K&E BALTIMORE 17 0233 PHOENIX 10-77 MC 6932

RIVERS CORPORATE PARK

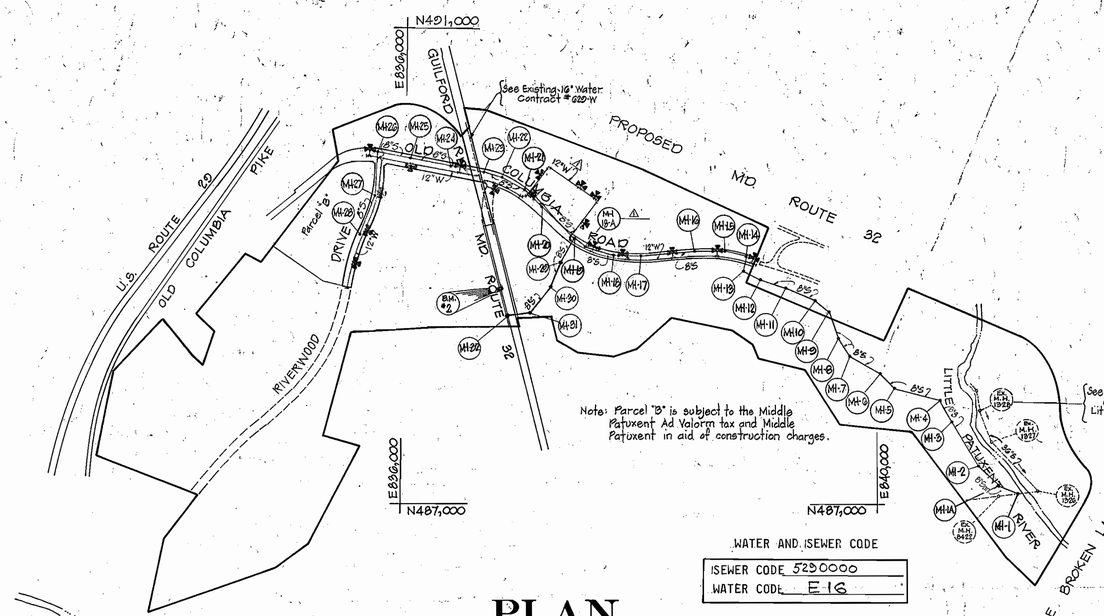
SECTION 1, AREA 1, PHASE 1

CONTRACT NO. 24-1025-D

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

QUANTITIES

ITEM	UNIT	ESTIMATED	AS-BUILT	MATERIAL/SUPPLIER
8" SEWER	L.F.	8240	8384	P.V.C. CARLON & J. MANVILLE
8" WATER	L.F.	385	414	US PIPE & FOUNDRY D.I.P.
MANHOLES	Ea.	33	34	ATLANTIC CONC. PRODUCTS CORP.
6" WATER	L.F.	440	433	US PIPE & FOUNDRY D.I.P.
12" WATER	L.F.	5295	5324	US PIPE & FOUNDRY D.I.P.
6" VALVES (Excluding F.H. Valves)	Ea.	None	(17)	M.H. & 6" VALVES & HYDRANTS
12" VALVES	Ea.	7	7	US PIPE & FOUNDRY
8" VALVES	Ea.	12	11	US & M.H.
FIRE HYDRANT	Ea.	17	17	M.H. HYDRANTS
16"x12" Tapping Tee and Valve	Ea.	2	2	US PIPE & FOUNDRY



WATER AND SEWER CODE

SEWER CODE 5250000
WATER CODE E-16

PLAN
Scale: 1" = 600'

TYPE OF BUILDINGS:	INDUSTRIAL
NO. OF LOTS:	14
NO. OF WATER CONNECTION:	10
NO. OF SEWER CONNECTION:	17
DRAINAGE AREA:	LITTLE PATUXENT

GENERAL NOTES

1. 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.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. ANY COST INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING AT POLES SHALL BE INCLUDED IN UNIT PRICES BID FOR EXCAVATION AND BACKFILL.
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS USE HOWARD COUNTY STANDARD DETAILS.
7. FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY STD. SPECIFICATIONS.
8. CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN THE VICINITY OF PROPOSED UTILITIES AT HIS OWN EXPENSE.
9. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
   - STATE HIGHWAY ADMINISTRATION ..... : 531-5533
   - BALTO. GAS & ELECTRIC CO. (Underground Electric Distribution) Customer Service ..... : 685-0123
   - BALTO. GAS & ELECTRIC CO. (Underground Gas Distribution) Customer Service ..... : 685-0123
   - ENGINEERING "DAMAGE CONTROL" ..... : 234-5621
   - "MISS UTILITY" ..... : (1) 559-0100
   - CHESAPEAKE AND POTOMAC (C & P) TELEPHONE COMPANY ..... : 725-8976
   - AMERICAN TELEPHONE AND TELEGRAPH Cable Location Division ..... : 393-3553
   - COLONIAL PIPELINE COMPANY ..... : 781-4641
   - BUREAU OF UTILITIES HOWARD COUNTY .... : 992-2366
10. TREES ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
11. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION AS DIRECTED BY THE ENGINEER. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EXCAVATION AND BACKFILL.
12. PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS.
13. ALL WATER MAINS TO BE C.I.P. OR D.I.P. UNLESS OTHERWISE NOTED.
14. TOP OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE NOTED.
15. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
16. BLOCK ALL FITTINGS WITH CONCRETE.
17. BURY LINE ELEVATIONS ON FIRE HYDRANTS SHALL BE SET TO THE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STD. DETAILS. SOIL AROUND THE FIRE HYDRANT TO BE COMPACTED IN ACCORDANCE WITH SECTION 5-15 OF THE STD. SPECIFICATIONS.
18. ALL WATER HOUSE CONNECTIONS SHALL BE FOR AN INSIDE METER SETTING.
19. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.

GENERAL NOTES: (Continued)

20. ALL SEWER MAINS SHALL BE C.S.P.X., V.C.P.X., P.V.C., OR A.C.P. CLASS 2400 UNLESS OTHERWISE NOTED.
21. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
22. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
23. FORCE MAINS SHALL BE D.I.P. ONLY.
24. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE BRICK MANHOLES ONLY.
25. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL S-12 (RCR-63A). WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE.
26. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CAN NOT BE SERVED.
27. WHERE SEWER DEPTH EXCEEDS 12 FEET, USE CLASS 3300 A.C.P.
28. THE TOP ELEVATION OF ALL OUTFALL MANHOLES SHOULD BE SET A MINIMUM OF 18" ABOVE EXISTING GROUND AS SHOWN ON STANDARD DETAIL S-1.53.
29. ALL PVC PIPE IS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S AND HOWARD COUNTY SPECIFICATIONS.
30. WATERMAIN AND WATERHOUSE CONNECTIONS MUST HAVE AT LEAST ONE FOOT SEPARATION FROM THE SEWER MAIN AND SEWER HOUSE CONNECTION AS THEY PASS ABOVE IT.

