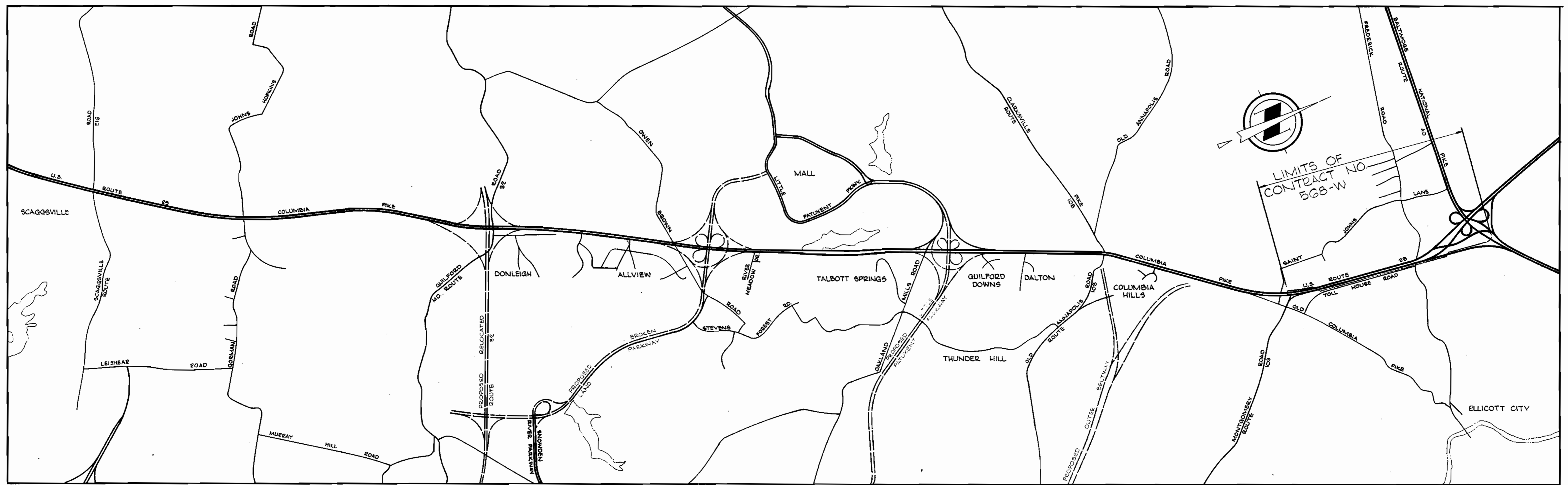


suspense

suspense



PROJECT NO. WP 8049

U.S. ROUTE 29 WATER MAINS

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

QUANTITIES		
As-Built	42" Water	7700 LF
As-Built	30" Water	1000 LF

'AS-BUILT'
 Stakeout in FB# 5612
 Diary in FB# 5613
 42" 30" - Precast Concrete Cylinder Pipe
 20" - Precast Concrete Cylinder Pipe &
 Cast Iron Pipe
 12" 6" - Cast Iron Pipe



Kenneth A. McCord

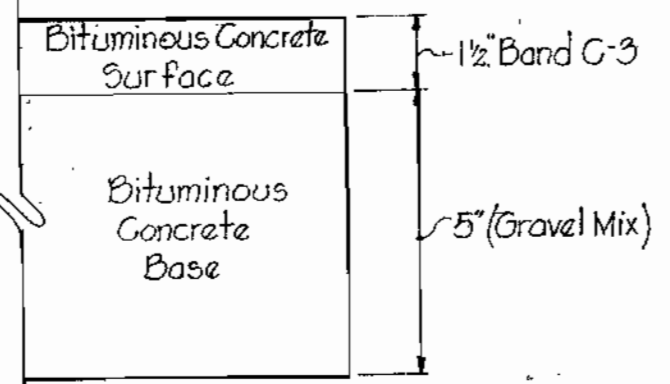
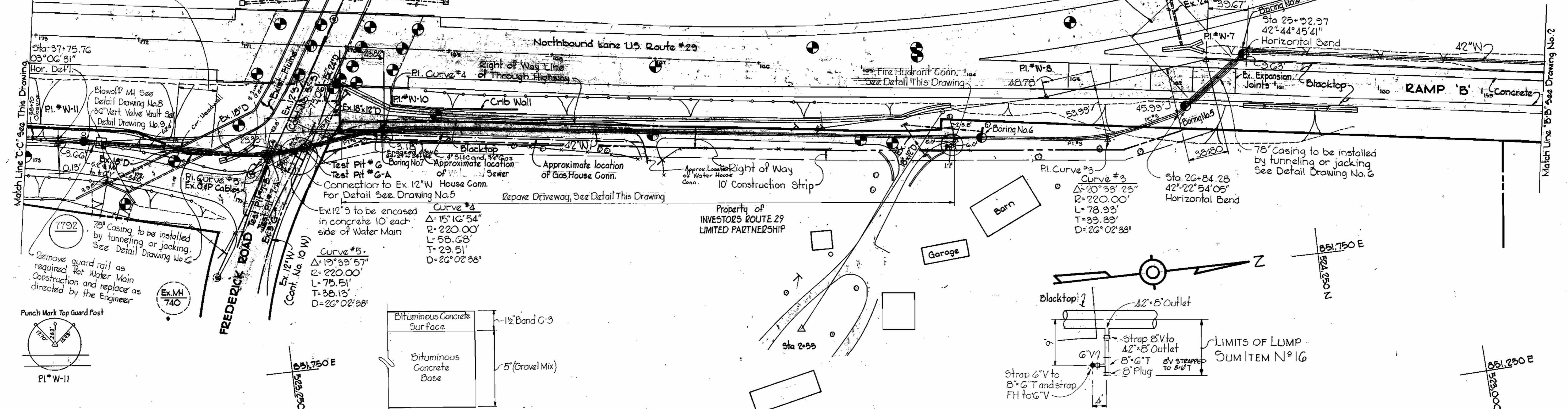
Project No. WP 8049
 Contract No. 568-W

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 1-22-74 DATE <i>W. O. Gilbert</i> CHIEF BUREAU OF ENGINEERING	CONTRACT NO. <u>568-W</u>	LOCATION PLAN	U.S. ROUTE 29 WATER MAIN U.S. ROUTE 40 TO SAINT JOHN'S LANE	DRAWING NO. <u>1</u> OF <u>9</u>	SCALE <u>1"=2000'</u>
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WS 568-W/1

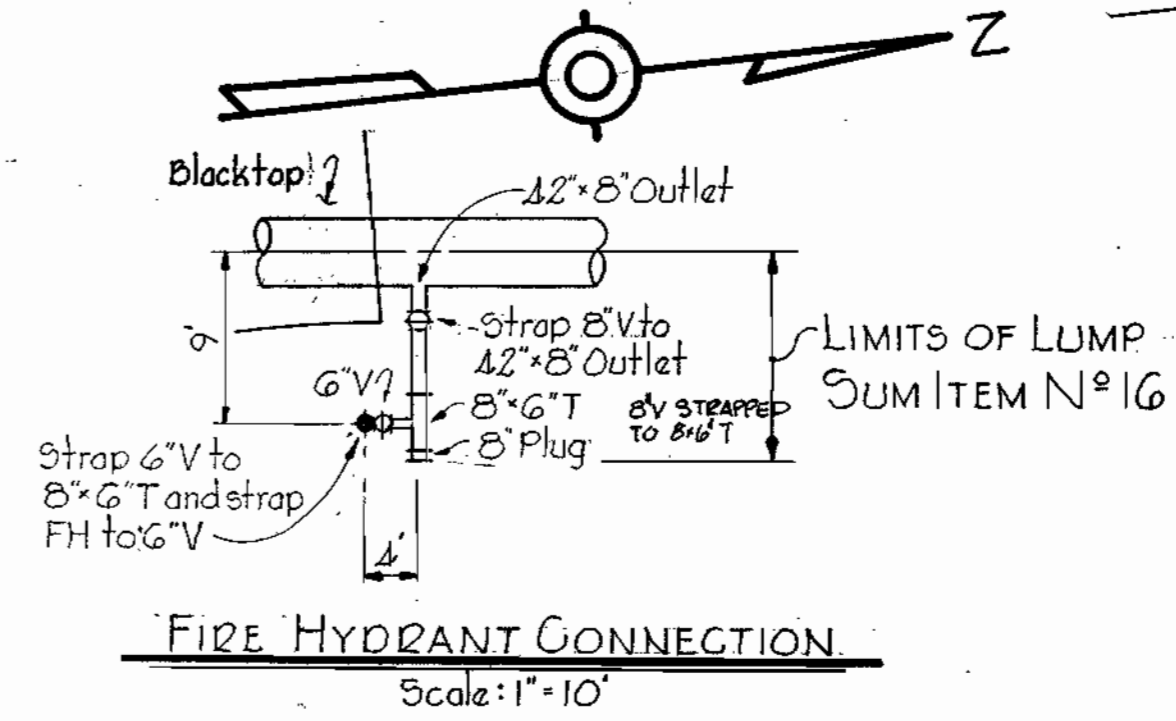
Test Pit # G Top Ex. 12" W Elev. 295.26
 Test Pit # G-A Top Ex. 3" G Elev. 298.10
 Test Pit # 7-A Top Concrete Slab Elev. 297.92
 Bottom 4 Channel Duct Elev. 296.28
 Test Pit # 7-B Top 18(3x6) Channel Duct Elev. 294.60
 Bottom 18(3x6) Channel Duct Elev. 292.10

CROSSING "C"
 LIMITS OF LUMP SUM
 ITEM No. 9
 Sta. 36+24 to 36+72.7

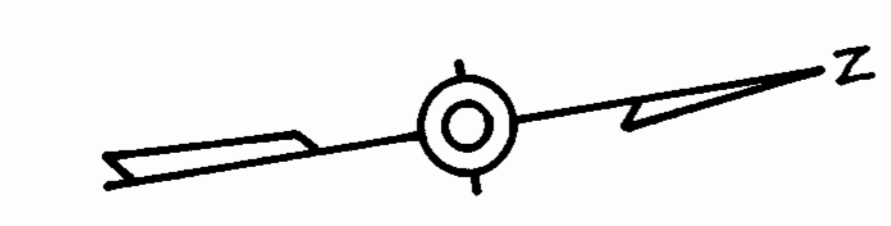
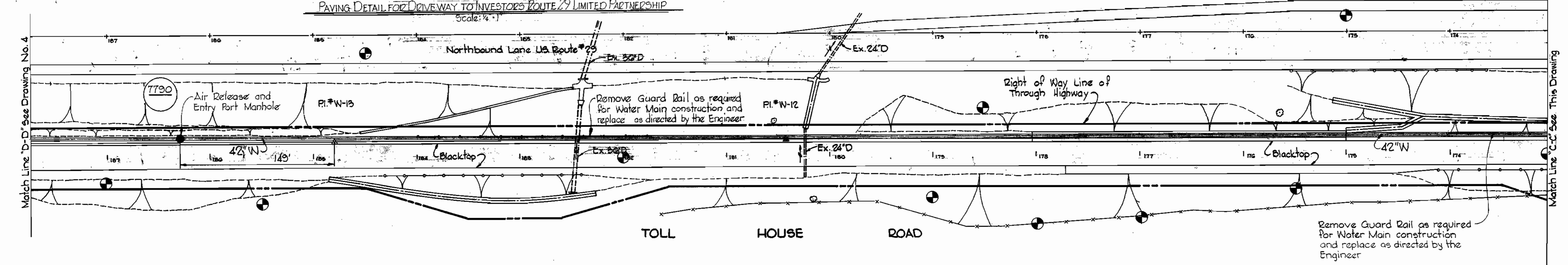


NOTE:
 1. To be constructed in accordance with The Howard County Road Construction Code and Specifications D-5.
 2. The dimensions of paving in this detail are minimum dimensions, and nothing shown in this detail shall relieve the Contractor of his responsibility to restore the existing driveway to at least its original condition.

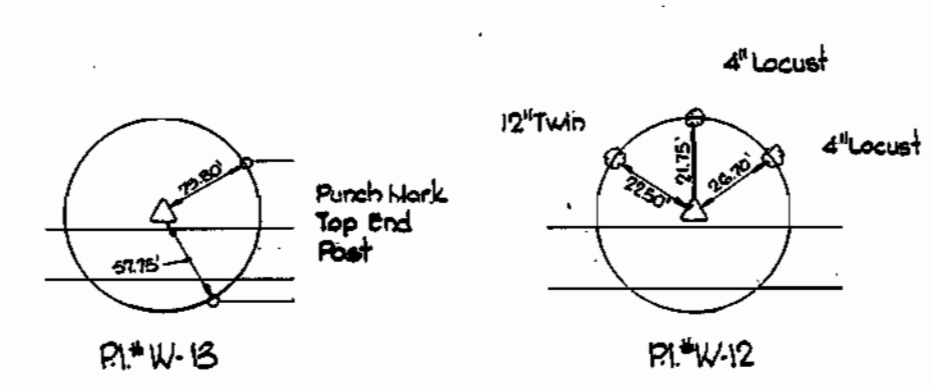
PAVING DETAIL FOR DRIVEWAY TO INVESTORS ROUTE 29 LIMITED PARTNERSHIP
 Scale: 1/4\"/>



FIRE HYDRANT CONNECTION
 Scale: 1\"/>



851,500 E
 523,000 N



Kenneth A. McCord

Project No. W.P. 8049
 Contract No. 568-W

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 1-22-74 <i>W. O. Gilbert</i> CHIEF-BUREAU OF ENGINEERING	CONTRACT NO. 568-W	PLAN OF WATER MAINS	U.S. ROUTE 29 WATER MAIN U.S. ROUTE 40 TO SAINT JOHN'S LANE	DRAWING NO. 3 OF 9 SCALE 1" = 50' 524-2 524-1 522-2 521-2
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W. O. 6840-2

