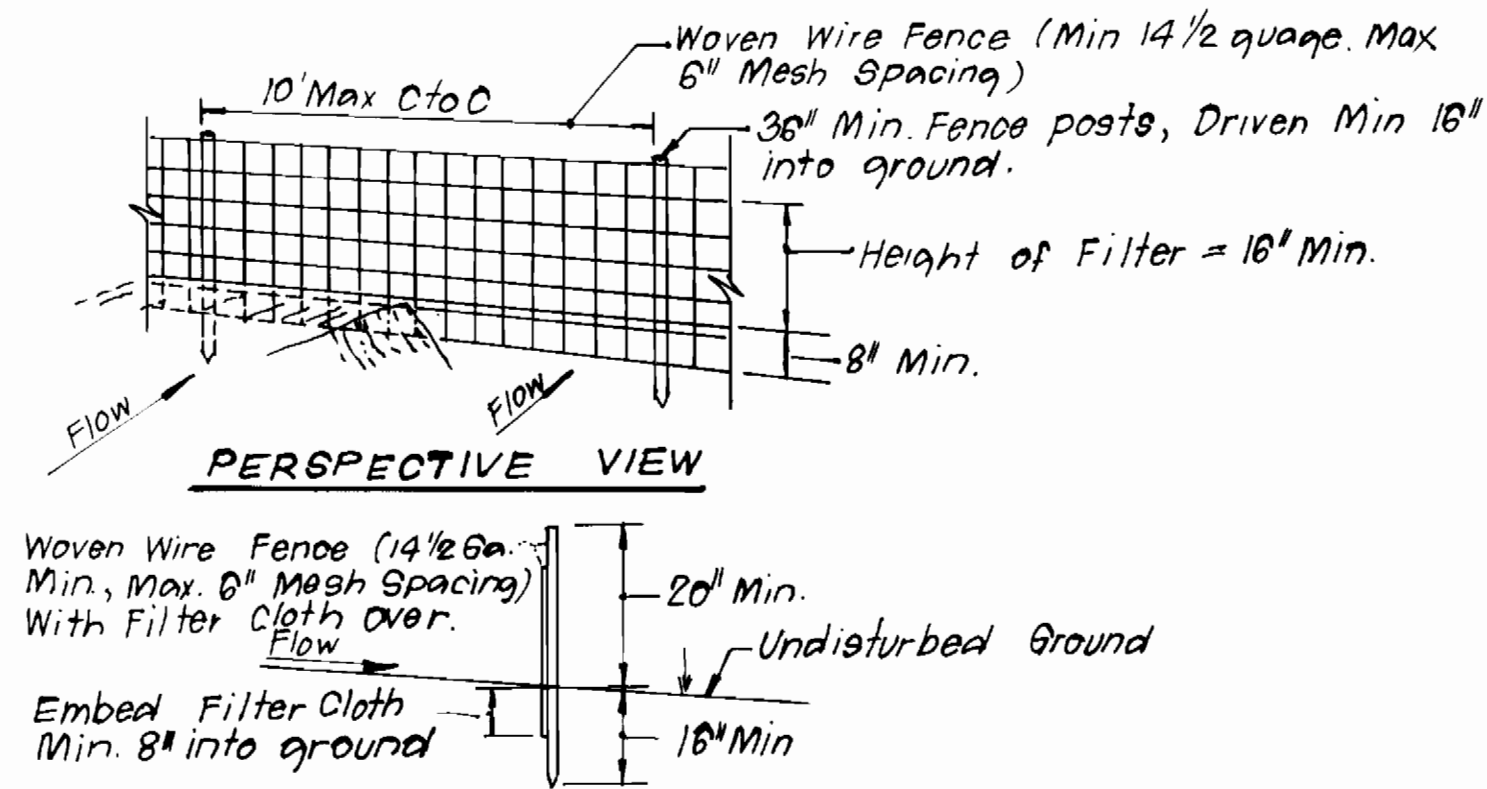


SEWER HOUSE CONNECTION TABLE					
LOTS	Inv. e. R.	Min. C.	LOTS	Inv. e. R.	Min. C.
1/2	373.4	376.8	28/29	358.8	362.1
3/4	372.2	375.6	30/31	358.8	362.0
5/6	370.8	374.2	32/33	364.8	368.1
7/8	369.5	372.9	34/35	365.3	368.6
9	368.3	371.7	36	366.0	369.3
10/11	368.8	370.2	37/38	366.5	369.8
12/13	365.5	368.9	39/40	367.1	370.3
14	360.7	363.9	41/42	367.2	370.4
15/16	360.2	363.4	43/44	367.7	370.9
17/18	359.6	362.8	45/46	368.0	371.2
19	359.1	362.4	47/48	367.5	370.8
20/21	358.6	361.9	49/50	367.8	371.1
22/23	358.1	361.4	51/52	368.1	371.4
24/25	357.5	360.8	53/54	368.5	371.8
26/27	358.8	362.1			



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. Woven Wire Fence to be fastened securely to fence posts with wire ties or staples.
2. Filter Cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
3. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
4. Maintenance shall be performed as needed and material removed when "Bulges" develop in the silt fence.

