

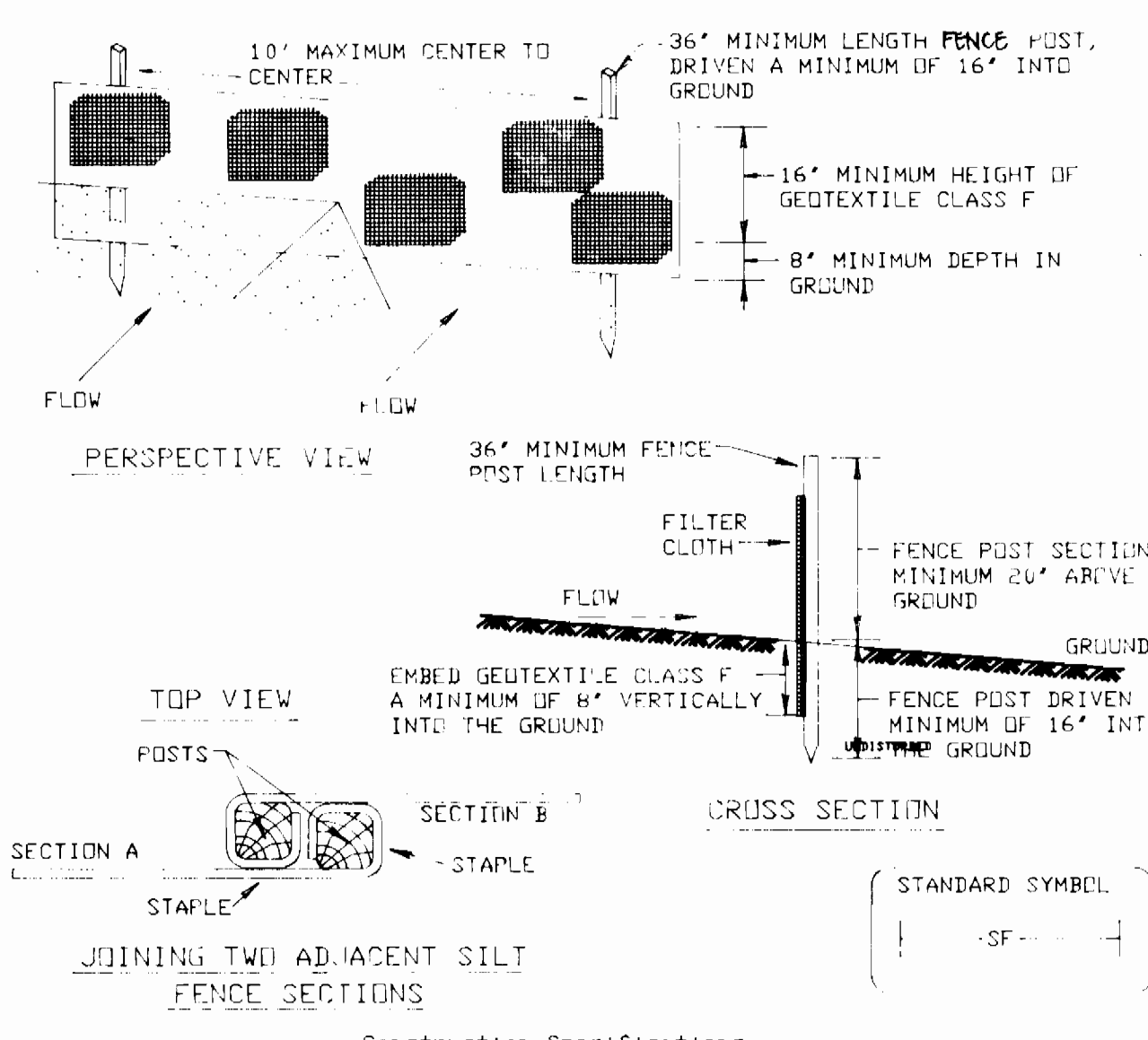
PLAN
SCALE: 1"=50'

QUANTITIES				
ITEM	ESTIMATED	QUANTITIES	AS-BUILT TYPE	SUPPLIER
8" DENVER	104 L.F.			
4" DENVER	497 L.F.			
MANHOLES	6 EACH			
8" DENVER D.I.P.	500 L.F.			
6" WATER	399 L.F.			
1" NHC	253 L.F.			
6" 1/2 HD	4 EACH			
6" 1/2 YB	2 EACH			

BENCHMARKS

BENCHMARK NO. 1 ELEV. = 491.10
 EXISTING MANHOLE RIM NO. 1 (CONTRACT #10-1352-D)
 N 534, 318 051000 E 051, 475 348 000

BENCHMARK NO. 2 ELEV. = 407.75
 HUB WITH STAKE MARKED "TRAVERSE PT. NO. 126"
 N 536, 742 360000 E 051, 766 890 000



- Construction Specifications
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pound per linear foot.
 - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ² /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
 - Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
 - Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

SILT FENCE
NOT TO SCALE

NOTE: THE OCCUPANCE PERMIT FOR THESE TOWNHOMES WILL NOT BE ISSUED UNTIL THE FORCE MAIN CONTRACT # 14-3499 & PUMPING SYSTEM CONTRACT # 10-3500 ARE COMPLETED & OPERATIONAL.

SIC INVERTS @ PROPERTY LINE CHART

STATION	LOT	ELEVATION
1+15 ST	MH 200 TO MH 201	
	19 (45" SHC)	436.25
0+20 ST	MH 201 TO MH 202	
	10 (45" SHC) @ MH	434.00
	17 (45" SHC)	433.00
0+40 ST	16 (45" SHC)	432.00
0+60 ST	15 (45" SHC)	433.00
0+80 ST	14 (45" SHC)	434.00
0+30 ST	MH 202 TO MH 203	
	12 (45" SHC)	441.00
0+50 ST	11 (45" SHC)	441.00
0+70 ST	10 (45" SHC)	441.00
0+90 ST	9 (45" SHC)	440.00
1+10 ST	8 (45" SHC)	439.50
1+30 ST	7 (45" SHC)	436.00
1+00 ST	MH 203 TO MH 204	
	6	423.54

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

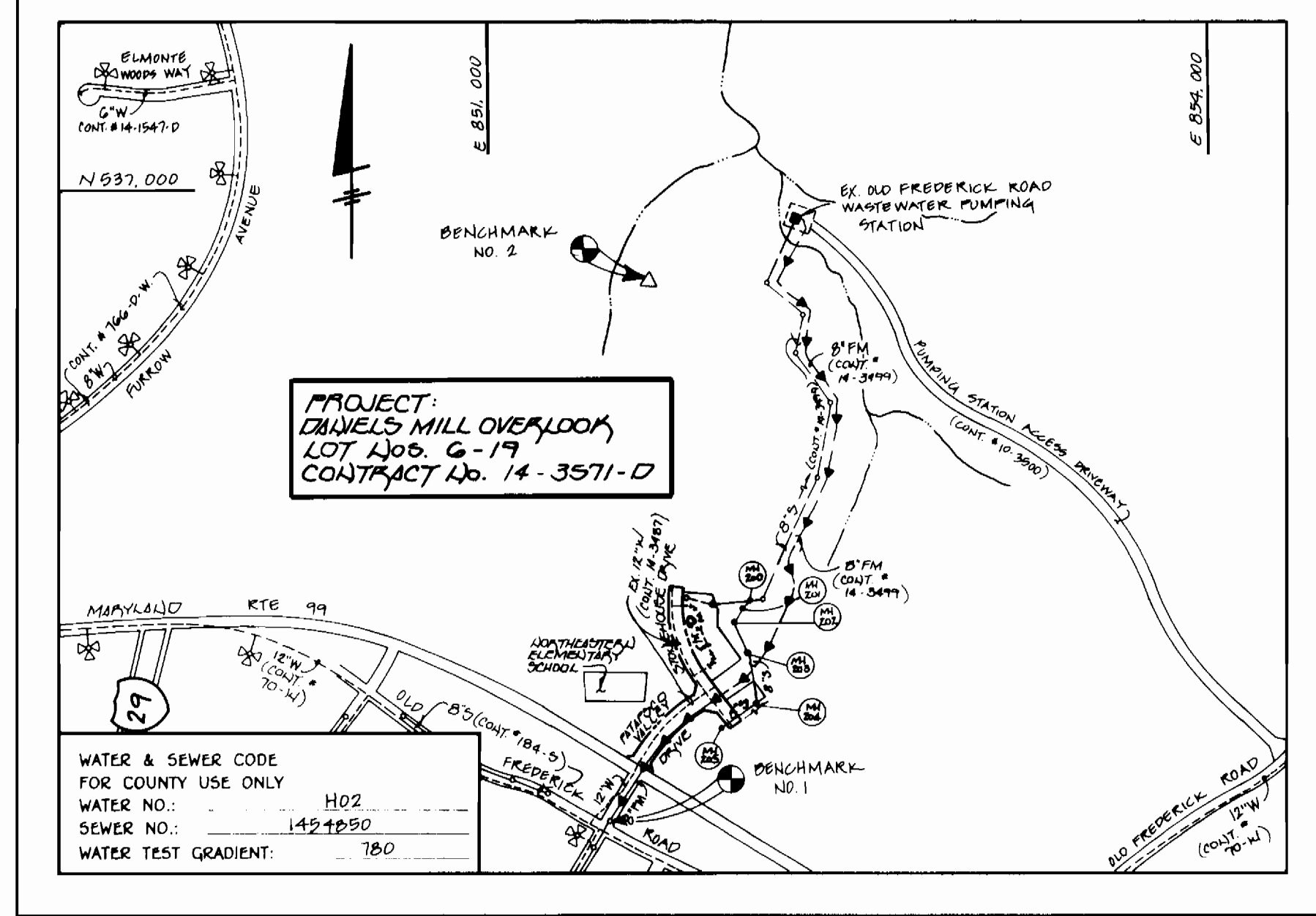
[Signature] 9/18/96
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

APPROVED: *[Signature]* 9/18/96
HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS AND ON SDP 97-12.

