

3253 S/1 High Ridge Sewer Main

RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
Ex. MH#392 TO S-1	73'	SEED
S-1 TO S-2	115'	SEED
S-2 TO S-3	347'	110' STONE, 237' SEED
0+79 (SHC)	10'	STONE
2+28 (SHC)	5'	STONE
S-3 TO S-12 TO S-13	354'	150' STONE, 204' SEED
S-3 TO S-4	99'	33' STONE, 66' SEED
0+83 (SHC)	26'	23' STONE, 3' SEED
S-4 TO S-5	205'	STONE
1+38 (SHC)	20'	15' STONE, 5' SEED
1+56 (SHC)	10'	3' STONE, 7' SEED
S-5 TO S-6	58'	STONE AND SEED
S-6 TO S-7	400'	185' STONE, 215' SEED
2+70 (SHC)	20'	15' STONE, 5' SEED
S-7 TO P.L. (SHC)	12'	SEED
S-7 TO S-8	400'	360' STONE, 40' SEED
2+25 (SHC)	20'	15' STONE, 5' SEED
S-8 TO P.L. (SHC)	20'	16' STONE, 4' SEED
S-8 TO S-9	45'	STONE
S-9 TO P.L. (SHC)	31'	14' STONE, 17' SEED
S-9 TO P.L. (SHC)	6'	SEED

STAKEOUT SCHEDULE		
MANHOLE	DISTANCE	OFFSET
S-1	X-1 TO X-2, STA. 1+13	64' LT.
S-2	X-1 TO X-2, STA. 0+24	11' RT.
S-3	X-1 TO D-161, STA. 3+48	5.5' RT.
S-4	D-161 TO D-160, STA. 0+89	16' RT.
S-5	D-161 TO D-160, STA. 2+93	8' RT.
S-6	D-161 TO D-160, STA. 3+50	4' RT.
S-7	D-160 TO D-159, STA. 3+53	9' LT.
S-8	D-159 TO D-158, STA. 3+54	5.5' RT.
S-9	D-158 TO D-157, STA. 0+29	1.5' LT.
S-10	D-160 TO D-160A, STA. 1+45	28.5' RT.
S-11	D-160 TO D-160A, STA. 4+87	2.6' RT.
S-12	D-161 TO D-160, STA. 0+01	69.5' LT.
S-13	D-161 TO D-160, STA. 0+09	397.5' LT.

