



AUGER BORINGS		
No.	Elevation Original Ground	Depth of Auger Boring
A	355.6	3'
B	339.5	6'
C	328.2	3'
D	320.0	5'
E	315.0	5'
F	312.1	3'
G	304.8	5'
H	337.8	4'
I	333.7	3'
J	314.6	4'
K	354.5	8'
L	351.0	5'
M	379.0	5'
N	383.3	9'
O	345.8	45'
P	354.5	5'
Q	365.3	4'
R	366.8	5'
S	350.9	10'
T	363.5	5'
U	361.9	5'
V	367.7	5'
W	376.5	10'
X	350.3	10'
Y	379.5	9'

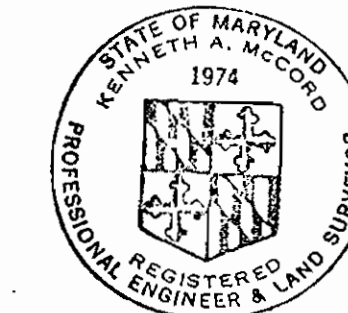
AUGER BORINGS		
No.	Elevation Original Ground	Depth of Auger Boring
Z	362.8	10'
A-1	361.2	5'
B-1	373.8	5'
C-1	362.7	5' (ref. 4)
D-1	351.8	5'
E-1	344.8	9'
F-1	337.3	8'
G-1	351.4	10'
H-1	327.6	12'
I-1	318.2	5'
J-1	307.0	10'
K-1	303.2	5'

Auger Refusal *

Note: Auger Borings were made by the American Testing and Engineering Company for the Howard Research and Development Corporation in March, 1972. Information relative to depth of boring and refusal on auger are shown. Complete logs are available at the Howard County, Department of Public Works. Boring Nos. were assigned by W.R.I.A.

QUANTITIES	
ITEM	QUANTITY
8" Sewer	10,900 LF
16" Water	460 LF
12" Water	5,910 LF
8" Water	9,350 LF
6" Water	7,250 LF
3" Water	4,500 LF
Fire Hydrants	19

CONTRACT C-486 D-W&S
VILLAGE OF OWEN BROWN
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS



Kenneth A. McCord

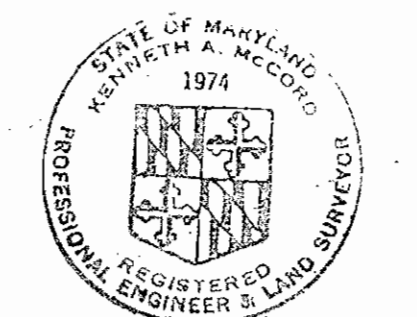
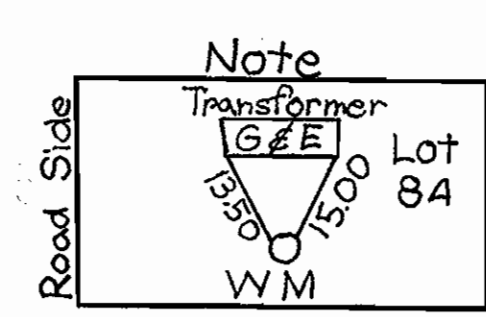
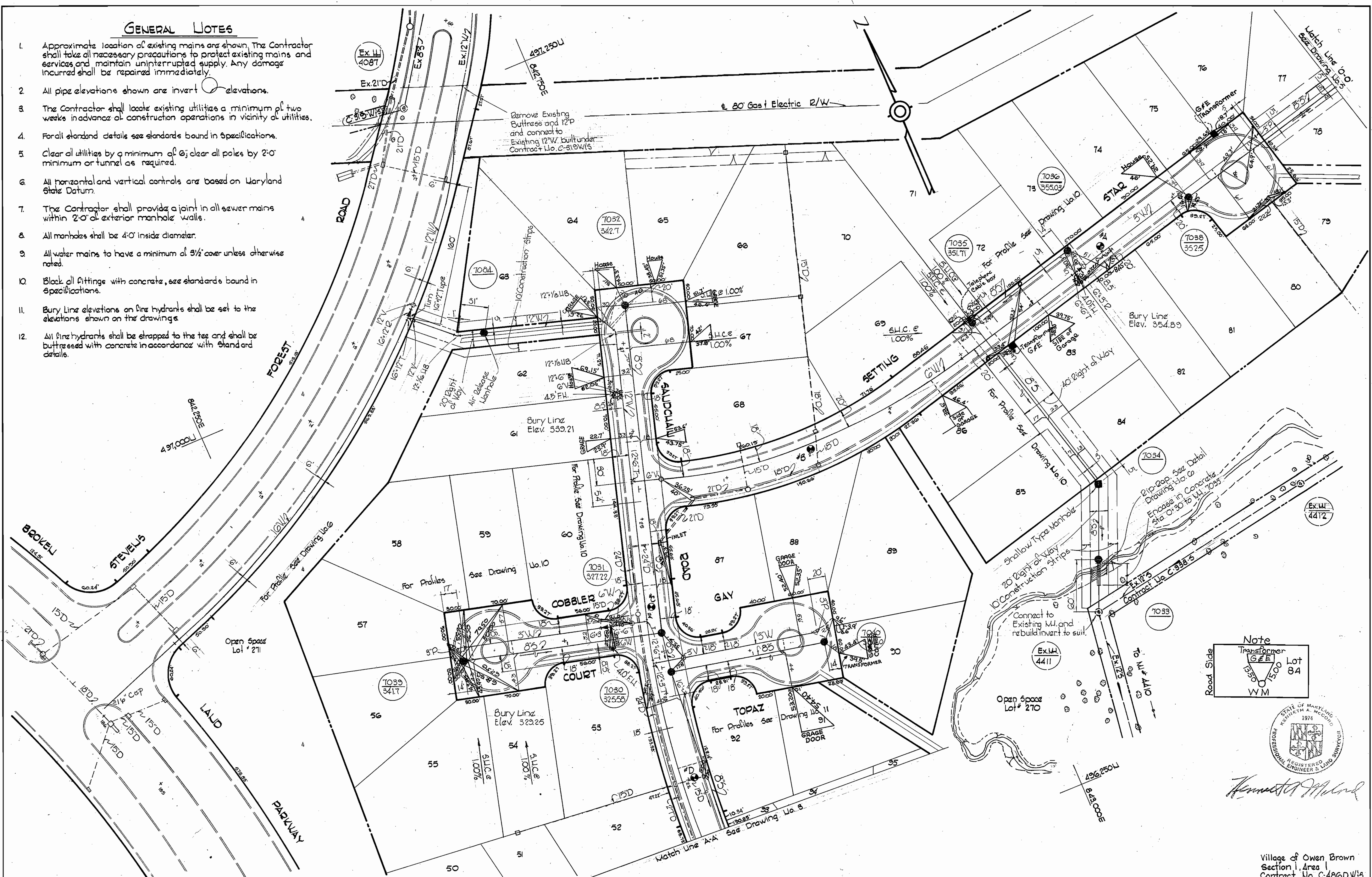
Village of Owen Brown
 Section I - Area I
 Contract No. C 486 D W/S

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE 8-21-72 W. O. Filbert CHIEF - BUREAU OF WATER AND SEWER	CONTRACT NO. C486D-W&S	LOCATION MAP OF WATER & SEWER MAIN EXTENSIONS	COLUMBIA VILLAGE OF OWEN BROWN ELECTION DISTRICT GUILFORD No. 6	DRAWING NO. 1 OF 14	SCALE 1"=800'
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WS 486 W&S/1

GENERAL NOTES

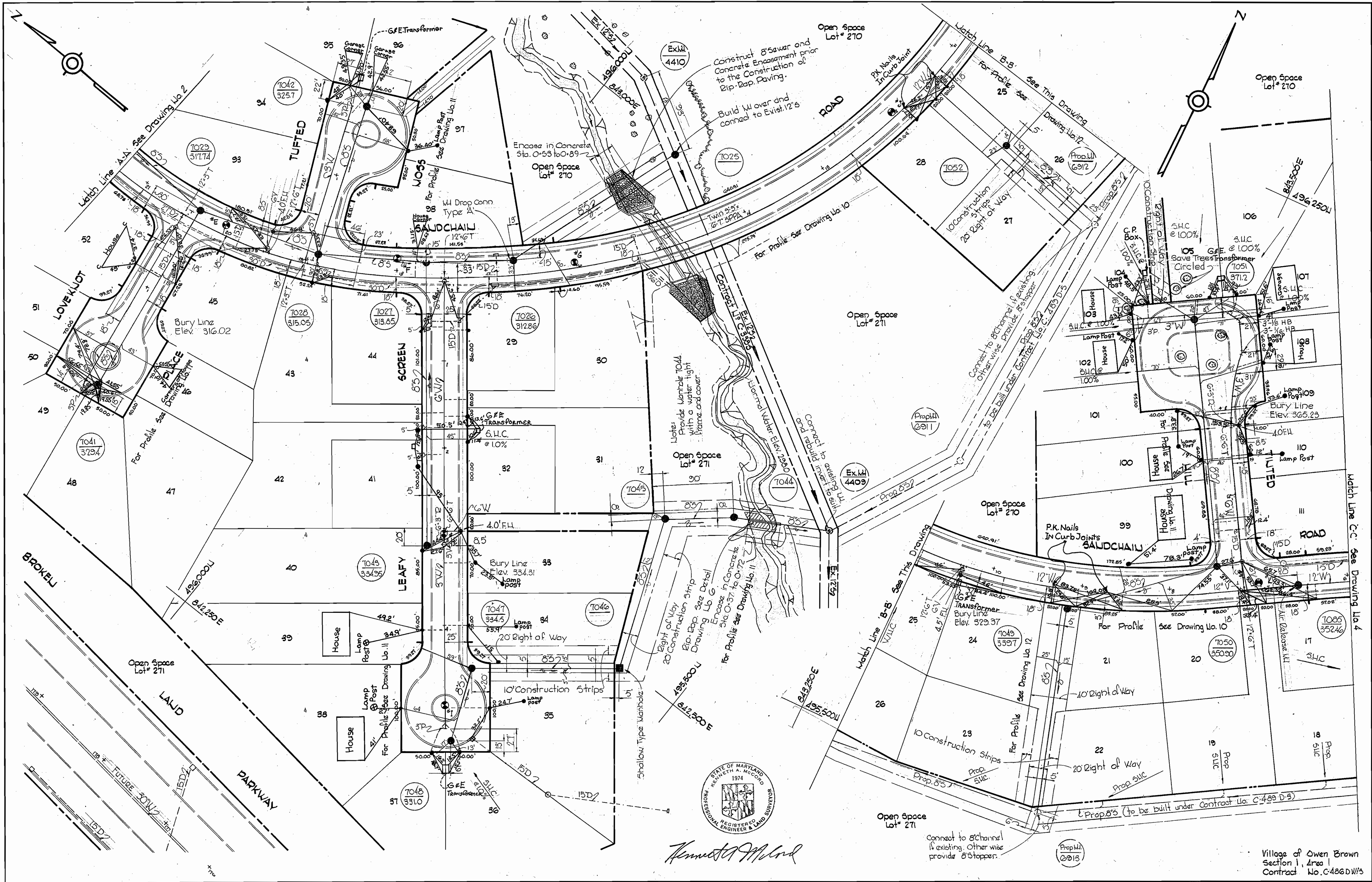
1. Approximate location of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately.
2. All pipe elevations shown are invert elevations.
3. The Contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in vicinity of utilities.
4. For all standard details see standards bound in specifications.
5. Clear all utilities by a minimum of 6'; clear all poles by 2'-0" minimum or tunnel as required.
6. All horizontal and vertical controls are based on Maryland State Datum.
7. The Contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole walls.
8. All manholes shall be 4'-0" inside diameter.
9. All water mains to have a minimum of 3 1/2' cover unless otherwise noted.
10. Block all fittings with concrete, see standards bound in specifications.
11. Bury Line elevations on fire hydrants shall be set to the elevations shown on the drawings.
12. All fire hydrants shall be strapped to the tee and shall be buttressed with concrete in accordance with standard details.