February 18, 1976 AS BUILT

ws 568-w/3

suspend ex

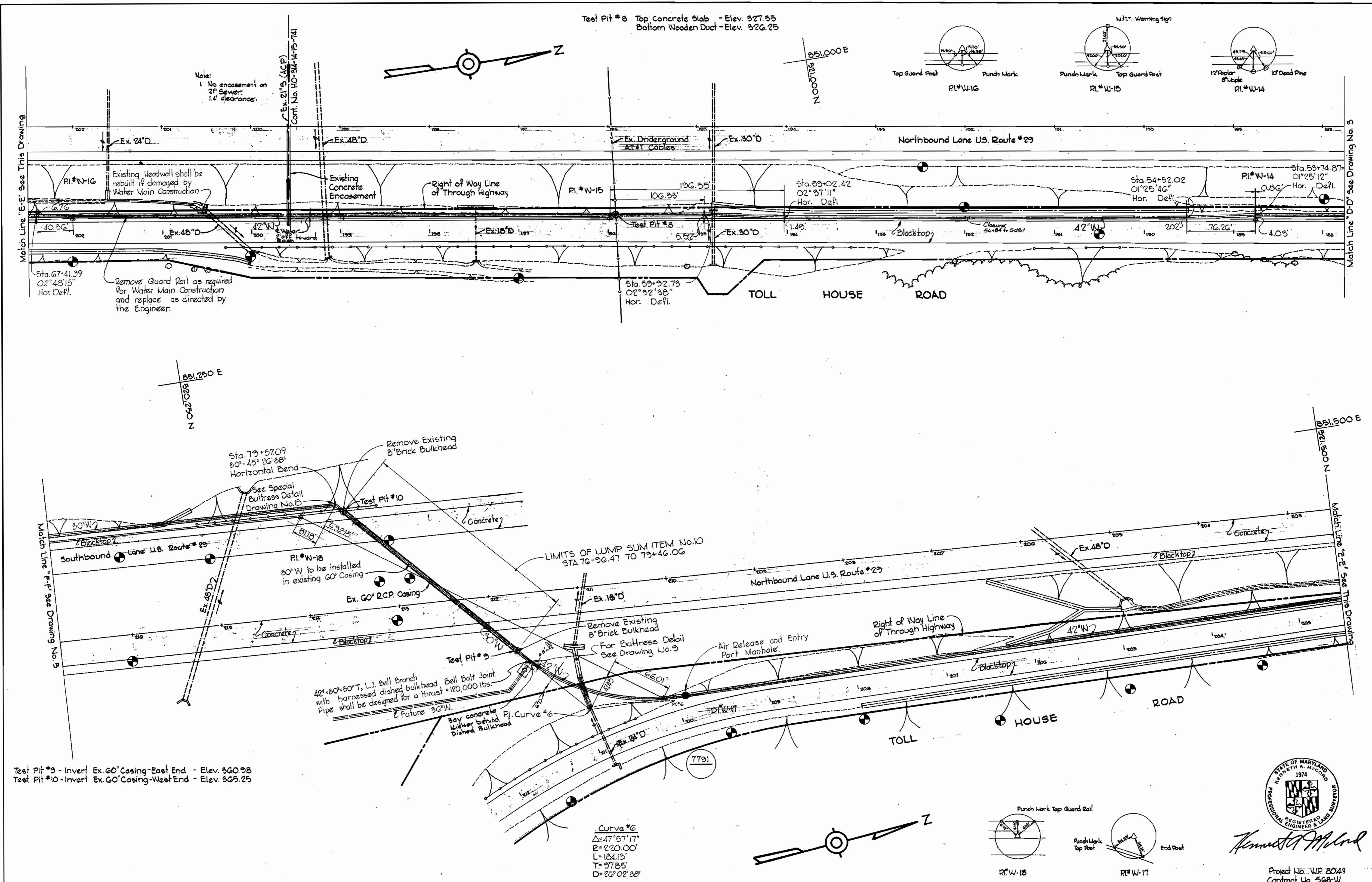
suspend ex

DRAWING 4451C 1-7-72

suspense

suspense

suspense



Test Pit #9 - Invert Ex. 60" Casing - East End - Elev. 320.98
 Test Pit #10 - Invert Ex. 60" Casing - West End - Elev. 325.25

Curve #6
 $\Delta = 47^\circ 57' 17''$
 $R = 220.00'$
 $L = 184.13'$
 $T = 97.85'$
 $D = 22^\circ 02' 38''$



Kenneth A. McCord

Project No. W.P. 8049
 Contract No. 568-W

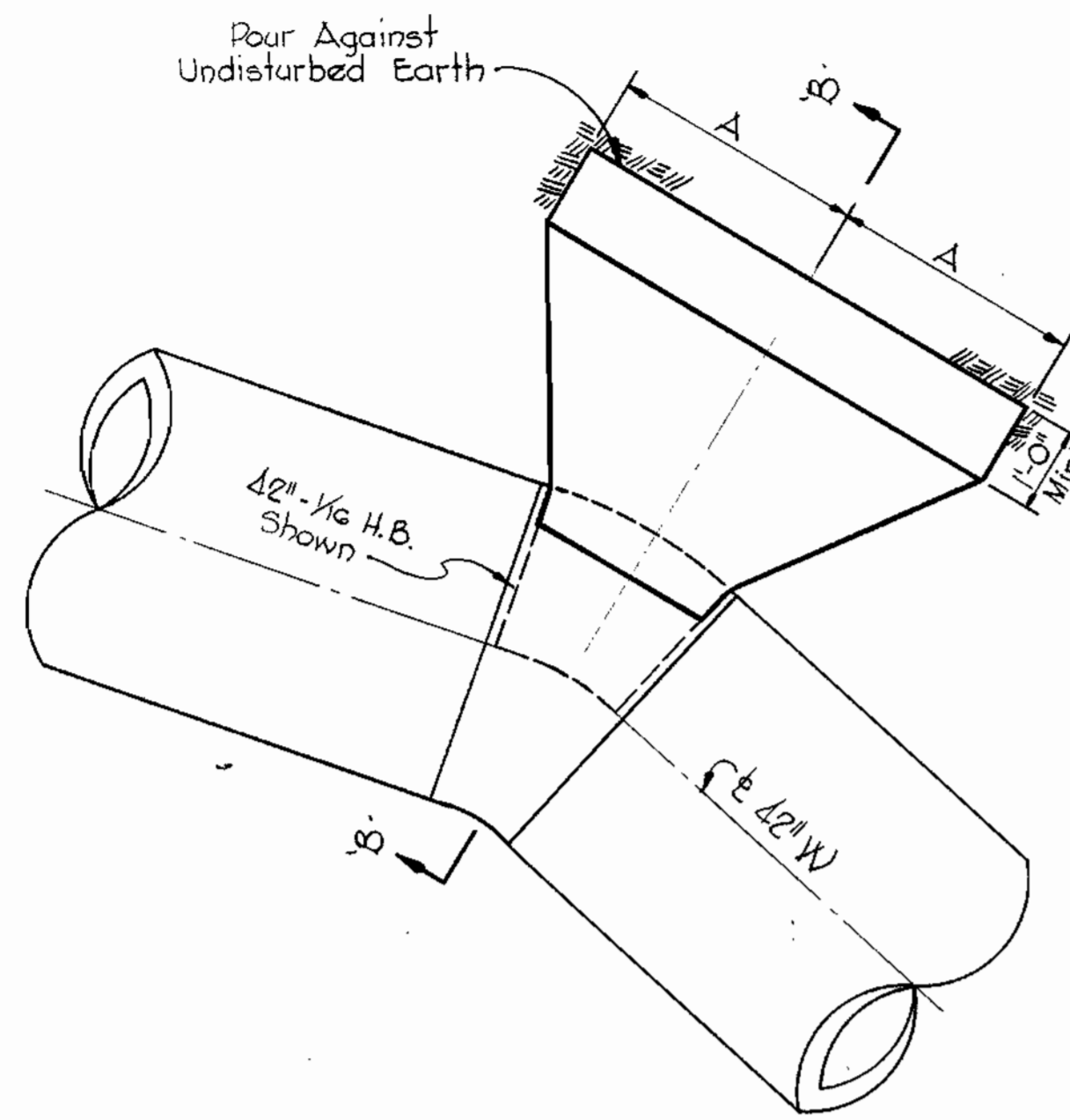
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 1-22-74 DATE <i>W. O. Fabert</i> CHIEF BUREAU OF ENGINEERING	CONTRACT NO. 568-W	PLAN OF WATER MAINS	U.S. ROUTE 29 WATER MAIN U.S. ROUTE 40 TO SAINT JOHN'S LANE	DRAWING NO. 4 OF 9 SCALE 1" = 50' 821-2 825-2 815-2 818-2
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W. O. 6840-2

FB#5472, 5478, 5481
 February 18, 1976 AS BUILT

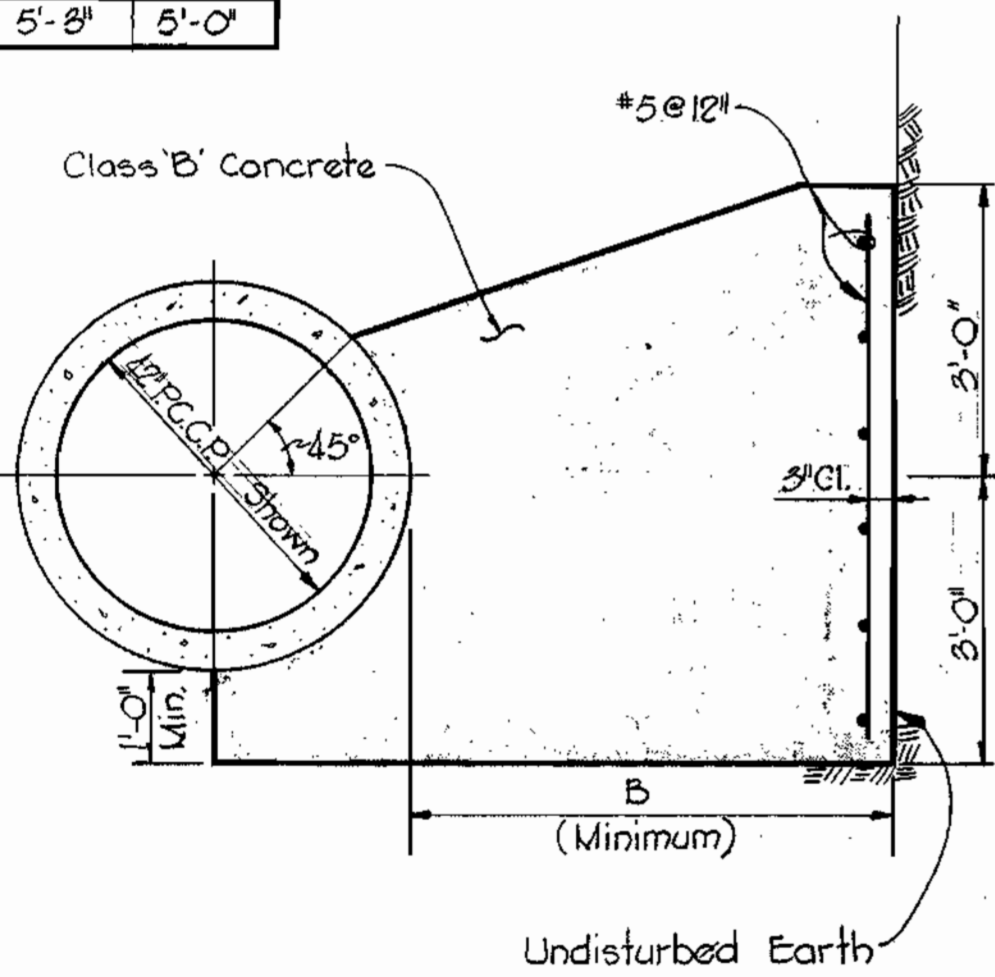
ws 568w/4

BRINING 44-510 B332



PLAN

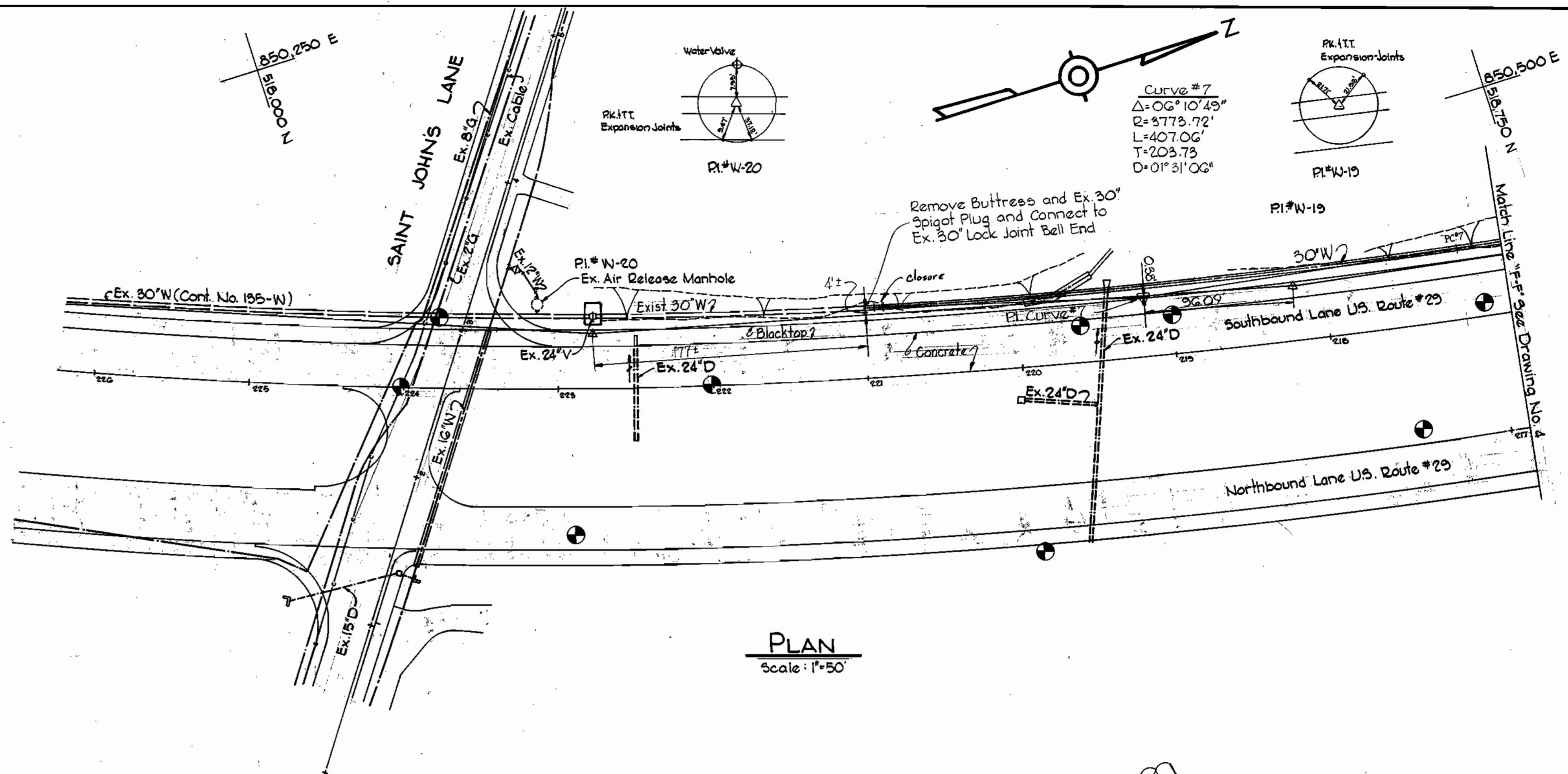
Buttress Schedule		
Size	A	B
42" x 1/8 H.B.	3'-0"	3'-0"
42" x 1/8 H.B.	5'-8"	5'-0"



SECTION 'B-B'

