTH OF OPEN TRENCH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY. WHEVEVER IS SHORTER.
6. CONSTRUCT THE WATER MAIN SEWER MAIN AND APPURTENANCES.
7. STABILIZE SEED AND MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES SHOWN ON THIS SHEET.
8. FOLLOWING SUCCESSFUL STABILIZATION OF ALL DISTURBED AREAS, AND AFTER PERMISSON HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES.

PERMANENT SEEDING NOTES

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

SEEDBED PREPARATION
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS:
APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1,000 SQ.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER (14 LBS./1,000 SQ.FT.) BEFORE SEEDING HARROW OR DISC. APPLY THREE INCHES OF SOIL AT THE END OF SEEDING. APPLY 400 LBS. PER ACRE 38-9-9 UREAFORM FERTILIZER (9 LBS./1,000 SQ.FT.) AND 500 LBS. PER ACRE 0.5 LBS./1,000 SQ.FT.) OF 10-20-20 FERTILIZER.

SEEDING:
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS. PER ACRE (2.3 LBS./1,000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS./ACRE (1.4 LBS./1,000 SQ.FT.) KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.05 LBS./1,000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE WITH OPTION (1) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OPTION (2) - USE 500 LBS. OPTION (3) SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE HYDROSEDED.

MULCHING:
APPLY 1 TO 2 TONS PER ACRE (10 TO 90 LBS./1,000 SQ.FT.) OF UNWOTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE (5 GALL./1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 0 FEET OR LESSER USE 340 GALLONS PER ACRE (8 GALL./1,000 SQ.FT.) FOR ANCHORING.

MAINTENANCE:
INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

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 (4 LBS./1,000 SQ.FT.)

SEEDING:
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 17 BUSHEL PER ACRE OF ANNUAL RYE (32 LBS./ACRE OF WEEPING LOVEGRASS 107 LBS./1,000 SQ.FT. FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28. PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING:
APPLY 1 TO 2 TONS PER ACRE (10 TO 90 LBS./1,000 SQ.FT.) OF UNWOTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 200 GALLONS PER ACRE (5 GALL./1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS ON SLOPES 0 FEET OR LESSER USE 340 GALLONS PER ACRE (8 GALL./1,000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1989 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL, FOR RATE AND METHODS NOT COVERED.

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT & PLAN FOR EROSION & SEDIMENT CONTROL, & THAT ALL RESPONSIBILITIES INVOLVED IN THE CONSTRUCTION OF THIS PROJECT WILL BE FULLY COMPLETED IN ACCORDANCE WITH THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT & EROSION BEFORE BEGINNING CONSTRUCTION. ALSO, I HEREBY CERTIFY THAT I AM AN INSPECTOR OF THE HOWARD COUNTY CONSERVATION DIVISION OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Michael J. McCann FOR H.J. BAKER 3/24/97
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL REPRESENTS A PRACTICAL & ADEQUATE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS & THAT IT HAS BEEN DESIGNED TO PROTECT THE SITE FROM EROSION & SEDIMENTATION OF THE HOWARD COUNTY CONSERVATION DIVISION."

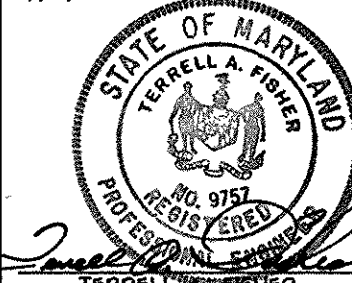
SIGNATURE OF ENGINEER DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Fisher, Collins & Carter, Inc.

