

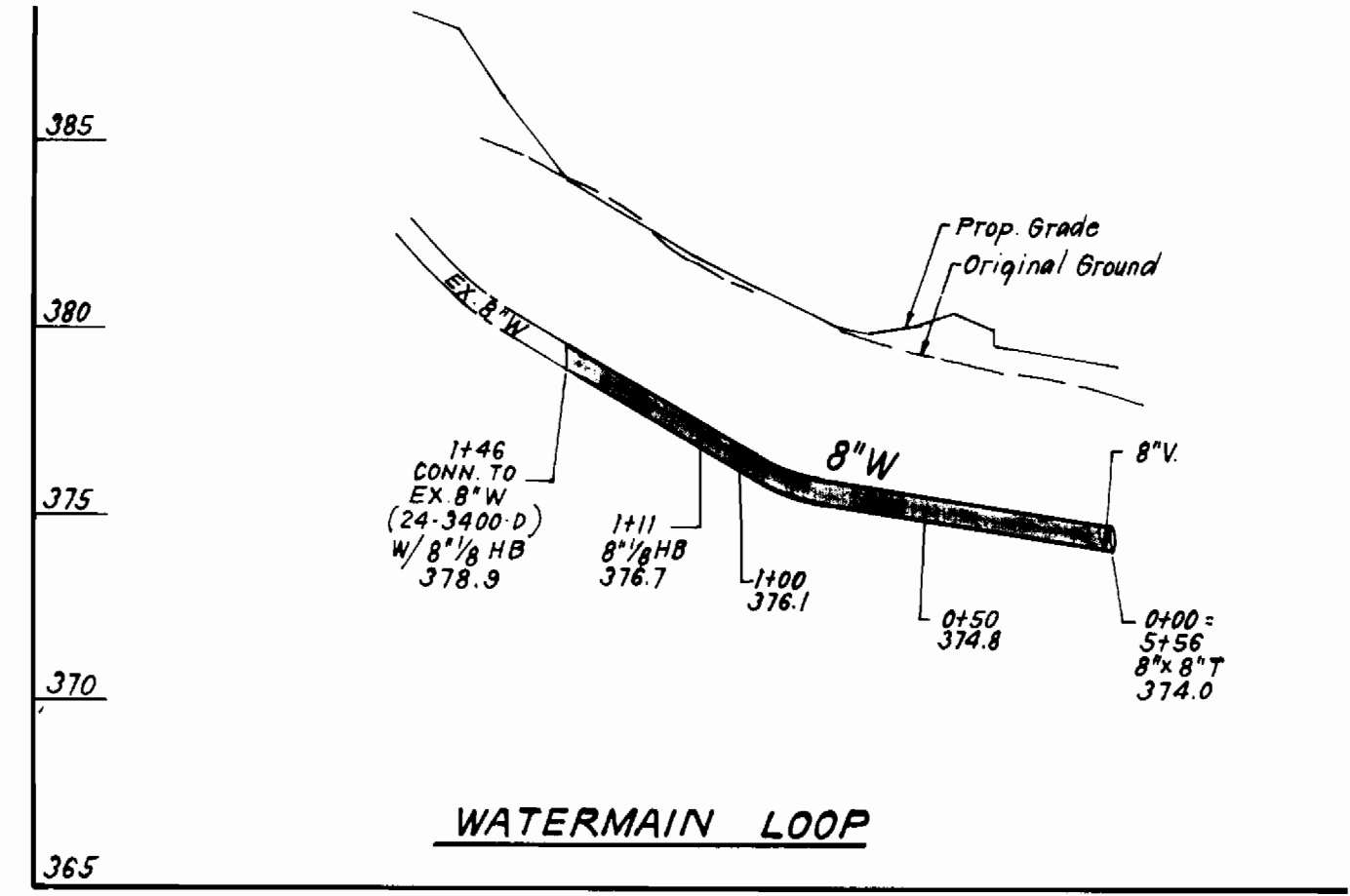
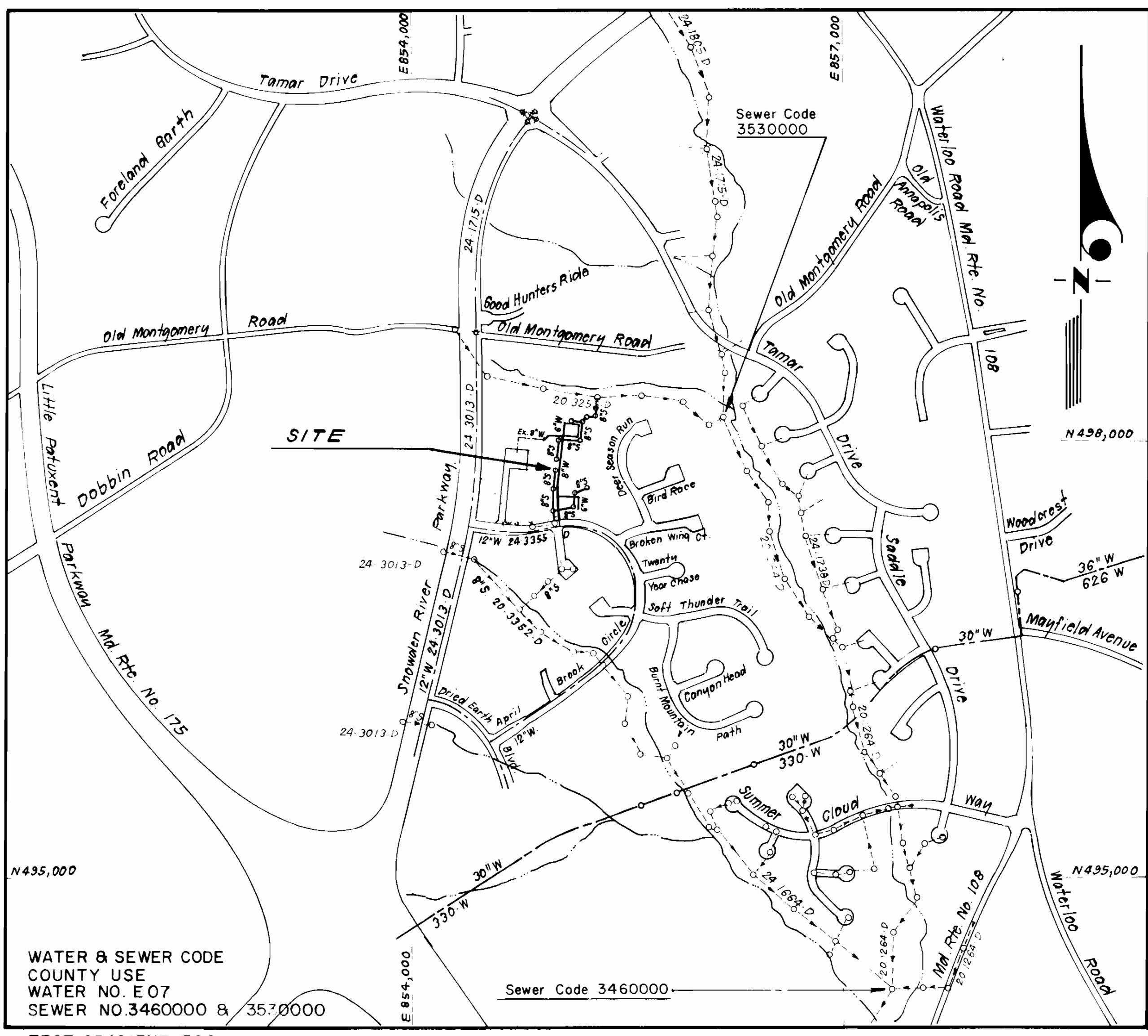
344 ws/1 VLR, 4/2, lots B-62 to B-131

