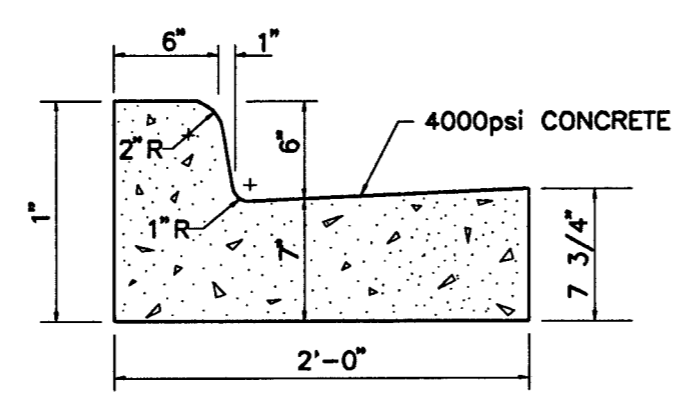
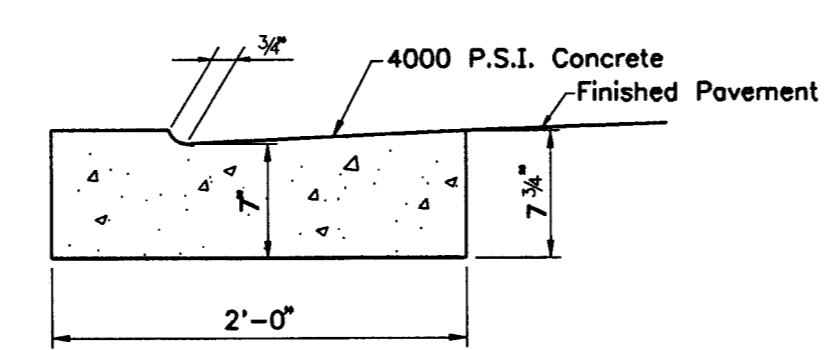


F CONCRETE WALK JOINTING DETAILS
NOT TO SCALE

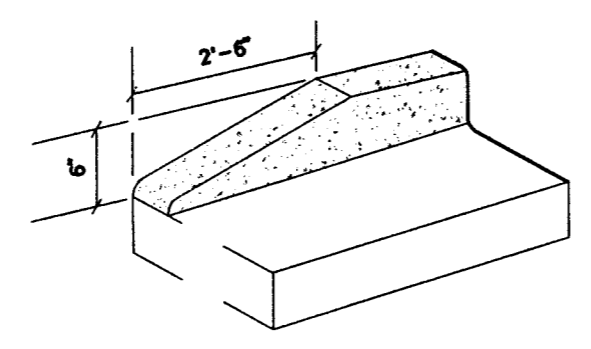
- NOTES:**
- 1/2" PREFORMED EXPANSION JOINT MATERIAL AT ALL PC AND PT OF CURB RADIUS AND MAX. SPACING OF TANGENT SECTIONS = 90°.
 - TOOLED CONTRACTION JOINTS AT 10'-0" CENTERS, CONTRACTION JOINT TO BE MINIMUM 3" DEEP AND 1/8" TO 1/4" WIDE.



15 CONCRETE CURB & GUTTER MODIFIED
SCALE: 1"=1'-0"



ALTERNATE CURB & GUTTER
(Through Driveways)
SCALE: 1"=1'-0"



CURB TRANSITION
NOT TO SCALE

GENERAL WATER MAIN NOTES

- SERVICE LINES FROM 3/4" TO 1" DIA. SHALL BE COMPLETELY REPLACED FROM MAIN TO EXISTING CURB STOP AND CURB BOX WITH TYPE "K" COPPER. NO JOINTS WILL BE PERMITTED BETWEEN CORPORATION STOP AND CURB STOP. THE CORPORATION AND CURB STOP SHALL NOT BE REPLACED.
- CONTRACTOR SHALL NOTIFY THE WATER UTILITY & PROJECT ENGINEER AT LEAST 48 HRS. IN ADVANCE OF BEGINNING CONSTRUCTION AND ANY ANTICIPATED SHUTDOWN. THE ARRANGEMENT FOR INTERRUPTION OF SERVICE AND NOTIFICATION TO THE CUSTOMER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- WATER MAIN TO BE CONSTRUCTED WITH A MINIMUM OF 48" OF COVER BELOW THE EXISTING PROFILE.
- A MINIMUM 10' HORIZONTAL SEPARATION OR 18" VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN THE WATER & SANITARY SEWER LINES AS SHOWN IN DETAIL ON THIS SHEET.