BENCH MARK

*1 B.M. #2240001 ELEV.= 329.697
Description: CONCRETE MONUMENT 16'± S. OF W. EDGE ROAD
N 486199.369 E 839811.396

*2 B.M. #2340002 ELEV.= 362.611
Description: R.B. 1.5'± W. OF W. EDGE ROAD 7' BELOW SURFACE
N 488839.177 E 836802.852

No	Revision
2	D.P.W. Comments on Sheet 9 of 9. 7/21/82
1	Revised Quantities, added 12"W & MH 18A

Note: Sediment Control Measures for this contract will be implemented in accordance with article 15 of the specification and also as shown on the grading and sediment control Plan. #SP82-02

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

APPROVED: William V. Kanne — HOWARD S.C.D. — Date 12-11-81

STATE OF MARYLAND — GERALD PHILIP MARAGOS — No. 9368 — PROFESSIONAL ENGINEER

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF BUREAU OF UTILITIES — DATE — CHIEF LAND DEVELOPMENT DIVISION — DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
Signature — U.S. SOIL CONSERVATION SERVICE — Date 12-11-81

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS · PLANNERS
TOWSON, MARYLAND 21204

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS — DATE 12-15-81 — CHIEF - BUREAU OF ENGINEERING — DATE 12/15/81

CONTRACT NO. 24-1025-D

TITLE SHEET

RIVERS CORPORATE PARK
SECTION 1, AREA 1, PHASE 1
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

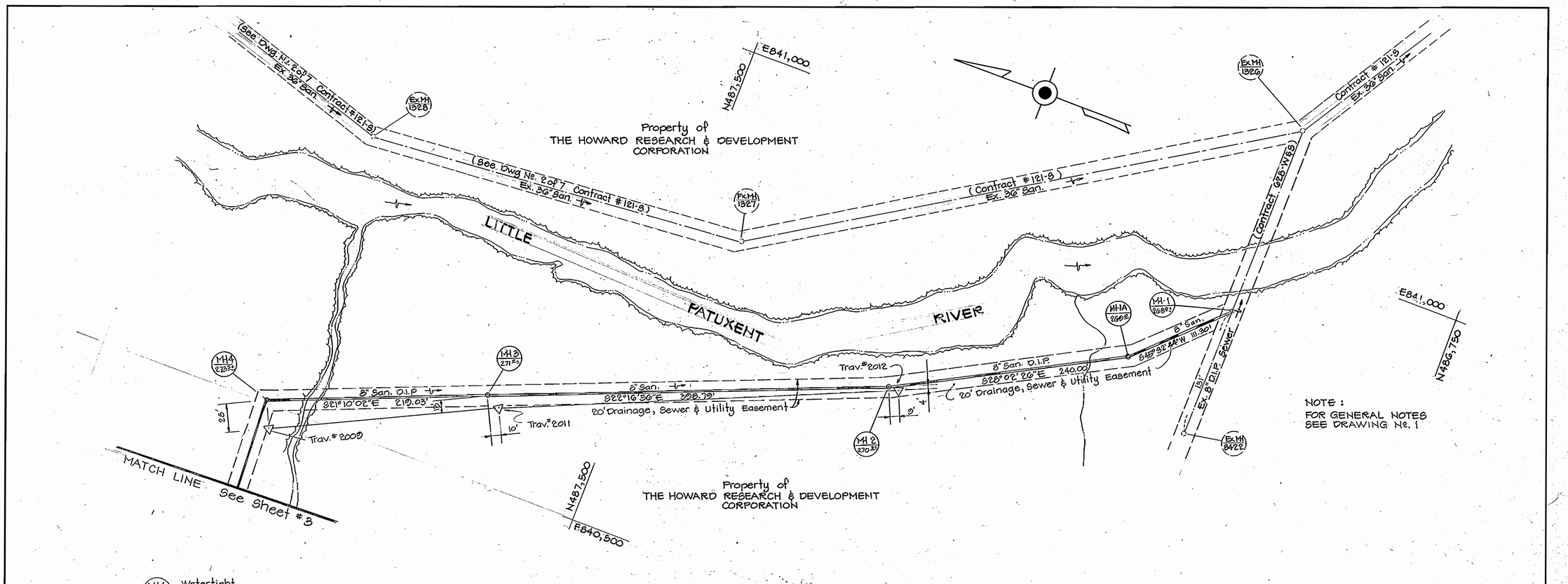
DRAWING NO. 1 OF 9

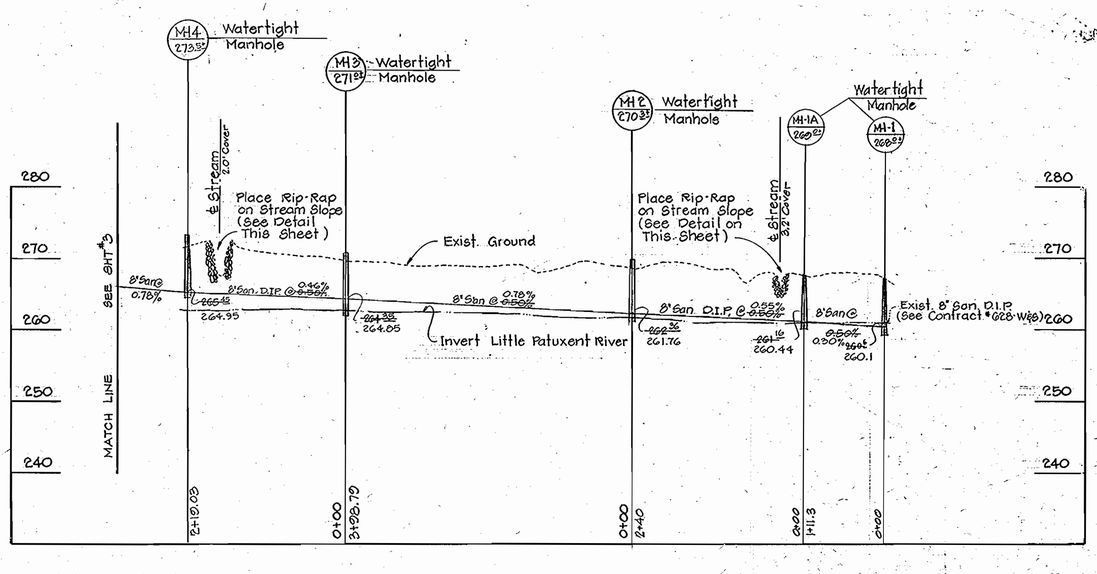
SCALE AS SHOWN

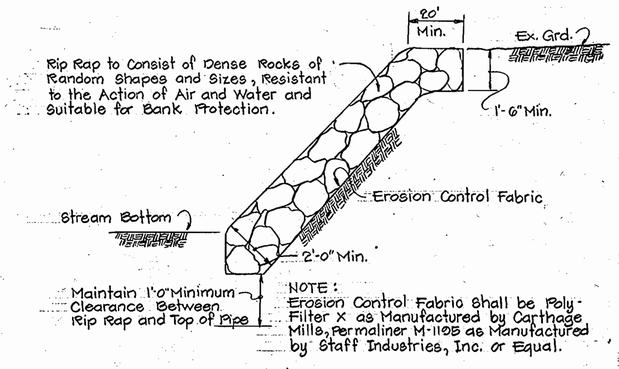
As Built - JULY 1982

1025/1 WS

K&E BALTIMORE 170253 PHOENIX 10-77 MC 6932*







NOTE:
Erosion Control Fabric Shall be Poly-Filter X as Manufactured by Carthage Mills, Permeliner M-1105 as Manufactured by Staff Industries, Inc. or Equal.