LOT NO.	INV.	PL.	MIN. CELL	LOT NO.	INV.	PL.	MIN. CELL	LOT NO.	INV.	PL.	MIN. CELL	LOT NO.	INV.	PL.	MIN. CELL
B-62	361.6	364.8	B-79	376.4	379.6	B-96	362.3	365.5	B-113	377.0	380.2				
B-63	364.4	369.6	B-80	375.9	379.1	B-97	363.0	366.2	B-114	376.7	379.9				
B-64	367.2	372.8	B-81	375.4	378.6	B-98	363.7	366.9	B-115	376.1	379.3				
B-65	368.4	374.0	B-82	374.9	378.1	B-99	364.4	367.6	B-116	375.4	378.6				
B-66	369.4	374.7	B-83	374.3	377.5	B-100	365.1	368.3	B-117	375.6	378.8				
B-67	370.4	373.7	B-84	374.3	377.5	B-101	365.8	369.0	B-118	375.3	378.5				
B-68	371.3	374.7	B-85	364.8	368.0	B-102	366.5	369.7	B-119	375.3	378.5				
B-69	372.7	375.9	B-86	364.6	367.8	B-103	371.1	374.3	B-120	377.2	380.4				
B-70	373.5	376.7	B-87	363.9	367.1	B-104	371.1	374.3	B-121	378.5	381.7				
B-71	374.3	377.5	B-88	363.3	366.5	B-105	369.3	372.5	B-122	378.5	381.7				
B-72	374.8	378.0	B-89	362.7	365.9	B-106	367.1	370.3	B-123	377.2	380.4				
B-73	375.4	378.6	B-90	361.8	365.0	B-107	367.1	370.3	B-124	374.7	377.9				
B-74	376.0	379.2	B-91	360.6	363.8	B-108	368.5	371.7	B-125	373.8	377.0				
B-75	376.7	379.9	B-92	360.6	363.8	B-109	369.7	372.9	B-126	372.9	376.1				
B-76	376.8	380.0	B-93	360.5	363.7	B-110	377.0	380.2	B-127	371.9	375.1				
B-77	377.2	380.4	B-94	360.4	363.6	B-111	377.4	380.6	B-128	371.0	374.2				
B-78	376.8	380.0	B-95	361.6	363.8	B-112	377.5	380.7	B-129	371.0	374.2				