| COVER | MINIMUM FOOTAGE OF RESTRAINED PIPE FOR VARIOUS DIAMETERS & DEGREES CAST & DUCTILE IRON ELBOWS | | | | | | | | | | | |
|-----------|---|----|----|---------|----|----|-----|----|----|----------------------------|-----|----|
| | DEGREE OF ELBOW | | | | | | | | | | | |
| | 11 1/4° | | | 22 1/2° | | | 45° | | | 90° OR DEAD END CROSS&TEES | | |
| DIA. MAIN | 4' | 5' | 8' | 4' | 5' | 8' | 4' | 5' | 8' | 4' | 5' | 8' |
| 4" | - | - | - | - | - | - | 3 | 3 | 2 | 10 | 8 | 5 |
| 6" | - | - | - | - | - | - | 5 | 4 | 2 | 14 | 12 | 7 |
| 8" | - | - | - | 2 | 2 | - | 6 | 5 | 3 | 20 | 16 | 10 |
| 10" | - | - | - | 3 | 2 | 1 | 8 | 7 | 4 | 28 | 22 | 14 |
| 12" | - | - | - | 3 | 3 | 2 | 12 | 9 | 6 | 39 | 30 | 19 |
| 16" | 2 | 1 | - | 5 | 4 | 3 | 17 | 14 | 9 | 58 | 47 | 30 |
| 20" | 2 | 2 | - | 6 | 5 | 3 | 22 | 18 | 12 | 75 | 62 | 40 |
| 24" | 2 | 2 | - | 7 | 6 | 4 | 26 | 22 | 14 | 88 | 73 | 47 |
| 30" | 3 | 2 | - | 9 | 7 | 5 | 29 | 26 | 18 | 104 | 86 | 57 |
| 36" | 3 | 3 | - | 11 | 9 | 6 | 39 | 34 | 21 | 128 | 111 | 70 |

SPECIAL NOTES ON JOINT RESTRAINT:

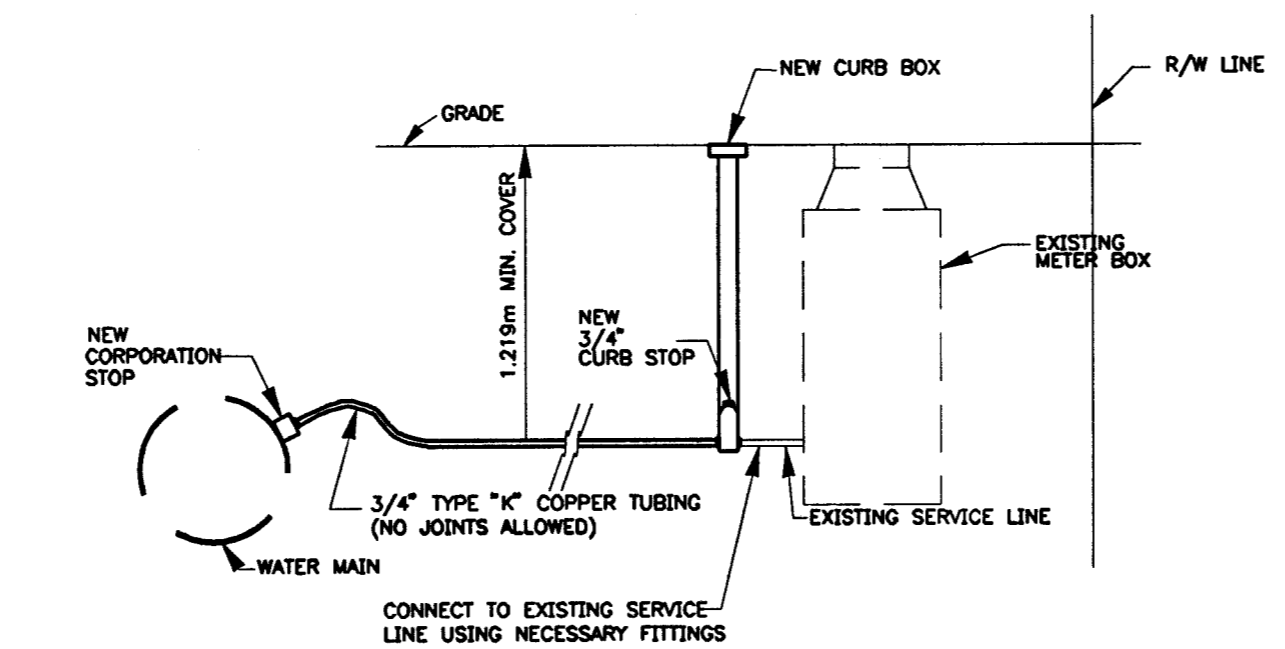
- Minimum Footage of Restrained Pipe Smaller Than 4" Shall Be In Accordance With The 4" Main Size Shown In The Table Above.
- Elbow & Tee Blocking Details Shall Be In Accordance With The 4" Main Size Shown In The Table Below.