Detail

STREAM CROSSING SLOPE PROTECTION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 12-15-81
CHIEF-BUREAU OF ENGINEERING — DATE 12/15/81
CHIEF-BUREAU OF UTILITIES — DATE 12-15-81
CHIEF-LAND DEVELOPMENT DIVISION — DATE 12-15-81

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS · PLANNERS
TOWSON, MARYLAND 21204

CONTRACT NO. 24-1025-D

PLAN AND PROFILE OF WATER AND SEWER MAINS

RIVERS CORPORATE PARK
SECTION 1, AREA 1, PHASE
6TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

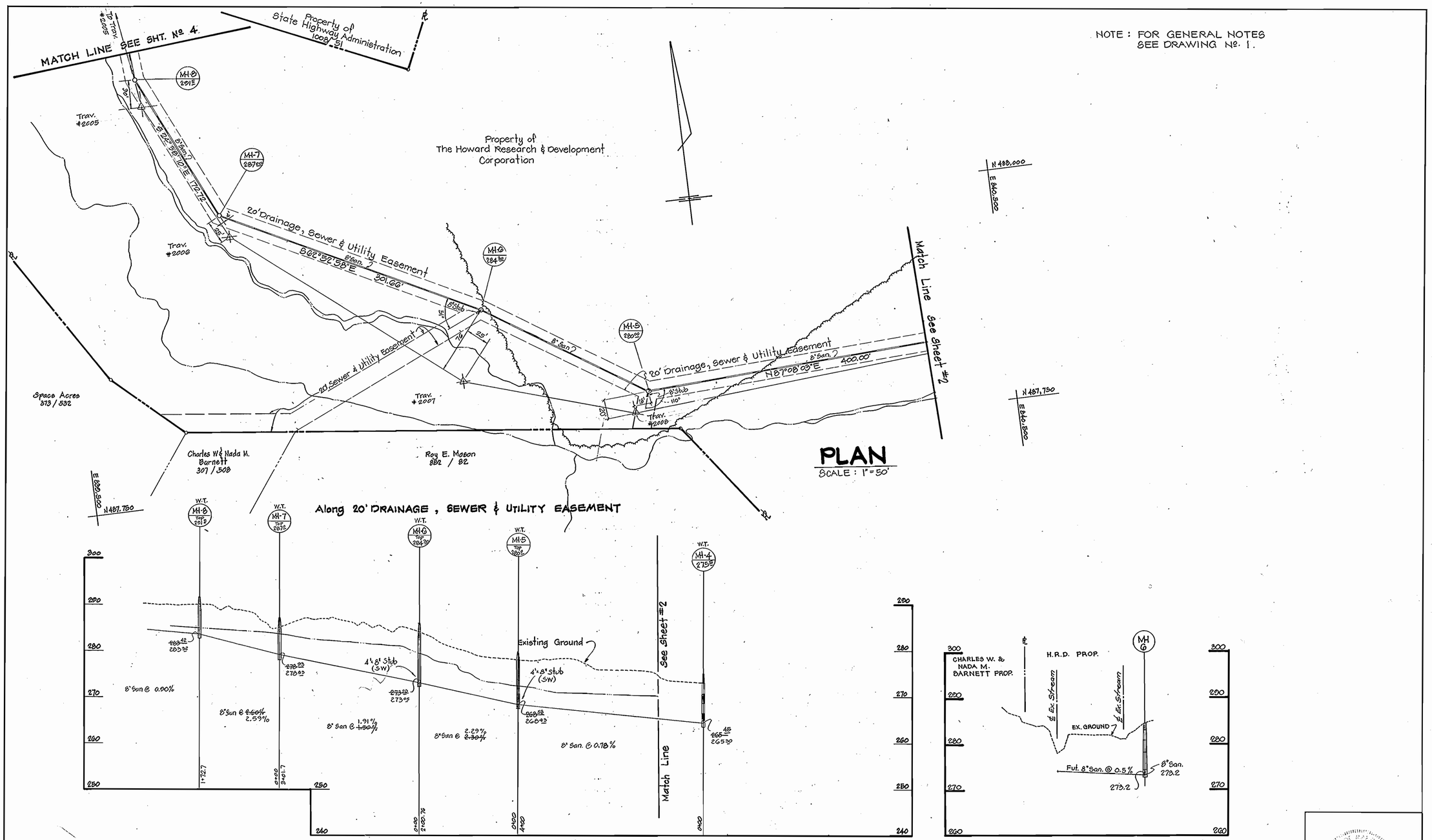
DRAWING NO. 2 OF 8

SCALE
Plan: 1"=50'
Profile Hor. 1"=40' Vert. 1"=10'

As Built - July 1982

1025/2 WS

K&E BALTIMORE 17 0253 PHOENIX 10-77 MC 69324



DATE	REVISIONS

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 12-15-81
CHIEF-BUREAU OF ENGINEERING — DATE 12/15/81
CHIEF-BUREAU OF UTILITIES — DATE 12-14-81
CHIEF-LAND DEVELOPMENT DIVISION — DATE 12-15-81

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS · PLANNERS
TOWSON, MARYLAND 21204