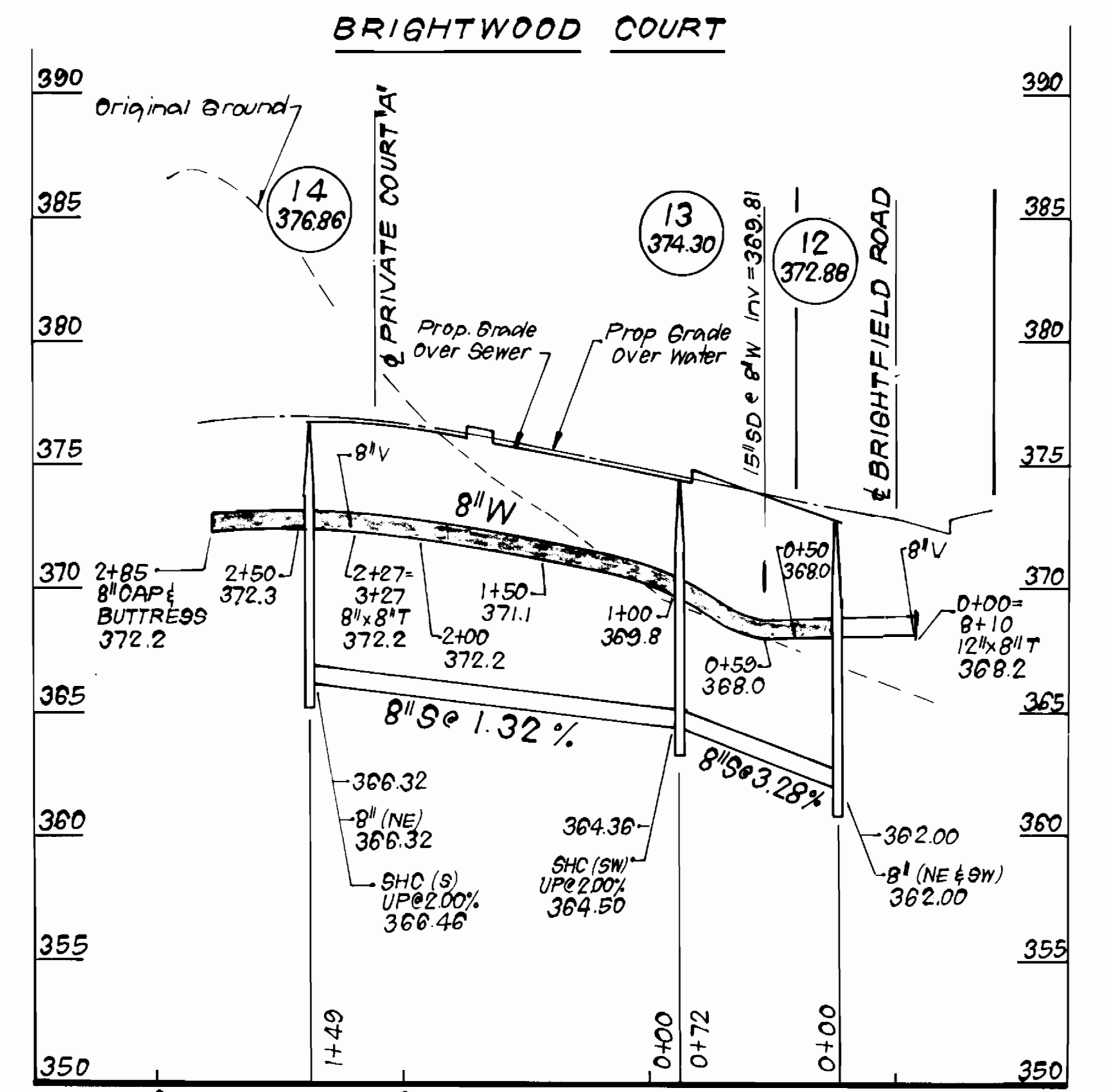
Posts: Steel either T or U type or 2" Hardwood
 Fence: Woven Wire 14 1/2 gauge, 6" Max Mesh Opening.
 Filter Cloth: Filter X, Mirafix, 100X Stablilinka T140. Nor approved equal.
 Prefabricated Unit: Geofab, Envirofence, or approved equal.

TYPE OF BUILDING	Townhouses
NO. OF LOTS	54
NO. OF WHC's	54
NO. OF SHC's	54
DRAINAGE AREA	Patapsco