TYPE OF BUILDING	TOWNHOUSES
NO. OF LOTS	68
NO. OF WHC's	68
NO. OF SHC's	68
DRAINAGE AREA	LITTLE PATUXENT LITTLE PATUXENT WWTP

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 Inspector, 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 minimum of 6" clear all poles by 2'-0" minimum or tunnel as required. Any cost incurred to the contractor for tunneling or bracing at poles shall be included in unit prices bid for excavation and backfill.
- For details not shown on the drawings use Howard County Standard Details.
- For materials and construction methods use Howard County Standard Specifications & Details and Howard County Design Manual, Volume IV (Latest Edition) The contractor shall have copies of these on the job site.
- Contractor shall locate existing utilities a minimum of two (2) weeks in advance of construction operations in the vicinity of proposed utilities at his own expense.
- Contractor shall notify the following utilities or agencies at least five (5) working days before starting work shown on these plans.
 - State Highway Administration - 531-5533
 - Baltimore Gas & Electric Company - Underground Damage Control - 787-9068
 - Baltimore Gas & Electric Company - Contractor Services - 850-4620
 - Baltimore Gas & Electric Company - Trouble Shooting - 298-9001
 - "Miss Utility" - 1-800-257-7777
 - Chesapeake & Potomac (C & P) Telephone Company - 1-800-257-7777
 - Bureau of Utilities Howard County - 313-4900
 - Colonial Pipeline Company - 795-1390
- Trees are to be protected from damage to maximum extent. Trees 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 as directed by the Inspector. Payment for such removal shall be included in the unit price bid for excavation and backfill.
- Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Top 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.
- Block all fittings with concrete.
- Bury line elevations on fire hydrants shall be set to the elevations shown on the drawings. All fire hydrants shall be restrained and buttressed with concrete in accordance with Sid Det. W.11 & W.21 Soil around the fire hydrant to be compacted in accordance with Sections 1000 & 1005 of the Standard Specifications.
- All water house connections shall be for an inside meter setting.
- The contractor shall not operate any water main valves on the existing system.
- All sewer mains shall be C.S.P.X., V.C.P.X., P.V.C., or D.I.P. unless otherwise noted.
 - manhole wall.
- All manholes shall be 4'-0" inside diameter, unless otherwise noted.
- Water main and water house connection lines must have a minimum of one foot separation from the sanitary sewer and sewer house connections as they cross. Except at crossings, water and sewer lines shall have a minimum horizontal separation of 10'.
- Manholes designated thus : WT, shall have a Watertight Frame and Cover.



