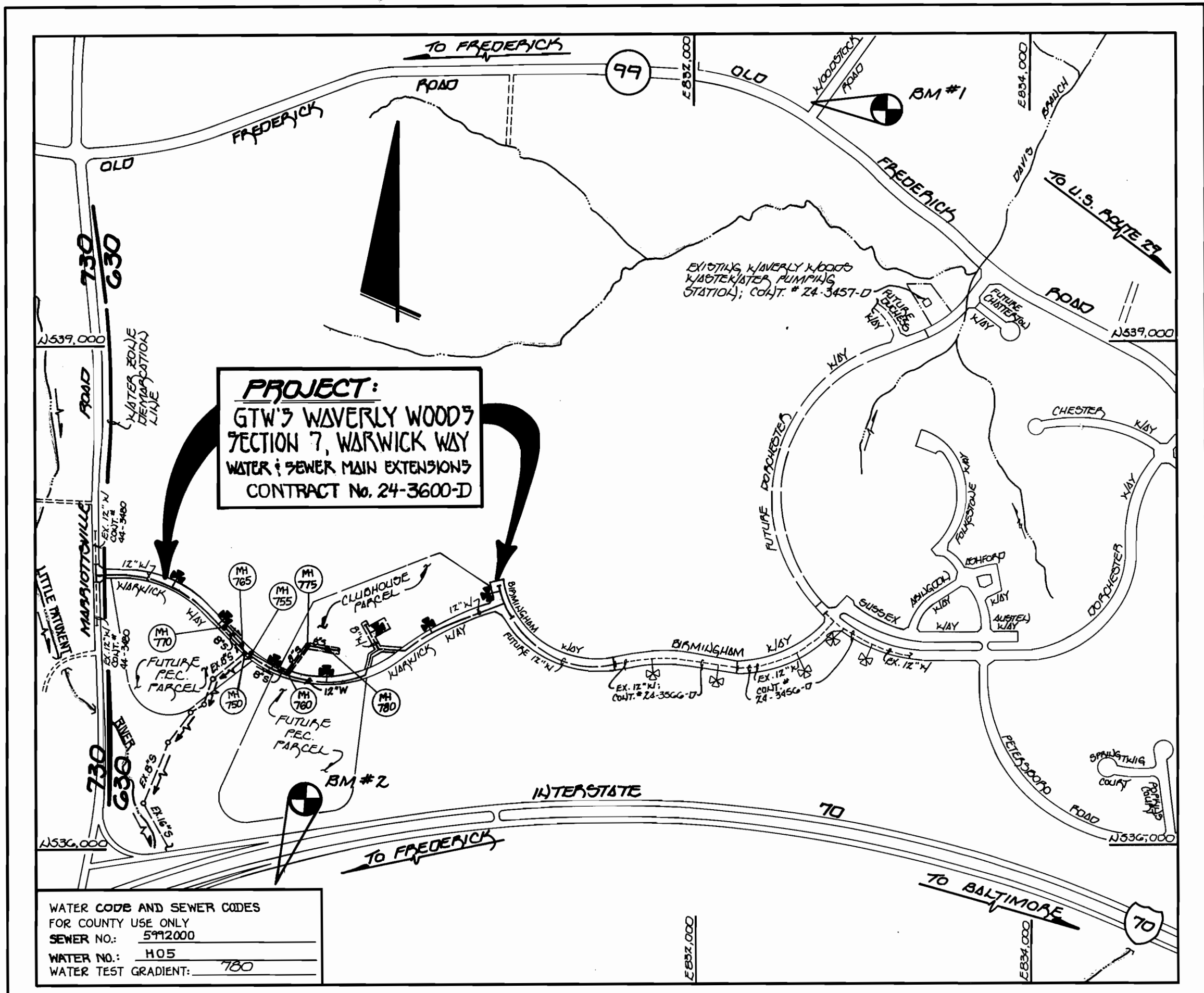


BRS = BELAIR ROAD SUPPLY

QUANTITIES				
ITEM	ESTIMATED	QUANTITIES	AS-BUILT	SUPPLIER
12" WATER	2,900 L.F.	2754	D.I.P.	U.S. PIPE / BRS
8" WATER	163 L.F.	164	D.I.P.	U.S. PIPE / BRS
6" WATER	339 L.F.	337	D.I.P.	U.S. PIPE / BRS
2" WATER	162 L.F.	178	COPPER	READING / BRS
FIRE HYDRANTS	8 EACH	8 EA.	SUPERCENTRIG	MUELLER / BRS
12" x 12" TAPPING SLEEVE & VALVE	1 EACH	1 EA.	STAINLESS STEEL	POWER SEAL / BRS
12" x 12" TEE	1 EACH	1 EA.	D.I.P.	U.S. PIPE / BRS
12" x 8" TEE	2 EACH	3 EA.	"	"
12" x 6" TEE	2 EACH	10 EA.	"	"
8" x 6" TEE	1 EACH	1 EA.	"	"
12" VALVES	4 EACH	5 EA.	R.S.	MUELLER / BRS
8" VALVES	3 EACH	3 EA.	R.S.	"
6" VALVES	10 EACH	10 EA.	R.S.	"
12" 1/2" HB	4 EACH	4 EA.	D.I.P.	U.S. PIPE / BRS
12" PLUG & BUTTRESS	2 EACH	1 EA.	D.I.P.	U.S. PIPE / BRS
8" PLUG & BUTTRESS	2 EACH	3 EA.	D.I.P.	U.S. PIPE / BRS
6" PLUG & BUTTRESS	2 EACH	2 EA.	D.I.P.	U.S. PIPE / BRS
8" SEWER	637 L.F.	655	P.V.C.	J.M. / BRS
8" SEWER (D.I.P.)	139 L.F.	135	D.I.P.	U.S. PIPE / BRS
6" SEWER	66 L.F.	32	P.V.C.	J.M. / BRS
MANHOLES	7 EACH	7 EA.	PRECAST	ATLANTIC

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



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 \square 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 16" 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 G.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.
- 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 (W11 AND W213). 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 18.14(d) OF THE HOWARD COUNTY CODE.

