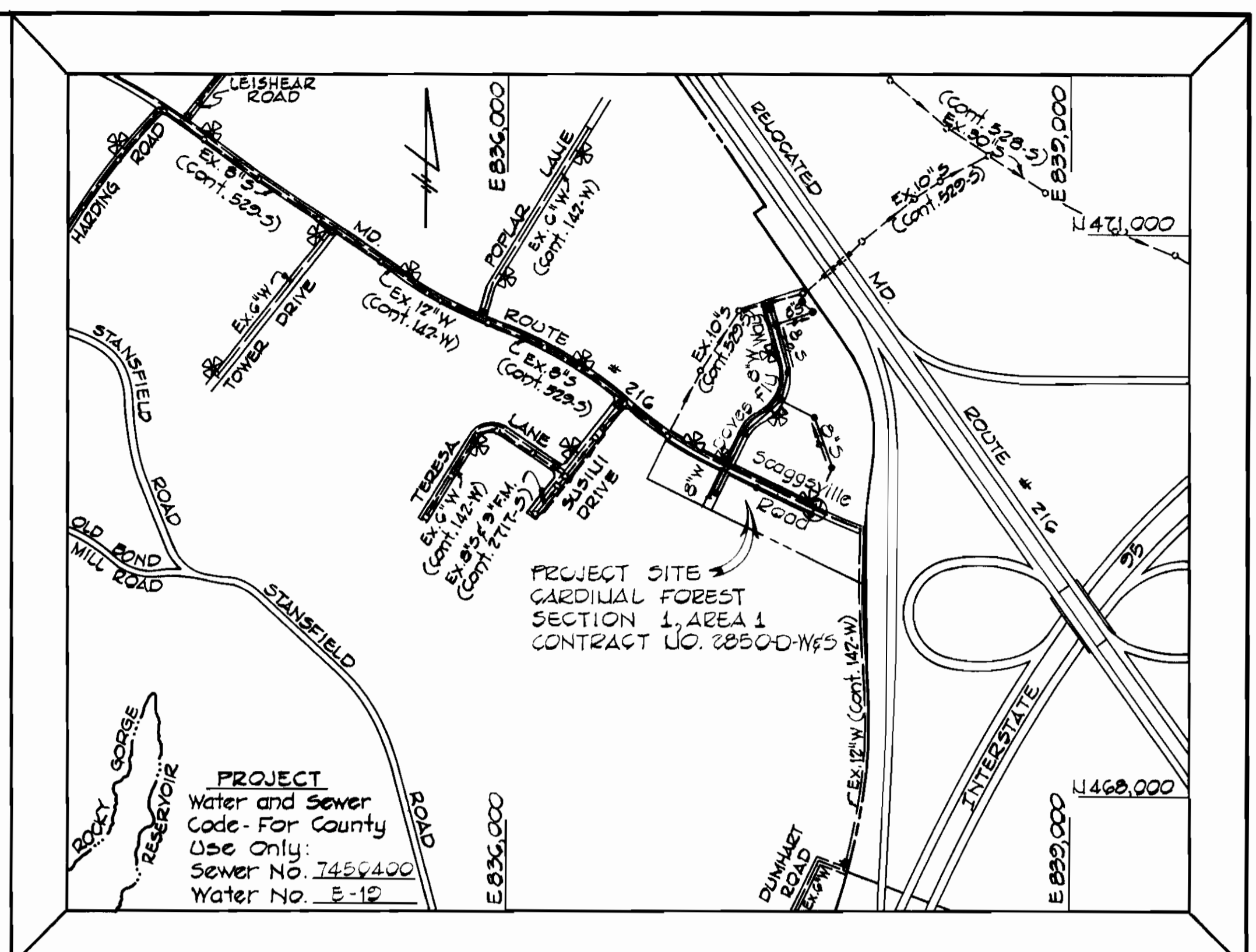


BENCH MARKS

B.M.#2 Elev. 364.70
 Rim of existing sewer MH #224 located 15' N.W. of intersection of rear lot lines 4 & T.

B.M.#3 Elev. 361.32
 Rim of existing sewer MH #225 located along rear line of lot 9.

B.M.#4 Elev. 335.60
 Rim of existing sewer MH #226 located along rear line of lot 10.