Village of Owen Brown
Section 1, Area 1
Contract No. C-486DW/5

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 8-21-72 W. O. Falbert CHIEF - BUREAU OF WATER AND SEWER	CONTRACT NO. C-486DW/5	PLAN OF WATER & SEWER MAINS	COLUMBIA VILLAGE OF OWEN BROWN ELECTION DISTRICT GUILFORD NO. 6	DRAWING NO. 2 OF 14	SCALE 1" = 50'
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WS 486 W4S/2



Kenneth A. McLeod

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 8-21-72 DATE <i>W. O. Calbert</i> CHIEF - BUREAU OF WATER AND SEWER	CONTRACT NO. C-486DW/3	PLAN OF WATER & SEWER MAINS	COLUMBIA VILLAGE OF OWEN BROWN ELECTION DISTRICT GUILFORD NO. 6	DRAWING NO. 3 OF 14 SCALE 1" = 50' AUGUST 18, 1972
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W. O. 6595-2

AS-BUILT

AUGUST 18, 1972

WS 486 W&S/3

BRUNING 44-510 14778



Kenneth A. McCord

Village of Owen Brown
Section 1, Area 1
Contract No. C-486 D W15

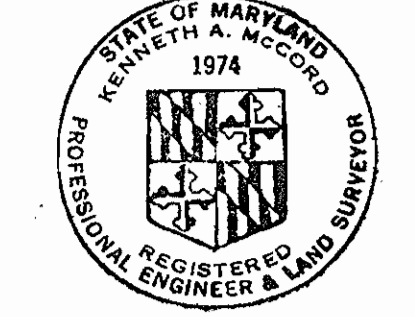
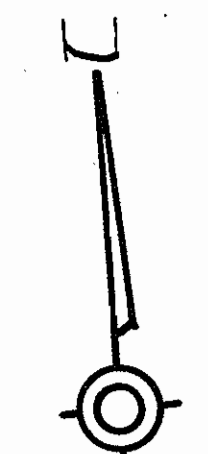
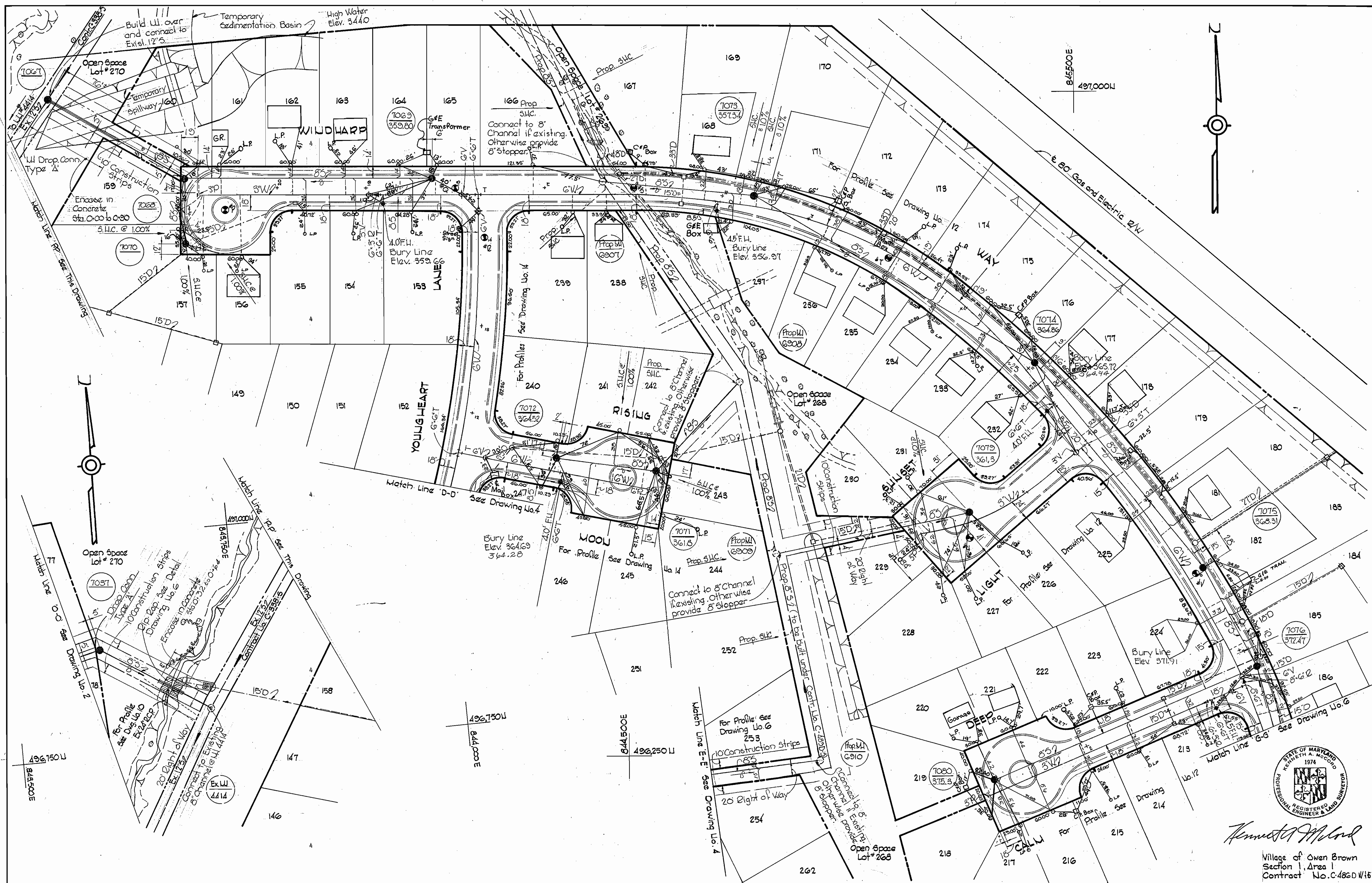
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W. O. 6595-2

AUGUST 18, 1972

WS 486 W&S/H

BRUNING 44,510 14178



Kenneth A. McCord
 Village of Owen Brown
 Section 1, Area 1
 Contract No. C-486D W15

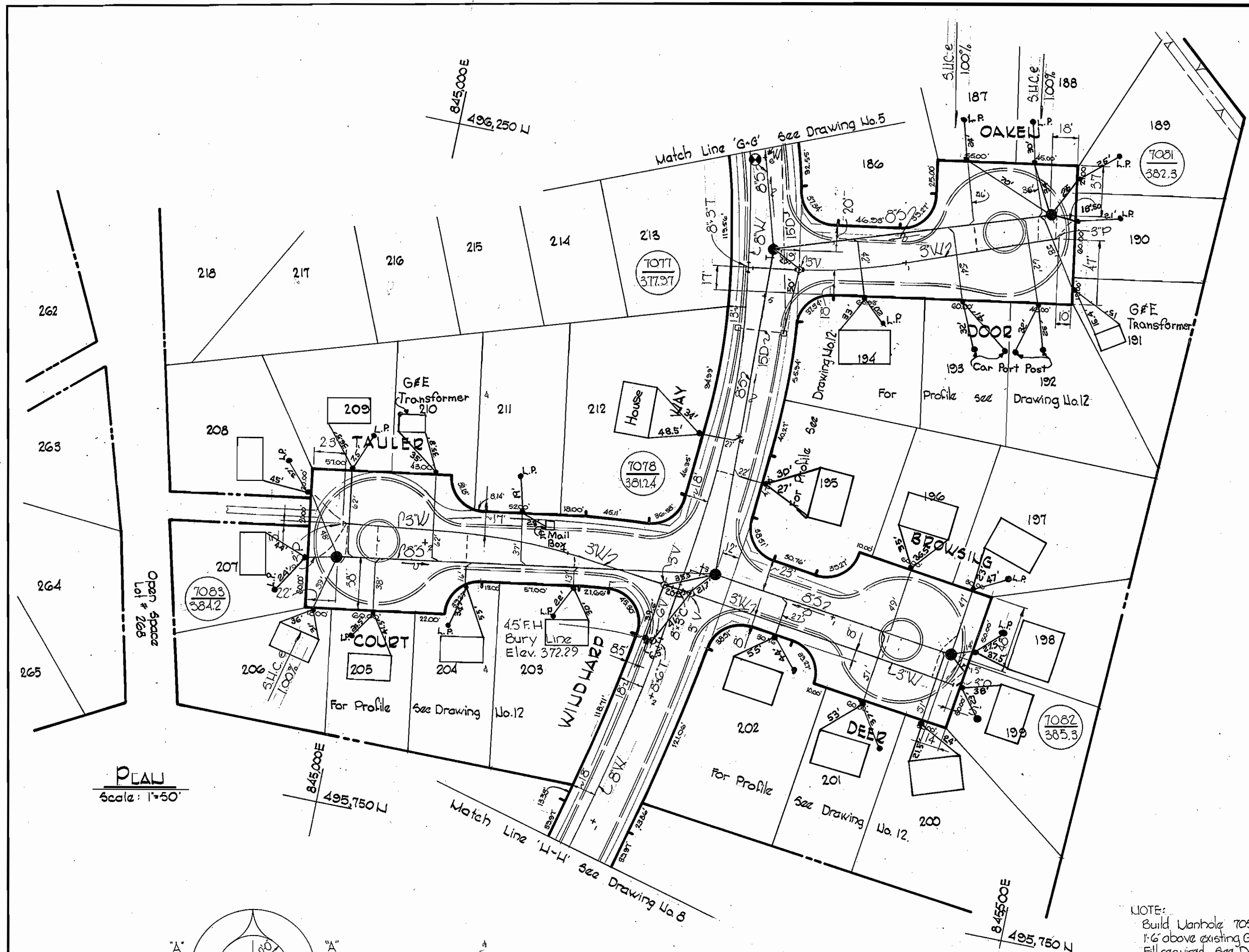
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W. O. 6595-2

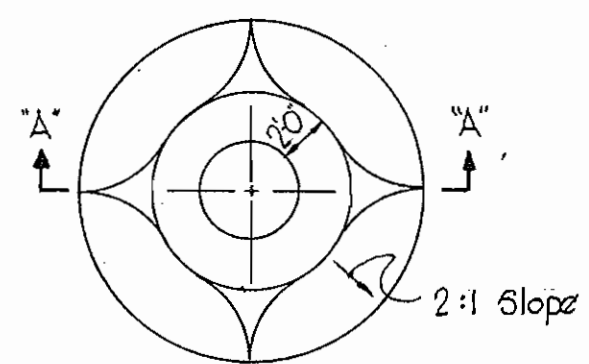
AUGUST 13, 1972

WS 486 W8S/5

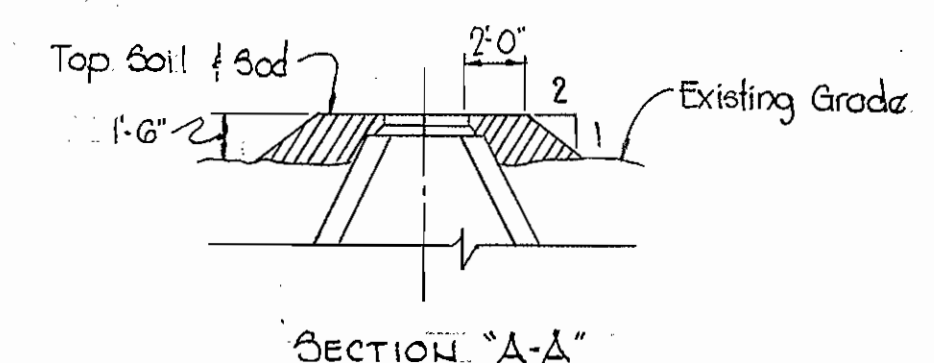
BRUNING 44,510 14726



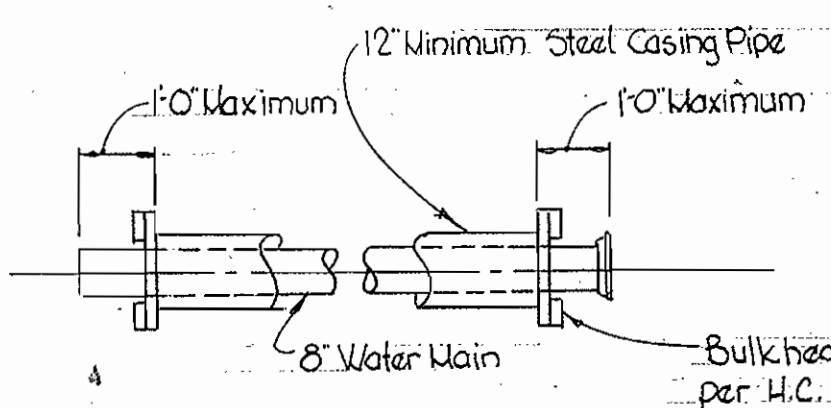
PLAN
Scale: 1"=50'