*9797



DESIGNED BY:	M.J.M.	DATE:	3-24-97
DRAWN BY:	M.J.M.	BY NO.:	
CHECKED BY:	P.W.K.	REVISION:	

SEDIMENT AND EROSION CONTROL NOTES

60° SCALE MAP NO. 17 BLOCK NO. 3
F.C.C. WORK ORDER NO. 30482
FILE NAME: G:\DRAWINGS\0462

MT. HEBRON
SECTION 23 - PHASE 2
LOT NOS. 27 - 57 & G9-71
GREENHAVEN COURT
CONTRACT NO. 24-3599-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN SHEET 6 OF 6

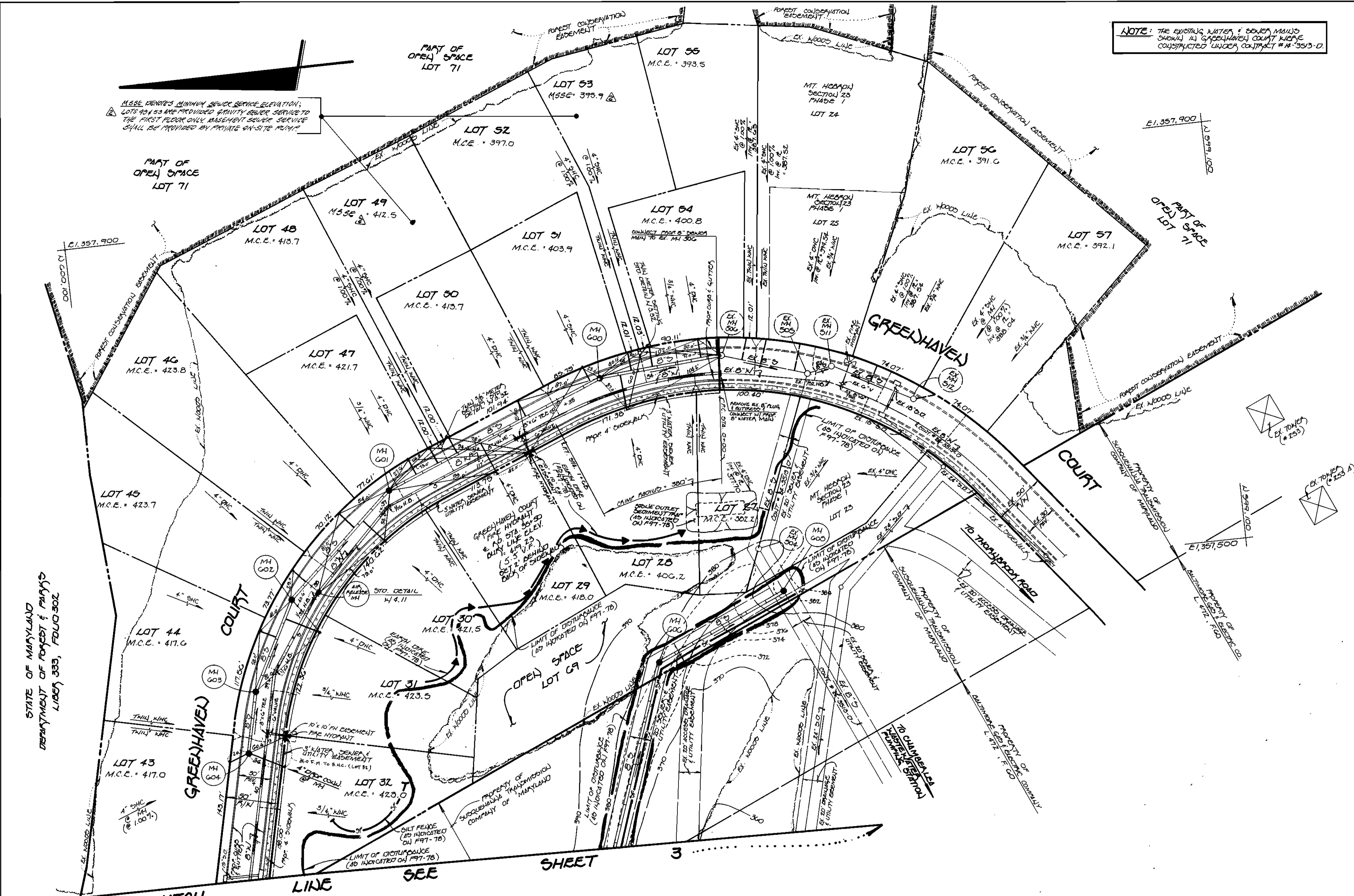
CONTRACT NO. 24-3599-D
MT. HEBRON
SECTION 23 - PHASE 2
LOT NOS. 27 - 57 & G9-71
GREENHAVEN COURT
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

