

WATER AND SEWER CODE
 WATER NO. H 03
 SEWER NO. 5758000

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. DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL \oplus 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 LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN 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 561-2585
 BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL - 234-5621
 BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING - 298-9013
 MISS UTILITY - 1-800-257-7777
 COLONIAL PIPELINE CO. - 795-1390
 BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366
- 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 LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- ALL WATER MAINS TO BE D.I.P. 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 ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTIONS 1003 AND 1008 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL SEWER MAINS SHALL BE C.S.P., R.C.S.P., V.G.P., A.C.P. CLASS 2400 OR P.V.C. UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE 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 DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S" INDICATES THAT CELLAR CANNOT BE SERVED.
- ALL WATER CONNECTIONS SHALL BE SET FOR INSIDE METER SETTING.

CONTRACT NO. 24-1594-D

McKENZIE'S DISCOVERY

SECTION ONE

WATER AND SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

INDEX

- TITLE SHEET
- PLAN OF WATER AND SEWER MAIN
- PLAN OF WATER AND SEWER MAIN
- WATER AND SEWER MAIN PROFILE
- WATER AND SEWER MAIN PROFILE

NOTES

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 210 OF THE SPECIFICATIONS AND WITH ROAD CONSTRUCTION PLANS, SHEETS 7, 8 & 9. SEDIMENT AND EROSION CONTROL - 8-87-107

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
James H. Jones 4-15-87
 DISTRICT SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
Stephen L. Smith 4-15-87
 DISTRICT CHIEF, HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

| QUANTITIES | | | |
|------------------------|----------|----------|--|
| ITEM | QUANTITY | AS-BUILT | SUPPLIER |
| 8" x 8" T.S. B.V. | - | 1 | US PIPE & FOUNDRY BELLAIR RD SUPPLY CO. |
| 8" WATER | 1882' | 1930' | GRIFFIN PIPE PRODUCTS CO. |
| 6" WATER | 4-82' | 322' | GRIFFIN PIPE PRODUCTS CO. |
| 1 1/2" BLOWOFFS | 1 | 1 | U.S. PIPE & FOUNDRY BELLAIR RD SUPPLY CO. |
| 8" VALVES | 4 | 4 | GRIFFIN PIPE PRODUCTS CO. |
| 6" VALVES (EXCL. FH'S) | 4 | 4 | GRIFFIN PIPE PRODUCTS CO. |
| 1" W.H.C. | 200' | 210' | BELLAIR RD SUPPLY CO. INC. |
| 3/4" W.H.C. | 420' | 432' | BELLAIR RD SUPPLY CO. INC. |
| FIRE HYDRANTS | 4 | 4 | U.S. PIPE & FOUNDRY BELLAIR RD SUPPLY CO. INC. |
| MANHOLES | 4 | 4 | U.S. PIPE & FOUNDRY BELLAIR RD SUPPLY CO. INC. |
| 8" SEWER | 2578' | 2578' | ATLANTIC CONC. PRODUCTS, INC. |
| 6" S.H.C. | 750' | 755' | BELLAIR RD SUPPLY CO. INC. |
| 8"x6" SADDLES | - | - | - |

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Victor F. Nunn 4-21-87
 DIRECTOR OF PUBLIC WORKS DATE

Robert B. Smith 4-23-87
 CHIEF, BUREAU OF UTILITIES DATE

William E. Jones 4-15-87
 CHIEF, BUREAU OF ENGINEERING DATE

Stephen L. Smith 4-15-87
 CHIEF, LAND DEVELOPMENT DIVISION DATE

JOHN E. HARMS JR.
 AND ASSOCIATES INC.
 CONSULTING ENGINEERS - ARCHITECTS - SURVEYORS
 9030 RED BRANCH ROAD SUITE 100
 COLUMBIA, MARYLAND 21045
 TELEPHONE (301) 740-5200



| | | | |
|-----------------|--------|----------|---|
| DES: JAB. | | | |
| DRN: J.J.T. | | | |
| CHK: W.P.N. | J.J.T. | 2 | REVISED PER STATE HEALTH DEPARTMENT COMMENTS 6/1/87 |
| DATE: NOV. 1986 | W.P.N. | 1 | REVISED PER HOWARD COUNTY COMMENTS 3/6/87 |
| BY | NO. | REVISION | DATE |

