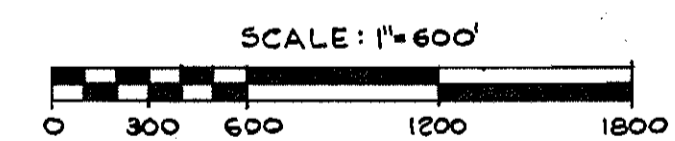
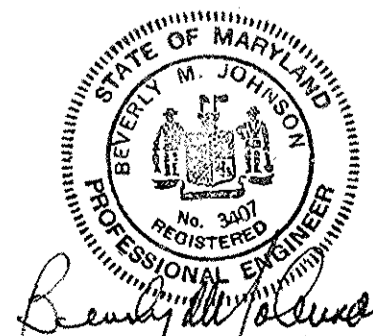


DESIGN DATA								
AREA SYMBOL	AREA ACRES	POPULATION DENSITY ULTIMATE	POPULATION ULTIMATE	ULT. AVG. SEWAGE FLOW (M.G.D.)	ULT. PEAK & DESIGN FLOW (M.G.D.)	APPROX. GRADE %	TENTATIVE SIZE	VELOCITY (n=0.013)
A	331.0	5.25	1,738	.200	.800	1.88	8"	3.5
B	237.5	5.25	1,247	.143	.572	0.54	8"	2.5
A-B	568.5	5.25	2,985	.343	1.15	0.68	10"	3.3
C	128.5	5.25	675	.078	.312	0.50	8"	2.5
A-C	697.0	5.25	3,660	.421	1.45	1.04	10"	4.1
D	127.0	5.25	667	.077	.308	0.54	8"	2.5
A-D	824.0	5.25	4,327	.498	1.70	0.54	12"	3.3
E	124.0	5.25	651	.075	.300	0.54	8"	2.5
A-E	948.0	5.25	4,978	.573	1.80	0.62	12"	3.5
F	53.8	5.25	282	.032	.128	0.54	8"	2.5
A-F	1,001.8	5.25	5,260	.605	2.00	0.78	12"	3.8
G	42.1	5.25	221	.025	.100	0.54	8"	2.5
A-G	1,043.9	5.25	5,481	.630	2.08	0.80	12"	4.0
H	32.2	3.10	100	.012	.048	0.54	8"	2.5
A-H	1,076.1	5.25	5,581	.642	2.10	0.88	12"	4.0



CONTRACT NO 417-S
BONNIE BRANCH INTERCEPTOR
HOWARD COUNTY MARYLAND
DEPARTMENT OF PUBLIC WORKS



PURDUM & JESCHKE
 ENGINEERS
 1023 N. CALVERT ST.
 BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 9.3.71 DATE
 W. O. Falbet
 CHIEF - BUREAU OF WATER AND SEWER

CONTRACT NO. 417-S

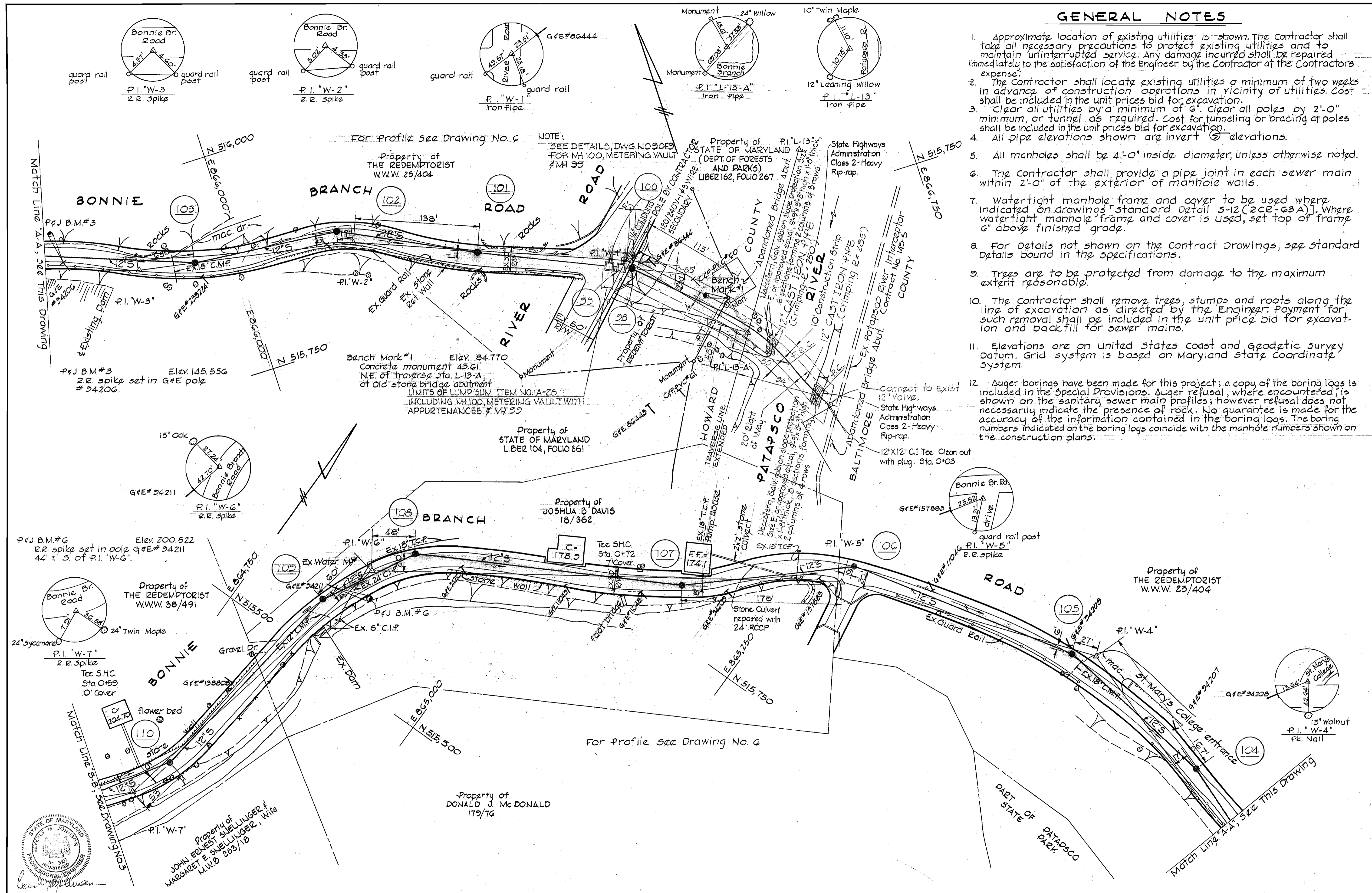
LOCATION MAP OF
 SANITARY SEWERS

ELECTION DISTRICTS NO. 1 & 2

DRAWING NO. 1 OF 2 SCALE AS SHOWN

WS 417-S/1

RESERVED COPY



GENERAL NOTES

1. Approximate location of existing utilities is shown. The contractor shall take all necessary precautions to protect existing utilities and to maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer by the Contractor at the Contractor's expense.
2. The Contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in vicinity of utilities. Cost shall be included in the unit prices bid for excavation.
3. Clear all utilities by a minimum of 6'. Clear all poles by 2'-0" minimum, or tunnel as required. Cost for tunneling or bracing at poles shall be included in the unit prices bid for excavation.
4. All pipe elevations shown are invert elevations.
5. All manholes shall be 4'-0" inside diameter, unless otherwise noted.
6. The contractor shall provide a pipe joint in each sewer main within 2'-0" of the exterior of manhole walls.
7. Watertight manhole frame and cover to be used where indicated on drawings [standard detail 5-12 (2CE-63A)]. Where watertight manhole frame and cover is used, set top of frame 6" above finished grade.
8. For details not shown on the Contract Drawings, see standard details bound in the specifications.
9. Trees are to be protected from damage to the maximum extent reasonable.
10. The contractor shall remove trees, stumps and roots along the line of excavation as directed by the Engineer. Payment for such removal shall be included in the unit price bid for excavation and backfill for sewer mains.
11. Elevations are on United States coast and geodetic survey datum. Grid system is based on Maryland State coordinate system.
12. Auger borings have been made for this project; a copy of the boring logs is included in the special provisions. Auger refusal, where encountered, is shown on the sanitary sewer main profiles; however refusal does not necessarily indicate the presence of rock. No guarantee is made for the accuracy of the information contained in the boring logs. The boring numbers indicated on the boring logs coincide with the manhole numbers shown on the construction plans.

