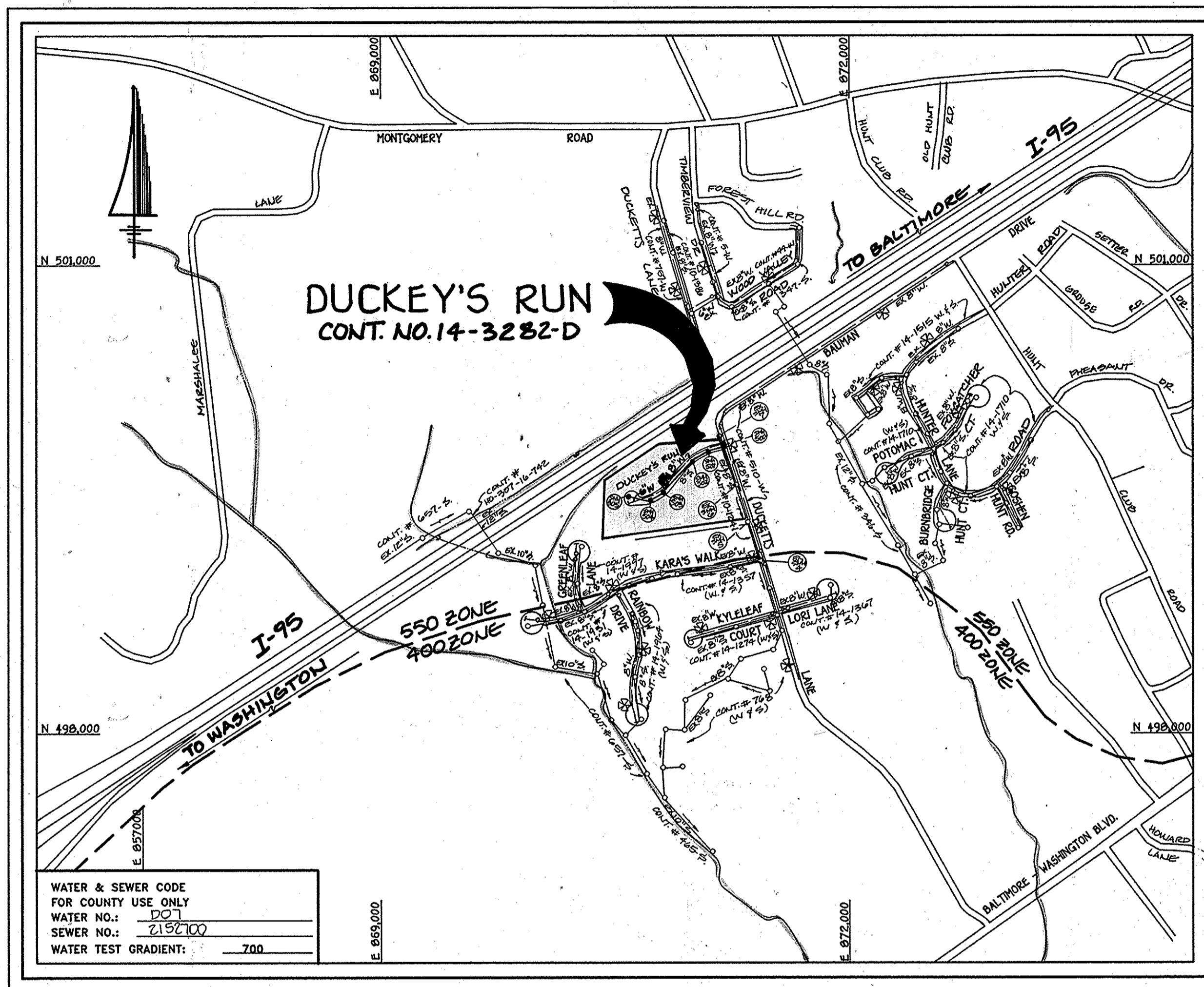


AS-BUILT 11/14/94

QUANTITIES				
ITEM	ESTIMATED	QUANTITIES	AS-BUILT	SUPPLIER
8" WATER	467 LF.	470	DE CL 52	GRIMPEL BELL & HOWELL
6" WATER	288 LF.	290	DE CL 52	"
1" WHC	308 LF.	276	SOFT "K" COPPER	HOWELL METALS
3/4" WHC	388 LF.	373.5	"	"
FIRE HYDRANTS	1 EACH	1	6" D"	MILLER CO
6" VALVE	2 EACH	2	SOFT "K" COPPER	"
8" T.S.V. VALVE	1 EACH	1	TAPPING VALVE	U.S. PIPE & FOUNDRY
8" SEWER	735 LF.	735	8" X 18" SDR-35 PVC	J.M. WILCOX CO.
4" SEWER	753 LF.	887	4" X 18" SDR-35 PVC	"
MANHOLES	6 EACH	6	RCC SANITARY	CANTON CO. / ATLANTIC

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



WATER & SEWER CODE
FOR COUNTY USE ONLY
WATER NO.: 1907
SEWER NO.: 2152100
WATER TEST GRADIENT: 700

TYPE OF BUILDING: RESIDENTIAL
NUMBER OF LOTS: 28 (BUILDABLE: 26)
NO. OF WATER HOUSE CONNECTIONS: 26
NO. OF SEWER HOUSE CONNECTIONS: 26
DRAINAGE AREA: PATAPSCO
TREATMENT PLANT: PATAPSCO WASTEWATER TREATMENT
PLANT: CITY OF BALTIMORE

VICINITY MAP
SCALE: 1"=600'

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 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., R.C.P., C.S.P.X., R.C.C.P., V.C.P.X., 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 AND COVERS, STANDARD DETAIL G5.51.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN THE SEWER MAINS WITHIN 2'-0" OF EXISTING MANHOLE WALL.