Robert M. Berman 4-16-97
CHIEF, BUREAU OF UTILITIES DATE

Michael J. McCann 4/28/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NOTE: THE EXISTING WATER & SEWER MAINS SHOWN IN GREENHAVEN COURT WERE CONSTRUCTED UNDER CONTRACT # M-3593-D.

PLEASE DENOTE MINIMUM SERVICE ELEVATION; LOTS 49 & 53 ARE PROVIDED SANITARY SEWER SERVICE TO THE FIRST FLOOR ONLY. BASEMENT SEWER SERVICE SHALL BE PROVIDED BY PRIVATE ON-SITE PUMP.



NOTE: SEE SHEET 3 FOR OHC INVERTS & PROPERTY LINE CHART.

NOTE: "S" DESIGNATED SILT PLACES, SEE SHEET 3 FOR NOTES & DETAILS.

NOTE: SEDIMENT & EROSION CONTROL MEASURED OVERALL ON THIS CONTRACT ARE TO BE PROVIDED IN ADDITION TO THOSE SHOWN UNDER 197-78.

GREENHAVEN COURT
FOR A PROPERTY
LINE CHART
SEE SHEET 3
SECTION 2, 3 & 4
OF CONTRACT
NO. 24-3599-D

DEVELOPER'S CERTIFICATE
I HEREBY CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT & PLAN FOR EROSION & SEDIMENT CONTROL & THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENTION OF A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT & EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZED PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.
Michael J. W. Lam for H.J. BAKER
SIGNATURE OF DEVELOPER DATE 5/24/97

ENGINEER'S CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL REPRESENTS A PRACTICAL & WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS & THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Paul W. Koehler
SIGNATURE OF ENGINEER DATE 03/25/97

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert W. Deacon
CHIEF, BUREAU OF UTILITIES
4-16-97
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
Michael J. W. Lam
CHIEF, DEVELOPMENT ENGINEERING DIVISION
4/24/97
DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 461-2855

