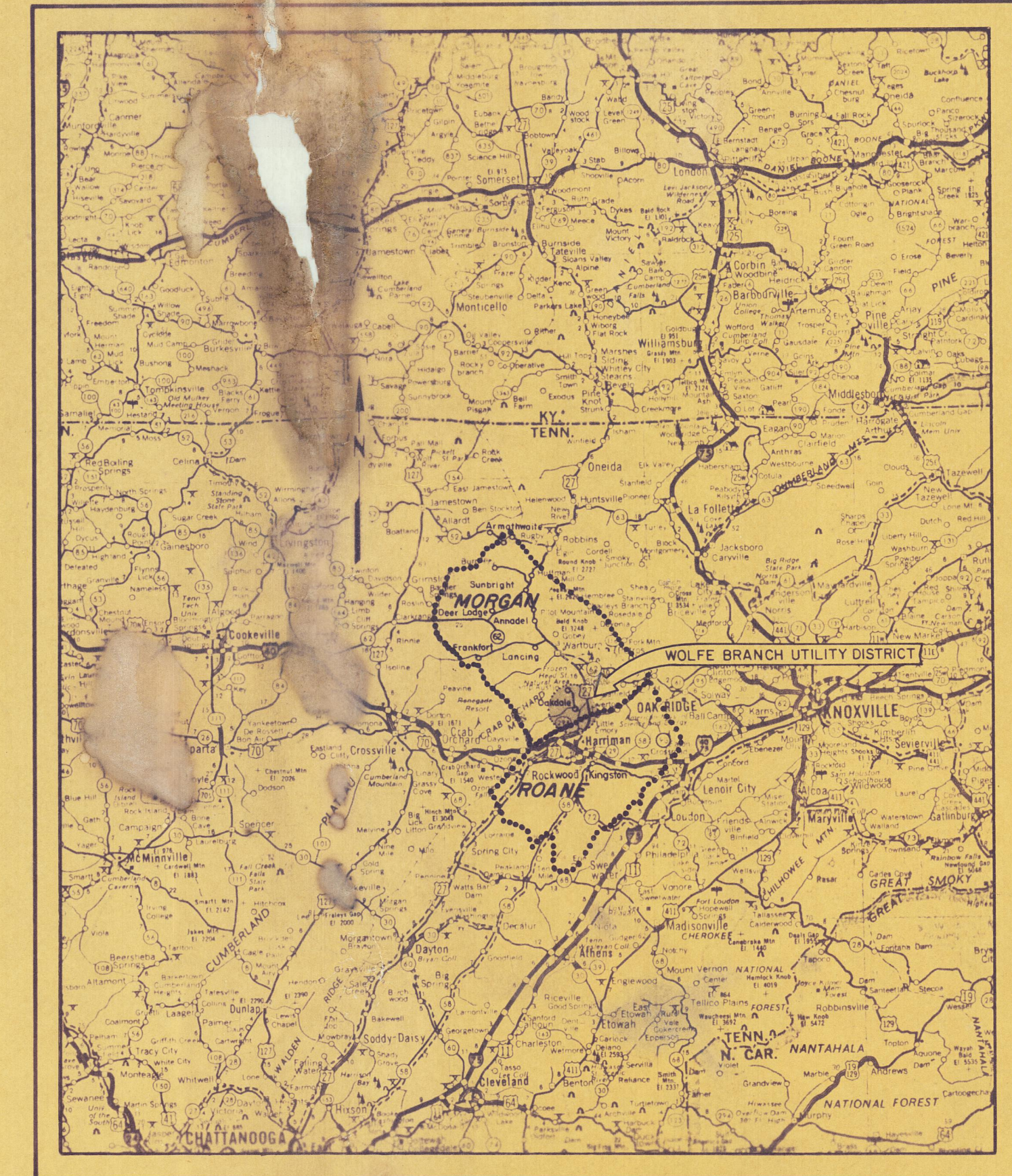


WOLFE BRANCH UTILITY DISTRICT WATER SYSTEM IMPROVEMENTS TOWN OF OAKDALE, TENNESSEE

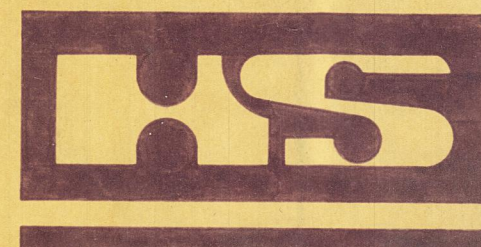
Phase I

TITLE	DWG. NO.
TITLE SHEET	7077-1-1
GENERAL PLAN	7077-1-2
PROPOSED WATER LINE PLAN	7077-1-3 thru 5
PIPING DETAILS & BRIDGE CROSSING DETAILS	7077-1-6 and 7
PAVEMENT REPLACEMENT DETAILS	7077-1-7

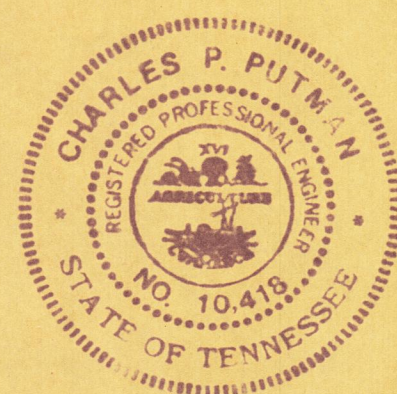
Ferragot Const
1983



LOCATION MAP
0 5 10 20 30
Scale of Miles (1" = 16.5 Miles)



Hensley-Schmidt, Inc.
Consultants
Knoxville, Tennessee



Charles P. Putman
CHARLES P. PUTMAN
TENNESSEE LICENSE NO. 10,418

2/25/83
DATE

WOLFE BRANCH UTILITY DISTRICT BOARD OF COMMISSIONERS

Fred Newcomb, Chairman
Hollis Eble, Secretary
Mitchell Johnson, Commissioner
Donald Painter, Manager

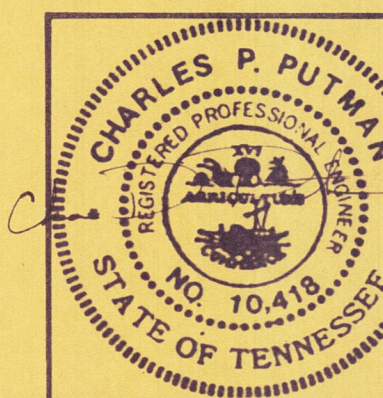
BRUNING 44 13 12756-3

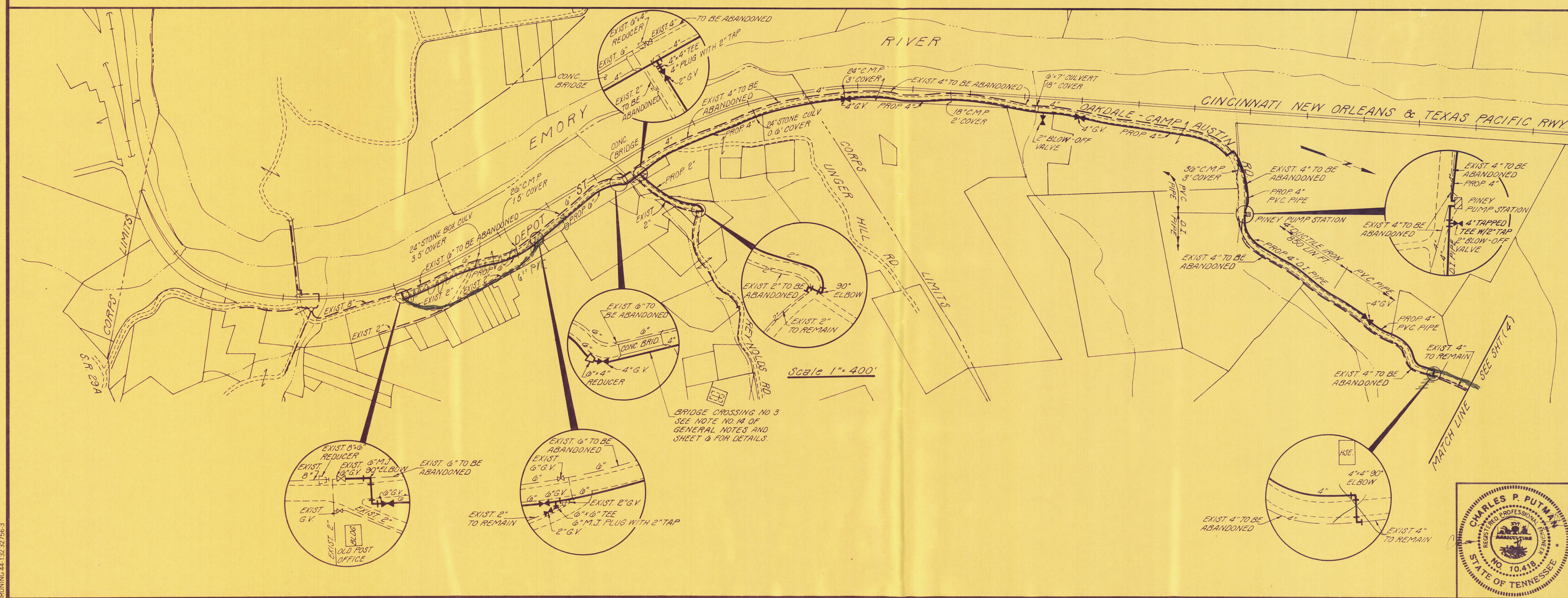
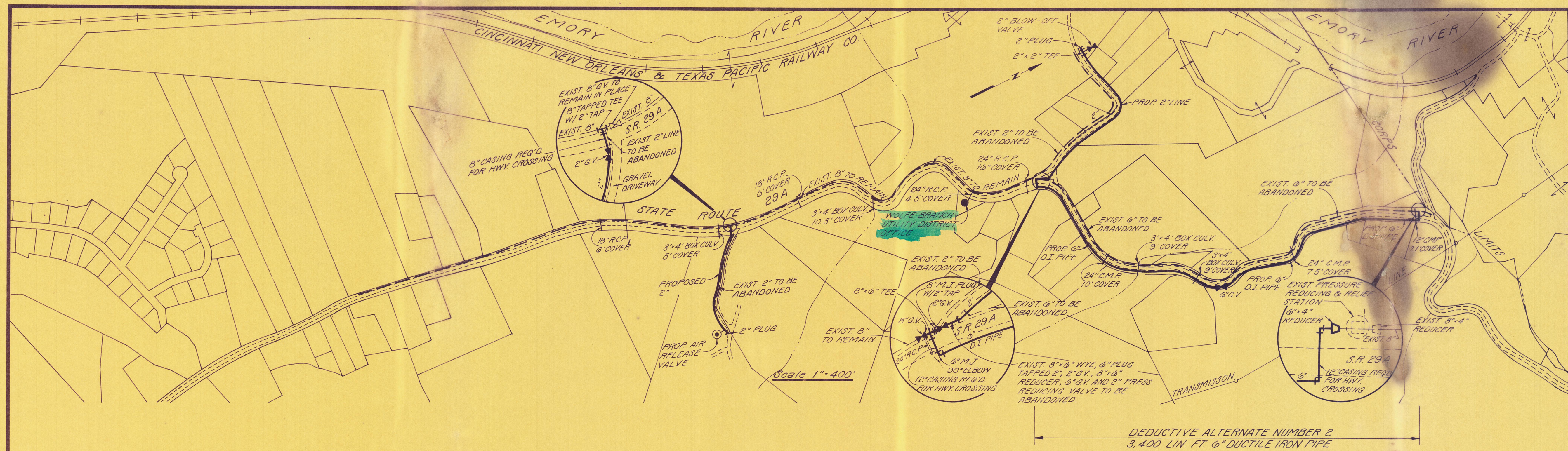