- 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. 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(g) OF THE HOWARD COUNTY CODE.

CONTRACT No. 14-3282-D
DUCKEY'S RUN
LOTS 1 - 28
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

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

APPROVED:
[Signature] 12/15/93
HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN F-94-04 REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

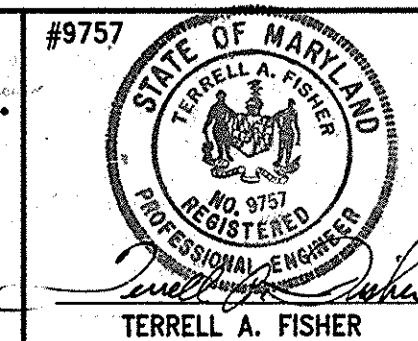
[Signature] 12/15/93
U.S. SOIL CONSERVATION SERVICE DATE

PLAN REFERENCE NUMBERS:
S93-08
F 94-04

CONTRACT NO. 14-3282-D
DUCKEY'S RUN
LOTS 1 - 28
WATER AND SEWER EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[Signature] 12/15/93
DIRECTOR OF PUBLIC WORKS DATE
[Signature] 12/15/93
CHIEF, BUREAU OF ENGINEERING DATE
[Signature] 12/15/93
CHIEF, LAND DEVELOPMENT DIVISION DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2855



DES:	M.S.V.		
DRWN:	J.C.A.		
CHK:	P.W.K.		
DATE:			
BY	NO.	REVISION	DATE

TITLE SHEET
600' SCALE MAP NO. 37 BLOCK NO. 12

DUCKEY'S RUN
LOTS 1 - 28
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 1 OF 3