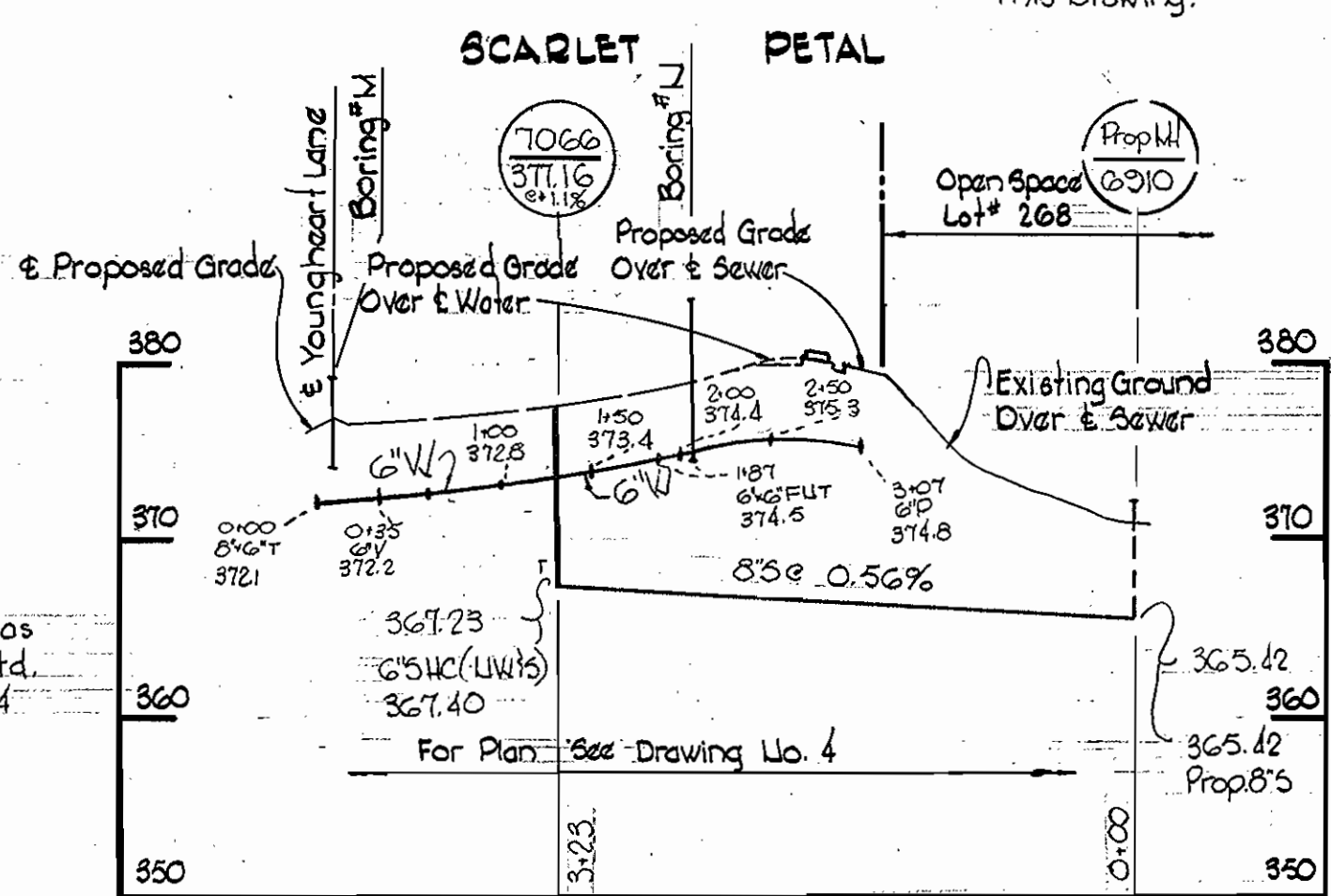
PLAN



SECTION "A-A"
FILL AT MANHOLE NOS
1025, 1033, 1037, 1044, 1058 & 1067
No Scale

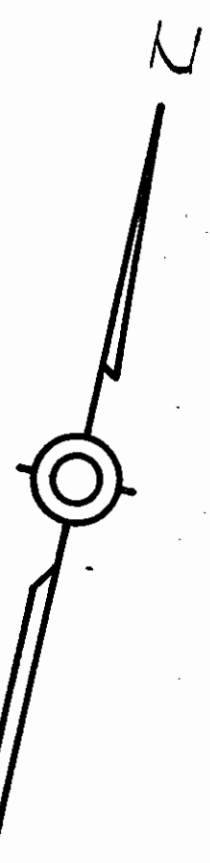


SLEEVE DETAIL
Scale: 1"=3/8"

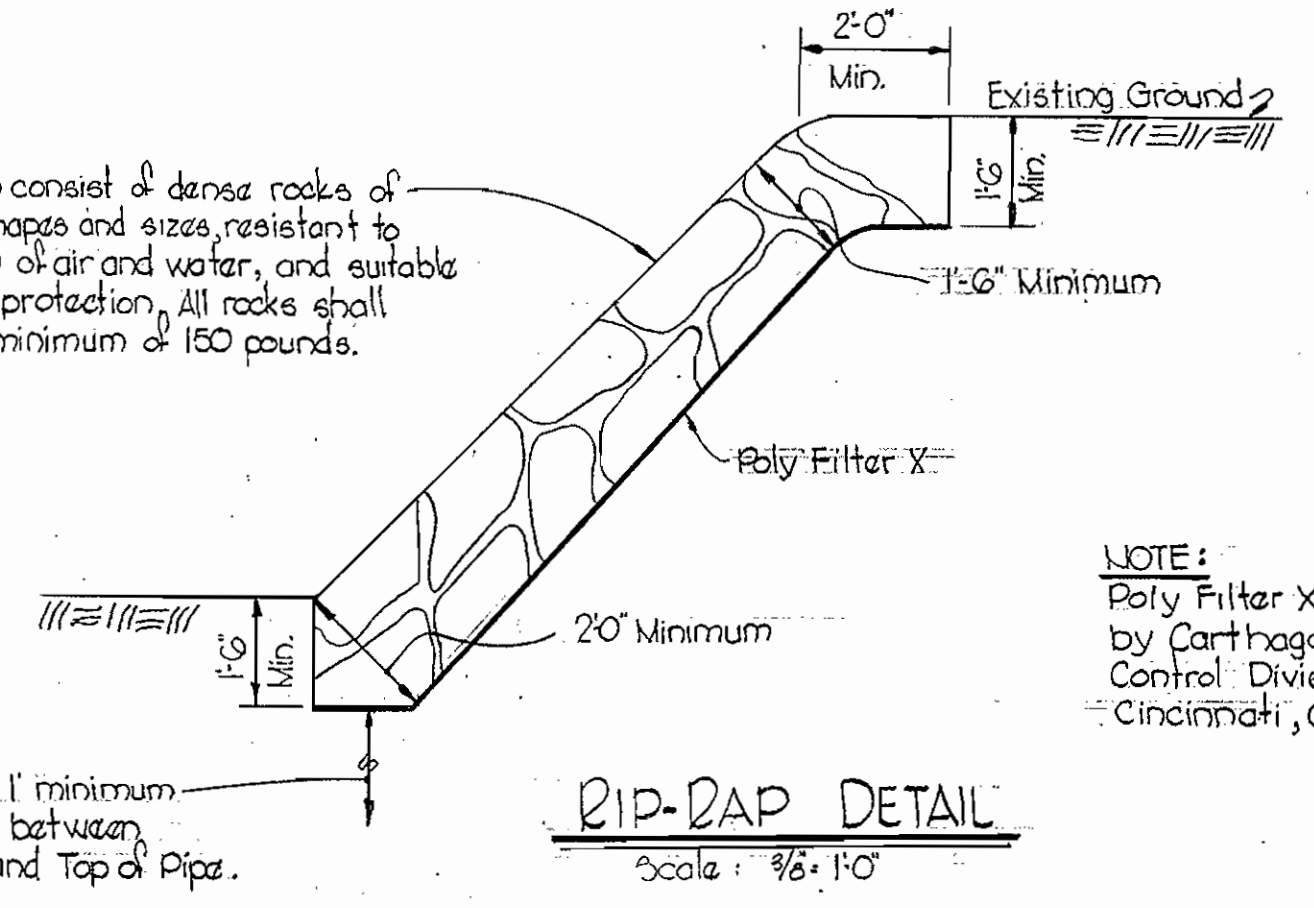


NOTE:
Build Manhole 1058
1'-6" above existing Ground
Fill required. See Detail
This Drawing.

PROFILES
Scale: H: 1"=100'
V: 1"=10'

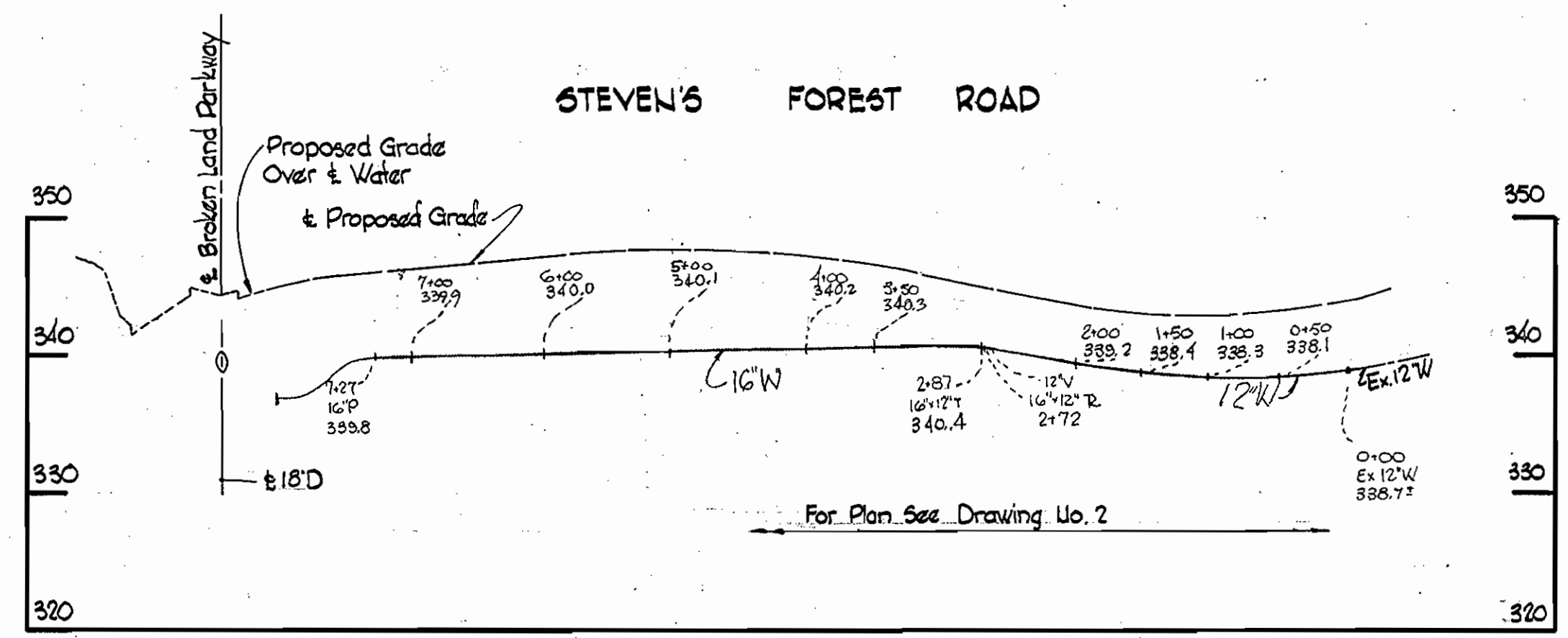


Rip-Rap to consist of dense rocks of random shapes and sizes, resistant to the action of air and water, and suitable for bank protection. All rocks shall weigh a minimum of 150 pounds.