GENERAL NOTES

1. LOCATION OF EXISTING WATER LINES IS NOT KNOWN. LOCATION AND DEPTH IS APPROXIMATE ONLY AND MAY VARY.
2. CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY EXISTING WATER LINES THAT ARE BROKEN OR DAMAGED DURING CONSTRUCTION. WATER TO REMAIN UNINTERRUPTED. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR REPLACEMENT TO EXISTING WATER LINES.
3. CONTRACTOR SHALL BE REQUIRED TO RUN SERVICE LINE FROM WATER MAIN TO WATER METER LOCATED AT THE PROPERTY LINE. METER TO BE IN A LOCATION DETERMINED BY THE PROPERTY OWNER. CONTRACTOR TO BE PAID UNDER UNIT PRICE BID FOR APPLICABLE TYPE PIPE AND IN THE BID SCHEDULE.
4. THE CONTRACTOR SHALL LOCATE ALL WATER, GAS, TELEPHONE, STORM DRAINAGE AND OTHER UNDERGROUND UTILITIES, BEFORE PROCEEDING WITH ANY TYPE OF EXCAVATION FOR PIPE LINES SO THAT WATER LINES TO BE INSTALLED MAY BE LOCATED WITH THE LEAST CONFLICT WITH EXISTING UTILITIES DETERMINED BY THE ENGINEER.
5. EXISTING WATER LINES TO REMAIN UNLESS OTHERWISE NOTED IN THE PLANS OR AS ORDERED BY THE ENGINEER.
6. NO ADDITIONAL PAYMENT SHALL BE ALLOWED FOR WATER LINES REQUIRED TO BE BURIED DEEPER THAN THAT FOR NORMAL COVER. PAYMENT TO BE INCLUDED IN UNIT PRICE BID FOR PIPE.
7. WHERE WATER LINES CROSS IMPROVED, GRASSED, OR LAWN AREAS, ETC., ALL SOIL, GRASS, FLOWERS, PLANTINGS, ETC., SHALL BE REPLACED IN ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE. GRASSED AREAS SHALL BE RESTORED TO PRIOR CONDITIONS IN THE FOLLOWING MANNER:
a. AREAS LESS THAN 3:1 SLOPE SHALL BE RESEEDED AND MULCHED WITH TOP SOIL OR GROUND COVER AS OUTLINED IN THE SPECIFICATIONS. AREAS GREATER THAN 3:1 SLOPE SHALL BE RESEEDED AND MULCHED WITH A FASRIC MATERIAL AS OUTLINED IN THE SPECIFICATIONS. PAYMENT SHALL BE INCLUDED IN THE APPLICABLE UNIT PRICE BID FOR THE WATER LINE.
8. WHERE LINES CROSS UNDER CURBS, THEY SHALL BE TUNNELED UNDER THE CURB. NO SEPARATE PAYMENT WILL BE ALLOWED FOR REPAIRING CURBS DAMAGED OR DESTROYED DURING WATER LINE CONSTRUCTION.
9. PROWISORIOUS DESTRUCTION OF TREES ALONG WATER LINE RIGHT-OF-WAY WILL NOT BE PERMITTED. ALL REASONABLE EFFORTS WILL BE MADE BY THE CONTRACTOR TO PROTECT AND SAFEGUARD TREES.
10. ANY EXISTING FENCES, ROCK WALLS, GUARDRAILS, ETC., ALONG THE WATER LINE RIGHT-OF-WAY ARE TO BE REMOVED AND REINSTALLED IN THEIR ORIGINAL CONDITION OR BETTER. NO SEPARATE PAYMENT WILL BE ALLOWED. PAYMENT TO BE INCLUDED IN THE APPLICABLE UNIT PRICE BID FOR THE WATER LINE.
11. ALL WATER LINES SHALL HAVE A MINIMUM COVER OF 30 INCHES, EXCEPT AS OTHERWISE NOTED.
12. THE COST FOR DIVERSION OF WATER IN DITCHES, CREEKS, OR RIVERS SHALL BE INCLUDED IN THE APPLICABLE UNIT PRICE BID FOR THE WATER LINE IN THE BID SCHEDULE. NO SEPARATE PAYMENT SHALL BE ALLOWED.
13. WHEN BLASTING FOR EXCAVATION OF WORK, ADEQUATE PRECAUTIONS SHALL BE USED TO PREVENT DAMAGE TO SURROUNDING PROPERTY.
14. NO SEPARATE PAYMENT SHALL BE ALLOWED FOR PIPE HANDERS AND SUPPORTS REQUIRED FOR ANY OF THE WORK. PAYMENT TO BE INCLUDED IN THE APPLICABLE UNIT PRICE BID FOR THE WATER LINE IN THE BID SCHEDULE.

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REV. NO.	RELEASED BY	DESCRIPTION OF REVISION
WOLFE BRANCH UTILITY DISTRICT		
WATER SYSTEM IMPROVEMENTS		
GENERAL PLAN & NOTES		
OAKDALE, TENNESSEE		
DSGN	HENSLEY-SCHMIDT, INC.	DRAWING NO.
DRWN	CONSULTANTS	7077-1-2
CHKD	ATLANTA CHATTANOOGA JACKSON	
APPR	KNOXVILLE - NASHVILLE	



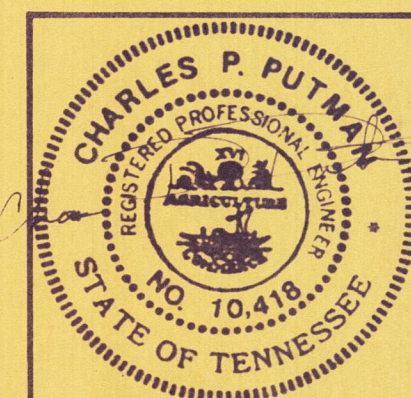


REVNO.	RELEASED BY	DESCRIPTION OF REVISION
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2		
3		

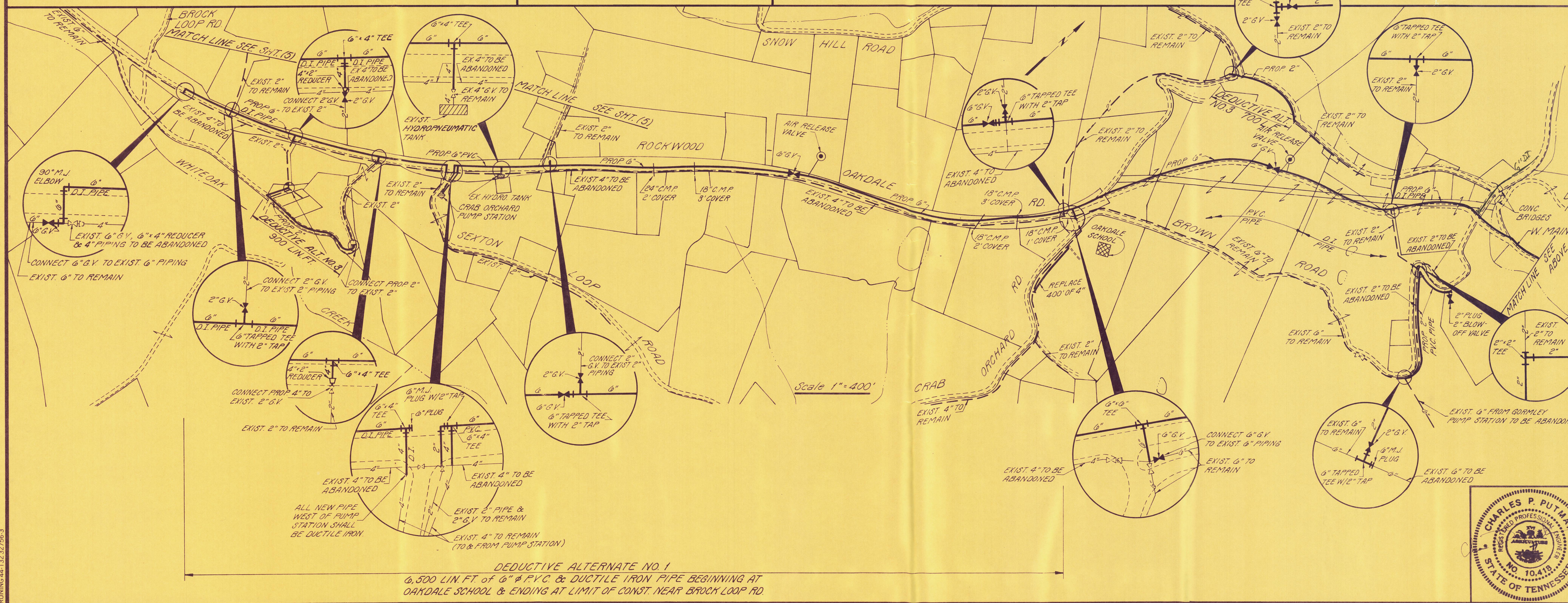
WOLFE BRANCH UTILITY DISTRICT

WATER SYSTEM IMPROVEMENTS
WATER LINE PLAN

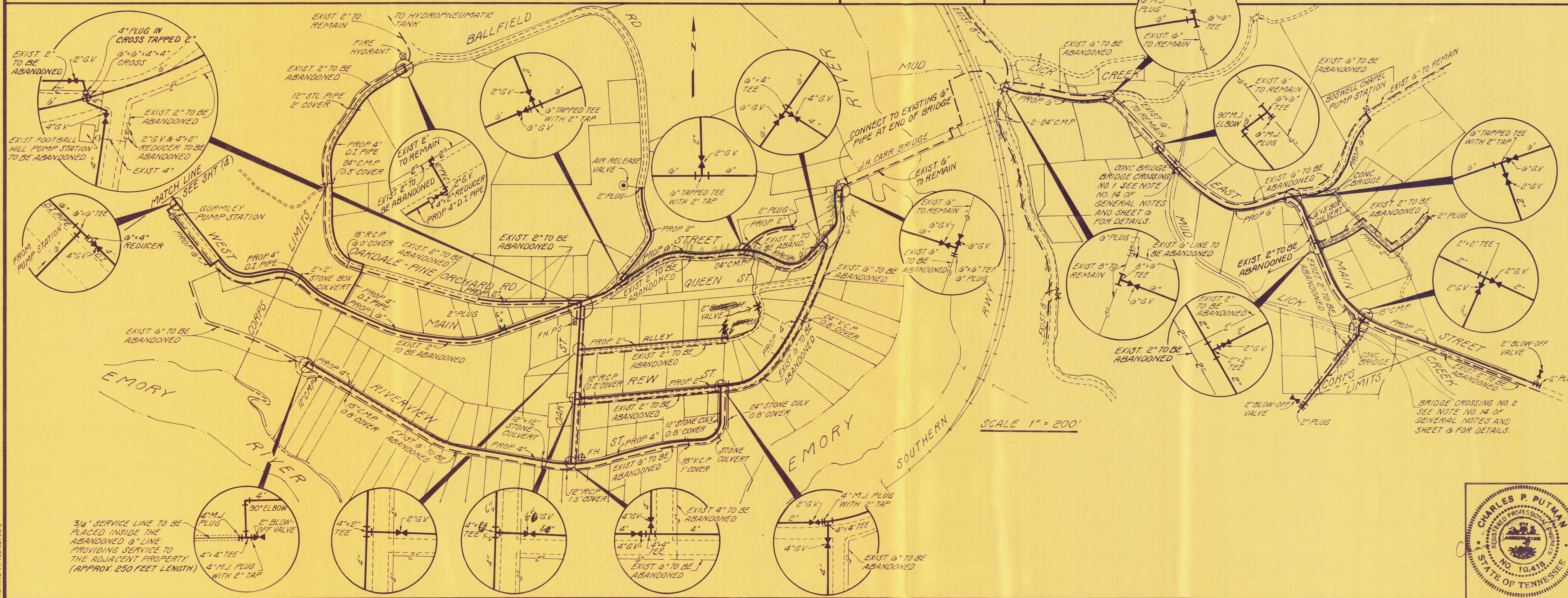
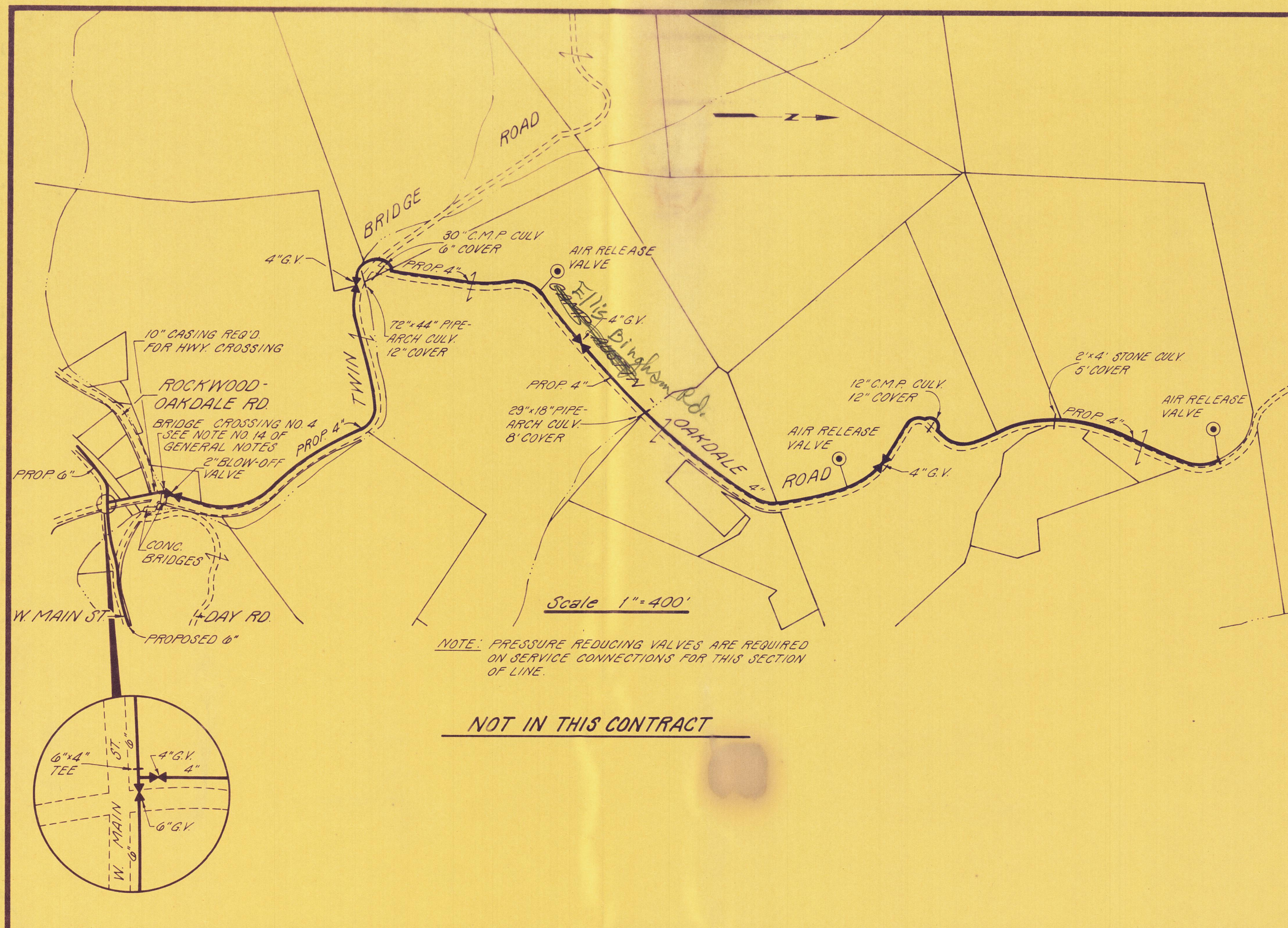
OAKDALE, TENNESSEE



