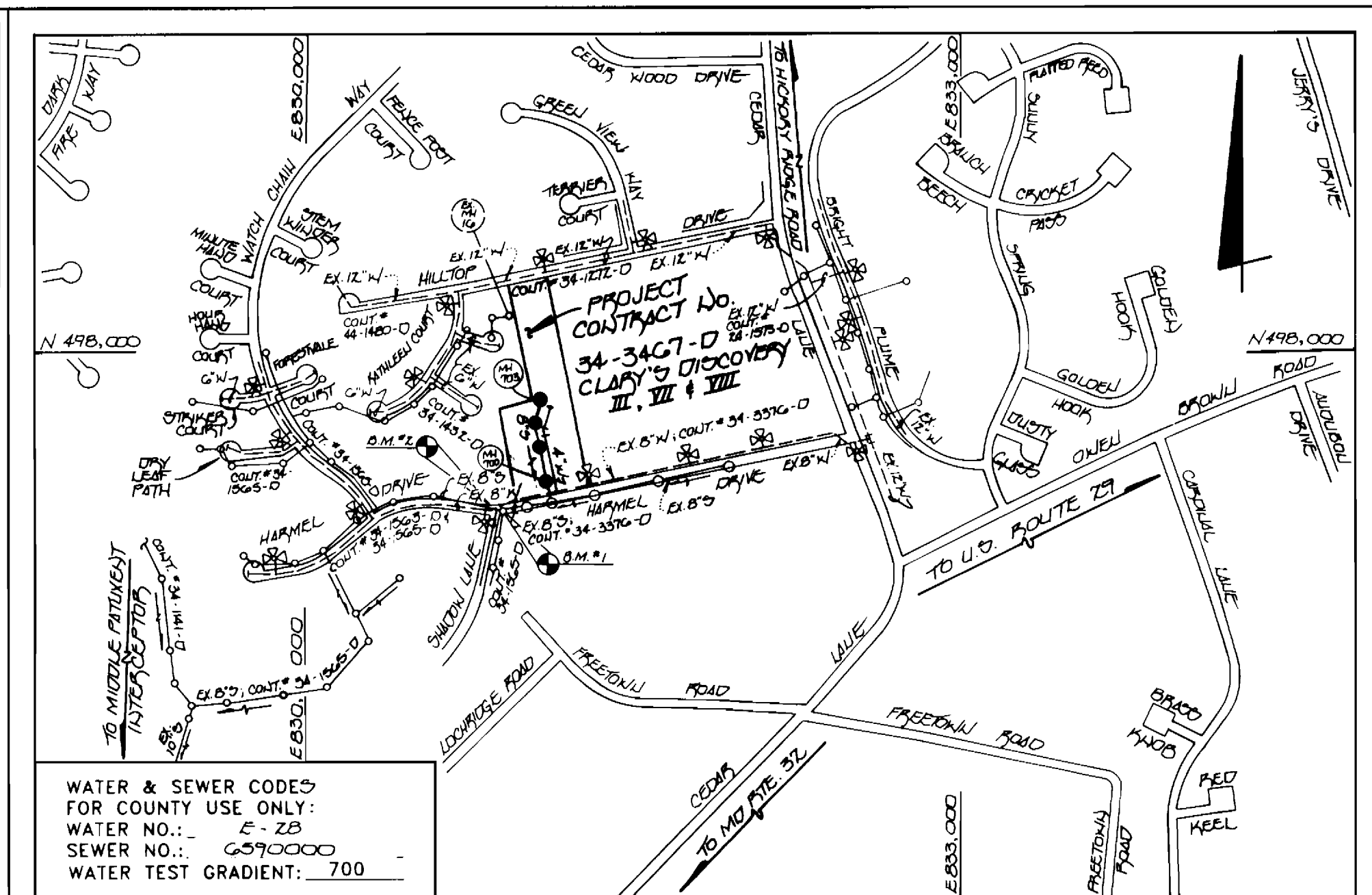


QUANTITIES

ITEM	ESTIMATED	QUANTITIES	AS-BUILT TYPE	OUTLIER
8" DENVER	515 LF	504	P.V.C.	J-M MANUFACTURING
4" DENVER	205 LF	239	"	"
MANHOLES	4 EACH	4	PRECAST CONC.	ATLANTIC M.I. CO.
8" WATER	3 LF	3	D.I.P. CLASS 92	GREEN PIPE / B.E.S.
4" WATER	450 LF	495	"	"
1" HMC	150 LF	159	TYPE 'K' COPPER	HOWELL METALS B.E.S.
3/4" HMC	85 LF	97	"	"
0.4" REDUCER	1 EACH	1	D.I.P. CLASS 92	GREEN PIPE / B.E.S.
1 1/2" DRAIN	1 EACH	1	B.E.S.	MERIT BRASS B.E.S.
1/2" HD	1 EACH	1	D.I.P. CLASS 92	GREEN PIPE / B.E.S.
4" PLUG & OUTLET	1 EACH	1	"	"

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

NOTE: B. R. S. - BEL AIR ROAD SUPPLY CO. INC.



SHC INVERTS @ 'R' CHART

STATION	LOT	ELEVATION
0+00 FT	EX. MH 101 TO MH 100	387.01
0+90 FT	CLARY'S III, LOT 1	387.31
0+07 FT	CLARY'S III, LOT 2	395.60
0+14 FT	CLARY'S III, LOT 2	395.40
1+45 FT	CLARY'S III, LOT 3	391.20
2+04 FT	CLARY'S III, LOT 3 @ 100%	391.09
1+20 FT	MH 102 TO MH 103	390.70
@ MH 103 LT	CLARY'S III, LOT 3	404.70
@ EX. MH 10	EX. MH 10 TO EX. MH 10	404.14

- ### 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 OR TUNNEL AS REQUIRED.
 - 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 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.