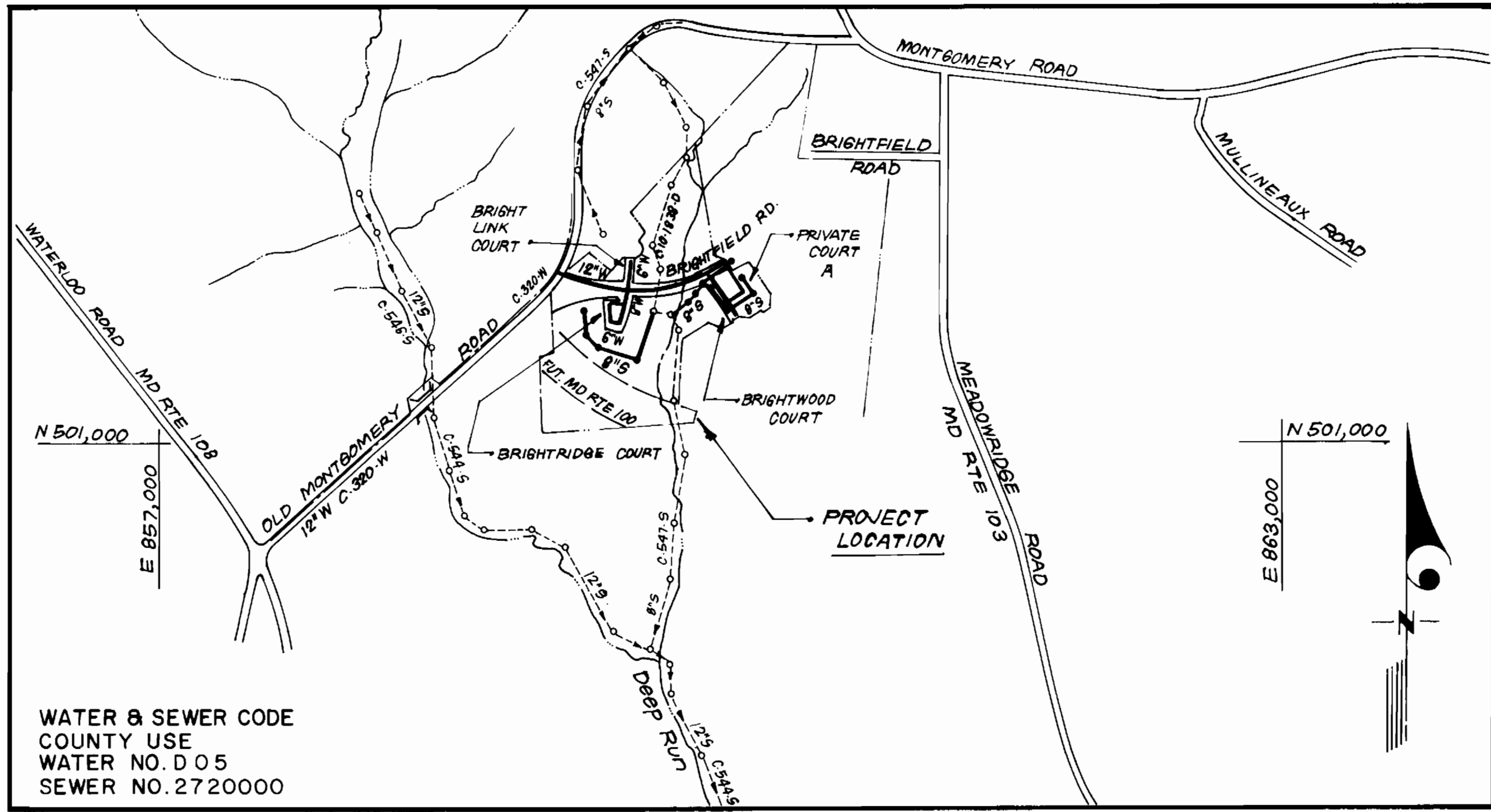
SILT FENCE DETAIL
NO SCALE

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 to the satisfaction of the Inspector, at the contractor's expense.
2. All horizontal controls are based on Maryland State Coordinates.
3. All vertical controls are based on U.S.G.S. Datum.
4. All pipe elevations shown are invert elevations.
5. 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.
6. For details not shown on the drawings use Howard County Standard Specifications and Howard County Design Manual, Volume IV. The Contractor shall have Volume IV on the job.
7. For materials and construction methods use Howard County Standard Specifications and Howard County Design Manual, Volume IV. The Contractor shall have Volume IV on the job.
8. 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.
9. 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 - 859-9004
 - 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 - 992-2366
 - Colonial Pipeline Company - 795-1390
10. 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.
11. 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.
12. 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.
13. All water mains to be D.I.P. Class 52 unless otherwise noted.
14. Top of all water mains to have a minimum of 3-1/2' cover unless otherwise noted.
15. Valves adjacent to tees shall be strapped to tees.
16. Block all fittings with concrete.
17. Bury line elevations on fire hydrants shall be set to the elevations shown on the drawings. All fire hydrants shall be strapped and buttressed with concrete in accordance with standard details. Soil around the fire hydrant to be compacted in accordance with Sections 1003 & 1008 of the Standard Specifications.
18. All water house connections shall be for an inside meter setting.
19. The contractor shall not operate any water main valves on the existing system.
20. All sewer mains shall be C.S.P.X., V.C.P.X., P.V.C., or A.C.P. Class 2400 unless otherwise noted.
21. The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
22. All manholes shall be 4'-0" inside diameter, unless otherwise noted.
23. 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'.
24. Manholes designated thus: WT, shall have a Watertight Frame and Cover.
25. All DIP Fittings shall be in accordance with AWWA specification C-153 Ductile Iron Compact Fittings, 3 inch through 12 inch for water and other liquids.



PROFILE SCALE
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'



VICINITY MAP
SCALE: 1" = 600'

CONTRACT NO. 14-1576-D
BRIGHTFIELD
SECTION ONE AREA ONE, LOTS 1 THRU 62 & PARCEL "A"
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-89-19; Drawing, Sediment & Erosion Control.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT.

SIGNATURE: _____ DATE: _____

U.S. SOIL CONSERVATION SERVICE

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

APPROVED: _____ DATE: 12/22/88

HOWARD S.C.D. DATE

QUANTITIES			
ITEM	EST'D	AS BUILT	MATERIAL / SUPPLIER
12" W	926 LF	926 LF	Giffen
8" W	578 LF	473 LF	"
6" W	790 LF	1085 LF	"
8" S	1,637 LF	1548 LF	J.M. Manufacturing
6" SHC	670 LF	610 LF	"
2" WHC	85 LF	79 LF	Howell
1" WHC	360 LF	269 LF	"
3/4" WHC	715 LF	746 LF	"
FH	5 EA	5 EA	MUELLER
4'-0" DIA MH	12 EA	12 EA	ATLANTIC CONCRETE
12" V	2 EA	2 EA	MUELLER
8" V	3 EA	2 EA	"
6" V (exc. FH)	6 EA	6 EA	"
12" x 12" T&V	1 EA	1 EA	"
36" O.D. STEEL CASING	27 LF	N/A	DELETTES