DSGN	HENSLEY-SCHMIDT, INC.	DRAWING NO.
DRWN	CONSULTANTS	
CHKD	ATLANTA - CHATTANOOGA - JACKSON	7077-1-3
APPR	KNOXVILLE - NASHVILLE	



3			
2			
1			
REV. NO.	RELEASED BY	DESCRIPTION OF REVISION	
WOLFE BRANCH UTILITY DISTRICT			
WATER SYSTEM IMPROVEMENTS			
WATER LINE PLAN			
OAKDALE, TENNESSEE			
DSGN		HENSLEY - SCHMIDT, INC. CONSULTANTS ATLANTA - CHATTANOOGA - JACKSON KNOXVILLE - NASHVILLE	DRAWING NO. 7077-1-4
DRWN			
CHKD			
APPR			



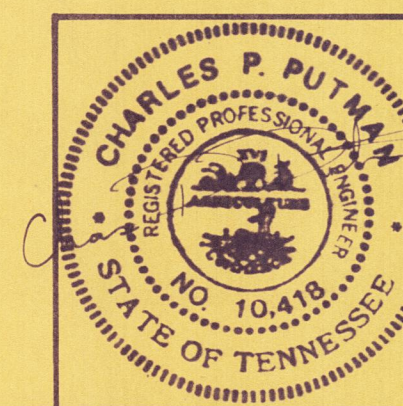
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WOLFE BRANCH UTILITY DISTRICT

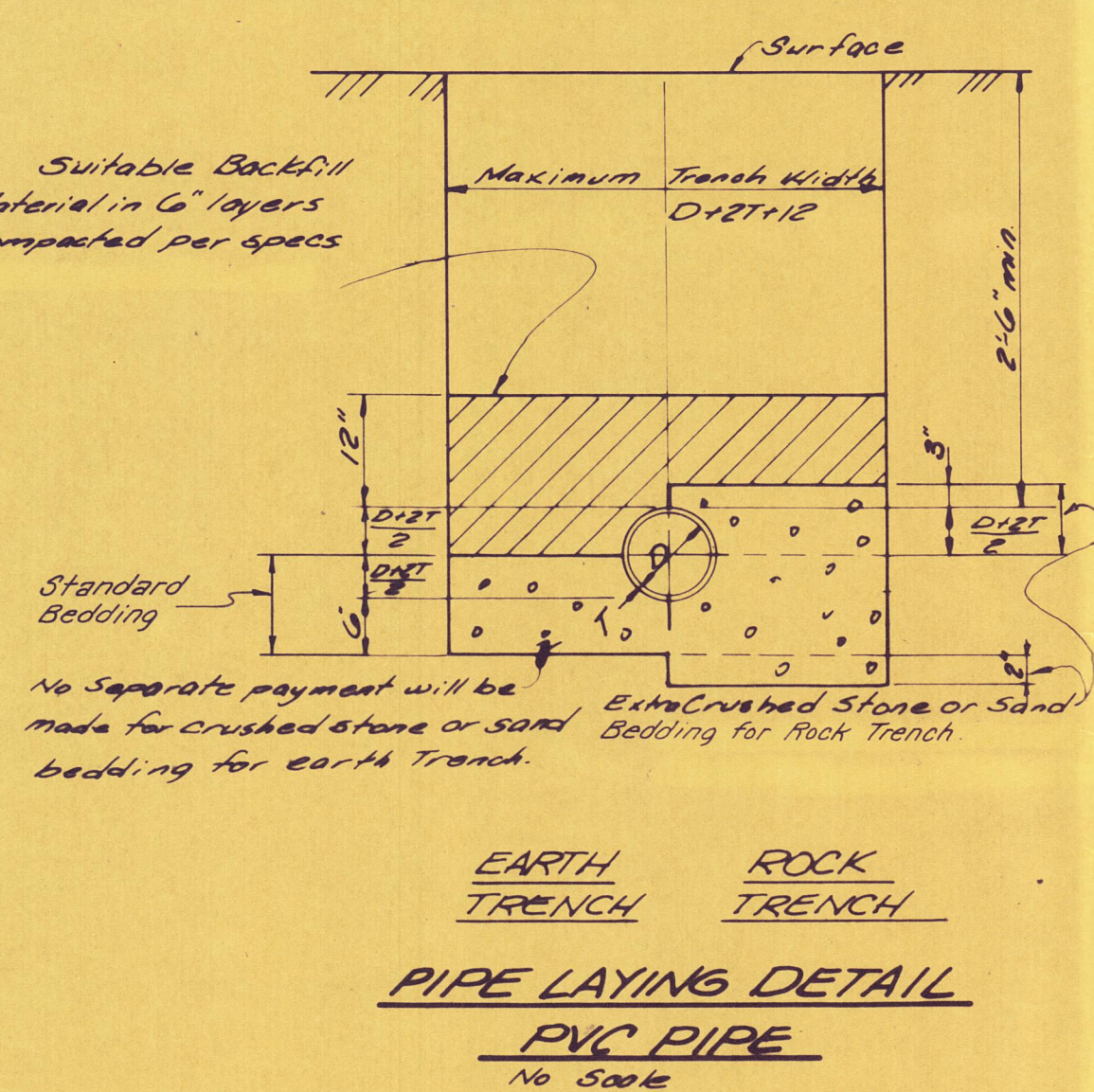
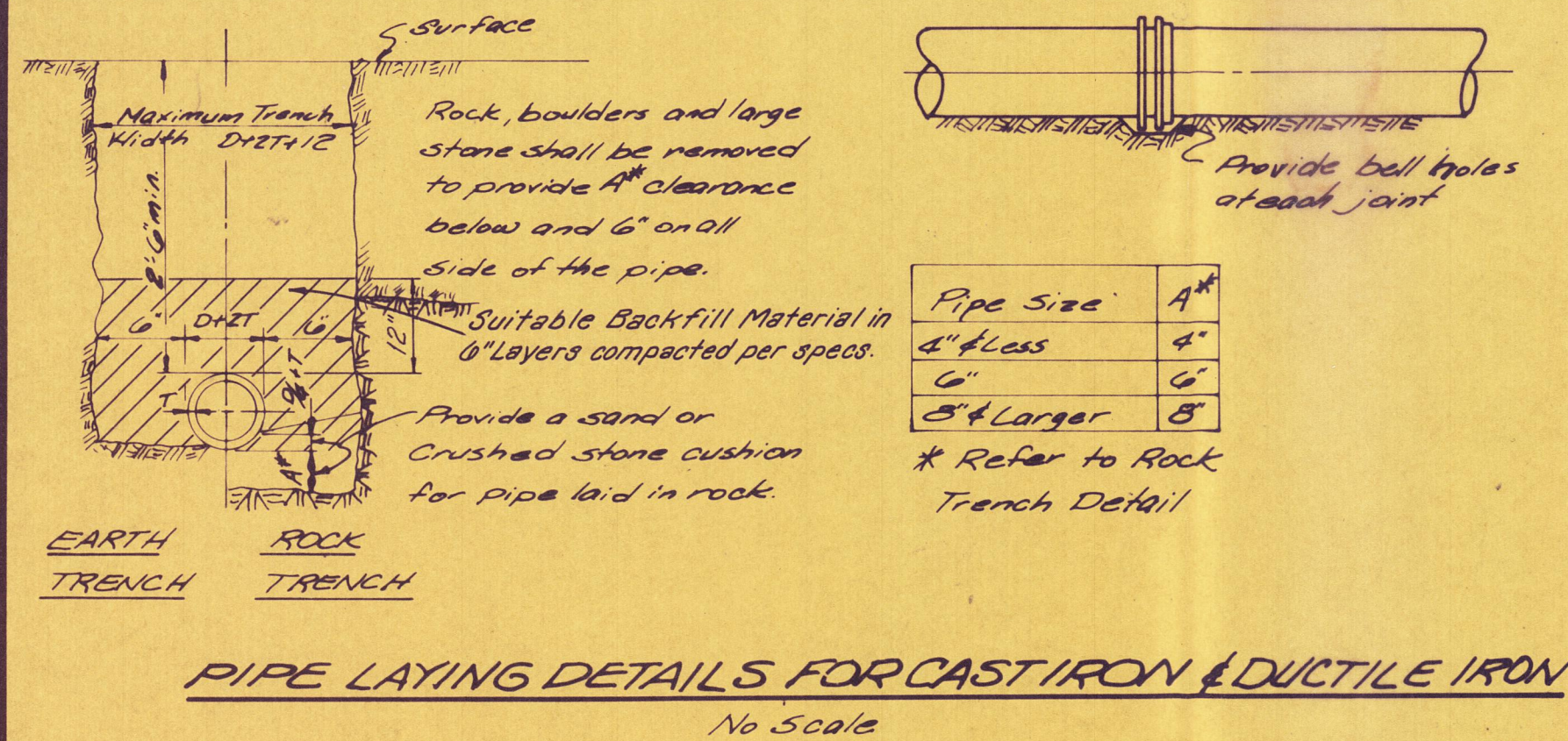
WATER SYSTEM IMPROVEMENTS