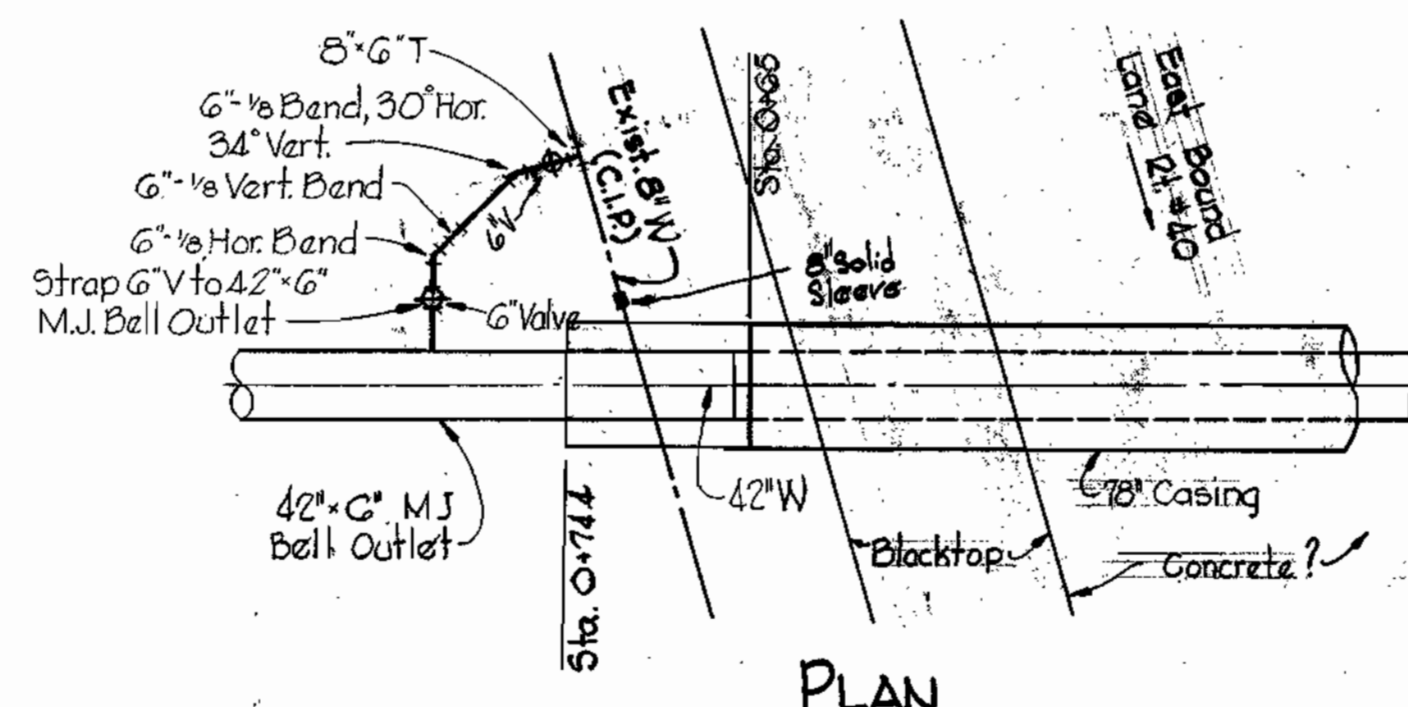
BUTTRESS DETAILS

Scale: 1/2" = 1'-0"

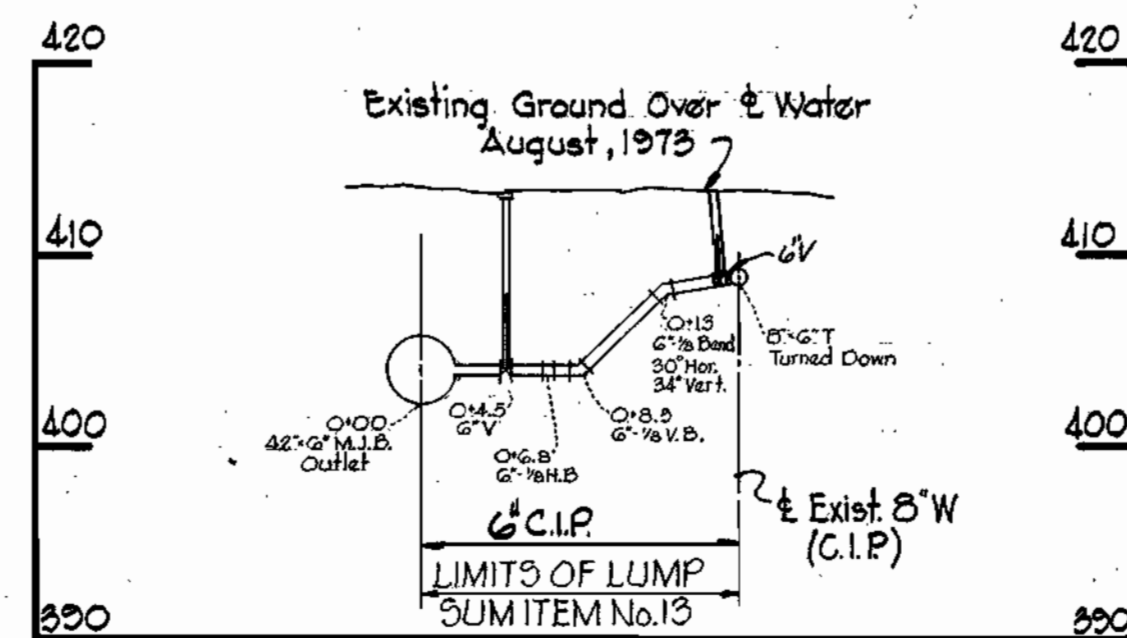


PLAN

Scale: 1" = 50'



PLAN



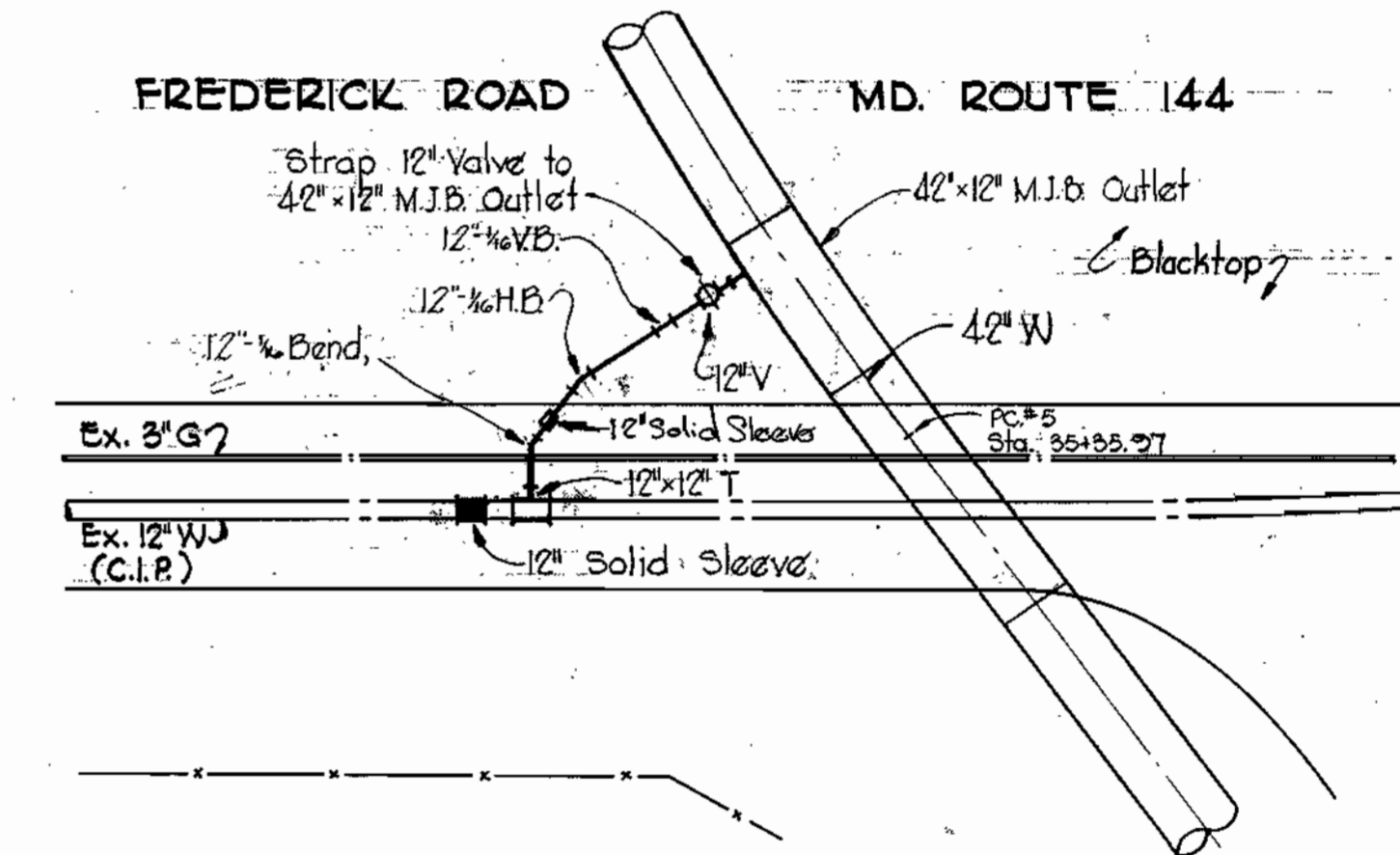
PROFILE

CONNECTION TO EXISTING 8" W

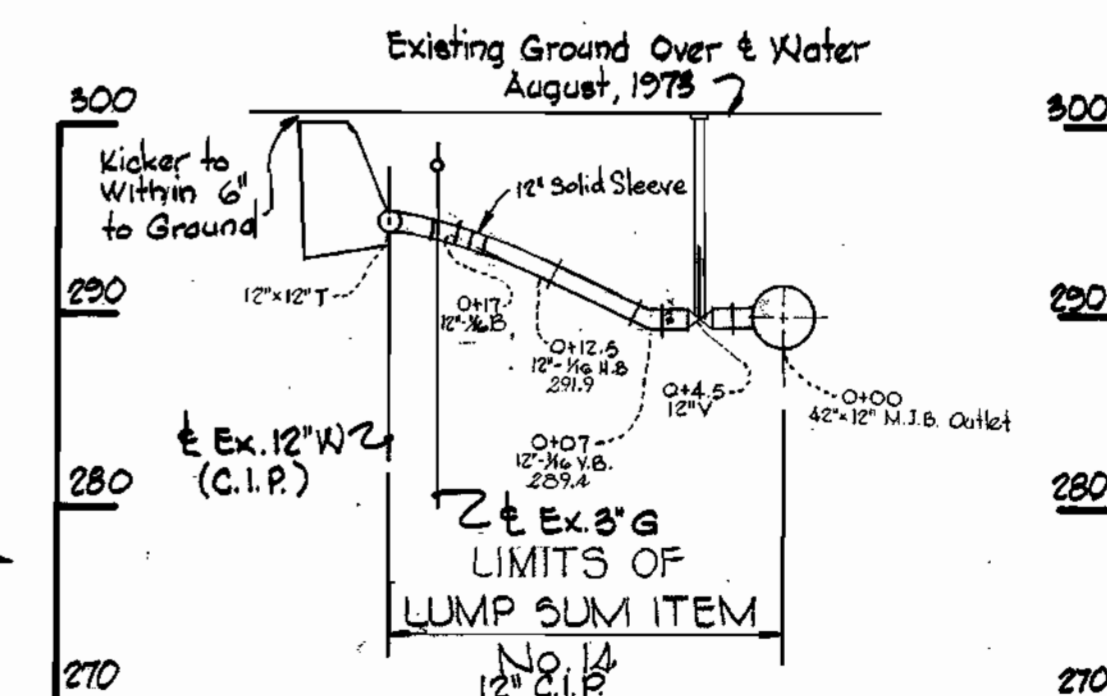
Scale: 1" = 10'

NOTE: Time of connection to existing water mains to be as directed by Howard County Dept. of Public Works. It may be at any time on any day or night.

Note: All Pitting are strapped together.



PLAN



PROFILE

CONNECTION TO EXISTING 12" W

Scale: 1" = 10'