TITLE SHEET
 CONTRACT NO. 24-1594-D
 600' SCALE MAP NO. 17 BLOCK NO. 9

McKENZIE'S DISCOVERY

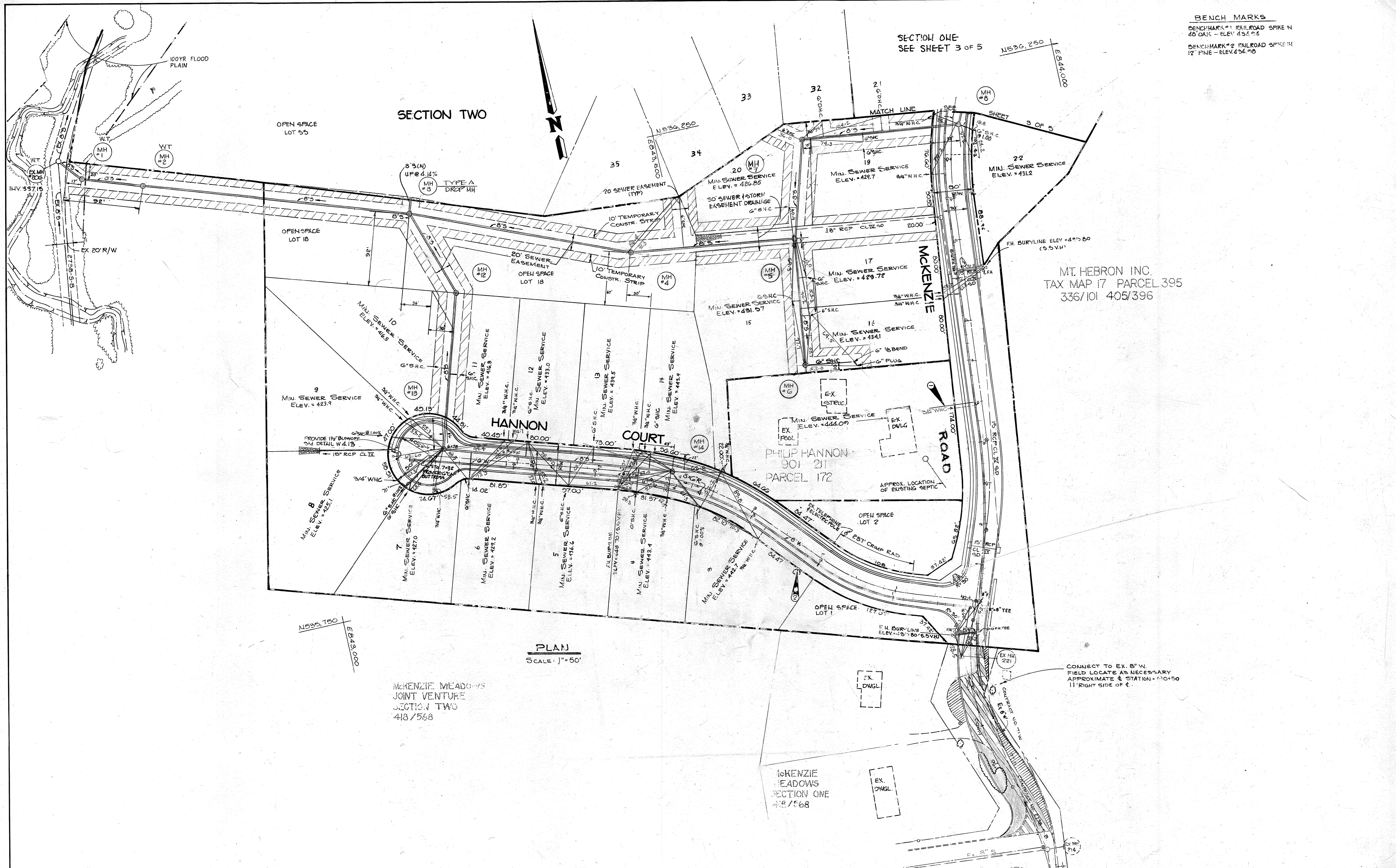
SECTION ONE
 LOTS 1-31

2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE
 H: 1"=50'
 V: 1"=5'

SHEET
 1 OF 3

AS-BUILT 8-18-87 DATE



BENCH MARKS
 BENCHMARK #1 RAILROAD SPIKE IN
 48 OAK - ELEV. 454.94
 BENCHMARK #2 RAILROAD SPIKE IN
 12" PINE - ELEV. 454.78

SECTION ONE
 SEE SHEET 3 OF 5

SECTION TWO

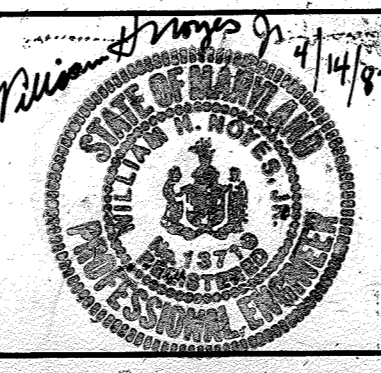
PLAN
 SCALE: 1" = 50'