CONTRACT NO. 24-1025-D

PLAN AND PROFILE OF WATER AND SEWER MAINS

RIVERS CORPORATE PARK
SECTION I, AREA I, PHASE I
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DRAWING NO. 3 OF 9

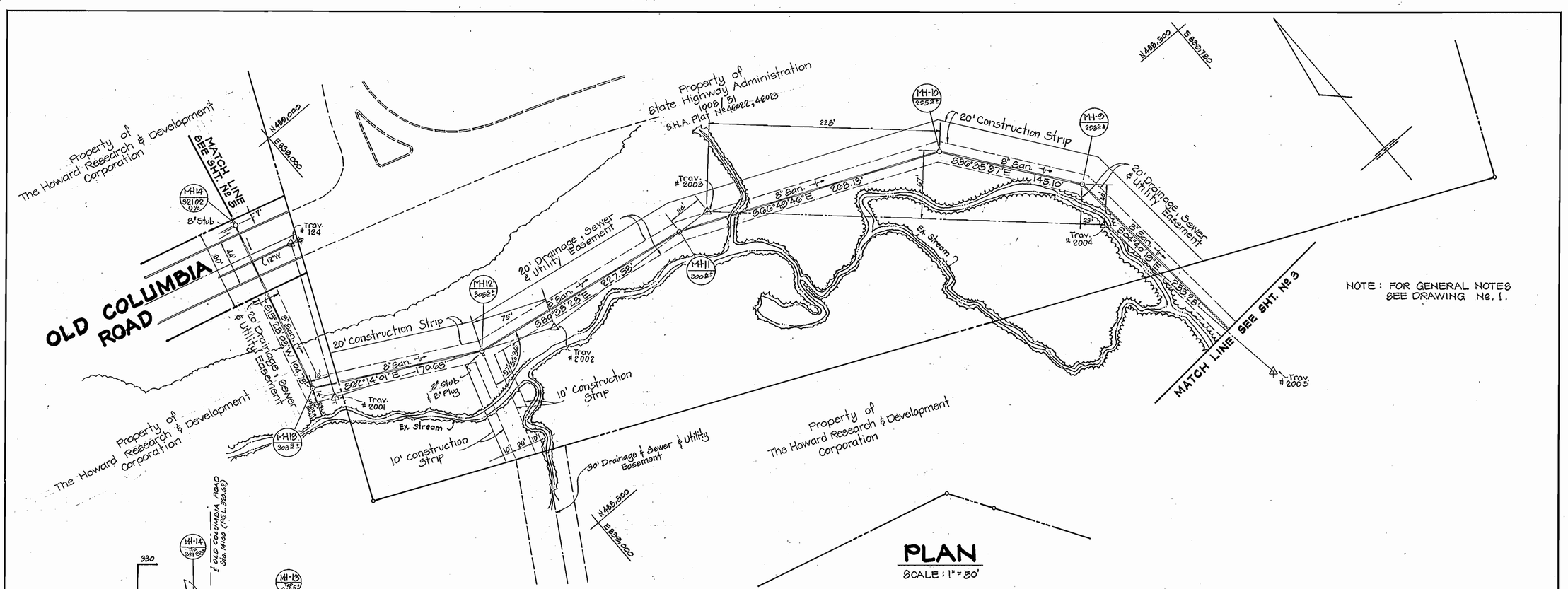
SCALE
Plan: 1"=50'
Profile: Hor: 1"=100' Vert: 1"=10'

As Built - July 1982

1025/3 WS

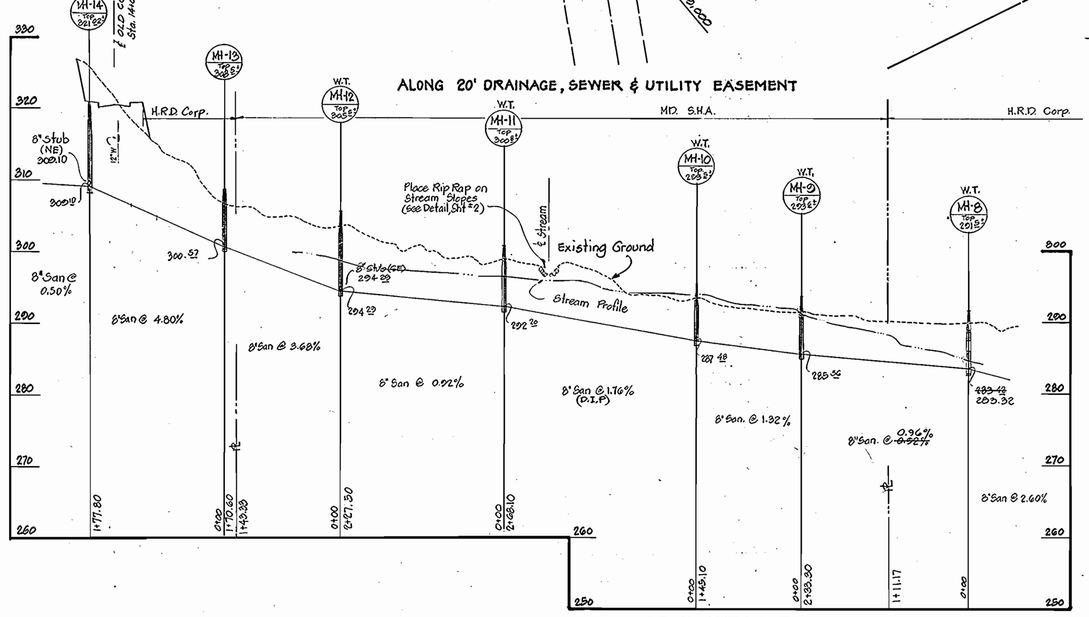
K&E BALTIMORE 170253 PHOENIX 10-77 MC 69324

1025/4 WS



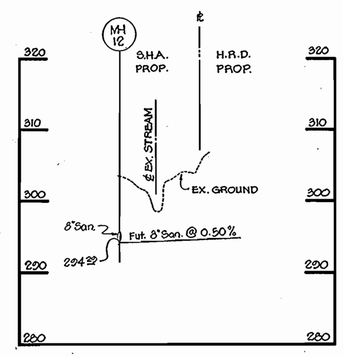
PLAN

SCALE: 1" = 50'



PROFILE

SCALE: HOR. 1" = 100'
VERT. 1" = 10'



DATE	REVISIONS

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 12-15-81
CHIEF-BUREAU OF ENGINEERING — DATE 12/15/81
CHIEF-BUREAU OF UTILITIES — DATE 12-14-81
CHIEF-LAND DEVELOPMENT DIVISION — DATE 12-15-81

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS · PLANNERS
TOWSON, MARYLAND 21204