TYPE OF BUILDINGS - SINGLE FAMILY DWELLINGS
 NUMBER OF LOTS - 41
 NUMBER OF WATER HOUSE CONNECTIONS - 41
 NUMBER OF SEWER HOUSE CONNECTIONS - 41
 DRAINAGE AREA - LITTLE PATUXENT

VICINITY MAP
 SCALE: 1"=600'

GENERAL NOTES

- APPROXIMATE LOCATIONS OF EXISTING UTILITIES 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.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN VICINITY OF UTILITIES.
- FOR ALL STANDARD DETAILS SEE STANDARDS BOUND IN SPECIFICATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6" VERTICALLY. CLEAR ALL UTILITY POLES BY 2'-0" MINIMUM OR TUNNEL, AS REQUIRED. ANY COSTS INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING POLES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EXCAVATION.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR WALLS.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER.
- BUTTRESS OR ANCHOR ALL WATER MAIN FITTINGS WITH CONCRETE. ALL VALVES SHALL BE STRAPPED TO TEES IN ACCORDANCE WITH STANDARD DETAILS.
- ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
- ALL FIRE HYDRANTS SHALL BE STRAPPED TO THE TEE AND SHALL BE BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. COST OF STRAPPING FIRE HYDRANTS AND VALVES TO BE INCLUDED IN THE UNIT PRICE BID FOR FURNISHING AND INSTALLING FIRE HYDRANTS. SOIL AROUND THE FIRE HYDRANT TO BE COMPACTED IN ACCORDANCE WITH SECTION 5-15 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS.
- BURY LINE ELEVATIONS ON FIRE HYDRANTS SHALL BE SET TO THE ELEVATIONS SHOWN ON THE DRAWINGS.
- ALL HORIZONTAL AND VERTICAL CONTROLS ARE BASED ON MARYLAND STATE DATUM.
- ALL SEWER MAINS SHALL BE C.S.P.X., V.C.P.X. OR A.C.P. CLASS 2400 UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
 BALTIMORE GAS AND ELECTRIC CO. - UNDERGROUND ELECTRIC - (234-5691).
 C & P TELEPHONE CO. - (725-9976).
 BALTIMORE GAS AND ELECTRIC CO. - UNDERGROUND GAS - (559-0100).
 MISS UTILITY - (800-441-8355).
- ALL WATER MAINS TO BE C.I.P. D.I.P. UNLESS OTHERWISE NOTED.
- ALL WATER HOUSE CONNECTIONS SHALL BE METER SETTING FOR INSIDE.

QUANTITIES			
ITEM	EST'D.	AS BUILT	SUPPLIER
8" Sewer	2,555 L.F.	2,495 L.F.	JOHNS MANVILLE
Manholes	13 EA.	12 EA.	ATLANTIC
6" Water	1,240 L.F.	1,238 L.F.	GRIFFIN-US. PIPE
6" Water	45 L.F.	38 L.F.	"
6" Valves	2 EA.	2 EA.	U.S. VALVE
Fire Hyd.	3 EA.	2 EA.	DRESSER

CONTRACT NO. 2850-D-W8S
 CARDINAL FOREST
 SECTION 1, AREA 1
 WATER AND SEWER EXTENSION

STATE OF MARYLAND
 TERRELL A. FISHER #9157
 REGISTERED PROFESSIONAL ENGINEER

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 James J. Elin
 CHIEF BUREAU OF UTILITIES
 DATE 12/28/79

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DATE 12-21-79
 CHIEF BUREAU OF ENGINEERING