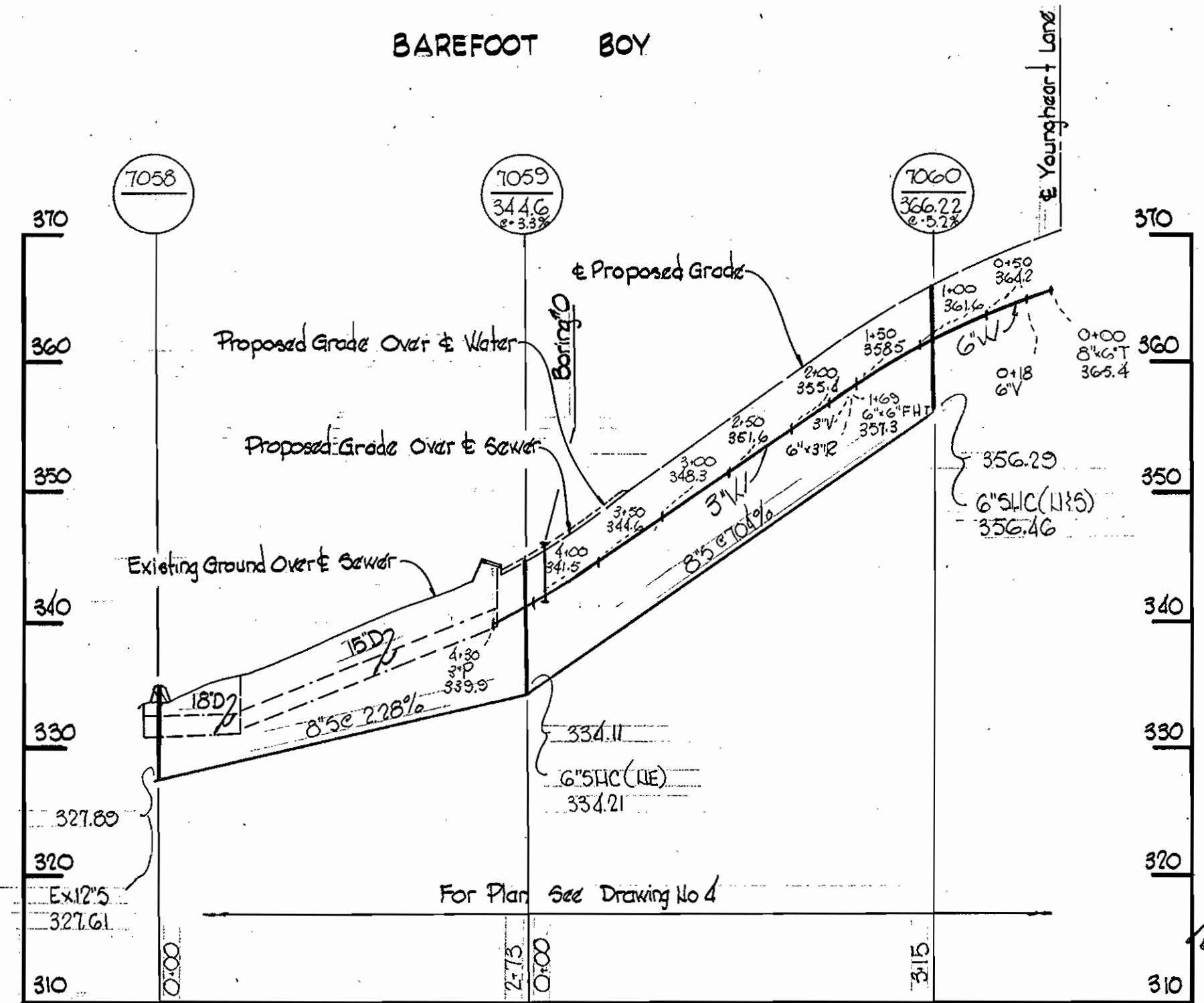


RIP-RAP DETAIL
Scale: 3/8"=1'-0"

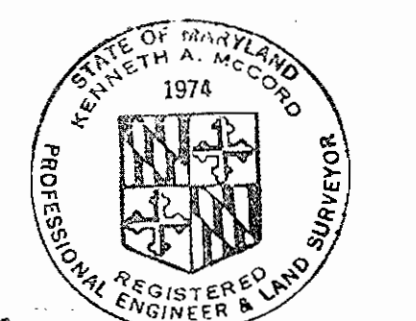
NOTE:
Poly Filter X shall as manufactured by Carthage Mills Inc. Erosion Control Division, 124 W. 60th Street, Cincinnati, Ohio, or approved equal.



STEVEN'S FOREST ROAD



BAREFOOT BOY



Kenneth A. McLeod

Village of Owen Brown
Section 1, Area 1
Contract No. C-486D-W/S

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 8-21-72 DATE W. O. Fullert CHIEF - BUREAU OF WATER AND SEWER	CONTRACT NO. C-486D-W/S	PLAN, PROFILES AND DETAILS OF WATER AND SEWER MAINS	COLUMBIA VILLAGE OF OWEN BROWN ELECTION DISTRICT GUILFORD NO. 6	DRAWING NO. 6 OF 14 SCALE AS SHOWN
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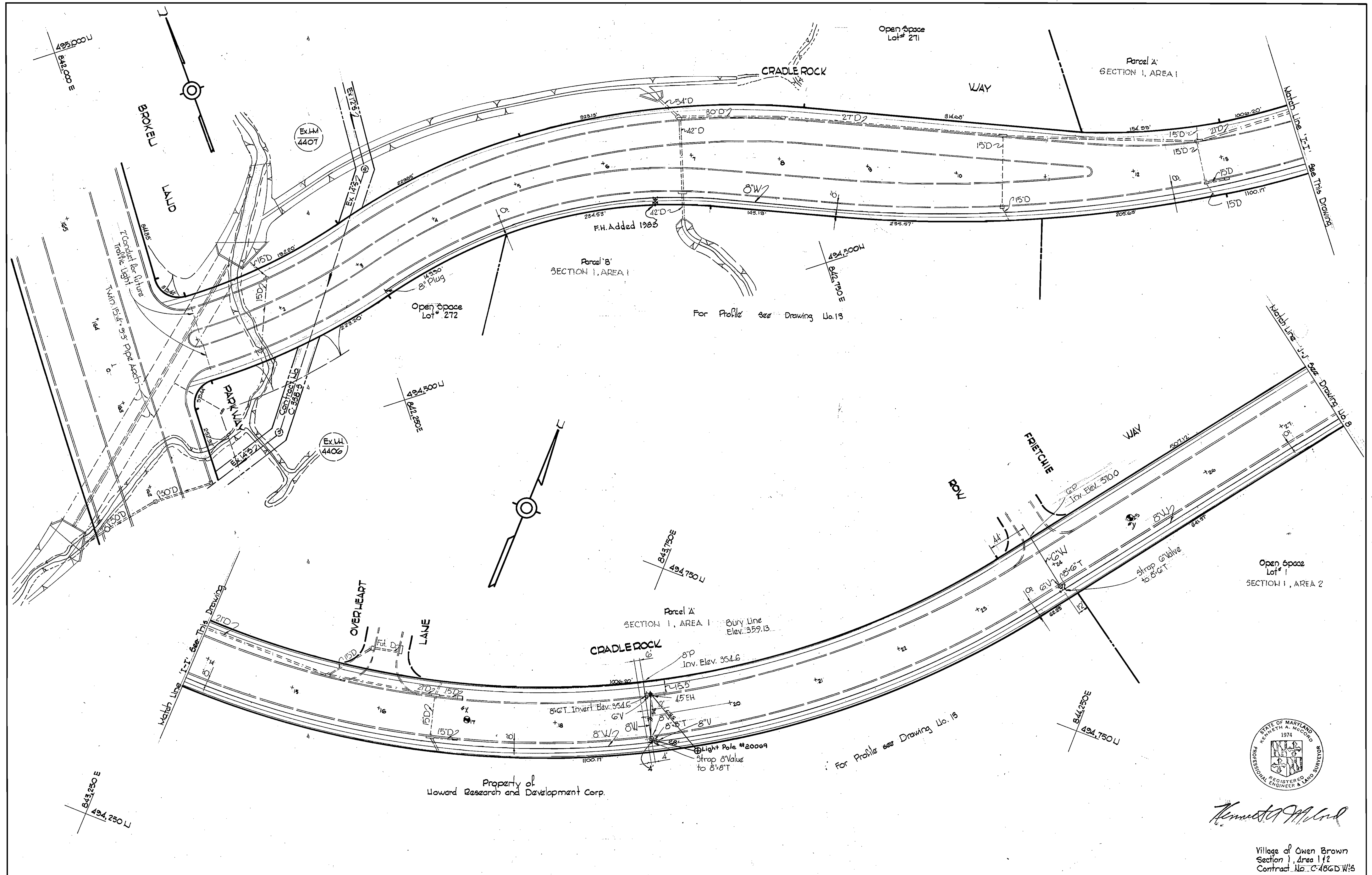
W. O. 6595-2

AS-BUILT

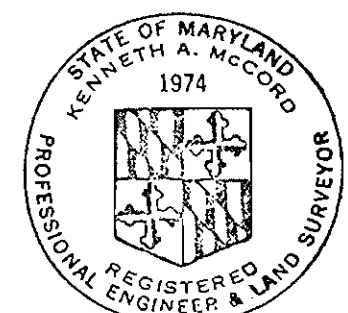
AUGUST 18, 1972

WS 486 wfs/6

REVISION 44-510 14778



Property of
Howard Research and Development Corp.