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HOWARD COUNTY, MARYLAND
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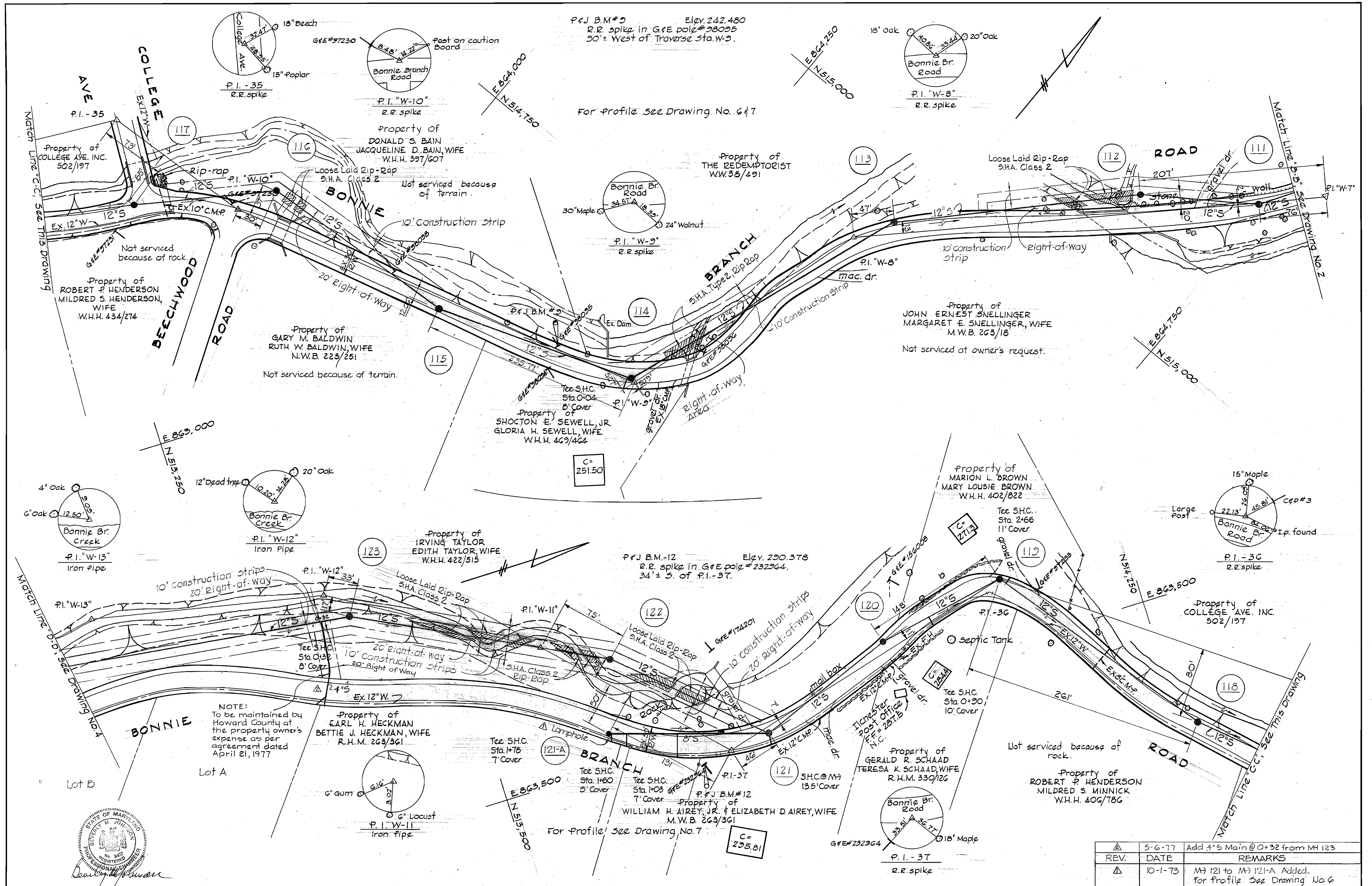
CONTRACT NO. **417-S**

PLAN OF SEWER MAINS

ELECTION DISTRICTS NO. 1 & 2

DRAWING NO. **2** OF **9**
SCALE **1"=50'**

WS 417-S/2



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CHIEF - BUREAU OF WATER AND SEWER

CONTRACT NO. 417-S

PLAN OF SEWER MAINS

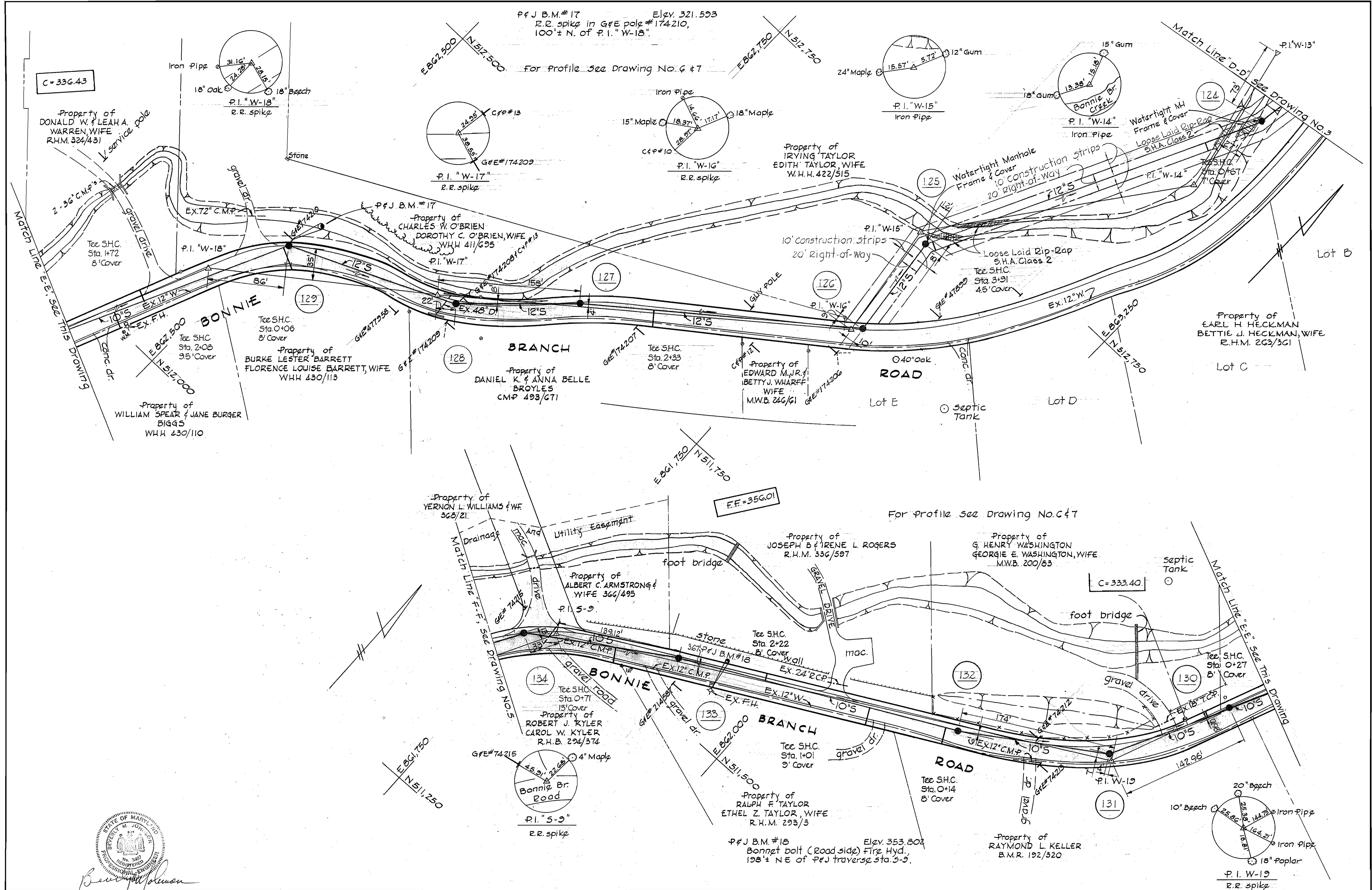
ELECTION DISTRICT NO. 1 & 2

DRAWING NO. 3 OF 9

SCALE 1"=50'

REV.	DATE	REMARKS
△	5-6-77	Add 4" S Main @ 0+32 from MH 123
△	10-1-73	MH 121 to MH 121-A Added. For Profile See Drawing No. 6

WS 417-S/3



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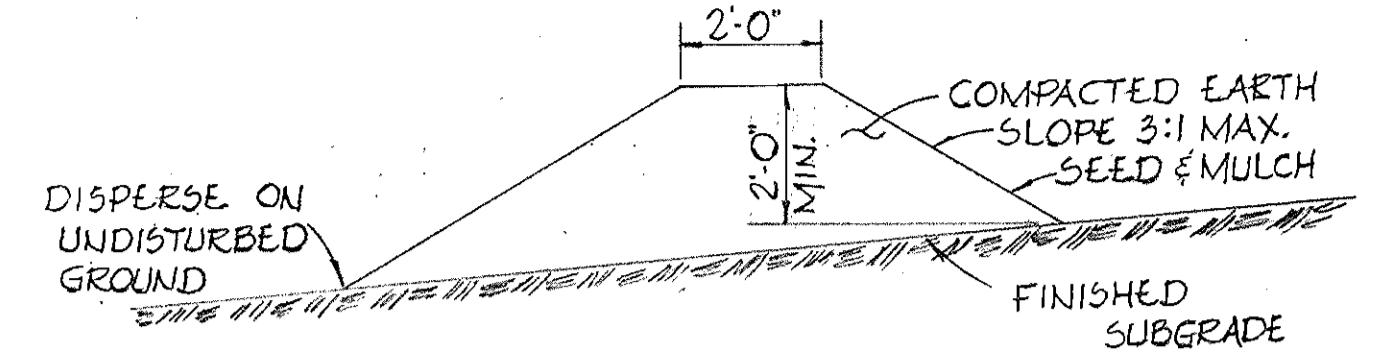
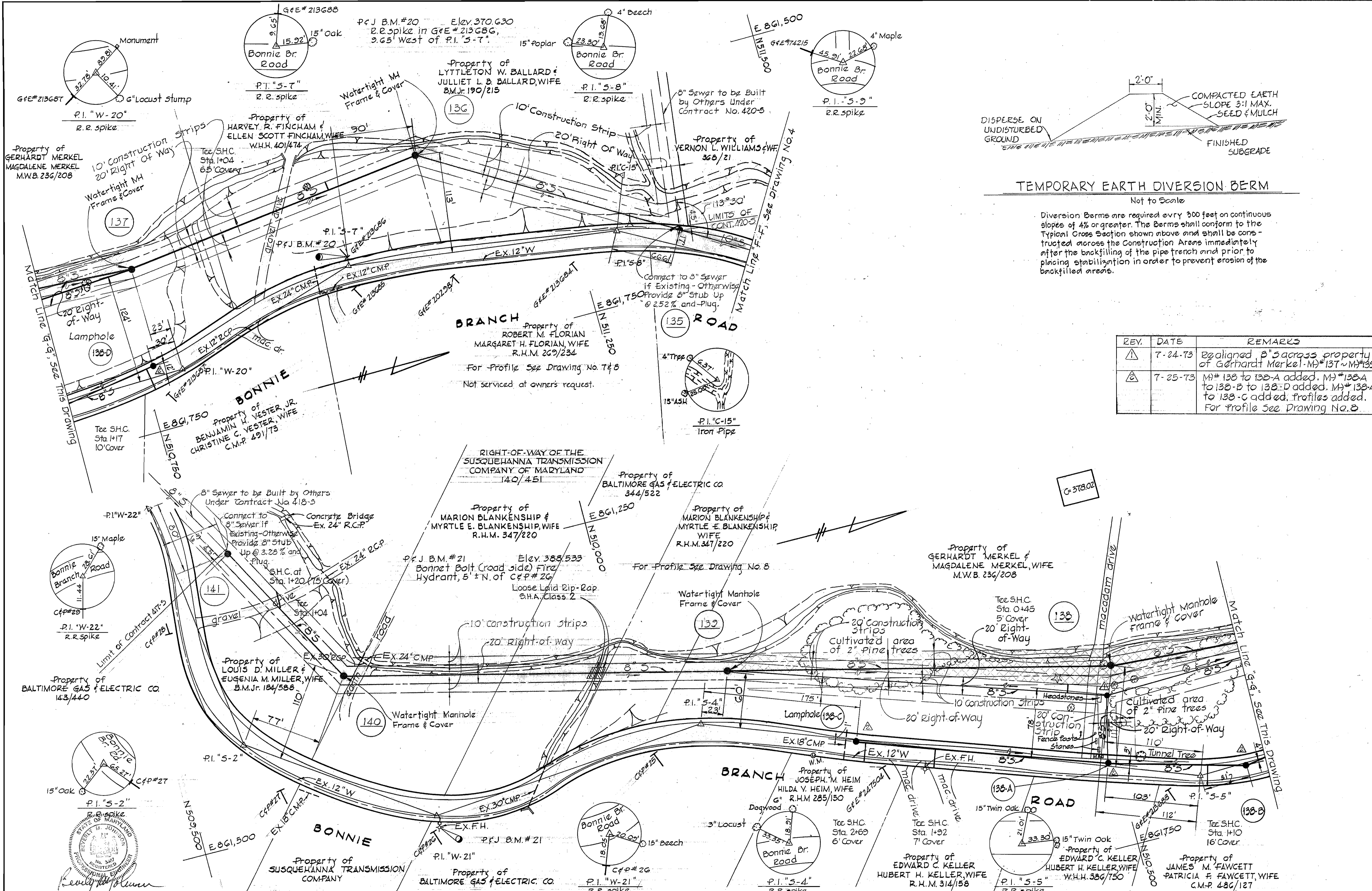
CONTRACT NO. 417-S