[Signature] 9/14/96
SIGNATURE OF DEVELOPER DATE



VICINITY MAP
SCALE: 1"=600'

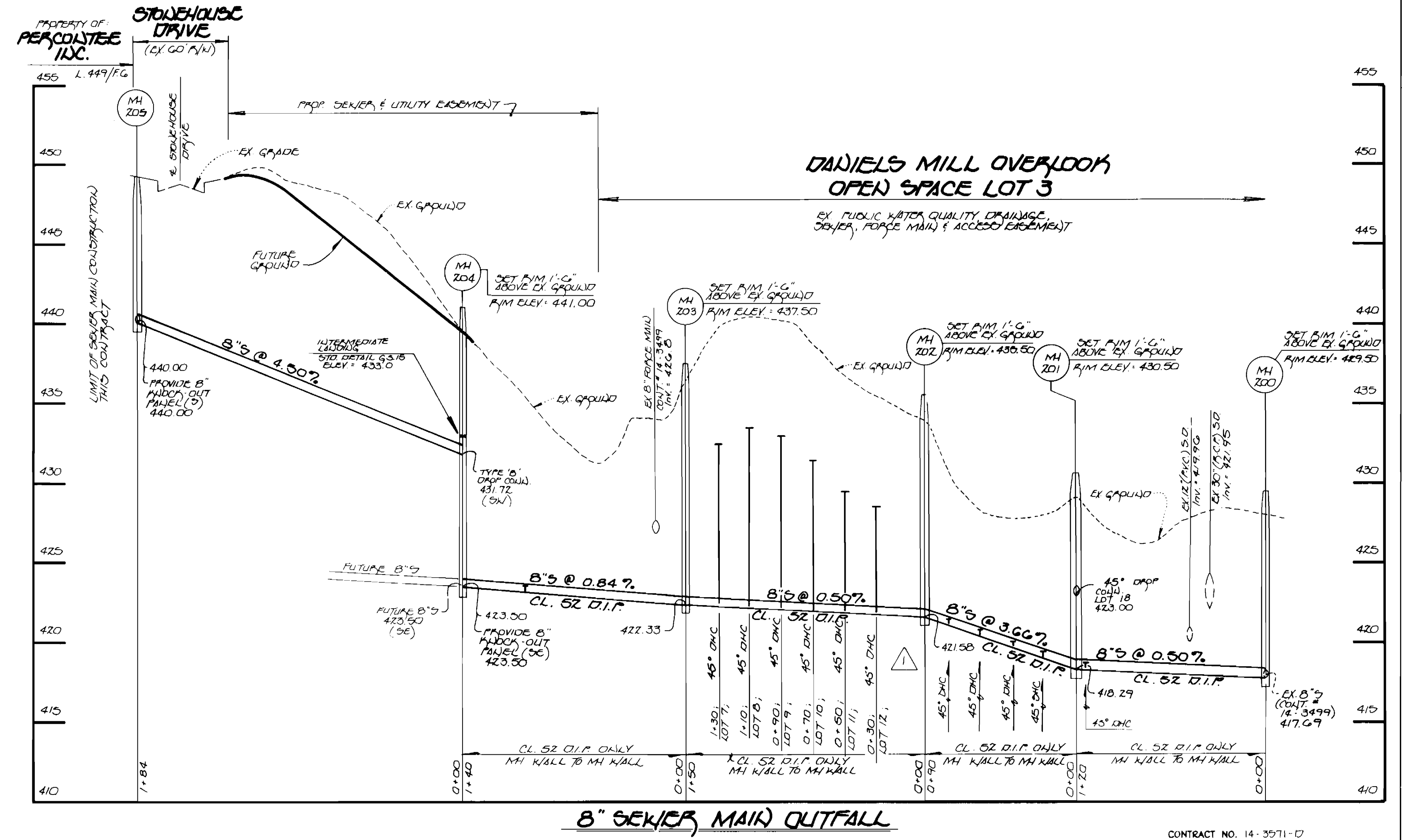
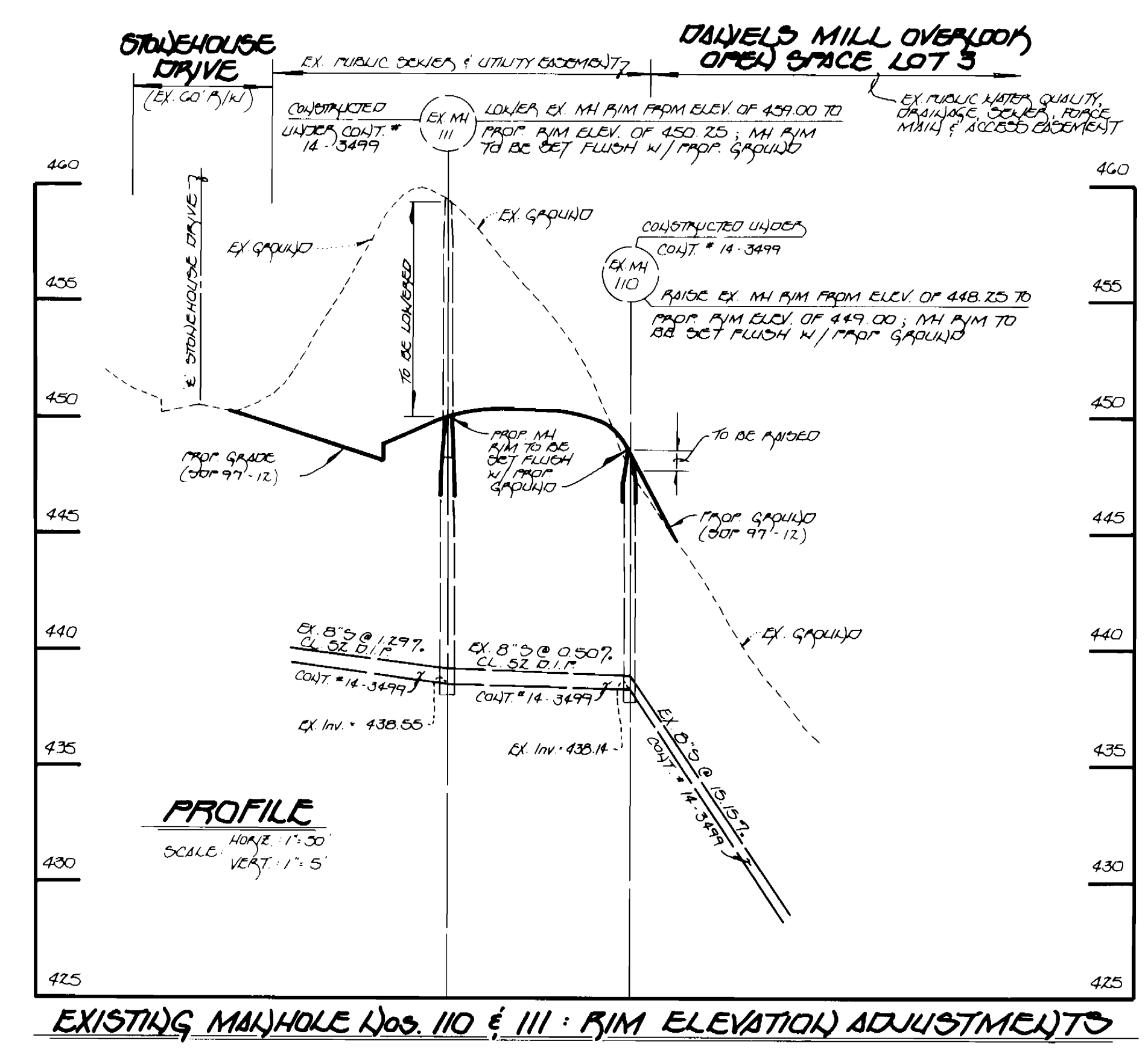
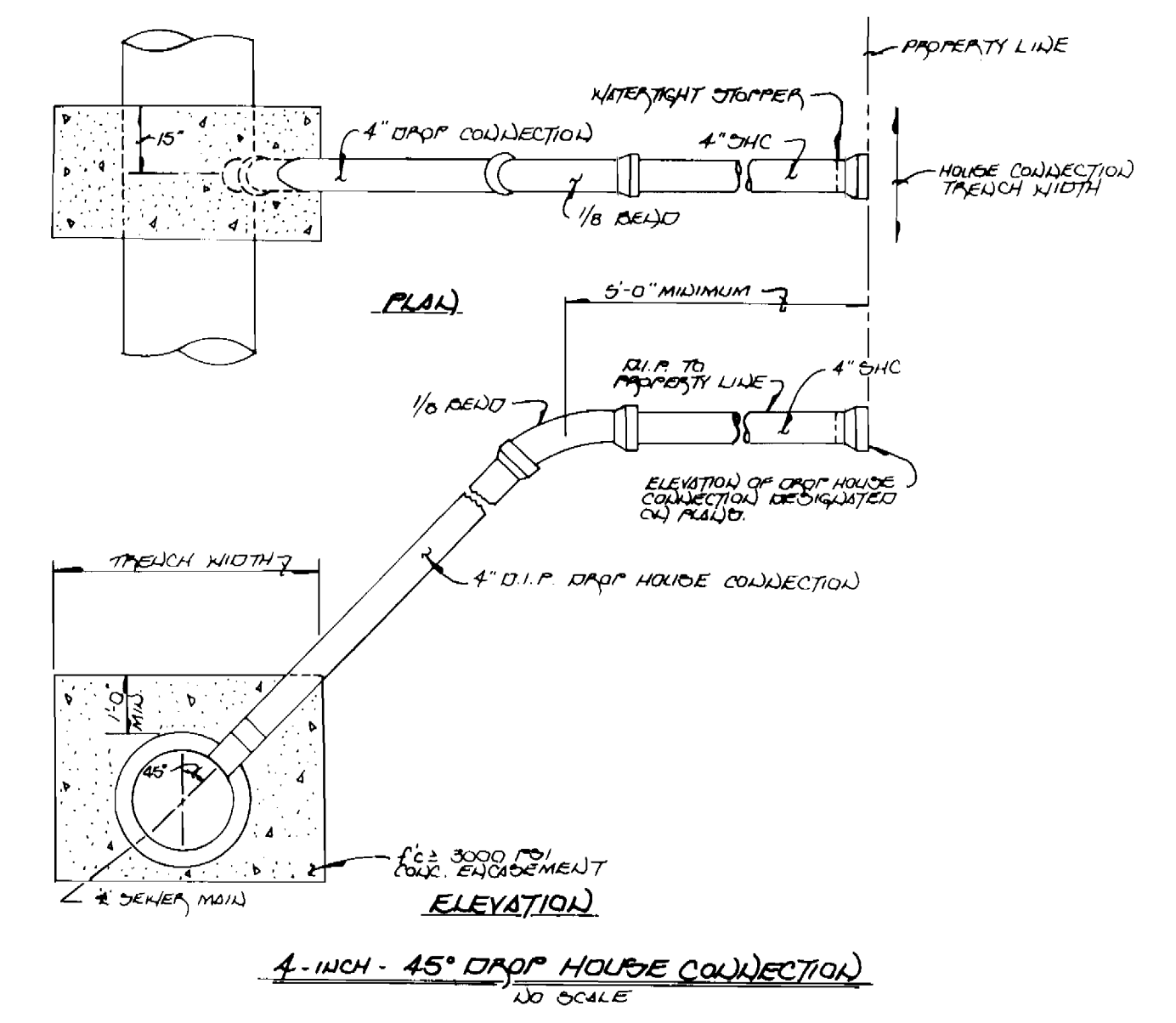
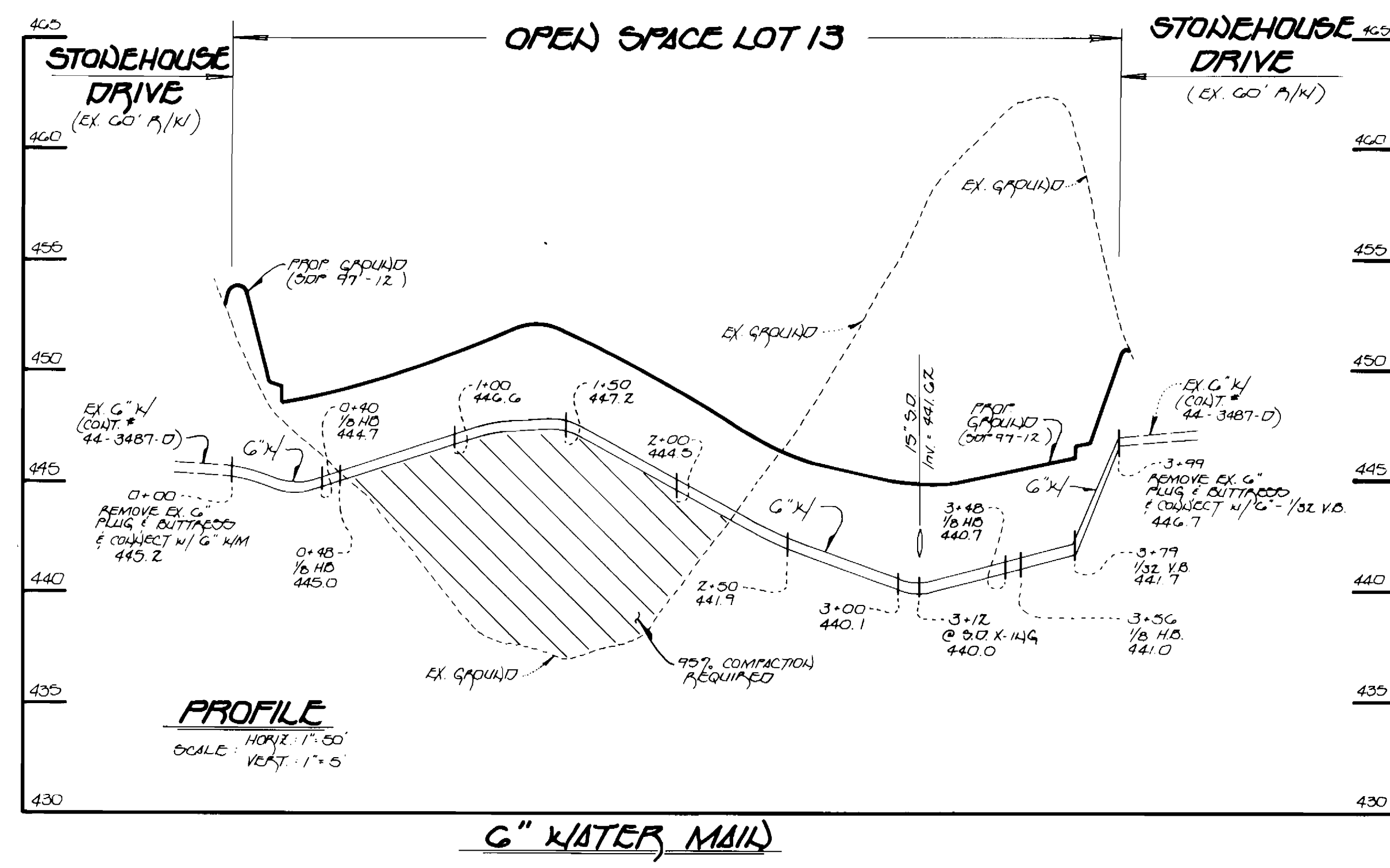
TYPE OF BUILDING: RESIDENTIAL, TOWNHOMES
 NUMBER OF LOTS: 14 (13 BUILDABLE)
 NO. OF WATER HOUSE CONNECTIONS: 13
 NO. OF SEWER HOUSE CONNECTIONS: 13
 DRAINAGE AREA: PATASCO
 TREATMENT PLANT: PATASCO W.W.T.P., CITY OF BALTIMORE VIA THE OLD FREDERICK ROAD PUMPING STATION