TEST GRADIENT 700
VICINITY MAP
SCALE: 1" = 600'

CONTRACT NO. 24-3414 - D

VILLAGE OF LONGREACH
SECTION 4 AREA 2
LOTS B-62 THRU B-131

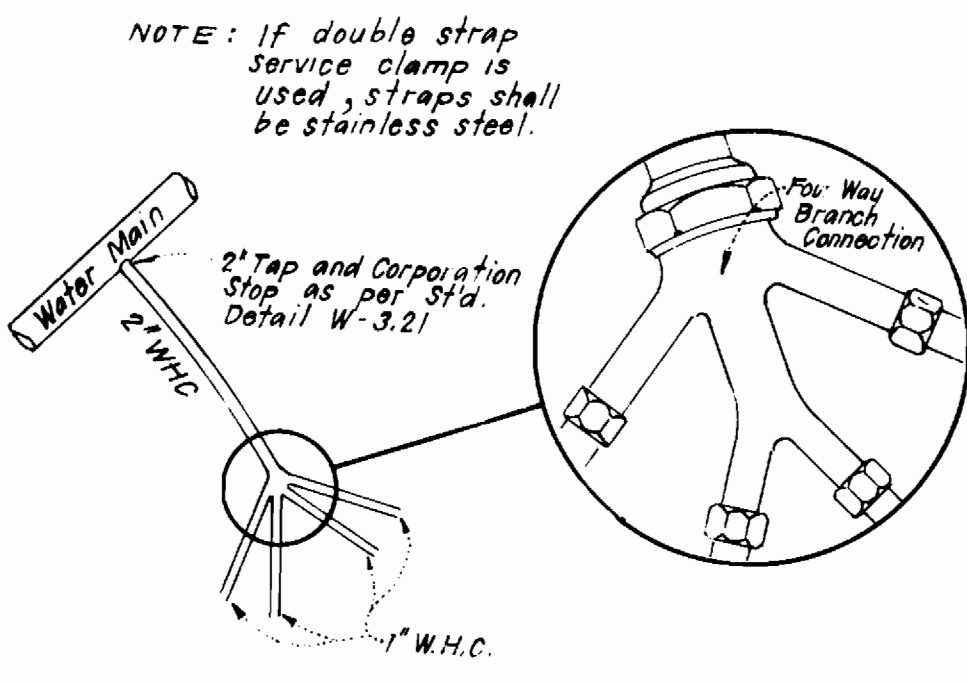
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

Sediment Control Measures will be implemented in accordance with Section 219 of the Specifications & with Road Construction Plan F-95-101; Drawing Sediment & Erosion Control.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT.
Signature: [Signature] DATE: 4/3/95

U.S. SOIL CONSERVATION SERVICE
This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

APPROVED: [Signature] DATE: 4/3/95
Howard S.C.D.

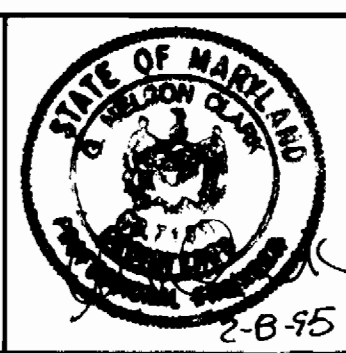


FOUR WAY WHC DETAIL
FOR LOTS 91 THRU 94; 103 THRU 106 AND 119 THRU 122

ITEM	QUANTITIES ESTIMATED	QUANTITIES AS BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" SEWER	1,299 LF	1,299 LF	PVC	JOHNS MANVILLE
8" WATER	760 LF	760 LF	DIP	ATLANTIC STATES
6" WATER	566 LF	566 LF	DIP	ATLANTIC STATES
4" SHC	1,390 LF	68 EA	PVC	JOHNS MANVILLE
1" WHC	1,010 LF	1010 LF	COPPER	
1 1/2" WHC	580 LF		COPPER	
2" WHC	100 LF		COPPER	
8" V	2 EA.	2 EA	GATE	MUELLER CO.
6" V (excl. FH)	2 EA.	4 EA	GATE	MUELLER CO.
F. H.	2 EA.	2 EA	AHWAC #02	MUELLER CO.
1 1/2" DRAIN	1 EA.	1 EA		
4'-0" DIA. MH	15 EA	15 EA	SANITARY	ATLANTIC COINC.
NAME OF UTILITY CONTRACTOR		GAINES UTILITY CONTRACTORS, INC.		
		SURVEY & DRAFTING DIV. AS BUILT DATE		

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Director of Public Works: [Signature] DATE: 4/6/95
Chief, Bureau of Engineering: [Signature] DATE: 4/5/95
Chief, Bureau of Utilities: [Signature] DATE: 3-30-95
Chief, Land Development Div.: [Signature] DATE: 4/5/95