MCKENZIE MEADOWS
 JOINT VENTURE
 SECTION TWO
 418/568

MCKENZIE
 MEADOWS
 SECTION ONE
 418/568

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works
 Chief, Bureau of Utilities

JOHN E. HARMS JR.
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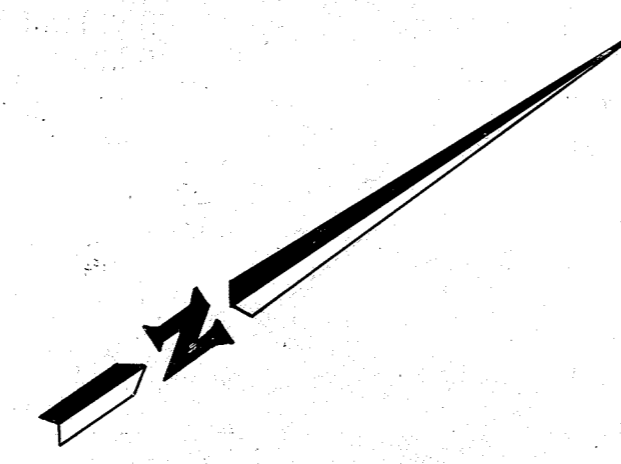


| | | | | |
|---------------|--|----------|------|--|
| DES: J.A.B. | | | | |
| DRN: J.L.R. | | | | |
| CHK: W.H.N. | | | | |
| J.J.T. 2 | REVISED PER STATE HEALTH DEPARTMENT COMMENTS | 6/1/87 | | |
| P.O.A. 1 | REVISED PER HOWARD COUNTY COMMENTS | 3/6/87 | | |
| DATE: NOV, 86 | BY NO. | REVISION | DATE | |

PLAN OF
 WATER AND SEWER MAINS
 CONTRACT NO. 24-1594D
 600' SCALE MAP NO. 17 BLOCK NO. 9

MCKENZIE'S DISCOVERY
 SECTION ONE
 LOTS 1-31
 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE
 H: 1" = 50'
 V: 1" = 5'
 SHEET
 2 OF 5