- 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.
 - 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.
 - FOR SEWER MAINS SHALL BE D.I.P. 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 WATER TIGHT FRAME AND COVERS, STANDARD DETAIL G. 5.52.
 - WHERE WATER TIGHT MANHOLE FRAME AND COVERS 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 FRAMES AND COVERS, STANDARD DETAIL G. 5.51.
 - 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 (W1.11 AND W2.13). 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 18.11(a) OF THE HOWARD COUNTY CODE.

PLAN REFERENCE NUMBERS:
SDP 97-12-4-F-96-67

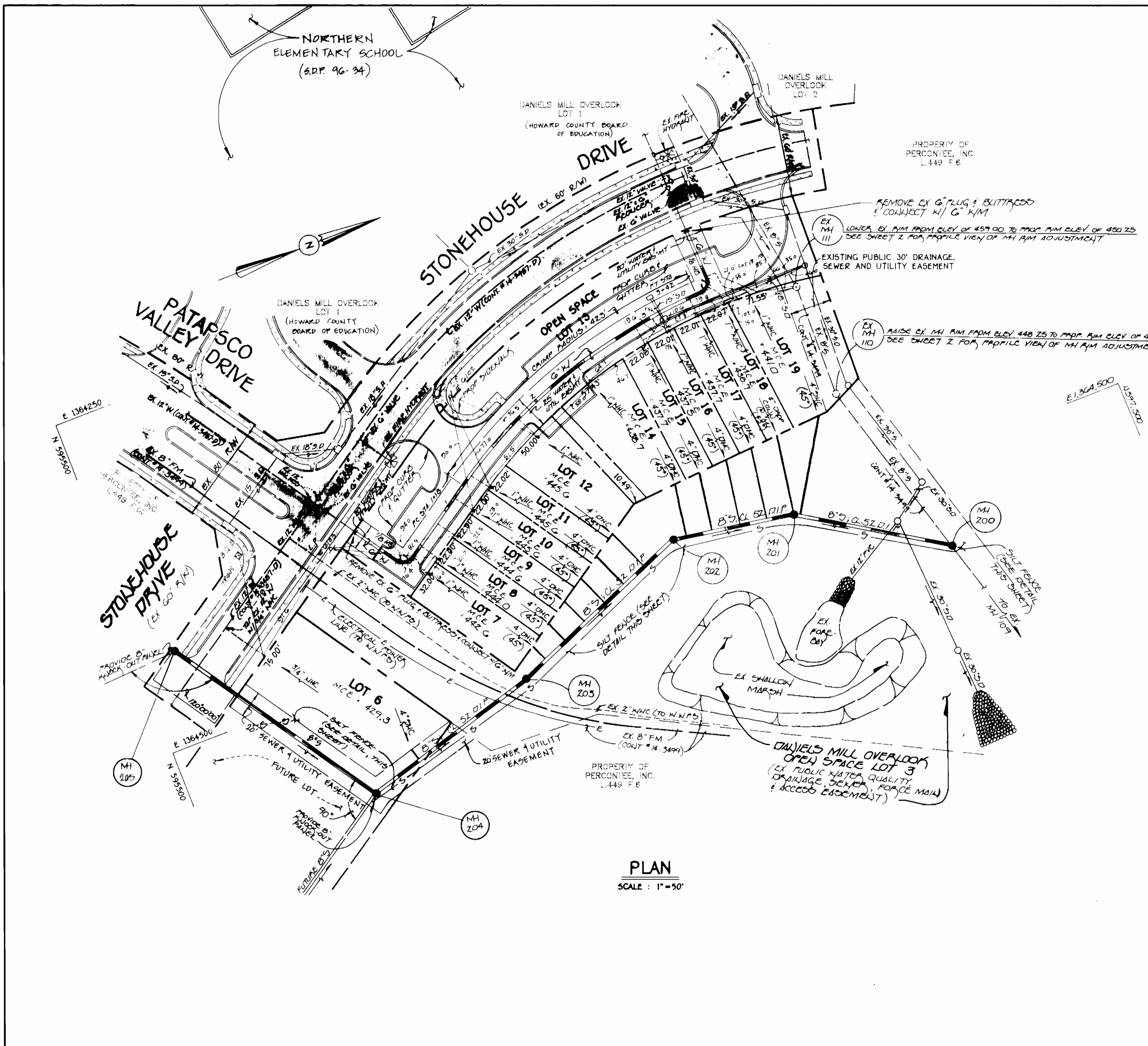
CONTRACT NO. 14-3571-17
 DANIELS MILL OVERLOOK
 LOT NOS. 6-19
 WATER AND SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>[Signature]</i> 9-10-96 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND <i>[Signature]</i> 9/13/96 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 Baltimore National Pike Ellicott City, Maryland 21042 (410) 461-2865 <i>[Signature]</i> TERRELL A. FISHER	Des: M.J.M. DRWN: J.M.M./J.A.U. CHK: P.W.K. DATE: 8/96	K.O.I. F.C.C. F.C.C. F.C.C. BY NO.	NOTE: SEE SHEETS 2A, 2B, 2C, & 2D FOR "AS-BUILT" PLAN. REVISE SHC INVERT @ R. CHART ADJUST 4" - 45" DENVER CONNECTIONS REVISE NHC LOCATION OUT OF PROP. OPENINGS REVISION DATE: 7/97 7/97 7/97	PLAN VIEW WATER AND SEWER MAINS 600' SCALE MAP NO. 17 BLOCK NO. 12	DANIELS MILL OVERLOOK LOT NOS. 6-19 CONTRACT NO. 14-3571-0 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 1 OF 2
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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert S. Benner</i> CHIEF, BUREAU OF UTILITIES 9-10-96 DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND <i>William J. ...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION 9/13/96 DATE	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 Baltimore National Pike Millcott City, Maryland 21042 (410) 461-2855		DES: M.J.M. DRAWN: J.M.M. CHK: P.W.K. DATE:	K.I.C. F.C.C. F.C.C. BY NO. NOTE: SEE SHEETS EA-2B, 2C & 2D FOR 'AS-BUILT PLAN' 100 45" DROP HOUSE COLLECTION DETAIL ADJUST 4" 45" BENDER CONNECTIONS	WATER AND SEWER MAINS PROFILES 11/1/97 4/97 4/97 DATE	DANIELS MILL OVERLOOK LOT NOS. 6 - 19 CONTRACT NO. 14-3571-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 14-3571-D DANIELS MILL OVERLOOK LOT NOS. 6-19 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 2 OF 2
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FOR ADDITIONAL DETAILS SEE SHEETS SA 5A, 5B, 5C & 5D

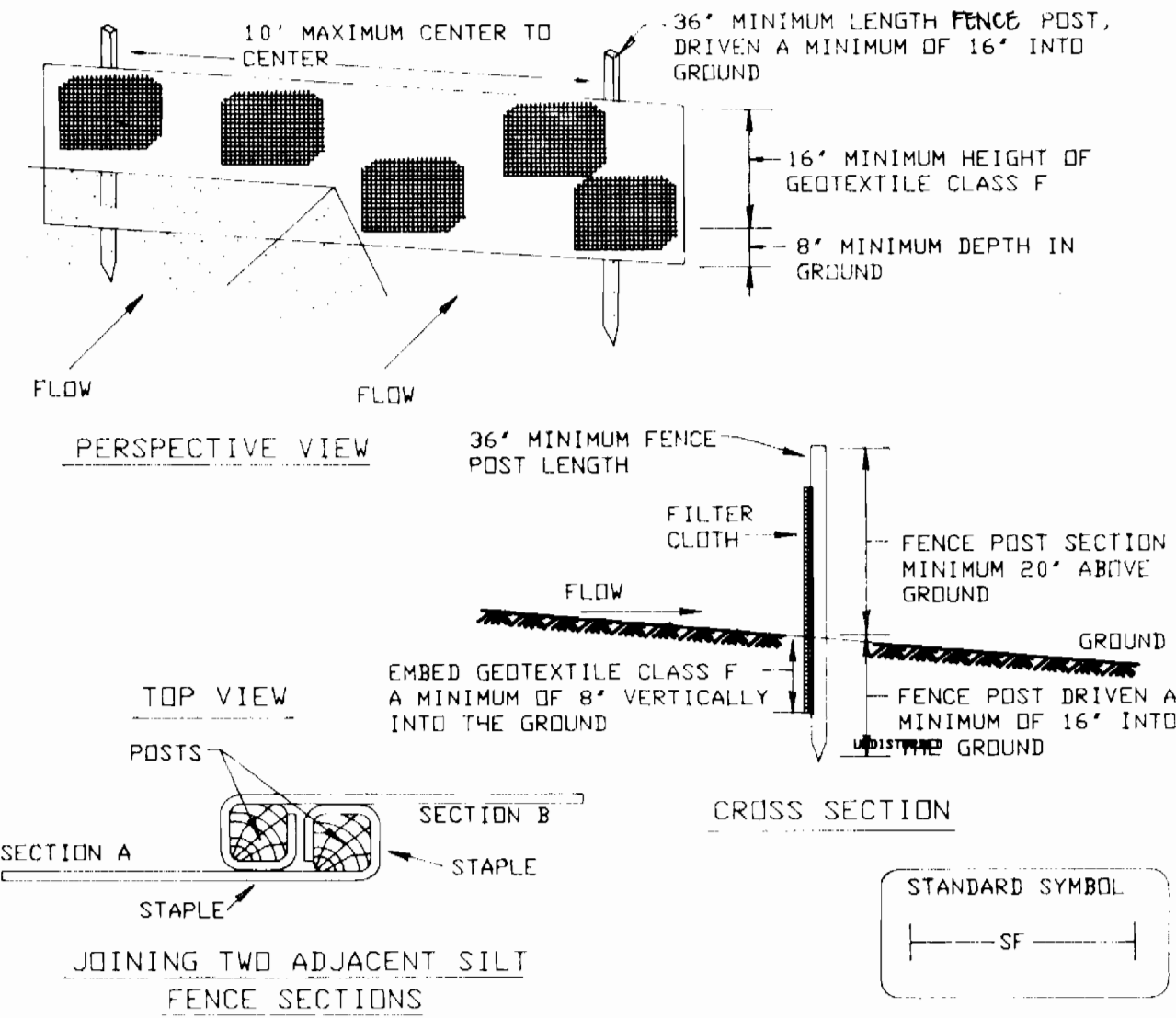


QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		SUPPLIER
		QUANTITIES	TYPE	
8" DENVER	184 L.F.			
4" DENVER	457 L.F.			
MANHOLES	6 EACH			
8" DENVER D.I.P.	500 L.F.			
6" WATER	379 L.F.			
1" WMC	253 L.F.			
6" 1/2 HD	4 EACH			
6" 1/2 VB	2 EACH			