CONTRACT NO. 24-1025-D

PLAN AND PROFILE OF WATER AND SEWER MAINS

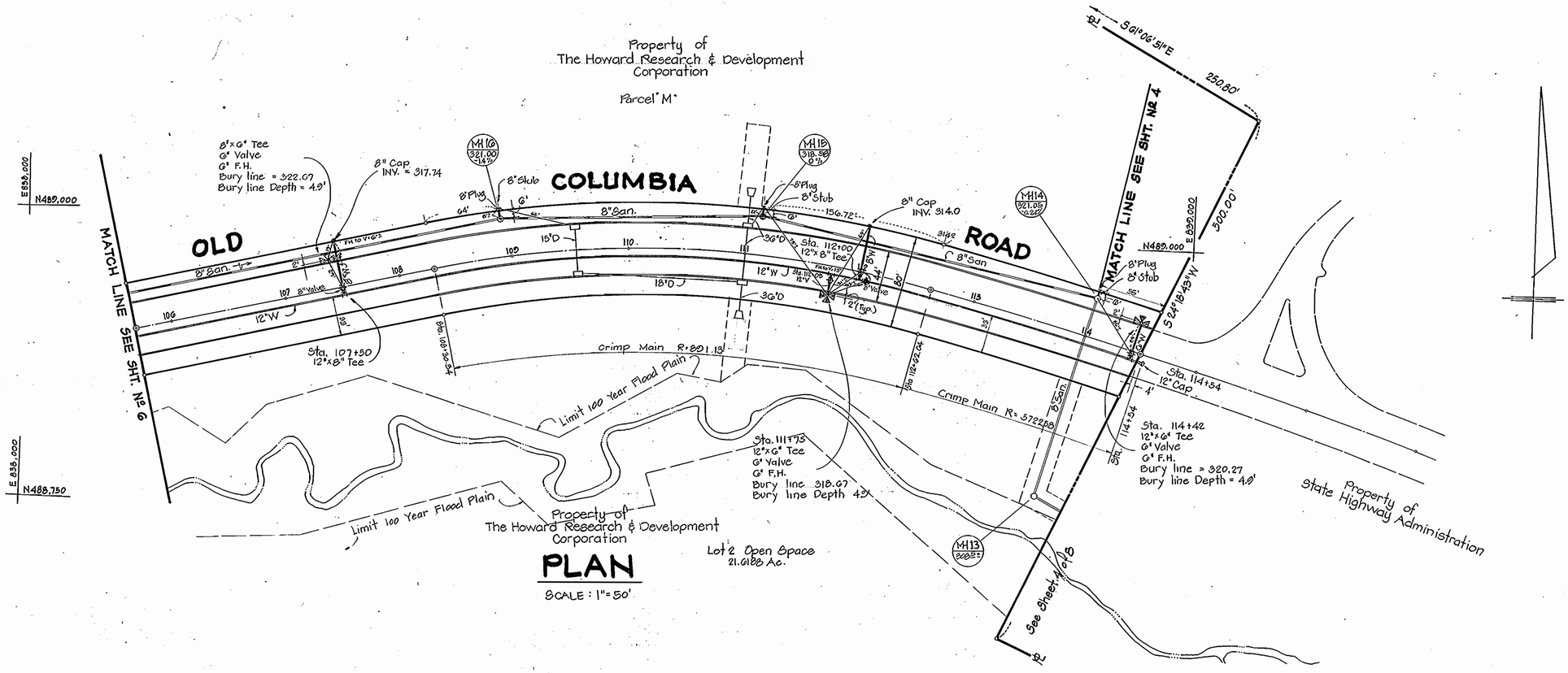
RIVERS CORPORATE PARK
SECTION 1, AREA 1, PHASE 1
6TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

DRAWING NO. 4 OF 9

SCALE
Plan: 1" = 50'
Profile: Hor: 1" = 100' Vert: 1" = 10'

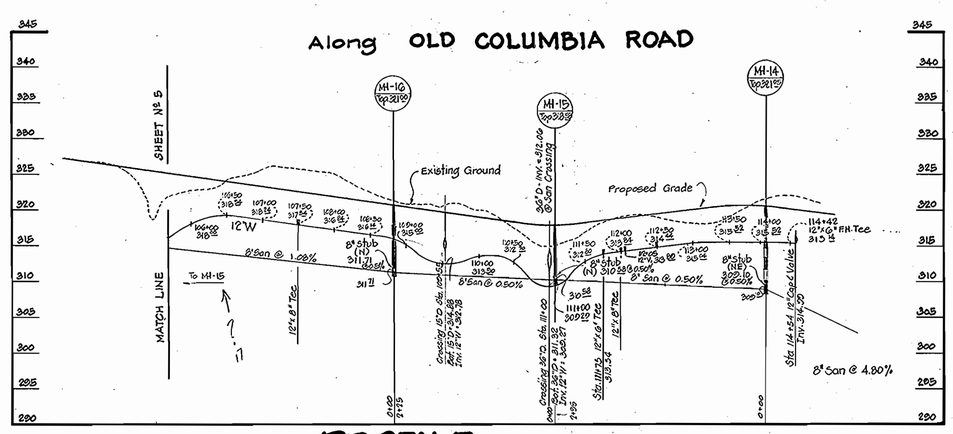
As Built - July 1982

K&E BALTIMORE 170253 PHOENIX 10-77 MC 6532



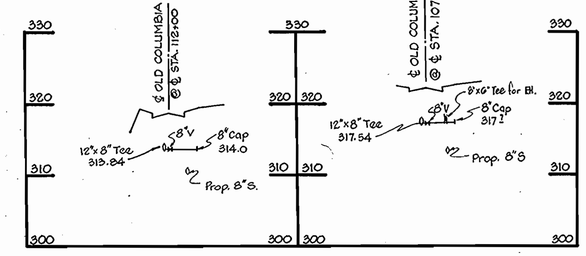
PLAN

SCALE : 1" = 50'



PROFILE

SCALE : HOR. 1" = 100'
VERT. 1" = 10'



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

12-15-81 DIRECTOR OF PUBLIC WORKS — DATE	12/15/81 CHIEF-BUREAU OF ENGINEERING — DATE
12-14-81 CHIEF-BUREAU OF UTILITIES — DATE	12-15-81 CHIEF-LAND DEVELOPMENT DIVISION — DATE

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS · PLANNERS
TOWSON, MARYLAND 21204