WATER CODES AND SEWER CODES FOR COUNTY USE ONLY
SEWER NO.: 512000
WATER NO.: 105
WATER TEST GRADIENT: 780

TYPE OF BUILDING:	COMMERCIAL / BUSINESS
NUMBER OF PARCELS:	ONE
NO. OF WATER HOUSE CONNECTIONS:	5
NO. OF SEWER HOUSE CONNECTIONS:	2
DRAINAGE AREA:	LITTLE PATRIENT
TREATMENT PLANT:	PATRIENT WWT.P. CITY OF BALTIMORE
VIA ROUTE 100 PUMPING STATION	

VICINITY MAP

SCALE: 1"=600'

PLAN REFERENCE NUMBERS: F 97-100

DEVELOPER'S CERTIFICATION
"I HEREBY CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT & PLAN FOR EROSION & SEDIMENT CONTROL & THAT ALL NECESSARY PRECAUTIONS INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF APPROVAL AT A DEPARTMENT OF THE EQUIPMENT APPROVED THROUGH MEANS FOR THE CONTROL OF SEDIMENT & EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OF THE PROPOSED DEVELOPMENT, AS ARE DEEMED NECESSARY."
Michael McCann FOR WAVERLY DEVELOPMENT CORP. 6-2-97
SIGNATURE OF DEVELOPER DATE

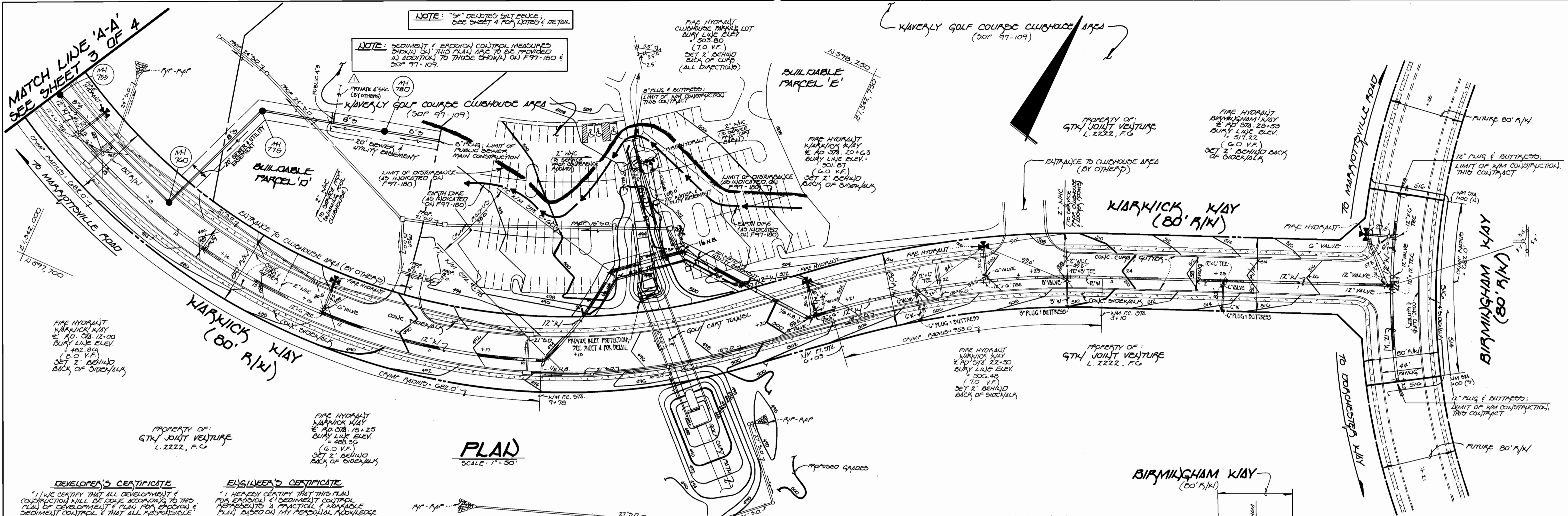
ENGINEER'S CERTIFICATE
"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL REPRESENTS A PRACTICAL & FEASIBLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS & THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
Terrell A. Fisher 6/2/97
SIGNATURE OF ENGINEER DATE

CONTRACT NO. 24-3600-D
GTW'S WAVERLY WOODS
SECTION 7, WARWICK WAY
MARRIOTTSVILLE ROAD TO BIRMINGHAM WAY
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

BENCH MARKS
BM#1 - HOWARD COUNTY CONTROL STATION #102 (JAN 83) (NEAR THE INTERSECTION OF MARYLAND ROUTE 99 & WOODSTOCK ROAD)
A) 601,060.177
E) 1,345,336.758
ELEV. 445.577
BM#2 - HOWARD COUNTY CONTROL STATION #101 (JAN 83) (NEAR THE INTERSECTION OF U.S. ROUTE 40 & MARRIOTTSVILLE ROAD)
A) 593,250.932
E) 1,340,192.711
ELEV. 509.924

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
Cecilia Simmons 9/21/98
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE
THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD SOIL CONSERVATION DISTRICT.
APPROVED:
Howard Soil Conservation District 9/21/98
DATE
SEDEMENT 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 F-97-100
Michael McCann FOR WAVERLY DEVELOPMENT CORP. 6-2-97
SIGNATURE OF DEVELOPER DEVELOPMENT CORP DATE

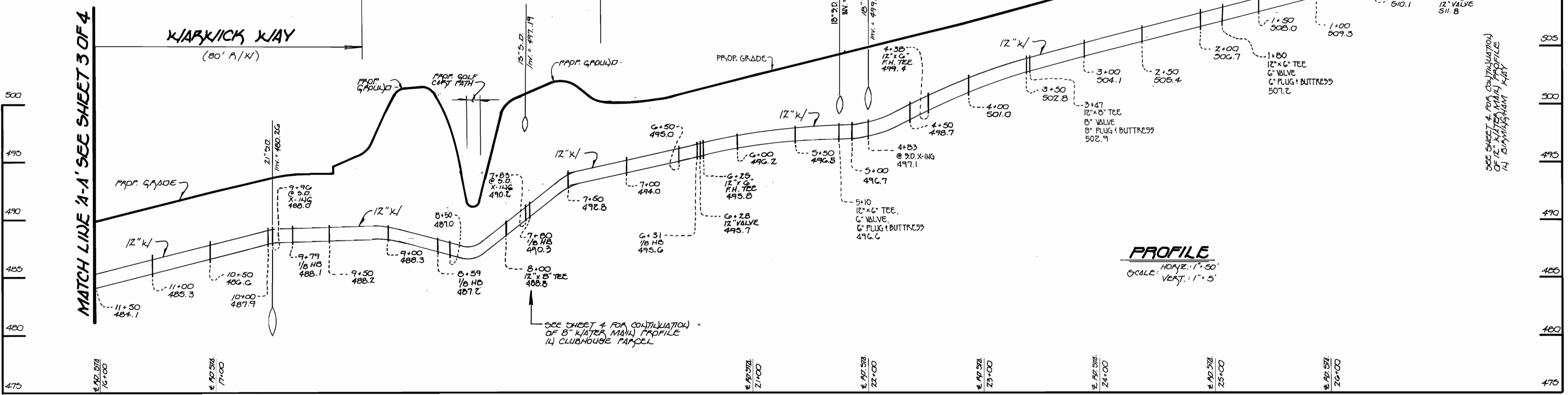
<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p>9-17-98</p>	<p>DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND</p> <p>9/2/98</p>	<p>Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 Baltimore National Pike Ellicott City, Maryland 21042 (410) 481-2855</p> <p>9757</p>	<p>DESIGNED BY: H.J.M. DRAWN BY: H.J.M. / J.M.H. / L.M. CHECKED BY: P.W.K. DATE: MARCH, 1978</p>	<p>ASBUILT REVISIONS ADDED TO PLAN</p>	<p>600' SCALE MAP NO. 16 BLOCK NOS. 412 F.C.C. WORK ORDER NO. 30023</p>	<p align="center">GTW'S WAVERLY WOODS SECTION 7, WARWICK WAY WATER AND SEWER MAIN EXTENSION CONTRACT NO. 24-3600-D THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND</p>	<p>SCALE AS SHOWN SHEET 1 OF 4</p>
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PLAN
SCALE: 1" = 50'