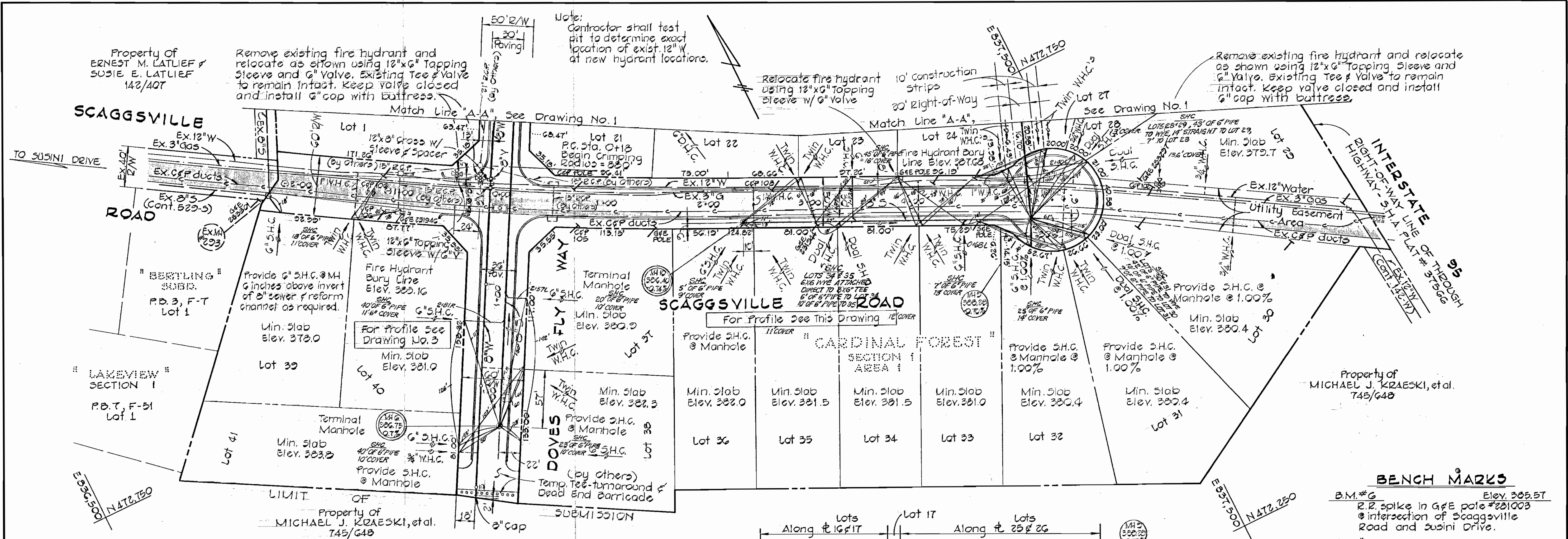
CONTRACT NO. 2850-D-W8S

PLAN
 WATER & SEWER MAINS

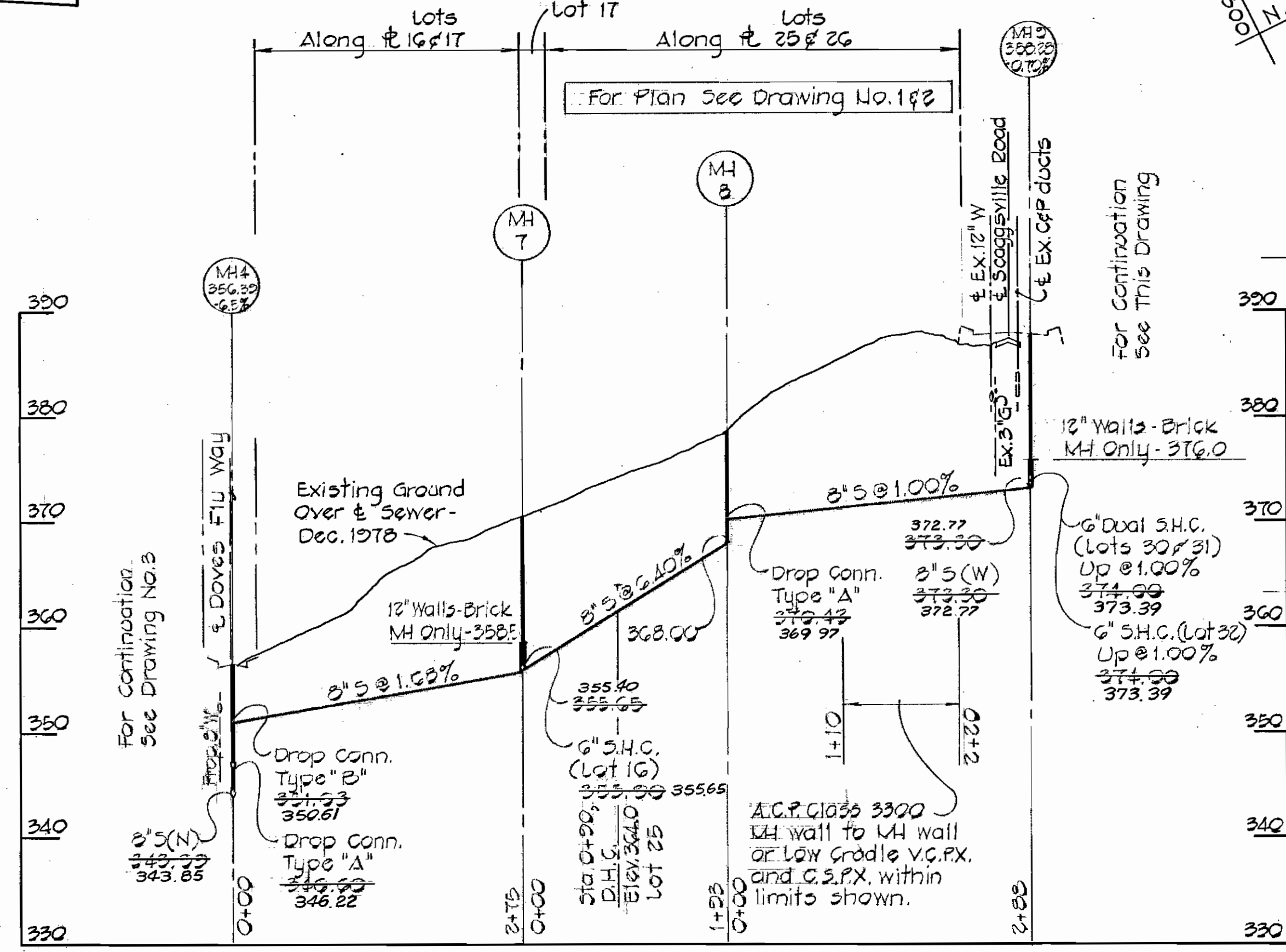