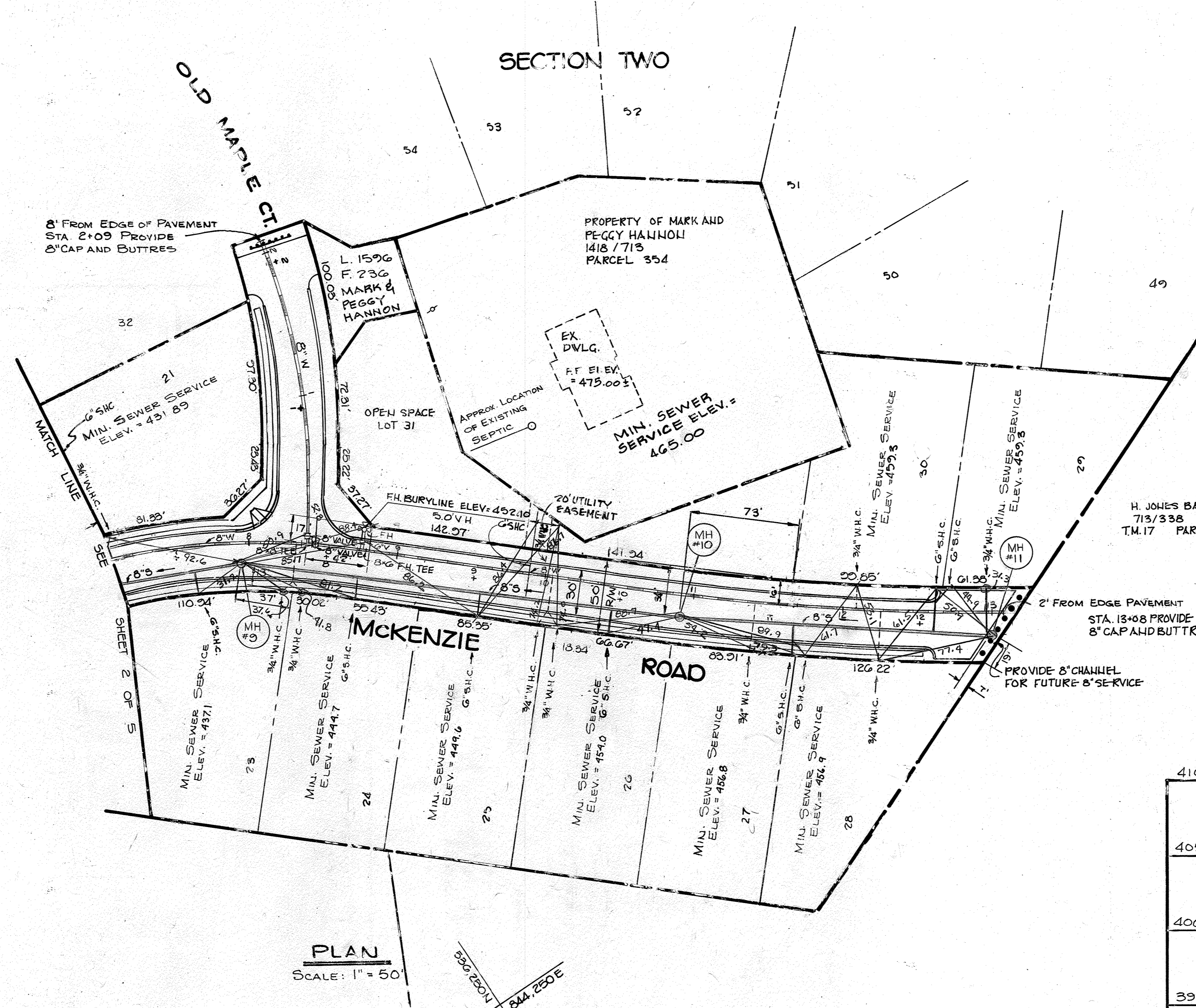


| SEWER HOUSE CONNECTION INVERT @ PROPERTY LINE | | | | | |
|---|--------|--------|---------------|---------------------------|--------|
| STATION | LOT | ELEV. | STATION | LOT | ELEV. |
| MH#12 TO MH#13 | | | MH#4 TO MH#5 | | |
| 0+94 | 10 | 412.42 | 0+66 | *34, 35 | 416.55 |
| 1+00 | 11 | 413.02 | MH#5 TO MH#6 | | |
| 1+83 | 9 | 421.90 | 0+76 | 15 | 427.26 |
| MH#13 TO MH#14 | | | 0+48 | 17 | 424.52 |
| 0+34 | 6 | 425.12 | 0+95 | 16 | 429.02 |
| 1+02 | 12 | 429.12 | MH#6 | PHILIP HANNON | 438.00 |
| 1+57 | 5 | 432.75 | MH#5 TO MH#7 | | |
| 1+84 | 13 | 434.28 | 0+38 | 20 | 422.84 |
| 2+40 | 4 | 437.94 | MH#7 | * 33 | 439.60 |
| 2+54 | 14 | 438.65 | MH#8 | 22 | 429.33 |
| MH#14 | 3 | 440.55 | MH#8 TO MH#9 | | |
| MH#10 TO MH#11 | | | 0+78 | 23 | 434.56 |
| 0+77 | 27, 28 | 454.22 | MH#9 TO MH#10 | | |
| 1+70 | 29, 30 | 455.20 | 0+78 | 24 | 440.61 |
| MH#13 | 7, 8 | 424.65 | 1+61 | 25 | 445.51 |
| | | | 2+51 | 26 | 450.70 |
| | | | 1+92 | MARK & PEGGY HANNON PROP. | 447.75 |
| | | | MH#7 TO MH#8 | | |
| | | | 0+28 | * 32 | 437.60 |
| | | | 0+99 | 21 | 435.70 |
| | | | 0+75 | 19 | 428.04 |