Kenneth A. McCord

Project No. W.P. 8049
Contract No. 568-W

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
1-22-74
DATE

W. O. Sallent
CHIEF BUREAU OF ENGINEERING

CONTRACT NO. 568-W

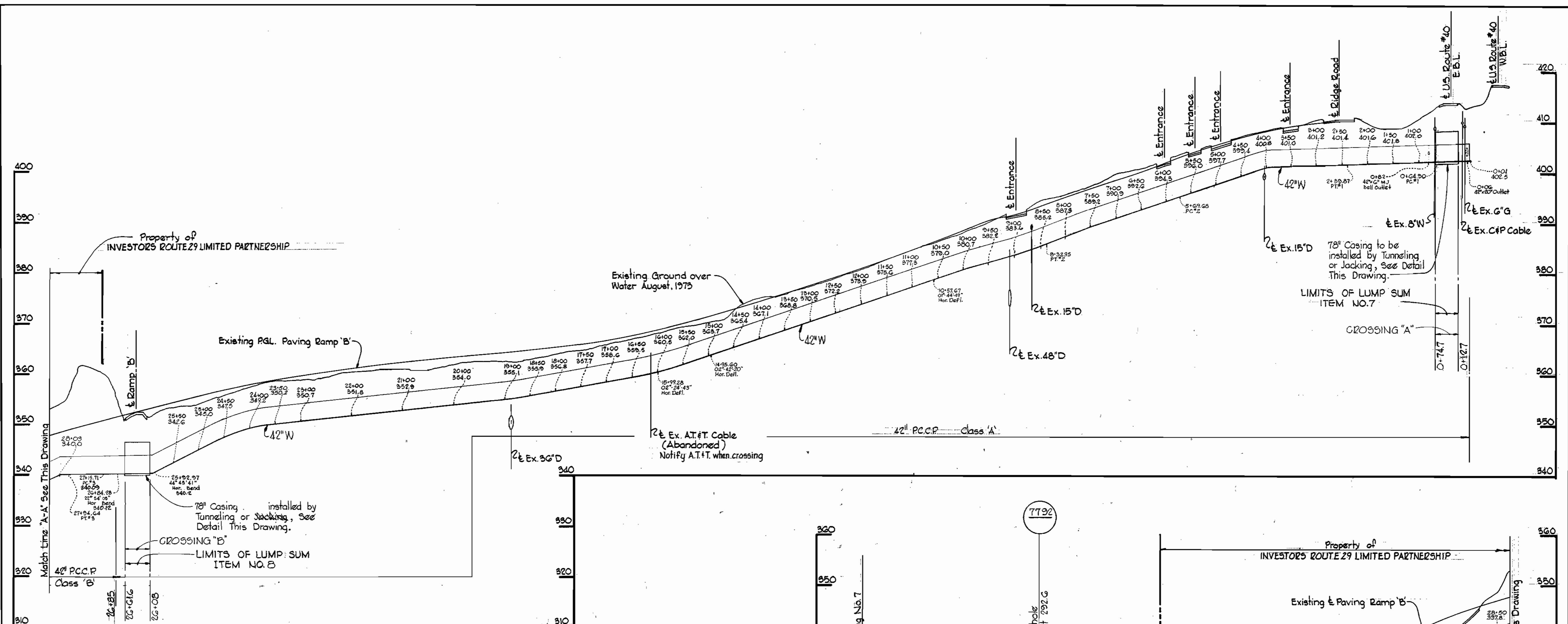
PLAN AND DETAILS OF
WATER MAINS

U.S. ROUTE 29 WATER MAIN
U.S. ROUTE 40 TO
SAINT JOHN'S LANE

DRAWING
NO. 5
OF 9

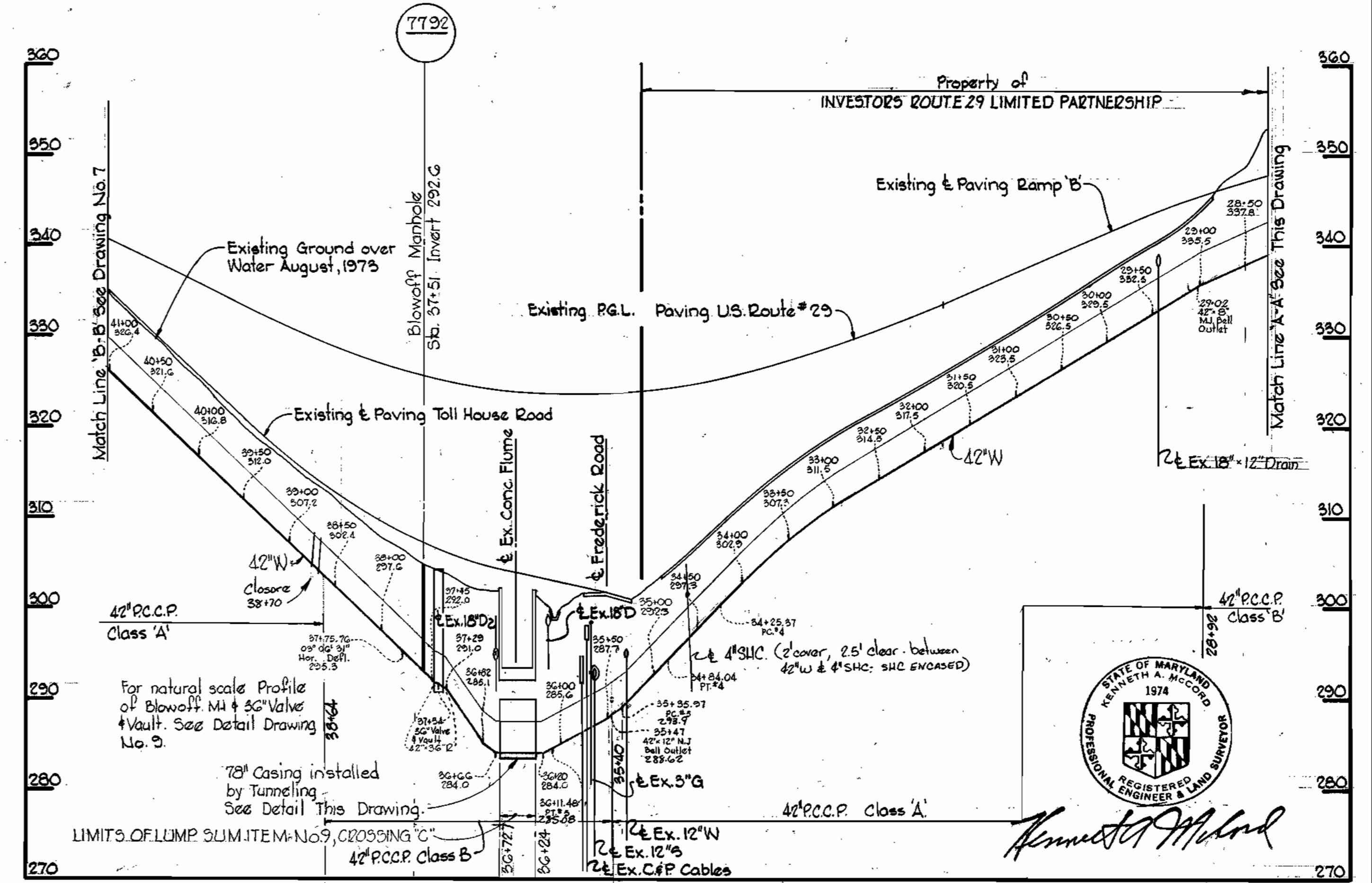
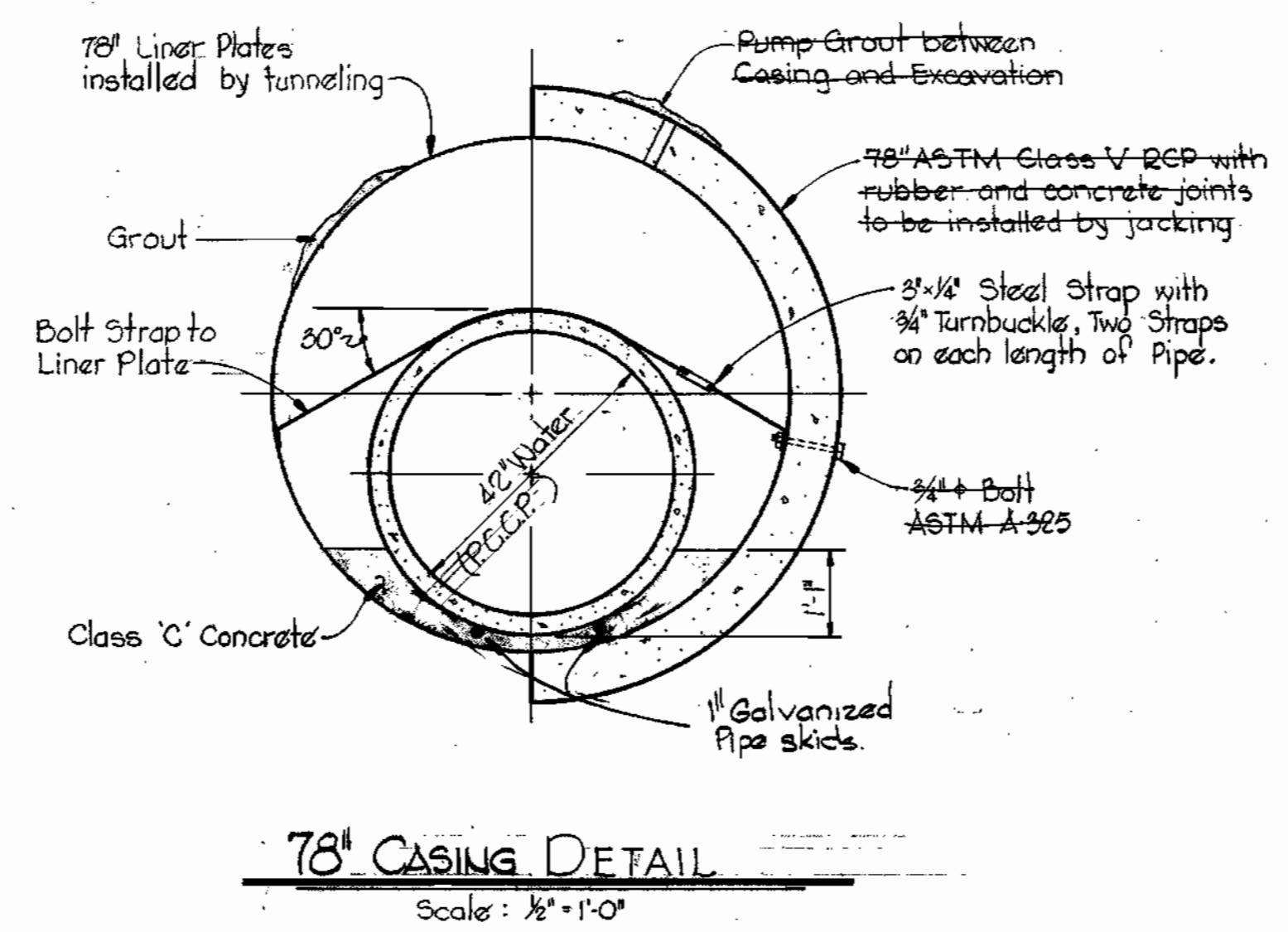
SCALE
AS
SHOWN

WS 568-W/5



LINER PLATE SCHEDULE	
Manufacturer	Thickness
Republic	12 gage

- NOTES:
1. Tunnel liner plate to be hot dipped galvanized in accordance with ASTM A 123 and coated with Bitumastic 50 as manufactured by the Koppers Co. or approved equal.
 2. A joint shall be provided in the water main within 12-inches of each outside end of 78-inch casing.
 3. Provide 8-inch brick bulkhead at each end of casing. Provide drain pipes through bulkhead on each side of water main at low end of casing. (2-2 1/2")
 4. Paint all Straps with 2 coats Mobile Asphalt 35-J-11 or approved equal.



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



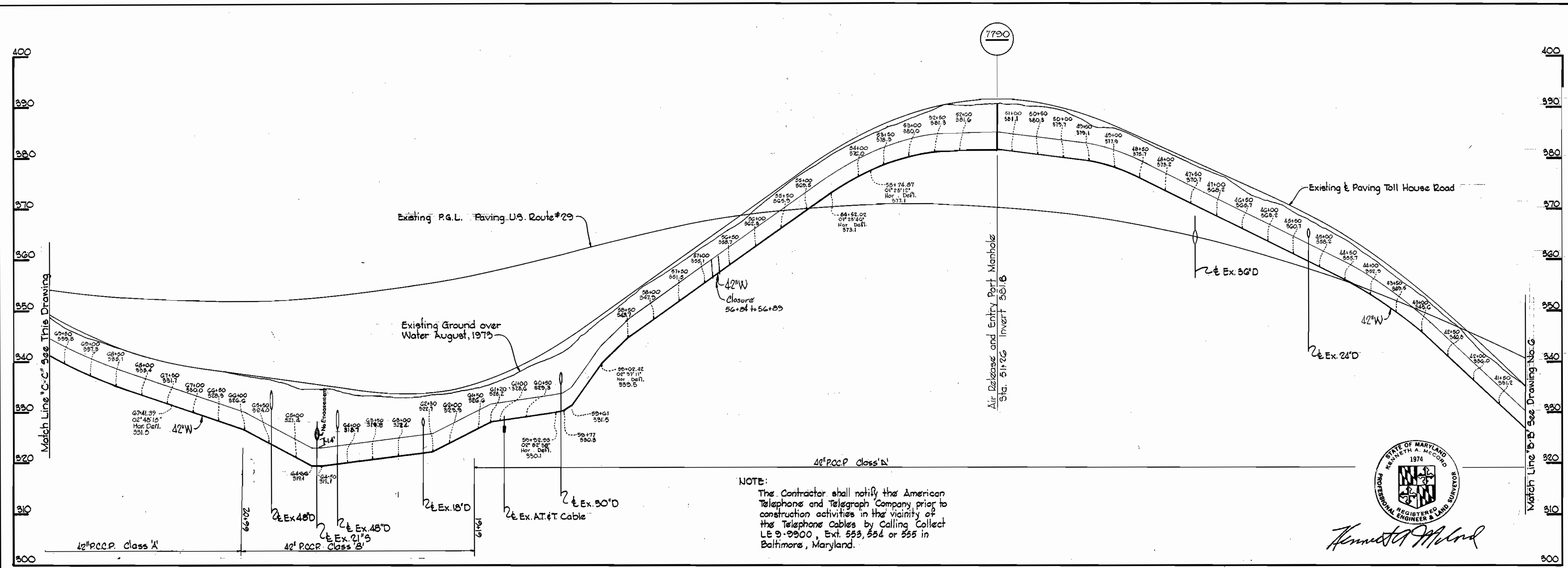
Kenneth A. McCord

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 1-22-74 <i>W. O. Felbert</i> CHIEF BUREAU OF ENGINEERING	CONTRACT NO. 568-W	PROFILES AND DETAILS OF WATER MAINS	U.S. ROUTE 29 WATER MAIN U.S. ROUTE 40 TO SAINT JOHN'S LANE	DRAWING NO. 6 OF 9	SCALE AS SHOWN
					Project No. WP-2049 Contract No. 568-W	February 18, 1976

W. O. 6840-2

February 18, 1976 AS BUILT

WS 568-W/6



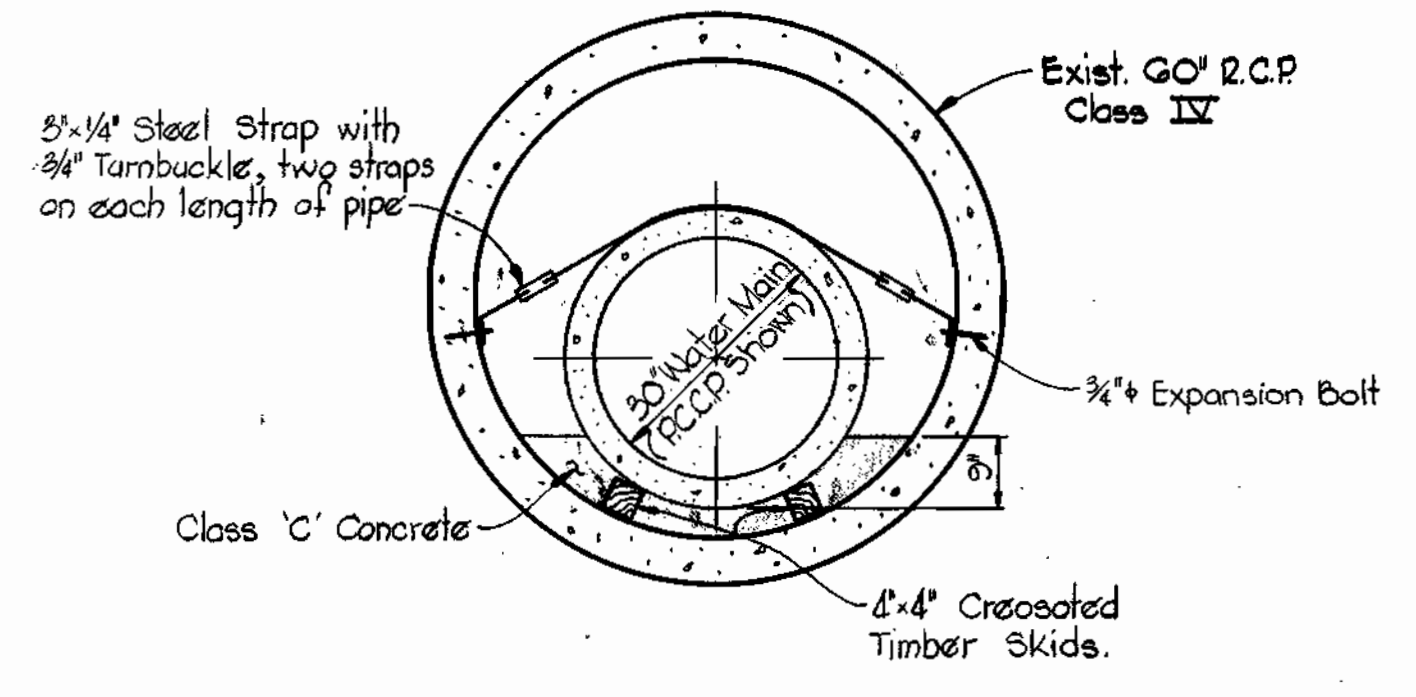
NOTE:
The Contractor shall notify the American Telephone and Telegraph Company prior to construction activities in the vicinity of the Telephone Cables by Calling Collect LE 9-9900, Ext. 553, 554 or 555 in Baltimore, Maryland.