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 EROSION & SEDIMENT 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. Ryan for Kaverly Development Corp. 6-2-97
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE
"I HEREBY CERTIFY THAT THIS PLAN 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."
James P. Fisher 6/2/97
SIGNATURE OF ENGINEER DATE



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

12" WATER MAIN: WARWICK WAY

CONTRACT NO. 24-3600-D
G.T.K.'S KAVERLY WOODS
SECTION 7, WARWICK WAY
WATER & SEWER MAIN EXTENSIONS
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief, Bureau of Utilities 9-17-98 DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND Chief, Development Engineering Division 9/2/98 DATE	Fisher, Collins & Carter, Inc. #9757 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 Baltimore National Pike Ellicott City, Maryland 21042 (410) 481-2855 Terrell A. Fisher	DES: M.J.M. DRAWN: J.M.M. CHK: P.W.K. DATE: MARCH, 1998 BY NO. REVISION DATE	ADD 4" SH. FOR REDUNDANCE BETWEEN MH 775 AND MH 780 ASBUILT CONDITIONS ADDED TO PLAN G/99 1/99	WATER & SEWER MAINS PLAN & PROFILE 600' SCALE MAP NO. 16 BLOCK NO. 415	"ASBUILT SET" G.T.K.'S KAVERLY WOODS SECTION 7, WARWICK WAY WATER & SEWER MAIN EXTENSIONS CONTRACT NO. 24-3600-D THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE AS SHOWN SHEET 2 OF 4
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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 EROSION & SEDIMENT BEFORE BEGINNING THE PROJECT. ALSO I AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT ON THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Michael J. McLean for WAVERLY DEVELOPMENT CORP. 6-2-97
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

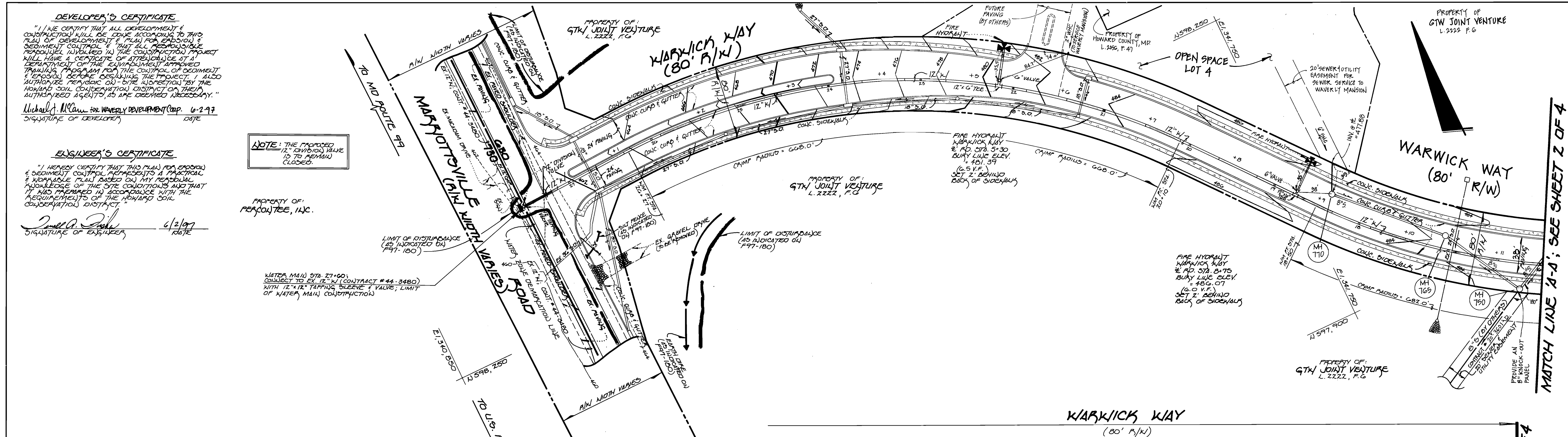
"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL, EROSION CONTROL & WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Terrell A. Fisher 6/2/97
SIGNATURE OF ENGINEER DATE

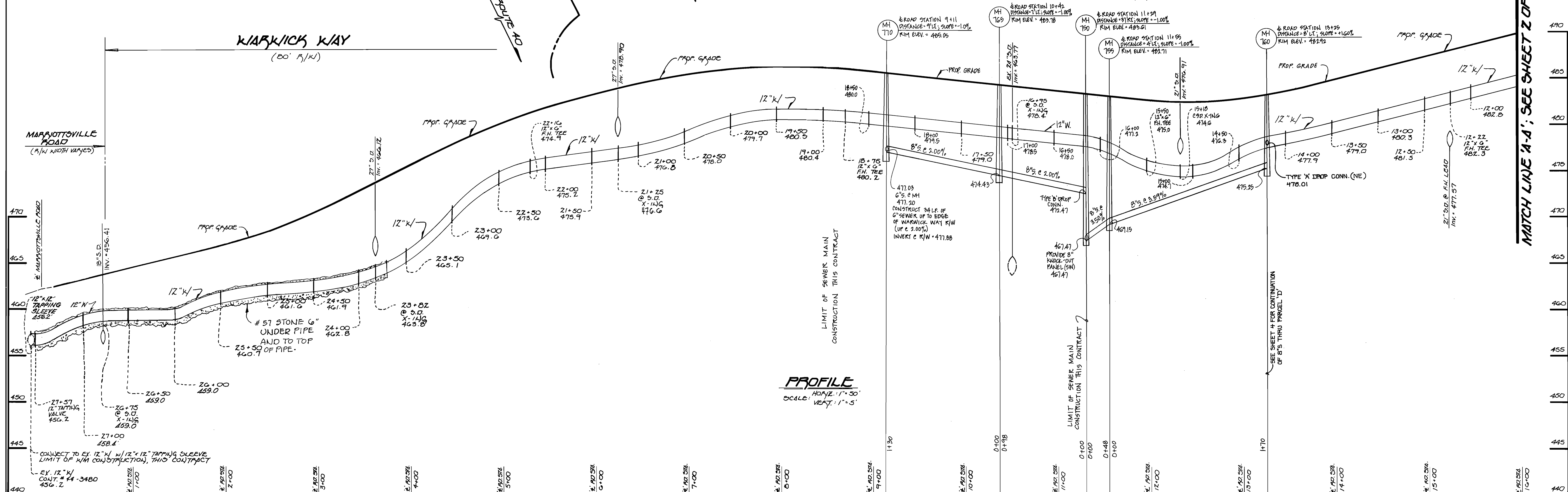
NOTE: THE PROPOSED 12" DIVIDED VALVE TO BE REMOVED & CLOSURE.