BENCHMARKS

BENCHMARK NO 1 ELEV. = 481.10
 EXISTING MANHOLE RIM NO 1 (CONTRACT #10-1352-D)
 N 534.318 051000 E 851.495 348000

BENCHMARK NO 2 ELEV. = 407.75
 HUB WITH STAKE MARKED "TRAVERSE PT NO 126"
 N 536.742 360000 E 851.766 870000

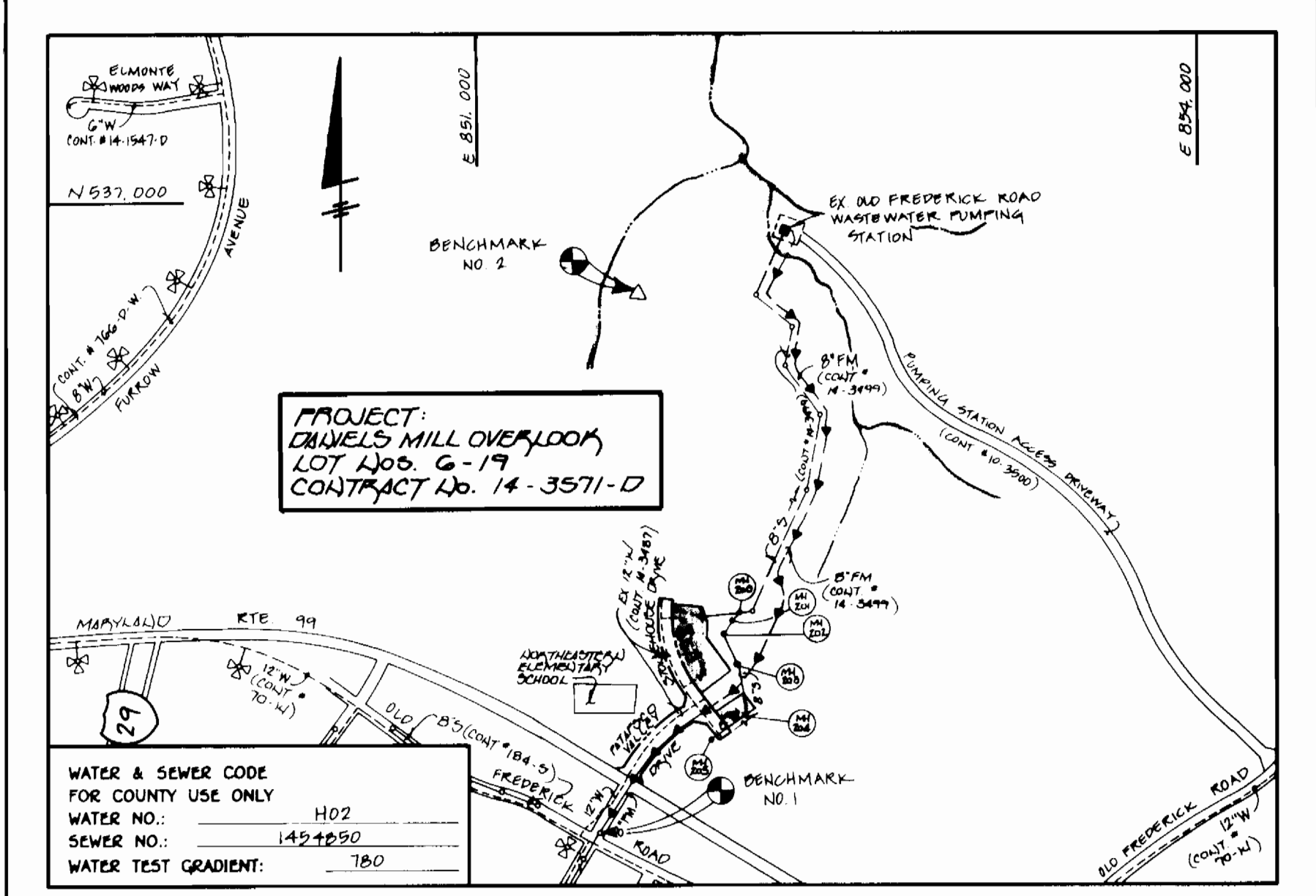


- Construction Specifications
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard I or U section weighting not less than 1.00 pound per linear foot.
 - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ² /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
 - Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
 - Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

SILT FENCE
NOT TO SCALE

NOTE: THE OCCUPANCE PERMIT FOR THESE TOWNHOMES WILL NOT BE ISSUED UNTIL THE SILT FENCE CONTRACT #14-3499 & PUMPING STATION CONTRACT #10-3800 ARE COMPLETED & OPERATIONAL.



PROJECT: DANIEL'S MILL OVERLOOK
 LOT NOS. 6-19
 CONTRACT NO. 14-3571-D

WATER & SEWER CODE FOR COUNTY USE ONLY
 WATER NO.: 1494290
 SEWER NO.: 1494290
 WATER TEST GRADIENT: 180

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 8". CLEAR ALL POLES BY 2'-0" MINIMUM.
- 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. 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.5.2.
- WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON 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 FRAMES AND COVERS, STANDARD DETAIL G.5.1.
- 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 (W.11 AND W.13). 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 ANNA SPECIFICATIONS G-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 10.114(b) OF THE HOWARD COUNTY CODE.

STATION	LOT	ELEVATION
	MH 200 TO MH 201	
1+15 AT	19 (45" SHC)	436.25
	MH 201 TO MH 202	
@ MH 201 AT	10 (45" SHC @ MH)	434.00
0+20 AT	17 (45" SHC)	433.00
0+40 AT	16 (45" SHC)	432.80
0+60 AT	15 (45" SHC)	433.00
0+80 AT	14 (45" SHC)	434.00
	MH 202 TO MH 203	
0+30 AT	12 (45" SHC)	441.00
0+50 AT	11 (45" SHC)	441.00
0+70 AT	10 (45" SHC)	441.00
0+90 AT	9 (45" SHC)	440.00
1+10 AT	8 (45" SHC)	439.50
1+30 AT	7 (45" SHC)	438.00
	MH 203 TO MH 204	
1+00 AT	6	423.54