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

12-16-88

CLARK - FINEPROCK & SACKETT, INC.
ENGINEERS - PLANNERS - SURVEYORS

7135 MINSTREL WAY COLUMBIA MARYLAND 21045
(301) 381-7500 BALTO. (301) 621-8100 WASH.



DES: JTR
DRN: JTR
CHK: CCM

JTR 1 Revise Steel Casing to 36"φ 2.21.88

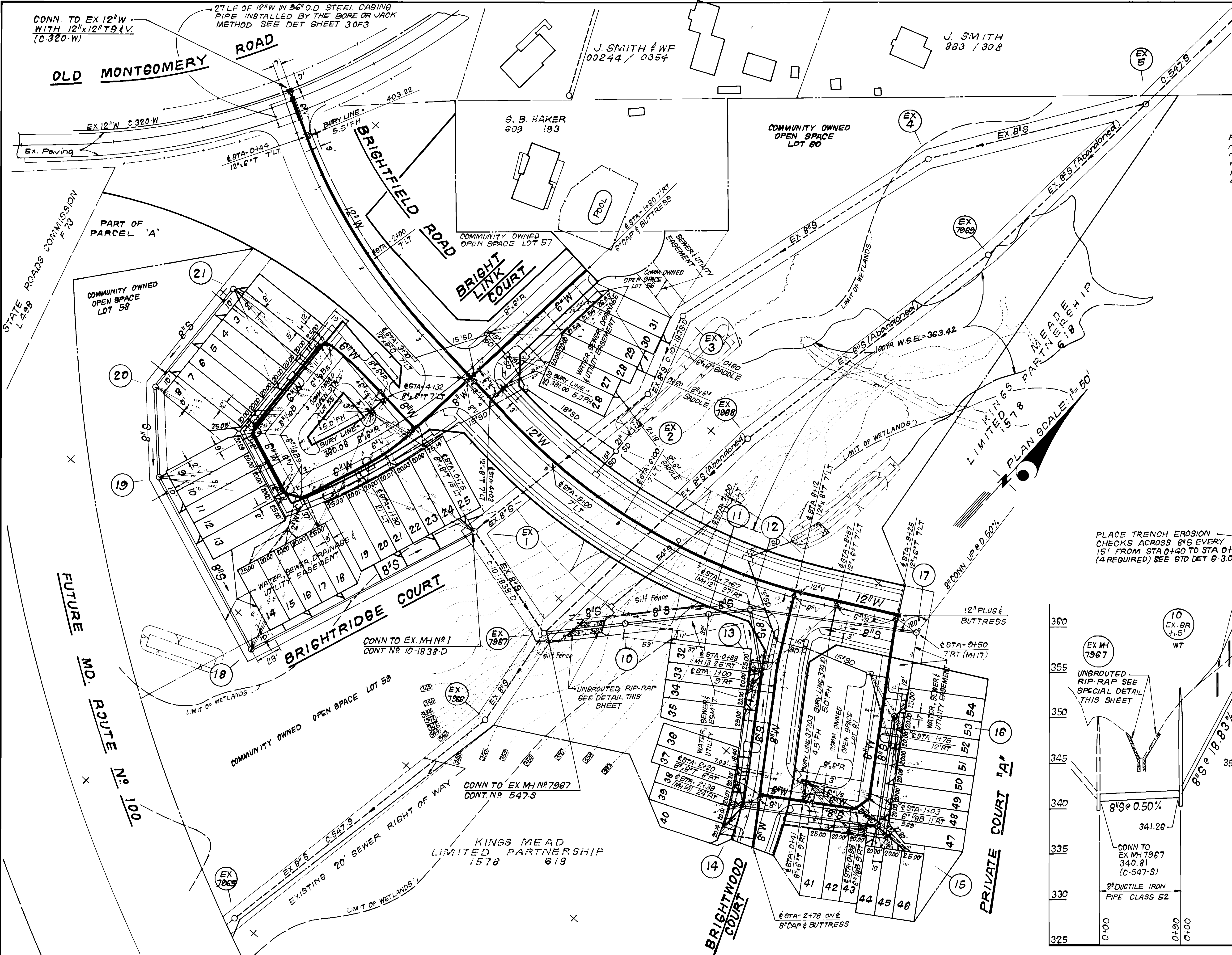
DATE JUN 88 BY NO. REVISION DATE

TITLE SHEET

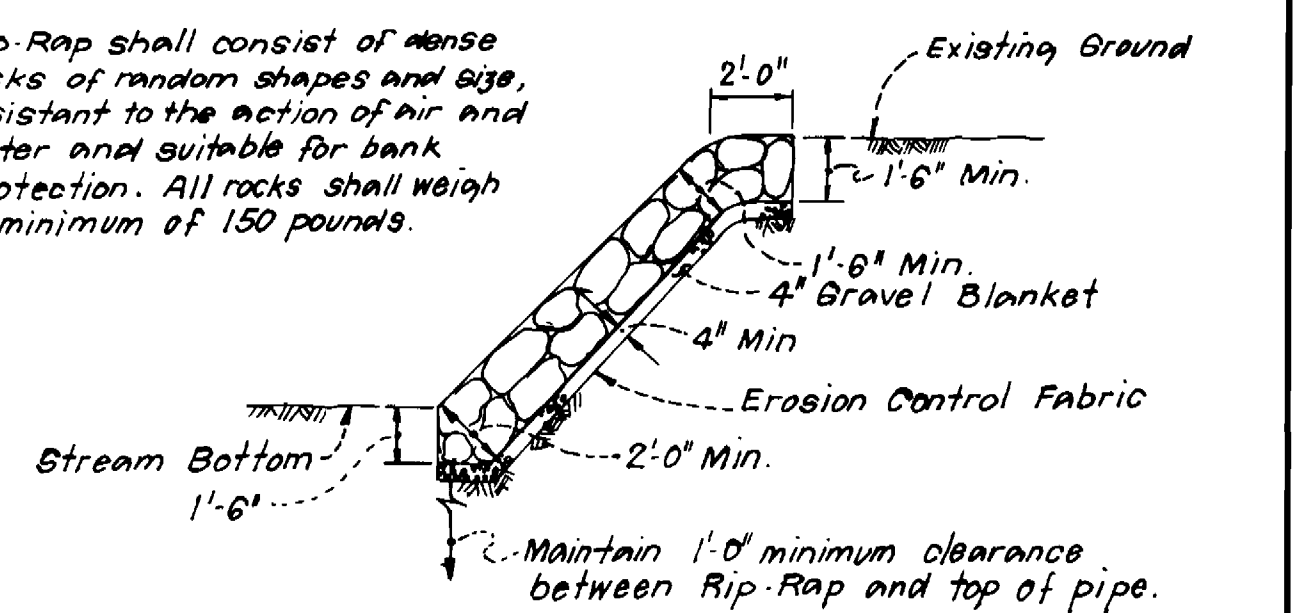
600' SCALE MAP NO. 37 BLOCK NO.