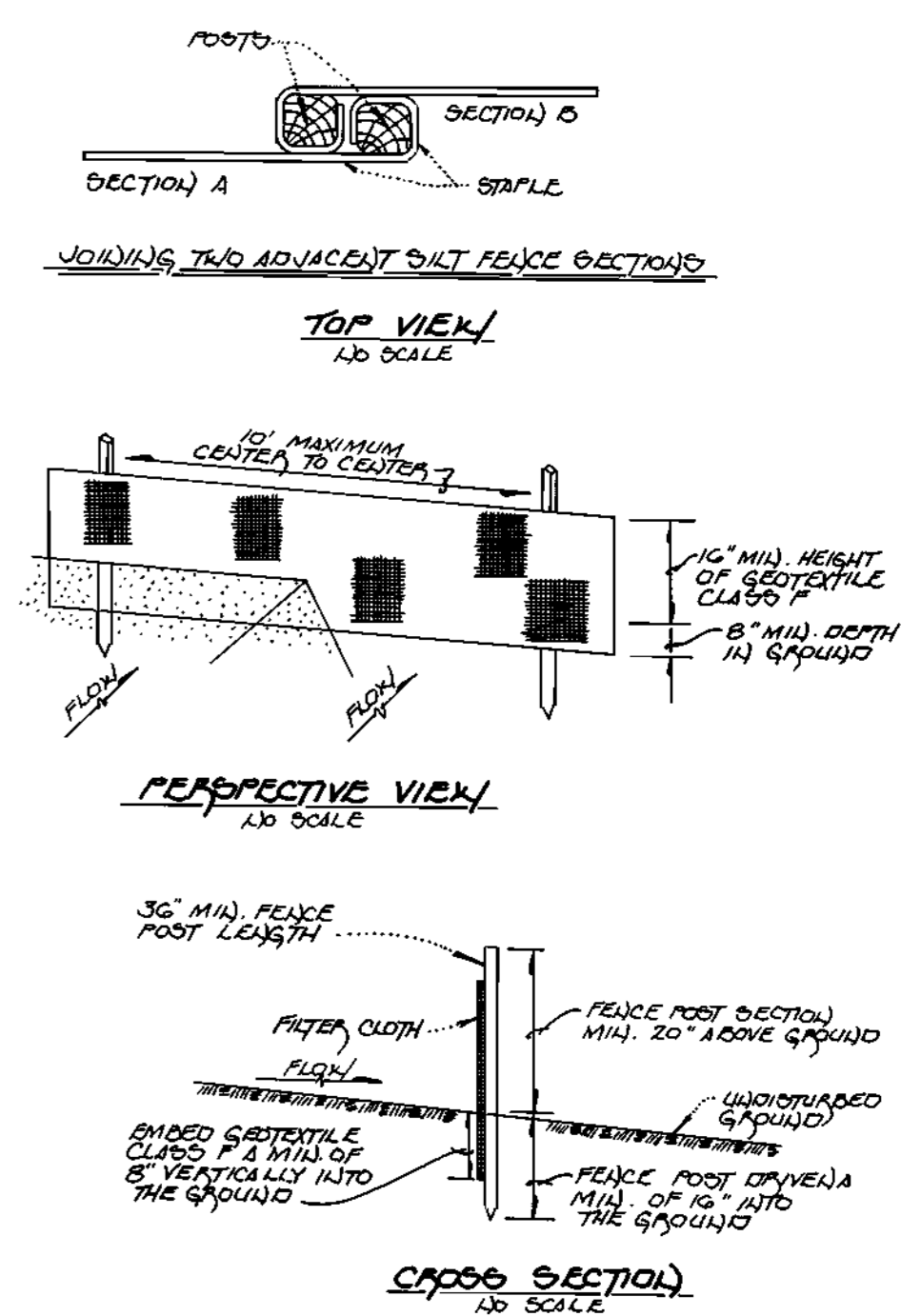
#9757
TERRELL A. FISHER

DES: H.J.M.	K.O.I.	1	SEWER AS-BUILT CONDITIONS ADDED TO PLAN	7/96
DRWN: J.H.M.	R.A.N.	2	ADD SANITARY SEWER SERVICE, SEE ONLY NOTE; LOTS 49 & 53	2-4-97
CHK: P.W.K.				
DATE: 3/24/97				
BY NO.			REVISION	DATE

PLAN VIEW
WATER AND SEWER MAINS
"SEWER AS-BUILT"
600' SCALE MAP NO. 17 BLOCK NO. 3

MT. HEBRON
SECTION 23 - PHASE 2
LOT Nos. 27-57 & 69-71
GREENHAVEN COURT
CONTRACT No. 24-3599-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 2 OF 6