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

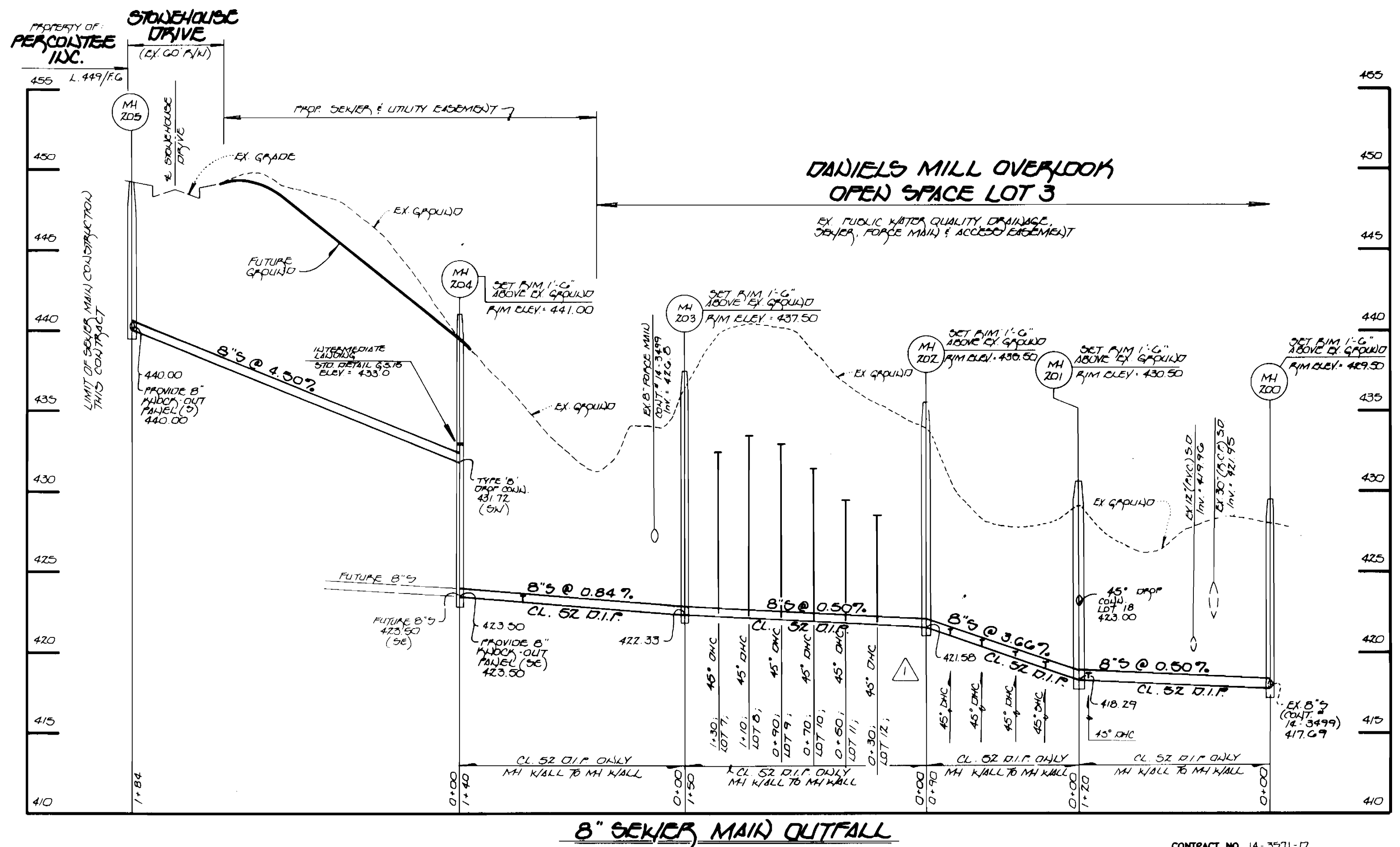
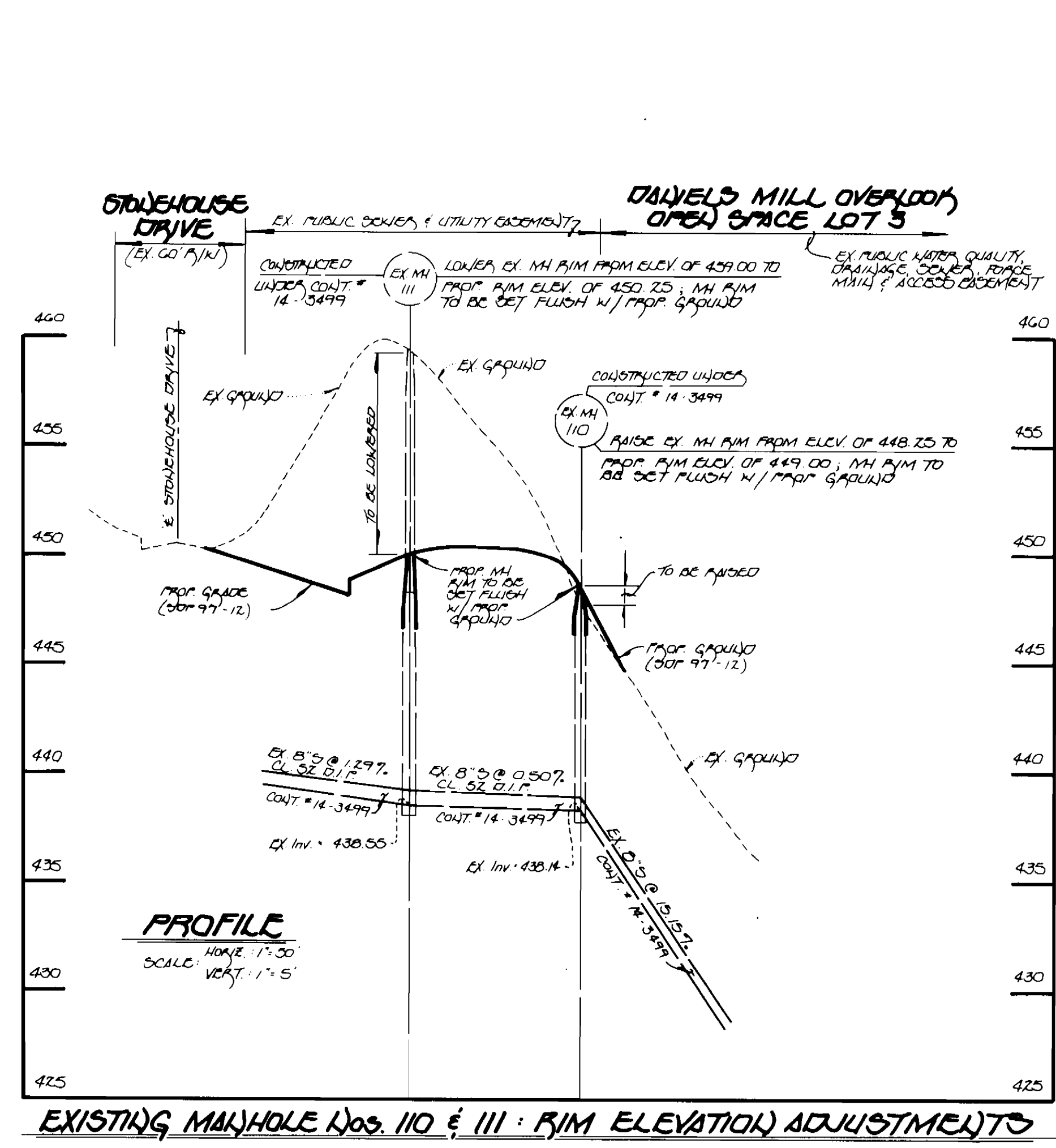
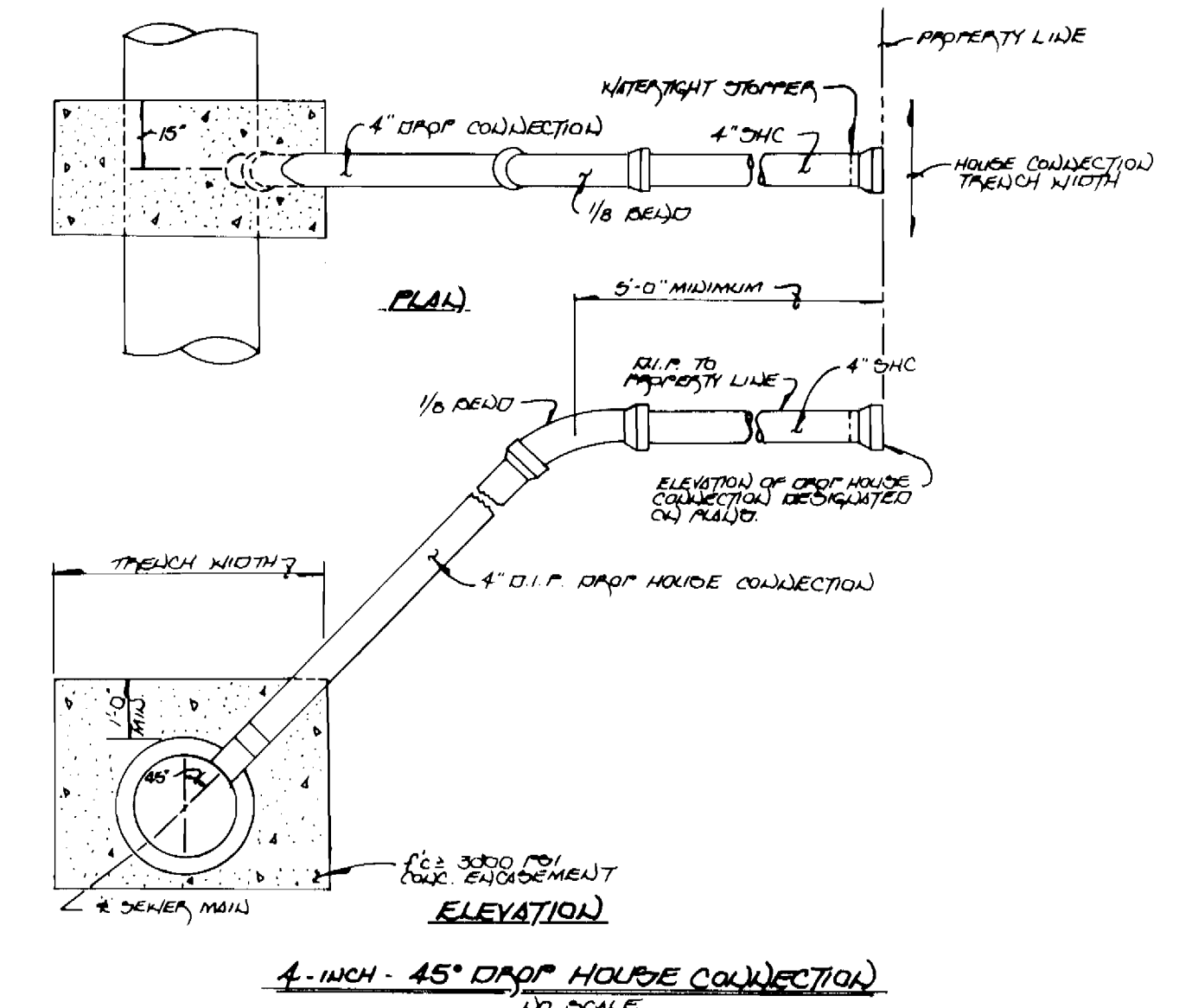
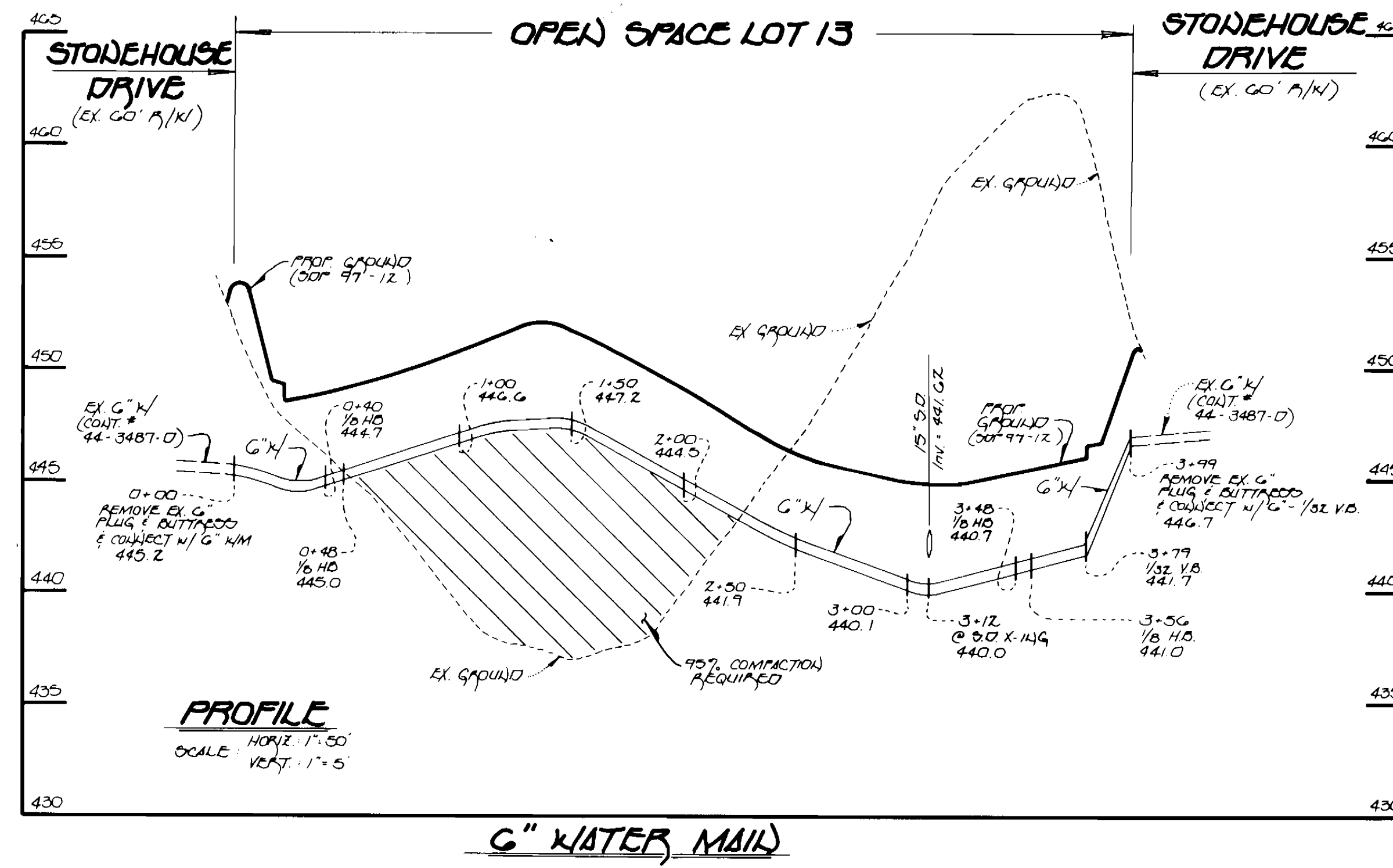
[Signature] 9/18/96
 U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

APPROVED: *[Signature]* 9/18/96
 HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS AND ON SDP 97-12.