WATER LINE PLAN

OAKDALE, TENNESSEE

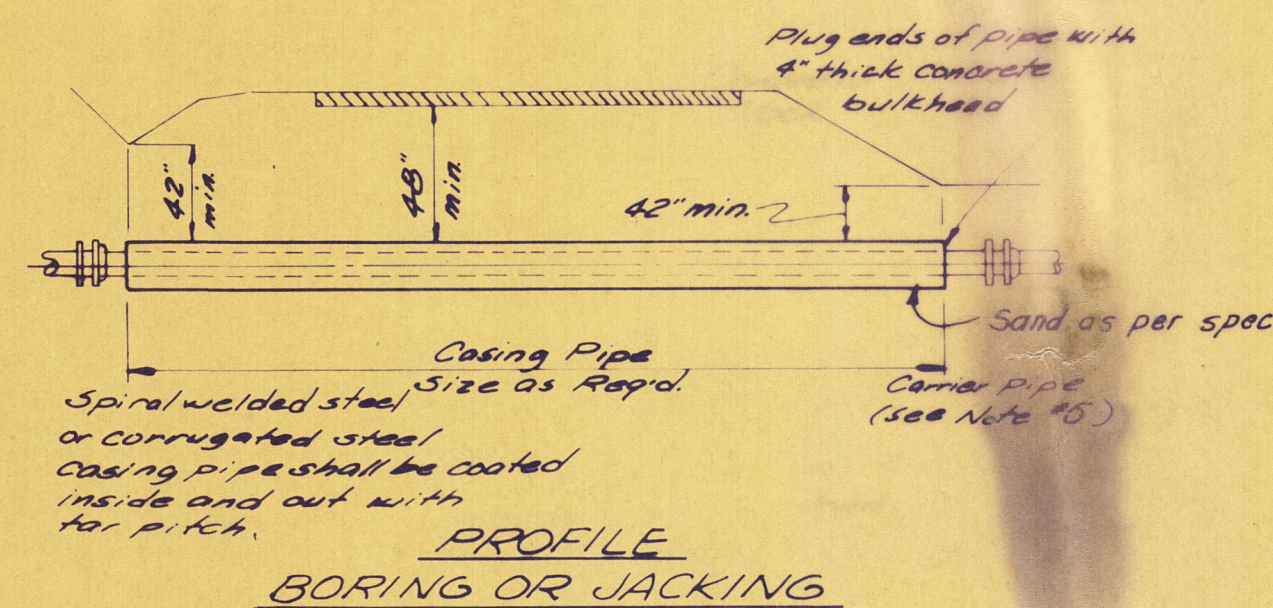


DSGN	HENSLEY-SCHMIDT, INC.	DRAWING NO.
DRWN	CONSULTANTS	7077-1-5
CHKD	ATLANTA - CHATTANOOGA - JACKSON	
APPR	KNOXVILLE - NASHVILLE	