CONTRACT NO. 24-1025-D

PLAN AND PROFILE OF WATER AND SEWER MAINS

RIVERS CORPORATE PARK
SECTION I, AREA I, PHASE I
6TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

DRAWING NO. 5 OF 9

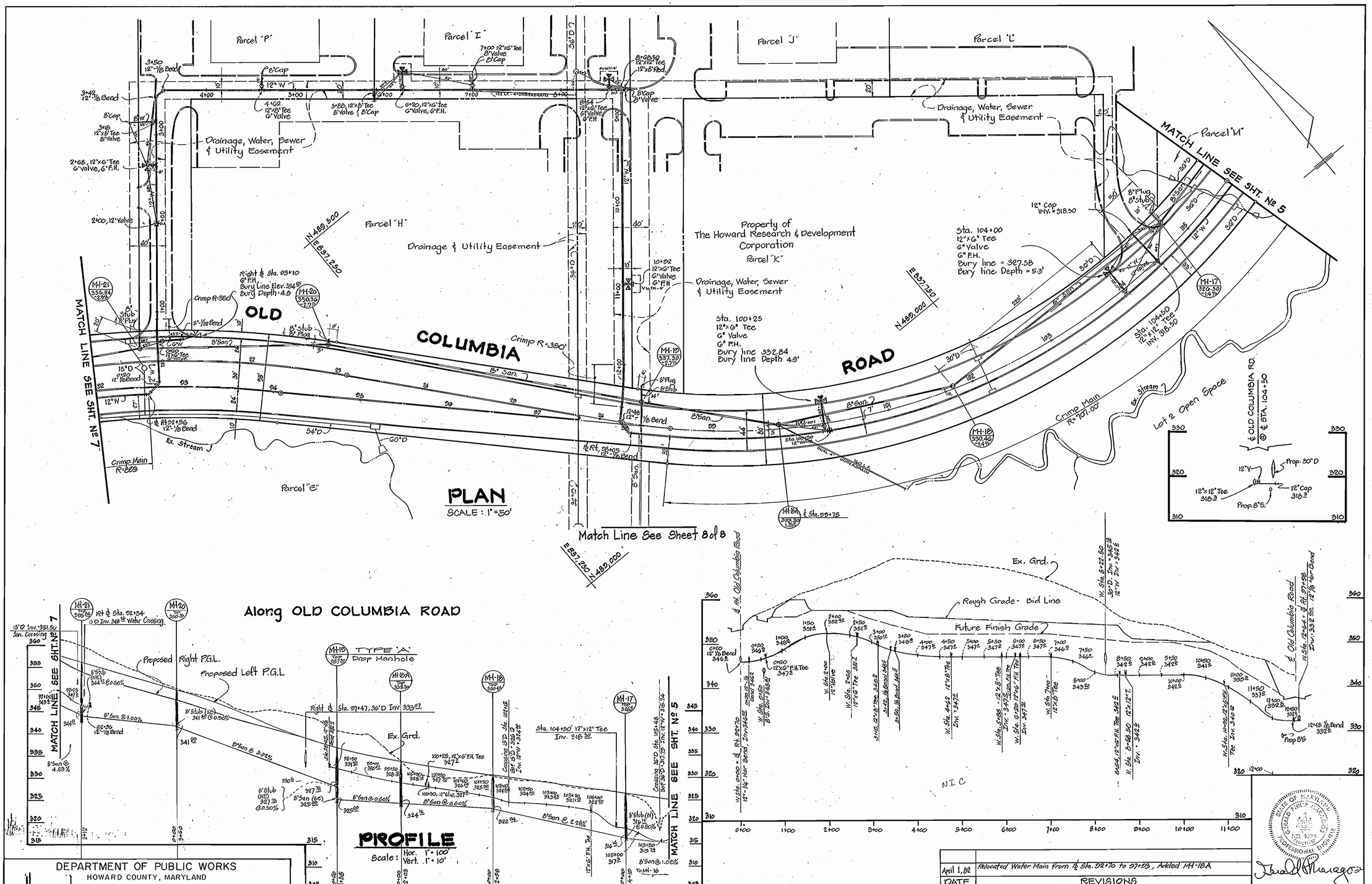
SCALE
Plan: 1" = 50'
Profile: Hor.: 1" = 100'
Vert.: 1" = 10'

DATE	REVISIONS

STATE OF MARYLAND — GERALD FRANK MARAGOS — No. 12 — PROFESSIONAL ENGINEER

As Built - July 1982

1025/5 WS



DATE	REVISIONS
April 1, 82	Relocated Water Main from ℄ Sta. 92+70 to 97+93, Added MH-18A

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 12-15-81
CHIEF-BUREAU OF ENGINEERING — DATE 12/15/81
CHIEF-BUREAU OF UTILITIES — DATE 12-14-81
CHIEF-LAND DEVELOPMENT DIVISION — DATE 12-15-81

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS · PLANNERS
TOWSON, MARYLAND 21204

CONTRACT NO. 24-1025-D

PLAN AND PROFILE OF WATER AND SEWER MAINS

RIVERS CORPORATE PARK
SECTION I, AREA I, PHASE I
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

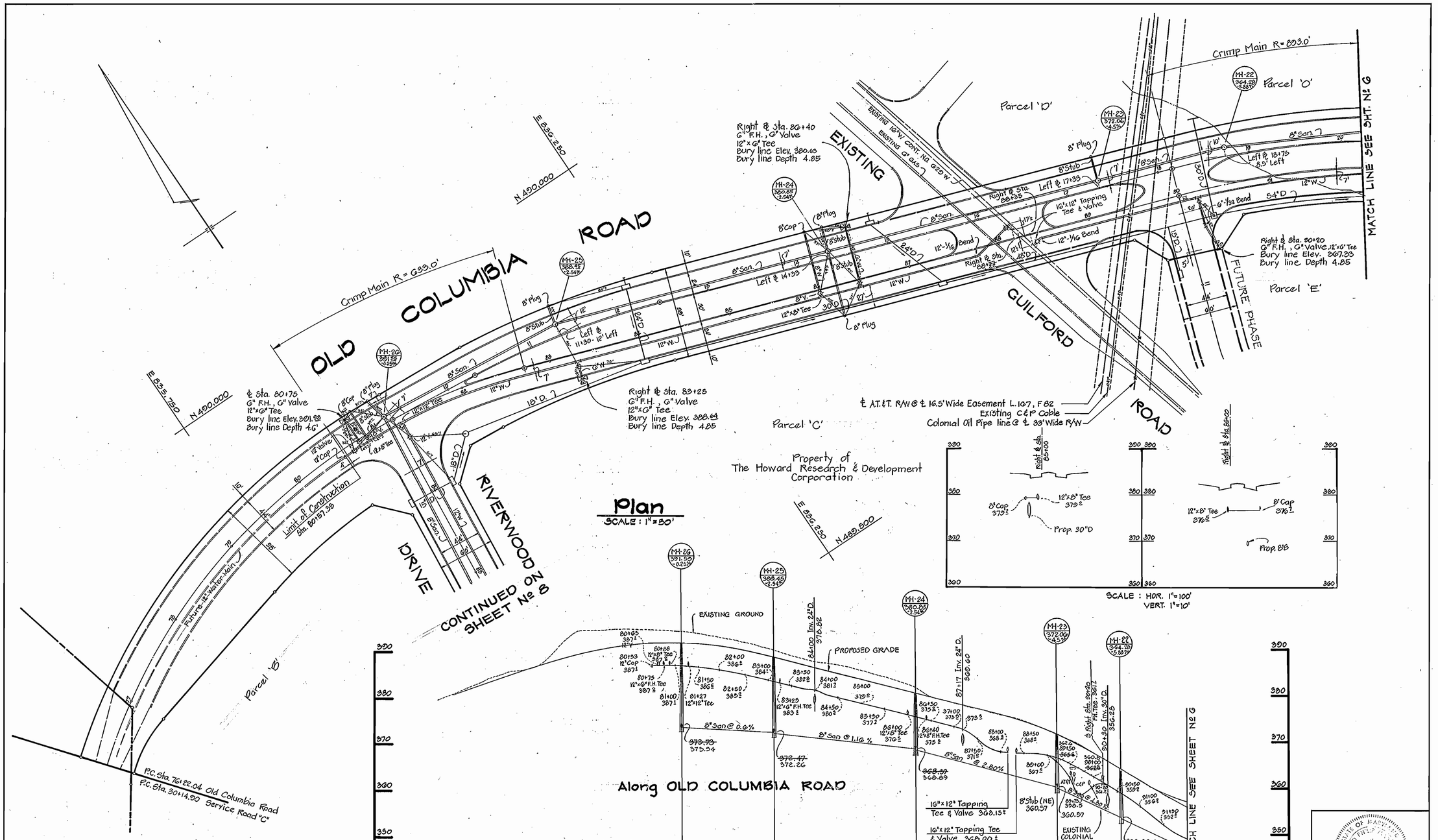
DRAWING NO. 6 OF 9

SCALE
Plan: 1"=50'
Profile Hor: 1"=100' Vert: 1"=10'