Kenneth A. McCord

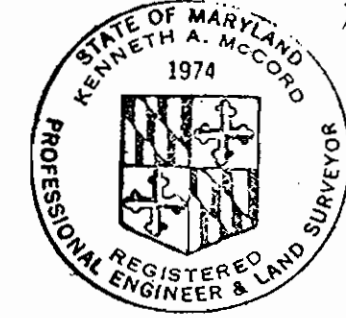
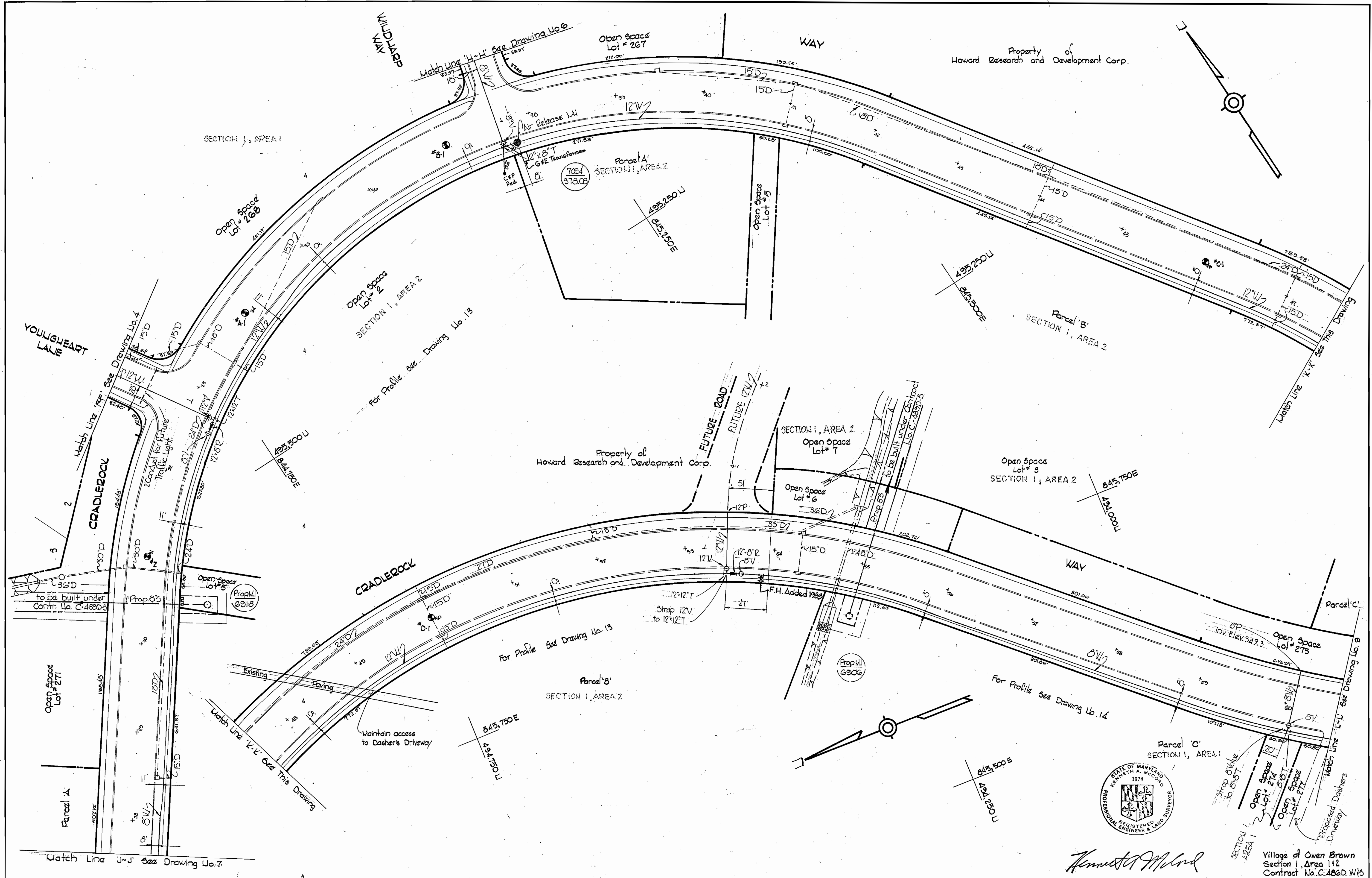
Village of Owen Brown
Section 1, Area 1
Contract No. C-486D W/13

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 8-21-72 DATE <i>W. O. G</i> CHIEF - BUREAU OF WATER AND SEWER	CONTRACT NO. C-486D-WBS	PLAN OF WATER MAINS	COLUMBIA VILLAGE OF OWEN BROWN ELECTION DISTRICT GUILFORD NO. 6	DRAWING NO. 7 OF 14 SCALE 1" = 50' F.H. Added 1982 AS-BUILT AUGUST 13, 1972
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W. O. G 6595-2

WS 486 W45/7

BRUNING 44,510 14778



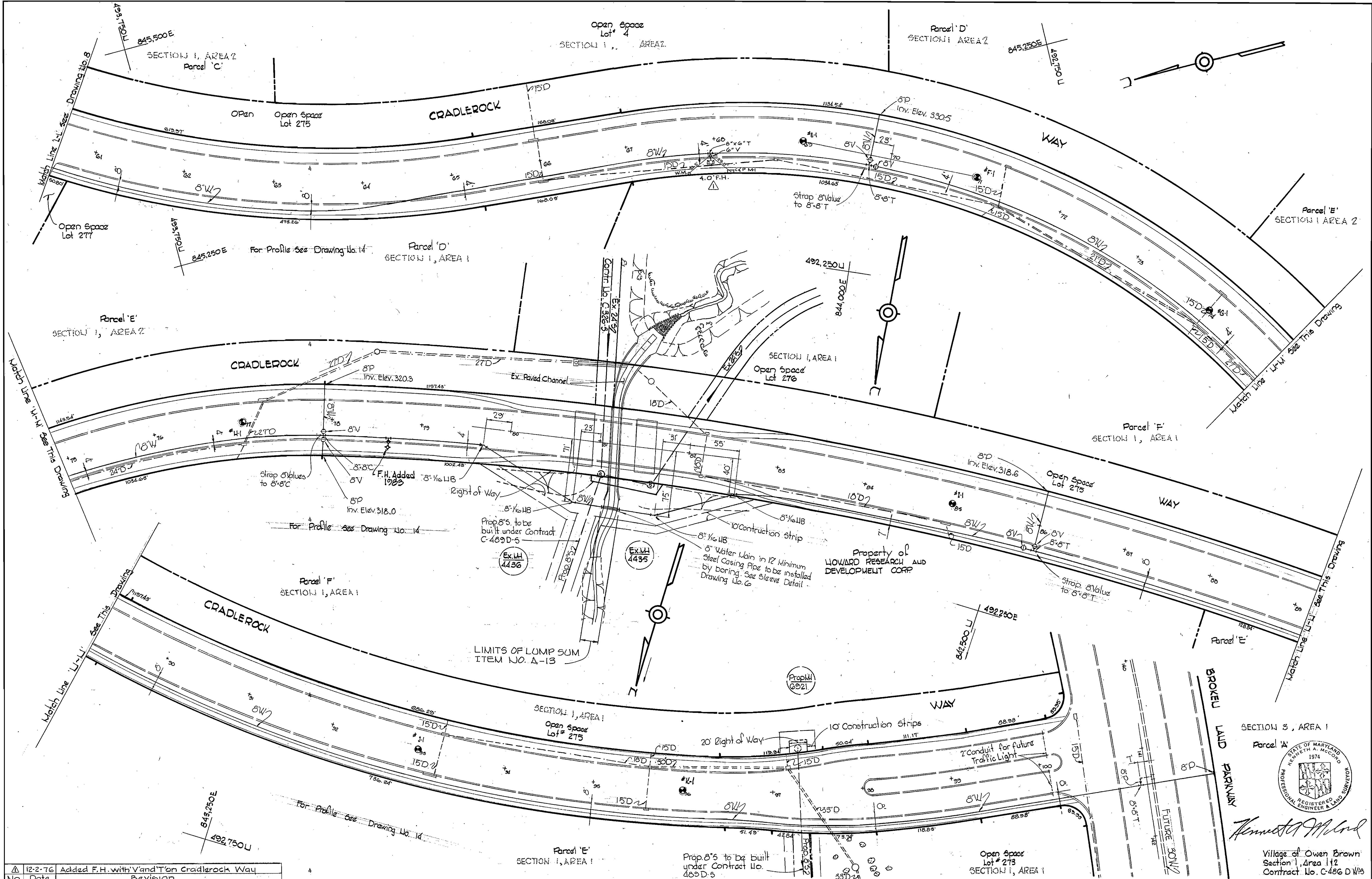
Herbert M. ...

Village of Owen Brown
Section I, Area 112
Contract No. C-486D W8

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 8-21-72 DATE <i>W. O. ...</i> CHIEF - BUREAU OF WATER AND SEWER	CONTRACT NO. C-486D W8S	PLAN OF WATER MAINS	COLUMBIA VILLAGE OF OWEN BROWN ELECTION DISTRICT GUILFORD NO. 6	DRAWING NO. 8 OF 14	SCALE 1" = 50'
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WS 486 W8S/8

BRUNING 44-510 14778



12-2-76	Added F.H. with 'V' and 'T' on Cradlerock Way
No	Date
	Revision

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 1304 ST. PAUL ST.
 BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 8-21-72
 DATE

CONTRACT NO. C-486-D-W8S

PLAN OF WATER MAINS

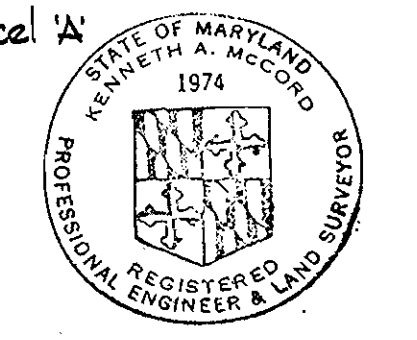
COLUMBIA VILLAGE OF OWEN BROWN ELECTION DISTRICT GULFORD NO. 6

DRAWING NO. 9 OF 14 **SCALE 1" = 50'**

W.O. 6595-2

F.H. Added 1985 AS-BUILT

AUGUST 18, 1972

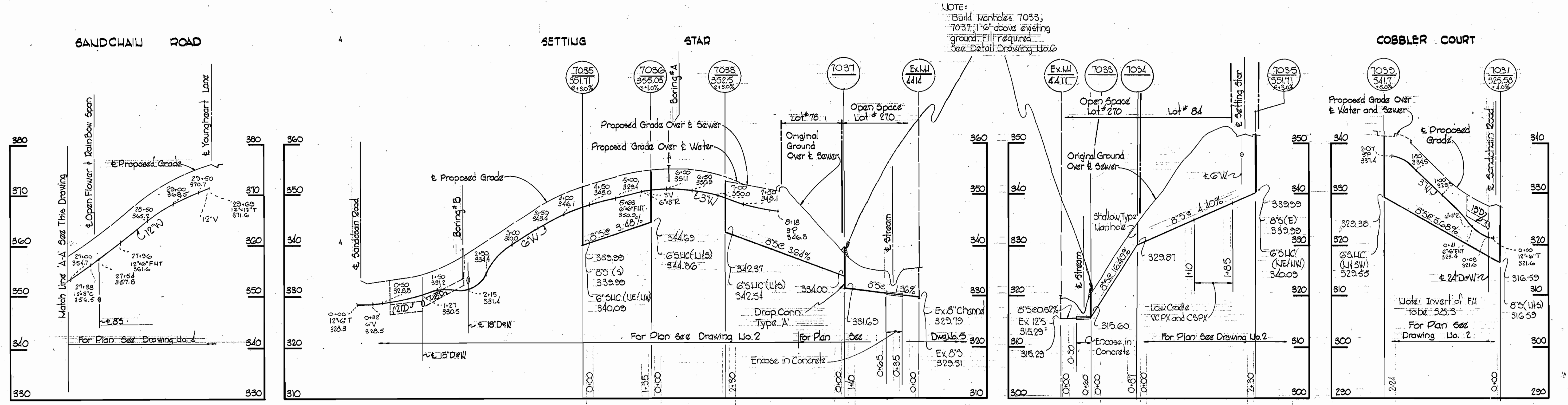
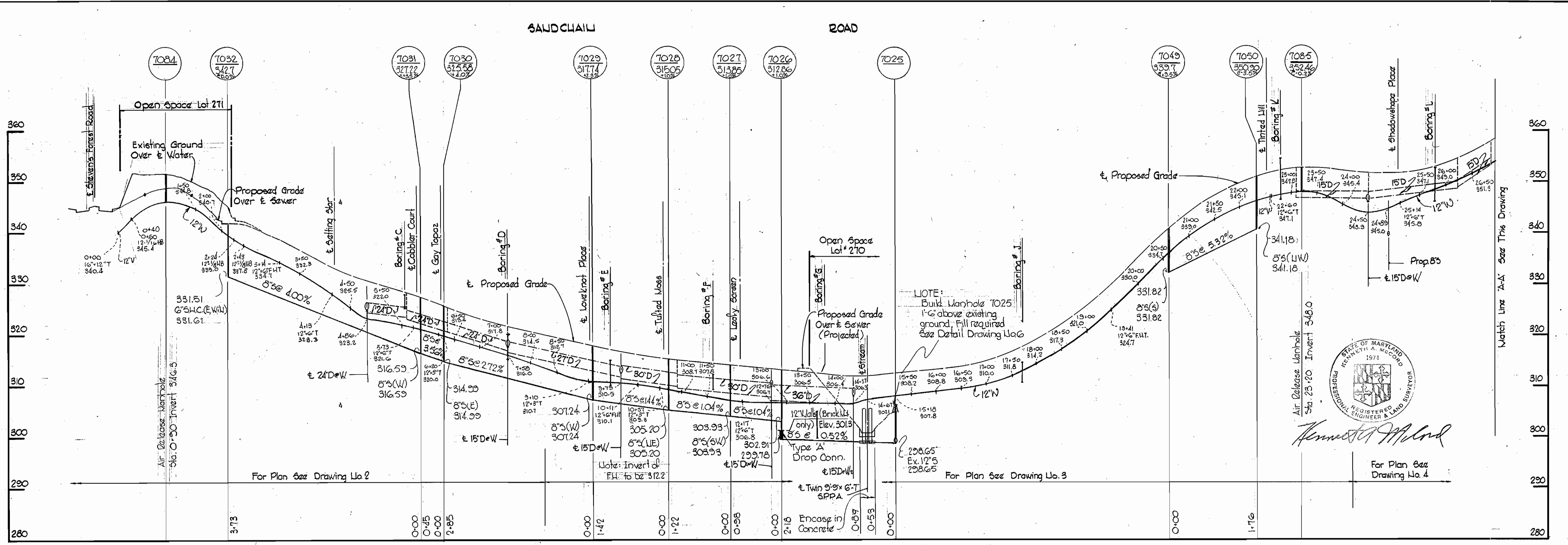