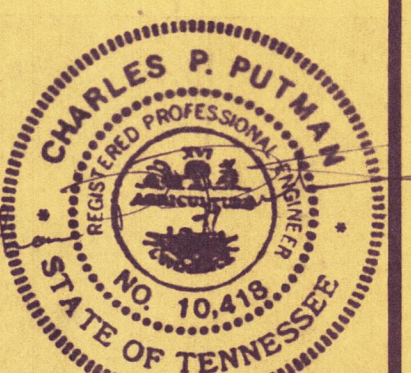
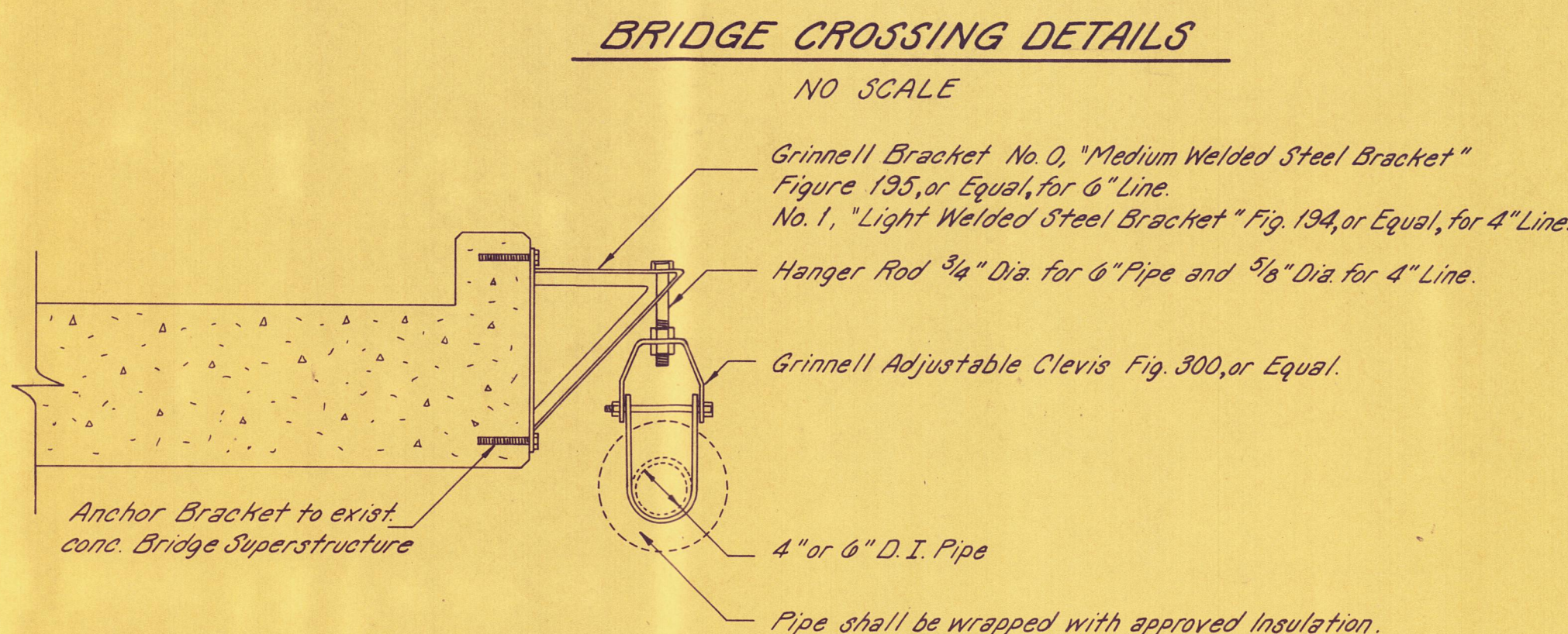
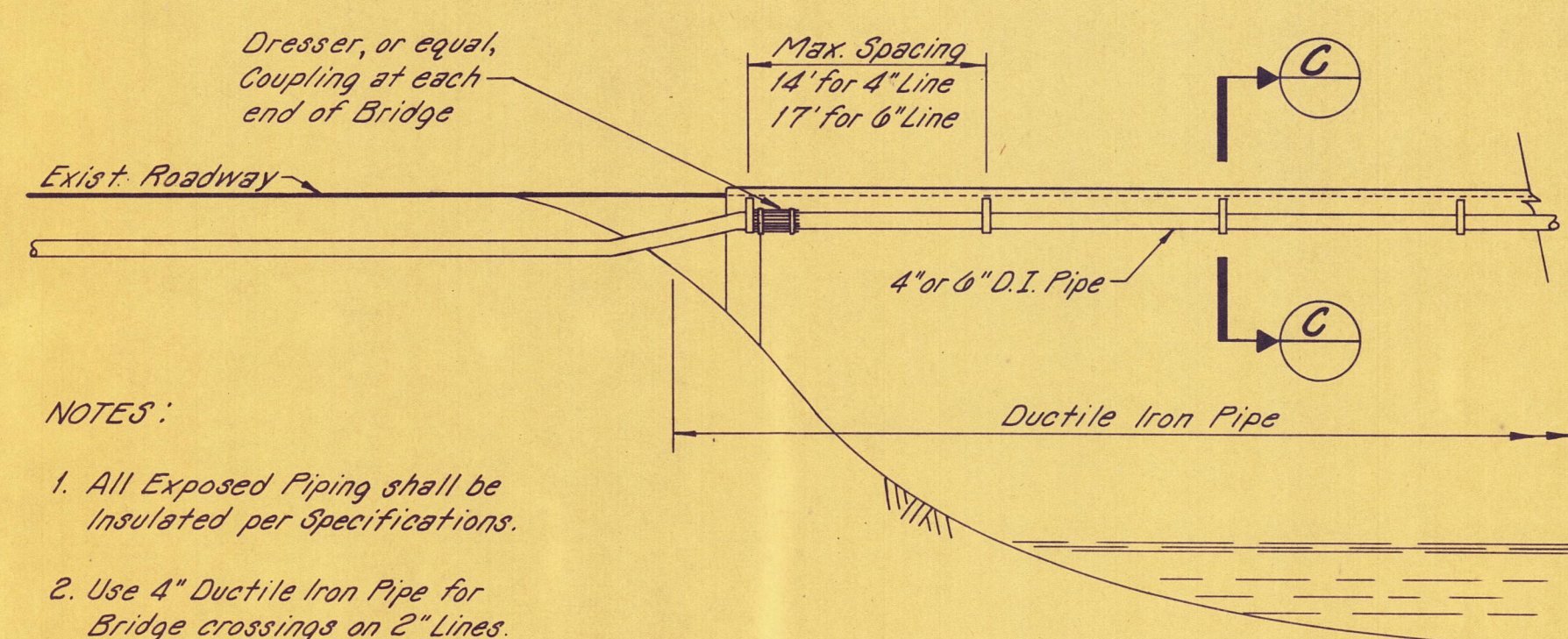
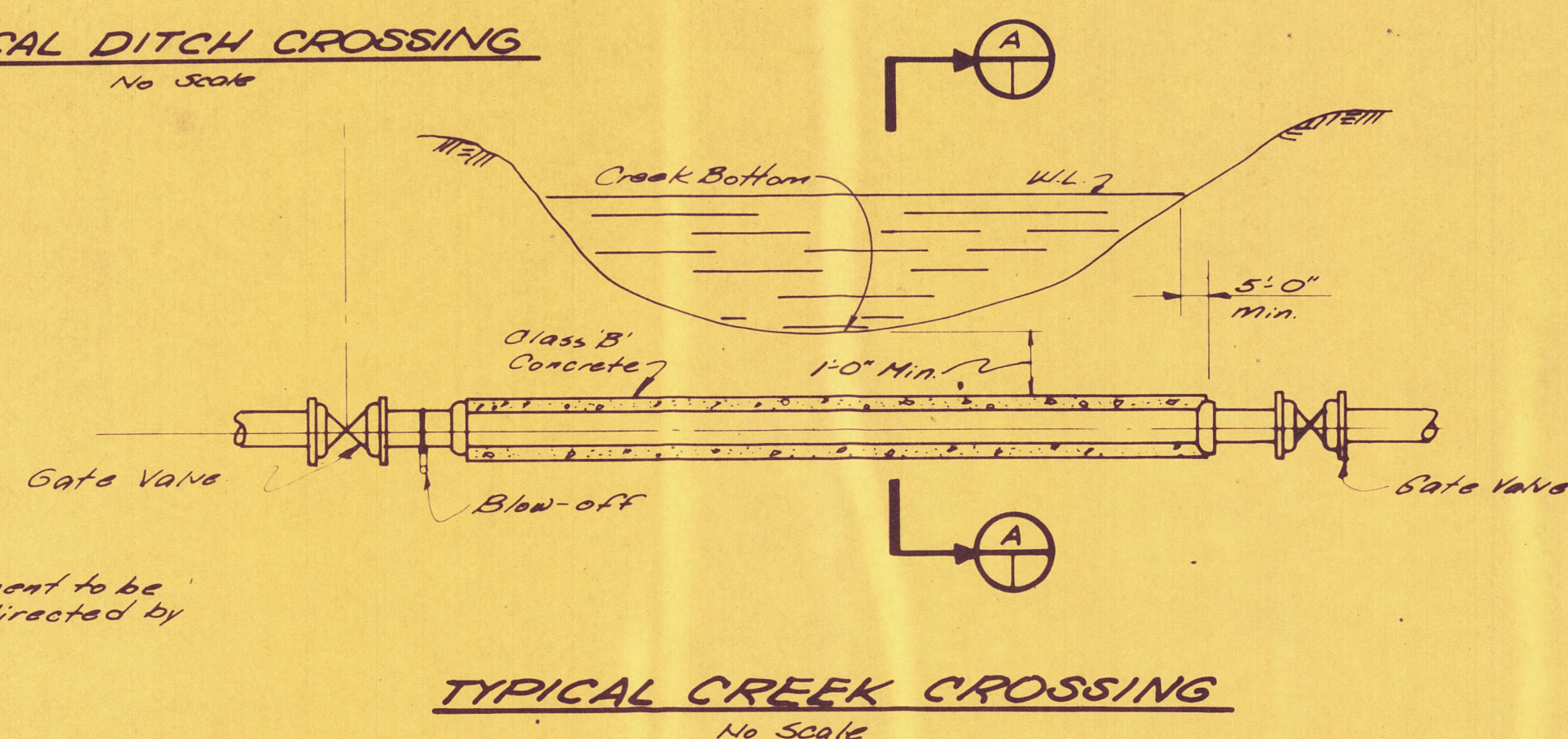
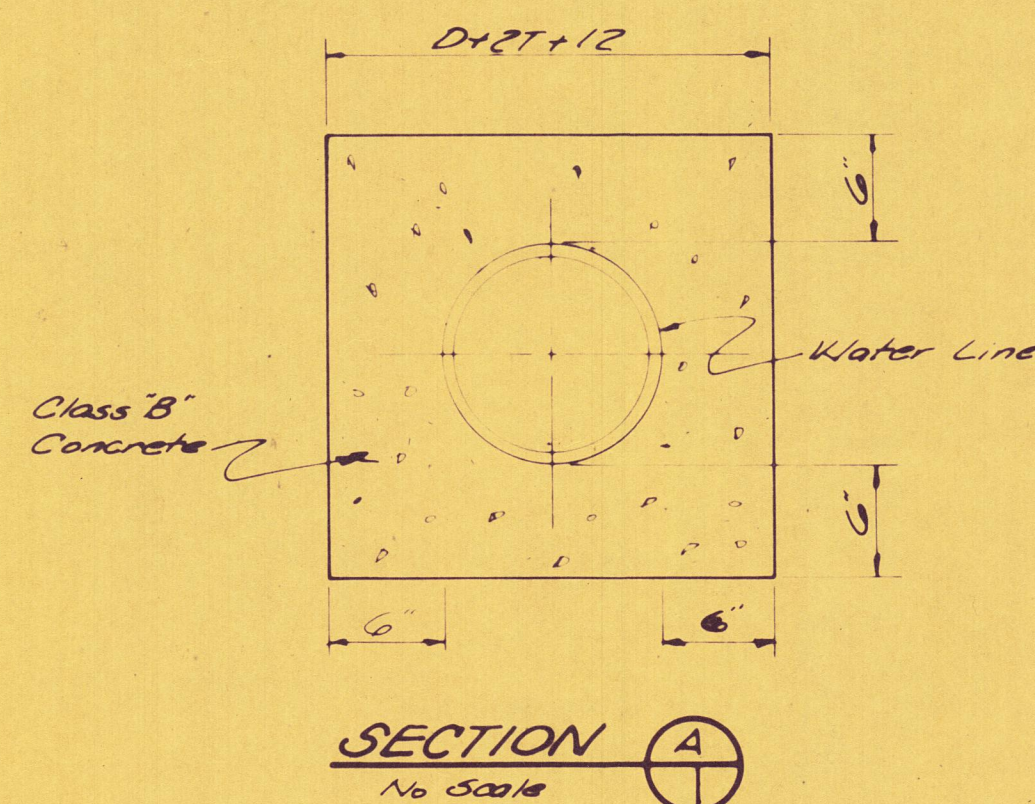
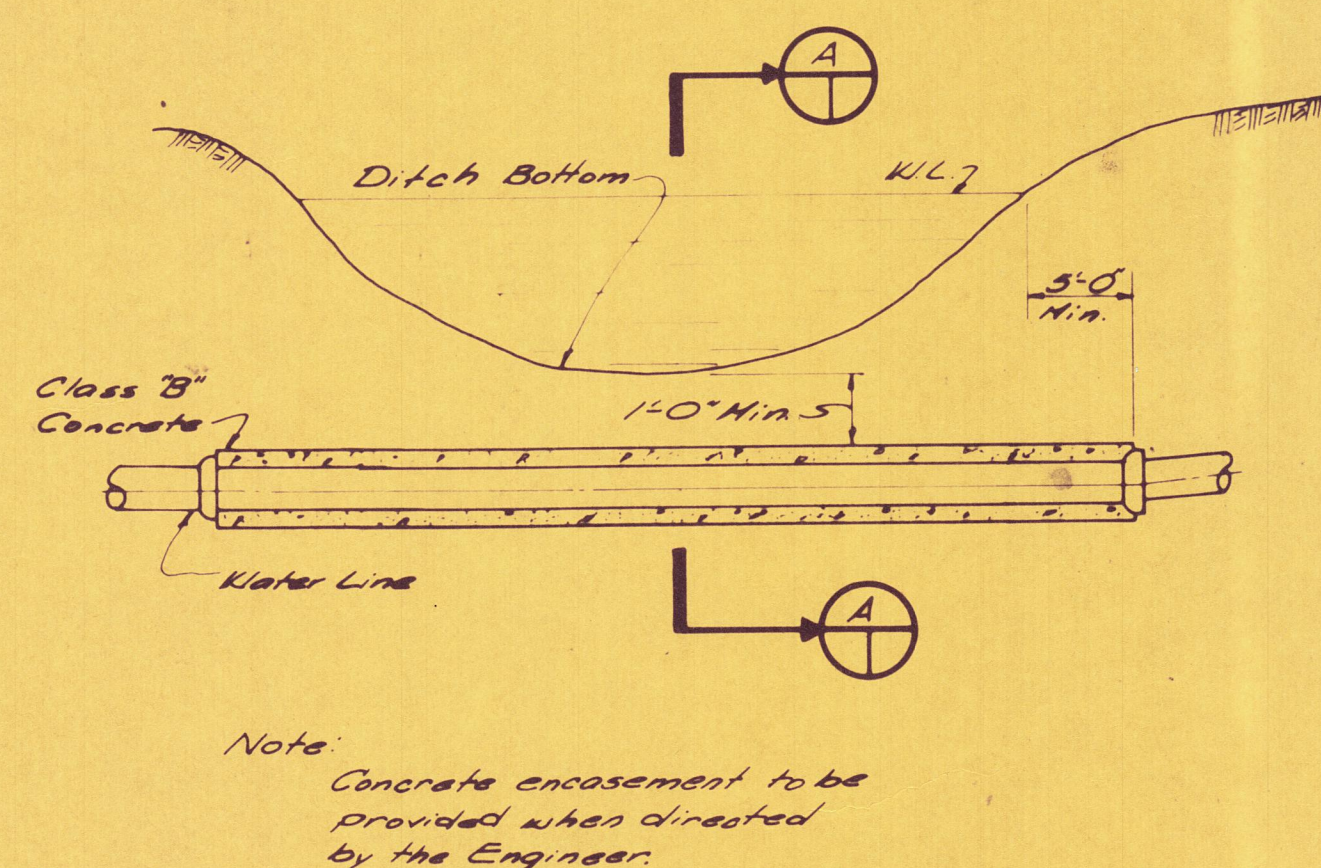
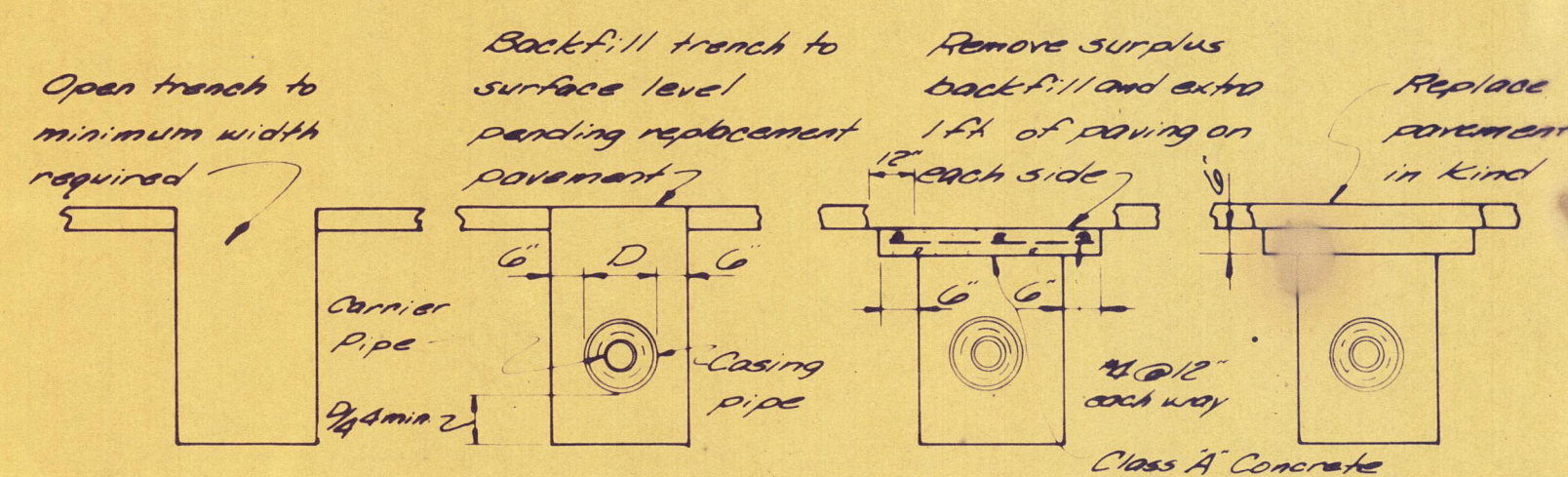
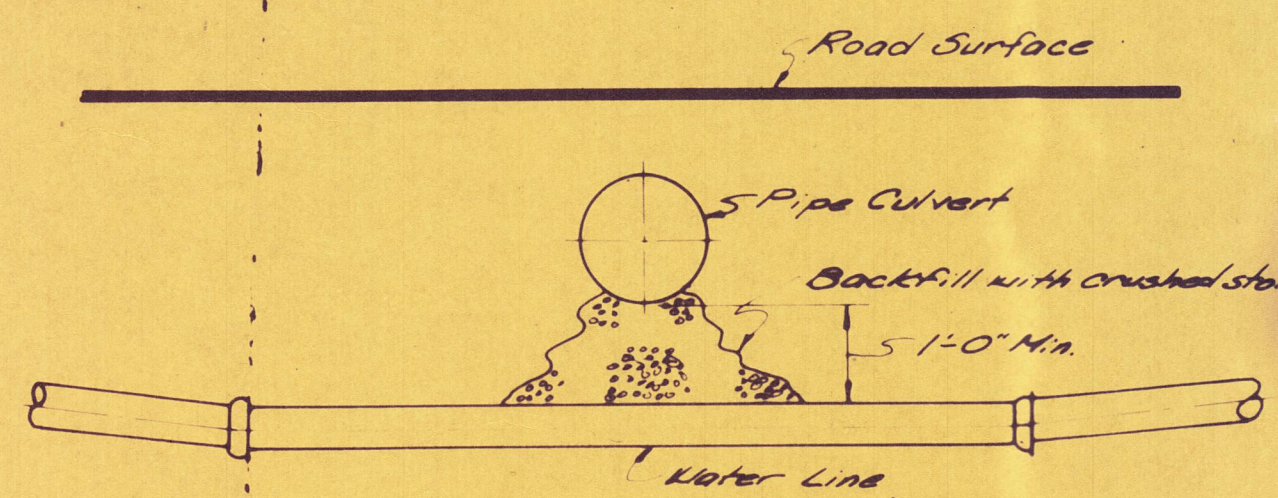


Carrier Pipe	Casing Pipe	Spigot Pipe
16"	30"	48"
14" x 12"	24"	31 1/2"
10"	20"	31 1/2"
8"	16"	25 1/2"
6"	12"	25 1/2"
4"	10"	25 1/2"
2 1/2" CI	8"	25 1/2"
2" Steel	6"	21 1/2"
1 1/2" Steel	4"	21 1/2"
1" Steel	3"	21 1/2"
3/4" Copper	1 1/2"	2"

* See Paragraphs 4 & 5 Under notes.