 - 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 92 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 18.114(a) OF THE HOWARD COUNTY CODE.

BENCHMARKS

BENCHMARK #1	ELEV. 389.60	BENCHMARK #2	ELEV. 389.15
CENTERLINE OF EX. SANITARY MH APPROX. 40' SOUTHWEST OF INTERSECTION OF HARMEL DRIVE & SHADOW LANE		CENTERLINE OF EX. WATER VALVE APPROX. 40' NORTHWEST OF INTERSECTION OF HARMEL DRIVE & SHADOW LANE	

NOTE: EXISTING 8" WATER & 8" DENVER IN HARMEL DRIVE WAS BUILT UNDER CONTRACT NO. 34-3376-D

PLAN REFERENCE NUMBERS:
F 96-99 (III)
F 96-92 (VII)
F 96-44 (VIII)

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
Patricia Engler 1/17/96
LOCAL NATURAL RESOURCE CONSERVATION SERVICE

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

APPROVED:
John R. Blanton 4/17/96
HOWARD SOIL CONSERVATION DISTRICT

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.

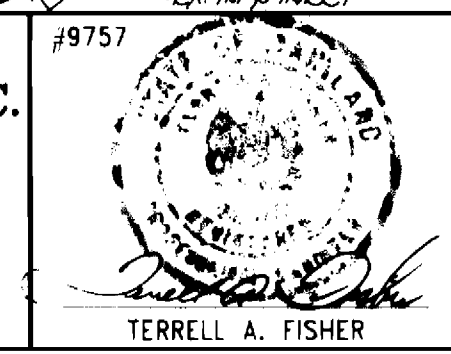
Paul W. Kriebel 12/19/95
SIGNATURE OF DEVELOPER DATE

PLANS
SCALE: 1" = 60'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert Berman 1-3-96
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
John R. Blanton 1/18/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 421-7000
TERRELL A. FISHER