AS-BUILT 11/14/94

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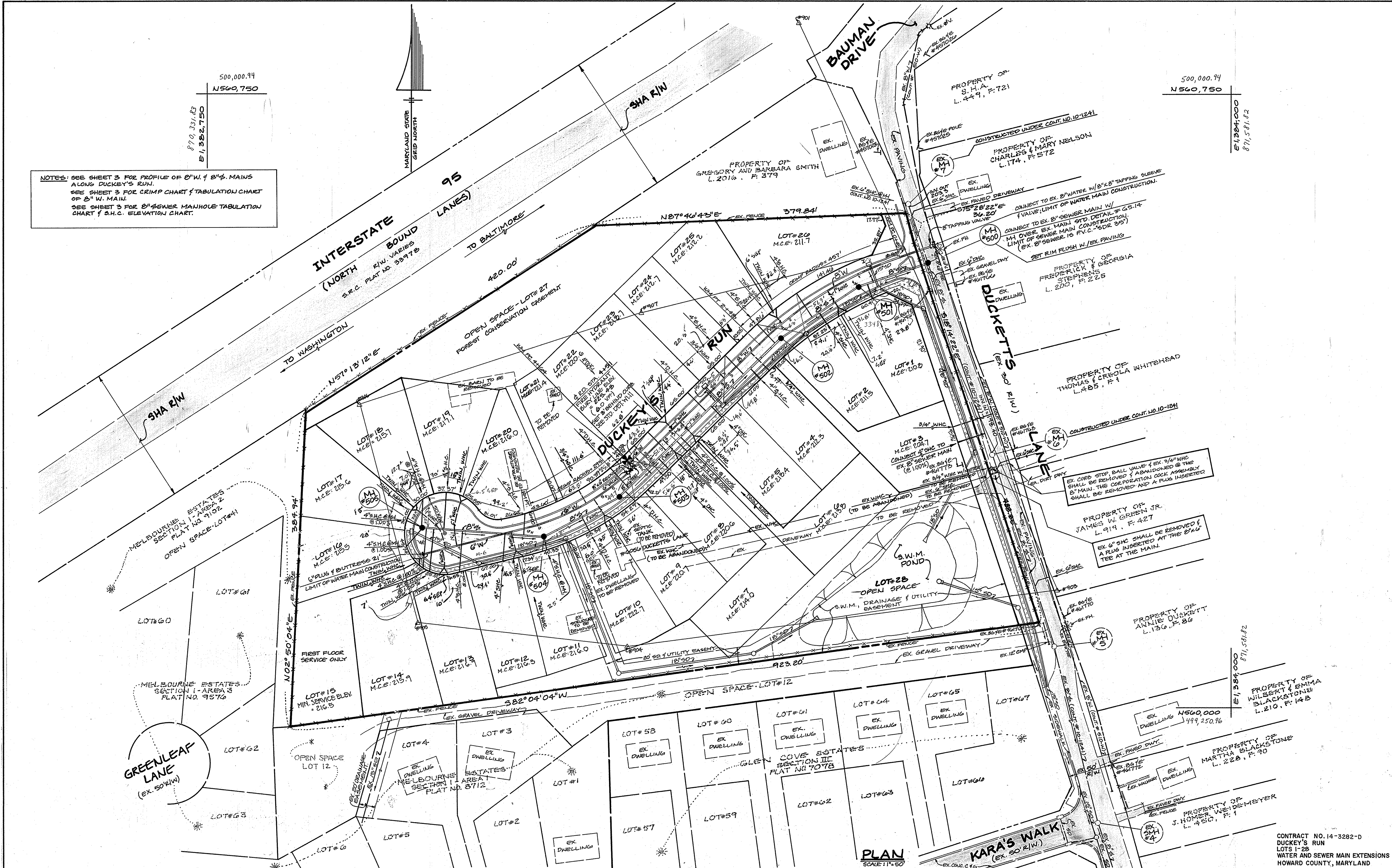
3282 W/S 1 DUCKEY'S RUN

AS-BUILT 11/14/94

Duckey's Run

3282

NOTES: SEE SHEET 3 FOR PROFILE OF 8" W. & 8" S. MAINS ALONG DUCKEY'S RUN.
 SEE SHEET 3 FOR CRIMP CHART & TABULATION CHART OF 8" W. MAIN.
 SEE SHEET 3 FOR 8" SEWER MANHOLE TABULATION CHART & S.H.C. ELEVATION CHART.