PROPERTY OF PERCUTEE, INC.

WATER MAIN STA. 27+00 CONNECT TO EX. 12" W (CONTRACT #44-3480) WITH 12" x 12" TAPPING SLEEVE & VALVE; LIMIT OF WATER MAIN CONSTRUCTION



WARWICK WAY (80' R/W)



12" WATER MAIN: WARWICK WAY

"ASBUILT SET"
CONTRACT NO. 24-3600-D
G.T.K.'S WAVERLY WOODS
SECTION 7, WARWICK WAY
WATER & SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Robert B. Bennett CHIEF, BUREAU OF UTILITIES DATE: 9-17-18	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND Terrell A. Fisher CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 9/17/18	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 DES: J.M.H. DRWN: J.M.H. B.L.M. CHK: P.W.K. DATE: MARCH, 1996 BY: K.O.I. 1 NO. ASBUILT CONDITIONS ADDED TO PLAN REVISION: 1/99	WATER & SEWER MAINS PLAN VIEW & PROFILE 600' SCALE MAP NO. 10 BLOCK NO. 445	G.T.K.'S WAVERLY WOODS SECTION 7, WARWICK WAY WATER & SEWER MAIN EXTENSIONS CONTRACT NO. 24-3600-D THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE AS SHOWN SHEET 3 OF 4
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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 erode and more likely to slow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES
This practice shall be used on denuded areas at final grade and may be used on highly erodible or critically eroding areas. This specification is derived from Temporary Seeding, to quickly establish vegetative cover for short duration top to one year, and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are Temporary Soil Stockpiles, graded areas left bare during construction phases, 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 subsequent plant growth. Sediment control devices prevent sediment from entering surface waters. Sediment control devices prevent sediment from entering surface waters. 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 prevent sediment from entering surface waters. Sediment control devices prevent sediment from entering surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. Site Preparation

- Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
- Perform all grading operations at right angles to the slope. Grading and shaping is not usually necessary for temporary seeding.
- Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

B. Soil Amendments (Fertilizer and Lime Specifications)

- Soil tests must be performed to determine exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 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.
- Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Fertilizers may be substituted with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty of the producer.
- Lime materials shall be ground limestone hydrated or burnt lime may be substituted which contains at least 50% total oxidant calcium oxide plus magnesium oxide. Limestone shall be ground to such fineness that at least 50% will pass through a 40 mesh sieve and 90-100% will pass through a 20 mesh sieve.
- Lime and fertilizer shall be applied to the top 3-5" of soil by disking or other suitable means.

C. Seeded Preparation

- Temporary Seeding
 - 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 ripper mounted on control top equipment, after the surface has been smoothed. 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.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
- Permanent Seeding
 - Minimum conditions required for permanent establishment:
 - Soil pH shall be between 6.0 and 7.0.
 - Soluble salts shall be less than 500 parts per million (ppm).
 - The soil shall contain less than 400 clay, but not less than 10% clay. An exception is if low organic or silica lepedezate is to be planted, then a sandy soil (50% silt plus clay) would be acceptable.
 - Soil shall contain sufficient pore space to permit adequate root penetration.
 - If these conditions cannot be met by soil on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
 - Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then smoothed to a depth of 2-5" to permit loosening of soil to permit loosening of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 - Apply soil amendments as per soil test or as included on the plans.
 - Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and grade the area for seed application. Where site conditions will not permit normal seeded preparation (e.g. steep slopes), areas shall be graded 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 3-5" of soil should be loose and friable. Seeding loosening may not be necessary on newly disturbed areas.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (12-31-99).
- 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 THERE TO.
- SEEDING INITIAL SEEDING OR RE-DISTRIBUTION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 48 CALENDAR DAYS FOR ALL PERMITS GRANTED UNDER THIS PERMITS.
- ALL SEEDING TRANSPORTATION SHALL BE FENCED AND WARNING SIGNS POSTED AROUND THESE PERMITS IN ACCORDANCE WITH VOL. 1, CHAPTER 12 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TEMPORARY SEEDING (SEC. 50), OR SEC. 51, 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.
- 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.
- SITE ANALYSIS
 - TOTAL AREA OF SITE: 3.49 ACRES
 - AREA TO BE GRADED OR PAVED: 0.21 ACRES
 - AREA TO BE VEGETATIVELY STABILIZED: 3.28 ACRES
 - TOTAL CUT: 2,694 CU.YDS.
 - DEFINITE MASTER/BORROW AREA LOCATION: N/A
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- SEEDING AND MULCHING SHALL BE COMPLETED WITHIN 48 HOURS OF THE PERIOD APPROVED BY THE INSPECTION AGENCY IS MADE.
- PERMITS FOR PLACEMENT OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

PERMANENT SEEDING NOTES

SEEDING 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 (85 LBS./1,000 SQ.FT.) AND 100 LBS. PER ACRE 50-20-20 FERTILIZER (14 LBS./1,000 SQ.FT.) BEFORE SEEDING HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING.

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 JUNE 30, SEED WITH 60 LBS./ACRE (1.4 LBS./1,000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.2 LBS./1,000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 29, SEED WITH 60 LBS./ACRE (1.4 LBS./1,000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF FEBRUARY 29 THROUGH MAY 31, SEED WITH 60 LBS./ACRE (1.4 LBS./1,000 SQ.FT.) OF WEEPING LOVEGRASS AND 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SHOWN AS POSSIBLE IN THE SPRING OPTION (2) - USE 500 OPTION (3) - SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE HYDROSEEDED.