DES: M.J.M.
DRWN: J.M.W./M.J.M.
CHK: P.W.K.
DATE: 8/14/95

FCC	REVISE SHC INVERTS @ 'R' CHART	4-23-96
FCC	REVISE 8" WATER & 8" DENVER MAINS; REVISE LOT LINE	4-23-96

BY NO. REVISION DATE

PLAN VIEW
WATER AND SEWER MAINS
600' SCALE MAP NO. 35 BLOCK NO. 11

CLARY'S DISCOVERY III, VII & VIII
LOTS 1-3, LOTS 1-3 & LOTS 1-3
CONTRACT NO. 34-3467-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 1 OF 2
CDTS.DWG

DEVELOPER'S CERTIFICATE
 I HEREBY 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 THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERSONS ON-SITE INSPECTED BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.
 Signature of Developer: [Signature] DATE: 12/19/95

ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL & 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: Paul W. Kimmel DATE: Nov. 22, 1995

As-Built Locations CLARY'S DISCOVERY VIII

LOT#	FROM	TO	DIST.
1	4" SHC	MH 700	25'
"	"	EX. 8" V#1	62.2'
"	"	EX. 3/4" WHC	91.3'

As-Built Locations CLARY'S DISCOVERY VIII (E. House #10884)

LOT#	FROM	TO	DIST.
2	4" SHC	3/4" WHC LOT 2	28.5'
"	"	MH 701	22.6'
"	3/4" WHC	"	41'
"	"	3/4" WHC LOT 2 SEC III	95.4'
"	"	N. COR. CARPORT EX. HOUSE #10884	40'

As-Built Locations CLARY'S DISCOVERY VIII

LOT#	FROM	TO	DIST.
3	4" SHC	24" Ø FINE TUBE	16'
"	"	3/4" WHC LOT 2	14'
"	"	MH 702 SEC III	82.6'
"	3/4" WHC LOT 3	"	69'

As-Built Locations CLARY'S DISCOVERY III

LOT#	FROM	TO	DIST.
3	4" SHC	MH 703	28.4'
"	"	3/4" WHC LOT 3	31.8'
"	"	1/2" BLOW OFF DEAIN	32'
"	3/4" WHC	MH 703	29'
"	"	1/2" DEAIN	5'

As-Built Locations CLARY'S DISCOVERY III

LOT#	FROM	TO	DIST.
3 SEC II	4" SHC	FENCE CORNER	32.6'
"	"	1" WHC	10.2'
"	1" WHC	FENCE CORNER	40'

As-Built Locations CLARY'S DISCOVERY III

LOT#	FROM	TO	DIST.
1	1" WHC	EX. 6" F.H.V.	104.5'
"	"	N.W. CORNER EX. HOUSE #10891	78.2'
"	"	N.E. "	96.2'
"	"	EX. SEPTIC TANK C.O.	34'

As-Built Locations CLARY'S DISCOVERY VIII

LOT#	FROM	TO	DIST.
1	4" SHC	MH 700	25'
"	"	EX. 8" V. (TO SITE)	66'
"	"	EX. MH 101	89'