[Signature] 9/4/96
 MICHAEL J. MCCANN FOR RYLAND, INC. DATE
 SIGNATURE OF DEVELOPER



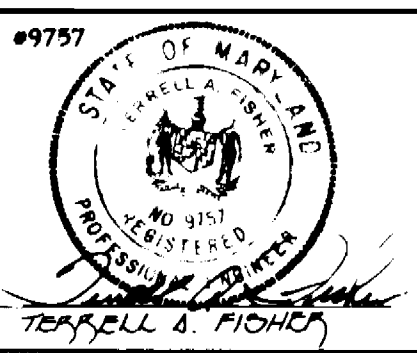
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Robert W. Berman 9-10-96
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

Robert W. Berman 9/13/96
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Fisher, Collins & Carter, Inc.
 CIVIL ENGINEERING CONSULTANTS &
 LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK
 10272 Baltimore National Pike
 Beltsville City, Maryland 21048
 (410) 481-2856



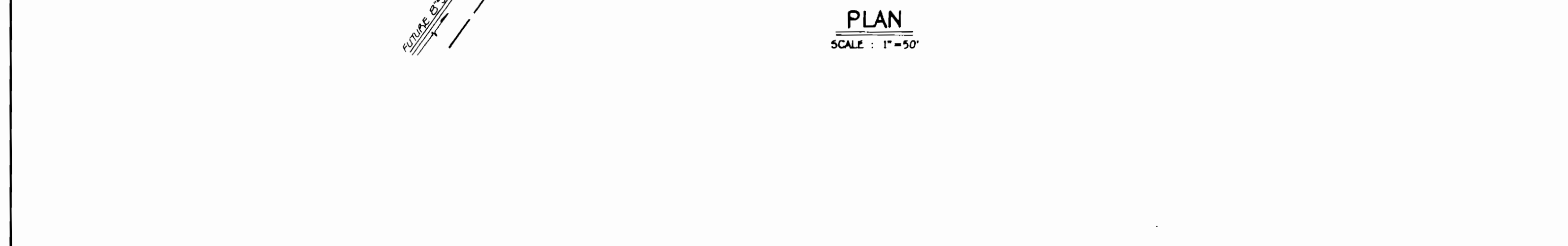
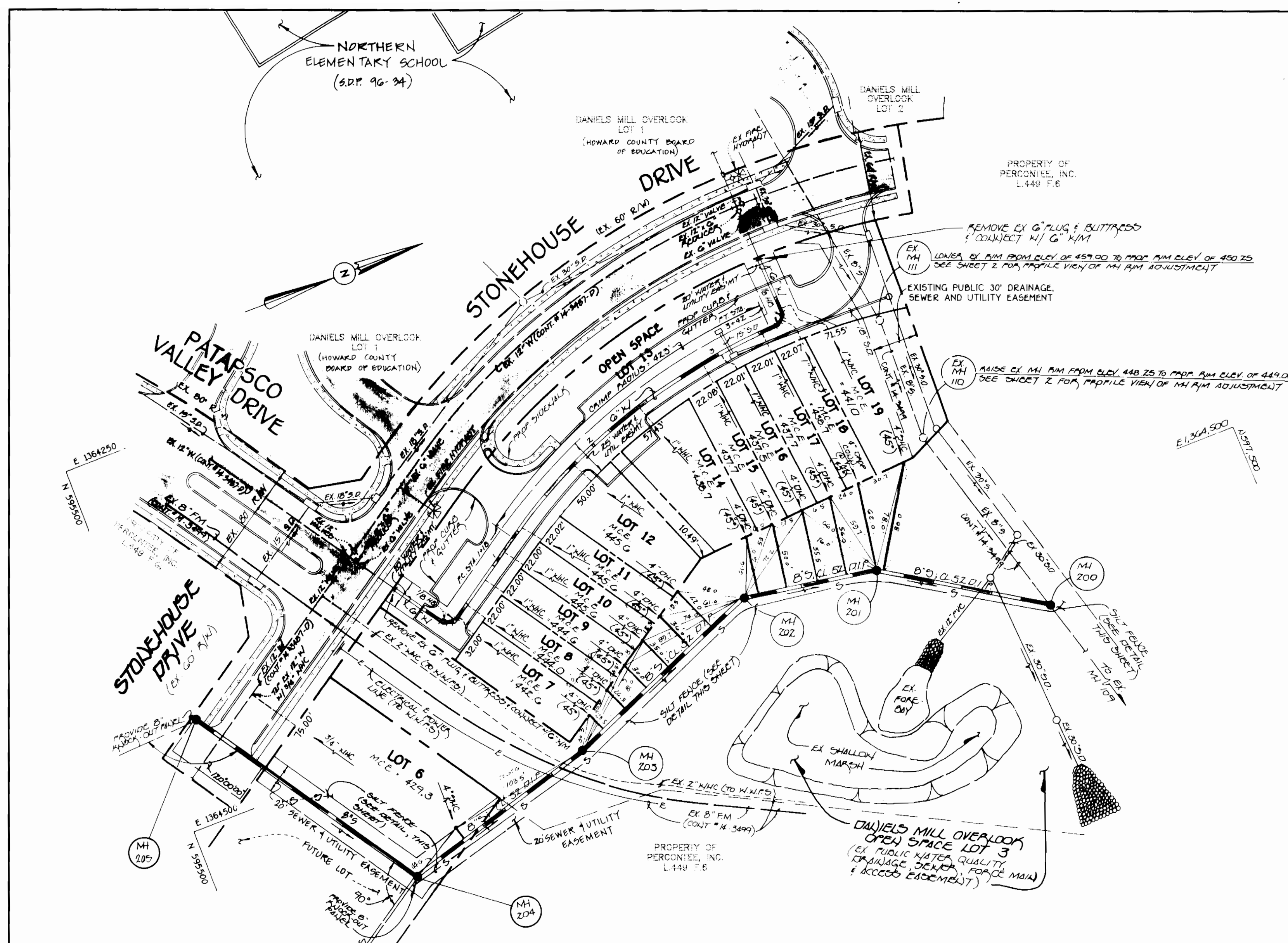
DES: J.H.M.			
DRWN: J.H.M.			
CHK: P.W.K.			
DATE:			
BY NO.		REVISION	DATE
		WATER ONLY ASBUILT CONDITIONS ADDED TO PLAN	11/6/97
		ADD 45° DROP HOUSE CONNECTION DETAIL	4/97
		ADJUST 4" - 45° DENIER CONNECTIONS	4/97

ASBUILT WATER ONLY
 WATER AND SEWER MAINS
 PROFILES

300' SCALE MAP NO. 17 BLOCK NO. 12

DANIELS MILL OVERLOOK
 LOT NOS. 6 - 19
 CONTRACT NO. 14-3571-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2^B OF 2^D



SHC INVERTS @ PROPERTY LINE CHART

STATION	LOT	ELEVATION
1+15 ST	MH 200 TO MH 201	436.25
0+20 ST	19 (45° SHC)	436.25
0+20 ST	MH 201 TO MH 202	434.00
0+40 ST	18 (45° SHC)	433.00
0+40 ST	17 (45° SHC)	432.50
0+60 ST	16 (45° SHC)	433.00
0+80 ST	15 (45° SHC)	434.00
0+30 ST	MH 202 TO MH 203	441.00
0+50 ST	12 (45° SHC)	441.00
0+70 ST	11 (45° SHC)	441.00
0+90 ST	10 (45° SHC)	440.00
1+10 ST	9 (45° SHC)	439.50
1+30 ST	8 (45° SHC)	430.00
1+00 ST	MH 203 TO MH 204	423.54
	7 (45° SHC)	

* NOTE: D.H.C. FOR LOTS 7-12 WERE ELIMINATED. ALL SHC WERE INSTALLED AT A 45° ANGLE.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS. DATE: 7/18/96

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD COUNTY SOIL CONSERVATION DISTRICT. DATE: 7/18/96

APPROVED: HOWARD COUNTY SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS AND ON SDP 91-12. DATE: 9/14/96

Michael J. McCann FOR RYLAND, INC. SIGNATURE OF DEVELOPER DATE

QUANTITIES (SEWER)

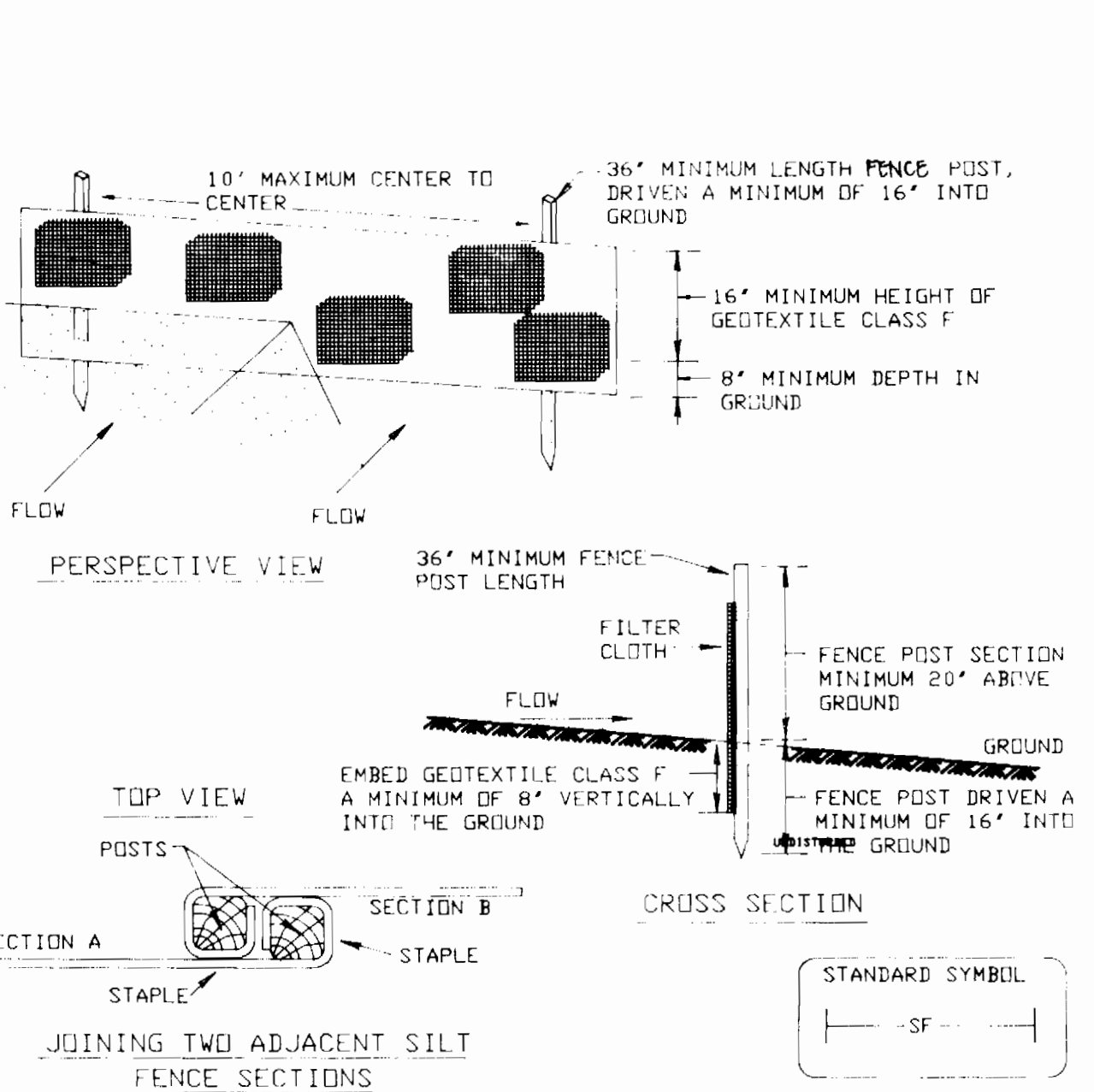
ITEM	ESTIMATED	QUANTITIES	AS-BUILT	TYPE	SUPPLIER
8" SEWER	104 LF	180		P.V.C.	A-1 PIPE INC.
4" SEWER	457 LF	501.5		A-1 PIPE	INC.
MANHOLES	6 EACH	6 EA		PRECAST	ATLANTIC PRECAST
8" DENVER VALVE	500 LF	474.0		O.I.P. (L52)	A-1 PIPE INC.
6" WATER	399 LF	399.0		O.I.P.	A-1 PIPE INC.
1" W/C	253 LF	244.0		K-COPPER	A-1 PIPE INC.
4.400 BRASS	12 EA	12 EA		O.V.	DAVIS CONIC INC.
6" 1/2 HD	4 EACH	4 EA		O.I.P.	A-1 PIPE INC.
6" 1/2 VB	2 EACH	2 EA		O.I.P.	A-1 PIPE INC.