TEE BLOCKING

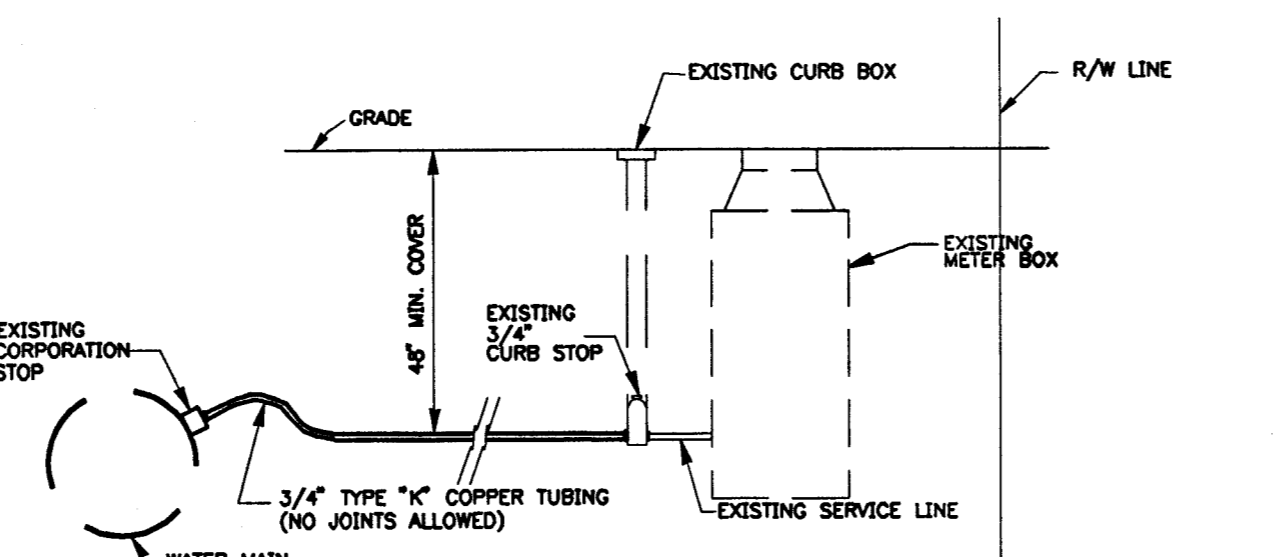
| "D" | WIDTH | DEPTH |
|-----|--------|-------|
| 4" | 2'-6" | 1'-0" |
| 6" | 3'-3" | 1'-6" |
| 8" | 4'-3" | 2'-0" |
| 10" | 5'-3" | 2'-6" |
| 12" | 6'-0" | 3'-0" |
| 16" | 8'-0" | 4'-0" |
| 20" | 9'-9" | 5'-0" |
| 24" | 11'-6" | 6'-0" |

| SIZE | 11 1/4° | | | | 22 1/2° | | | | 45° | | | | 90° | | | |
|------|---------|-------|-------|-------|---------|-------|--------|-------|--------|-------|-------|-------|--------|-------|-------|-------|
| | W | D | W | D | W | D | W | D | W | D | W | D | W | D | W | D |
| 4" | 9" | 9" | 1'-0" | 1'-0" | 1'-0" | 1'-0" | 1'-6" | 1'-3" | 2'-9" | 1'-3" | 1'-3" | 1'-3" | 2'-9" | 1'-3" | 1'-3" | 1'-3" |
| 6" | 1'-0" | 1'-0" | 2'-0" | 1'-0" | 2'-6" | 1'-6" | 4'-3" | 1'-6" | 6'-0" | 2'-0" | 2'-0" | 2'-0" | 6'-0" | 2'-0" | 2'-0" | 2'-0" |
| 8" | 1'-3" | 1'-3" | 2'-0" | 1'-9" | 3'-9" | 1'-9" | 6'-0" | 2'-6" | 7'-3" | 2'-6" | 2'-6" | 2'-6" | 7'-3" | 2'-6" | 2'-6" | 2'-6" |
| 10" | 1'-9" | 1'-6" | 3'-0" | 2'-0" | 4'-0" | 2'-6" | 7'-3" | 2'-6" | 8'-3" | 3'-0" | 3'-0" | 3'-0" | 8'-3" | 3'-0" | 3'-0" | 3'-0" |
| 12" | 2'-0" | 1'-9" | 3'-6" | 2'-0" | 4'-9" | 3'-0" | 6'-3" | 3'-0" | 11'-3" | 4'-0" | 4'-0" | 4'-0" | 11'-3" | 4'-0" | 4'-0" | 4'-0" |
| 16" | 2'-9" | 2'-3" | 5'-6" | 2'-3" | 6'-0" | 4'-0" | 11'-3" | 4'-0" | 13'-9" | 5'-0" | 5'-0" | 5'-0" | 13'-9" | 5'-0" | 5'-0" | 5'-0" |
| 20" | 3'-3" | 2'-9" | 5'-9" | 3'-3" | 7'-6" | 5'-0" | 13'-9" | 5'-0" | 16'-6" | 6'-0" | 6'-0" | 6'-0" | 16'-6" | 6'-0" | 6'-0" | 6'-0" |
| 24" | 4'-6" | 3'-0" | 6'-9" | 4'-0" | 9'-0" | 6'-0" | 16'-6" | 6'-0" | 21'-0" | 7'-0" | 7'-0" | 7'-0" | 21'-0" | 7'-0" | 7'-0" | 7'-0" |