As-Built Locations CLARY'S DISCOVERY VII

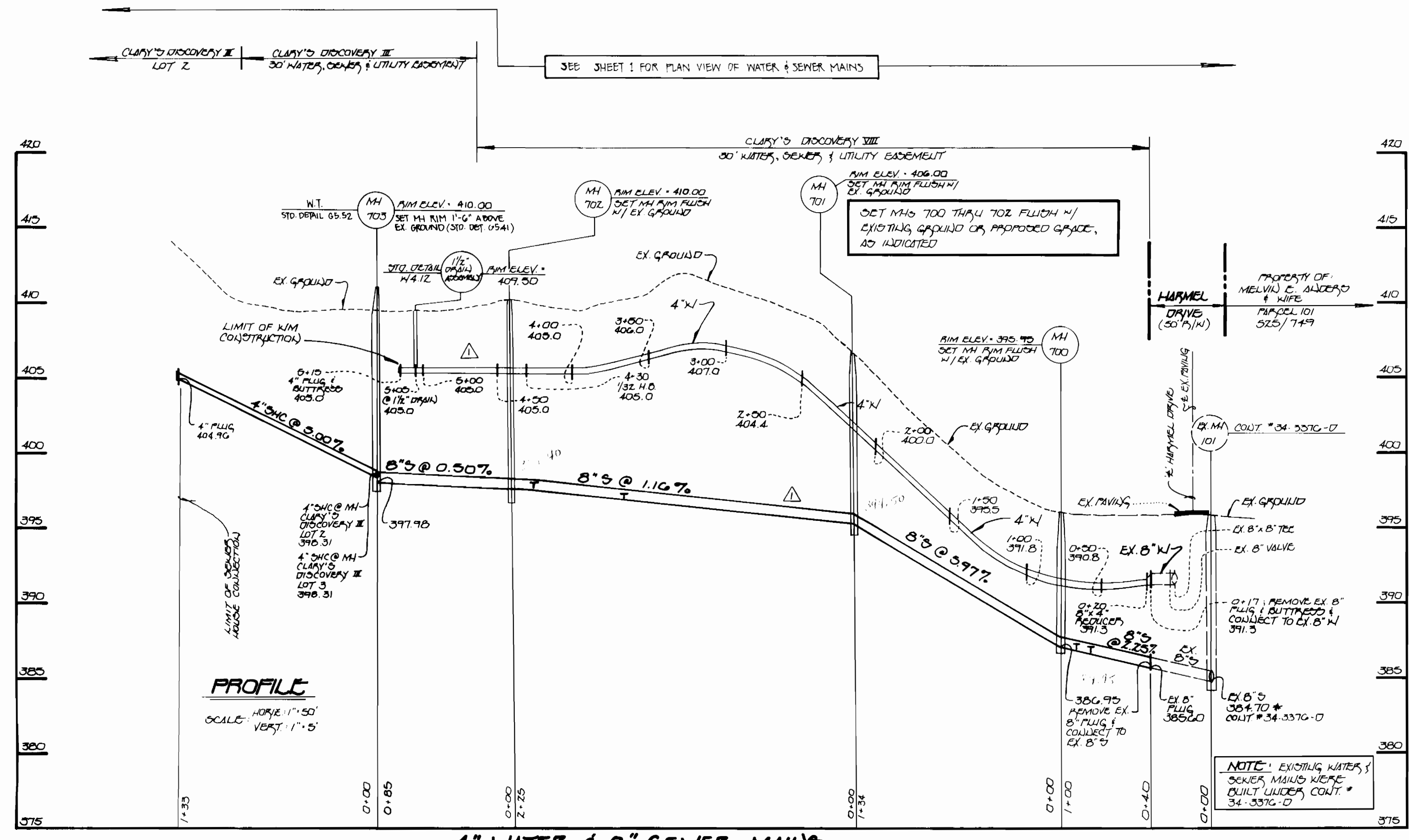
LOT#	FROM	TO	DIST.
2 (EX. HOUSE #1089)	4" SHC	MH 701	15.6'
"	"	4" SHC (LOT 2) #10884	34'
"	"	S.E. CORNER OF CARPORT	21.6'
"	"	3/4" WHC LOT 2	79.2'
"	"	N.E. CORNER OF CARPORT	24.2'
"	"	MH 701	82'

As-Built Locations CLARY'S DISCOVERY III

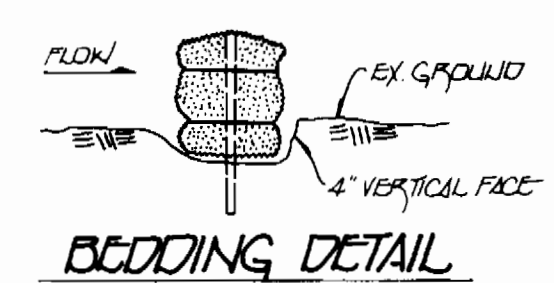
LOT#	FROM	TO	DIST.
3	4" SHC	MH 702	29.6'
"	"	3/4" WHC LOT 3 SEC III	55'
"	"	" " " VII	37.7'
"	3/4" WHC	MH 702	19.4'
"	"	703	60.4'