PLAN OF
 SEWER MAINS

ELECTION DISTRICTS NO. 1 & 2

DRAWING NO. 4 OF 9
 SCALE 1"=50'

WS 417-S/4



TEMPORARY EARTH DIVERSION BERM

Diversion Berms are required every 300 feet on continuous slopes of 4% or greater. The Berms shall conform to the Typical Cross Section shown above and shall be constructed across the Construction Areas immediately after the backfilling of the pipe trench and prior to placing stabilization in order to prevent erosion of the backfilled areas.

REV.	DATE	REMARKS
1	7-24-73	Realigned B" S across property of Gerhardt Merkel-M#137-M#139
2	7-25-73	M#138 to 138-A added. M#138A to 138-B to 138-D added. M#138-A to 138-C added. Profiles added. For Profile See Drawing No. 8



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HOWARD COUNTY, MARYLAND
DATE: 9-3-71
W.O. Fawcett
CHIEF - BUREAU OF WATER AND SEWER

CONTRACT NO. 417-S

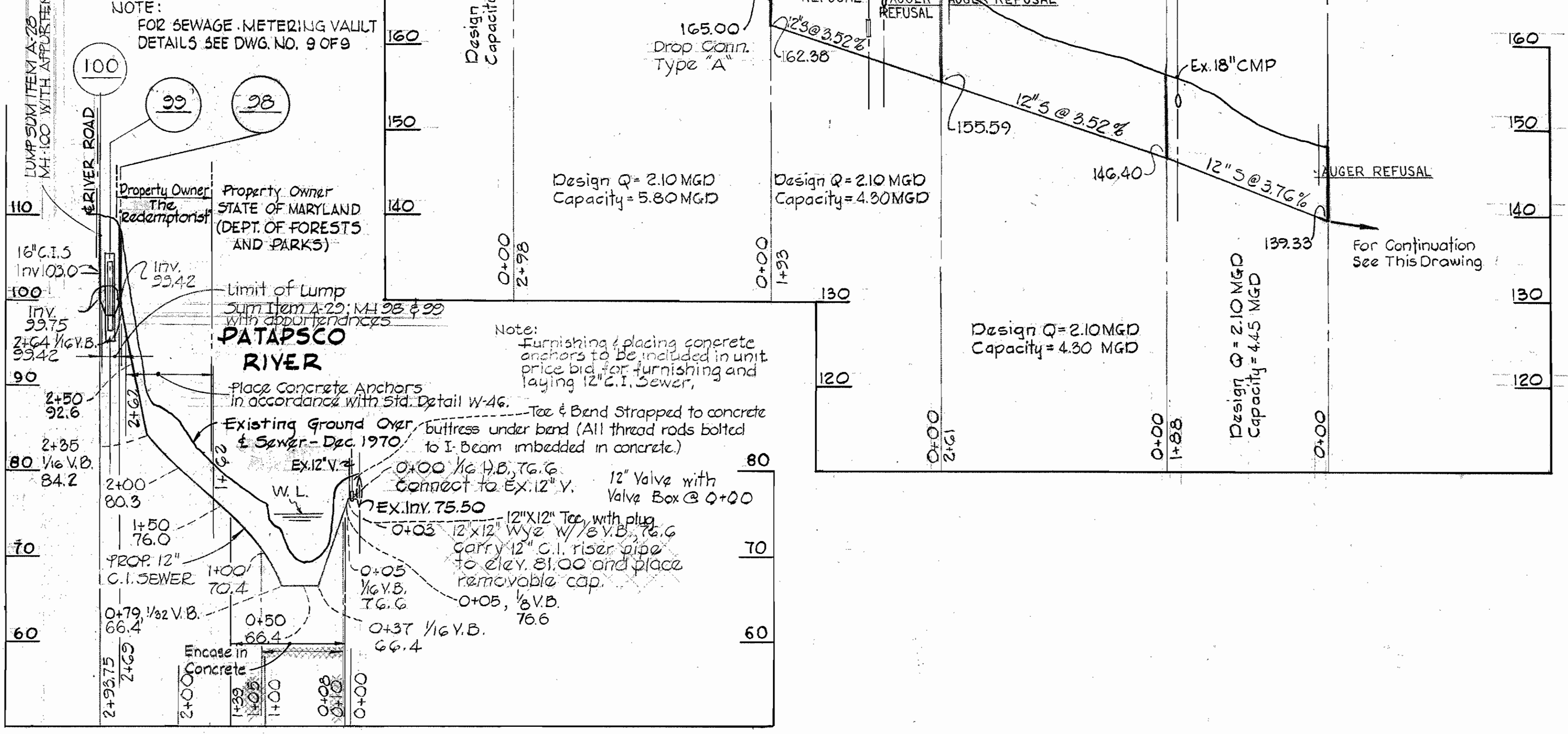
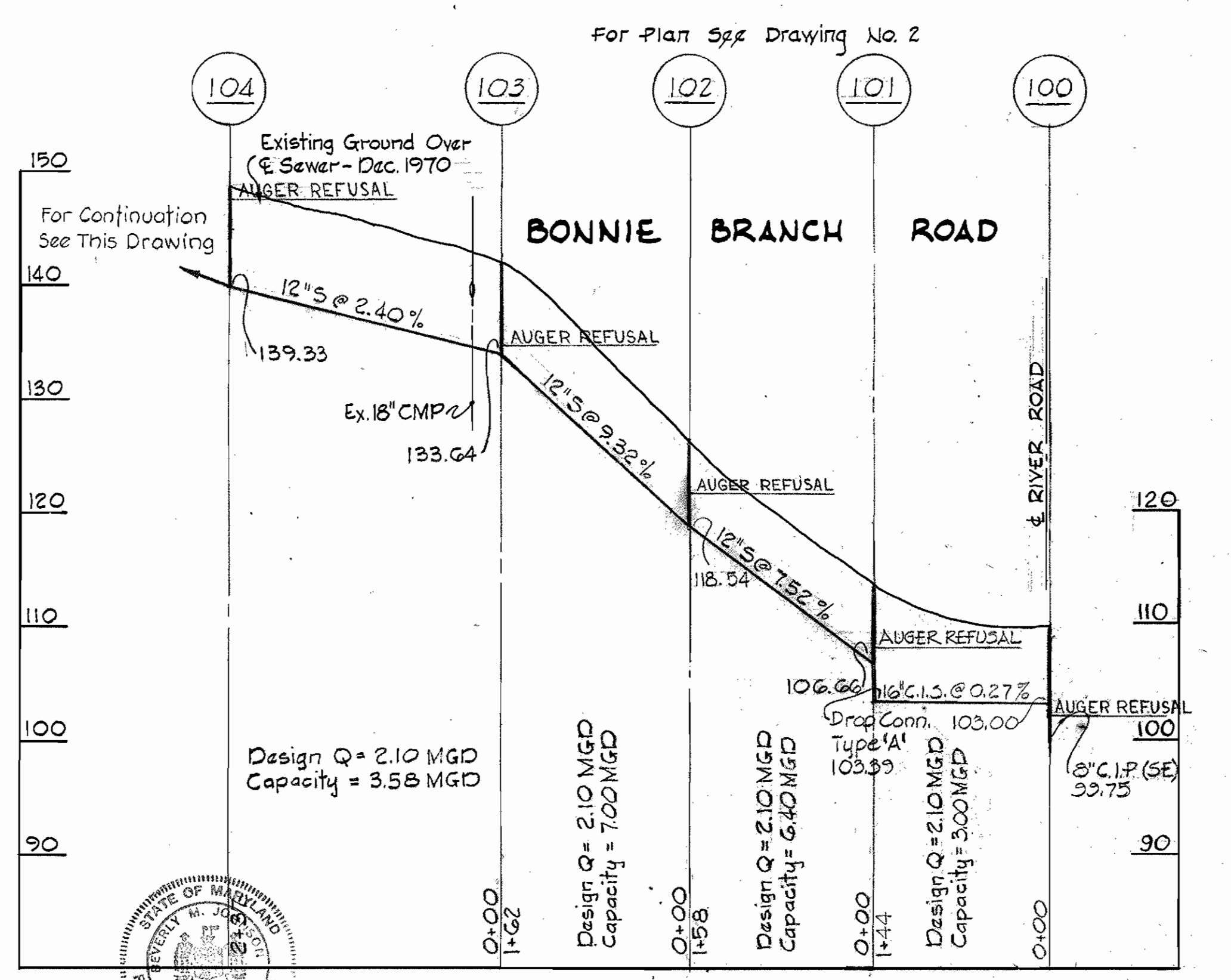
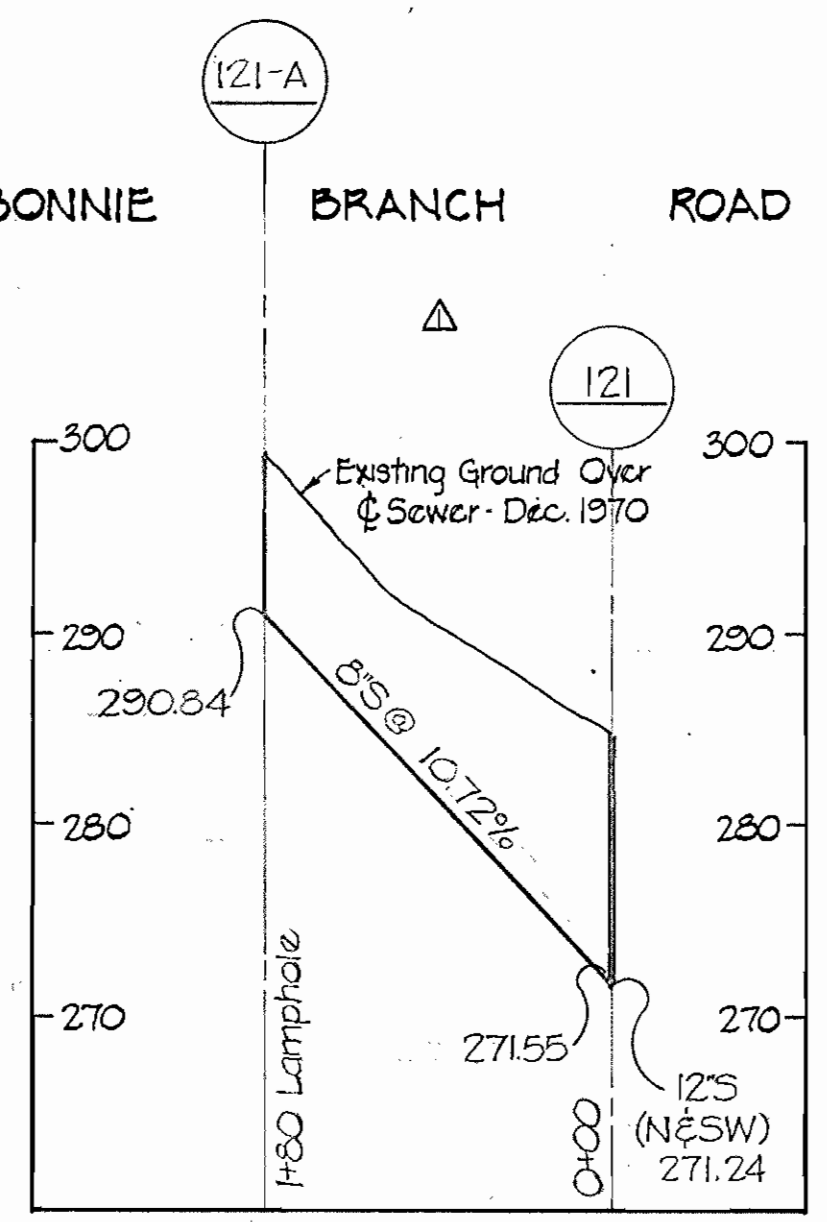
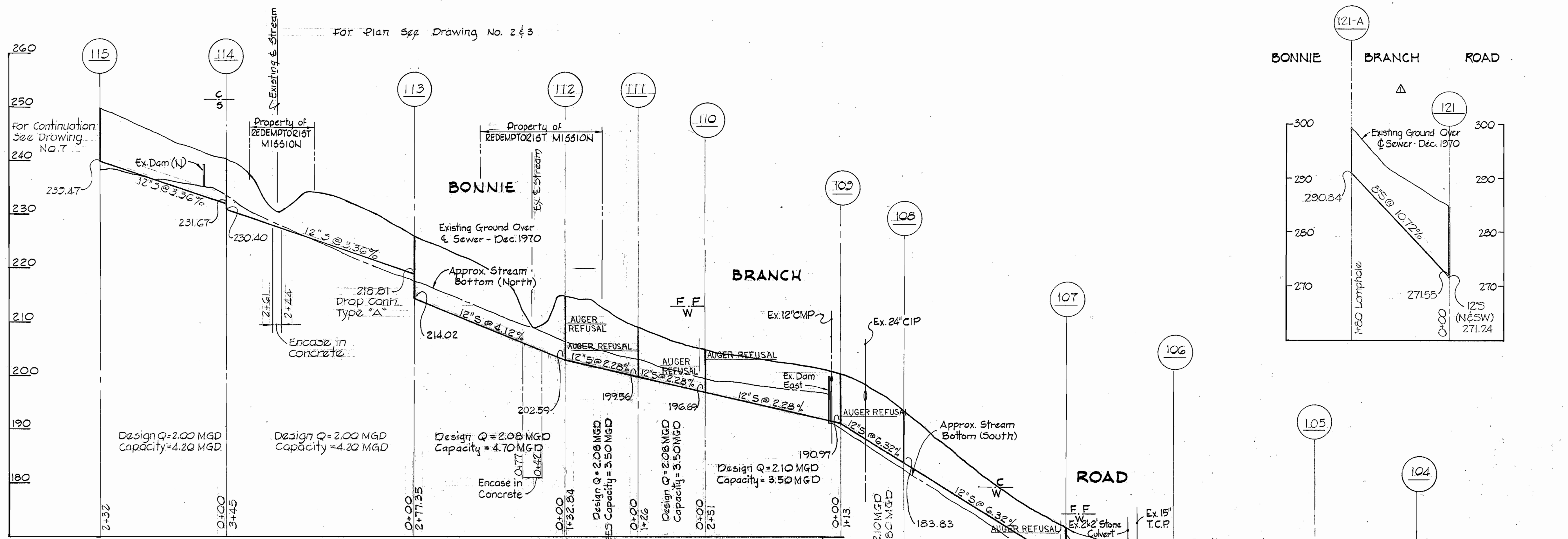
PLAN OF SEWER MAINS