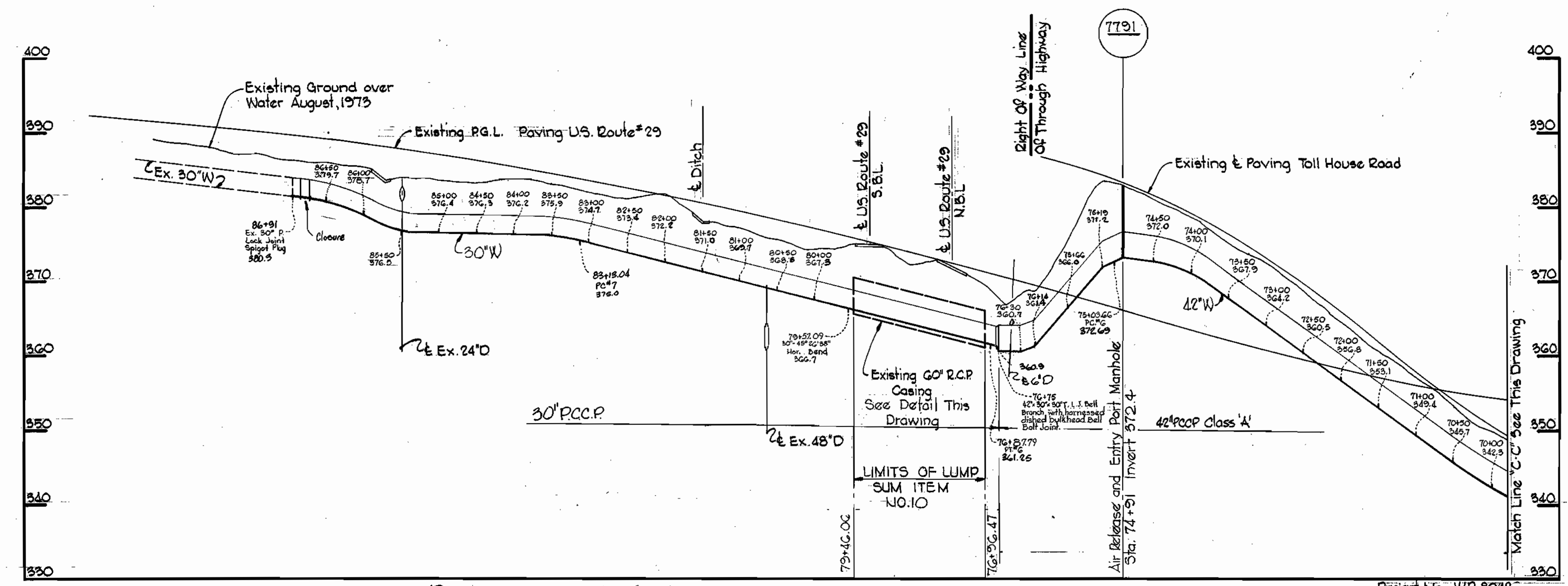
Kenneth A. McCord

NOTES:

1. Paint all exposed steel with two coats of Mobile Asphalt 35-J-11 or approved equal.
2. A joint shall be provided in the water main within 12 inches of each outside end of existing 60 inch casing.
3. Provide 8-inch brick bulkhead at each end of casing. Provide drain pipes through bulkhead on each side of water main at low end of casing (2'-2").



DETAIL OF EXISTING 60" CASING UNDER ROUTE #29
Scale: 1/2" = 1'-0"



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

Project No. W.P. 8049
Contract No. 568-W

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 1-22-74 W. O. Filbert CHIEF-BUREAU OF ENGINEERING	CONTRACT NO. 568-W	PROFILES AND DETAILS OF WATER MAINS	U.S. ROUTE 29 WATER MAIN U.S. ROUTE 40 TO SAINT JOHN'S LANE	DRAWING NO. 7 OF 9 SCALE AS SHOWN
-----------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------	--------------------	----------------------------------------	-------------------------------------------------------------------	--------------------------------------

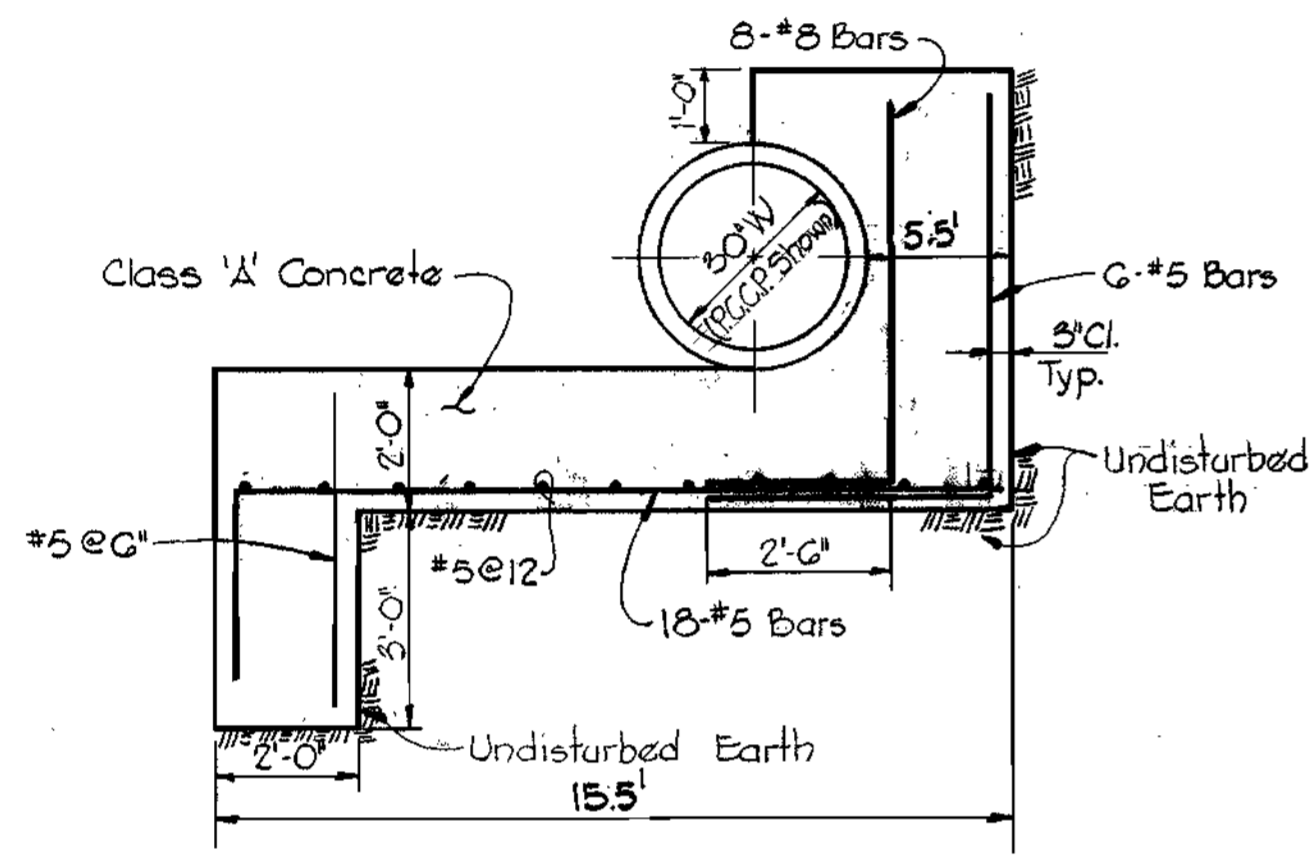
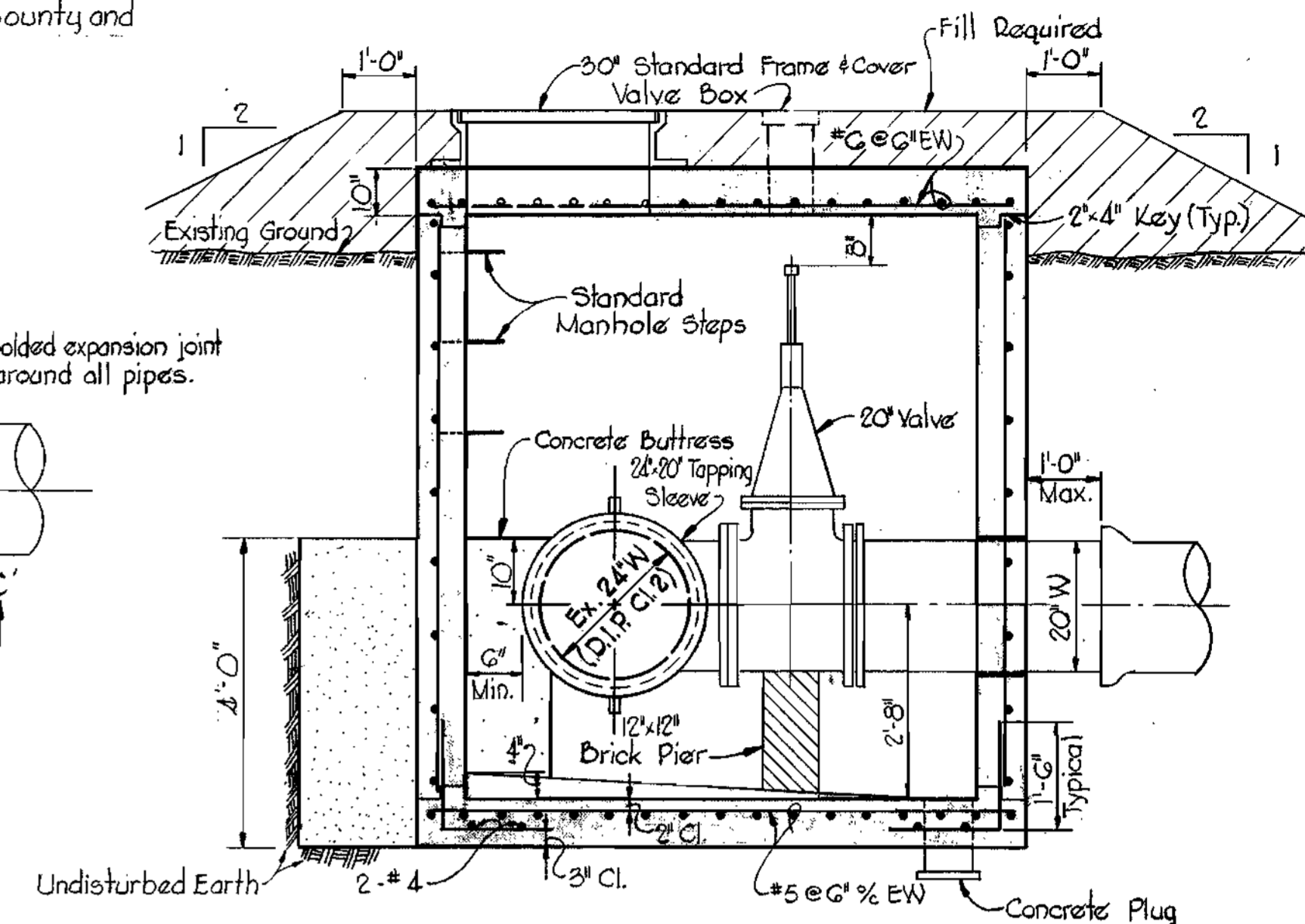
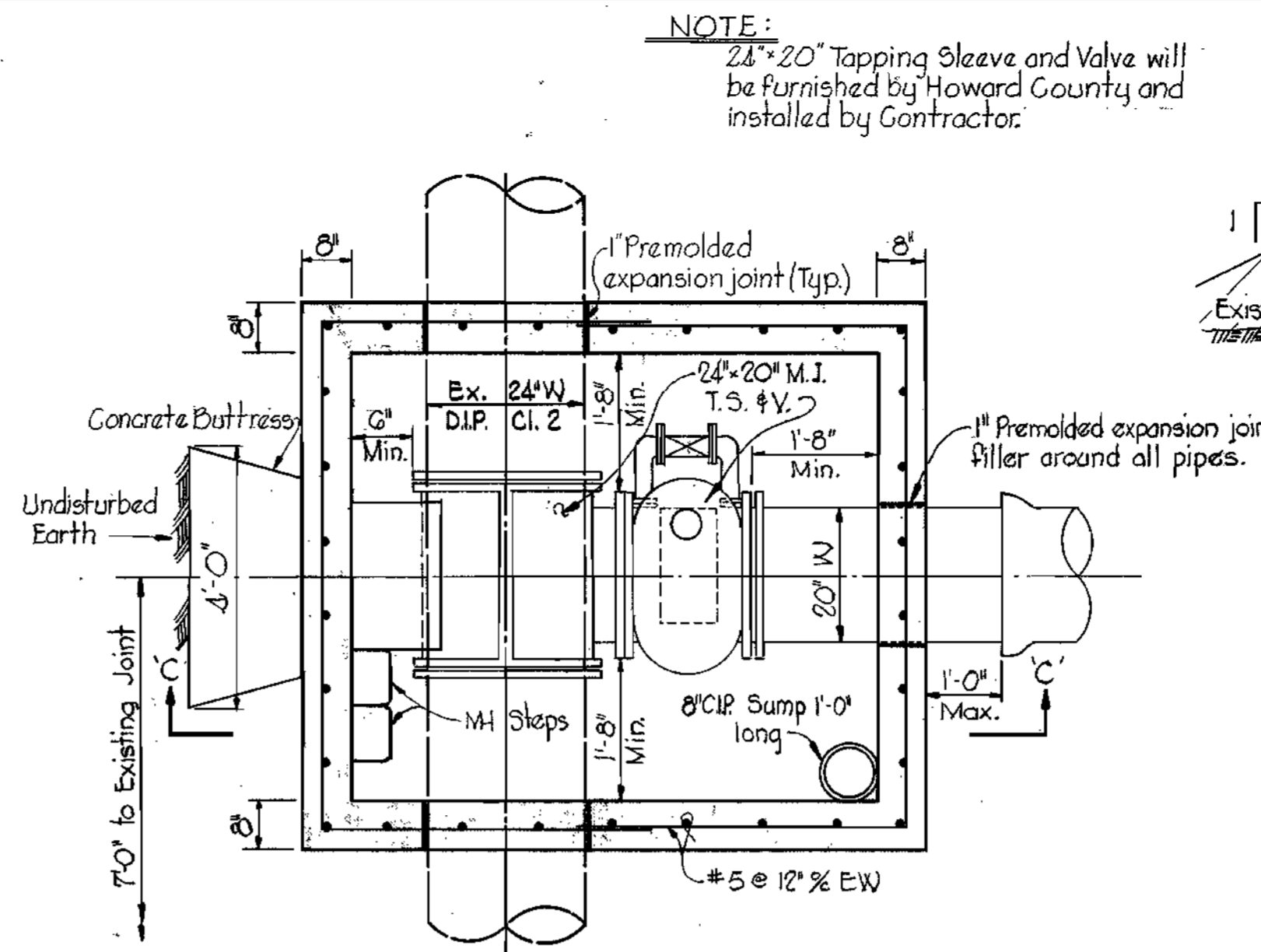
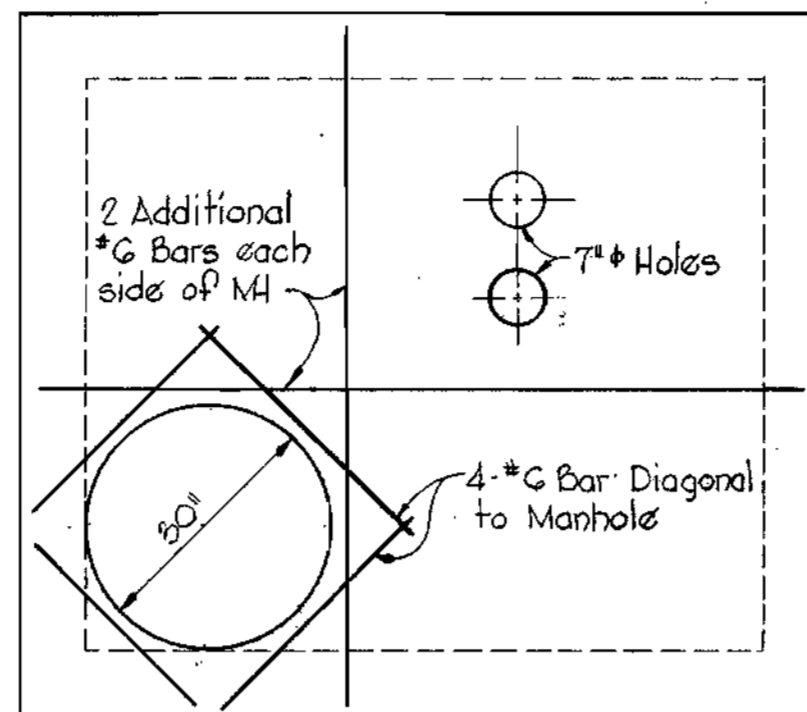
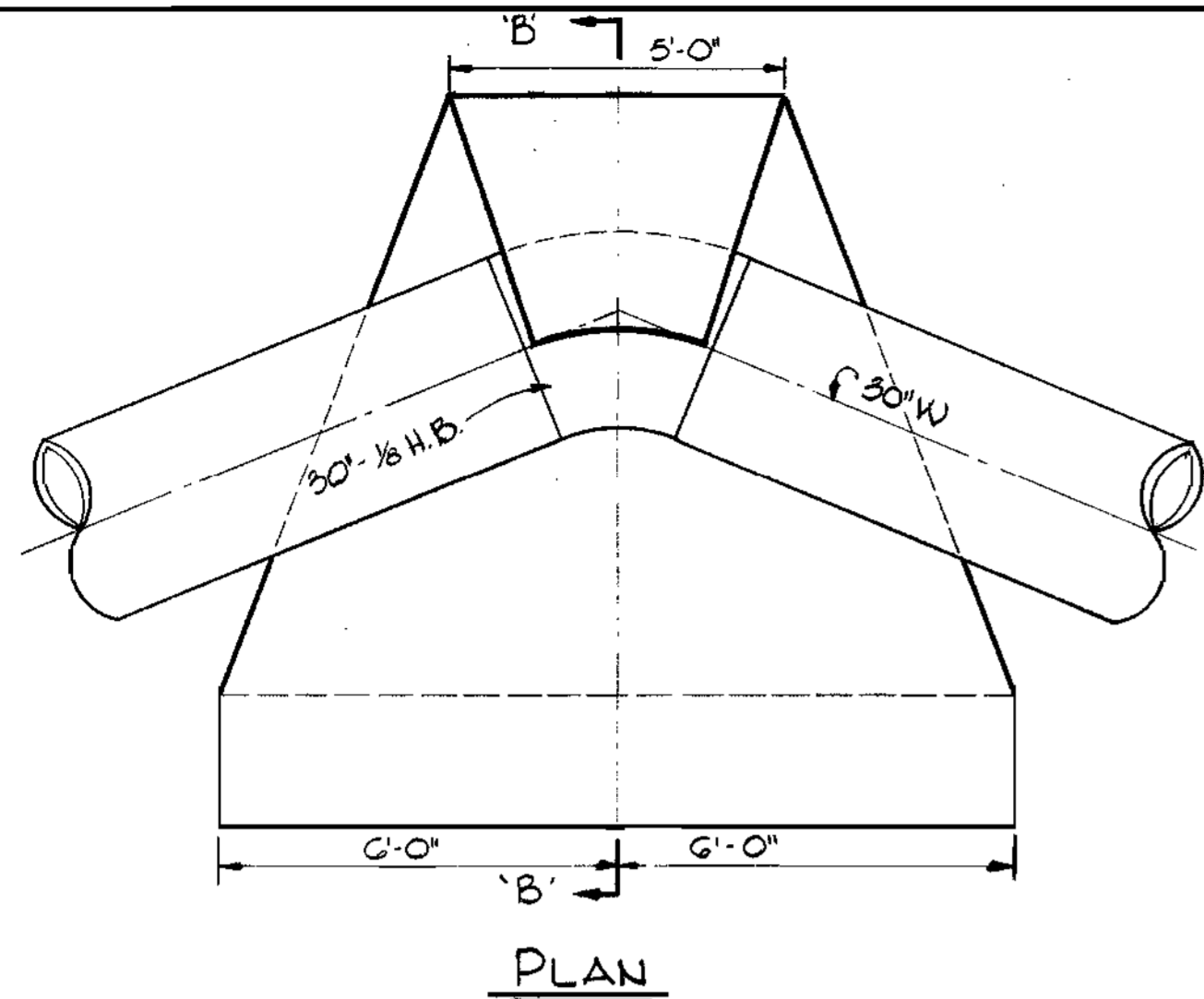
W. O. 6840-2