As-Built Locations CLARY'S DISCOVERY III

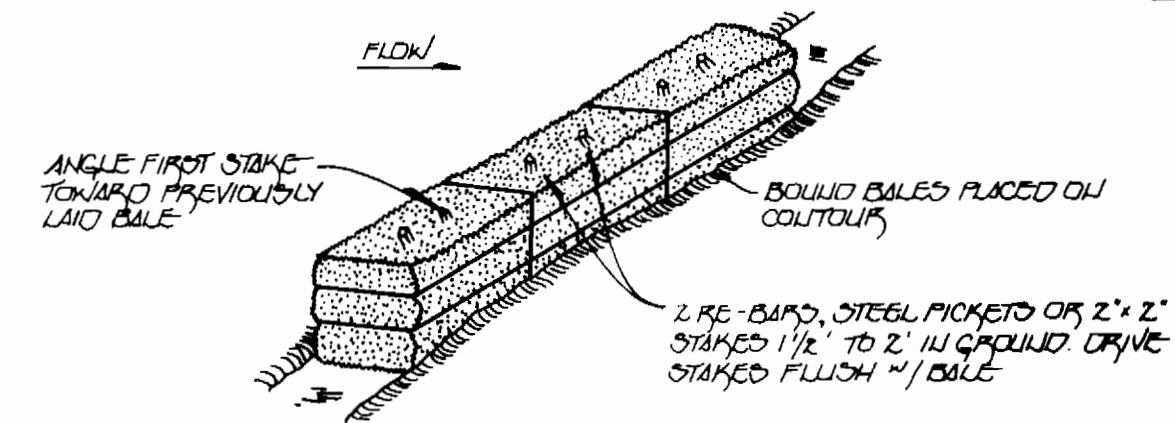
LOT#	FROM	TO	DIST.
3 SEC III	1/2" DEAIN	MH 703	19.5'
"	"	" 702	2.7'
"	"	WHC LOT 3 SEC III	5'



NOTE: THE LENGTH OF OPEN TRENCH FOR INSTALLATION OF THE WATER & SEWER MAINS SHALL BE LIMITED TO A MAXIMUM OF THREE (3) PIPE LENGTHS OR TO THAT WHICH CAN BE BACKFILLED & STABILIZED IN ONE (1) WORKING DAY, WHICHEVER IS SHORTER.



SEE SHEET 1 FOR LOCATIONS OF STRAW BALE DIKES



STRAW BALE DIKE

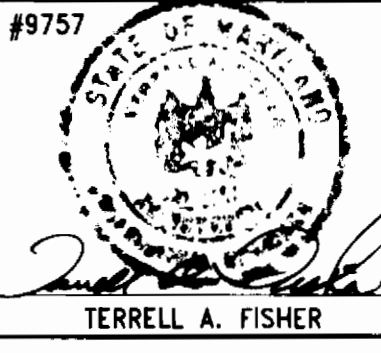
1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR, & IN A ROW WITH EDDO TIGHTLY ADJUTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES, & PLACED SO THE BUNDLES ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY OTHERS TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH W/ THE BALE.
4. INSPECTIONS SHALL BE FREQUENT & REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPED EROSION FLOW OR OUTFLOW.

NOTE: EXISTING WATER & SEWER MAINS WERE BUILT UNDER CONT. # 34-3376-D

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 [Signature] 1-3-96
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 [Signature] 1/10/96
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK
 10272 BALTIMORE NATIONAL PIKE
 CLICOTT CITY, MARYLAND 21042
 (410) 401-2855



DES:	M.J.M.				
DRWN:	J.M.M./M.J.M.				
CHK:	P.W.K.				
DATE:	8/10/95				
FCC BY NO.		REVISION		DATE	
		REVISED 4" WATER & 8" SEWER MAINS		1/23/96	

**WATER AND SEWER MAINS
 PROFILES AND DETAILS**
 600' SCALE MAP NO. 35 BLOCK NO. 17

CLARY'S DISCOVERY III, VII & VIII
 LOTS 1-3, LOTS 1-3 & LOTS 1-3
 CONTRACT NO. 34-3467-D
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 2
 CD.DWG