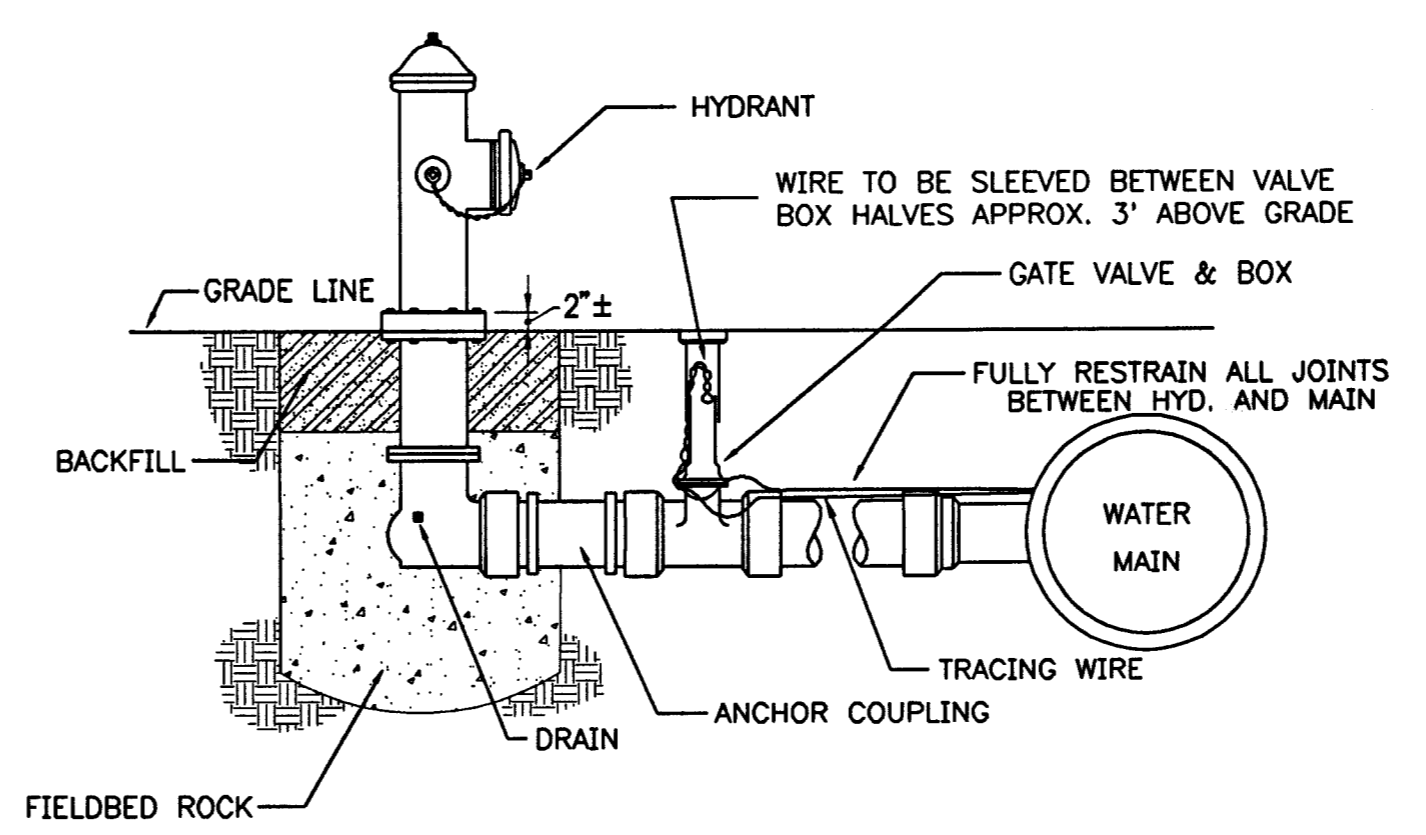
NOTE:
Concrete Shall Be Kept A Sufficient Distance From Joint For Removal Of All Joint Accessories Including Bolts, And Shall Be Of A Mix Not Leaner Than 1 Part Cement To 2 1/2 Parts Sand And 5 Parts Stone And Having A Compressive Strength Of Not Less Than 2000 psi After 28 Days.