STATION	LOT	ELEVATION
EX. MH 506 TO MH 600		
0+20 FT.	54 (DHC)	395.40
0+28 FT.	53 (@100%)	390.38
0+88 FT.	52 (@100%)	391.15
1+00 LT.	78 (DHC)	400.66
MH 600 TO MH 601		
0+10 FT.	31	396.58
0+80 FT.	50 (DHC)	408.36
1+30 FT.	29 (DHC)	412.64
1+36 FT.	49 (@100%)	406.87
1+74 FT.	48 (@100%)	407.93
2+00 FT.	47 (DHC)	416.36
MH 601 TO MH 602		
0+40 FT.	30 (DHC)	416.10
0+50 FT.	46 (DHC)	418.42
1+20 FT.	45 (DHC)	418.38
MH 602 TO MH 603		
0+20 FT.	31 (DHC)	418.16
0+40 FT.	44	412.26
MH 603 TO MH 604		
@ MH 604 LT.	32 (DHC @ MH @ 100%)	417.08
@ MH 604 FT.	43 (DHC @ MH @ 100%)	412.96
MH 604 TO MH 610		
0+30 FT.	34	376.26
0+40 FT.	35	376.31
MH 610 TO MH 611		
0+20 FT.	40	382.91
1+00 FT.	41	388.03
@ MH 611 LT.	42 (DHC @ MH)	393.74
@ MH 611 FT.	43 (DHC @ MH)	394.02
MH 610 TO MH 612		
0+43 FT.	37 (@100%)	376.46
@ MH 612 FT.	38 (DHC @ MH @ 100%)	376.47
@ MH 612 LT.	31 (DHC @ MH @ 100%)	376.53
@ MH 612 LT.	36 (DHC @ MH @ 100%)	376.83



DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT & PLAN FOR SEWER & SEDIMENT CONTROL & THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A SEPTIMENTATION TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT & 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."

Michael J. McLean FOR H.J. BAKER 3/24/97
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL REPRESENTS A PRACTICAL & FEASIBLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS & THAT IT HAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

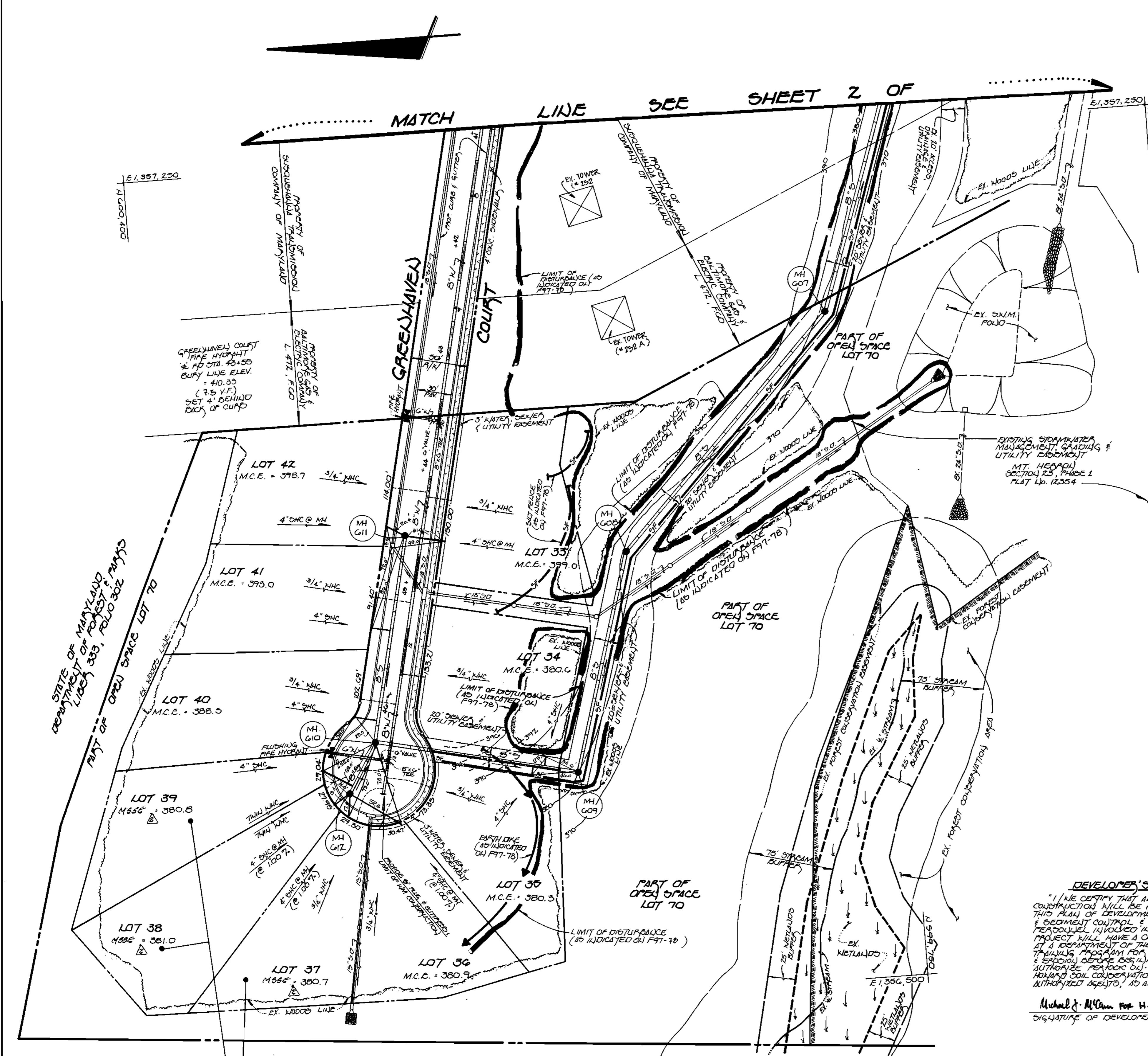
Paul W. Keibel 03/25/97
SIGNATURE OF ENGINEER DATE