As Built - July 1982

1025/6 WS

K&E BALTIMORE 17 0233 PHOENIX 10-77 MC 6932



DATE	REVISIONS
3-5-82	Remove 8"V, 8"W & 8"Cap @ Sta. 85+00 Plan & Profile

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 12-15-81
CHIEF-BUREAU OF ENGINEERING — DATE 12/15/81
CHIEF-BUREAU OF UTILITIES — DATE 12-14-81
CHIEF-LAND DEVELOPMENT DIVISION — DATE 12-15-81

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS · PLANNERS
TOWSON, MARYLAND 21204

CONTRACT NO. 24-1025-D

PLAN AND PROFILE OF WATER AND SEWER MAINS

RIVERS CORPORATE PARK
SECTION 1, AREA 1, PHASE 1
6TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

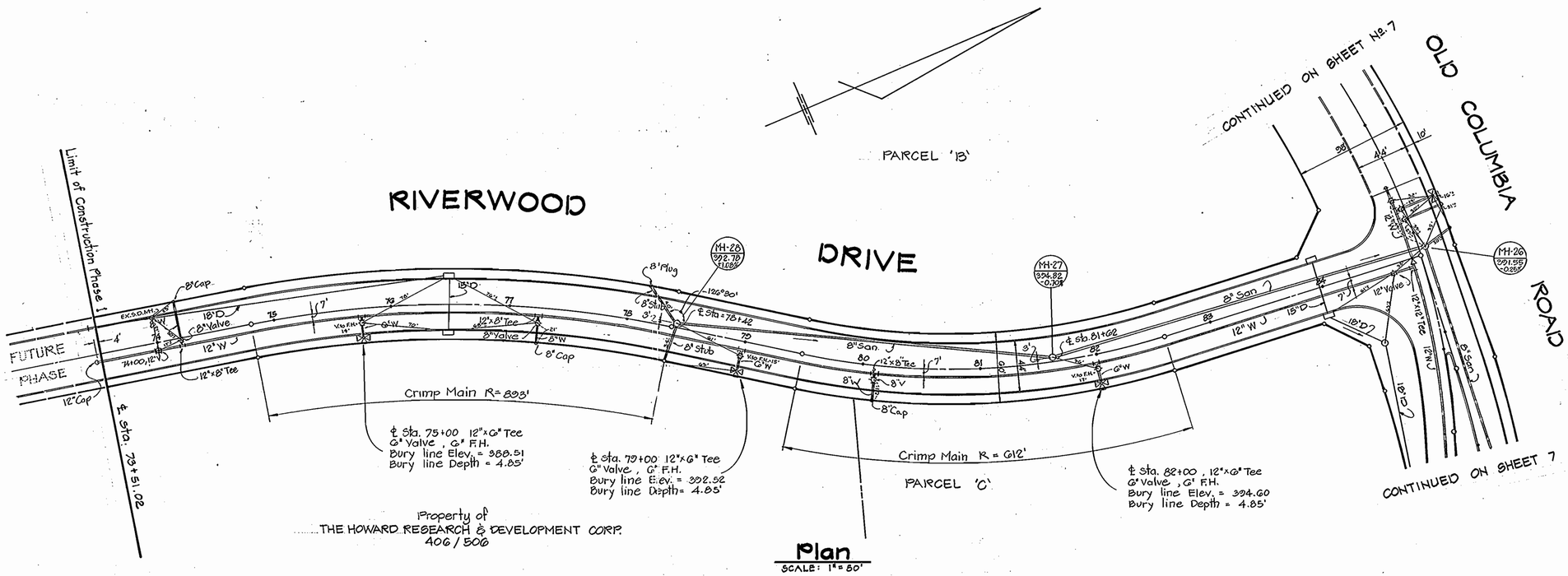
DRAWING NO. 7 OF 9

SCALE
Plan = 1" = 50'
Profile Hor. = 1" = 100'
Vert. 1" = 10'

As Built: July 1982

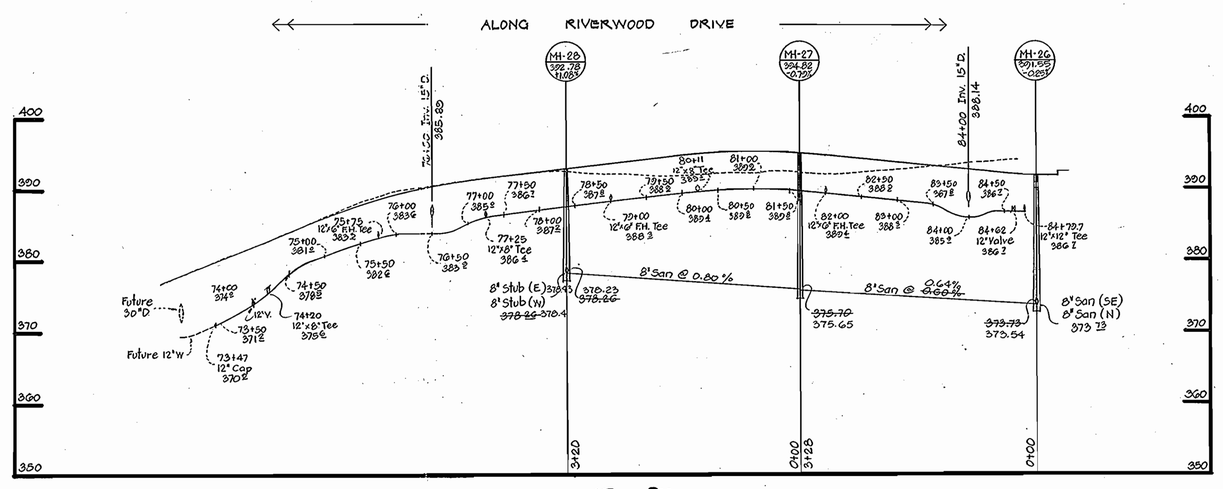
1025/7 WS

K&E BALTIMORE 17 0253 PHOENIX 10-77 MG 6932*



Plan

SCALE: 1" = 50'



Profile

SCALE: HOR. 1" = 100'
VERT. 1" = 10'

DATE	REVISIONS
April 1, 1982	Relocated 8" W Connection from Sta. 74+00 to 74+20; Shift San. Connection @ MH 28
3-5-82	Add 8" V, 8" W & 8" Cap Sta. 80+11 Plan & Profile

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 12-15-81
CHIEF-BUREAU OF ENGINEERING — DATE 12/15/81
CHIEF-BUREAU OF UTILITIES — DATE 12-14-81
CHIEF-LAND DEVELOPMENT DIVISION — DATE

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS · PLANNERS
TOWSON, MARYLAND 21204

CONTRACT NO. 24-1025-D

PLAN AND PROFILE OF WATER AND SEWER MAINS

RIVERS CORPORATE PARK
SECTION 1, AREA 1, PHASE 1
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