BRIGHTFIELD
SECTION ONE AREA ONE
LOTS 1 THRU 62 & PARCEL "A"
1ST ELECTION DISTRICT
CONTRACT NO. 14-1576-D

SCALE AS SHOWN
SHEET 1 OF 3

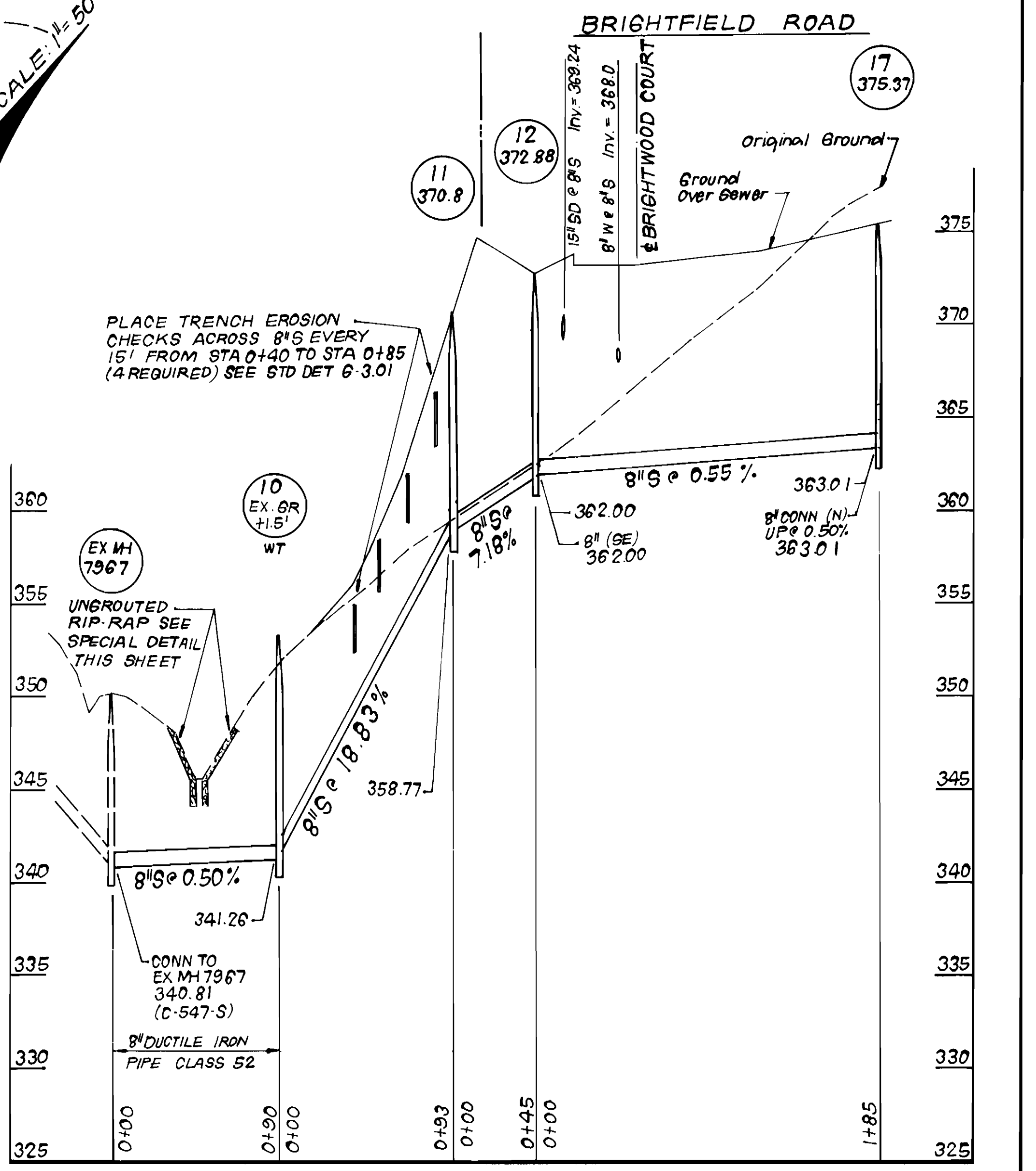


NOTES:
 1. Erosion Control Fabric shall be Poly Filter-X as manufactured by Carthage Mills Inc., Erosion Control Division, 124 West 66th Street, Cincinnati, Ohio; Laurel Erosion Control Cloth as manufactured by Laurel Plastics Inc., Madison, Main, or approved equal.
 2. Rip-Rap shall be placed 6' each side of sewer or as shown. Any disturbance to stream banks beyond these limits shall be protected with Rip-Rap.