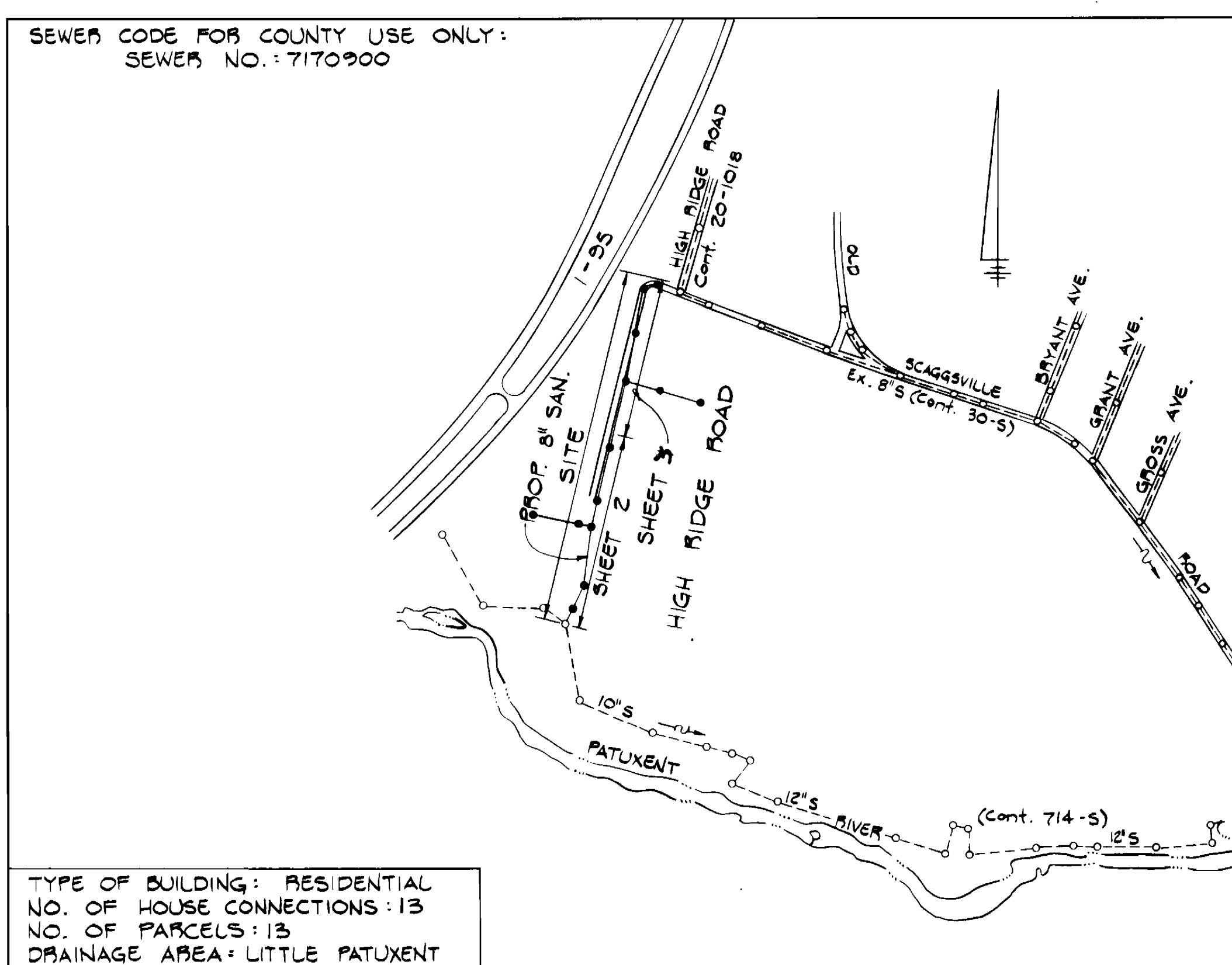
QUANTITIES				
ITEM	UNIT	ESTIMATE	AS-BUILT	SUPPLIER
8" SAN. SEWER	L.F.	520	520	
4' STD. MANHOLE	EA.	11	11	
4" SAN. HSE. CONN.	L.F.	230	230	
CONC. ENCASEMENT	L.F.	10	10	
8" D.I.P. SAN.	L.F.	2049	2049	
TYPE 'B' DROP MH	EA.	2	2	
STD. CONC. ANCHOR	EA.	2	2	

NOTE: A MINIMUM OF 6 INCHES OF WELL-COMPACTED STONE IS TO BE USED FOR ALL ROAD AND DRIVEWAY RESTORATION FOR THIS JOB.

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 THE NAD-83 COORDINATE SYSTEM.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- 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. POLE B.G.&E.# 236635 TO BE BRACED. CONTRACTOR TO CONTACT B.G.&E. TO COORDINATE WORK. HOWARD CO. HAS CONTACTED B.G.&E. AND HAS MADE ARRANGEMENTS.
- 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. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB (LATEST EDITION) AT ALL TIMES.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT LOCATION OF 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 TESTS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING WORK SHOWN ON THESE PLANS:
 STATE HIGHWAY ADMINISTRATION - 531-5533
 BALTIMORE GAS AND ELECTRIC CO. CONTRACTOR SERVICE - 850-4620
 BALTIMORE GAS AND ELECTRIC CO. UNDERGROUND DAMAGE CONTROL - 859-9004
 A.T.&T. - 865-3803
 "MISS UTILITY" - 1-800-257-7777
 CHESAPEAKE AND POTOMAC (C&P) TELEPHONE COMPANY - 597-8585
 COLONIAL PIPELINE - 795-1390
 BUREAU OF UTILITIES, HOWARD COUNTY DEPT. OF PUBLIC WORKS - 313-4900
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE 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 FOR CONSTRUCTION OF THE MAIN AND SERVICE CONNECTIONS.
- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., 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.
- TRENCH REPAIR TO BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS.
- ALL WORK WILL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL SECTION 219.
- LENGTH OF OPEN TRENCH WILL BE LIMITED TO THAT WHICH CAN BE FILLED AND STABILIZED WITHIN ONE WORKING DAY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVER, STANDARD DETAIL G.5.2. WHERE WATERTIGHT MANHOLE FRAME AND COVER ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOLS "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