MULCHING
APPLY 1 TO 2 TONS PER ACRE (60 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE OF 5 GALLON GALS.) OF ASPHALT OR ASPHALT ON FLAT ACRES. ON SLOPES 8 FEET OR HIGHER USE 340 GALLONS PER ACRE (18 GAL./1,000 SQ.FT.) FOR ANCHORING.

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

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTRIBUTED 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 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 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 (3.2 LBS./ACRE) OF WEEPING LOVEGRASS (0.7 LBS./1,000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 29, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS POSSIBLE IN THE SPRING, OR USE 500.

MULCHING
APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 200 GALLONS PER ACRE (5 GALLON/1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES ON SLOPES 8 FEET OR HIGHER. USE 340 GALLONS PER ACRE (18 GAL./1,000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

TEMPORARY SEEDING NOTES

SEEDING 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./1,000 SQ.FT.)

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FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 17 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./ACRE) OF WEEPING LOVEGRASS (0.7 LBS./1,000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 29, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS POSSIBLE IN THE SPRING, OR USE 500.

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REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

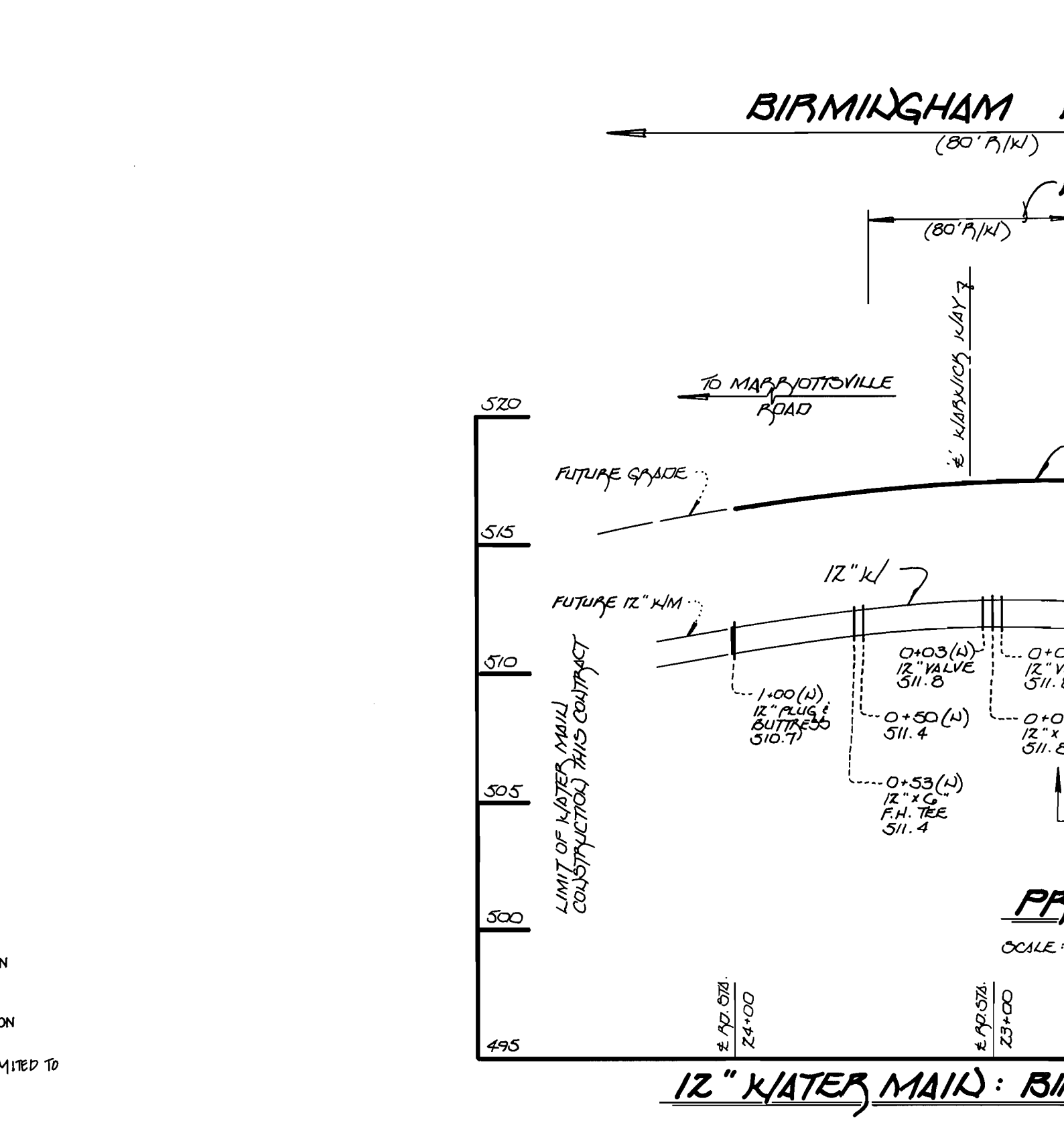
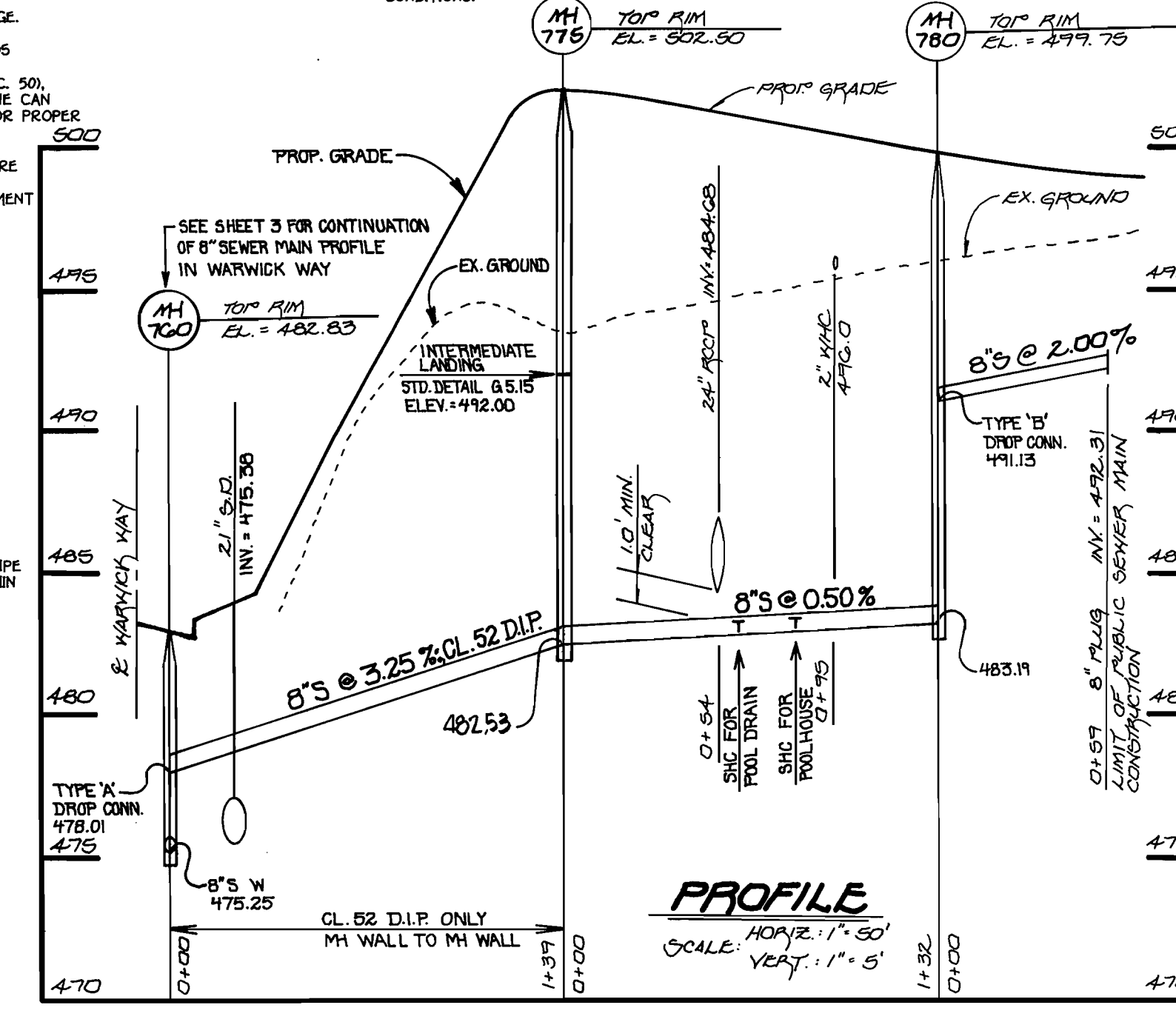
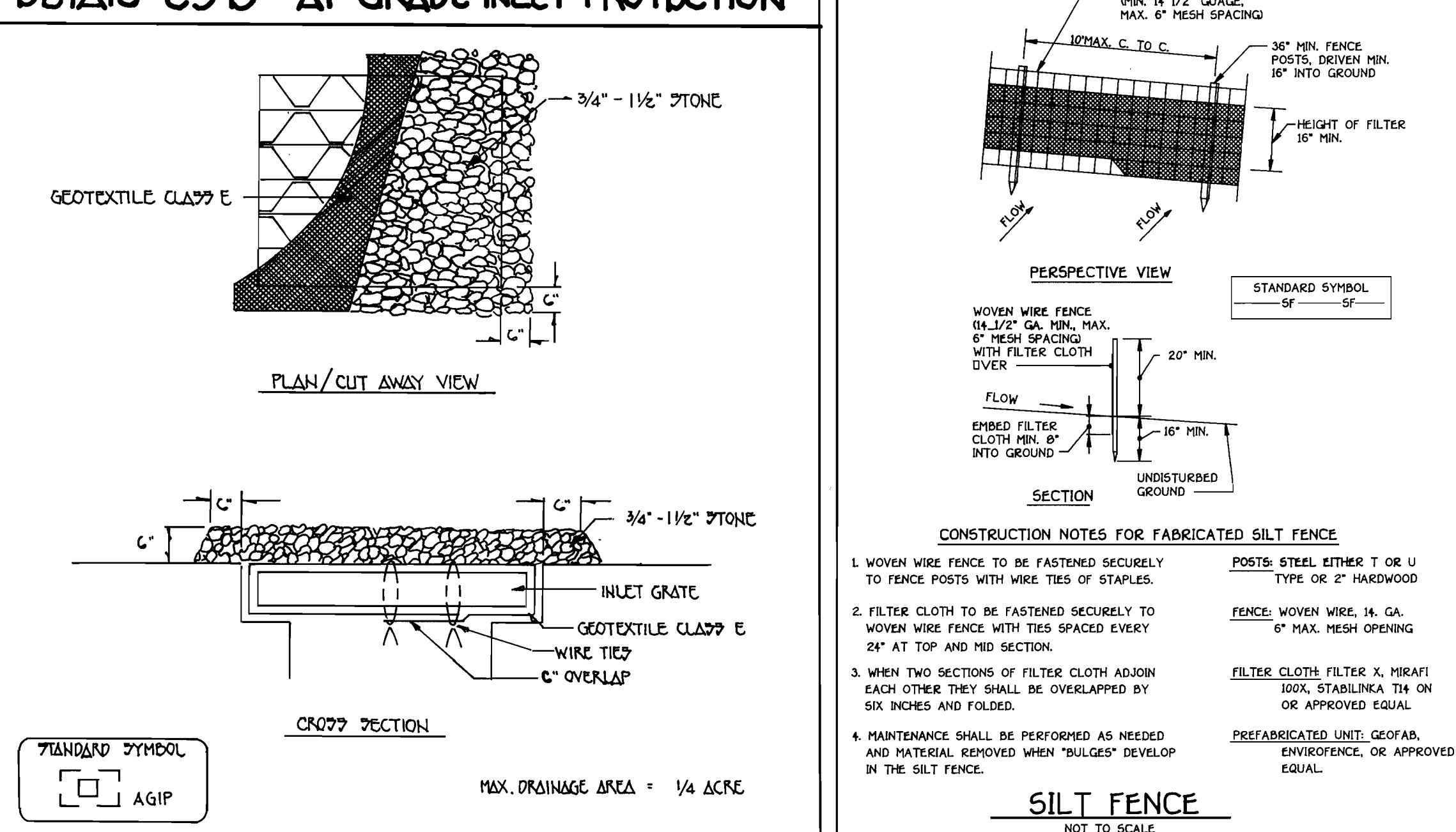
SEQUENCE OF CONSTRUCTION

- OBTAIN THE REQUIRED GRADING PERMIT.
- NOTIFY MISS UTILITY 48 HOURS BEFORE BEGINNING ANY WORK (410-995-7777). NOTIFY HOWARD COUNTY CONSTRUCTION/INSPECTION DIVISION 24 HOURS BEFORE STARTING ANY WORK (410-313-1870).
- INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES AS INDICATED ON SHEETS 2 AND 3 OF THIS CONTRACT.
- CLEAR AND GRUB AS NECESSARY, ONLY AS REQUIRED FOR EXCAVATION AND INSTALLATION OF THE WATER MAIN & SEWER MAINS, AND ONLY WITHIN THE DESIGNATED WATER & UTILITY EASEMENTS.
- NOTE: THE LENGTH OF OPEN WATER SEWER MAIN TRANCH SHOULD BE LIMITED TO 100 FEET OR LESS, UNLESS TEMPORARILY STABILIZED WITHIN ONE (1) WORKING DAY, WHICHEVER IS SHORTER.
- CONSTRUCT THE WATER SEWER MAINS AND APPROXIMATELY 25% STABILIZE SEED AND MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES SHOWN ON THIS SHEET.
- FOLLOWING SUCCESSFUL STABILIZATION OF DISTURBED AREAS, AND AFTER PERMISSION HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES.