- NOTES:
1. All trench excavation within the right-of-way and not under paving shall be backfilled by tamping in 6" layers. All surplus material shall be removed from the right-of-way and the excavation filled back with surrounding ground.
 2. Highway crossing under paved roads and paved crossroads within the State and U. S. Highway right-of-way shall be excavated and placed by boring or jacking. Boring or jacking shall extend from toe of shoulder slope to toe of shoulder slope. On lines crossing the entire width of right-of-way, the length of casing shall be determined by the State Highway Department. All boring and jacking shall be done as shown on this drawing.
 3. Where it is evident that boring is impractical due to rock or other obstruction, the Division Engineer may grant permission to open cut the paving. Where open cut is allowed, the following conditions will be met:
 - (a) All backfill material will be stabilized with Portland Cement and mixed in a concrete mixer. If soil is used, it shall be a sandy material free from lumps or clods and shall be stabilized with two (2) sacks of cement per cubic yard of soil. If sand and gravel are used, pit run material may be used, and it shall be stabilized with one (1) sack of cement per cubic yard. Backfill must be tamped in a moist condition.
 - (b) One half of the traveled portion of the paving must be open to traffic at all times.
 - (c) Open cutting of pavement shall be done in the manner and sequence shown on this drawing.
 4. Casing pipe shall be either corrugated or spiral welded steel pipe applicable and suitable to method of installation employed. Corrugated pipe size 6" shall be 18 gauge steel. Corrugated pipe size 8" to 24" shall be 16 gauge steel. Corrugated pipe size 30" to 48" shall be 14 gauge steel.
 5. Carrier pipe for all lines 6" and larger shall be cast or ductile iron pipe with "Push-On" type joints.