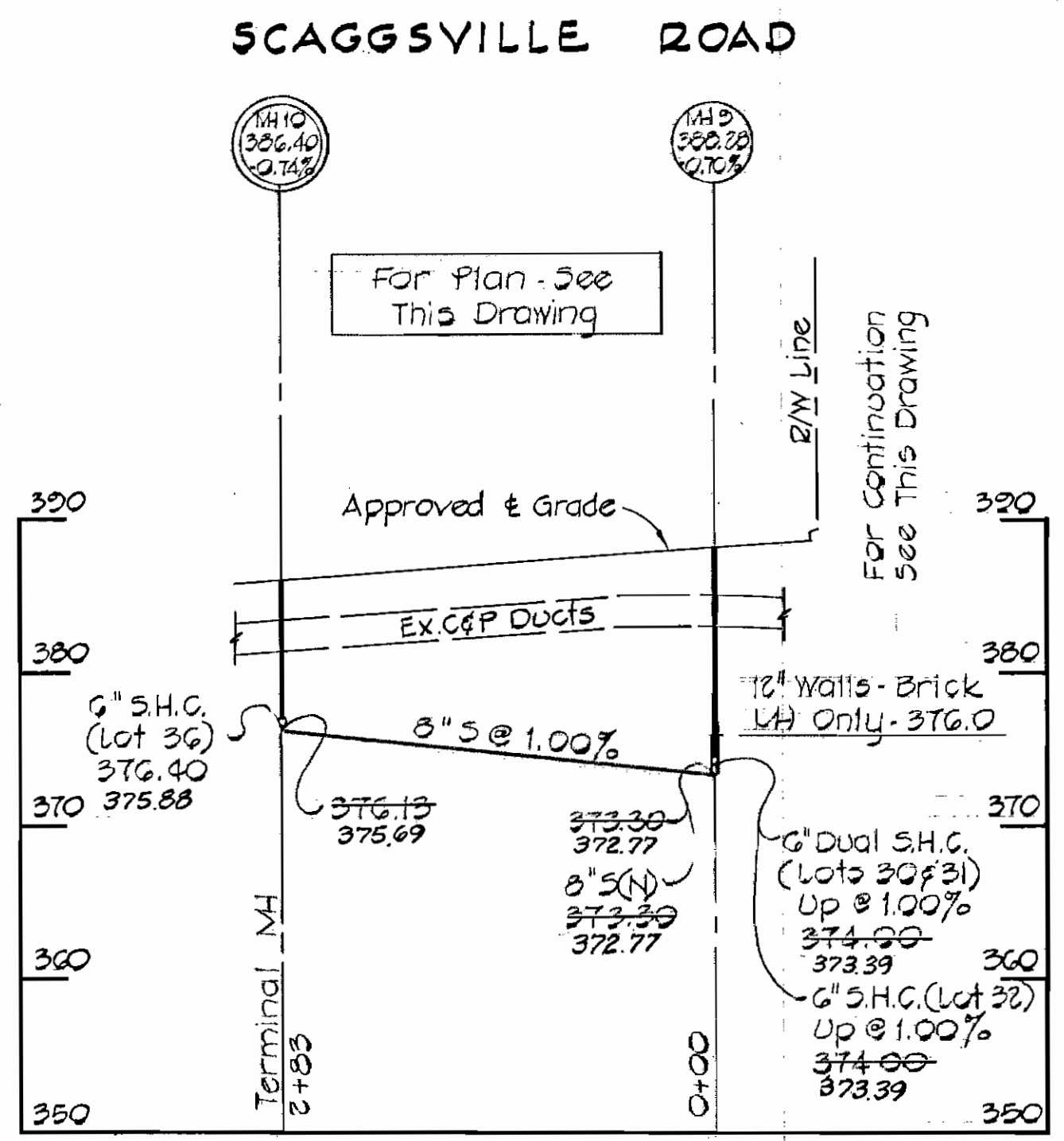
CARDINAL FOREST - SEC. 1, AR. 1
 ELECTION DISTRICT NO. 6
 HOWARD COUNTY, MARYLAND