February 18, 1976

AS BUILT

WS 568-W/1

BRUNING 44,510 18382



SPECIAL BUTTRESS DETAIL
Scale: 3/8" = 1'-0"

TOP SLAB

SECTIONAL PLAN

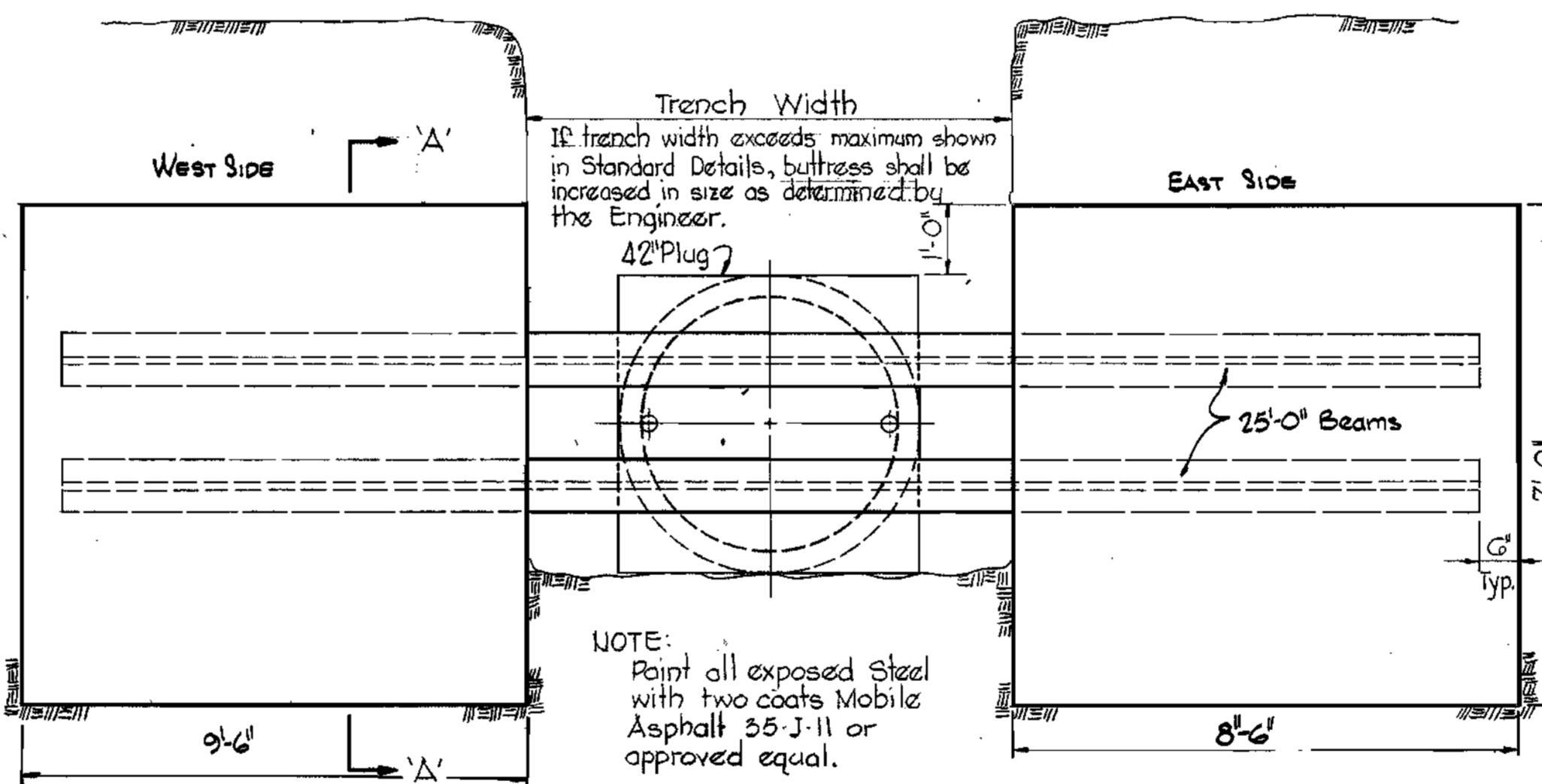
SECTION 'C-C'

24" x 20" TAPPING SLEEVE AND VALVE VAULT

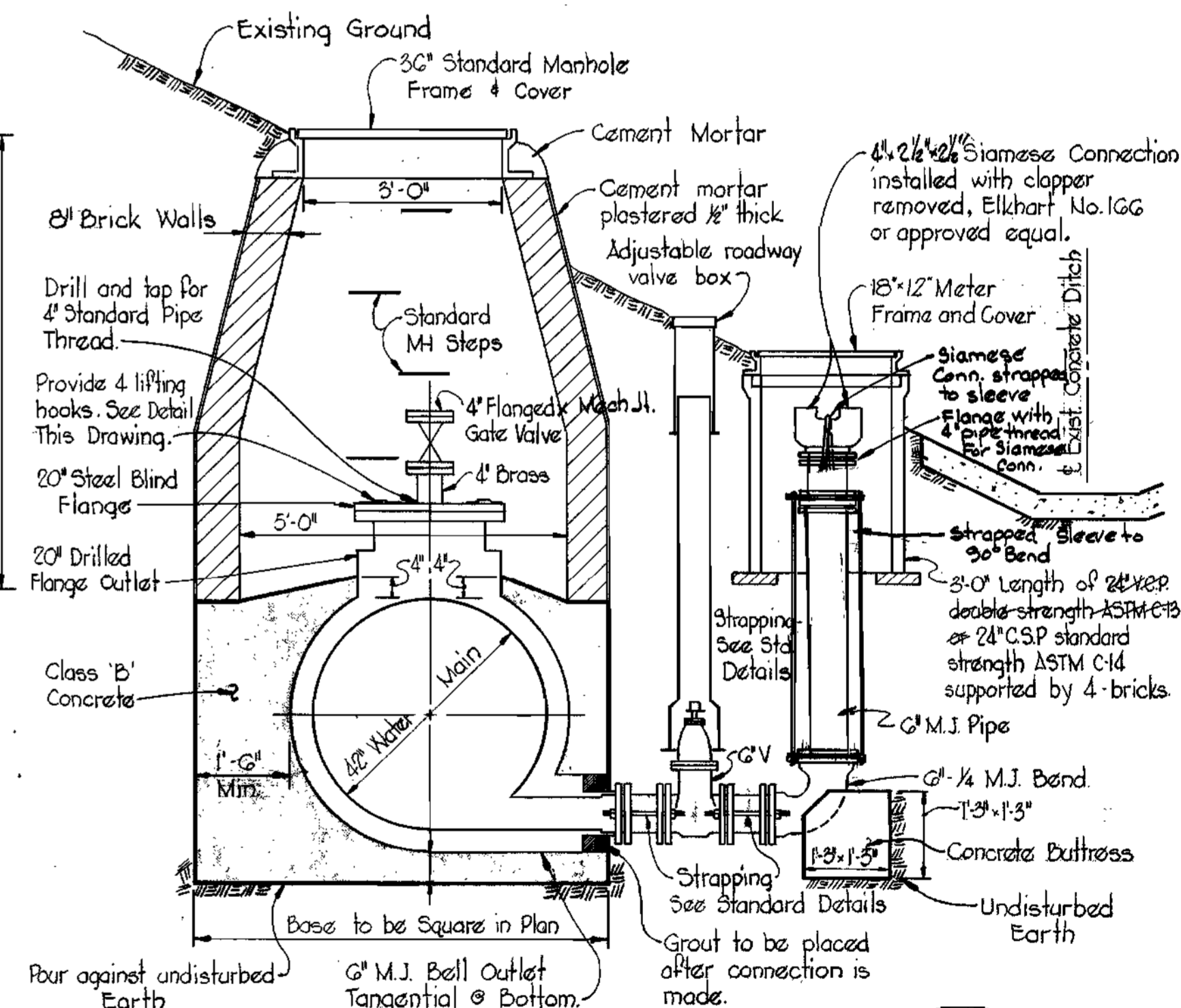
Scale: 1/2" = 1'-0"

NOTES:

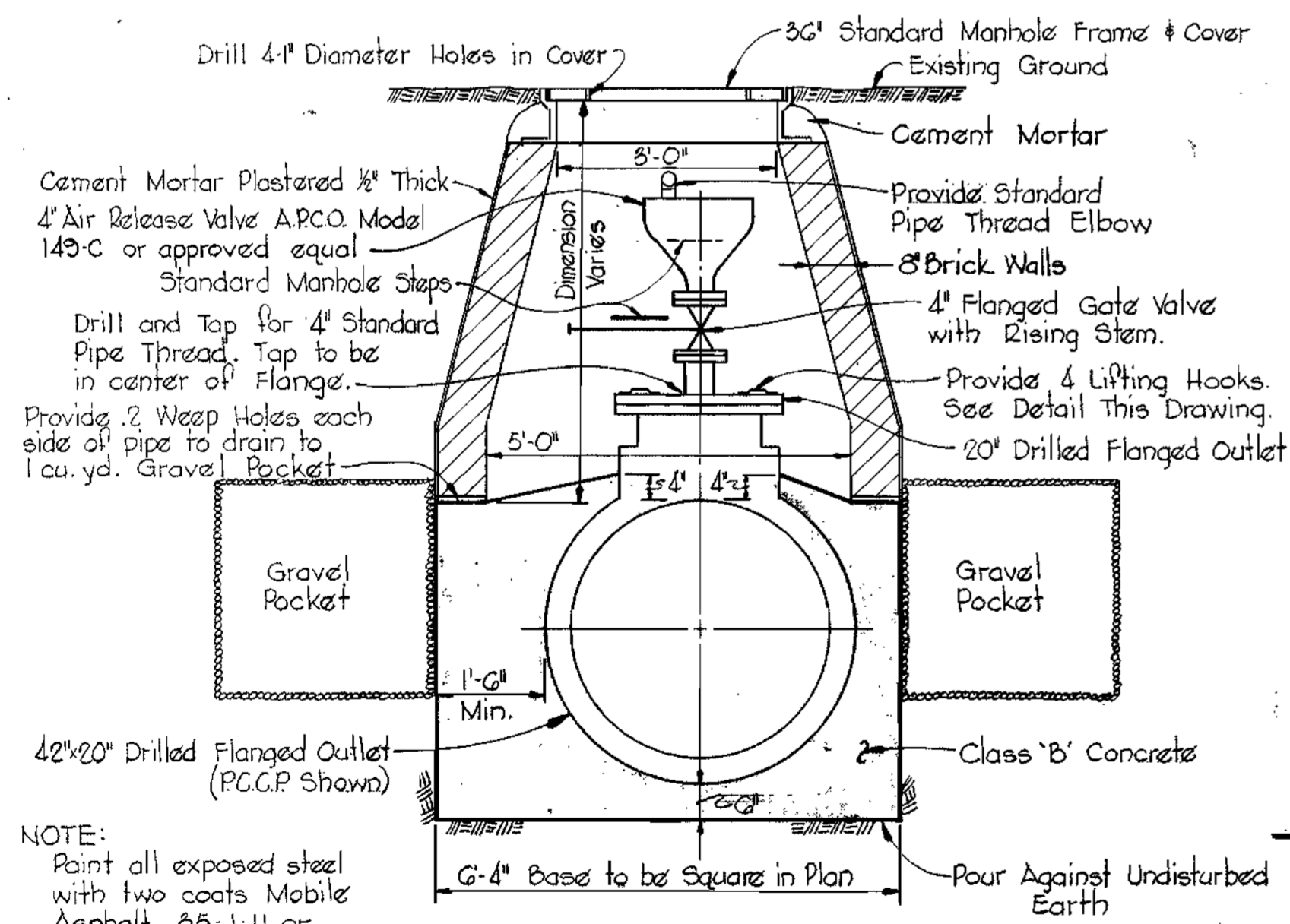
- All concrete shall be Class 'A'.
- Reinforcing steel shall conform to A.S.T.M. A-615-70 Grade 40.
- Reinforcing Bar Laps and Dowel projections shall be 30 Bar diameters unless otherwise noted.
- All exposed concrete edges shall be chamfered 3/4".
- For additional reinforcing around openings in walls and slabs, see Note on Drawing Uo.9.