- SILT FENCE**
- FENCE POSTS SHALL BE A MINIMUM OF 36" LONG, DRIVEN 10" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1 1/2" SQUARE (MINIMUM) CUT, OR 1 1/2" DIAMETER (MINIMUM) ROUND. SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS SHALL BE STAINLESS OR U.S. SECTION HEIGHTS 1/2" LESS THAN 1.00 POUND PER LINEAR FOOT.
 - GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT 70" & 110" SECTION & SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS./IN. (MIN.)	TEST: MOMT 509
TENSILE MODULUS	20 LBS./IN. (MIN.)	TEST: MOMT 509
FLOW RATE	0.3 GAL./FT. ² /MINUTE (MAX.)	TEST: MOMT 322
FILTRATION EFFICIENCY	75% (MIN.)	TEST: MOMT 322
 - WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED & STAPLED TO PREVENT SEDIMENT BYPASS.
 - SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT & MAINTAINED WHERE DUNGS OCCUR OR WHEN SEDIMENT ACCUMULATION REACHES 50% OF THE FABRIC HEIGHT.

SYMBOLS

CONTRACT NO. 24-3599-D
MT. HEBRON
SECTION 23 - PAGE 2
LOT NO. 27-37 & 39-71
GREENHAVEN COURT
CONTRACT NO. 24-3599-D
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND



NOTE 1: SEE THIS SHEET FOR DHC INVENTORY & PROPERTY LINE CHART.

NOTE 2: "OF" DENOTES SILT FENCE; SEE THIS SHEET FOR NOTES & DETAILS.

NOTE 3: SEDIMENT & EROSION CONTROL MEASURED SHOWN ON THIS CONTRACT ARE TO BE PROVIDED IN ADDITION TO THOSE SHOWN UNDER PPT-7B.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert Baumer 4-16-97
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Michael J. McLean 4/20/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Elliott City, Maryland 21042
(410) 461-2855

TERRELL A. FISHER

DES:	H.J.M.	H.O.I.	1	AS-BUILT CONDITIONS ADDED TO PLAN	7/96
DRWN:	J.H.M.	D.A.M.	2	ADD 6" MIN. SEWER SERVICE; SEE NOTE, LOTS 37, 38 & 39	6-4-01
CHK:	P.W.K.				
DATE:	3-24-97				
BY:	NO.			REVISION	DATE

PLAN VIEW
WATER AND SEWER MAINS
SEWER AS-BUILT

600' SCALE MAP NO. 17 BLOCK NO. 3

SCALE AS SHOWN

SHEET 3 OF 6