Kenneth A. McLeod

Village of Owen Brown
 Section 1, Area 1
 Contract No. C-486-D-W8

WS 486 W&S/9

BRUNING 44,510, 14778

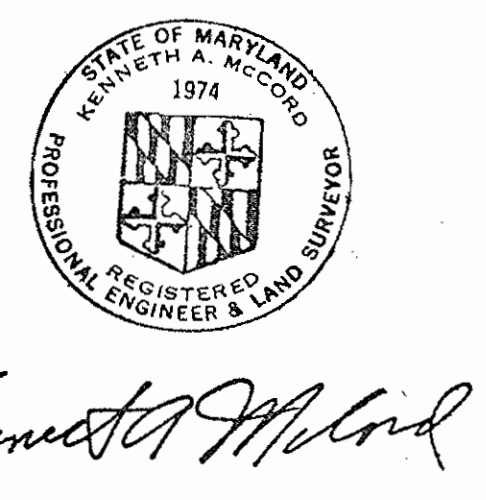
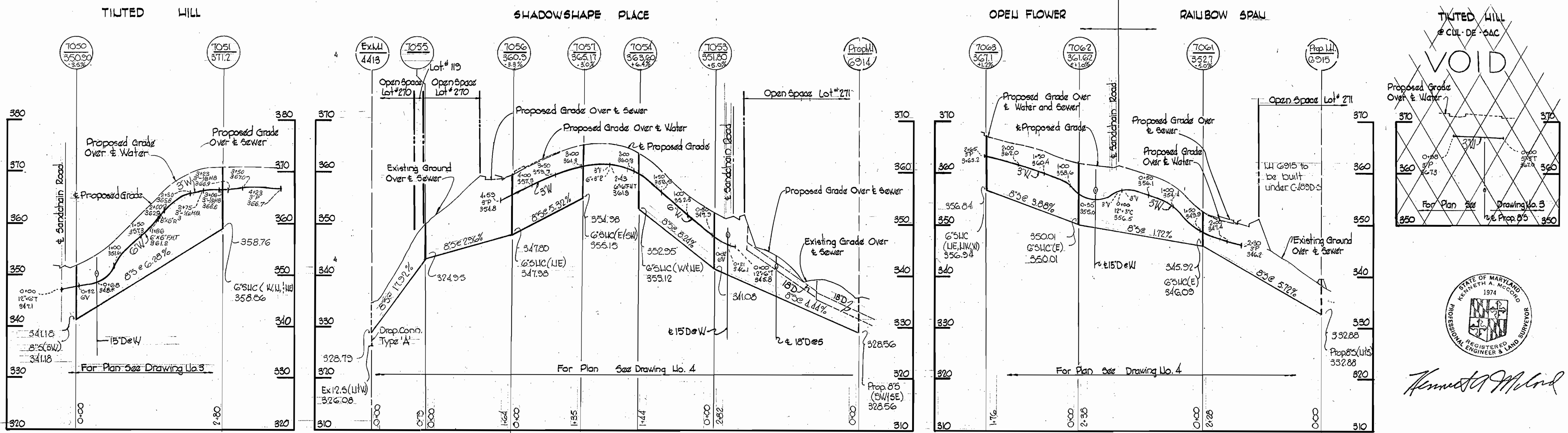
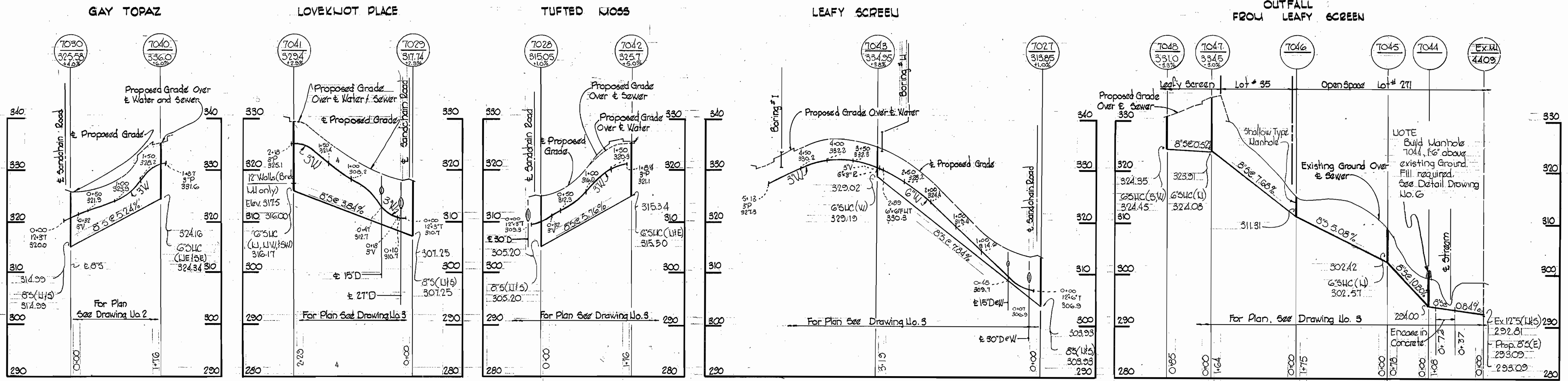


WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 8-21-72 <i>W. O. Fulbert</i> CHIEF - BUREAU OF WATER AND SEWER	CONTRACT NO. C-486D-WBS	PROFILES OF WATER & SEWER MAINS	COLUMBIA VILLAGE OF OWEN BROWN ELECTION DISTRICT GUILFORD NO. 6	DRAWING NO. 10 OF 14	SCALE H: 1" = 100' V: 1" = 10'
					Village of Owen Brown Section 1, Area 1 Contract No. C-486 D-W/15	

W. O. 6555? AS-BUILT AUGUST 18, 1972

WS 486 W & S/10

BRUNING 44-510 1477B



Village of Owen Brown
 Section 1, Area 1
 Contract No. C-486 D-W/5

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 8-21-72 W. O. Falbert CHIEF - BUREAU OF WATER AND SEWER	CONTRACT NO. C-486 D-W/5	PROFILES OF WATER & SEWER MAINS	COLUMBIA VILLAGE OF OWEN BROWN ELECTION DISTRICT GUILFORD NO. 6	DRAWING NO. 11	SCALE H=1"=100' V=1"=10'
					OF 14	

W. O. 65952

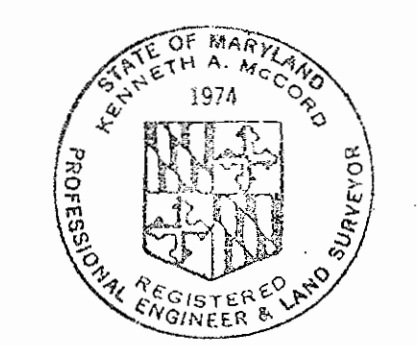
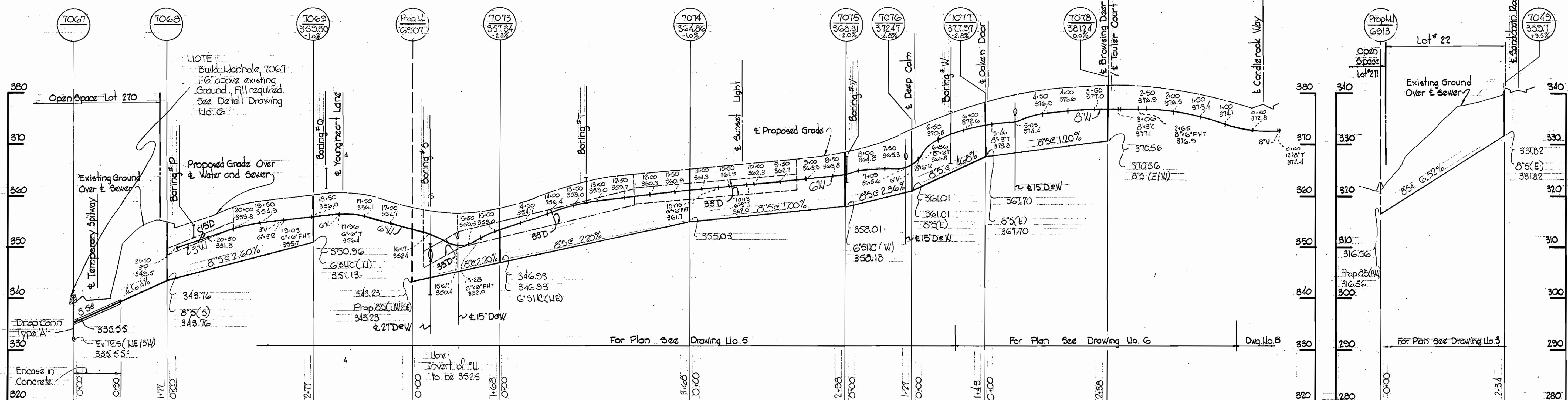
AS-BUILT

AUGUST 18, 1972

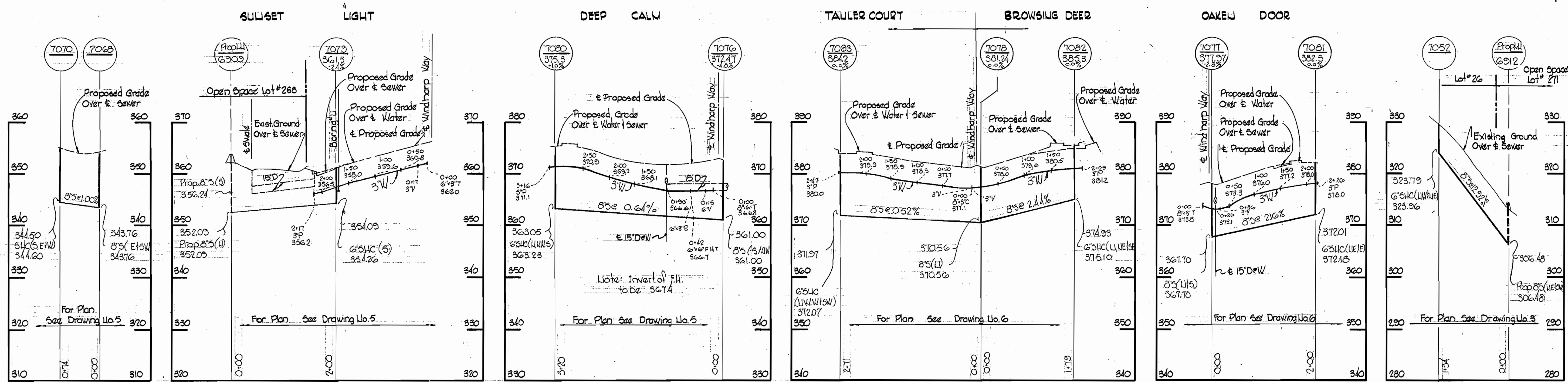
WS 486 - W&S//

REVISION 44-510 14776

WINDHARD WAY



Kenneth A. McLeod



WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
1304 ST. PAUL ST.
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
8-21-72
W. O. Falbert
CHIEF - BUREAU OF WATER AND SEWER