ELECTION DISTRICTS NO. 1 & 2

DRAWING NO. 5 OF 9

SCALE 1"=50'

WS 417-S/5



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

REV.	DATE	REMARKS
Δ	10-1-73	Mt 121 to Mt 121-A Added For Plan See Sheet 3 of 3

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HOWARD COUNTY, MARYLAND
9-3-71
DATE

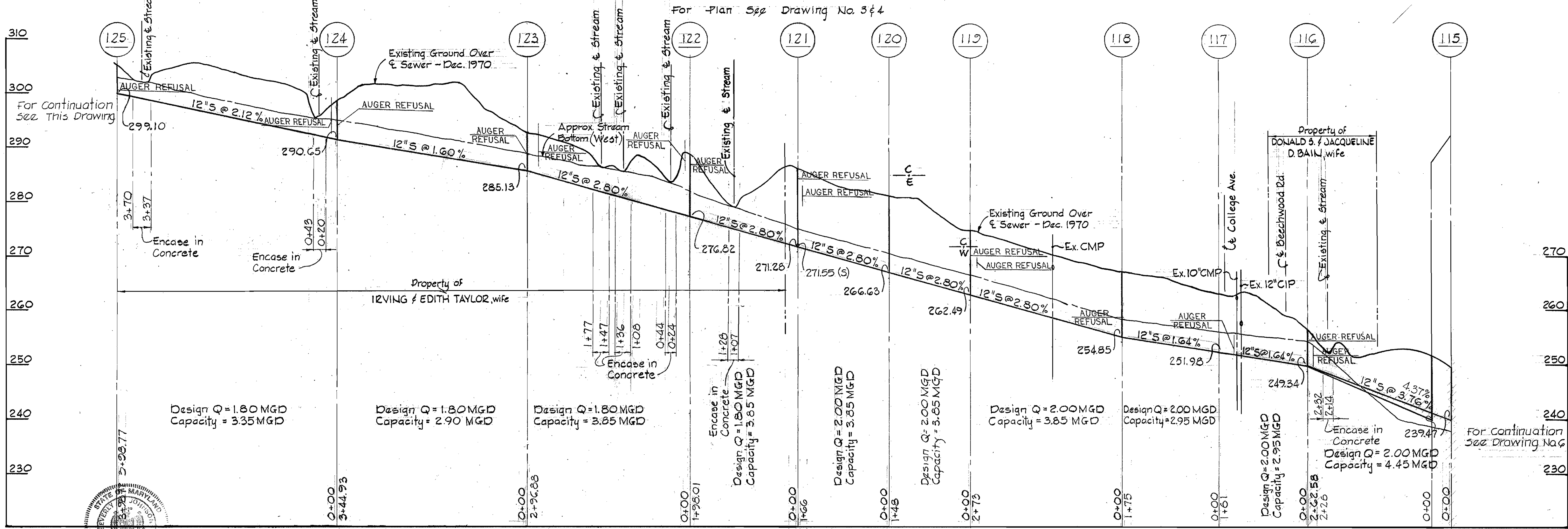
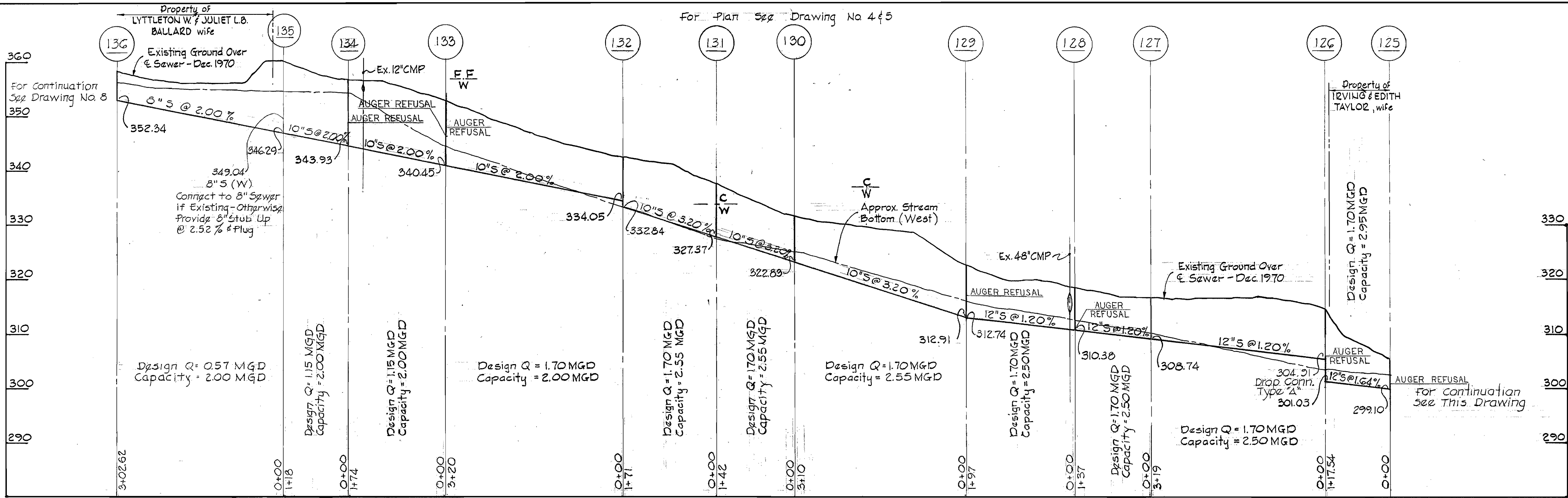
CONTRACT NO. **417-S**