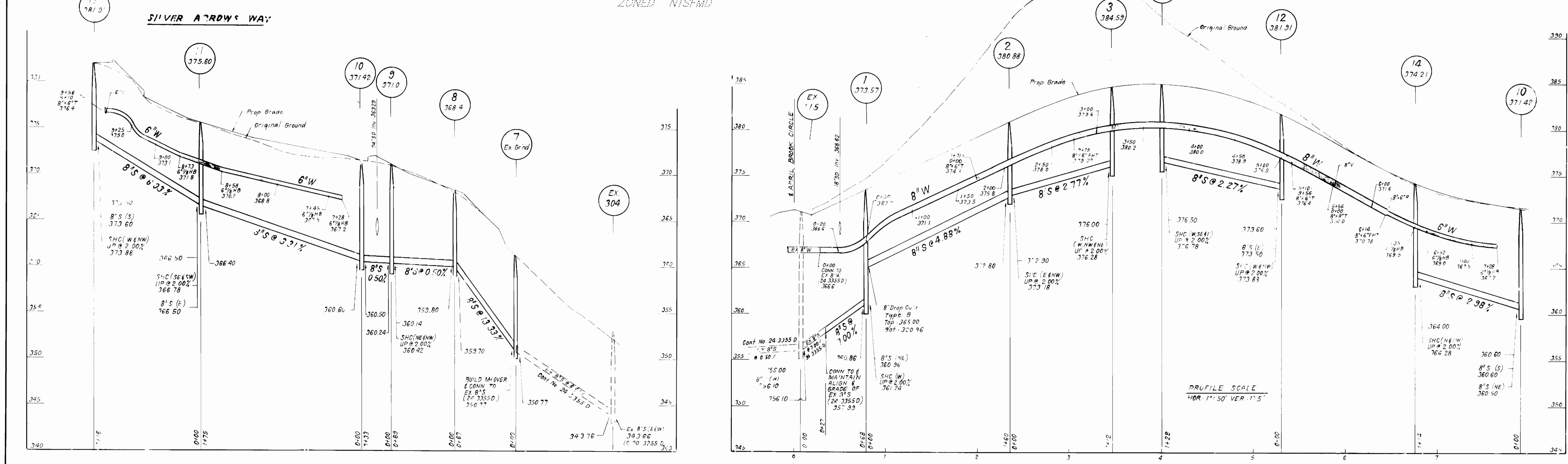
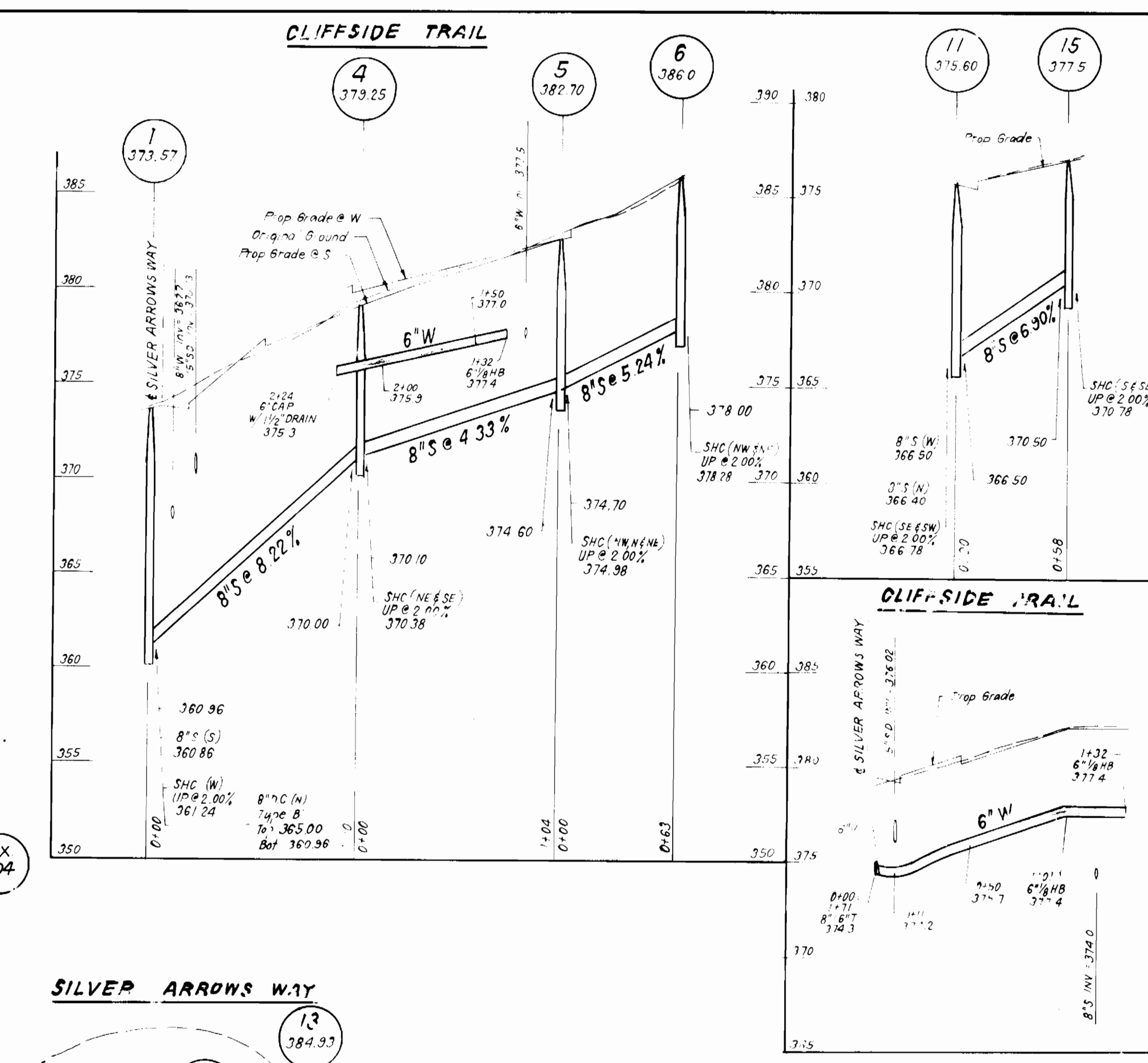
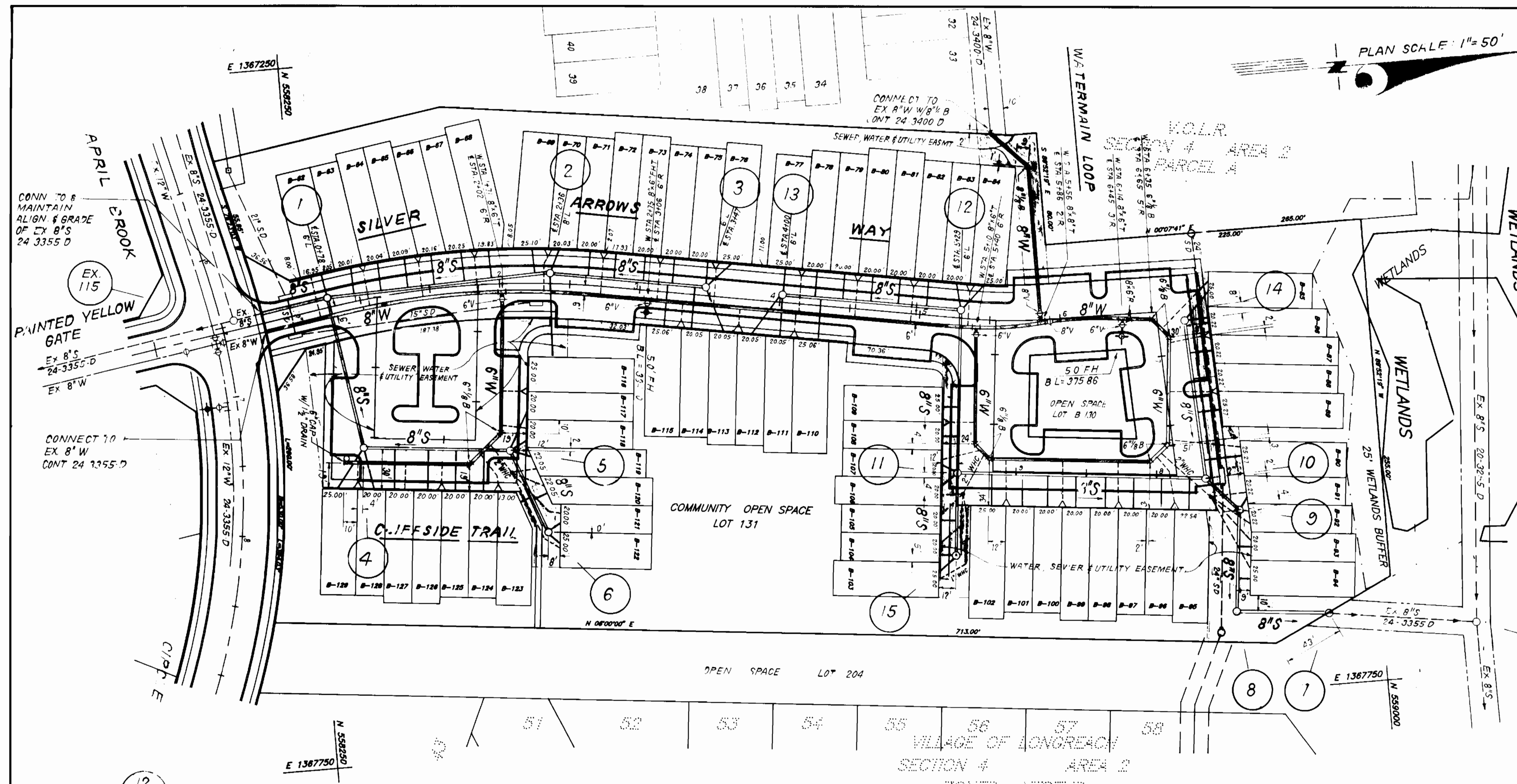
CLARK FINEFROCK & SACKETT, INC.
ENGINEERS - PLANNERS - SURVEYORS
7135 MINSTREL WAY COLUMBIA MARYLAND 21045
(301) 381-7500 BALTO. (301) 621-8100 WASH.