DRAWING NO. 1 OF 3
 SCALE AS SHOWN
 DES. R. D. B.
 DRN. D. B. S.
 CHK. T. A. F.

FISHER, COLLINS AND CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS
 8388 COURT AVENUE
 ELLICOTT CITY, MARYLAND 21043

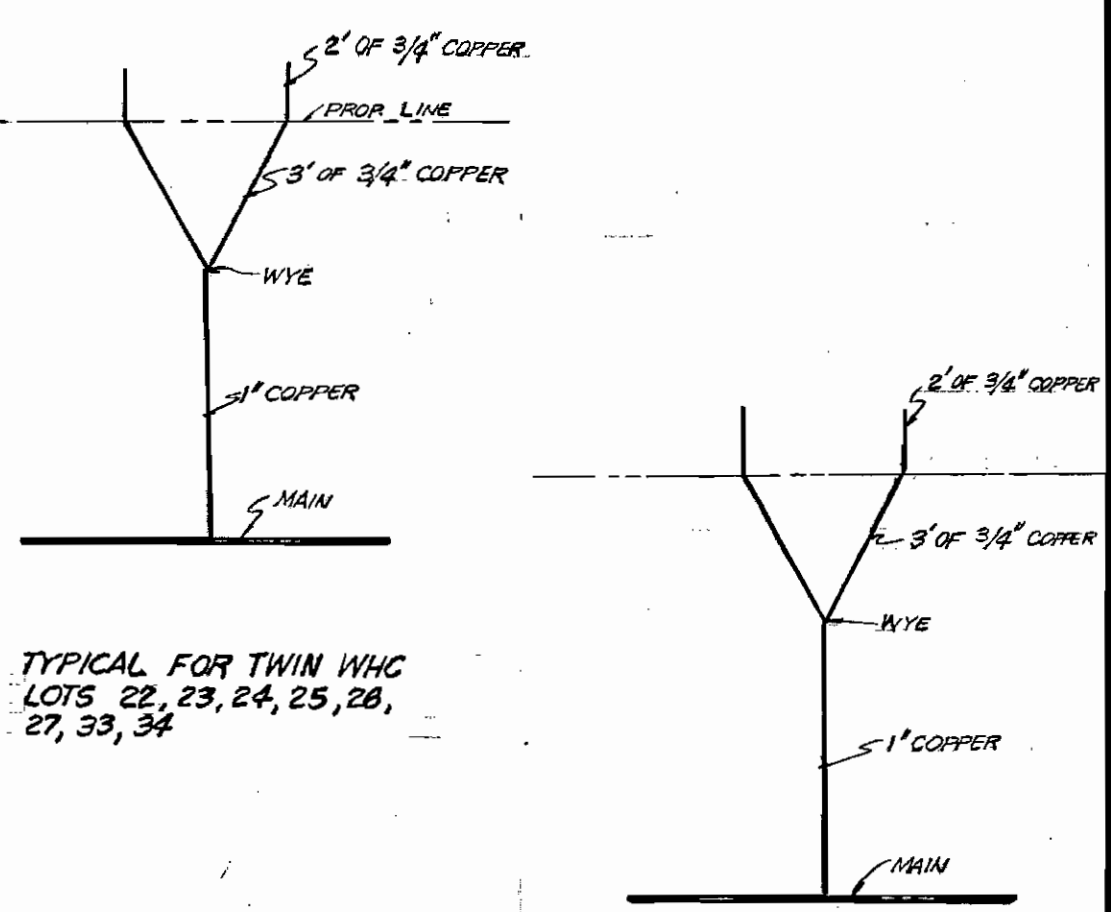


PLAN
1"=50'



PROFILES
Scale: Horz. 1"=100'
Vert. 1"=10'

BENCH MARKS
 B.M. #6 Elev. 369.57
 2" R. spike in G&E pole #281003
 @ intersection of Scaggsville Road and Susini Drive.