PROFILE

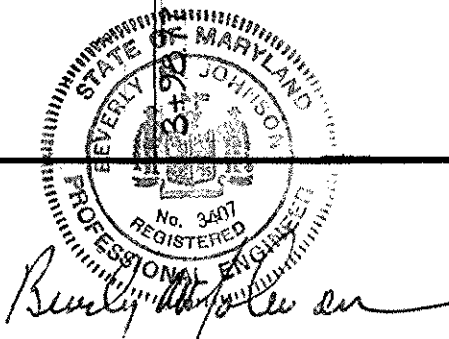
ELECTION DISTRICT NO. 1 & 2

DRAWING NO. 6 OF 9
SCALE AS SHOWN

WS 417-S/6



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



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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE 3-71
CHIEF - BUREAU OF WATER AND SEWER

CONTRACT NO. 417-S

PROFILE

ELECTION DISTRICTS NO. 182

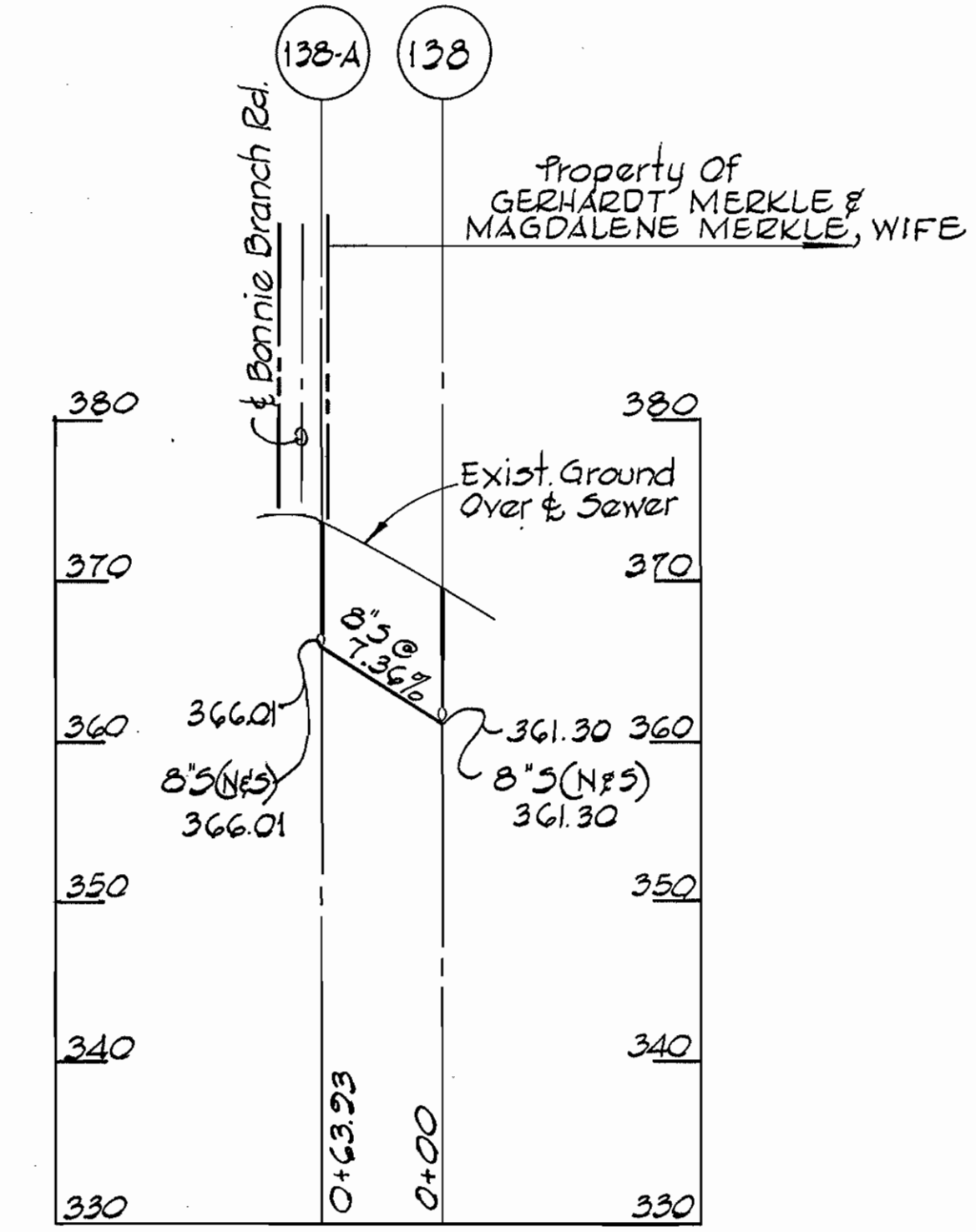
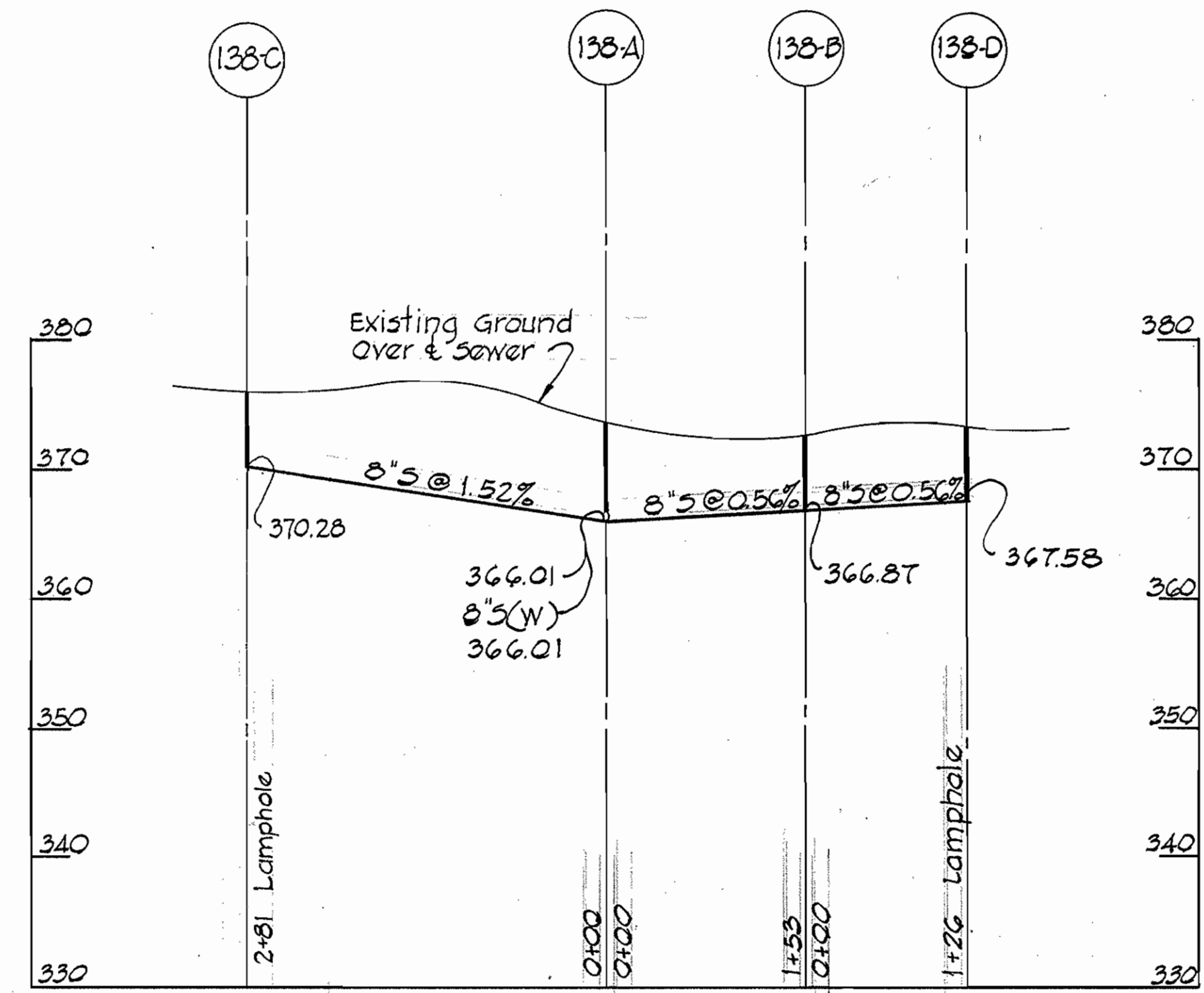
DRAWING NO. 7 OF 9
SCALE AS SHOWN