STANDARD AND SPECIFICATIONS FOR TOPSOIL

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

DETAIL 23 B - AT GRADE INLET PROTECTION



CONSTRUCTION SPECIFICATIONS

- LIFT GRATE AND WRAIP WITH GEOTEXTILE CLASS E TO COMPLETELY COVER ALL OPENING, THEN SET GRATE BACK IN PLACE.
- PLACE 3/4" X 1 1/2" STONE, 4"-6" THICK ON THE GRATE TO SECURE THE FABRIC AND PROVIDE ADDITIONAL FILTRATION.

MAX. DRAINAGE AREA = 1/4 ACRE

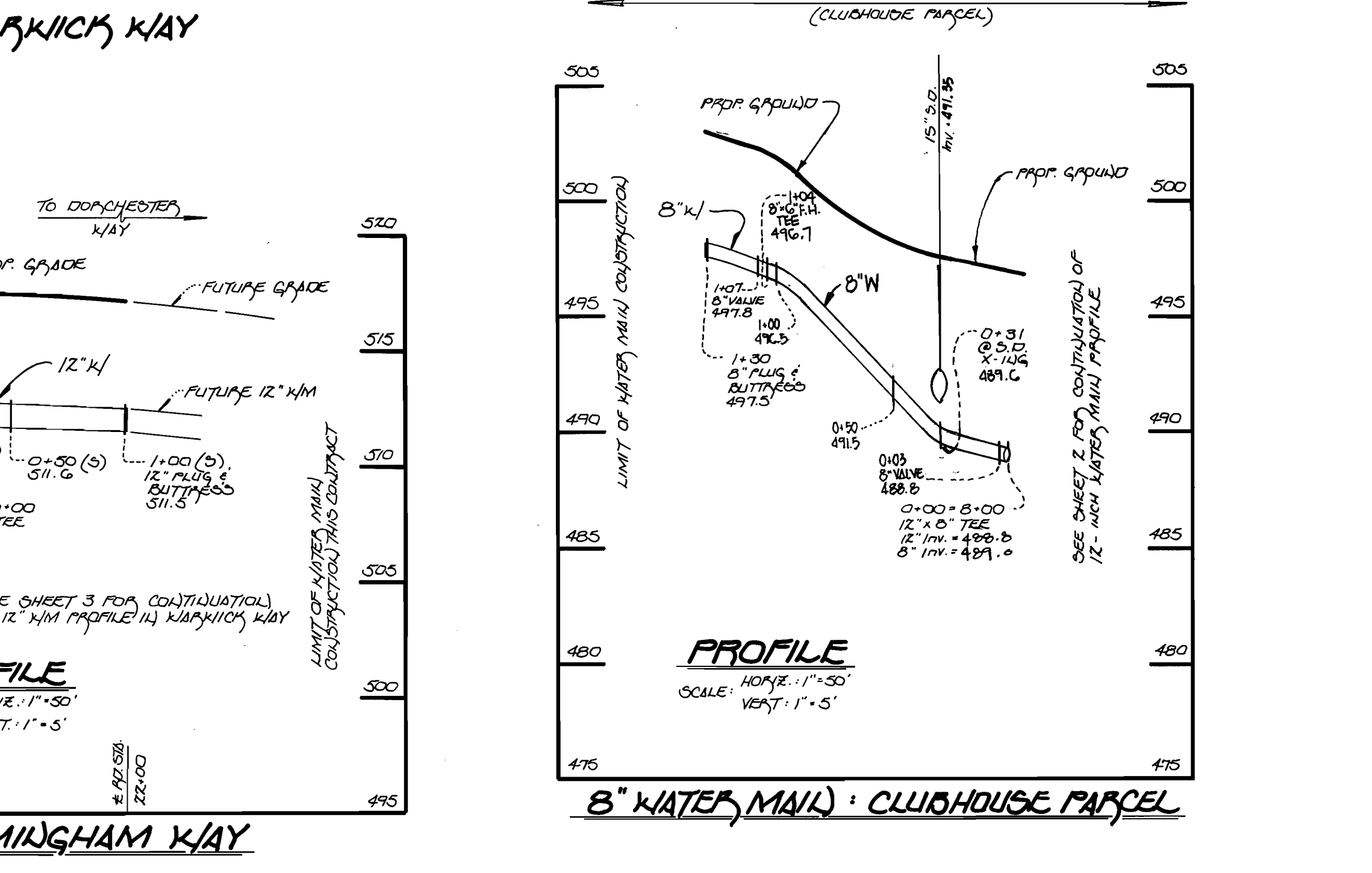
STANDARD SYMBOL
AGIP

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

PAVING
E-1C-5A

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

G.T.W.'s WAVERLY WOODS GOLF COURSE
(CLUBHOUSE PARCEL)



DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THE 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 THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE 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.

SIGNATURE OF DEVELOPER: _____ DATE: 6/2/97

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

ENGINEER'S CERTIFICATION

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 CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER: _____ DATE: 6/2/97

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

MICHAEL M. COOPER, P.E.
DEVELOPER

TERRELL A. FISHER
ENGINEER

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
355 CENTENNIAL SQUARE OFFICE PARK
BILKOWITZ BLVD., SUITE 21045
WYOMING, DELAWARE 19806
(410) 461-2855