REV. BY DATE DESCRIPTION

WOLFE BRANCH UTILITY DISTRICT

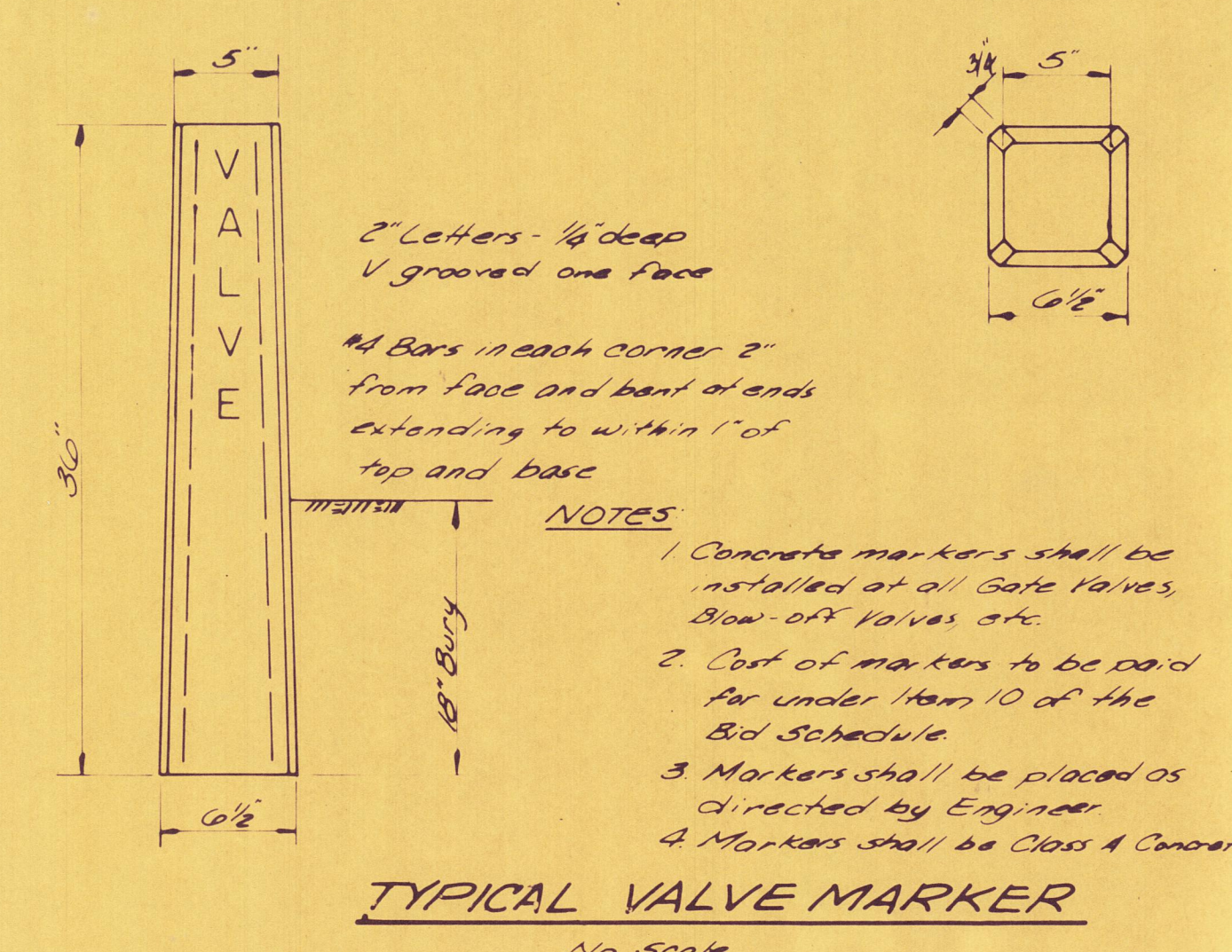
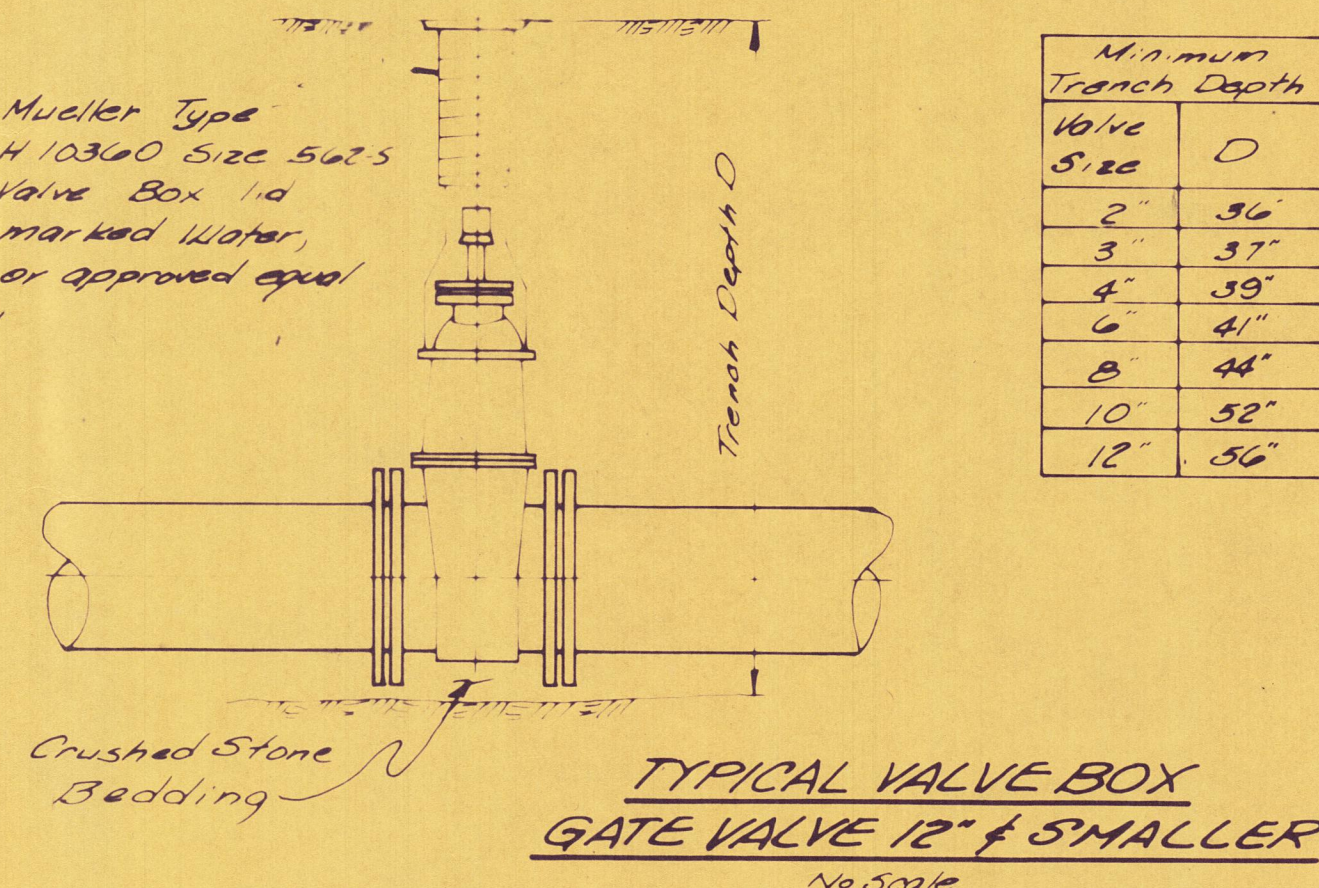
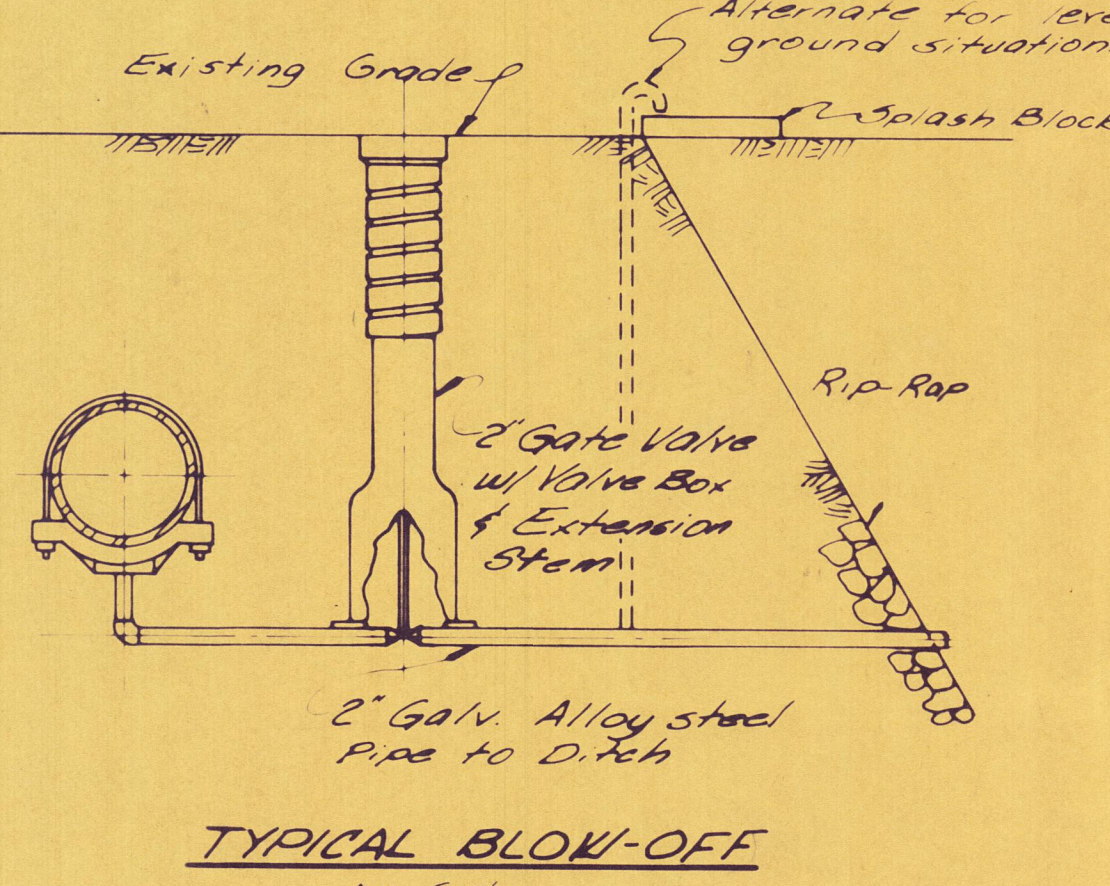
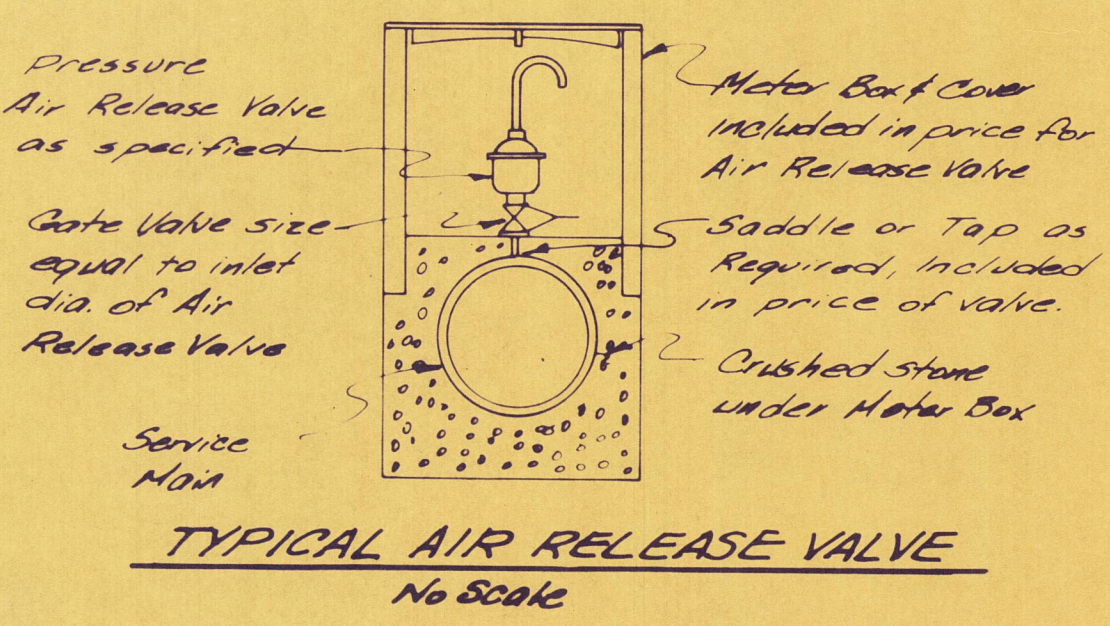
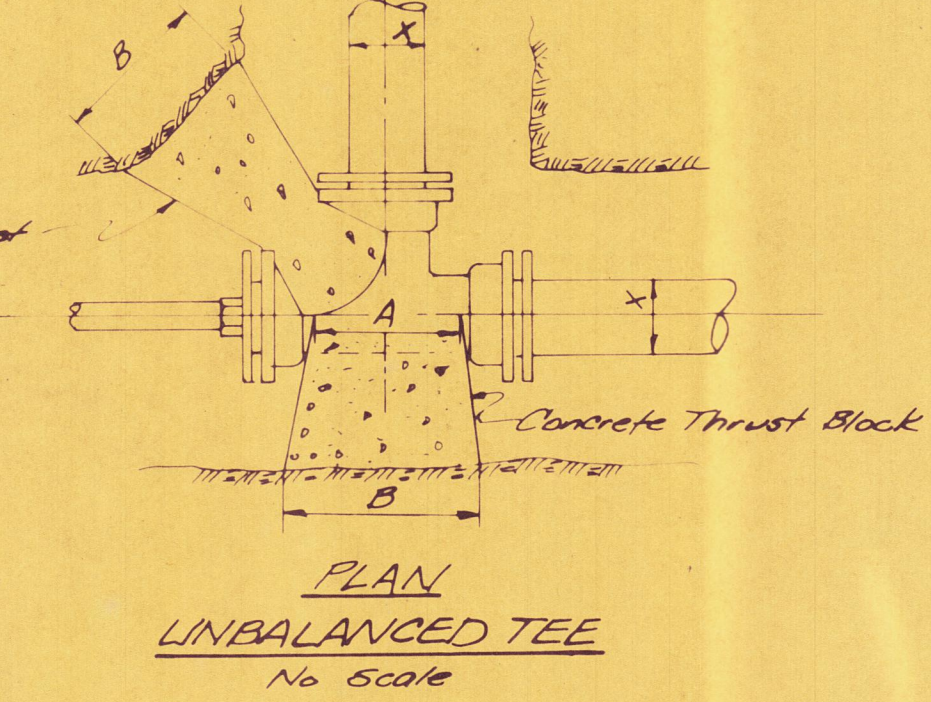
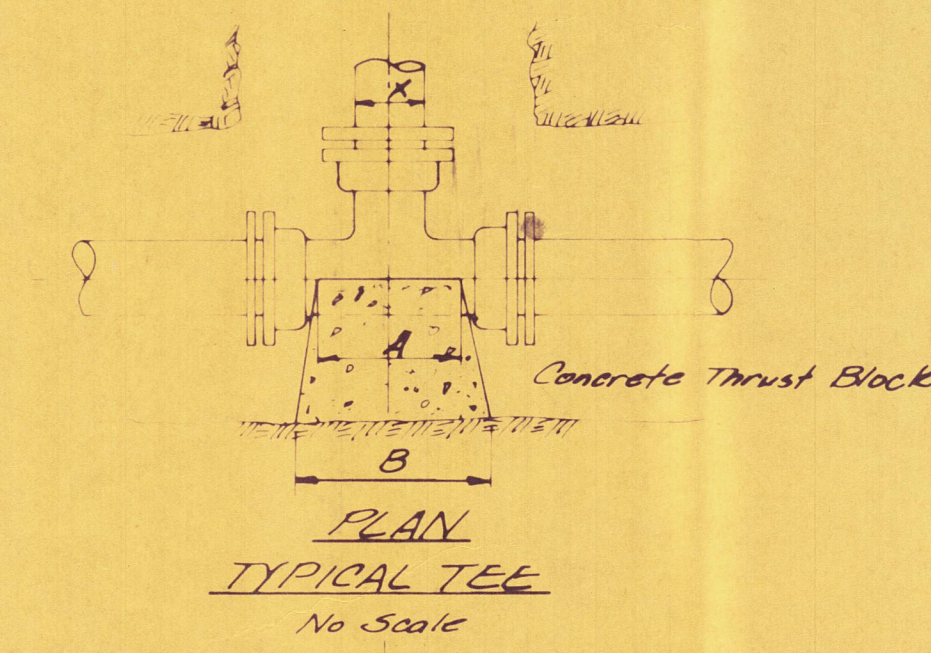
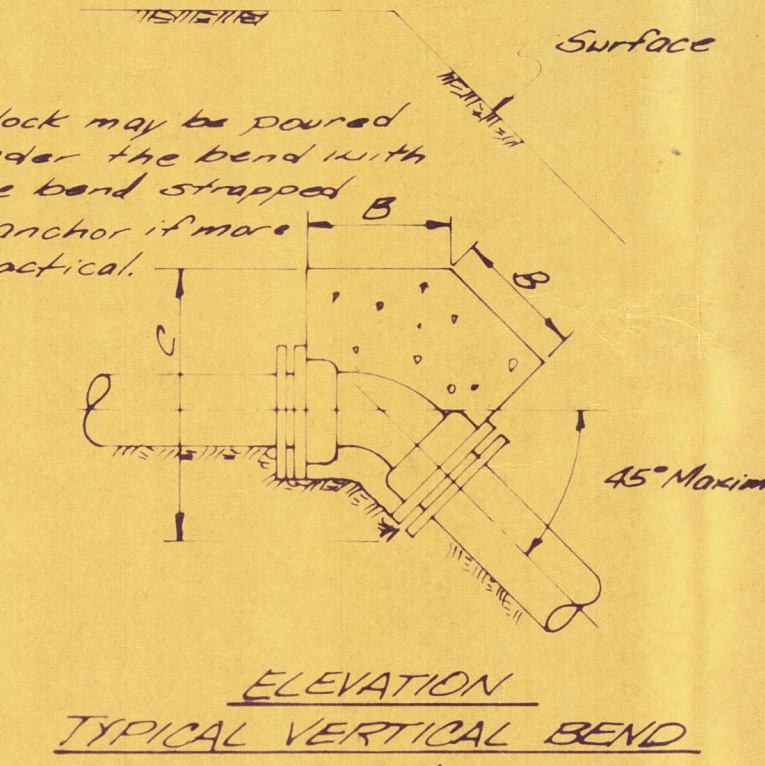
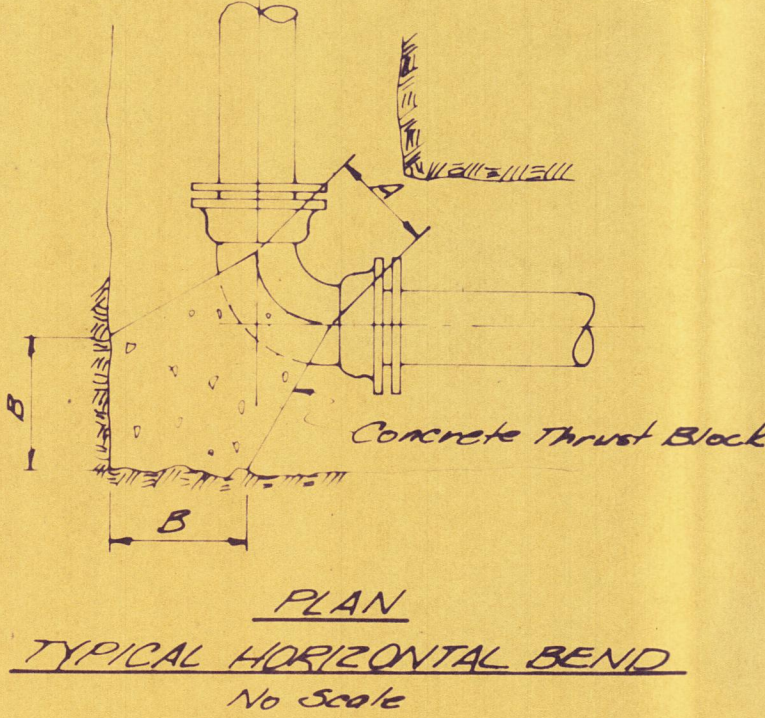
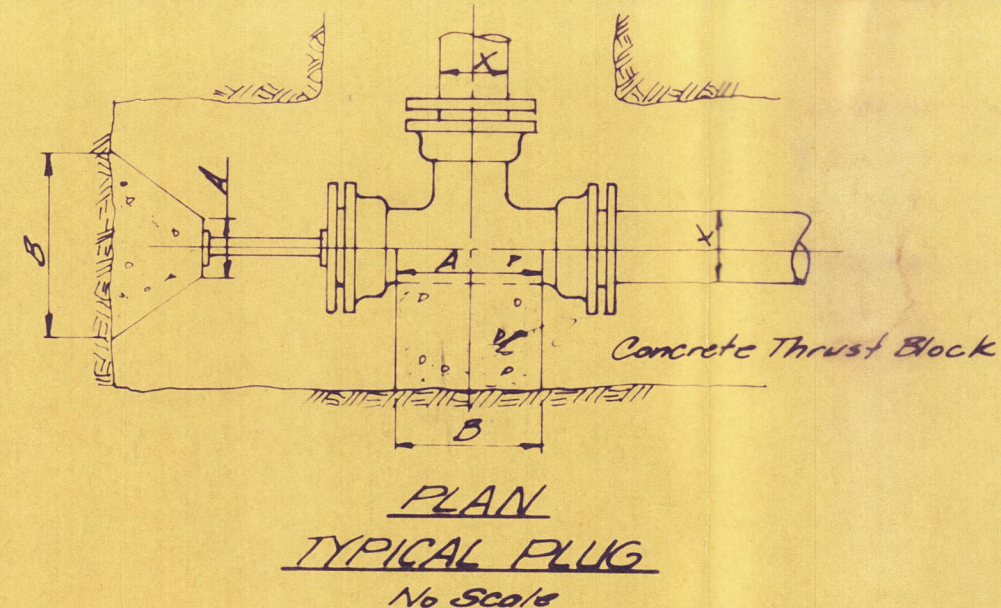
PIPING DETAILS AND
BRIDGE CROSSING DETAILS
SHEET 1 OF 2