AS-BUILTS



VICINITY MAP
SCALE: 1"=600'

DEVELOPER'S CERTIFICATION

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

[Signature] 5-24-93
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATION

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

[Signature] 4/15/93
SIGNATURE OF ENGINEER DATE

SEQUENCE OF CONSTRUCTION

- Contact Howard County Bureau of Construction Inspection (410) 313-1880 and W. Duvall & Associates, Inc. (410) 583-9571 at least five working days prior to starting date.
- Install all necessary maintenance of traffic signs and devices as required by the approved "Maintenance of Traffic Schedule."
- Install erosion and sediment control devices as per Section 219 of the Howard County Design Manual, Vol. IV, dated March 1986 and as amended.
- Perform construction stakeout.
- Excavate and install proposed 8 inch sewer main and 4 inch sewer house connections. Length of open trench shall be limited to that which can be backfilled and stabilized within one working day.
- Restore paving and earth trenches to their original condition as per Howard County Standard Detail G 4.01, and as amended.
- Upon permission from Howard County Sediment Control Inspector, remove Sediment Control Devices.
- Fine grade all disturbed areas and stabilize with permanent seeding.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855)
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
 TOTAL AREA OF SITE _____ ACRES
 AREA DISTURBED 0.25 ACRES
 AREA TO BE ROOFED OR PAVED (STONE) 0.15 ACRES
 AREA TO BE VEGETATIVELY STABILIZED 0.10 ACRES
 TOTAL CUT 4,550 CU. YDS.
 TOTAL FILL 4,483 CU. YDS.
 OFFSITE WASTE/BORROW AREA LOCATION - HOWARD CO. LANDFILL
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ. FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE (.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

STATE PROJECT C-240994-02(14)

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
[Signature] 4/15/93
SOIL CONSERVATION SERVICE DATE

This Construction Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.
APPROVED: *[Signature]* 4/15/93
HOWARD S.C.D. DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS 5/22/93
CHIEF, BUREAU OF UTILITIES 5-25-93