RIP-RAP DETAIL
NO SCALE

PROFILE SCALE
 HORIZONTAL: 1"=50'
 VERTICAL: 1"=5'



PLACE TRENCH EROSION CHECKS ACROSS 8" EVERY 15' FROM STA 0+40 TO STA 0+85 (4 REQUIRED) SEE STD DET G-3.01

UNGROUTED RIP-RAP SEE SPECIAL DETAIL THIS SHEET

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *William W. Waldland* 12-16-88
 Chief, Bureau of Engineering: *William W. Waldland* 12-16-88
 Chief, Bureau of Utilities: *John W. Brown* 12-16-88

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

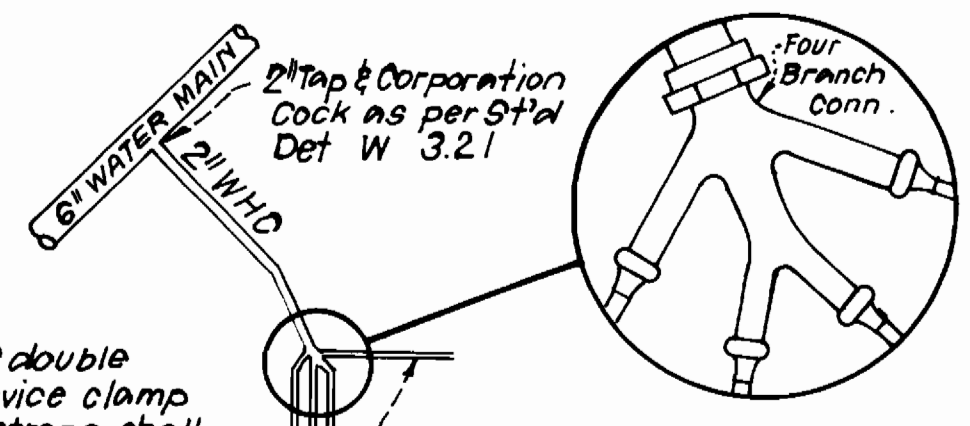
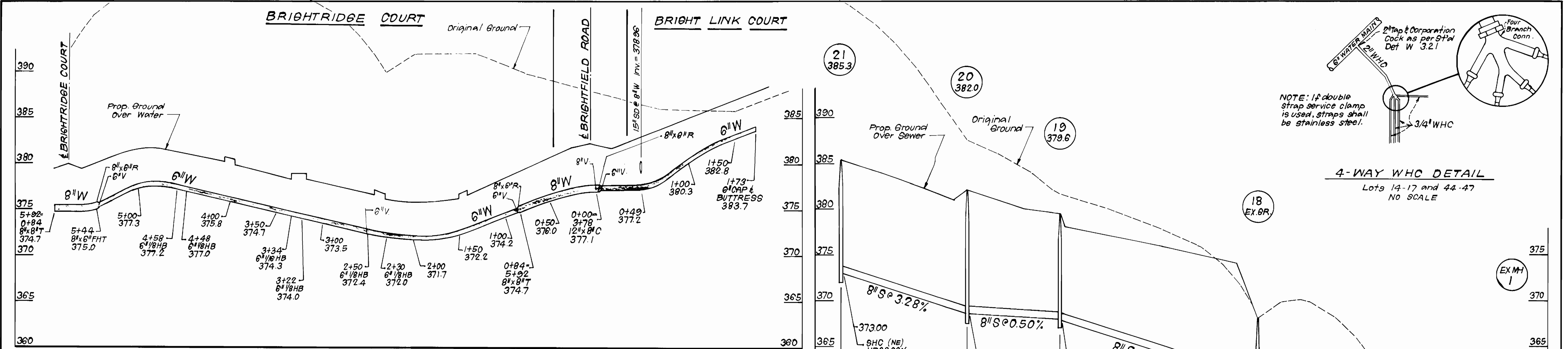


DES: JTR			
DRN: JTR			
CHK: DCM			
DATE: JULY 88			
JTR	1	Revise Steel Casing to 36" ø	2-21-89
BY	NO.	REVISION	DATE