WS 417-S/7

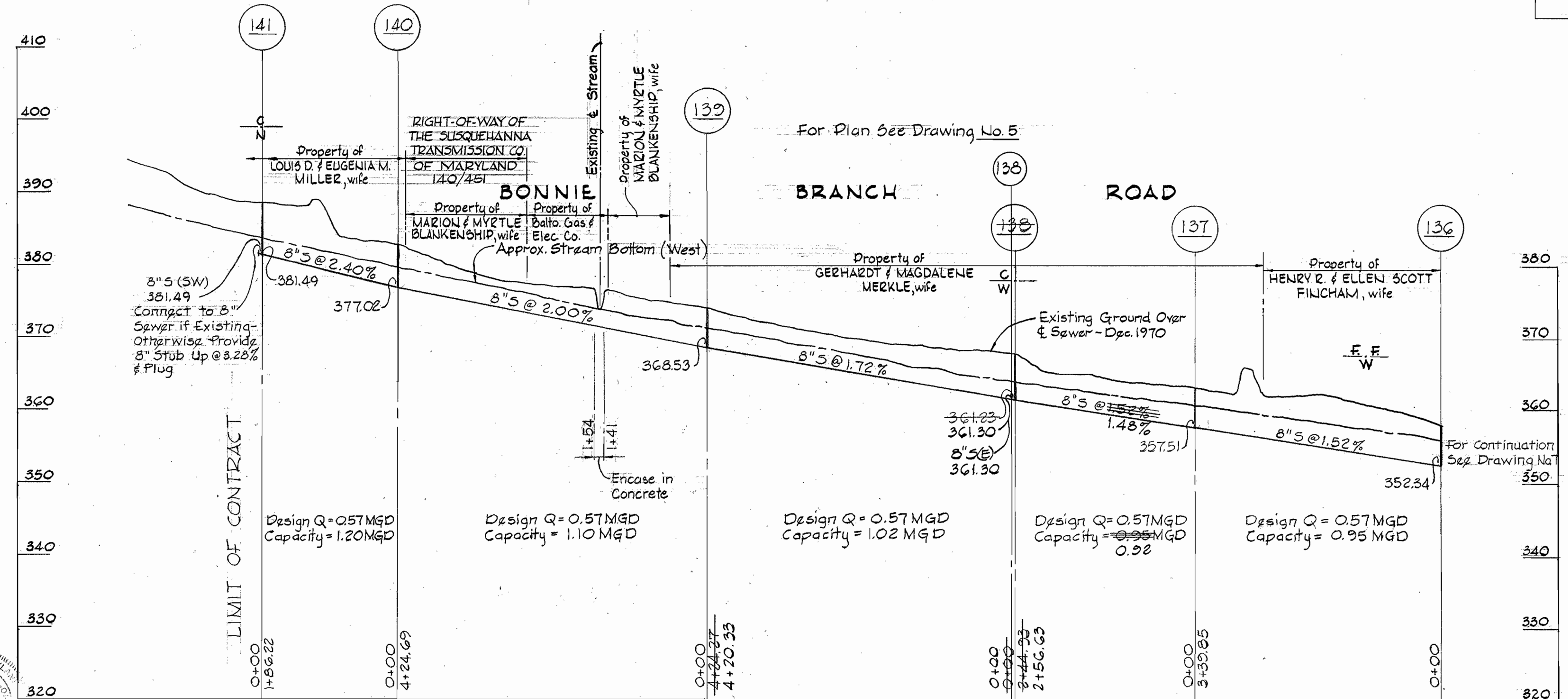
For Plan See Drawing No.5

For Plan See Drawing No.5

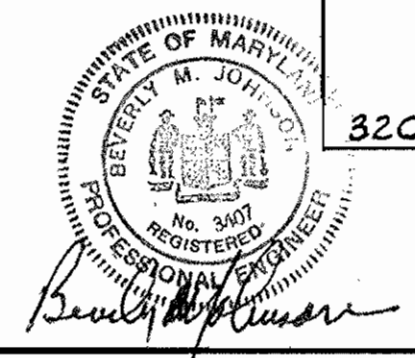
BONNIE BRANCH ROAD



REV.	DATE	REMARKS
△	7-24-73	Revised Sewer profile-M)*137 to M)*138, M)*138 to M)*139.
△	7-25-73	Sewer profiles added: M)138 to M)138-A, M)138-A to M)138-B to M)138-D and M)138-A to M)138-C. For plan see Drawing No.5



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



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HOWARD COUNTY, MARYLAND
DATE **9-3-71**
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CONTRACT NO. **417-S**