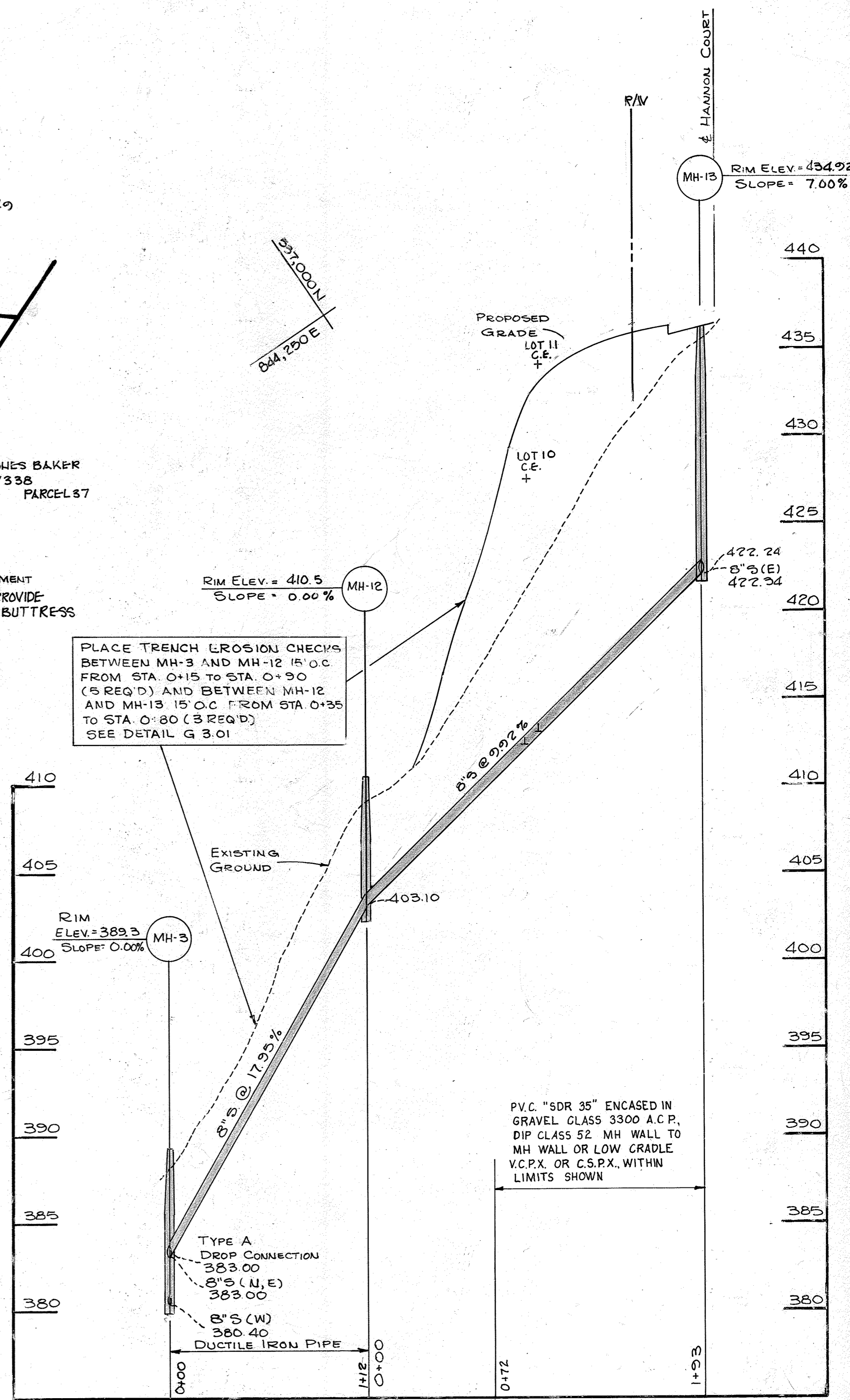
NOTE: * LOTS ARE PART OF SECTION TWO. S.H.C. TO R WILL BE PROVIDED WITH CONSTRUCTION OF SECTION ONE.

| MANHOLE TABLE | | | | | | |
|---------------|--------|----------|----------|-------|-------------|--------------------------------------|
| NO. | RD STA | DIST OFF | RIM ELEV | SLOPE | CROSS SLOPE | TYPE MANHOLE |
| 1* | N/A | N/A | 347.0 | 0.00% | N/A | WATER TIGHT BRICK MANHOLE STD G 5.01 |
| 2* | N/A | N/A | 364.7 | 0.00% | N/A | WATER TIGHT BRICK MANHOLE STD G 5.01 |
| 3* | N/A | N/A | 389.3 | 0.00% | N/A | TYPE 'A' DROP MANHOLE STD S 1.32 |
| 4* | N/A | N/A | 418.9 | 0.00% | N/A | BRICK MANHOLE STD G 5.01 |
| 5* | N/A | N/A | 428.0 | 0.00% | N/A | BRICK MANHOLE STD G 5.01 |
| 6* | N/A | N/A | 441.80 | 0.00% | N/A | BRICK MANHOLE STD G 5.01 |
| 7* | N/A | N/A | 444.00 | 0.00% | N/A | BRICK MANHOLE 17' DEPTH STD G 5.01 |
| 8 | 6+43 | 8' | 439.69 | 4.90% | 3.00% | BRICK MANHOLE STD G 5.01 |
| 9 | 7+44 | 7' | 445.87 | 7.00% | 3.00% | BRICK MANHOLE STD G 5.01 |
| 10 | 10+41 | 7' | 463.31 | 3.00% | 3.00% | BRICK MANHOLE STD G 5.01 |
| 11 | 12+48 | 6' | 463.70 | 0.00% | N/A | BRICK MANHOLE STD G 5.01 |
| 12* | N/A | N/A | 410.50 | 0.00% | N/A | BRICK MANHOLE STD G 5.01 |
| 13 | 6+78 | 7' | 435.99 | 7.00% | N/A | BRICK MANHOLE 17' DEPTH STD G 5.01 |
| 14 | 3+09 | 7' | 440.70 | 0.54% | 3.00% | TERMINAL MANHOLE STD S 1.31 |

NOTE: * SEE PLAN FOR LOCATION



PLAN SCALE: 1" = 50'



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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

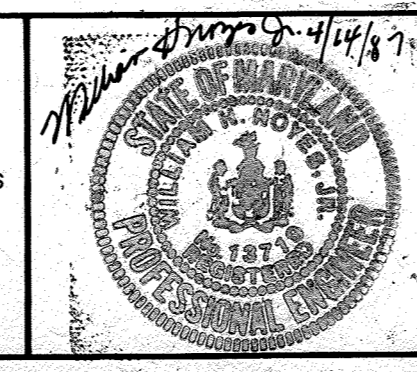
Lois F. Nemy 4-23-87
DIRECTOR OF PUBLIC WORKS DATE

Ruth Beatty 4-23-87
CHIEF, BUREAU OF UTILITIES DATE

William E. Kelly 4-23-87
CHIEF, BUREAU OF ENGINEERING DATE

Joseph ...
CHIEF, LAND DEVELOPMENT DIVISION DATE

JOHN E. HARMS JR.
AND ASSOCIATES INC.
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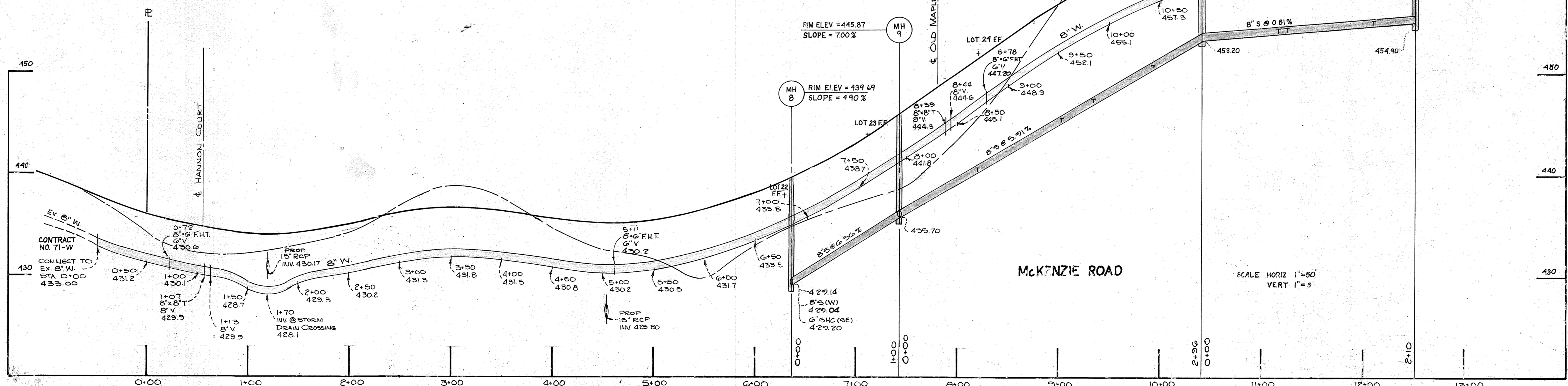
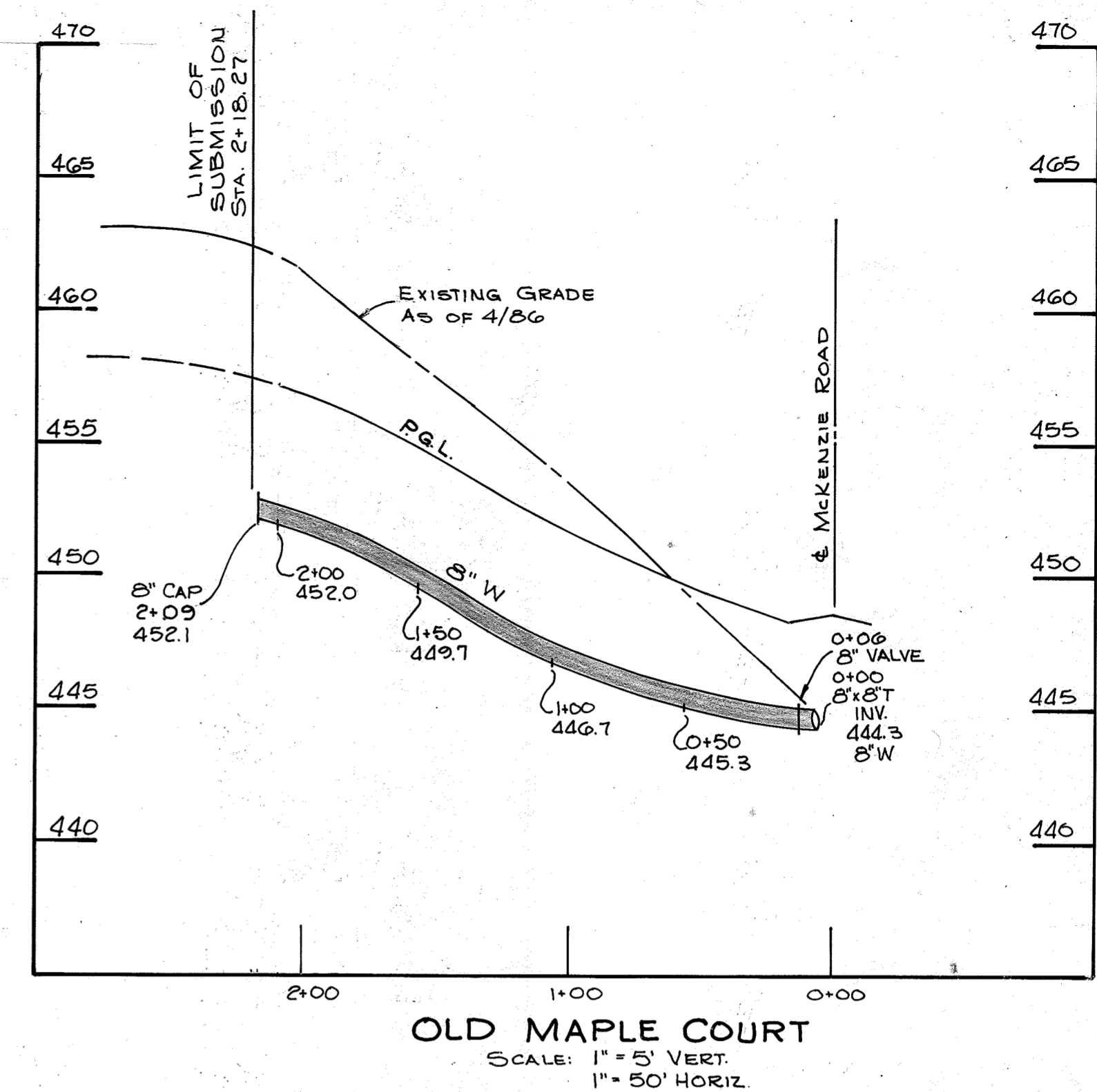
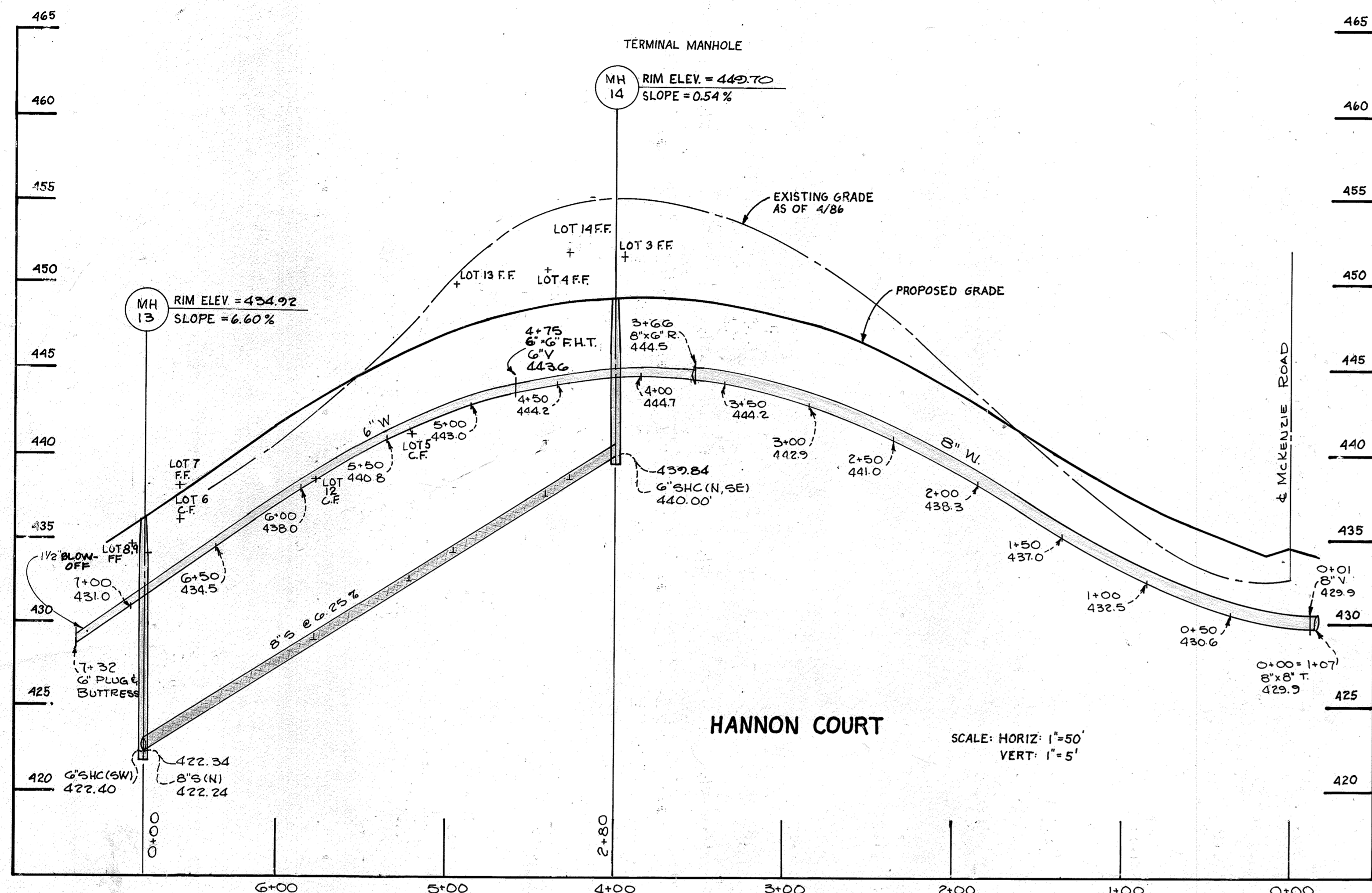