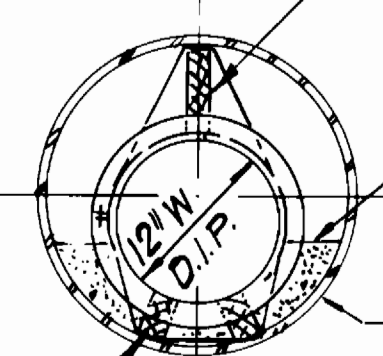
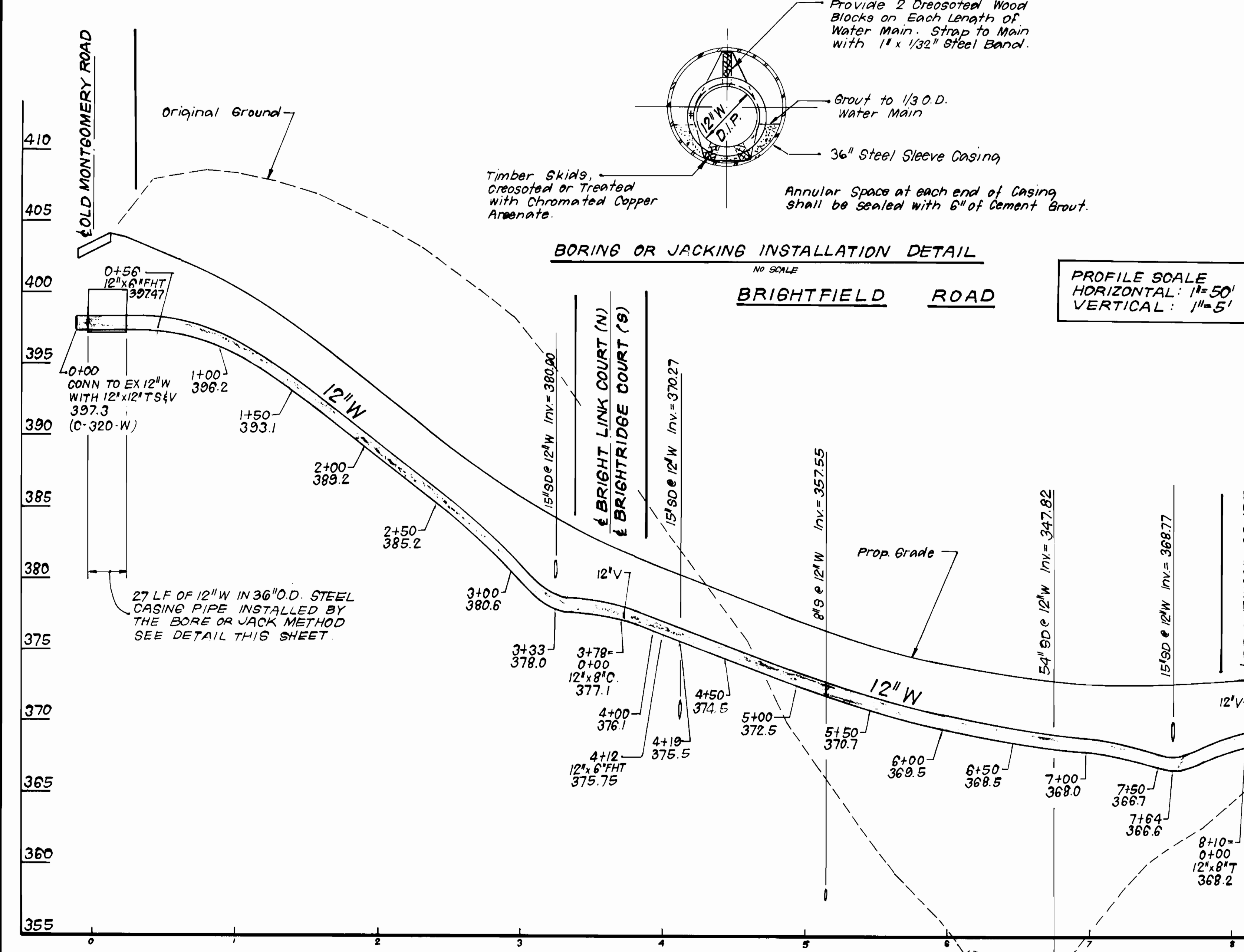
PLAN & PROFILES OF
 WATER & SEWER MAINS
 600' SCALE MAP NO. 37 BLOCK NO.

BRIGHTFIELD
 SECTION ONE AREA ONE
 LOTS 1 THRU 62 & PARCEL "A"
 1ST ELECTION DISTRICT
 CONTRACT NO. 14-1576-D

SCALE
 AS SHOWN
 SHEET
 2 OF 3A

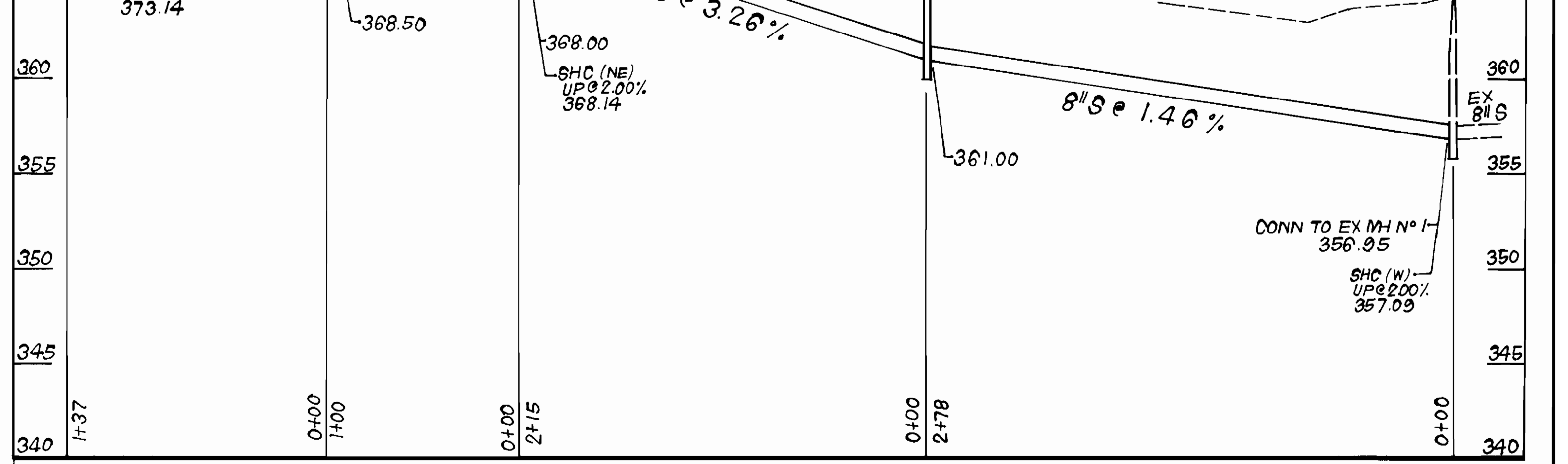


4-WAY WHC DETAIL
Lots 14-17 and 44-47
NO SCALE



BORING OR JACKING INSTALLATION DETAIL
NO SCALE
BRIGHTFIELD ROAD

PROFILE SCALE
HORIZONTAL: 1"=50'
VERTICAL: 1"=5'