NAME OF UTILITY CONTRACTOR: DAVIS & CO. INC.
SURVEY & DRAFTING DIVISION AS-BUILT DATE:

BENCHMARKS

BENCHMARK NO. 1 ELEV. = 481.10
EXISTING MANHOLE RIM NO. 1 (CONTRACT #10-1352-D)
N 534.318 051000 E 851.495 348000

BENCHMARK NO. 2 ELEV. = 407.75
HUB WITH STAKE MARKED "TRAVERSE PT NO. 126"
N 534.742 360000 E 851.766 890000



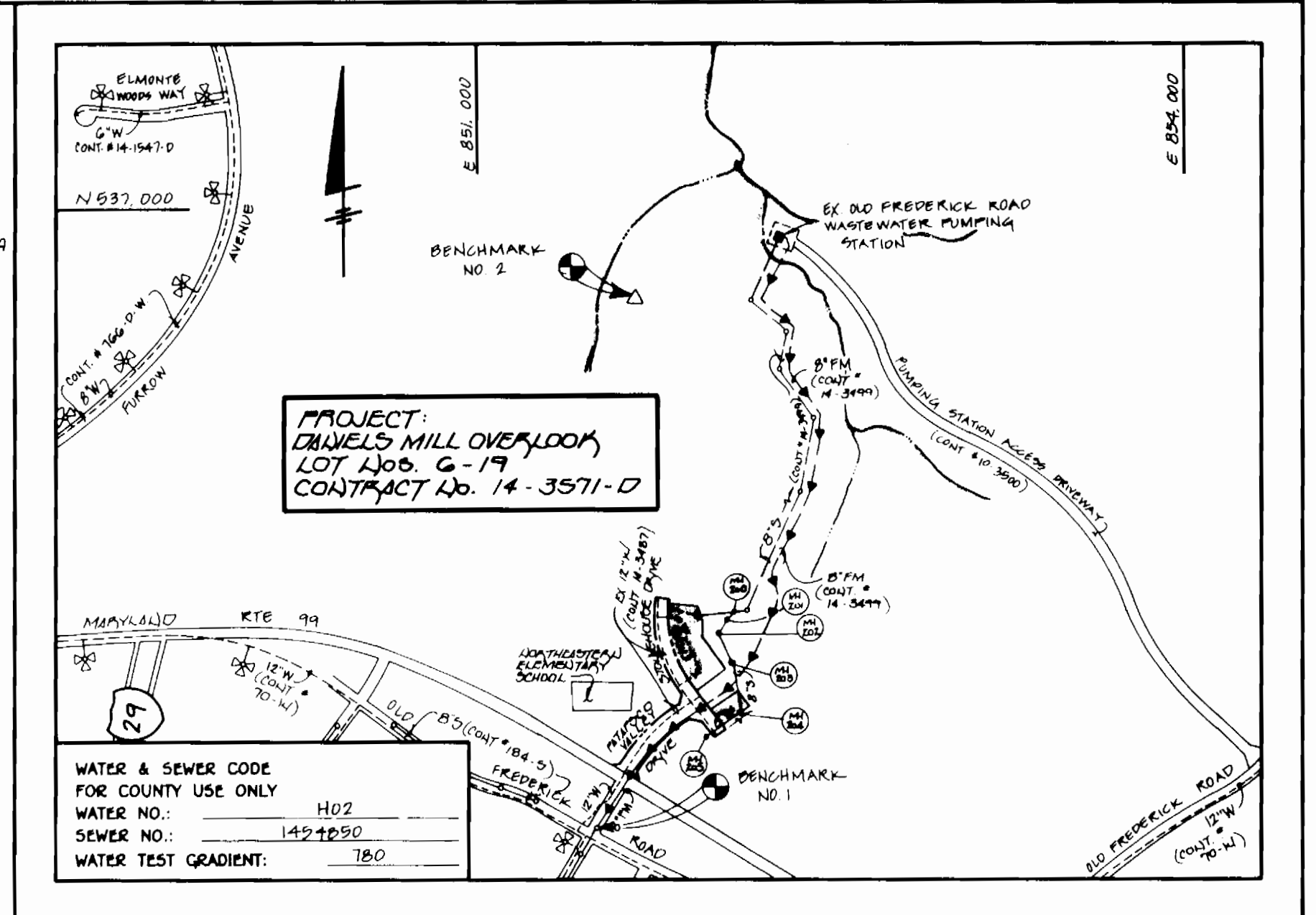
Construction Specifications

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ² /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

SILT FENCE NOT TO SCALE

NOTE: THE OCCUPANCE PERMIT FOR THESE TOWNHOUSES WILL NOT BE ISSUED UNTIL THE FORCE MAIN CONTRACT #14-3499 & PUMPING STATION CONTRACT #10-3500 ARE COMPLETED & OPERATIONAL.