W. DUVALL & ASSOCIATES, INC.
ENGINEERS · SURVEYORS · PLANNERS
530 EAST JOPPA ROAD
TOWSON, MARYLAND 21286
(410) 583-9571



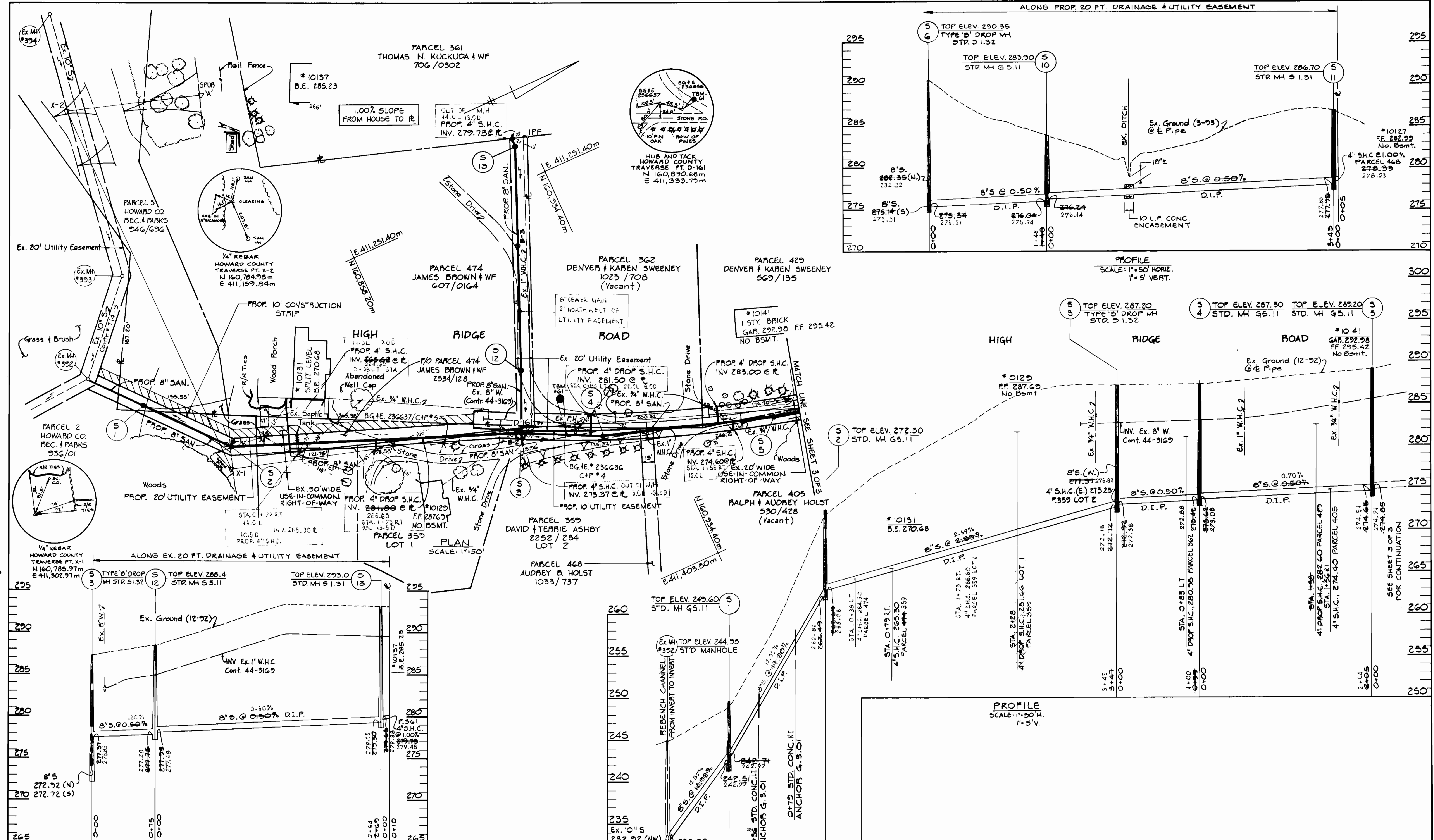
DES: W.D.A.					
DRN: RED JR.					
CHK: G.D.L.					
DATE: 4-15-93	BY	NO.	REVISION	DATE	

8" SEWER MAIN
CONTRACT NO. 20-3253
600' SCALE MAP NO. 47.50 BLOCK NO.

HIGH RIDGE ROAD SEWER MAIN
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT S-6170

SCALE AS SHOWN
SHEET 1 OF 3

AS-BUILT
High Ridge Sewer Main
S12
3253



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 J. M. [Signature] 6/1/93
 SOIL CONSERVATION SERVICE DATE

This Construction Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.
 APPROVED: [Signature] 6/1/93
 HOWARD S.C.D. DATE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: [Signature] 5-24-93
 Chief, Bureau of Engineering: [Signature] 5-24-93
 Chief, Bureau of Utilities: [Signature] 5-25-93
 Chief, Water and Sewer Design Division: [Signature] 5-24-93

W. DUVAL & ASSOCIATES, INC.
 ENGINEERS · SURVEYORS · PLANNERS
 530 EAST JOPPA ROAD
 TOWSON, MARYLAND 21286
 (410) 583-9571