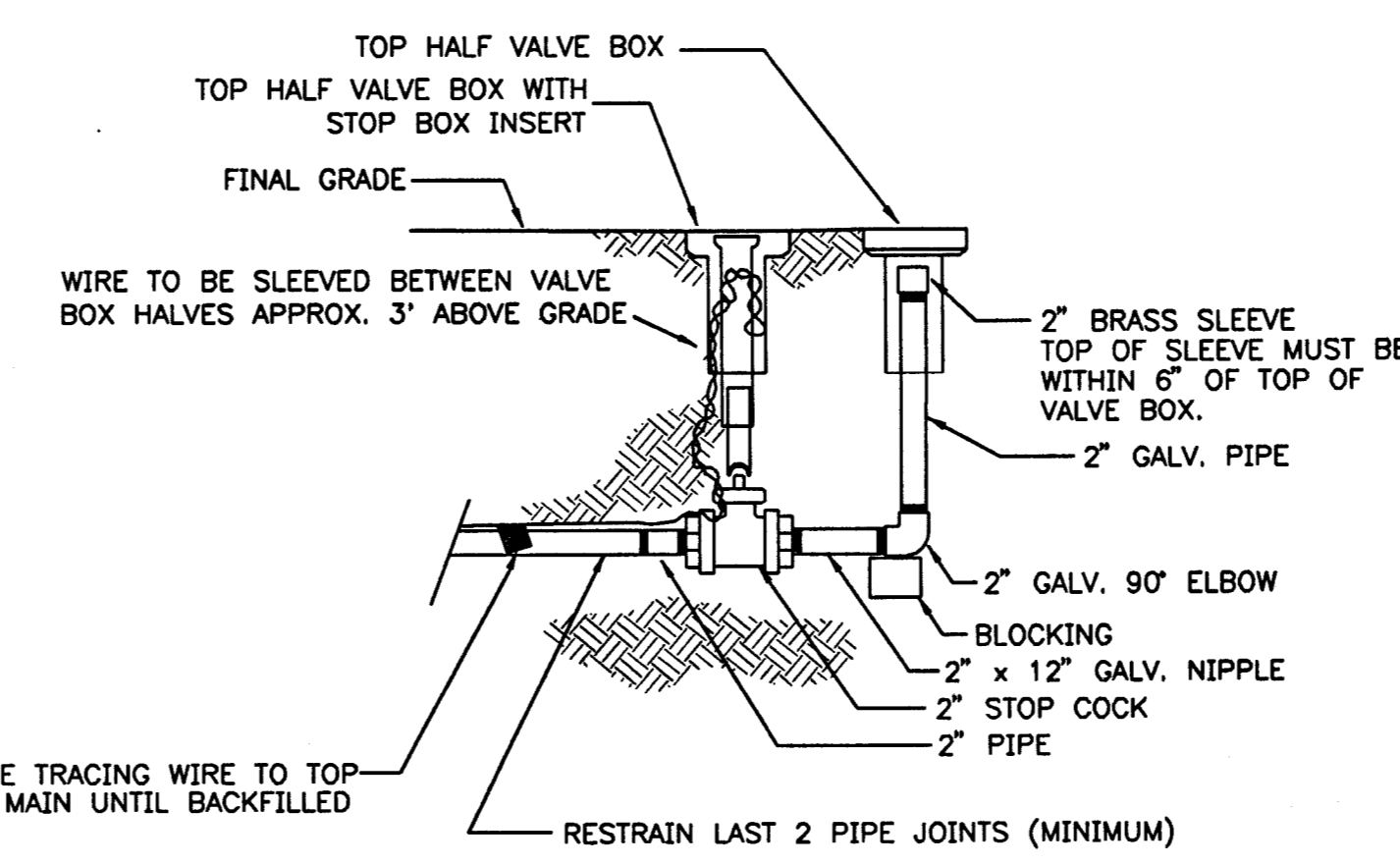
NEW WATER SERVICE
NOT TO SCALE



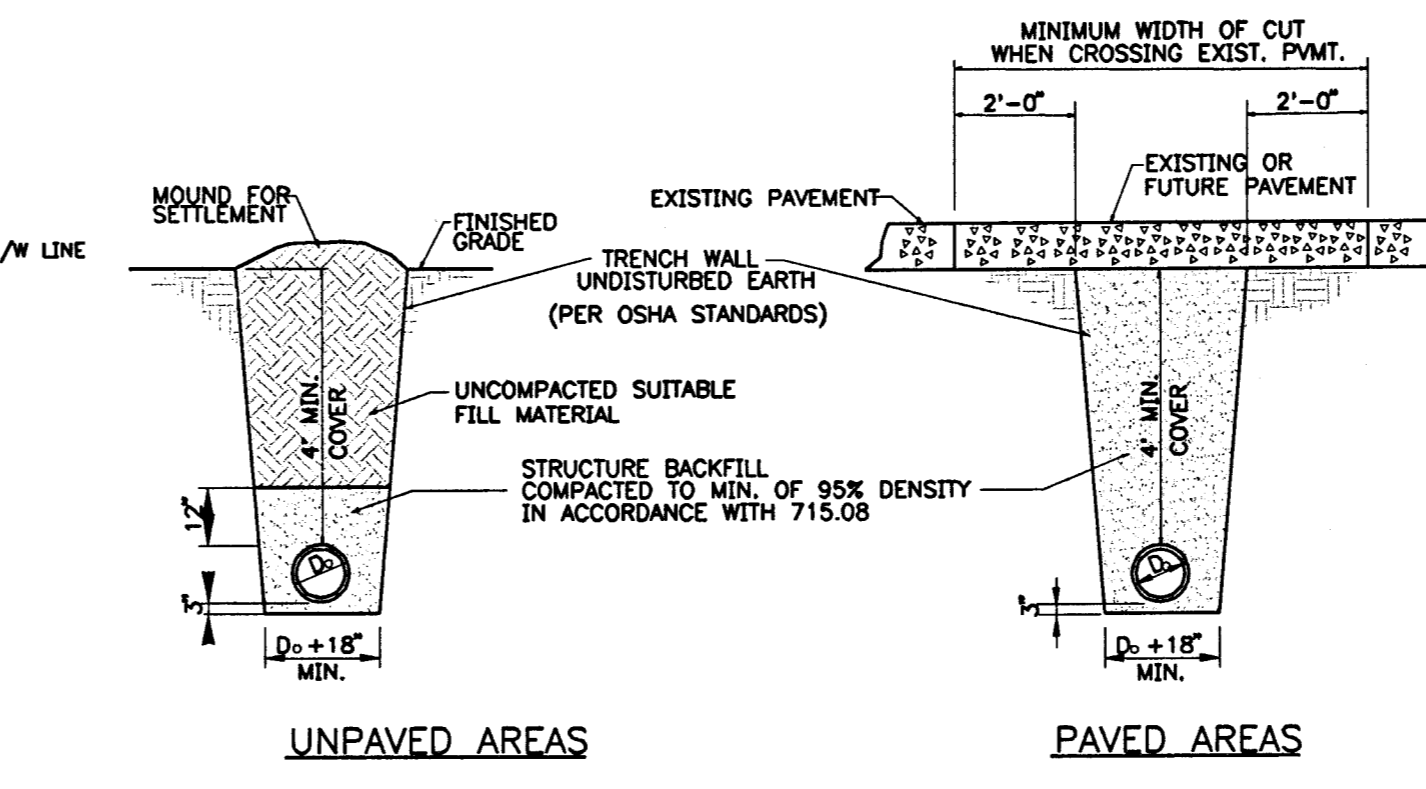
NOTE:
New Water Service Shall Be Included In Bid. Water Service Replacement In Lieu Of New Service May Be Utilized Where Engineer/Owner Agree Total Replacement Not Req'd.