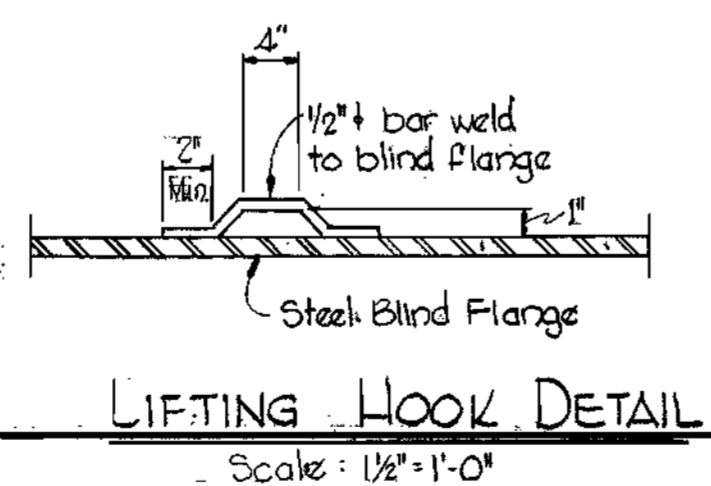
ELEVATION



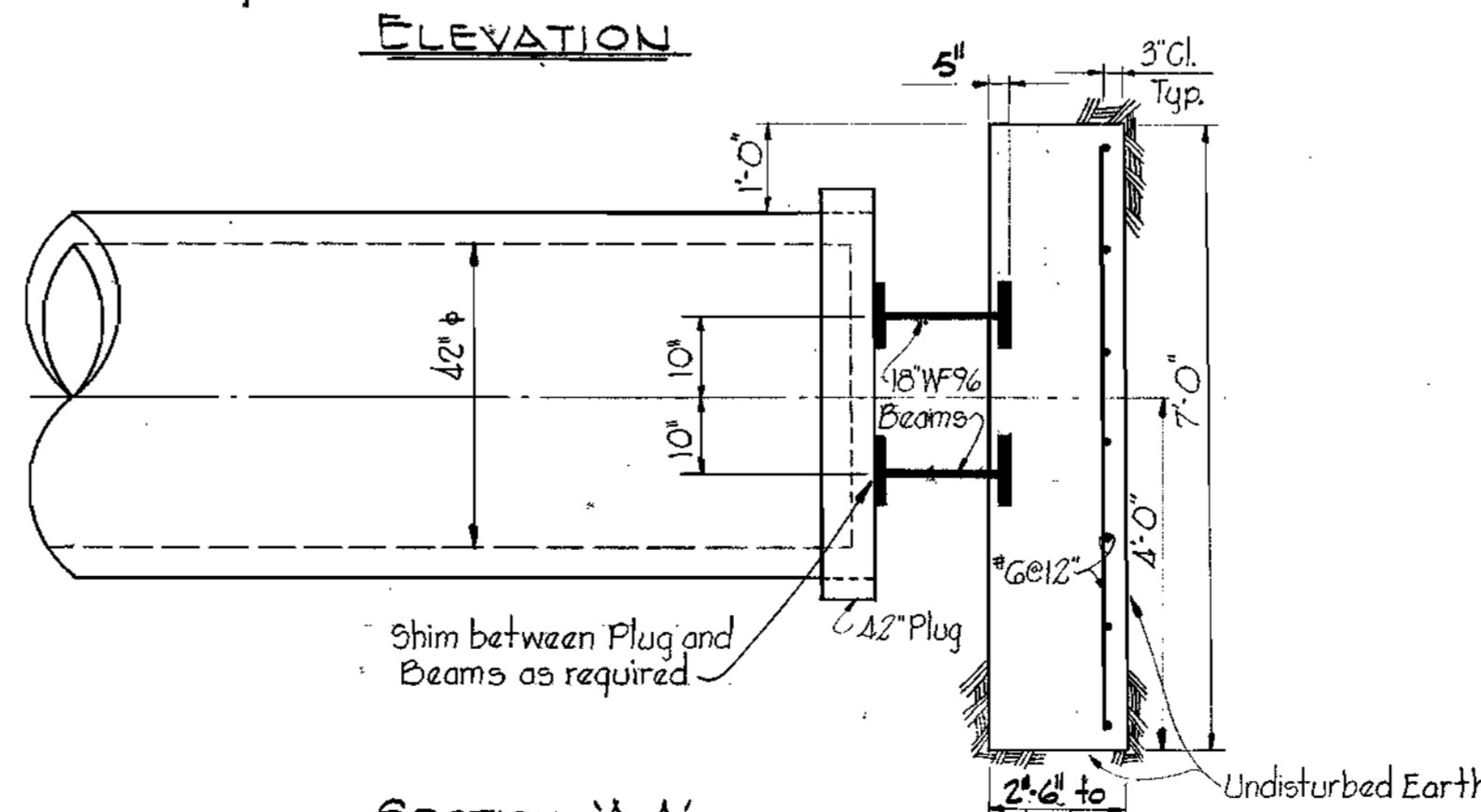
BLOWOFF DETAIL
Scale: 1/2" = 1'-0"



AIR RELEASE AND ENTRY PORT MANHOLE
Scale: 1/2" = 1'-0"



LIFTING HOOK DETAIL
Scale: 1/2" = 1'-0"



SECTION 'A-A'
SPLIT BEAM BUTTRESS
Scale: 1/2" = 1'-0"



Kenneth M. Lind

Project No. W.P. 2049
Contract No. 568-W

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
1-22-74
DATE
W. O. Falbert
CHIEF BUREAU OF ENGINEERING

CONTRACT NO. 568-W

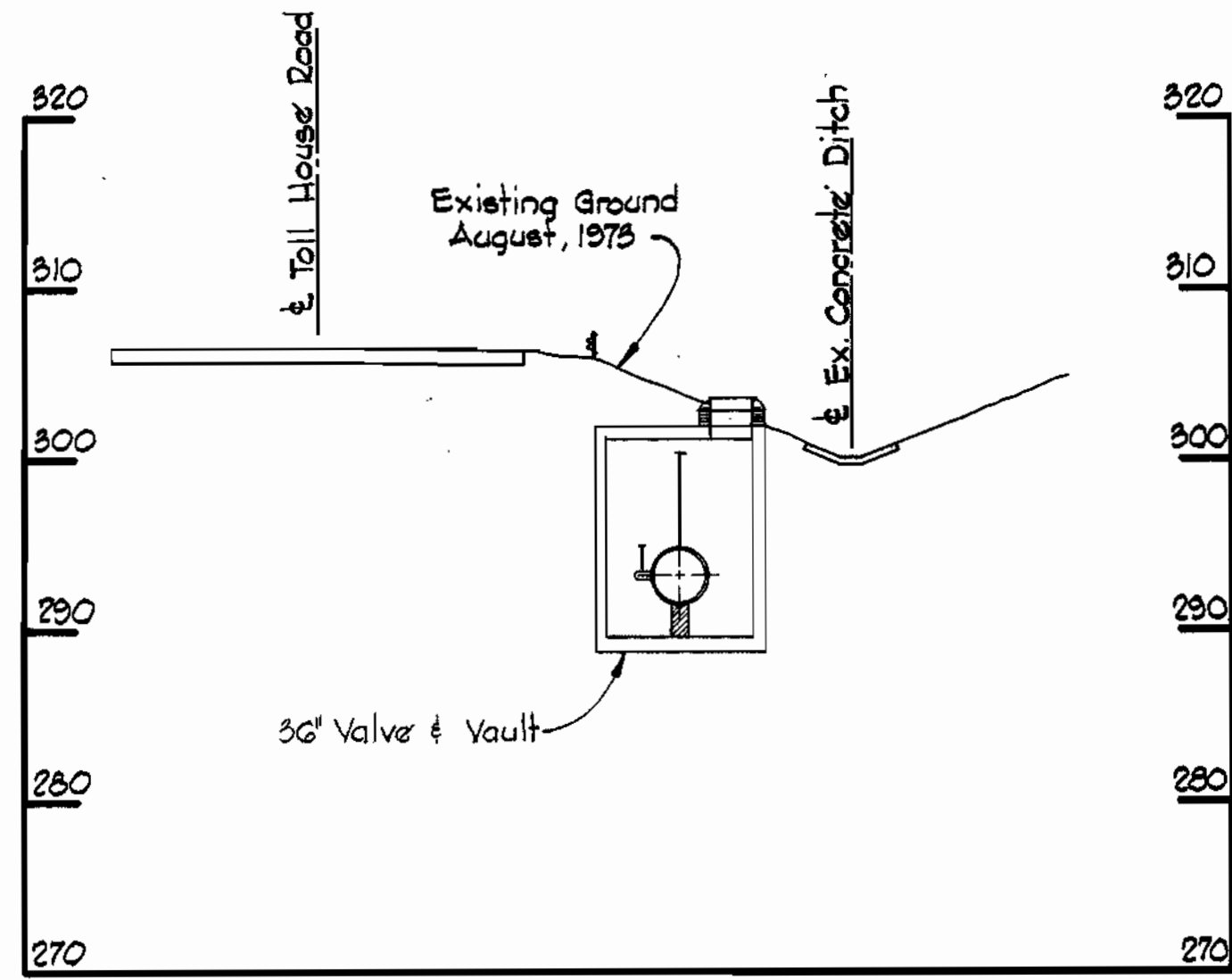
DETAILS OF
WATER MAINS

U.S. ROUTE 29 WATER MAIN
U.S. ROUTE 40 TO
SAINT JOHN'S LANE

DRAWING NO. 8 OF 9 SCALE AS SHOWN

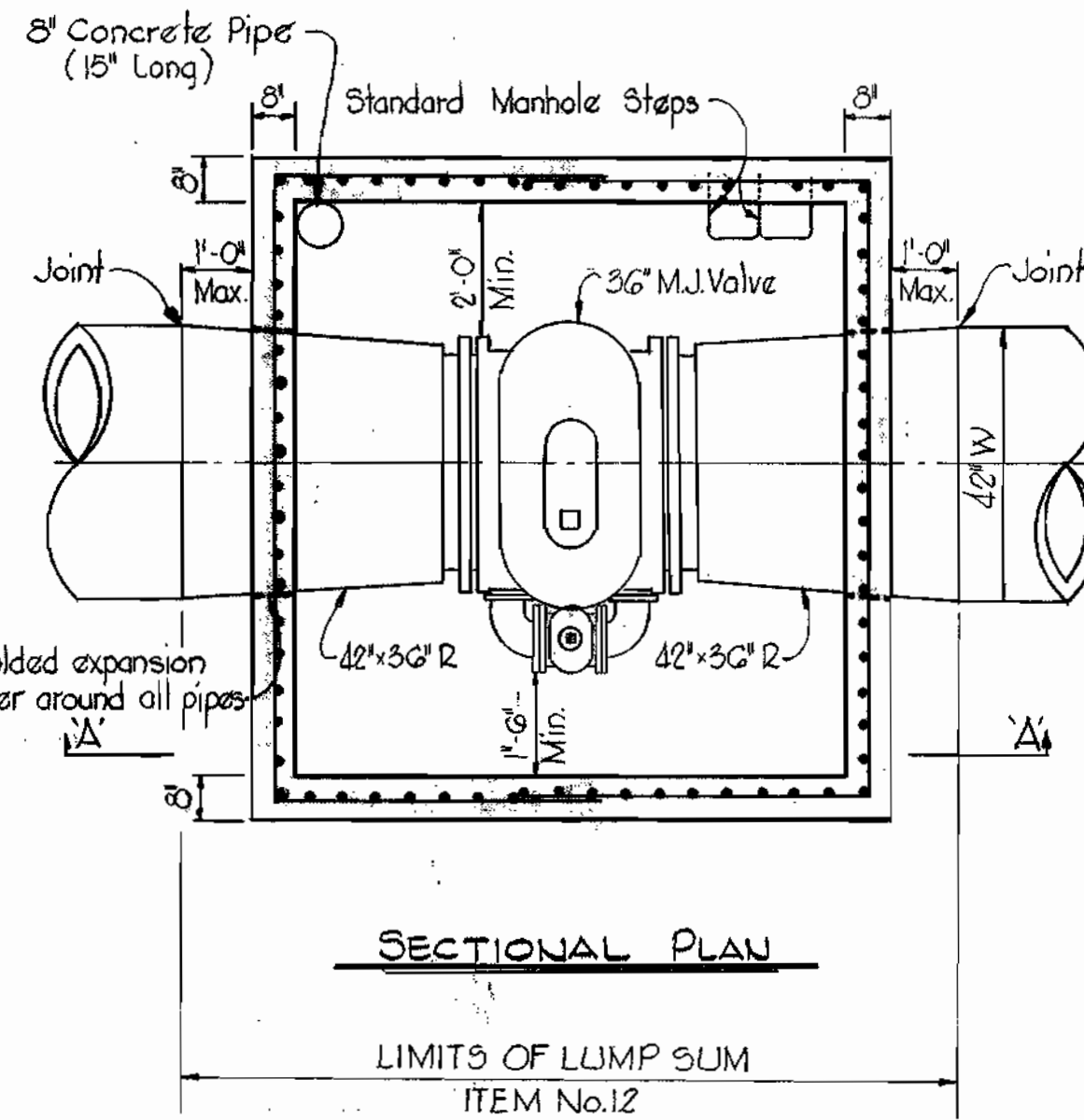
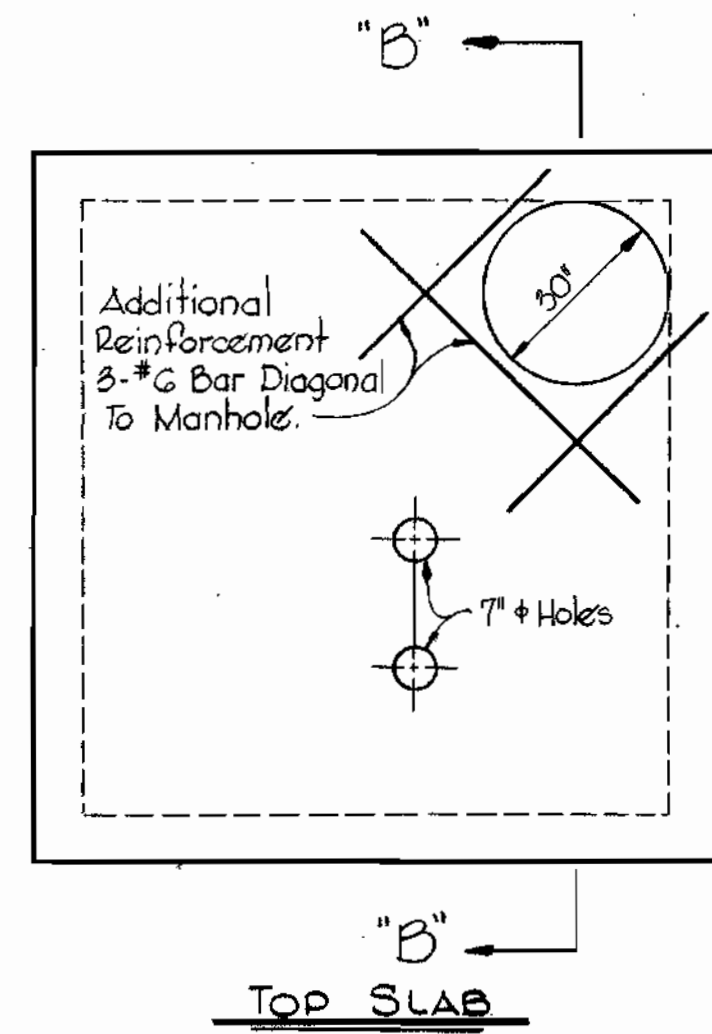
NOTE:
Reinforcing interrupted by openings in walls or slabs shall be replaced by additional reinforcement E.F.W. Minimum of 1/2 the Principle Reinforcing bars interrupted by the opening shall be provided on each side and each face of the opening.