DES: W.D.A.	
DRN: RED JR.	
CHK: G.D.L.	
DATE: 4-15-93	
BY NO.	
REVISION	
DATE	

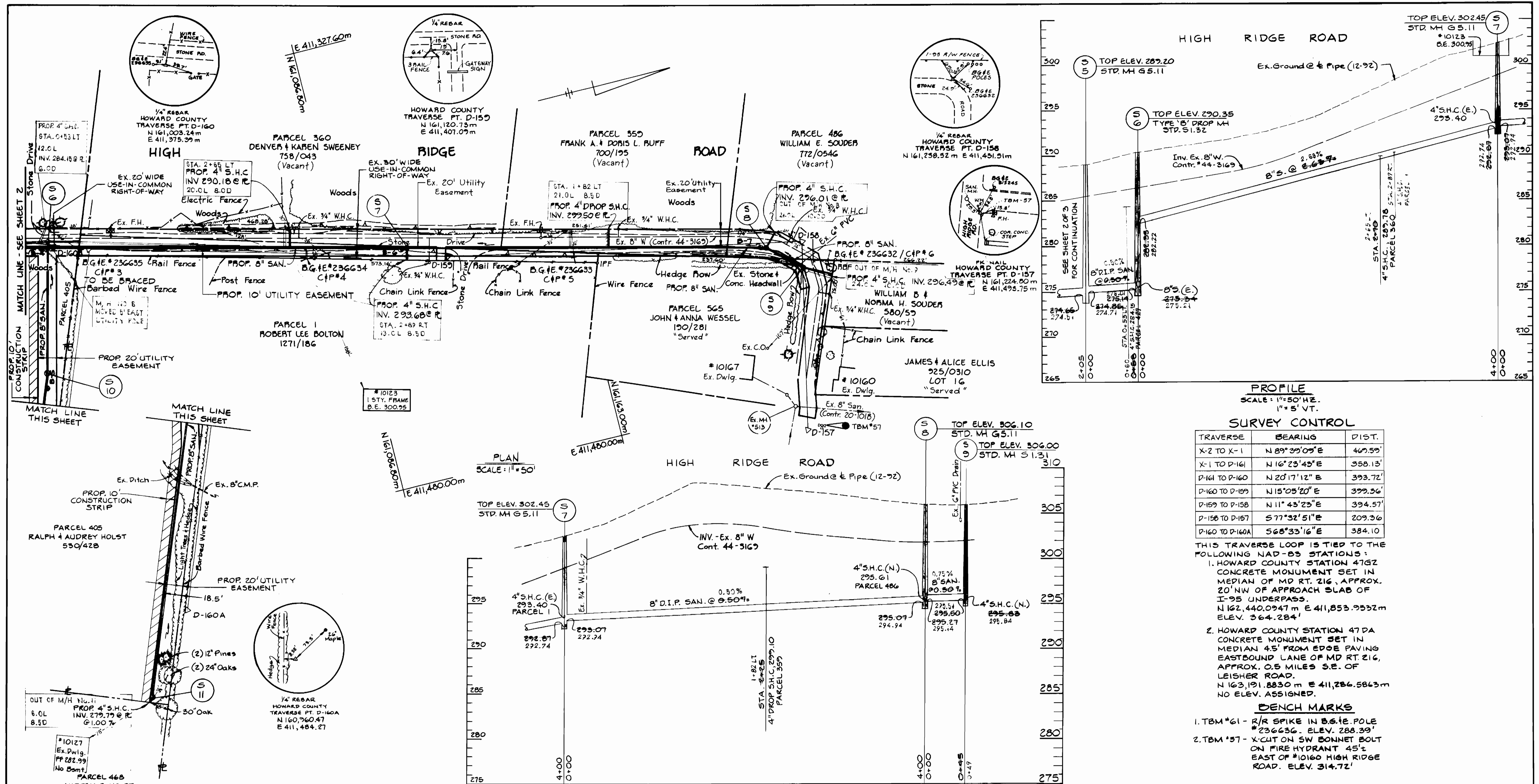
8" SEWER MAIN
 CONTRACT NO. 20-3253

HIGH RIDGE ROAD SEWER MAIN
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CAPITAL PROJECT S-6170

SCALE AS SHOWN
 SHEET 2 OF 3

STATE PROJECT C-240994-02 (14)

High Ridge Road Sewer Main



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

APPROVED FOR HOWARD SOIL CONSERVATION DISTRICT.

DATE: 5-25-93

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DATE: 5-25-93

DATE: 5-24-93

W. DUVAL & ASSOCIATES, INC.
ENGINEERS · SURVEYORS · PLANNERS
530 EAST JOPPA ROAD
TOWSON, MARYLAND 21286
(410) 583-9571



DES: W.D.A.	
DRN: RED JR	
CHK: G.D.L.	
DATE: 4-15-93	
BY NO.	
REVISION	
DATE	

8" SEWER MAIN
CONTRACT NO. 20-3253

600 SCALE MAP NO. 47.50 BLOCK NO.

HIGH RIDGE ROAD SEWER MAIN
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT S-6170

SCALE AS SHOWN
SHEET 3 OF 3

STATE PROJECT C-240994-02(14)