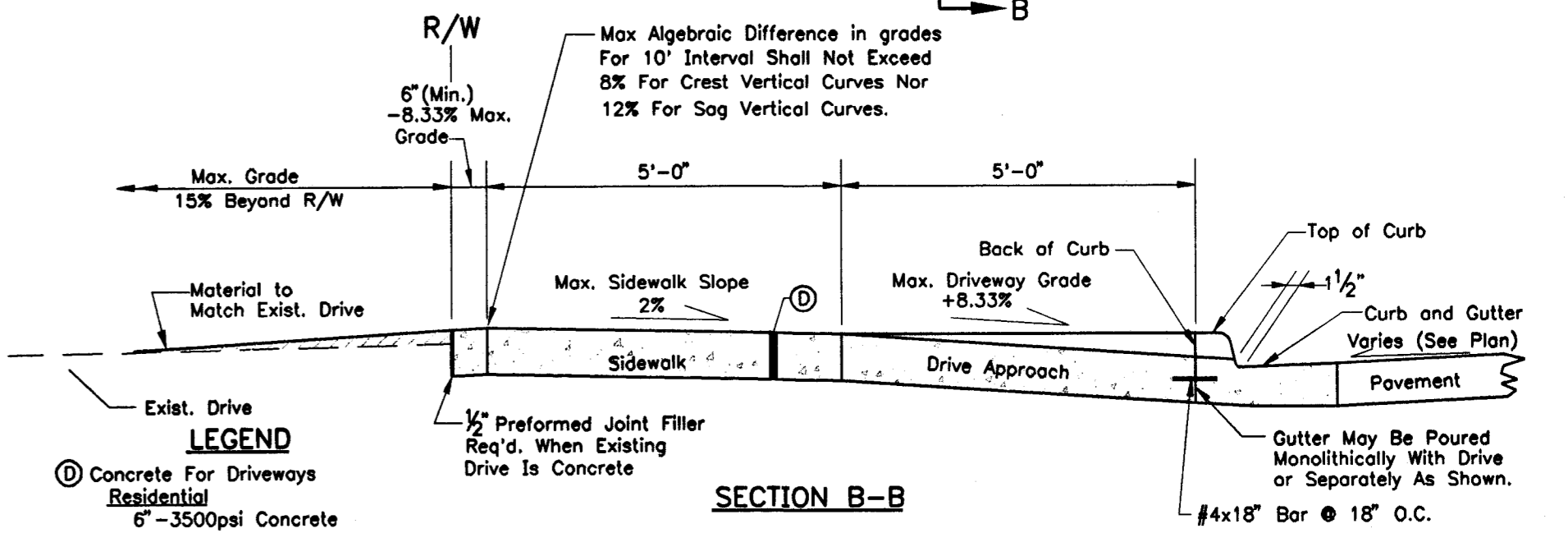
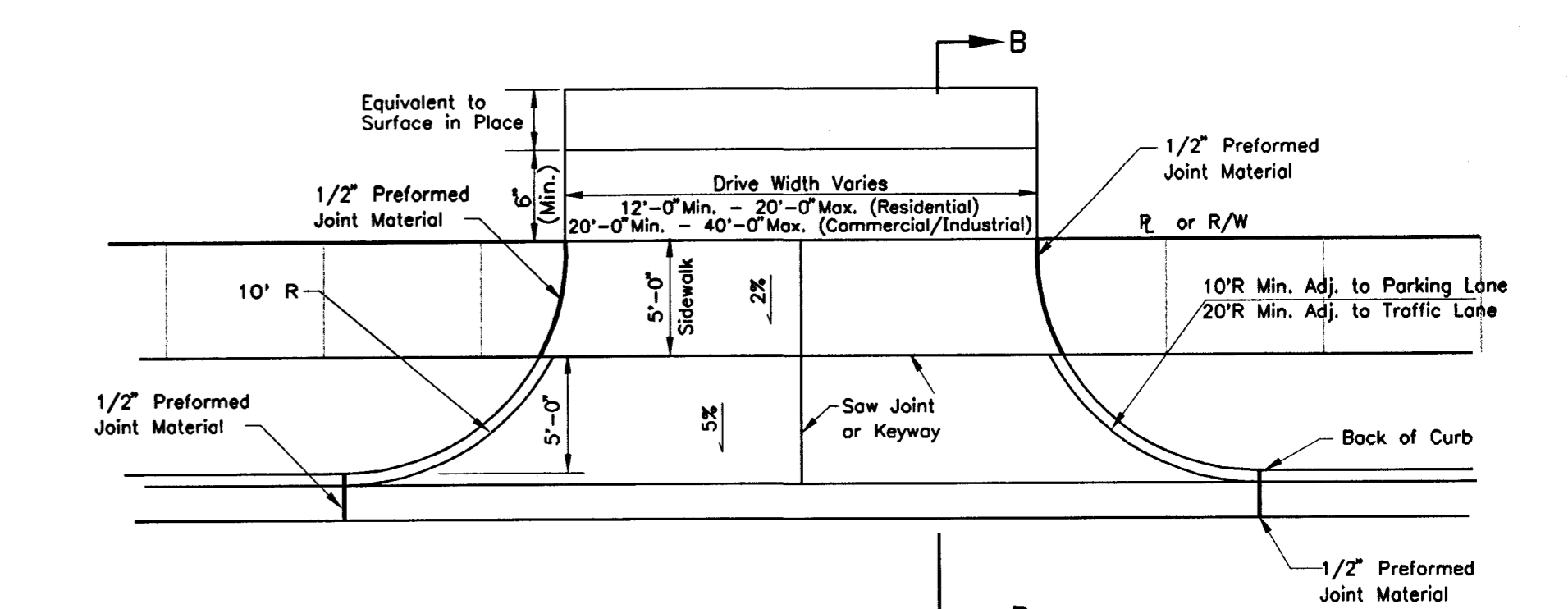
TYPICAL FIRE HYDRANT ASSEMBLY