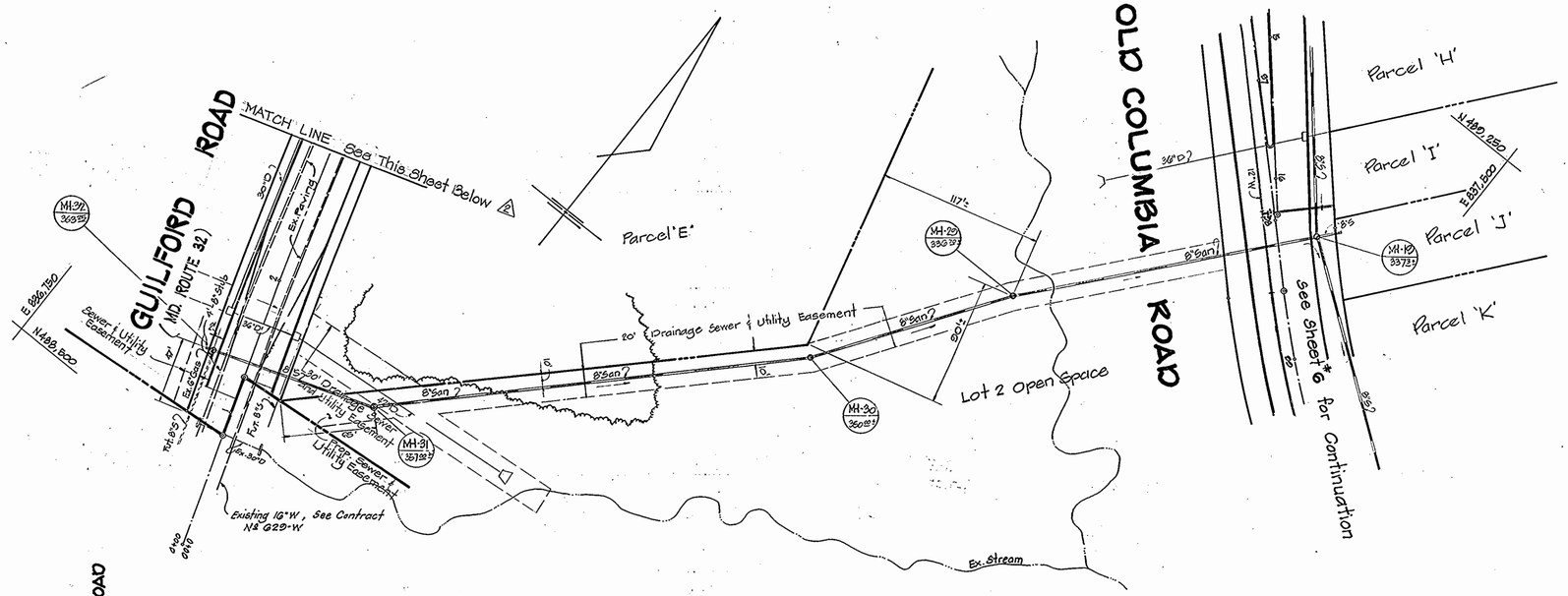
DRAWING NO. 8 OF 9

SCALE
Plan = 1" = 50'
Profile Hor: 1" = 100
Vert: 1" = 10'

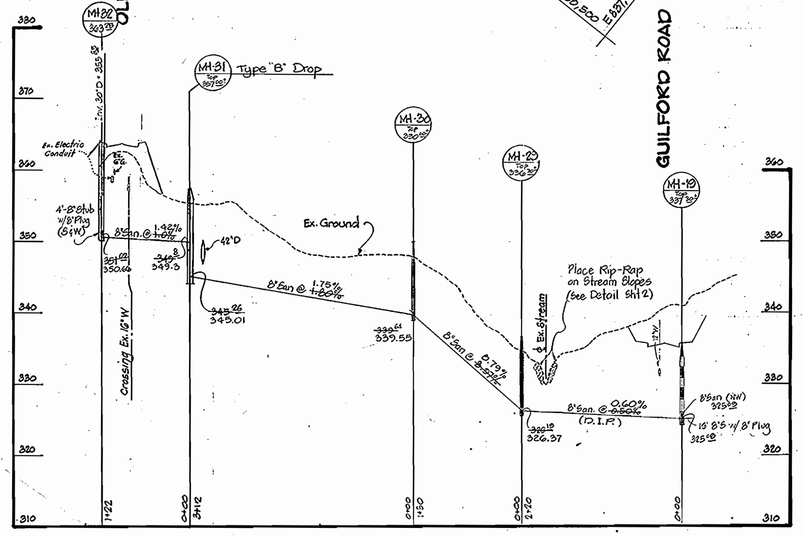
As Built - July 1982

1025/8 WS

K&E BALTIMORE 170253 PHOENIX 10-77 MC 6932



Plan
Scale: 1"=50'



Profile
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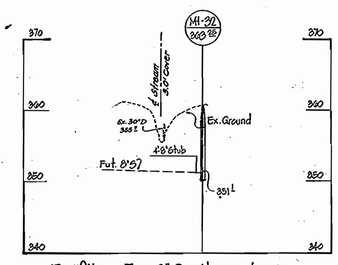
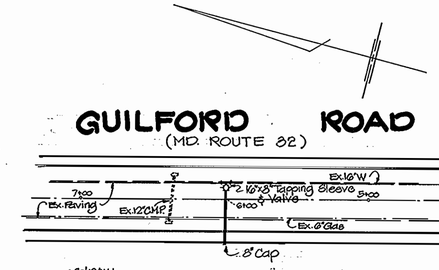
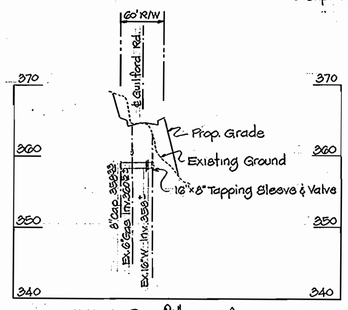


Profile - For 8" Sanitary along GUILFORD ROAD
Scale: Horz. 1"=100' Vert. 1"=10'



Plan
Scale 1"=50'



Profile
Scale: Hor. 1"=100' Vert. 1"=10'

DATE	REVISIONS
7/21/82	Added 8" Water Conn. @ Sta. 6+00 Plan & Profile
April 1, 82	Revise Inverts of MH-10 & MH-26

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

12-15-81 — DIRECTOR OF PUBLIC WORKS — DATE
12/15/81 — CHIEF-BUREAU OF ENGINEERING — DATE
12-14-81 — CHIEF-BUREAU OF UTILITIES — DATE
12-15-81 — CHIEF-LAND DEVELOPMENT DIVISION — DATE

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS · PLANNERS
TOWSON, MARYLAND 21204

CONTRACT NO. 24-1025-D

PLAN AND PROFILE OF WATER AND SEWER MAINS

RIVERS CORPORATE PARK
SECTION 1, AREA 1, PHASE 1
6TH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

DRAWING NO. 2 OF 2

SCALE AS SHOWN

As Built - July 1982

1025/9 WS