NOTE:
36" Valve will be furnished by Howard County and installed by Contractor.



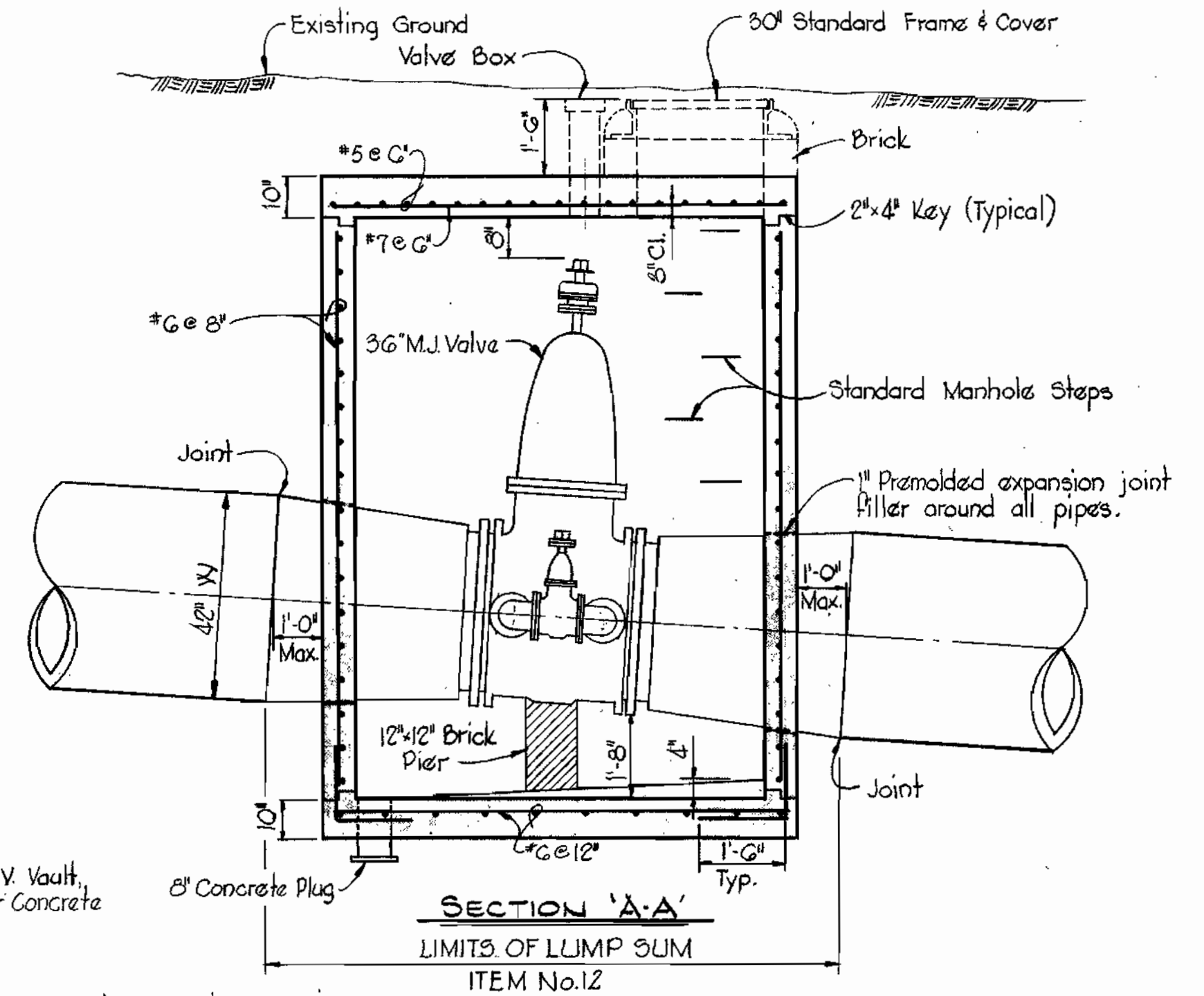
SECTION 'B-B'

Scale: 1"=10'



SECTIONAL PLAN

LIMITS OF LUMP SUM ITEM No.12



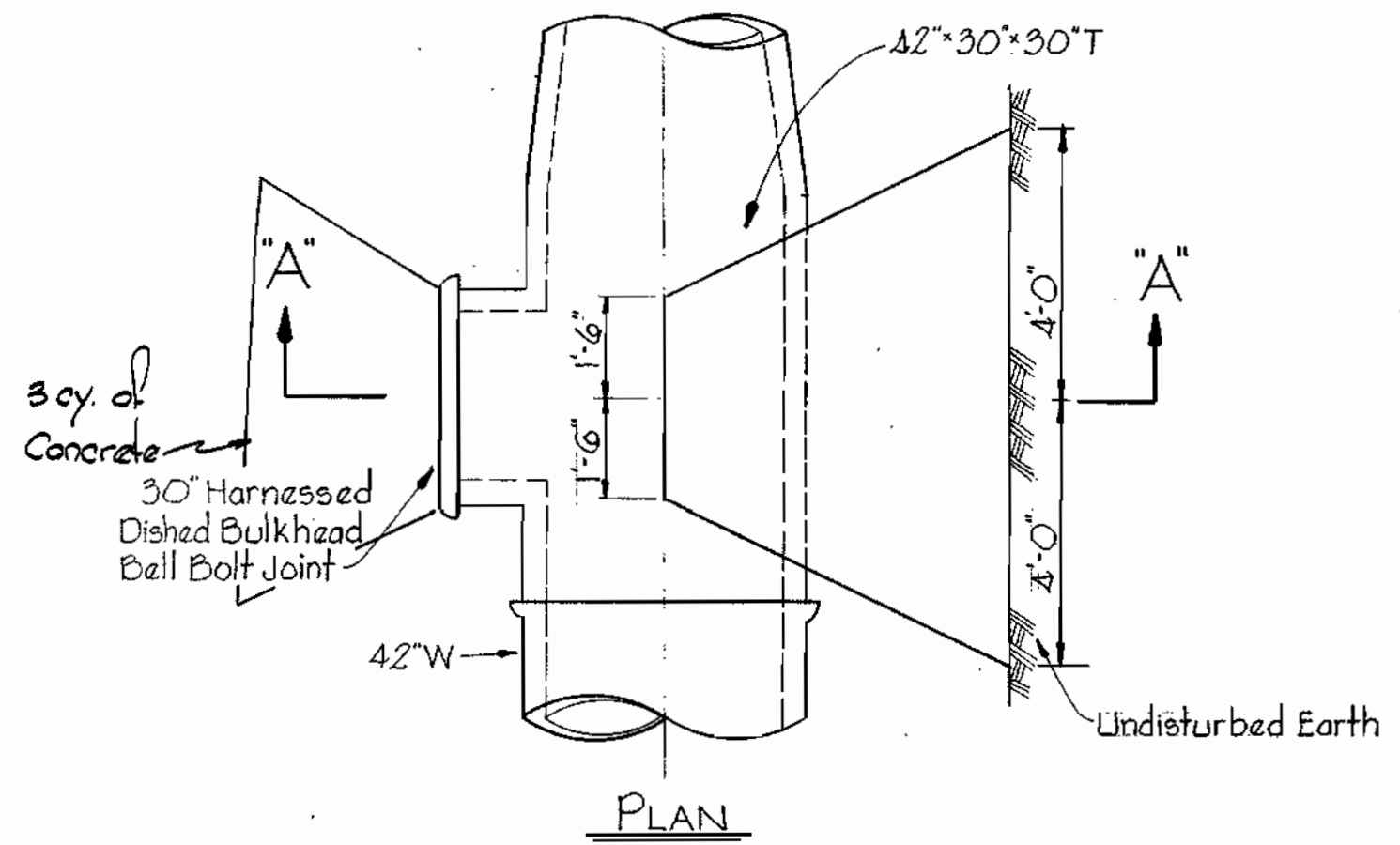
SECTION 'A-A'

LIMITS OF LUMP SUM ITEM No.12

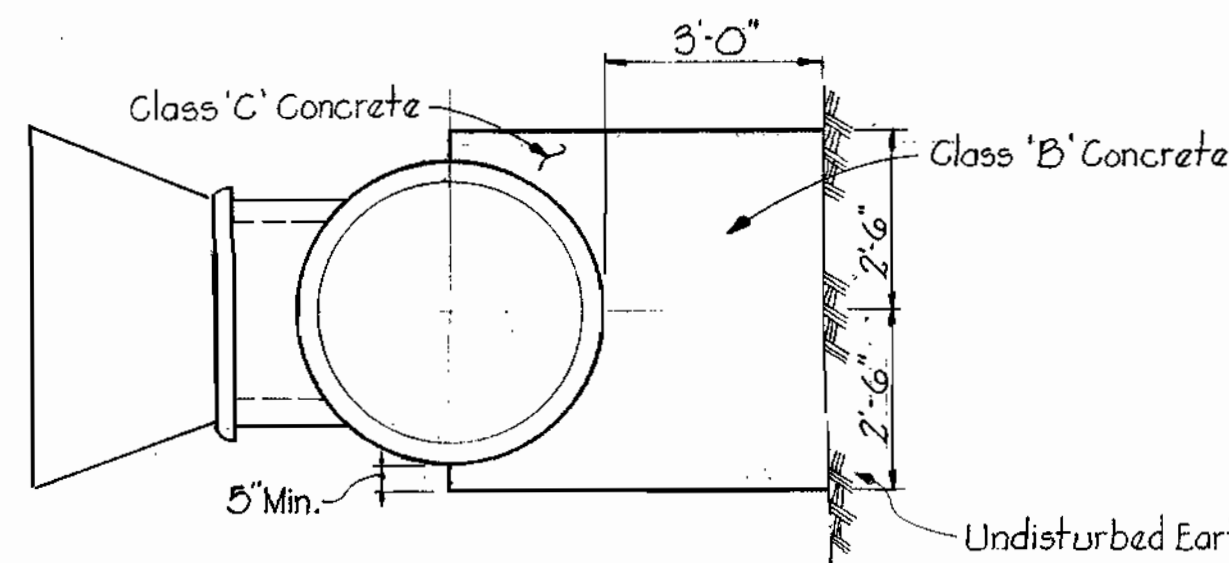
NOTE:
1. Concrete shall be Class 'A'.
2. See 24x20" T.S. 4V. Vault, Drawing No. 2, For Concrete Notes.

DETAILS OF 36" VERTICAL VALVE VAULT

Scale: 3/8"=1'-0"



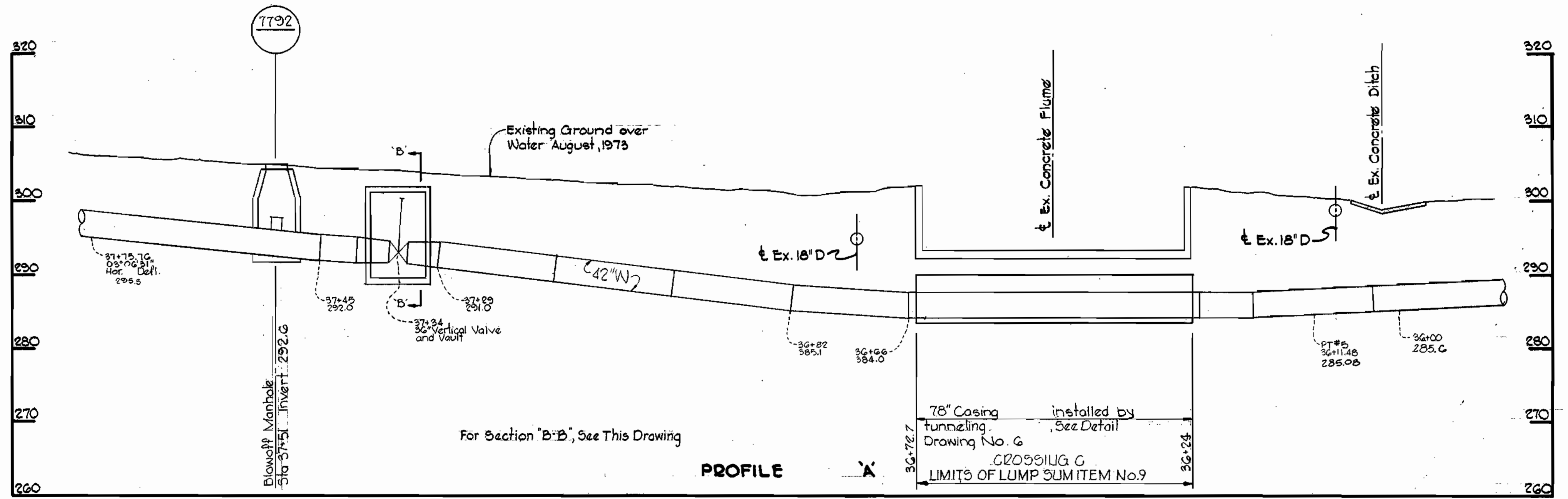
PLAN



SECTION 'A-A'

BUTTRESS DETAIL FOR 42"X30"X30" TEE

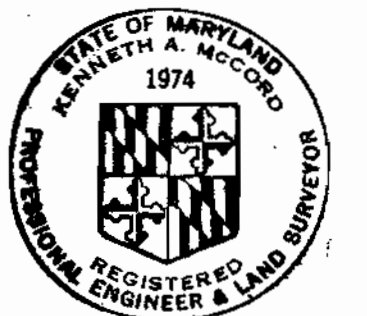
Scale: 3/8"=1'-0"



For Section 'B-B', See This Drawing

PROFILE

PROFILE
Scale: H: 1"=10'
V: 1"=10'



Kenneth A. McLeod

Project No. W.P. 8029
Contract No. 568-W

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
1-22-74
W. O. Falbert
CHIEF-BUREAU OF ENGINEERING

CONTRACT NO. 568-W

DETAILS OF
WATER MAINS

U.S. ROUTE 29 WATER MAIN
U.S. ROUTE 40 TO
SAINT JOHN'S LANE

DRAWING NO. 9	SCALE AS SHOWN
OF 9	

W. O. 6640-2

February 18, 1976 AS BUILT

WS 568-W/9

BRUNNEN 44510 18382