 B.M. #2 Elev. 364.72
 Rim of existing sewer MH #224 located 15' ± N.W. of intersection of rear lot lines 4 & 7.



WHC AS-BUILT



Terrell A. Fisher
 TERRELL A. FISHER #9727

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 James H. Gleser
 CHIEF BUREAU OF UTILITIES DATE 12/20/79

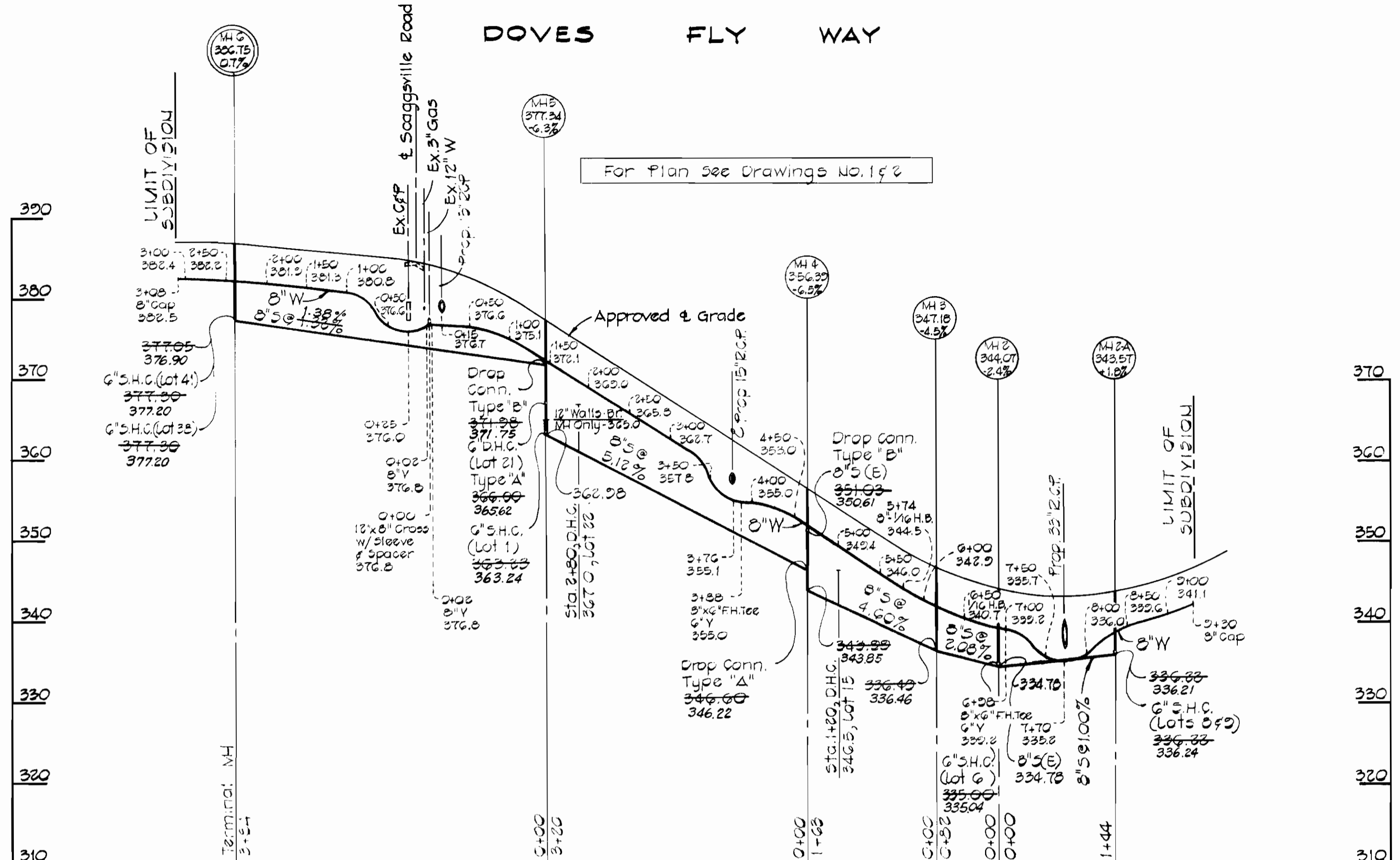
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Donald F. Nunnery
 DIRECTOR OF PUBLIC WORKS DATE 12-26-79