DESIGNED BY: M.J.M.
DRAWN BY: M.J.M./J.M.M./L.M.
CHECKED BY: P.W.K.
DATE: MAY 1, 1998
BY NO. KCI 1

ASBUILT CONDITIONS ADDED TO PLAN

DATE: MARCH, 1998

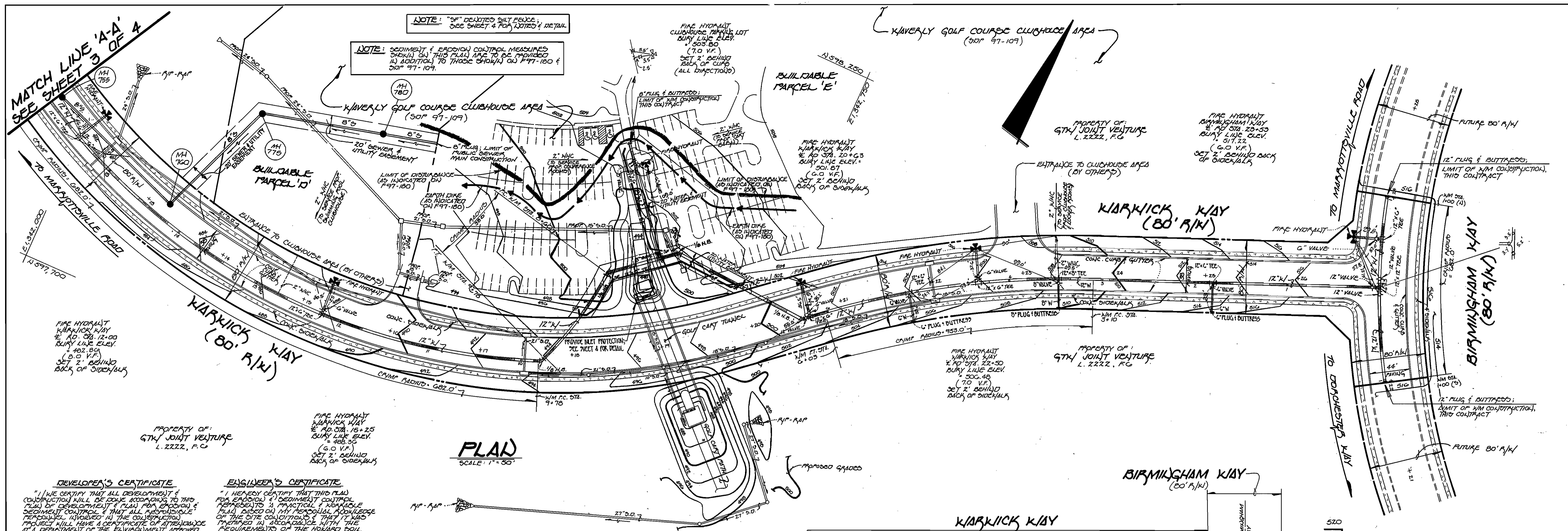
**PROFILES
NOTES AND DETAILS**

600' SCALE MAP NO. 16 BLOCK NO. 4 and 5
F.C.C. WORK ORDER NO. 30025
FILE NAME: G:\DRAWINGS\30025

**G.T.W.'s WAVERLY WOODS
SECTION 7, WARRICK WAY
WATER & SEWER MAIN EXTENSIONS**

CONTRACT NO. 24-3600-D
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

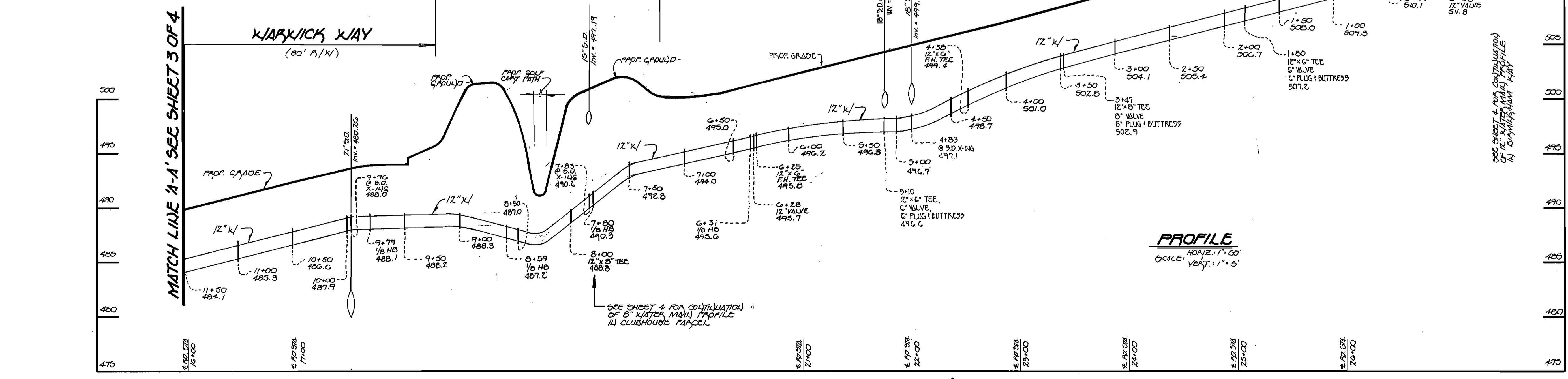
SCALE: AS SHOWN
SHEET: 4 OF 4



PLAN
SCALE: 1" = 50'

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 APPLICABLE FEDERAL, STATE & LOCAL REGULATIONS AND ORDINANCES WILL BE STRICTLY OBSERVED. I AM RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED AND THE COMPLETION OF THE PROJECT WITHIN THE SPECIFIED TIME FRAME. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS NECESSARY."
Michael J. McLean for Kaverly Development Corp. 6-2-97
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE
"I HEREBY CERTIFY THAT THIS PLAN REPRESENTS A PRACTICAL & WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS THAT I HAVE INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
James R. Fisher 6/2/97
SIGNATURE OF ENGINEER DATE



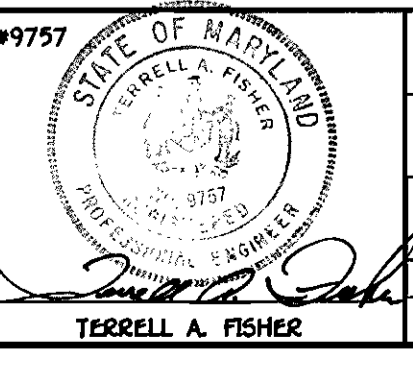
PROFILE
SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'

12" WATER MAIN: KIARWICK WAY

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
R. J. ...
CHIEF, BUREAU OF UTILITIES
9-17-98
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
...
CHIEF, DEVELOPMENT ENGINEERING DIVISION
9/2/98
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: M.J.M.					
DRAWN: J.M.M.					
CHK: P.W.K.					
DATE: MARCH, 1998					
BY NO.		REVISION		DATE	

WATER & SEWER MAINS
PLAN & PROFILE
600' SCALE MAP NO. 16 BLOCK NO. 415

G.T.K.'s KAVERLY WOODS
SECTION 7, KIARWICK WAY
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 24-3600-D
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 2 OF 4

CONTRACT NO. 24-3600-D
G.T.K.'s KAVERLY WOODS
SECTION 7, KIARWICK WAY
WATER & SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND