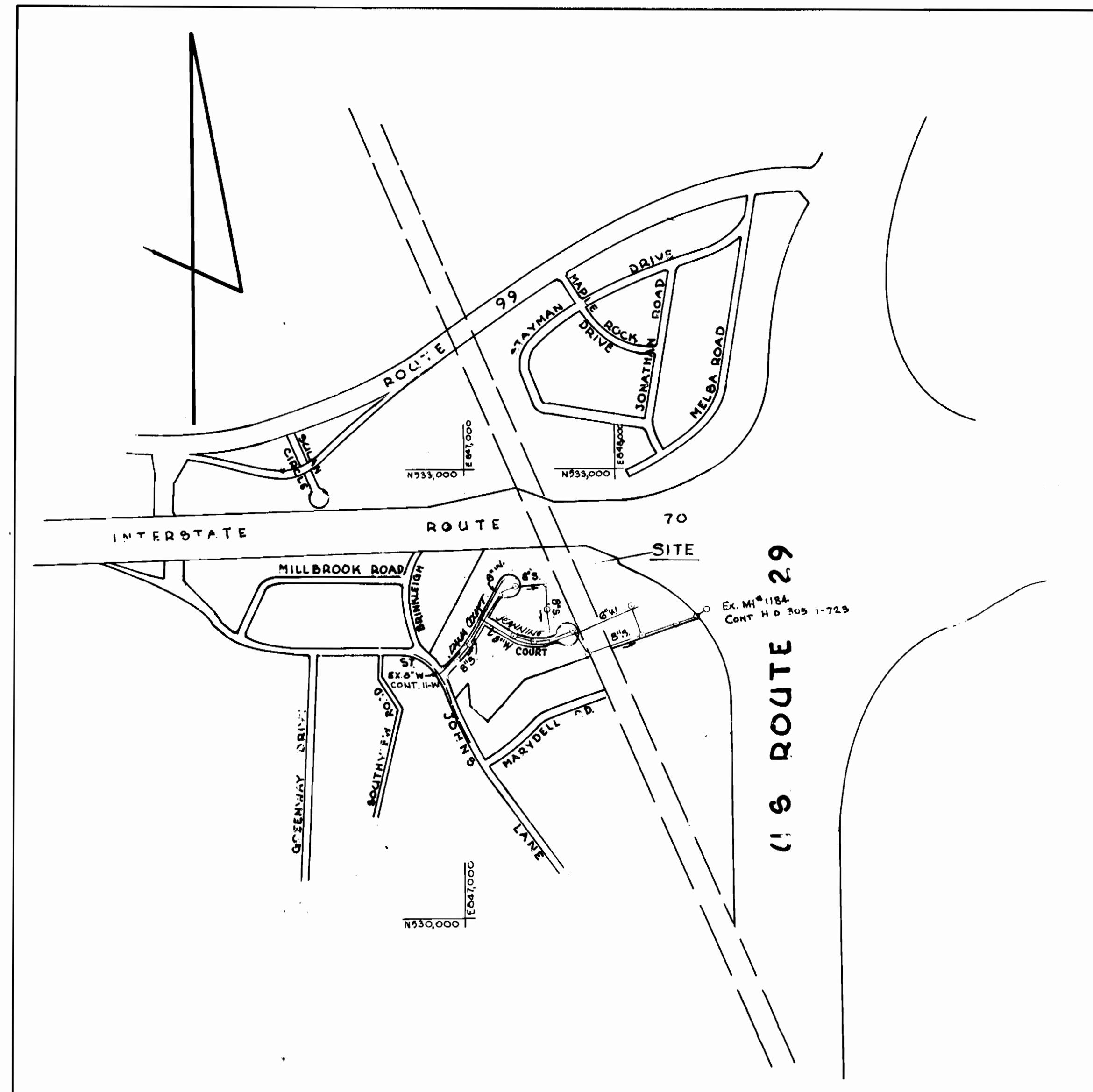


TYPE OF BUILDING	SINGLE FAMILY
NUMBER OF LOTS	35
NUMBER OF SHC'S	35
NUMBER OF WHC'S	35
DRAINAGE AREA	PATAPSCO



SEWER CODE: H03200  
WATER CODE: H04

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 SHOWN ARE INVERT ELEVATIONS.
  - CLEAR ALL UTILITIES BY A MIN. OF 6"
  - FOR DETAILS NOT SHOWN ON THE DRAWINGS AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME II, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME II ON THE JOB.
  - WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL [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 - 531-5553
    - BALTIMORE GAS AND ELECTRIC CO. - CONTRACTOR SERVICES 541-2585
    - BALTIMORE GAS AND ELECTRIC CO. - UNDERGROUND DAMAGE CONTROL - 234-5621
    - BALTIMORE GAS AND ELECTRIC CO. TROUBLE SHOOTING - 290-9013
    - "MDS UTILITY" - 1-599-0100
    - COLONIAL PIPELINE CO. - 795-1390
    - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2566
  - 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.
- PART II - WATER**
- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
  - TOP OF ALL WATER MAINS TO HAVE A MIN 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 DRAWING.
  - 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 SECTION 1003 THE STANDARD SPECIFICATIONS.
  - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
  - ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON THE PLAN OR IN THE SPECIFICATIONS.
- PART III - SEWER**
- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., A.C.P. CLASS 2400 OR PVC 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.
  - FORCE MAINS SHALL BE D.I.P. ONLY.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE NO. 15 OF THE SPECIFICATIONS AND WITH F-56-144  
SEDIMENT & EROSION CONTROL

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*Robert M. Vela* 8-20-86  
U.S. SOIL CONSERVATION SERVICE DATE

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

APPROVED:

*Robert W. Zieher* 8/20/86  
HOWARD SCD DATE

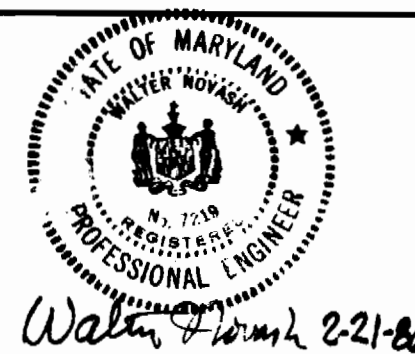
QUANTITIES BOX			
ITEM	ESTIM'D	AS-BUILT	MATERIAL/SUPPLIER
8" SEWER MAIN	2,700 L.F.	2,477 L.F.	1.5521E D.I.P. / P.V.C. HUNTER
6" WATER MAIN	1,000 L.F.	1,250 L.F.	1.5521E D.I.P. / SCRIPPLE PIPE PRODUCTS CO.
6" WATER MAIN	870 L.F.	1,100 L.F.	1.5521E D.I.P. / SCRIPPLE PIPE PRODUCTS CO.
12" M.W.C.	160 L.F.	1,100 L.F.	1.5521E D.I.P. / H.B. METALS
8" M.W.C.	670 L.F.	1,100 L.F.	1.5521E D.I.P. / HUNTER
6" 3" C	2,595 L.F.	1,100 L.F.	1.5521E D.I.P. / HUNTER
8" 4" TAPPING SLABS	1 EA.	1	D.I.P. / CLOW
8" SLICE	2 EA.	2 + 1	TRAPPING SLEEVE
6" VALVE (NPT EN. V.)	1 EA.	1 + 4	1.5521E D.I.P. / Kennedy
8" 4" TEE	4 EA.	4	
8" x 8" TEE	1 EA.	1	
FIRE HYDRANT	6 EA.	4	TYPE 925 / M.B.H.
ENT & DRAIN ARMY	2 EA.	2	
MANHOLES	15 EA.	15	PRE-CAST CONCRETE / ATLANTIC CONCRETE PRODUCTS

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Robert W. Zieher* 9-2-86  
CHIEF, BUREAU OF UTILITIES DATE

*Robert W. Zieher* 9-2-86  
CHIEF, LAND DEVELOPMENT DIV. DATE

BOENDER ASSOCIATES, INC.  
ENGINEERS - PLANNERS - SURVEYORS  
3565 ELLICOTT MILLS DRIVE  
ELLICOTT CITY, MARYLAND 21043  
465-7777



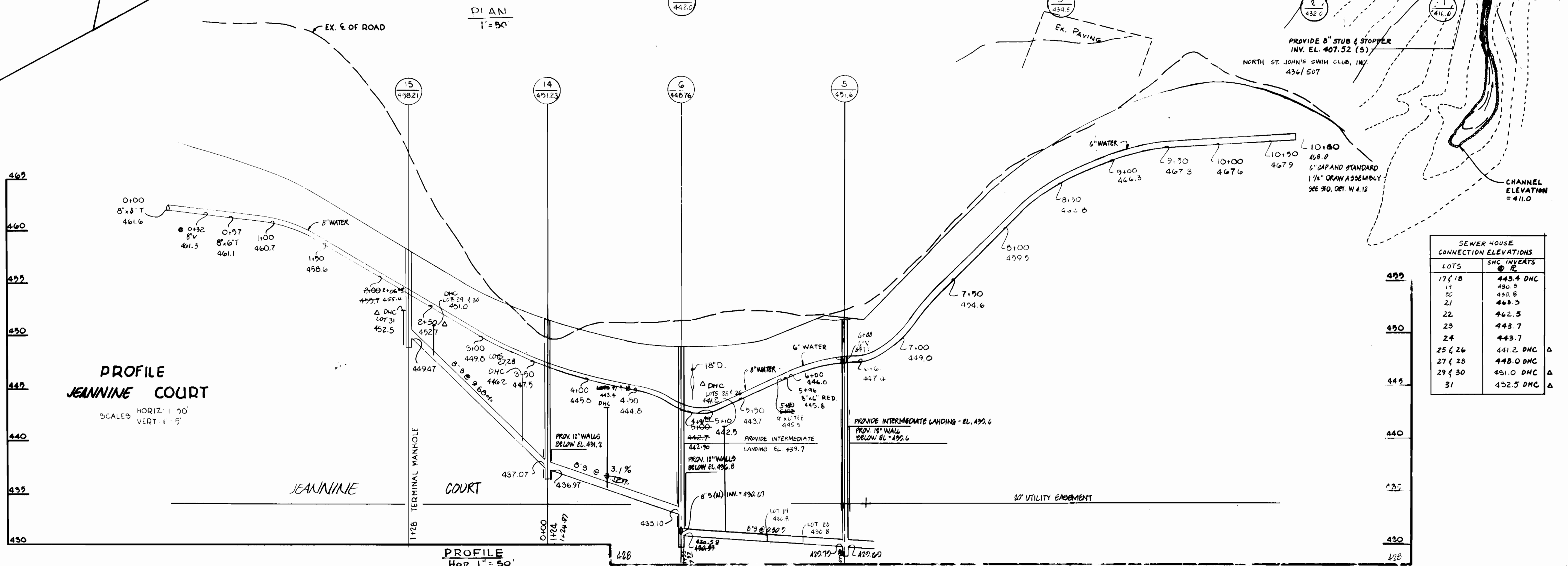
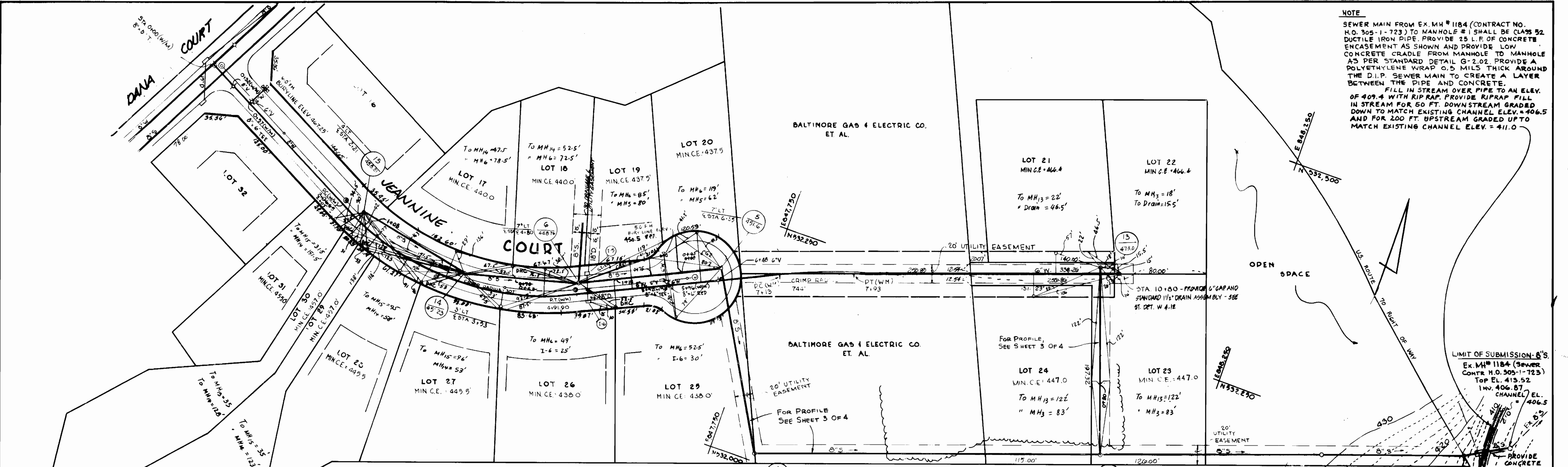
DES:	DP	LOWER P.H.C. LOTS 3&4, 27&28 CORRECT SHC INV. TABLE	2-9-80
DRN:	DP	CONCRETE EXCAVATION FOR SHC LOTS 3&4	2-9-80
CHK:	DP	CORRECT LOT ROTAGE LOTS 13,16,20,21,22,23,24,14, 2,19,35	12-2-86
		AREA OF PROPOSED UTILITIES OVERLAY	3-5-87
DATE:			
BY NO.		REVISION	DATE

TITLE SHEET

ST JOHN'S WOODS LOTS 1-36  
2ND ELECTION DISTRICT  
CONTRACT NO. 14-1528-D

SCALE AS SHOWN SHEET 1 OF 4

**NOTE**  
 SEWER MAIN FROM EX. MH #1184 (CONTRACT NO. H.O. 305-1-723) TO MANHOLE #1 SHALL BE CLASS 52 DUCTILE IRON PIPE, PROVIDE 25 L.F. OF CONCRETE ENCASUREMENT AS SHOWN AND PROVIDE LOW CONCRETE CRADLE FROM MANHOLE TO MANHOLE AS PER STANDARD DETAIL G-2.02. PROVIDE A POLYETHYLENE WRAP 0.5 MILS THICK AROUND THE D.I.P. SEWER MAIN TO CREATE A LAYER BETWEEN THE PIPE AND CONCRETE. FILL IN STREAM OVER PIPE TO AN ELEV. OF 409.4 WITH RIP RAP. PROVIDE RIP RAP FILL IN STREAM FOR 50 FT. DOWNSTREAM GRADED DOWN TO MATCH EXISTING CHANNEL ELEV. = 406.5 AND FOR 200 FT. UPSTREAM GRADED UP TO MATCH EXISTING CHANNEL ELEV. = 411.0



**DEPARTMENT OF PUBLIC WORKS**  
 Director of Public Works: [Signature] 9/2/86  
 Chief, Bureau of Engineering: [Signature] 9/2/86  
 Chief, Bureau of Utilities: [Signature] 9/2/86  
 Chief, Land Development Div: [Signature] 9/2/86

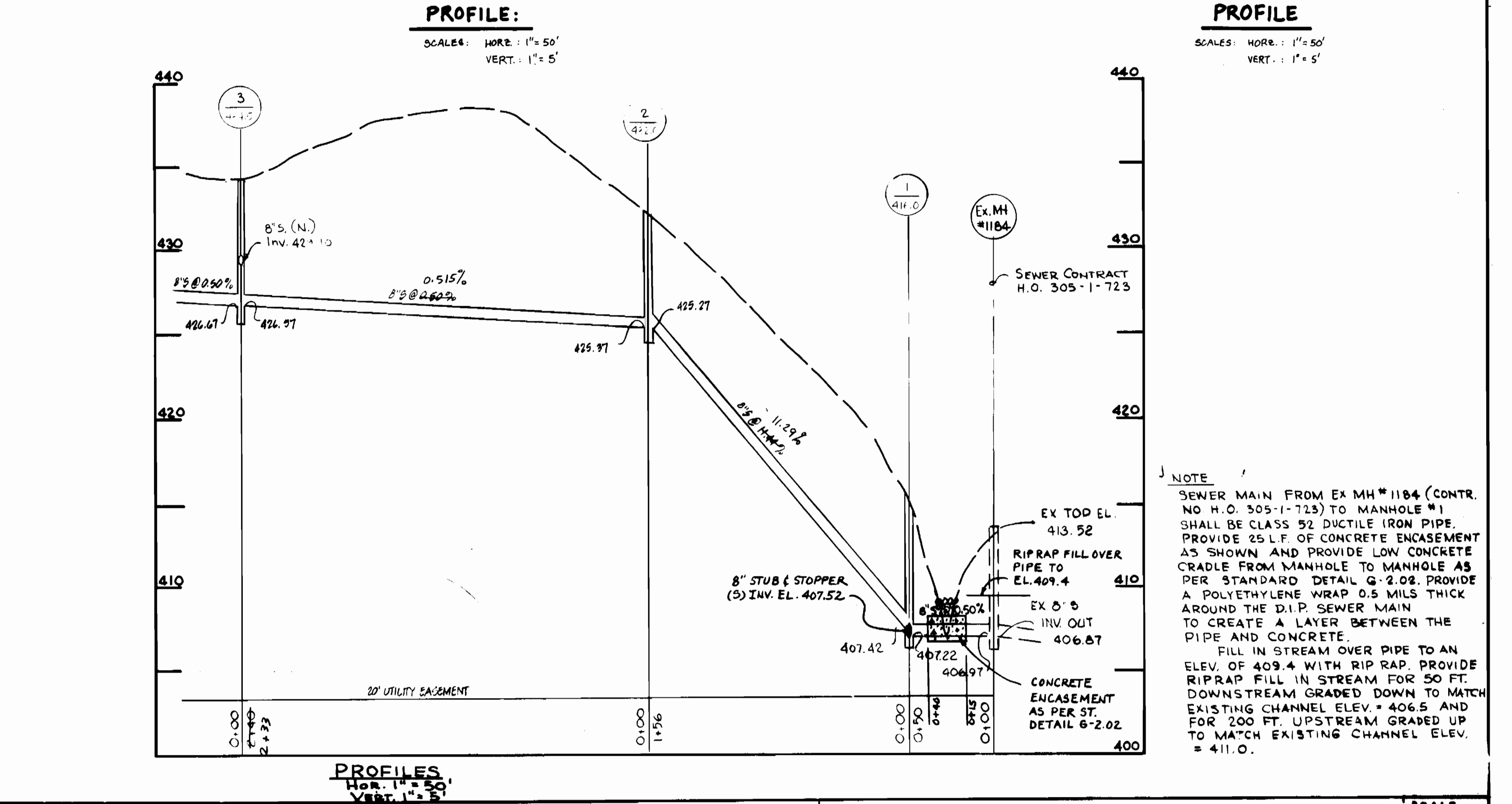
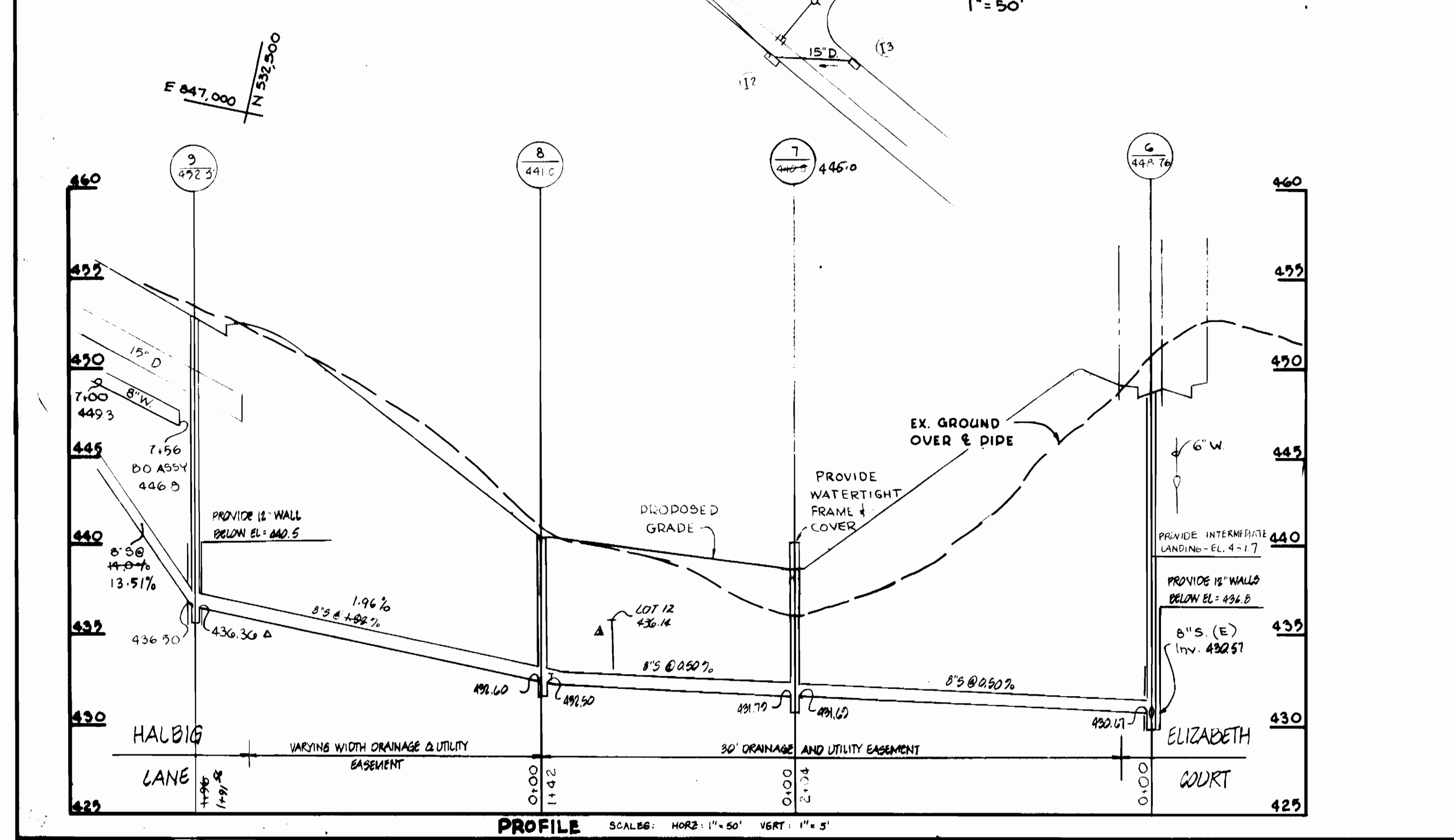
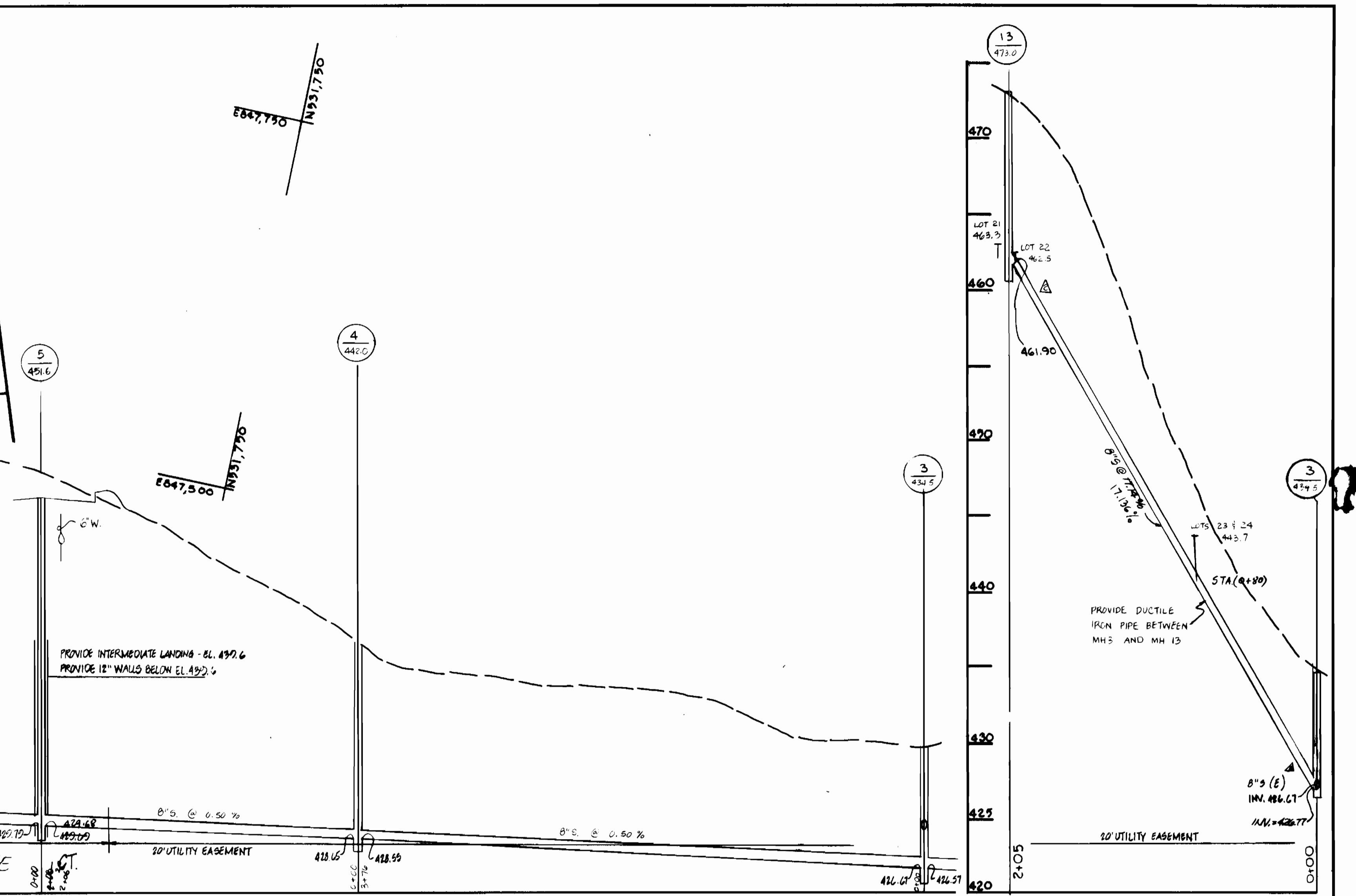
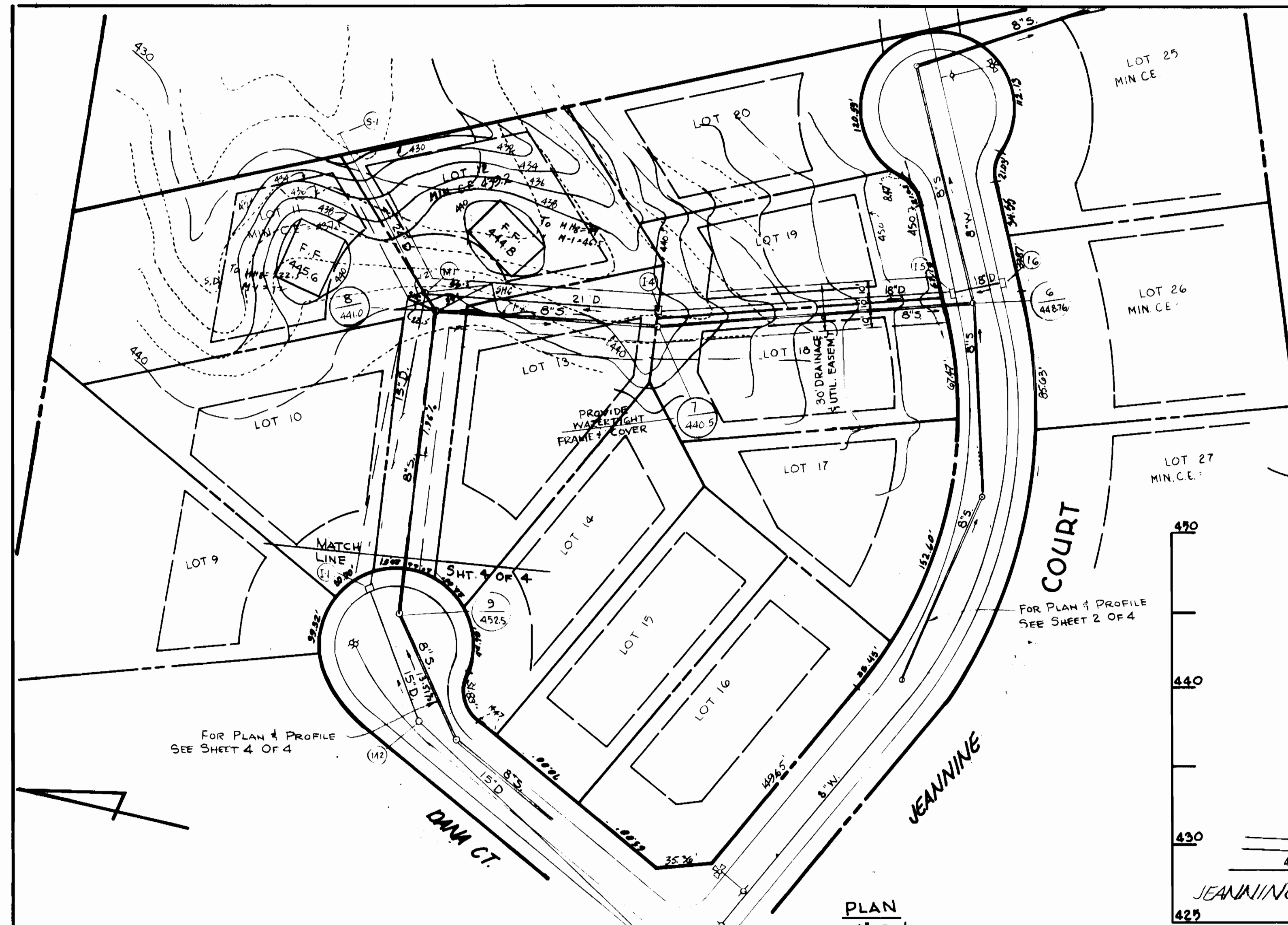
**BOENDER ASSOCIATES, INC.**  
 ENGINEERS PLANNERS SURVEYORS  
 3565 ELLICOTT MILLS DR.  
 ELLICOTT CITY, MARYLAND 21043  
 (301) 465-7777



DES			
DRN			
CHK	JCO	ROAD NAMES	8-2-87
	JCO	8" V @ 0+32	5-12-87
	JCO	S.H.C. ELEV.	5-12-87
DATE	BY NO.	REVISION	DATE

**PLAN AND PROFILES**

ST JOHN'S WOODS  
 2ND ELECTION DISTRICT  
 CONTRACT NO. 14-1528-D  
 SCALE: AS SHOWN  
 SHEET: 2 OF 4



NOTE  
SEWER MAIN FROM EX MH #1184 (CONTR. NO. H.O. 305-1-723) TO MANHOLE #1 SHALL BE CLASS 52 DUCTILE IRON PIPE. PROVIDE 25 L.F. OF CONCRETE ENCASUREMENT AS SHOWN AND PROVIDE LOW CONCRETE CRADLE FROM MANHOLE TO MANHOLE AS PER STANDARD DETAIL G-2.02. PROVIDE A POLYETHYLENE WRAP 0.5 MILS THICK AROUND THE D.I.P. SEWER MAIN TO CREATE A LAYER BETWEEN THE PIPE AND CONCRETE. FILL IN STREAM OVER PIPE TO AN ELEV. OF 409.4 WITH RIP RAP. PROVIDE RIP RAP FILL IN STREAM FOR 50 FT. DOWNSTREAM GRADED DOWN TO MATCH EXISTING CHANNEL ELEV. = 406.5 AND FOR 200 FT. UPSTREAM GRADED UP TO MATCH EXISTING CHANNEL ELEV. = 411.0.

DEPARTMENT OF PUBLIC WORKS  
 Director of Public Works: [Signature] DATE: 9-2-86  
 Chief, Bureau of Engineering: [Signature] DATE: 9-2-86  
 Chief, Bureau of Utilities: [Signature] DATE: 9-2-86  
 Chief, Land Development Div.: [Signature] DATE: 9-2-86

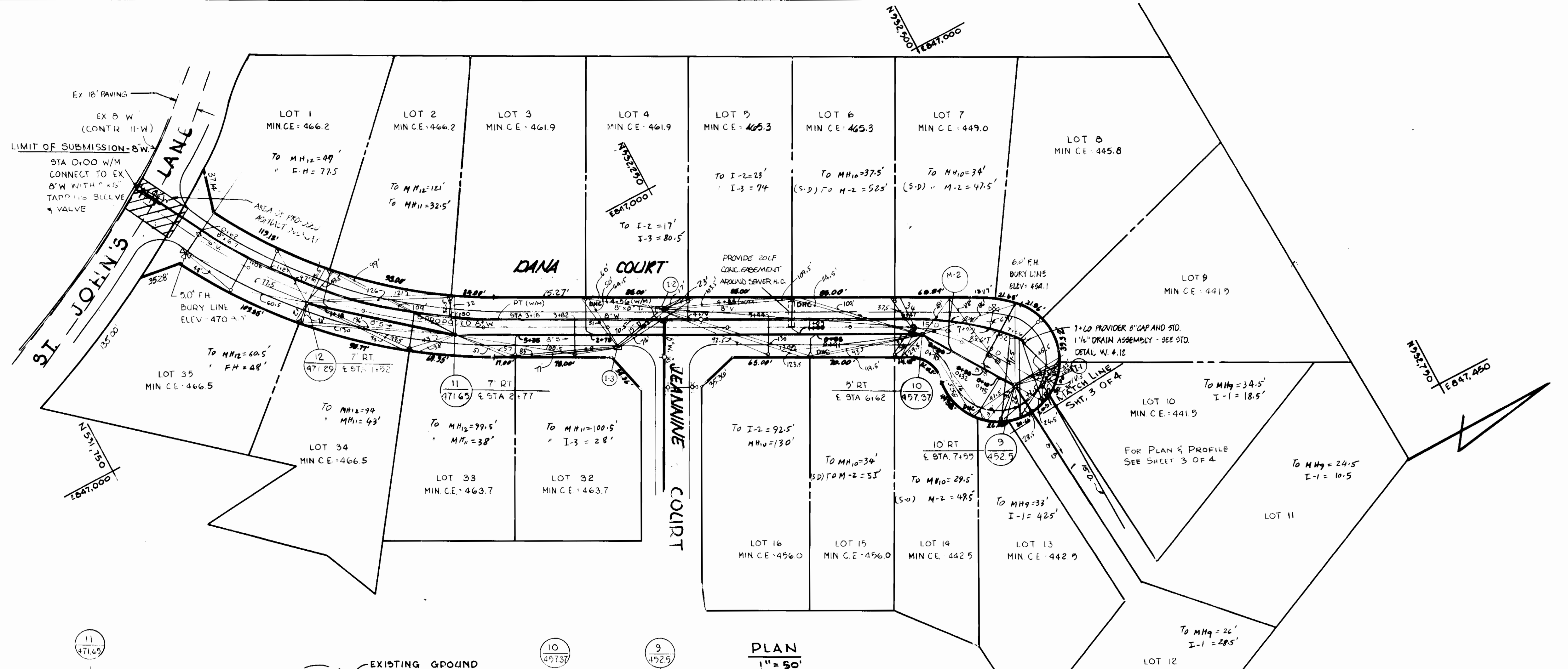
BOENDER ASSOCIATES, INC.  
 ENGINEERS-PLANNERS-SURVEYORS  
 3565 ELLICOTT MILLS DR.  
 ELLICOTT CITY, MARYLAND 21043  
 (301) 465-7777



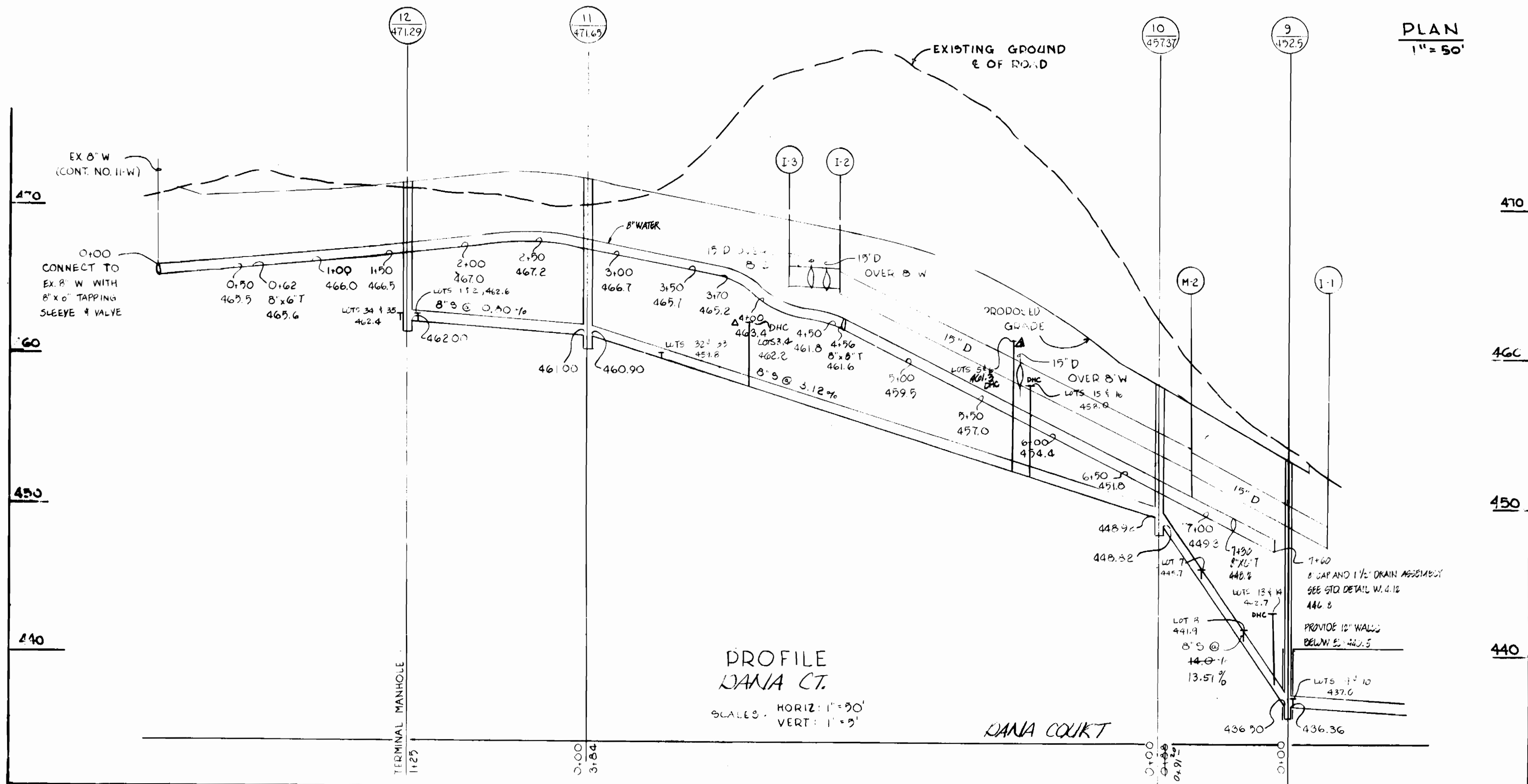
DES:			
DRN:	JCO	ROAD NAMES	10-2-84
CHK:	JCO	PIPE SLOPE/LOT/CELLAR/BOX/LOT/12 SHC	9-29-87
	JCO	CHALICE PIPE SLOPE	3-19-87
DATE:	JCO	PIPE INV.	9-15-87
BY:	NO.	REVISION	DATE

PLAN AND PROFILES

ST. JOHN'S WOODS  
 2ND. ELECTION DISTRICT  
 CONTRACT NO. 14-1528-D  
 SCALE: AS SHOWN  
 SHEET: 8 OF 4  
 AS-BUILT 27 JAN 88 8505



PLAN  
1" = 50'



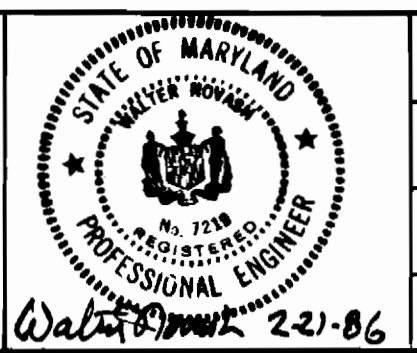
PROFILE  
DANA CT.  
SCALES: HORIZ: 1" = 50'  
VERT: 1" = 5'

SEWER HOUSE CONNECTION ELEVATIONS	
LOTS	S.H.C. INVERTS @ ELEV.
1 & 2	462.6
3 & 4	462.2 DHC
5 & 6	461.3 DHC
7	445.7
8	441.9
9 & 10	437.0
11	431.7
12	432.4 DHC
13 & 14	442.7 DHC
15 & 16	458.0 DHC
32 & 33	459.8
34 & 35	462.4

PROFILES - HOR: 1" = 50'  
VERT: 1" = 5'

DEPARTMENT OF PUBLIC WORKS  
 Director of Public Works: [Signature] 9-2-86  
 Chief, Bureau of Engineering: [Signature] 9-2-86  
 Chief, Bureau of Utilities: [Signature] 9-2-86  
 Chief, Land Development Div: [Signature] 9-2-86

BOENDER ASSOCIATES, INC.  
 ENGINEERS - PLANNERS - SURVEYORS  
 3565 ELLICOTT MILLS DR.  
 ELLICOTT CITY, MARYLAND 21043  
 (301) 465-7777



DES:			
DRN:			
CHK:	JCO	ROAD NAMES	10-2-86
	JCO	DHC LOTS 5 & 6, CELLAR ELEV. LOTS 5 & 6	9-29-86
	JCO	S.H.C. ELEV.	3-4-86
DATE NOV 1986	BY NO.	REVISION	DATE

PLAN AND PROFILES

ST. JOHN'S WOODS  
 2ND ELECTION DISTRICT  
 CONTRACT NO. 14-1528-D

SCALE:  
 AS SHOWN  
 SHEET  
 4 OF 4