DES. CCM.	
DRN.	
CHK.	
DATE: 3-21-95	BY NO.
REVISION	
DATE	
600' SCALE MAP NO. 37	BLOCK NO. 7

COLUMBIA, VILLAGE OF LONGREACH
SECTION 4 AREA 2 PHASE 2
LOTS B62 THRU B-131
6TH ELECTION DISTRICT
CONTRACT No. 24-3414-D
SCALE AS SHOWN
SHEET 1 OF 2

3414 ws/2 VLR 4/2



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signature] 4/6/95
 DIRECTOR OF PUBLIC WORKS DATE

[Signature] 4/5/95
 CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 3-30-95
 CHIEF, BUREAU OF UTILITIES DATE

[Signature] 4/5/95
 CHIEF, LAND DEVELOPMENT DIV. DATE

CFE CLARK · FINEPROCK & SACKETT, INC.
 ENGINEERS · PLANNERS · SURVEYORS

7135 MINSTREL WAY COLUMBIA MARYLAND 21045
 (410) 381-7500 BALTO (301) 821-8100 WASH

DES	CCM	
DRN	CCM	
CHK		
DATE	2 9 95	
BY	NO.	
REVISION		
DATE		

PLAN & PROFILES
 OF WATERMAINS & SEWERS

600 SCALE MAP NO. 37 BLOCK NO. 7

COLUMBIA, VILLAGE OF LONGREACH
 SECTION 4 AREA 2 PHASE 2
 LOTS B-62 THRU B-131
 6TH ELECTION DISTRICT
 CONTRACT No 24 3414 - D