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Director of Public Works: *William W. Wickland* 12-28-88
Chief, Bureau of Engineering: *Robert J. Brown* 12-28-88
Chief, Bureau of Utilities: *Robert J. Brown* 12-16-88
Chief, Land Development Div.: *Robert J. Brown* 12-28-88

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



DES: JTR				
DRN: JTR				
CHK: CCM				
DATE: JUN 88	BY: JTR	NO: 1	REVISION: Revise Steel Casing to 36"	DATE: 2-21-89

PROFILES OF
WATER & SEWER MAINS
600' SCALE MAP NO. 37 BLOCK NO.

BRIGHTFIELD
SECTION ONE AREA ONE
LOTS 1 THRU 62 & PARCEL "A"
1ST ELECTION DISTRICT
CONTRACT NO. 14-1576-D

SCALE
AS SHOWN
SHEET
3 OF 3

SEWER As-Builts

WATER As-Builts

NOTE * SEE SHEET 2 OF 3A FOR WATER AS-BUILTS *

LOT	LOCATION	DISTANCE
lot # 1	MANHOLE # 20	148'
" "	MANHOLE # 21	14'
lot # 2	" "	14.5'
" "	MANHOLE # 20	144'
lot # 3	" "	109'
" "	MANHOLE # 21	32'
lot # 4	" "	39'
lot # 5	MANHOLE # 20	102.5'
" "	" "	69'
lot # 5	MANHOLE # 21	70'
lot # 6	" "	28'
" "	MANHOLE # 20	63'
lot # 7	" "	28.5'
" "	MANHOLE # 21	113.5'
lot # 8	" "	117'
" "	MANHOLE # 20	24'
lot # 9	MANHOLE # 18	216.5'
" "	MANHOLE # 19	10.5'
lot # 10	" "	42'
" "	MANHOLE # 18	178'
lot # 11	" "	172'
" "	MANHOLE # 19	48'
lot # 12	" "	83'
" "	MANHOLE # 18	134'
lot # 13	" "	131'
" "	MANHOLE # 19	88'
lot # 14	MANHOLE # 18	44.5'
" "	EXISTING MANHOLE # 1	236.5'
lot # 15	" "	206.5'
" "	MANHOLE # 18	78.5'
lot # 16	" "	77'
" "	EXISTING MANHOLE # 1	223.5'
lot # 17	" "	166.5'
" "	MANHOLE # 18	113'
lot # 18	EXISTING MANHOLE # 1	116.5'
" "	" "	162.7'
lot # 19	MANHOLE # 18	115.6'
" "	" "	165'
lot # 20	EXISTING MANHOLE # 1	192.5'
" "	" "	88.5'
lot # 21	MANHOLE # 18	82'
" "	" "	199'
lot # 22	EXISTING MANHOLE # 1	230'
lot # 23	" "	52'
" "	MANHOLE # 18	47'
lot # 24	" "	236.5'
" "	EXISTING MANHOLE # 1	271.5'
lot # 25	" "	222.5'
" "	MANHOLE # 18	22'
lot # 32	MANHOLE # 13	226.5'
" "	MANHOLE # 14	77'
lot # 33	" "	147'
" "	MANHOLE # 13	141'
lot # 34	" "	16'
" "	MANHOLE # 14	40.5'
lot # 35	" "	111'
" "	MANHOLE # 13	106'
lot # 36	" "	44.5'
" "	MANHOLE # 14	95'
lot # 37	" "	54'
" "	MANHOLE # 13	24'
lot # 38	" "	128'
" "	MANHOLE # 14	132.5'
lot # 39	" "	80'
" "	MANHOLE # 13	23'
lot # 40	MANHOLE # 13	162.5'
" "	" "	173'
lot # 41	MANHOLE # 14	32'
" "	" "	98'
lot # 42	MANHOLE # 15	55'
" "	" "	27'
lot # 42	MANHOLE # 14	102'
lot # 43	" "	138'
" "	MANHOLE # 15	86'
lot # 44	" "	22'
" "	MANHOLE # 14	145'
lot # 45	" "	179'
" "	MANHOLE # 15	37'
lot # 46	" "	39'
" "	MANHOLE # 14	183'
lot # 47	MANHOLE # 15	12'
" "	MANHOLE # 16	116'
lot # 48	" "	113'
" "	MANHOLE # 15	14'
lot # 49	" "	49'
" "	MANHOLE # 16	26'
lot # 50	" "	28'
" "	MANHOLE # 15	52'
lot # 51	" "	86'
" "	MANHOLE # 16	41'
lot # 52	" "	36'
" "	MANHOLE # 15	90'
lot # 53	" "	126'
" "	MANHOLE # 16	16'
lot # 54	" "	16'
" "	MANHOLE # 15	131'

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

600' SCALE MAP NO.

BLOCK NO.

SEWER AND WATER As-Builts

BRIGHTFIELD
lot 1 Thru 62

CONTRACT NO. 14-1576-D

SCALE AS SHOWN

SHEET 3A OF 3A

KATHY WILLIAMS

AS-BUILT

7-17-89