CONTRACT NO. 2850-D-W8S

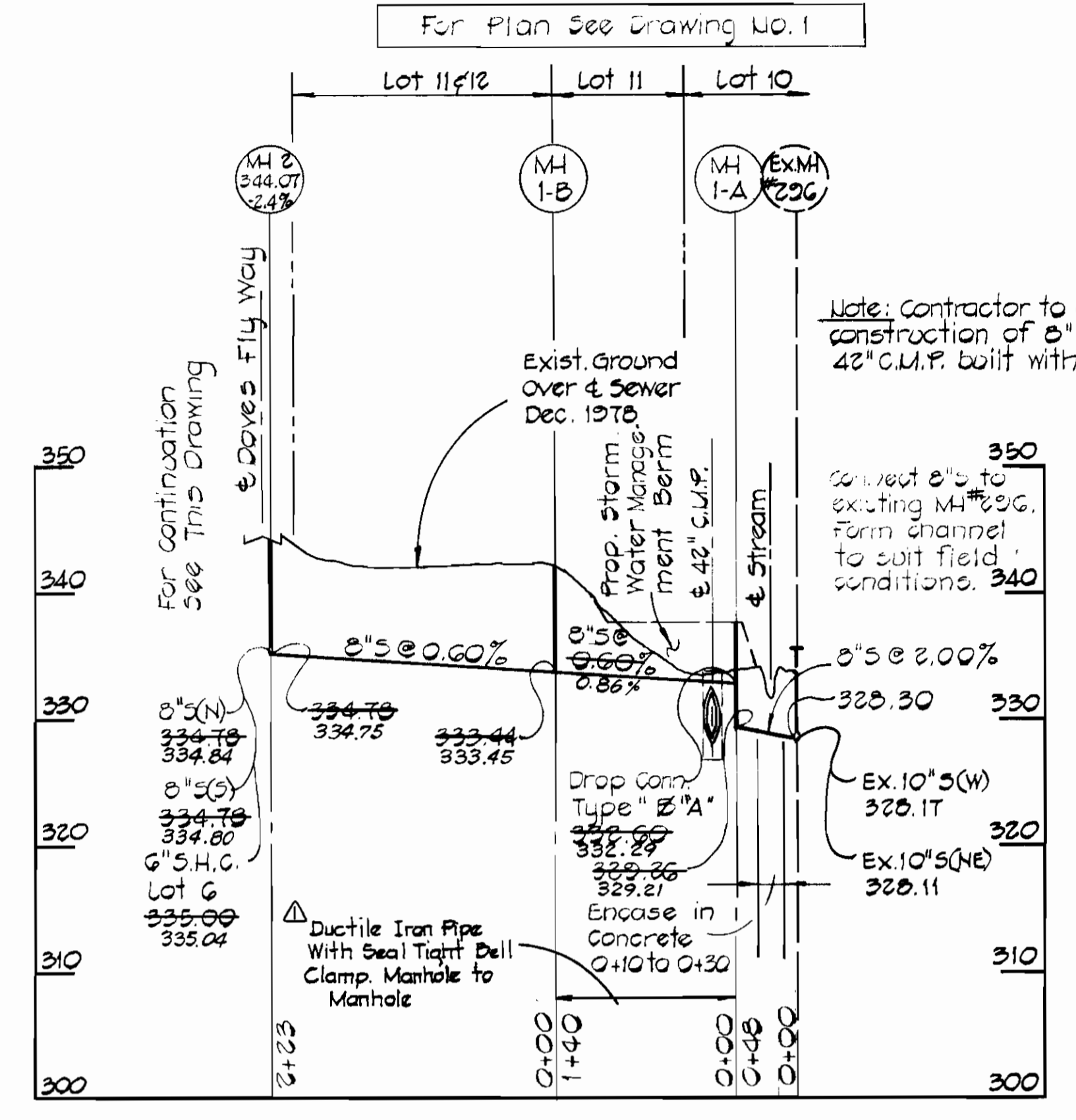
PLAN AND PROFILE
 WATER & SEWER MAINS

CARDINAL FOREST - SEC. I, AR. I
 ELECTION DISTRICT NO. 6
 HOWARD COUNTY, MARYLAND

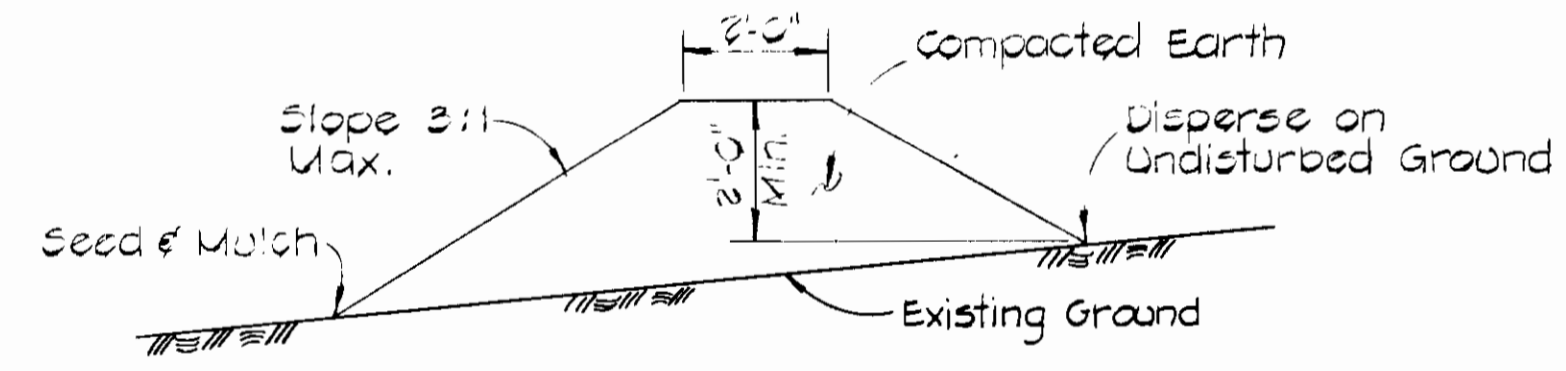
DRAWING NO. 2 OF 3
 SCALE AS SHOWN
 DES. R. D. B.
 DRN. D. B. S.
 CHK. T. A. F.



PROFILE
Scale: Horiz. 1"=100'
Vert. 1"=10'



PROFILE
Scale: Horiz. 1"=100'
Vert. 1"=10'



Erosion control is required every 350 feet on continuous slopes of 4% or greater. The berms shall conform to the typical section shown herein. They shall be constructed across the construction areas immediately after the backfilling of the pipe trench and prior to placing stabilization in order to prevent erosion of the backfilled areas.

TEMPORARY EARTH DIVERSION BERM
No Scale



TERRELL A. FISHER, #9757

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
James J. [Signature]
CHIEF BUREAU OF UTILITIES DATE 12/20/79

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[Signature]
DIRECTOR OF PUBLIC WORKS DATE 12-21-79

CONTRACT NO. 2850-D-W&S

PROFILES
WATER & SEWER MAINS

NO.	DATE	REVISION
1	3/28/80	Substitute Ductile Iron Pipe MH 1-A to 1-B

CARDINAL FOREST - SEC. I, AR. I
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

DRAWING NO.	SCALE	DES. R. D. B.
NO. 3 OF 3	AS SHOWN	DRN. D. B. S. CHK. T. A. F.

CONTRACT NO. 2850-D-W&S
CARDINAL FOREST
SECTION I AREA I
WATER AND SEWER EXTENSION