SCALE AS SHOWN
 SHEET 2 OF 2

3414 AS-BUILT INFO. As-BLT 3-13-96

SEWER	
LOT #	NO SECONDARY PULL GIVEN
62	18.6' TO MH 1
63	27.6' TO MH 1
64	42.8' TO MH 1
65	22.2' TO MH 1
66	81.0' TO MH 1
67	68.1' TO MH 2
68	48.4' TO MH 2
69	22.5' TO MH 2
70	19.4' TO MH 2
71	71.0' TO F.H.
72	72.0' TO F.H.
73	48.1' TO MH 3
74	31.2' TO MH 3
75	19.0' TO MH 3
76	40.6' TO MH 13
77	19.5' TO MH 13
78	31.1' TO MH 13
79	48.5' TO MH 13
80	47.0' TO MH 12
81	53.0' TO MH 12
82	31.4' TO MH 12
83	20.3' TO MH 12
84	25.1' TO MH 12
85	25.0' TO MH 14
86	18.0' TO MH 14
87	24.2' TO MH 14
88	44.0' TO MH 14
89	56.0' TO MH 10
90	30.0' TO MH 10
91	13.0' TO MH 10
92	28.0' TO MH 10
93	25.5' TO MH 9
94	25.0' TO MH 8
95	10.0' TO MH 10
96	25.0' TO MH 10
97	91.6' TO MH 9
98	19.7' TO SMC 97
99	18.0' TO SMC 98
100	23.5' TO SMC 99
101	58.0' TO MH 11
102	35.0' TO MH 11
103	21.6' TO MH 15
104	15.5' TO MH 15
105	26.5' TO MH 15
106	49.0' TO MH 15
107	12.0' TO MH 11
108	28.7' TO MH 11
109	50.0' TO MH 11
110	40.0' TO MH 3
111	31.3' TO MH 3
112	34.5' TO MH 3
113	34.8' TO MH 3
114	31.5' TO MH 3
115	40.0' TO MH 3
116	60.0' TO MH 2
117	30.0' TO MH 5
118	15.6' TO MH 6
119	16.0' TO MH 6
120	27.0' TO MH 6
121	10.0' TO MH 6
122	75.2' TO MH 6
123	30.8' TO MH 6
124	38.0' TO MH 6
125	50.0' TO MH 6
126	55.0' TO MH 4
127	38.0' TO MH 4
128	31.5' TO MH 4
129	30.5' TO MH 4

WATER	
LOT #	NO SECONDARY PULL GIVEN
62	19.0' TO MH 1
63	32.0' TO MH 1
64	34.4' TO MH 1
65	69.3' TO MH 1
66	72.0' TO MH 1
67	60.0' TO MH 2
68	57.1' TO MH 2
69	19.5' TO MH 2
70	19.0' TO MH 2
71	65.0' TO F.H.
72	72.2' TO F.H.
73	39.8' TO MH 3
74	35.0' TO MH 3
75	20.0' TO MH 3
76	20.0' TO MH 3
77	22.5' TO MH 13
78	27.0' TO MH 13
79	52.0' TO MH 13
80	65.0' TO MH 12
81	42.0' TO MH 12
82	39.0' TO MH 12
83	21.7' TO MH 12
84	21.6' TO MH 12
85	31.0' TO MH 14
86	20.0' TO MH 14
87	21.7' TO MH 14
88	54.0' TO MH 14
89	80.0' TO MH 10
90	42.0' TO MH 10
91	19.2' TO MH 10
92	9.5' TO MH 10
93	23.0' TO MH 9
94	41.7' TO MH 9
95	30.0' TO MH 10
96	32.0' TO MH 10
97	58.0' TO MH 10
98	60.0' TO MH 10
99	85.0' TO MH 11
100	75.0' TO MH 11
101	42.0' TO MH 15
102	43.0' TO MH 15
103	20.0' TO MH 15
104	15.0' TO MH 15
105	30.0' TO MH 15
106	20.0' TO MH 11
107	15.0' TO
108	38.0' TO MH 11
109	40.0' TO MH 11
110	30.0' TO MH 15
111	27.0' TO MH 15
112	36.0' TO MH 15
113	37.0' TO MH 15
114	32.0' TO MH 15
115	35.0' TO MH 15
116	45.0' TO MH 5
117	41.0' TO MH 5
118	20.0' TO MH 5
119	25.0' TO MH 5
120	20.0' TO MH 6
121	15.0' TO MH 6
122	17.0' TO MH 6
123	32.0' TO MH 5
124	30.0' TO MH 5
125	55.0' TO MH 5
126	60.0' TO MH 4
127	40.0' TO MH 4
128	30.0' TO MH 4
129	31.5' TO MH 4

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____
CHIEF, BUREAU OF ENGINEERING _____ DATE _____

DES:				
DRN:				
CHK:				
DATE:	BY	NO.	REVISION	DATE

SEWER & WATER AS-BUILTS

600' SCALE MAP NO. _____ BLOCK NO. _____

COLUMBIA, VILLAGE OF LONGREACH
SECTION 4 AREA 2 PHASE 2

CONTRACT 24-3414-D

SCALE AS SHOWN

SHEET 2A OF 2

08/1987
J&J WHITE MARK, MD.