OAKDALE, TENNESSEE

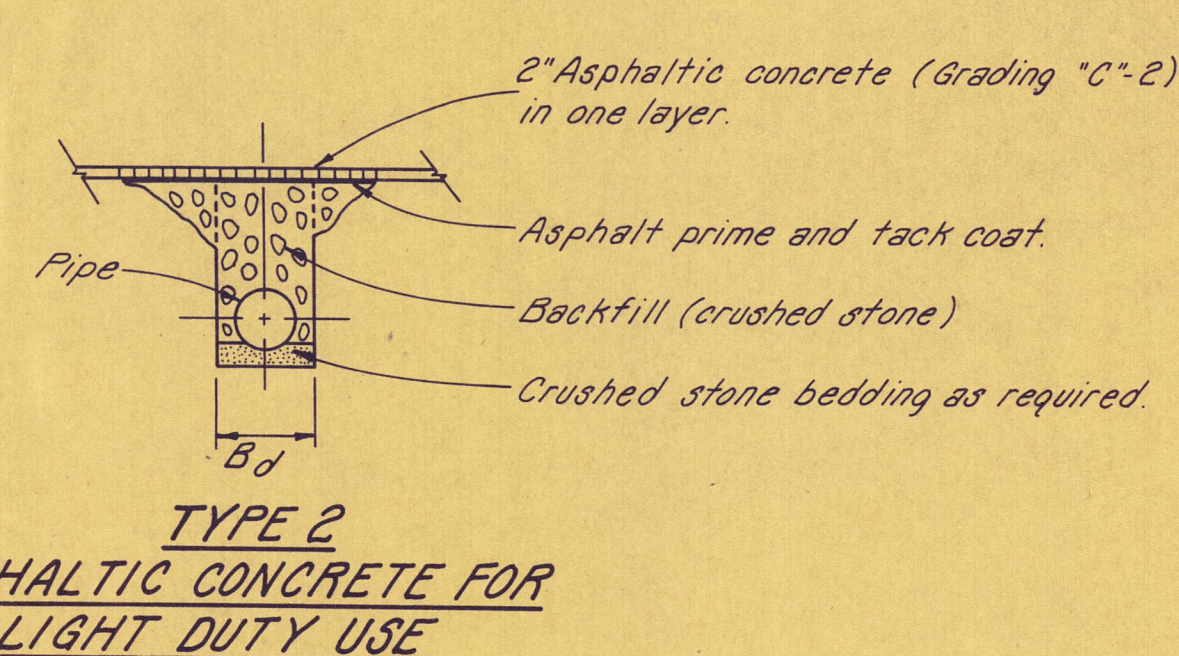
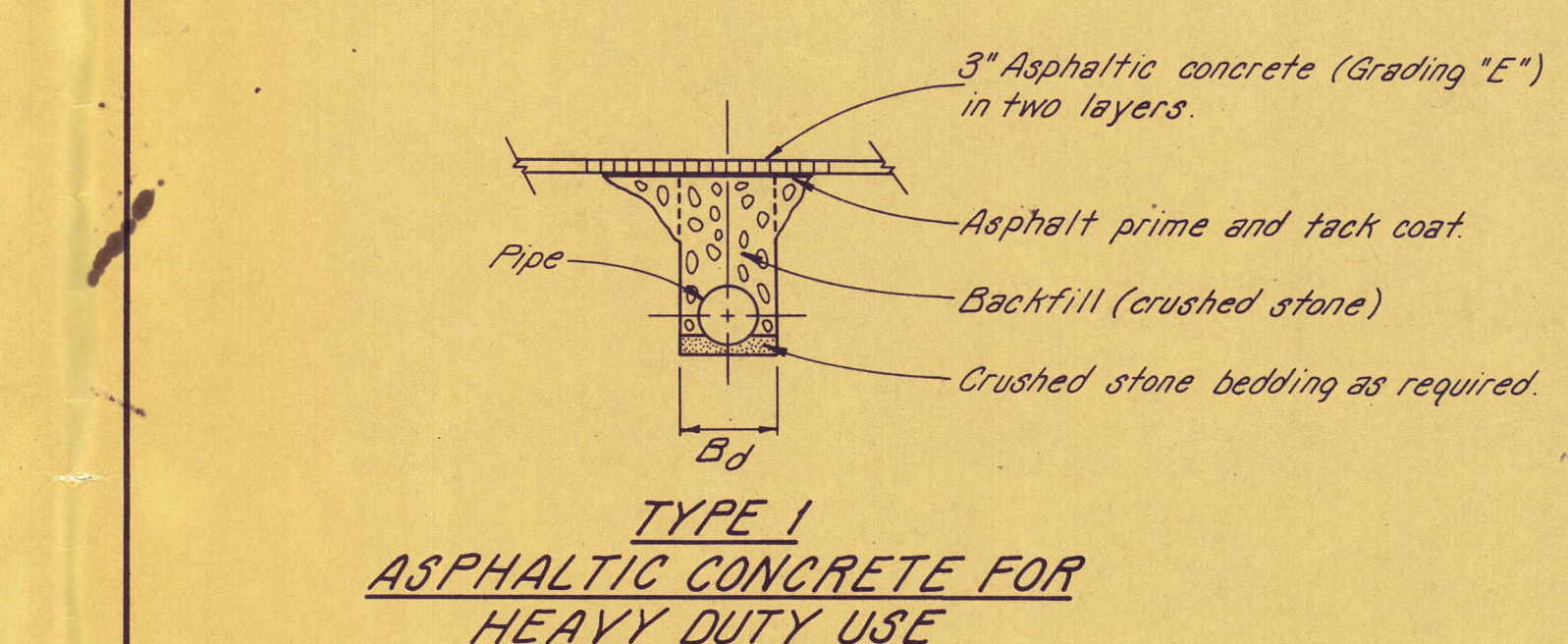
DESIGNED BY: WCI HENSLEY-SCHMIDT, INC. DRAWING NO.
DRAWN BY: JWC CONSULTANTS
CHKD. DATE: ATLANTA-CHATTANOOGA-JACKSON
APPR. DATE: CHARLOTTE-KNOXVILLE-NASHVILLE 7077-1-6

Pipe Size in	A	B	Depth C
90° Bend			
24"	2'-4"	4'-6"	5'-0"
20"	2'-4"	4'-0"	4'-6"
18"	2'-0"	3'-6"	4'-0"
16"	1'-9"	3'-4"	3'-6"
14"	1'-9"	2'-6"	3'-0"
12"	1'-6"	2'-0"	2'-6"
10"	1'-4"	1'-6"	2'-0"
8"	1'-0"	1'-0"	2'-0"
6"	0'-9"	1'-0"	2'-0"
4"	0'-9"	1'-0"	1'-0"
45° Bend			
24"	1'-4"	4'-6"	3'-0"
20"	1'-4"	3'-3"	3'-0"
18"	1'-0"	4'-0"	2'-0"
16"	1'-0"	4'-3"	1'-6"
14"	1'-0"	3'-6"	1'-8"
12"	1'-0"	3'-4"	1'-0"
10"	0'-9"	2'-6"	1'-0"
8"	0'-9"	1'-6"	1'-0"
6"	0'-9"	1'-0"	1'-0"
4"	0'-6"	1'-0"	1'-0"
22½° Bend			
24"	1'-4"	3'-0"	2'-0"
20"	1'-4"	2'-6"	2'-0"
18"	1'-0"	2'-9"	1'-6"
16"	1'-0"	2'-4"	1'-4"
14"	1'-0"	2'-0"	1'-2"
12"	1'-0"	1'-9"	1'-0"
10"	0'-9"	1'-6"	0'-10"
8"	0'-9"	1'-0"	0'-8"
6"	0'-9"	1'-0"	0'-6"
4"	0'-6"	1'-0"	0'-4"
11¼° Bend			
24"	1'-4"	1'-6"	2'-0"
20"	1'-4"	1'-3"	2'-0"
18"	1'-0"	1'-4"	1'-6"
16"	1'-0"	1'-3"	1'-4"
14"	1'-0"	1'-0"	1'-2"
12"	1'-0"	1'-0"	1'-0"
10"	0'-9"	1'-0"	0'-10"
8"	0'-9"	1'-0"	0'-8"
6"	0'-9"	1'-0"	0'-6"
4"	0'-6"	1'-0"	0'-4"
Unbalanced Tee & Plug			
24"	3'-0"	7'-0"	5'-0"
20"	3'-0"	5'-0"	5'-0"
18"	2'-0"	5'-6"	3'-6"
16"	2'-0"	5'-6"	3'-0"
14"	2'-0"	4'-0"	3'-0"
12"	2'-0"	4'-6"	2'-0"
10"	1'-0"	3'-0"	2'-0"
8"	1'-0"	2'-9"	2'-0"
6"	1'-0"	1'-0"	1'-0"
4"	1'-0"	1'-0"	1'-0"

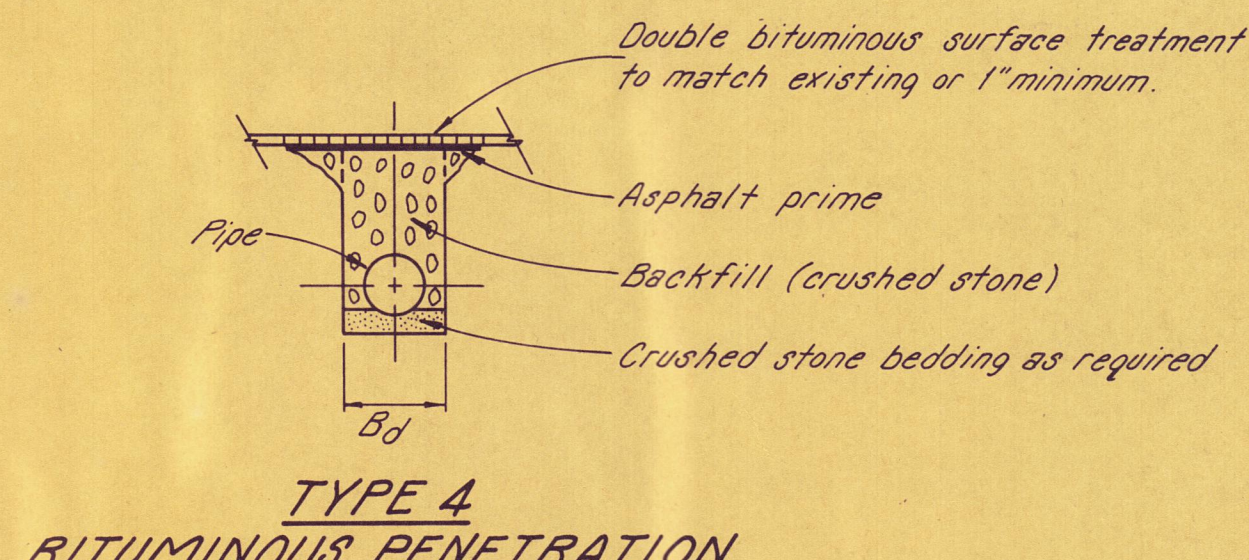
Table of Dimensions for Horizontal & Vertical 90° Bends



Minimum Trench Depth	Valve Size	D
2'	3"	36"
3'	3"	37"
4'	3"	39"
6'	3"	41"
8'	3"	44"
10'	3"	52"
12'	3"	56"



- NOTES:**
1. For replacement of pavement in like use TYPE 1, 2 or 4.
 2. Crown streets as required.
 3. $B_j = D + 2T + 12"$



**PAVEMENT REPLACEMENT
DETAILS FOR
COUNTY, CITY, & PRIVATE ROADS
ONLY**

REV	BY	DATE	DESCRIPTION
WOLFE BRANCH UTILITY DISTRICT			
PIPING DETAILS & PAVEMENT REPLACEMENT DETAILS			
SHEET 2 OF 2			
OAKDALE, TENNESSEE			
DESIGNED BY	W.C.T.	HENSLEY-SCHMIDT, INC.	DRAWING NO.
DRAWN BY	J.W.C.	CONSULTANTS	
CHKD.	DATE:	ATLANTA CHATTANOOGA JACKSON	7077-1-7
APPR.	DATE:	CHARLOTTE KNOXVILLE NASHVILLE	