| | | | |
|---------------|----------|--|--------|
| DES: J.A.B. | | | |
| DRN: J.M.M. | | | |
| CHK: W.H.N. | J.J.T. 2 | REVISED PER STATE HEALTH DEPARTMENT COMMENTS | 6/1/87 |
| DATE: May, 86 | J.M.M. 1 | REVISED PER HOWARD CO. COMMENTS | 3/6/87 |
| BY NO. | | REVISION | |

PLAN OF
WATER AND SEWER MAINS
CONTRACT NO 24-1594 D
600' SCALE MAP NO. 17 BLOCK NO. 9

MCKENZIE'S DISCOVERY
SECTION ONE
LOTS 1-31
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE
H: 1" = 50'
V: 1" = 5'
SHEET
3 OF 5



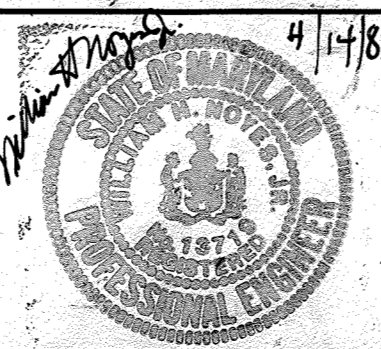
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Ray F. Neamey 4-23-87
DIRECTOR OF PUBLIC WORKS DATE

William E. Cole 4-23-87
CHIEF, BUREAU OF ENGINEERING DATE

Robert Beining 4-23-87
CHIEF, BUREAU OF UTILITIES DATE

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| | | | |
|---------------|-----|-----|---------------------------------|
| DES: J.A.B. | | | |
| DRN: J.J.T. | | | |
| CHK: W.H.H. | | | |
| DATE: 11/2/86 | JMM | 1 | REVISED PER HOWARD CO. COMMENTS |
| | BY | NO. | REVISION |
| | | | DATE: 3/6/87 |

PROFILES OF
WATER AND SEWER MAINS
CONTRACT NO. 24-1594D

McKENZIE'S DISCOVERY
SECTION ONE
LOTS 1-31

2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE
H: 1" = 50'
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SHEET
5 OF 5