3253 High Ridge Sewer Main (pos. sht. #1 of 2) - file w/ plans.
cap. proj. S-6170

E 411,175.20m

E 411,251.40m

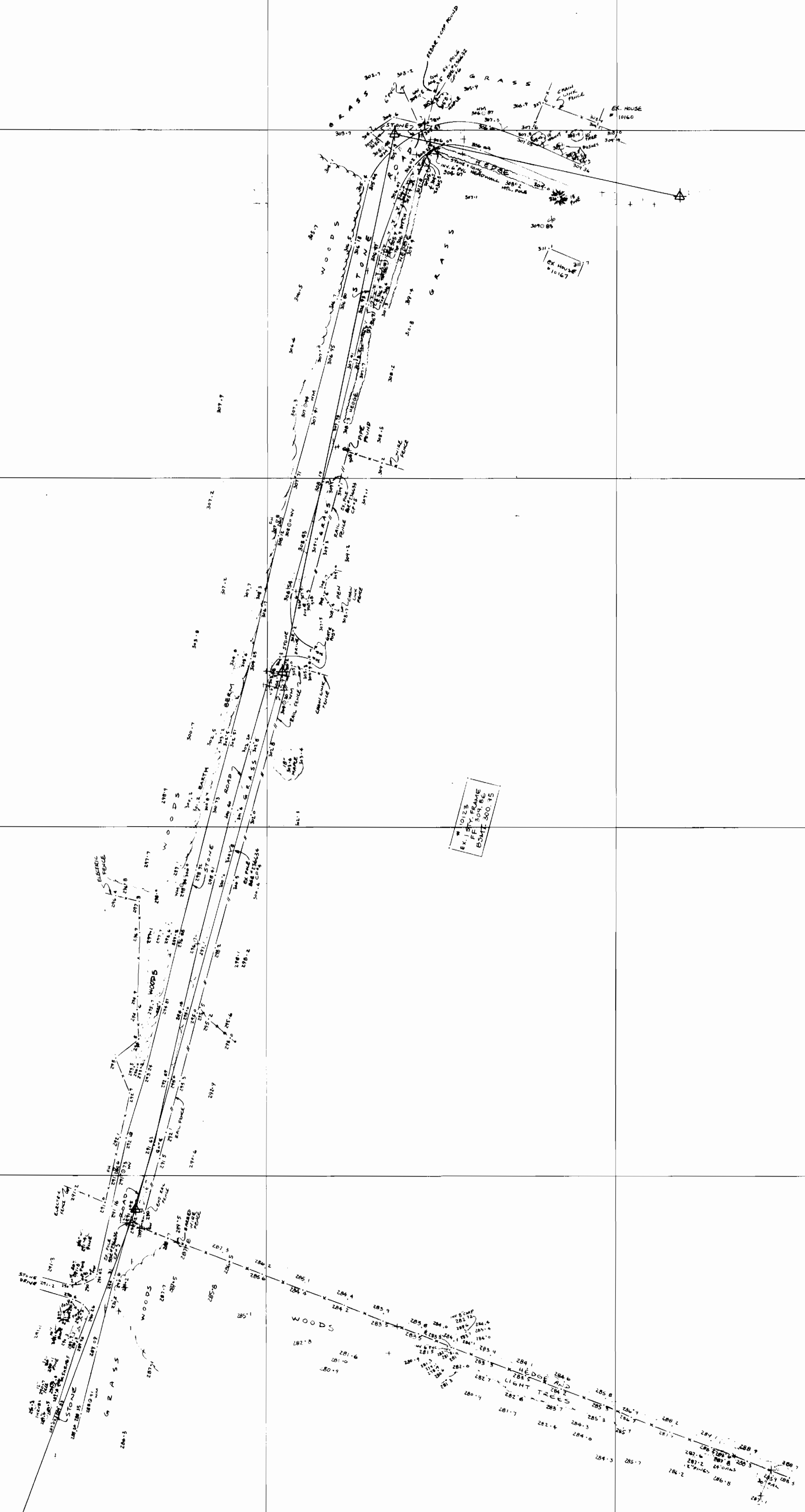
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E 411,403.80m