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: James J. [Signature] 12/29/93
 Chief, Bureau of Engineering: [Signature] 12/29/93
 Chief, Bureau of Utilities: [Signature] 12/15/93
 Chief, Land Development Division: [Signature] 12/29/93

FISHER, COLLINS, AND CARTER, INC.
 CONSULTING ENGINEERS AND LAND SURVEYORS
 9171 BALTIMORE NATIONAL PIKE
 SUITE 100
 ELLICOTT CITY, MARYLAND 21043
 (410) 461-2855
 #9757
 STATE OF MARYLAND
 TERRILL A. FISHER

DES: M.S.V.	
DRN: M.S.V.	
CHK: P.W.K.	
DATE:	
BY:	
NO.:	
REVISION:	
DATE:	

WATER AND SEWER MAINS
 PLAN
 SCALE: 1" = 60'
 600' SCALE MAP NO. 37 BLOCK NO. 12

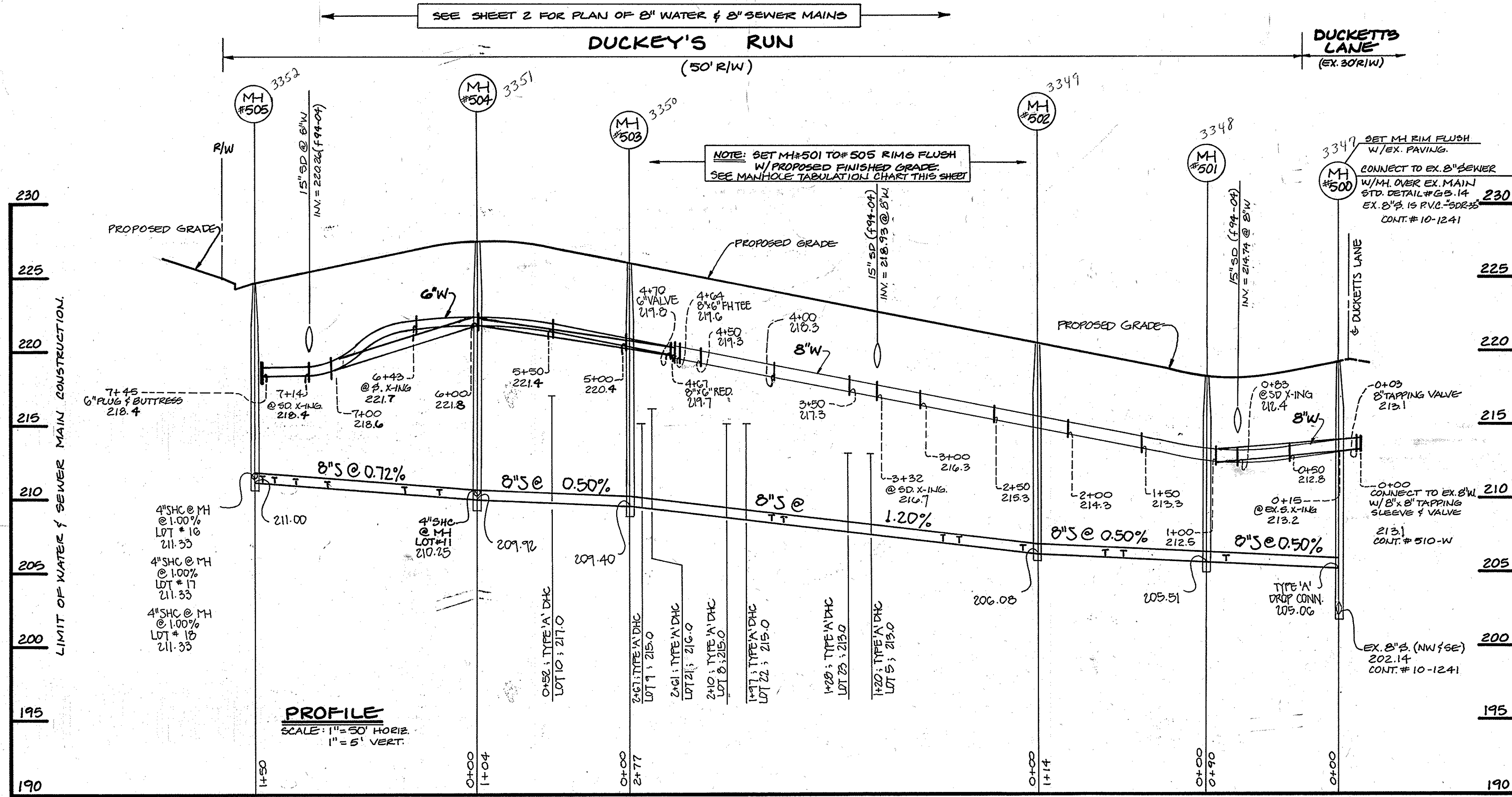
DUCKEY'S RUN
 LOTS 1-28
 CONTRACT NO. 14-3282-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE AS SHOWN
 SHEET 2 OF 3