PROFILE

ELECTION DISTRICTS NO. 1 & 2

DRAWING NO. **8** OF **9** SCALE AS SHOWN

WS 417-S/B

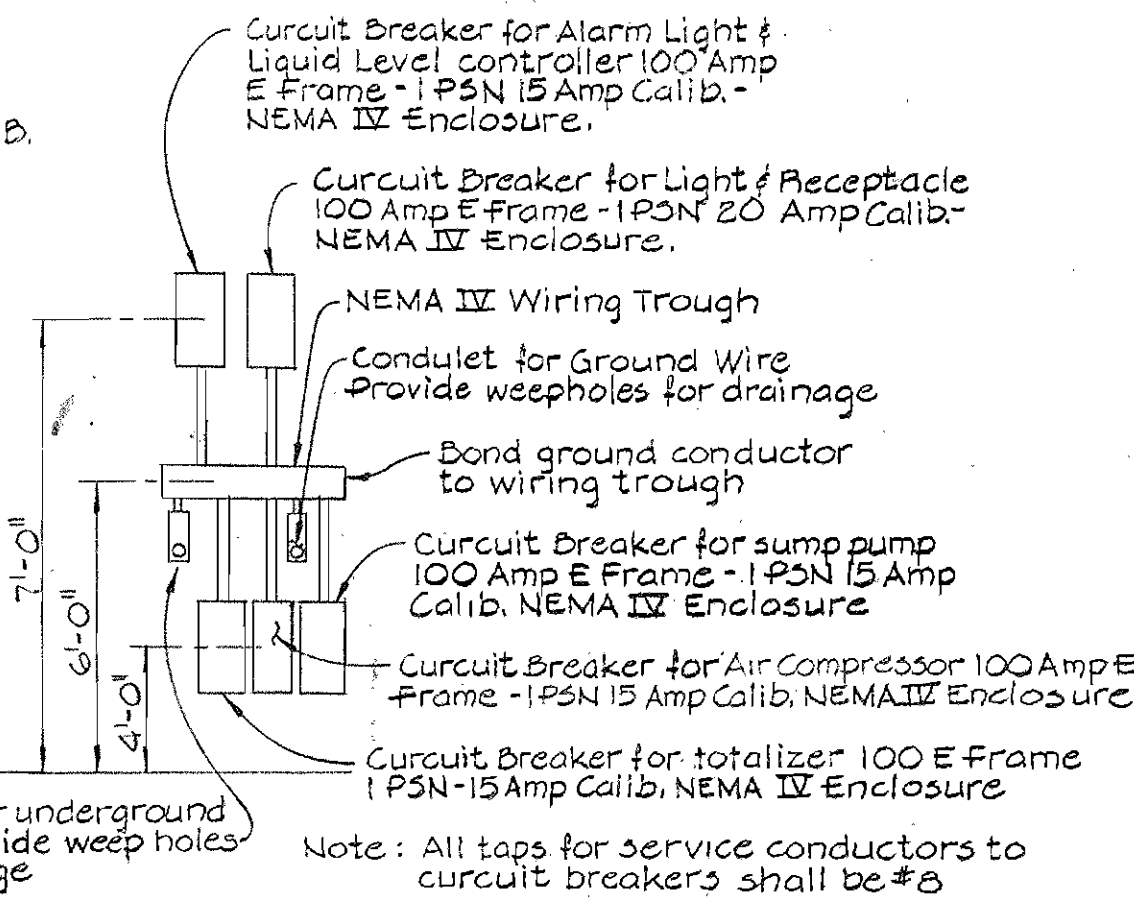
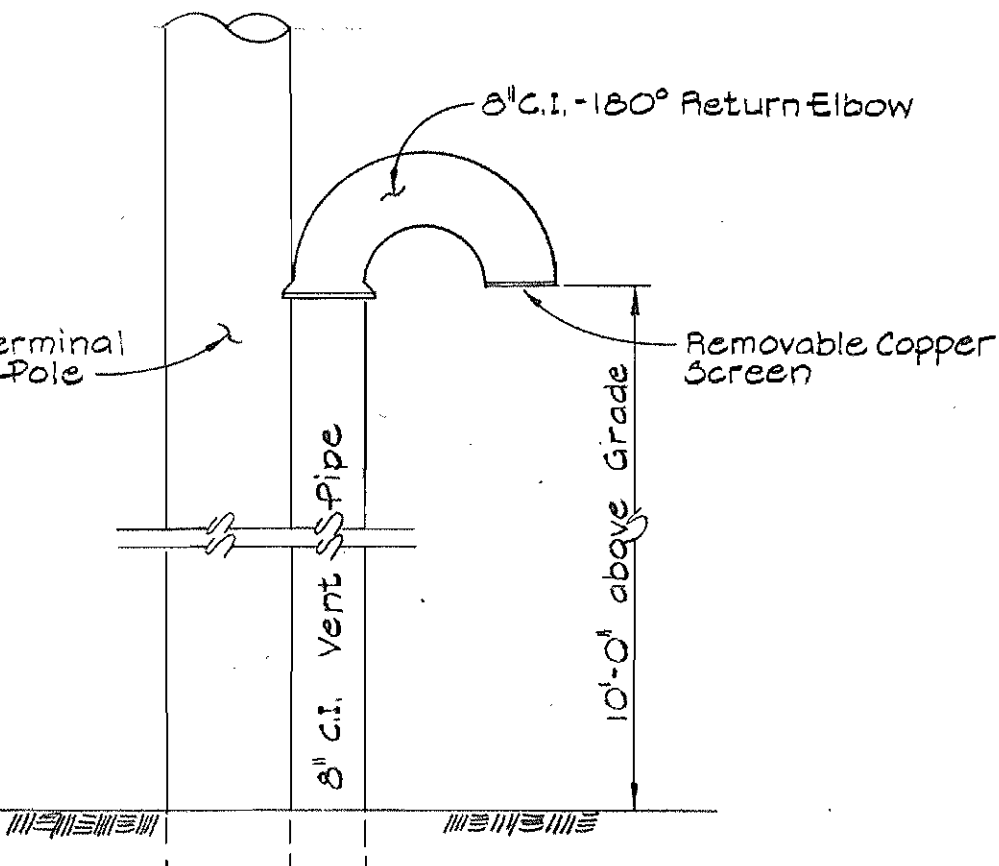
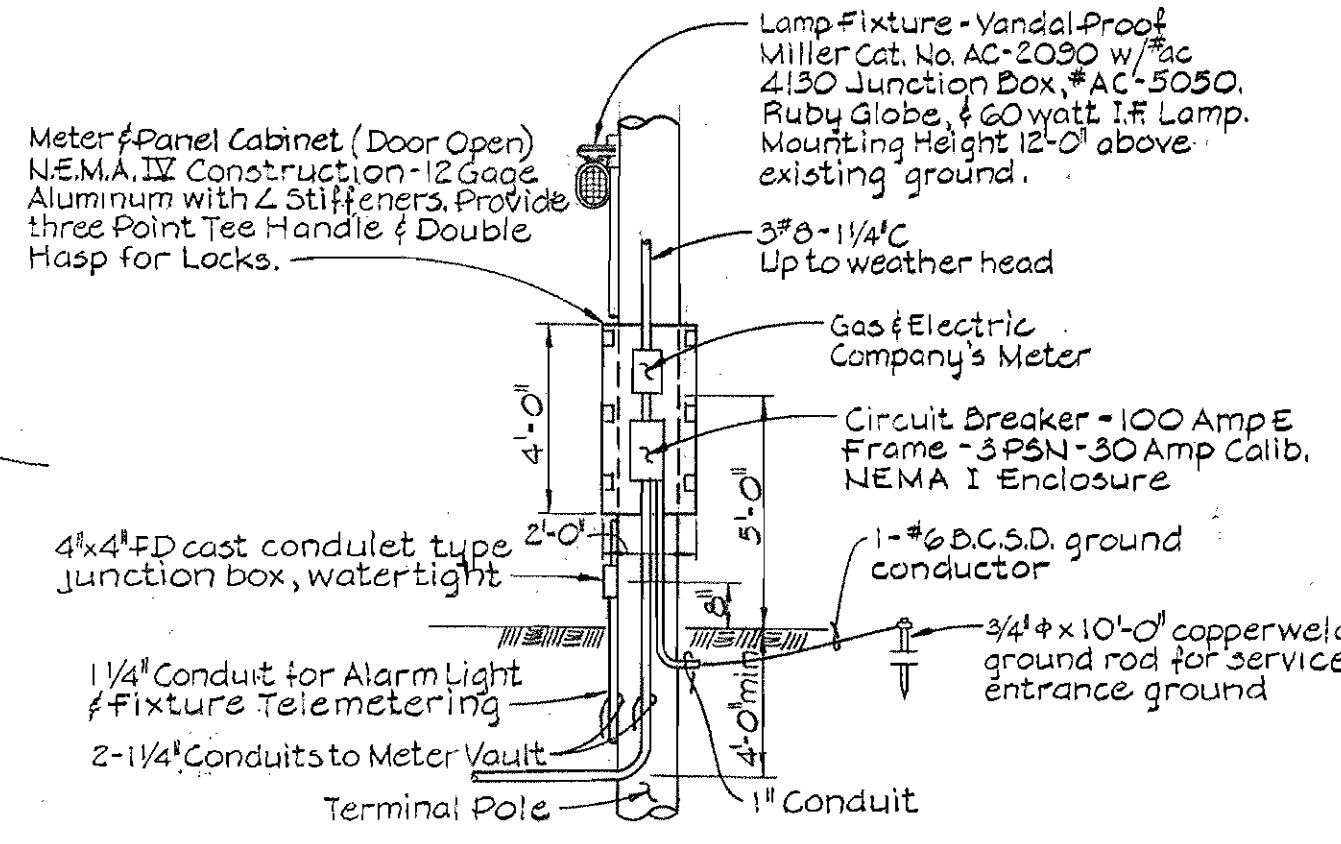
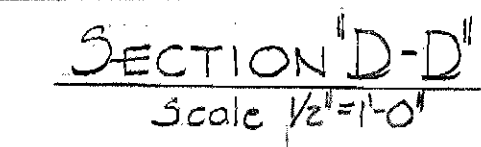
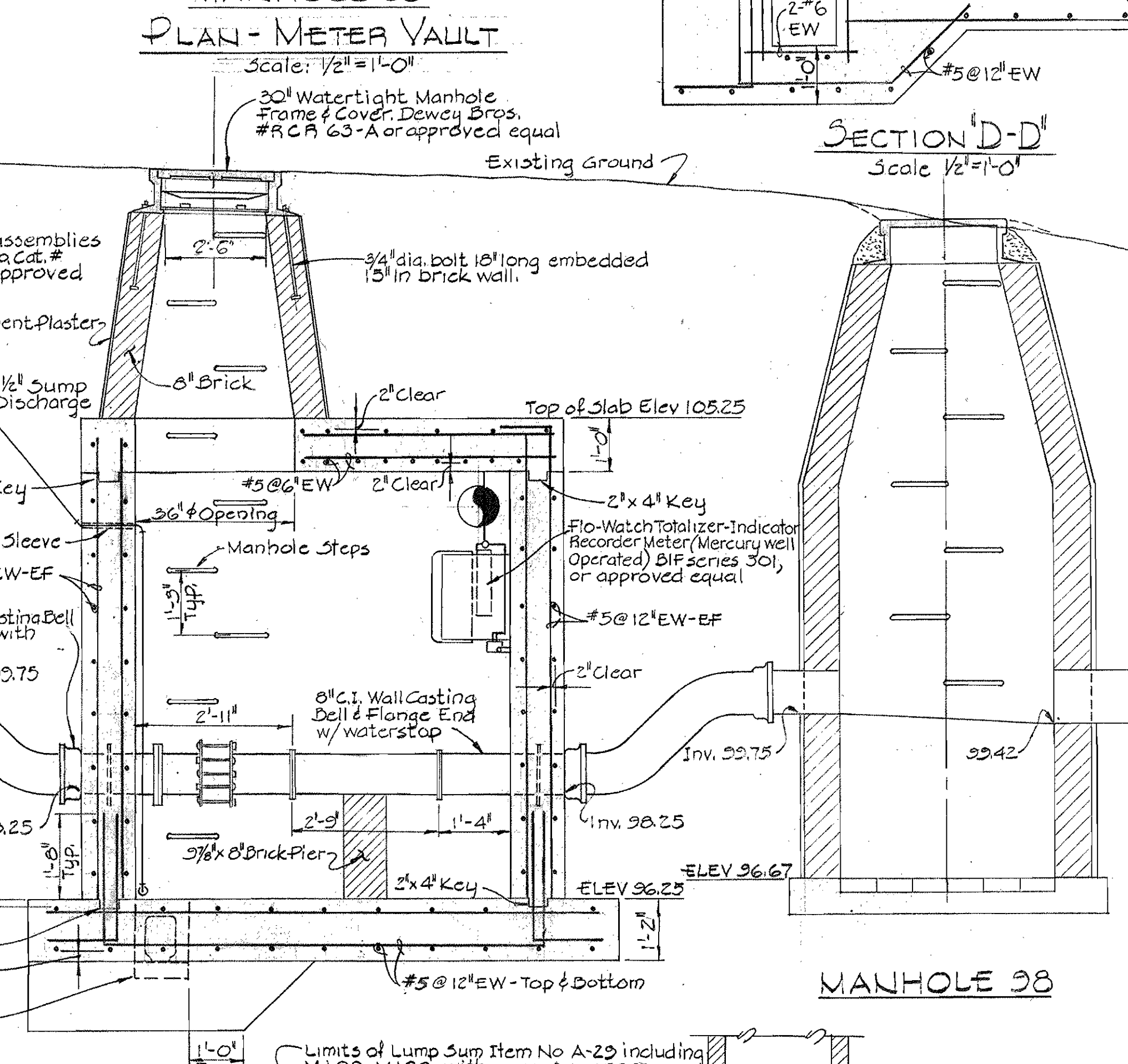
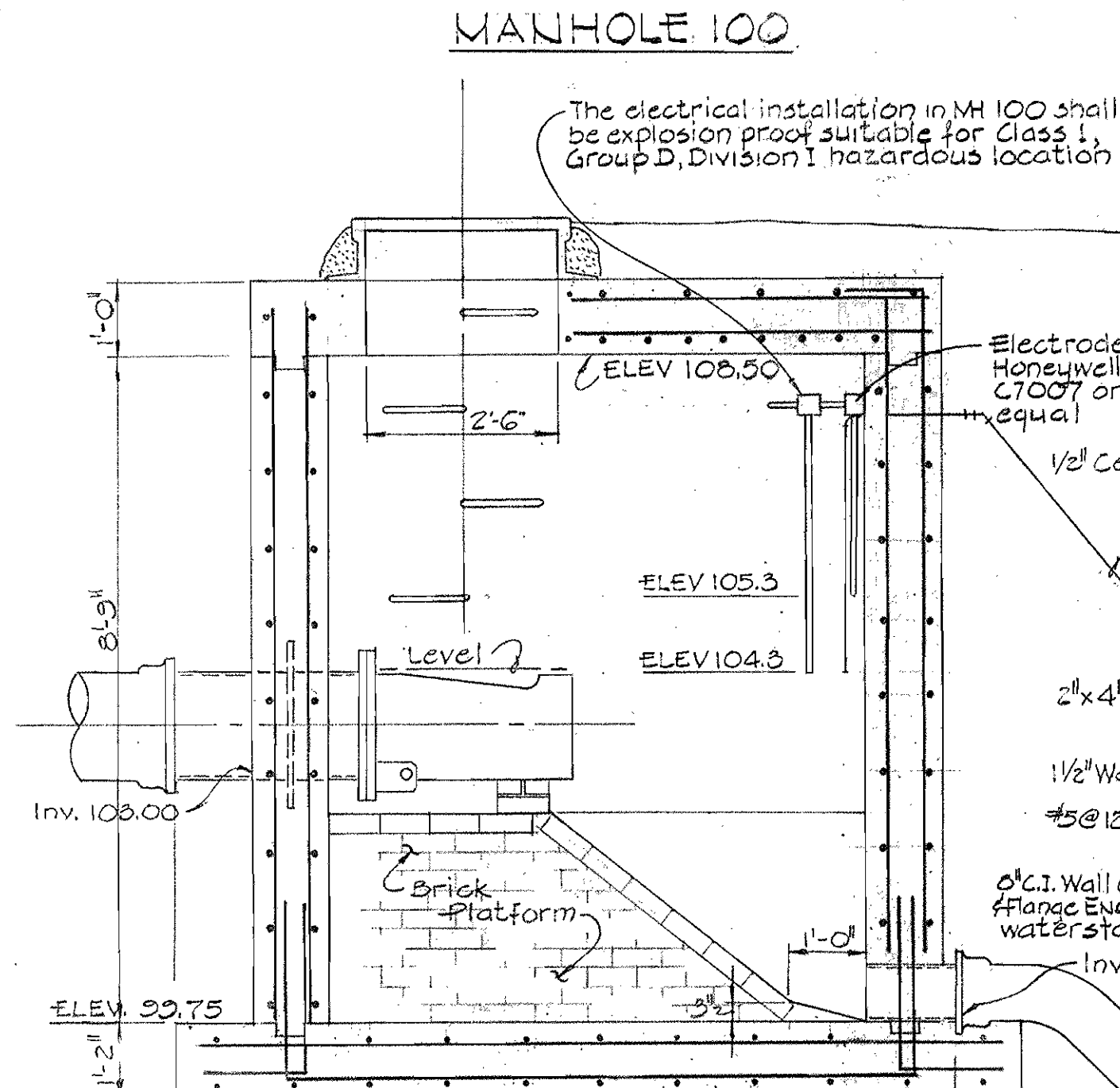
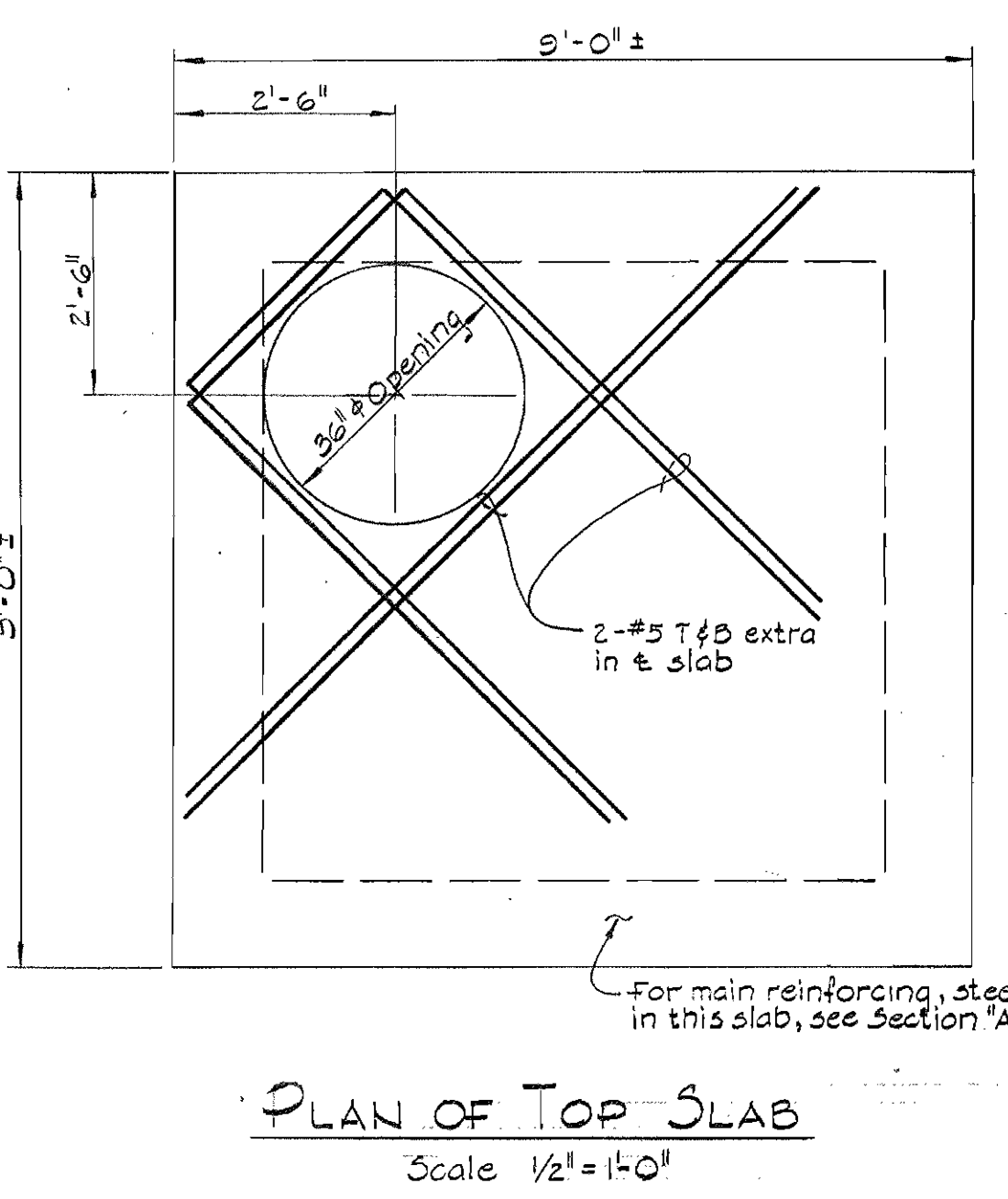
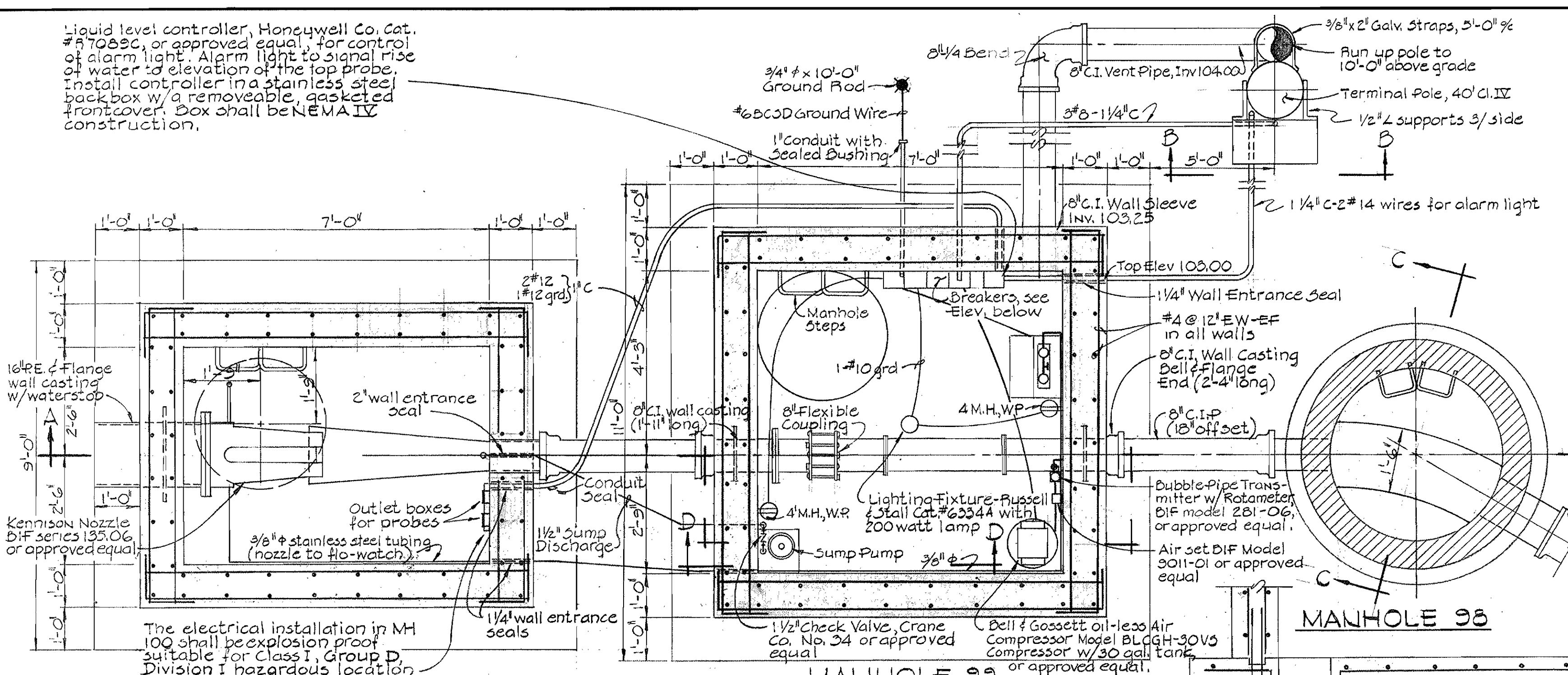
Liquid level controller, Honeywell Co. Cat. #A7083C, or approved equal, for control of alarm light. Alarm light to signal rise of water to elevation of the top probe. Install controller in a stainless steel back box w/ a removable, gasketed front cover. Box shall be NEMA IV construction.