CONTRACT NO. 486D-W8S

PROFILES OF
WATER & SEWER MAINS

COLUMBIA
VILLAGE OF OWEN BROWN
ELECTION DISTRICT GUILFORD NO. 6

DRAWING NO. 12 OF 14
SCALE H: 1"=100'
V: 1"=10'

Village of Owen Brown
Section 1, Area 1
Contract No. C-486D-W15

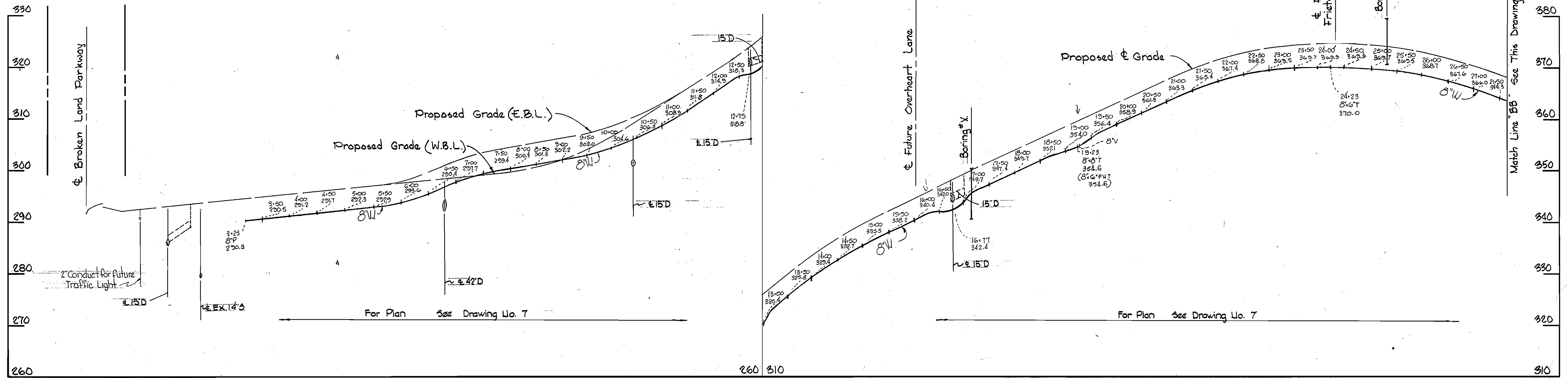
AUGUST 18, 1972

WS 486 - W45/12

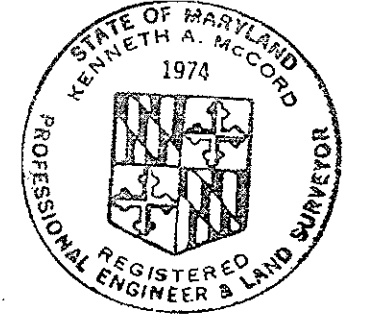
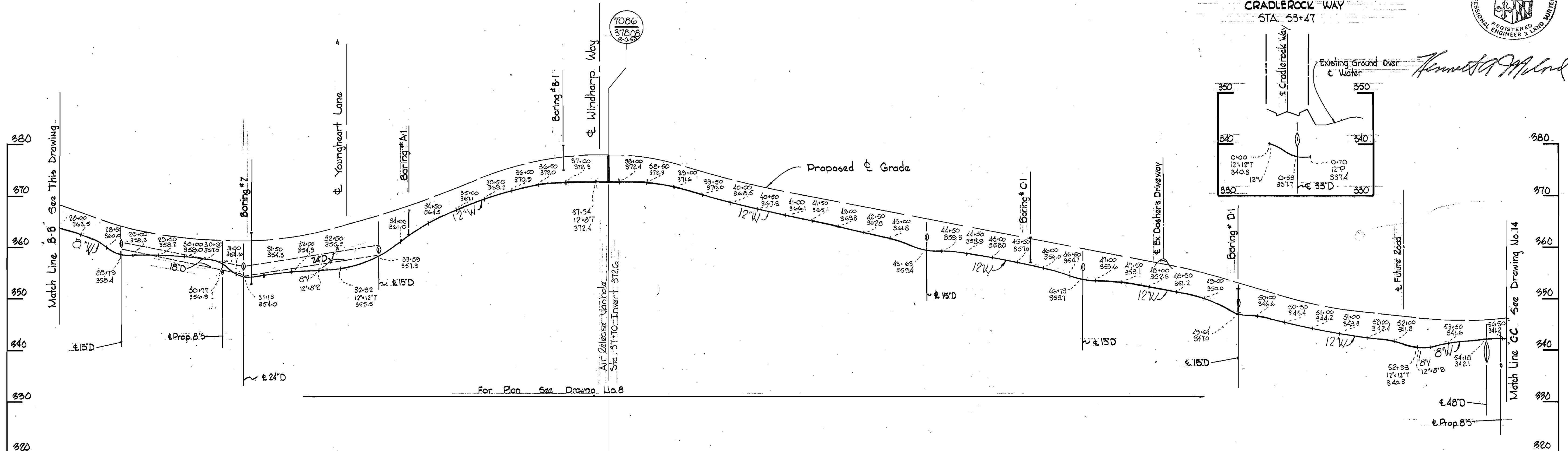
BRUNING 44-510 14778