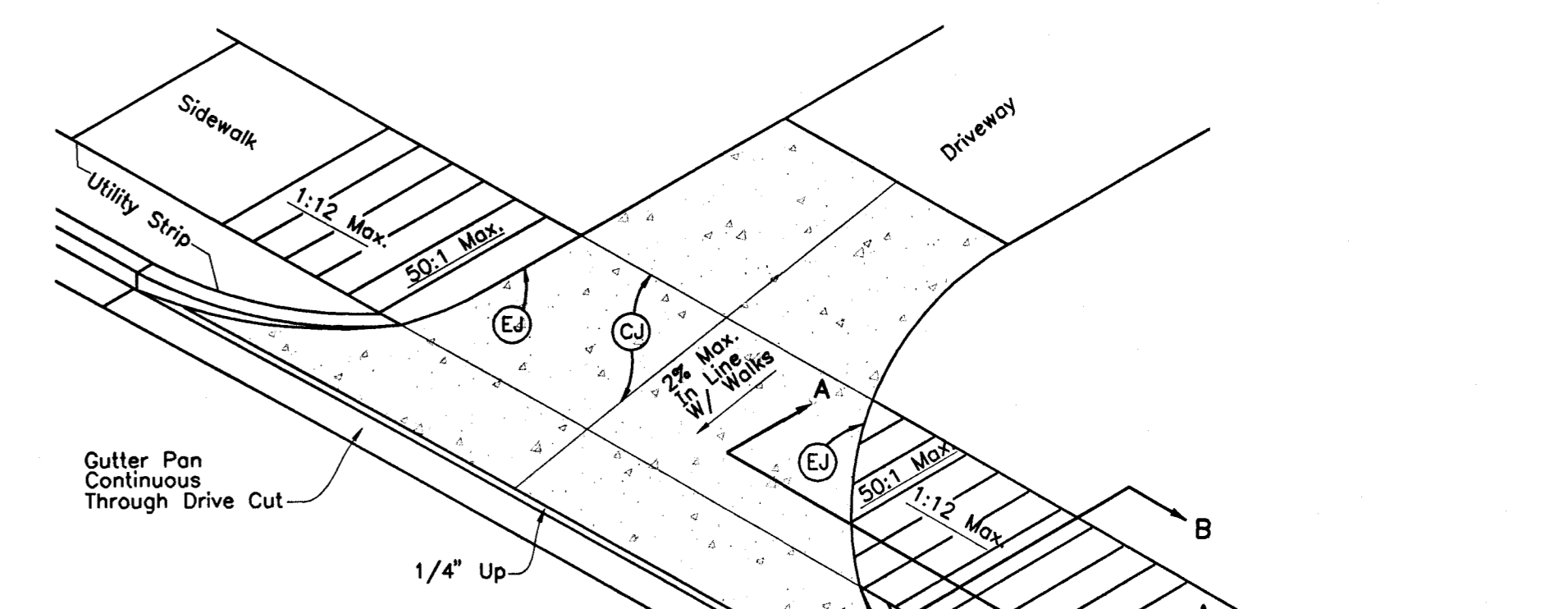
TYPICAL PERMANENT BLOWOFF ASSEMBLY WITH SOLID SLEEVE AND CORP COCK



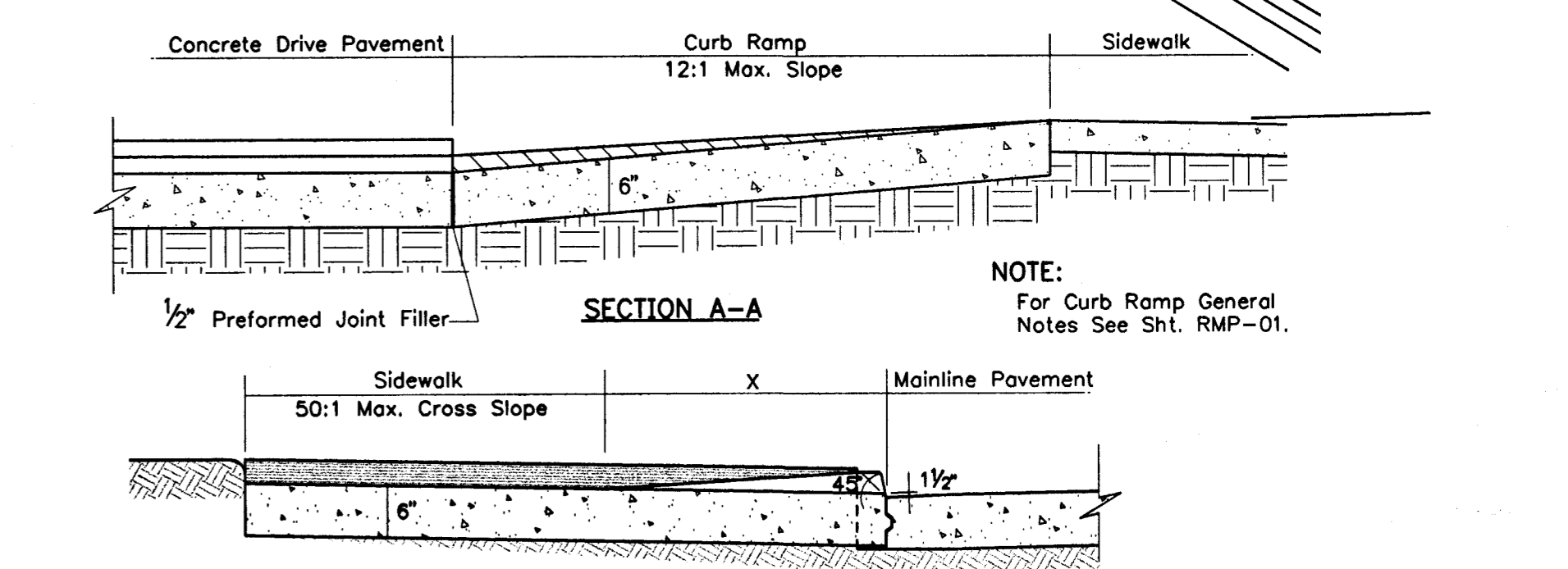
WATER MAIN TRENCH/PIPE BEDDING DETAILS



DRIVEWAY DETAIL
SCALE: 1"=1'-0"



- GENERAL NOTES:**
- X = Distance Between Face of Curb And Sidewalk
 - When X Is Greater Than Or Equal To 2'-0", But Less Than 6'-0", Curb Ramp Type "O" Shall Be Used. When X Is Greater Than Or Equal To 6'-0", No Curb Ramp Is Required.



CURB RAMP @ DRIVEWAY DETAIL

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MISC. SITE DETAILS
FOR
HARLAN AVE. EXTENSION
VANDEBURGH COUNTY, INDIANA

Prepared By: **JAMES A. PARRY**
REGISTERED PROFESSIONAL ENGINEER
No. 20434
STATE OF INDIANA

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Planners - Engineers - Surveyors
4209 West River
Evansville, IN 47715 (812)479-8200

PROJECT NO.: 102-0183
ISSUED:

DATE: _____
SYT: _____

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