AS-BUILT 11/14/94

AS-BUILT 11/14/94

DUCKEY'S RUN
w/s 3

3202



RD STATION	APPURTENANCE	DISTANCE
2+90	8" TAPPING SLEEVE/VALVE	5' LT.
4+51	8" G' RH. TEE	7' RT.
4+54	8" G' REDUCER	7' RT.
4+58	6" VALVE	7' RT.
L.P. 1+12	8" PLUG & BUTTRESS	2' RT.

WT STATION	APPURTENANCE	RADIUS
0+45	PC: BEGIN CRIMP	45'
2+48	PT: END CRIMP	
4+10	PC: BEGIN CRIMP	293'
6+00	PT: END CRIMP	

MH NR.	RD. STATION	DISTANCE	SLOPE	RIM ELEV.
#500	3+07	5' RT.		218.74
#501	0+98	5' LT.	+0.81%	218.25
#502	2+11	6' LT.	+2.00%	220.22
#503	4+87	9' LT.	+2.00%	225.15
#504	5+89	9' LT.	-0.78%	227.18
#505		IN CUL-DE-SAC		224.73

STATION	LOT #	ELEVATION
MH#500 TO MH#501		
0+80 LT.	1	206.01
MH#501 TO MH#502		
0+58 LT.	2	206.31
0+68 RT.	26	206.70
MH#502 TO MH#503		
0+10 RT.	25	207.01
0+23 RT.	4	207.25
0+44 RT.	24	207.66
1+10 LT.	5	213.36
1+28 RT.	23	213.64
1+72 LT.	6 (1.00%)	209.89
1+79 LT.	7 (1.00%)	208.58
1+97 RT.	22	215.64
2+10 LT.	8	215.36
2+61 RT.	21	216.64
2+67 LT.	9	219.36
MH#503 TO MH#504		
0+52 LT.	10	217.36
@ MH#504 LT.	11	210.61
MH#504 TO MH#505		
0+25 RT.	20	210.81
0+42 LT.	12	211.12
1+00 LT.	13	211.81
1+23 RT.	19	211.86
1+35 LT.	14 (1.00%)	211.89
1+44 LT.	15 FF SERVICE ONLY (1.00%)	211.61
@ MH#505 LT.	16 (1.00%)	211.63
@ MH#505 RT.	17 (1.00%)	211.53
@ MH#505 RT.	18 (1.00%)	211.67
EX. MH#6 TO EX. MH#7		
0+27 LT.	3	199.60

CONTRACT NO. 14-3282-D
DUCKEY'S RUN
LOTS 1-28
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works DATE: 12/29/93 Chief, Bureau of Utilities	FISHER, COLLINS, AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS 9171 BALTIMORE NATIONAL PIKE SUITE 100 ELLICOTT CITY, MARYLAND 21043 (410) 401-2855		DES: M.S.V.		WATER AND SEWER MAINS PROFILES	DUCKEY'S RUN LOTS 1-28 CONTRACT NO. 14-3282-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN
			DRN: M.S.V.				DATE: 12/29/93

AS-BUILT 11/14/94