W. O. 6552

CRADLEROCK WAY



CRADLEROCK WAY



Existing Ground Over & Water
Kenneth A. McCord

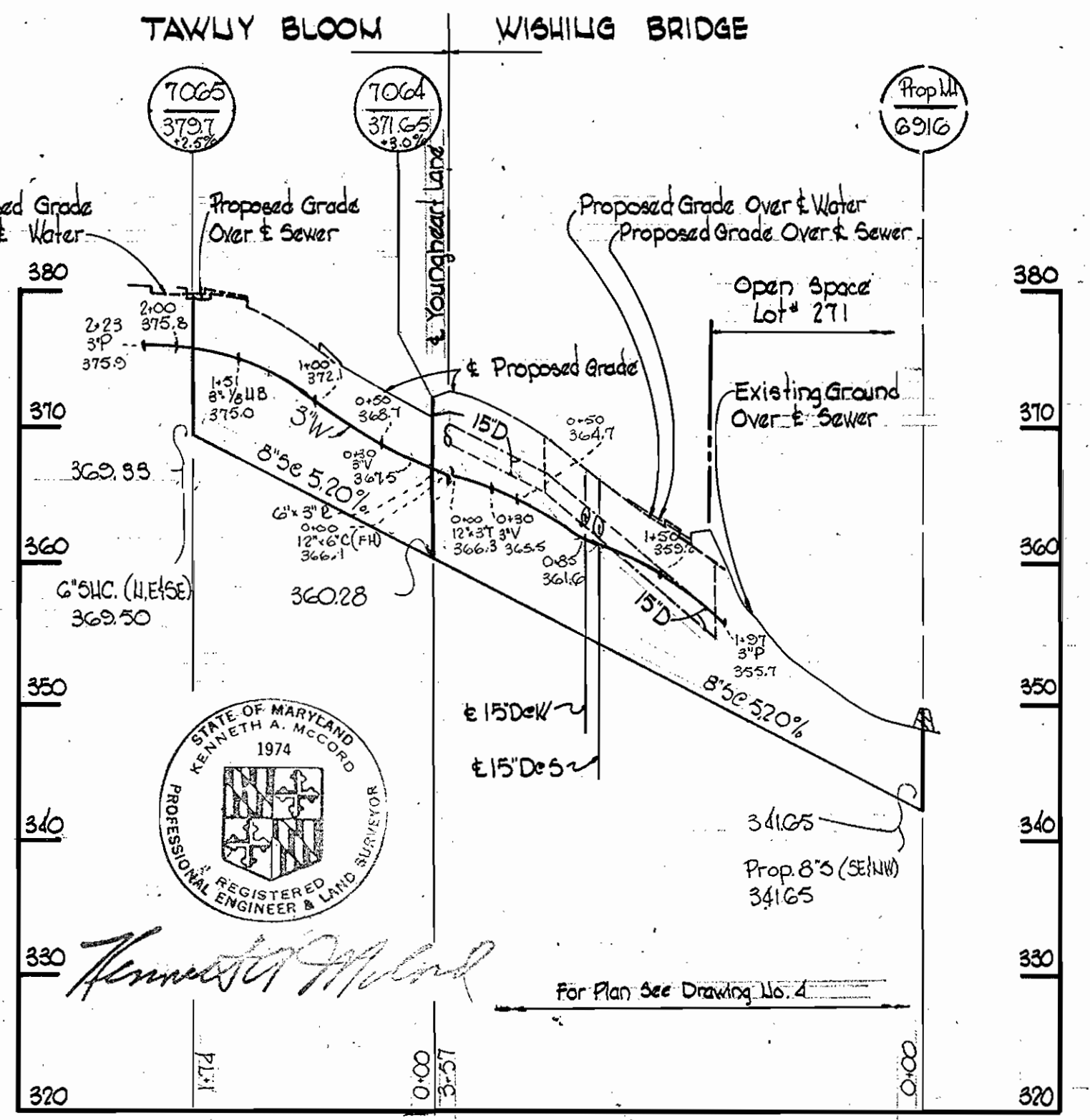
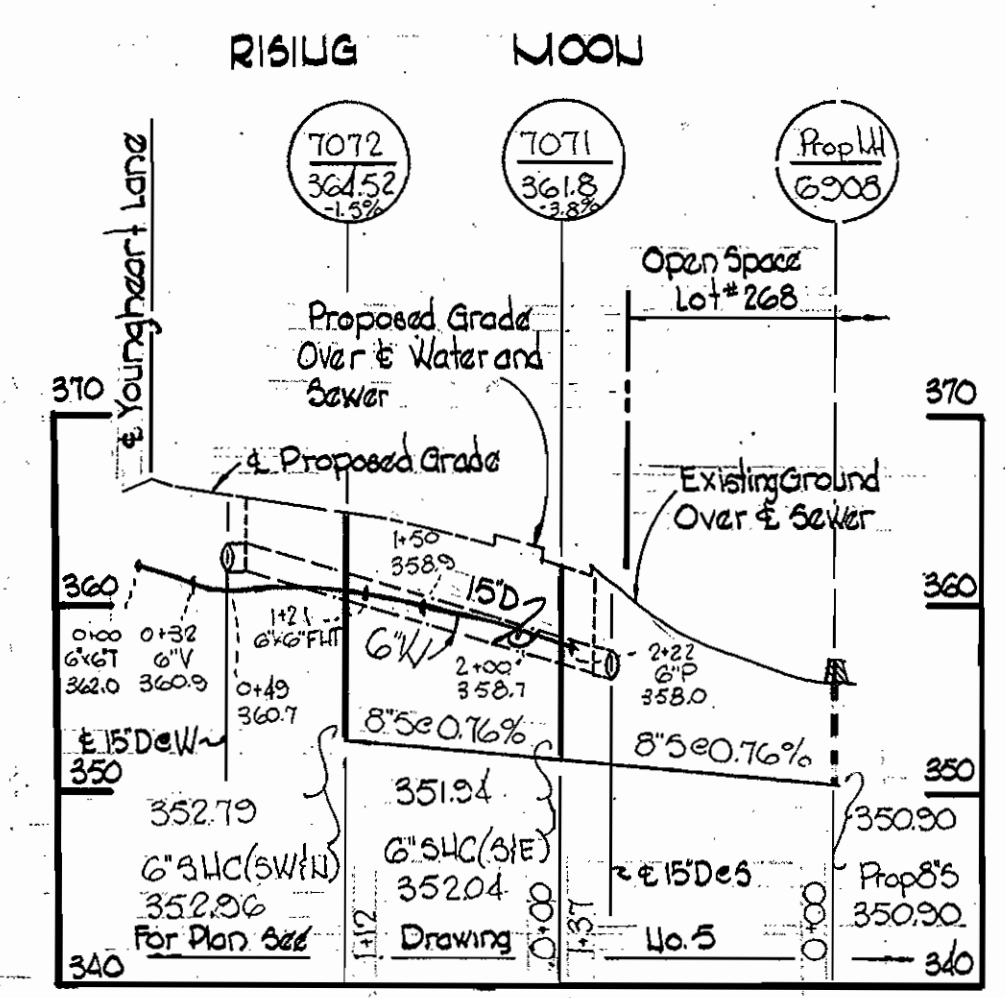
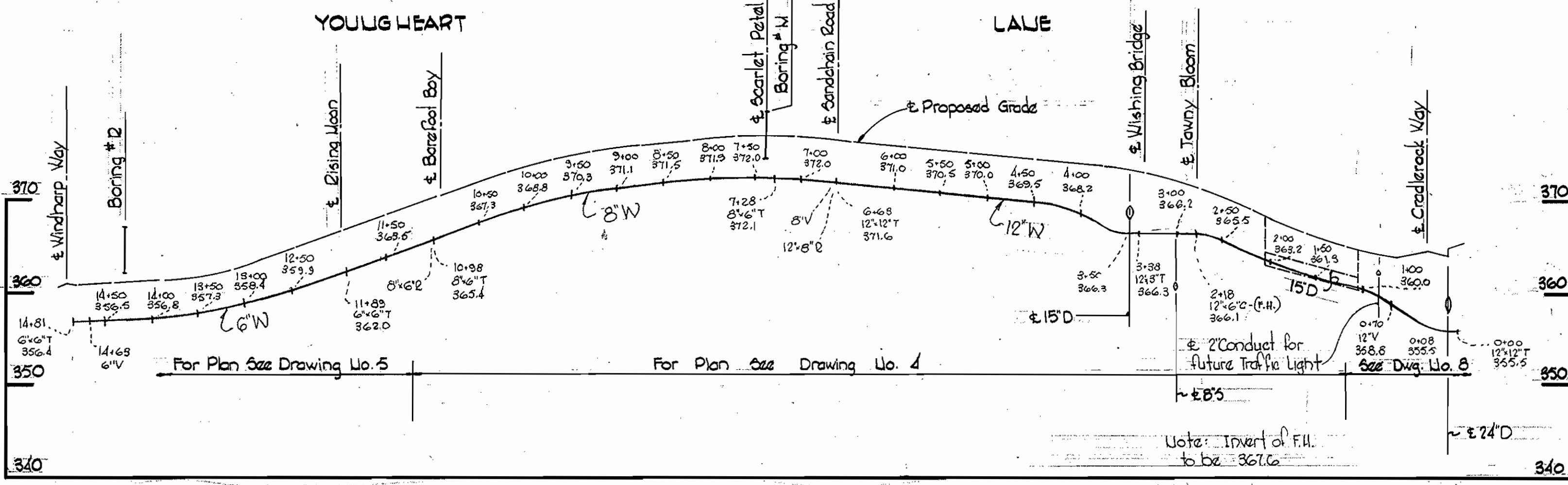
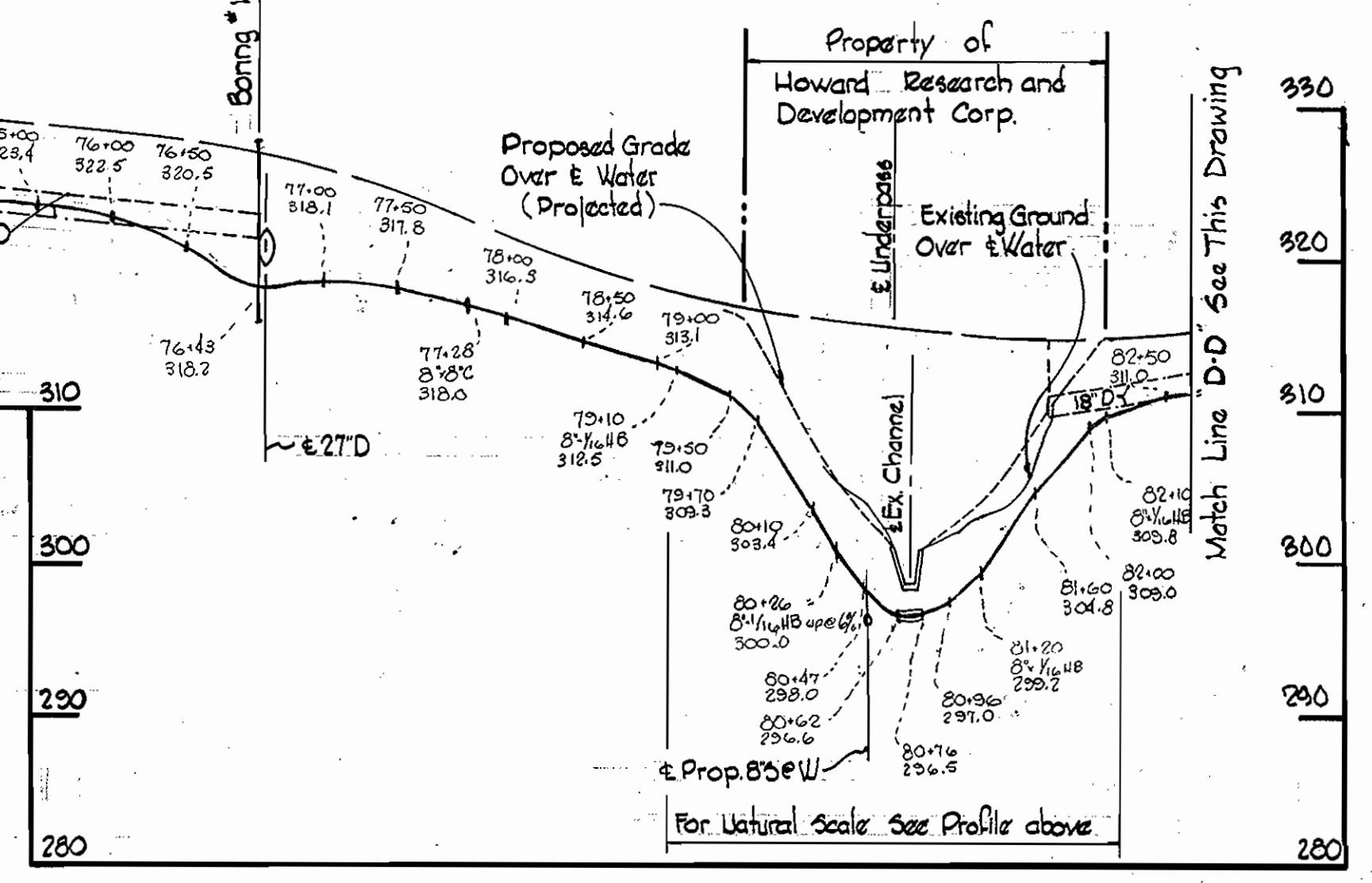
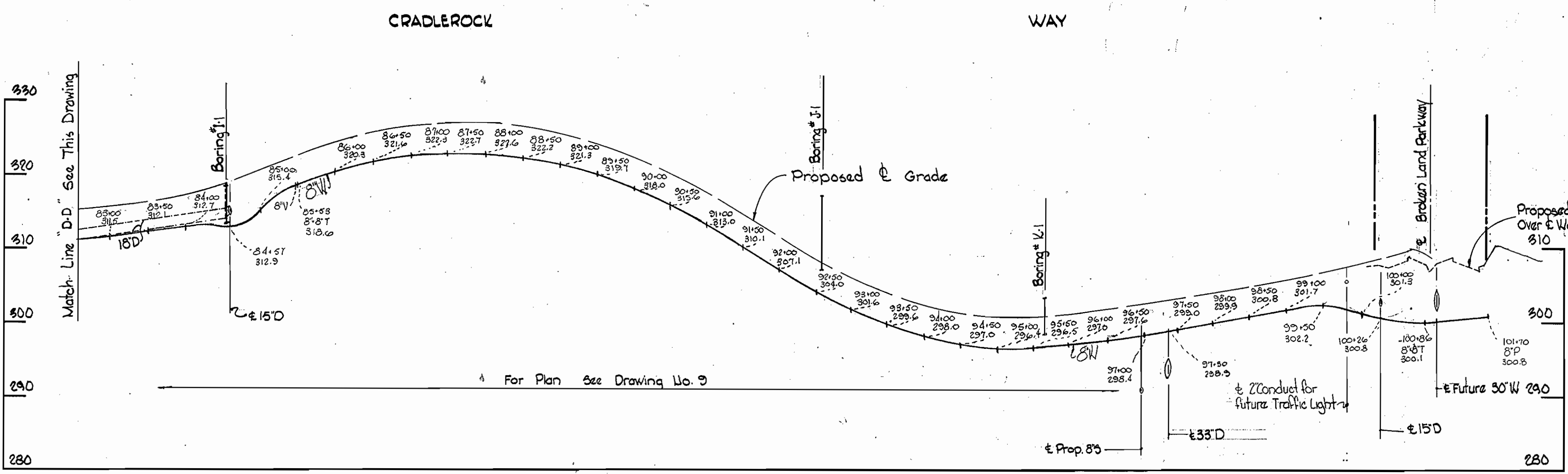
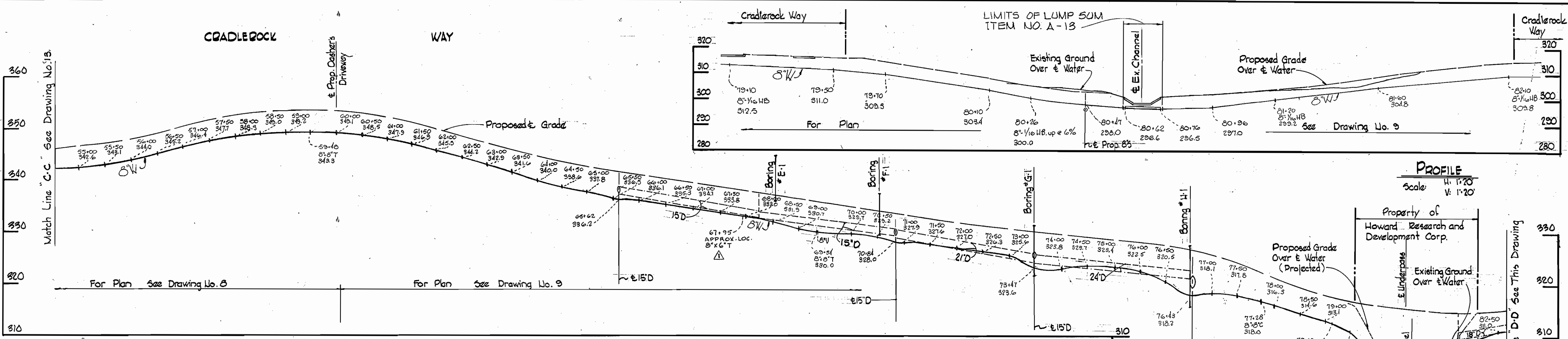
Village of Owen Brown
 Section 1, Area 112
 Contract No. C-486D W85

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 8-21-72 <i>W. O. Falbert</i> CHIEF - BUREAU OF WATER AND SEWER	CONTRACT NO. C-486D W85	PROFILES OF WATER MAINS	COLUMBIA VILLAGE OF OWEN BROWN ELECTION DISTRICT GUILFORD NO. 6	DRAWING NO. 13 OF 14 SCALE H=1"=100' V=1"=10'
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AUGUST 18, 1972

WS 486 W85/13

BRUNN 44510 14772



12-2-76	Added Approx. Loc. of 8"x6" T-Cradlerock Way
No.	Date
	Revision

WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
1304 ST. PAUL ST.
BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
8-21-72
DATE

W. O. P. Kelly
CHIEF - BUREAU OF WATER AND SEWER

CONTRACT NO. C-486D-W8S

PROFILES OF WATER & SEWER MAINS

COLUMBIA VILLAGE OF OWEN BROWN ELECTION DISTRICT GUILFORD NO. 6

DRAWING NO. 14 OF 14

SCALE H=1"=100' V=1"=10'

Village of Owen Brown
Section 1, Area 1
Contract No. C-486D-W8S

WS 486 W&S/14