STRUCTURAL NOTES

- All excavations shall be inspected by the Engineer before placing any gravel or concrete.
- All concrete shall be Class "A" and shall contain an air entraining admixture, "Darex" or approved equal. The amount of air entrained shall be 4.5% ± 1.5% by volume.
- All concrete poured in temperatures above 50°F shall contain a retarding admixture, "Plastiment" or an approved equal, to a proper amount resulting in a retardation of 2 to 3 hours.
- All concrete poured in temperatures below 50°F shall contain a densifying admixture "Sikacrete" or approved equal at the rate of 1 1/2 gallons per cubic yard of concrete.

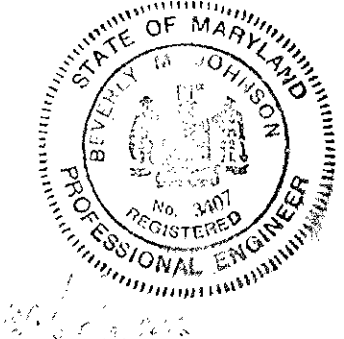
PAINTING

- All items of mechanical equipment and vent pipe shall be painted as follows:
 - One shop prime coat of Inertol Rust Inhibitive Primer No. 621, or one field prime coat of Inertol Rust Penetrating Primer No. 622 or approved equal.
 - Two finish coats of Inertol Glamortex enamel No. 306 or an approved equal.
- Outside of Vaults to be waterproofed with 3 coats of Inertol Standard or approved equal.



ELECTRICAL NOTES

- Indicates rigid steel conduit, minimum size 3/4"
- ⊕ Indicates weatherproof duplex receptacle 125 V, 15 A-2 P grounded, Arrow Hart or approved equal.
- Unless otherwise noted all conductors shall be #12 AWG, copper, THWN insulation.
- Ground all equipment in accordance with the manufacturers recommendations.
- Furnish and install a Buss Co., TRON type waterproof HEH in line fuse holder in the Recorder Case. The fuse for the Recorder shall be sized in accordance with the manufacturers recommendations.
- Terminations of all conduits shall be made with Myers hubs and all conduit entrances sealed and made watertight with "Insta-foam" sealer (as manufactured by Insta-foam Products, Inc.) or approved equal.



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9-3-71
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CONTRACT NO. 417-5

METER VAULT AND DETAILS

ELECTIONS DISTRICTS NO. 1 & 2

DRAWING
NO. 9
OF 9
SCALE
AS SHOWN

WS 417-5/9