E 411,480.00m

E 411,556.20m

E 411,632.40m



N 161,239.20m

N 161,163.00m

N 161,086.80m

N 161,010.60m

N 160,934.40m

3253 High Ridge Sewer Main (pos. sht. # 2 of 2) - file w/ plans.
COP. PROJ. 5-6170

E 411,022.80 m

E 411,099.00 m

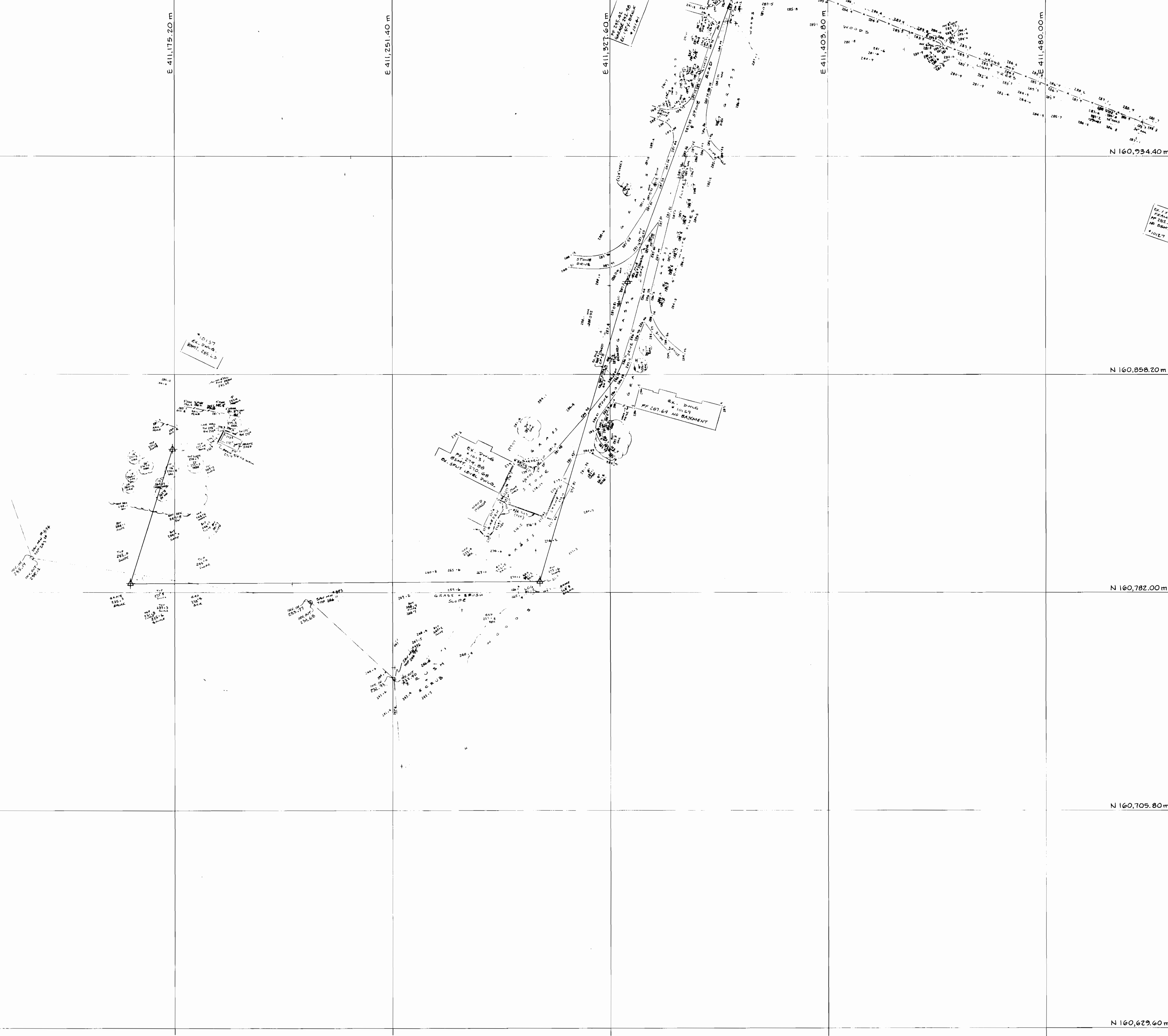
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E 411,403.80 m

E 411,480.00 m



N 160,934.40 m

N 160,858.20 m

N 160,782.00 m

N 160,705.80 m

N 160,629.60 m