WATER & SEWER CODE FOR COUNTY USE ONLY

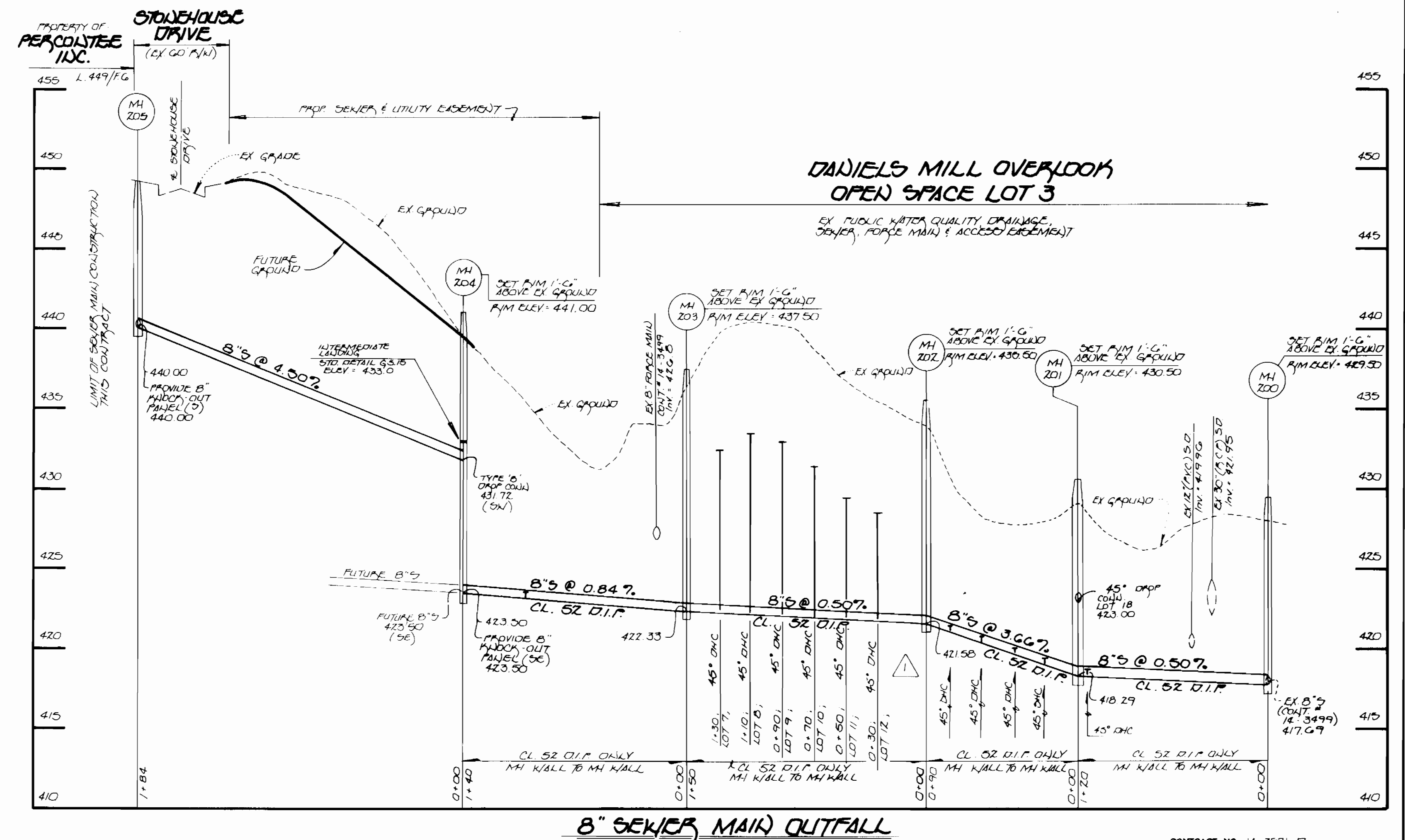
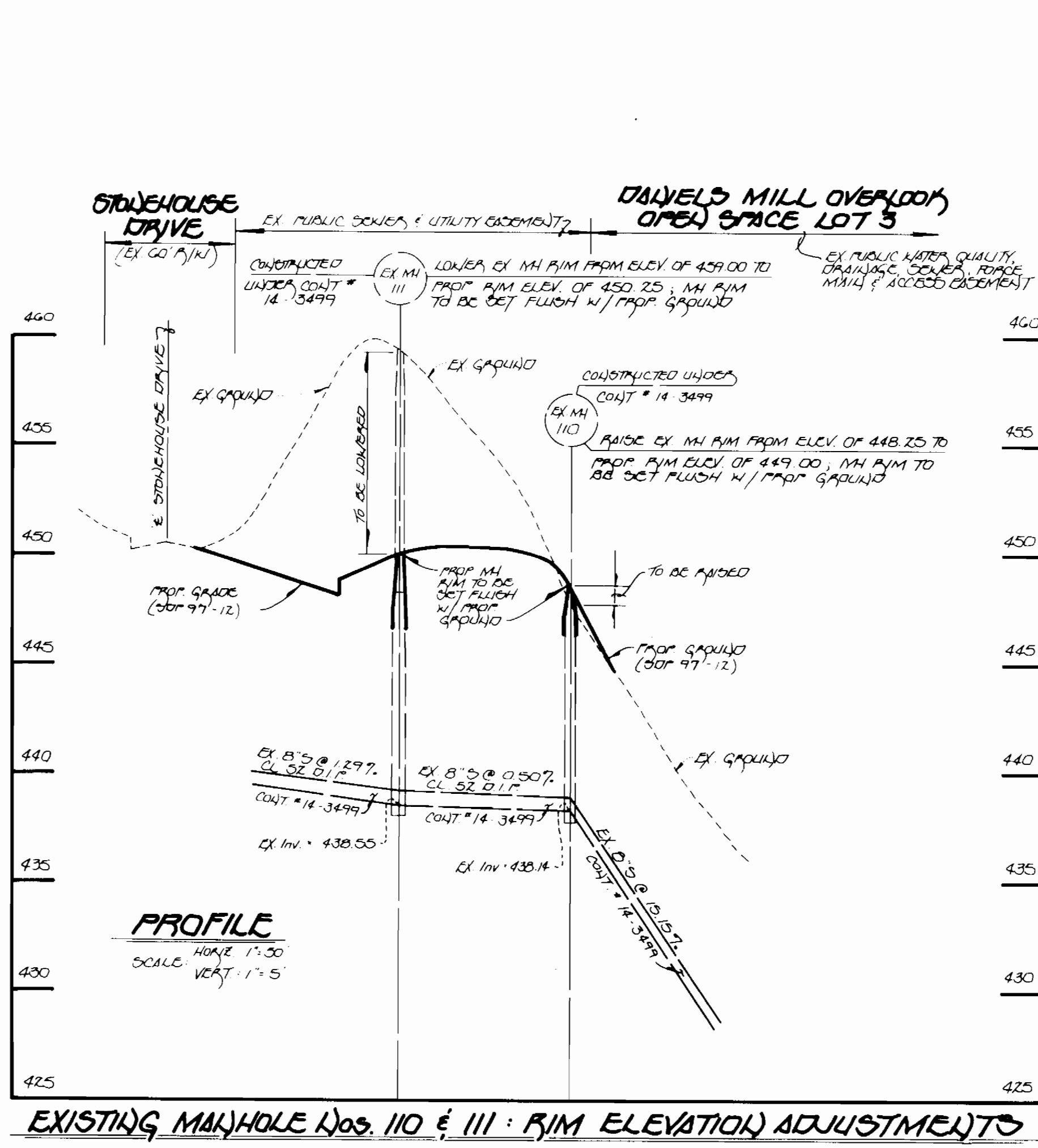
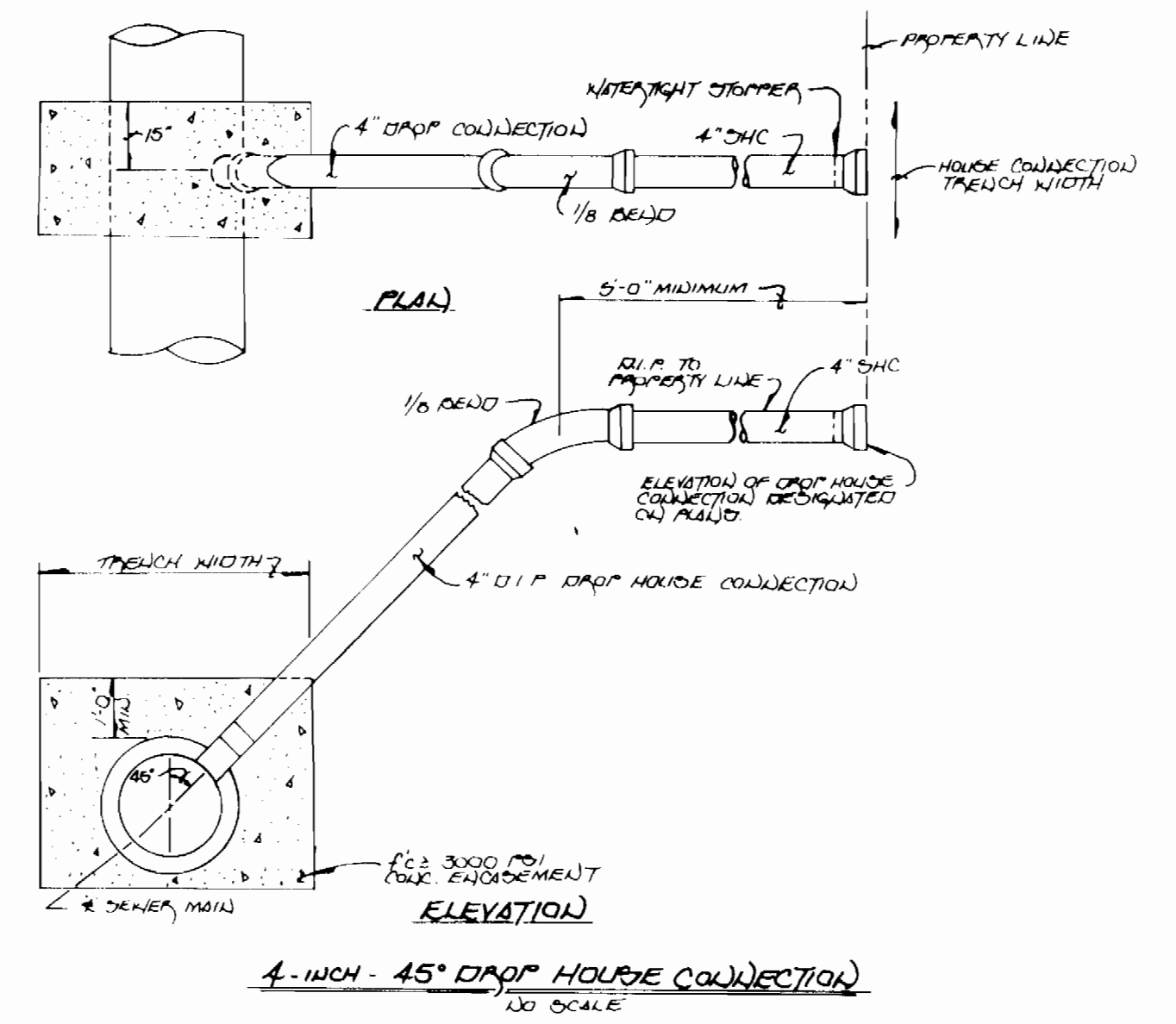
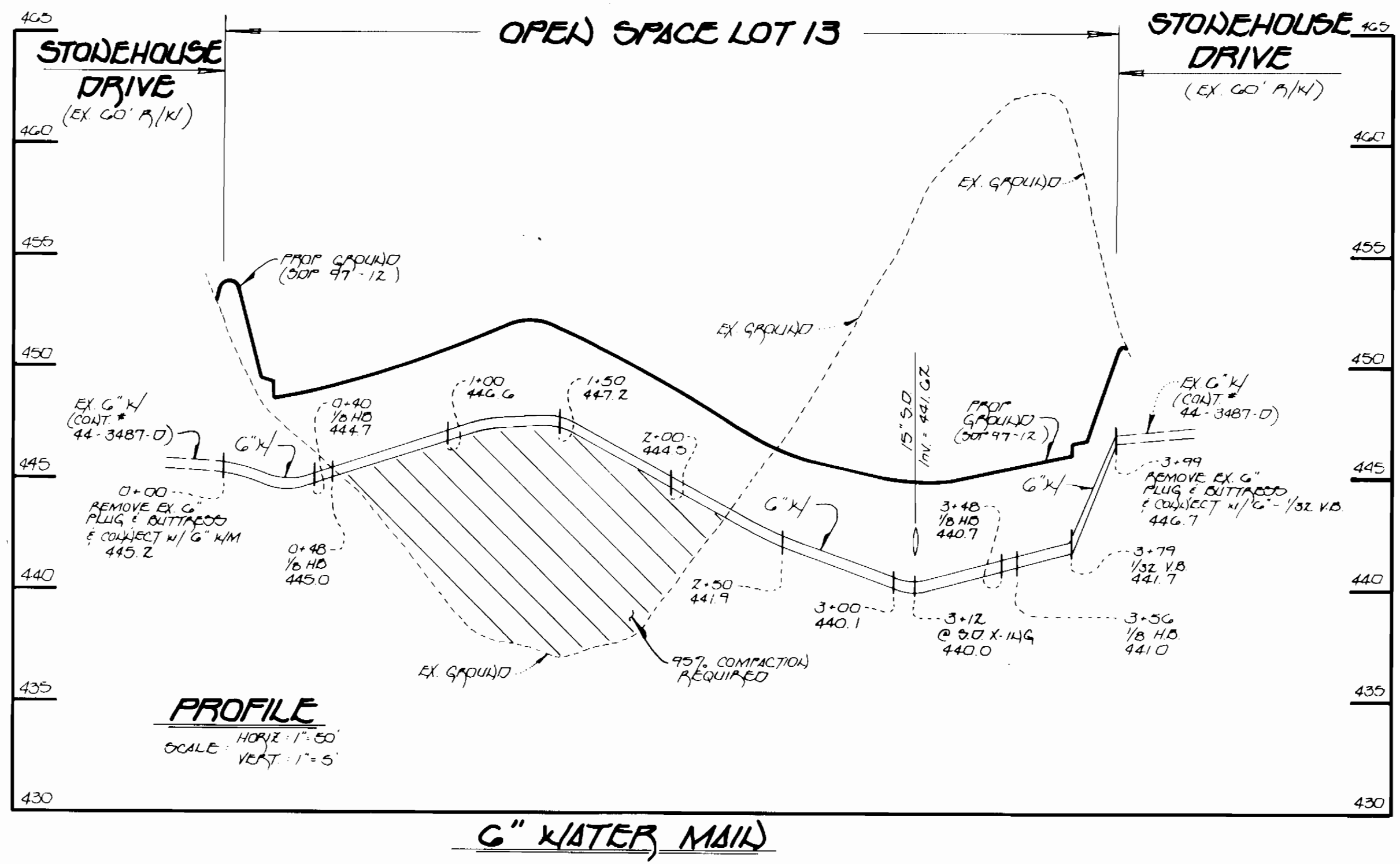
WATER NO.: HD2
SEWER NO.: 142+1850
WATER TEST GRADIENT: 180

TYPE OF BUILDING: RESIDENTIAL, TOWNHOUSES
NUMBER OF LOTS: 14 (13 BUILDABLE)
NO. OF WATER HOUSE CONNECTIONS: 13
NO. OF SEWER HOUSE CONNECTIONS: 13
DRAINAGE AREA: PATAPSCO
TREATMENT PLANT: PATAPSCO W.W.T.P., CITY OF BALTIMORE VIA THE OLD FREDERICK ROAD PUMPING STATION.

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.
 - 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 - 787-9088
 - 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 O.I.P. 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 WATER TIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52.
 - WHERE WATER TIGHT 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 FRAMES AND COVERS, STANDARD DETAIL G 5.51.
 - 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 O.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 (W.11 AND W.2.13). 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 O.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 10.114(b) OF THE HOWARD COUNTY CODE.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 9-10-96 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND 9/13/96 CHIEF, DEVELOPMENT ENGINEERING DIVISION	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK 10272 Baltimore National Pike Ellicott City, Maryland 21042 (410) 481-2866	DES: M.J.M. DRWN: J.M.M./J.A.U. CHK: P.W.K. DATE: 8/96	AS-BUILT "SEWER ONLY" PLAN VIEW WATER AND SEWER MAINS 600' SCALE MAP NO. 17 BLOCK NO. 12	DANIELS MILL OVERLOOK LOT NOS. 6-19 CONTRACT NO. 14-3571-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 20 OF 20
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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert S. ...
CHIEF, BUREAU OF UTILITIES

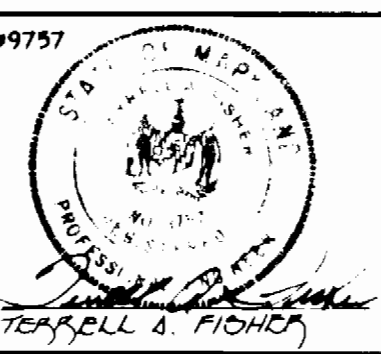
9-10-96
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

...
CHIEF, DEVELOPMENT ENGINEERING DIVISION

9/13/96
DATE

Fisher, Collins & Carter, Inc.
#9757
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 481-2866



DES: J.M.H.			
DRN: J.M.H.			
CHK: P.W.K.			
DATE:			
BY:	NO.	REVISION	DATE
CLW	3	SEWER ONLY "AS-BUILT" CONDITIONS ADDED TO PLAN	11/101
F.C.C.	2	ADD 45° DROP HOUSE CONNECTIONS DETAIL	6/99
F.C.C.	1	ADJUST 4" - 45° SEWER CONNECTIONS	4/97

"AS-BUILT" SEWER ONLY
WATER AND SEWER MAINS
PROFILES

GOO' SCALE MAP NO. 17 BLOCK NO. 12

DANIELS MILL OVERLOOK
LOT NOS. 6 - 19
CONTRACT NO. 14-3571-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE
AS SHOWN

SHEET
2 OF 20