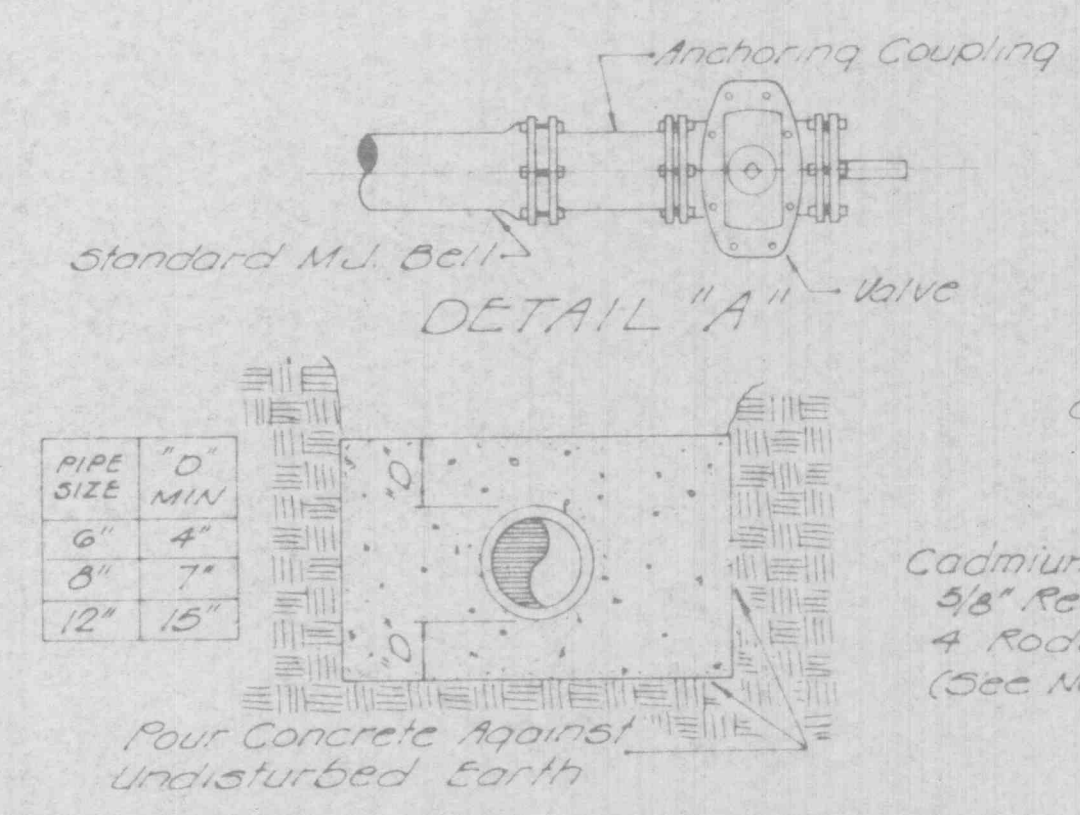
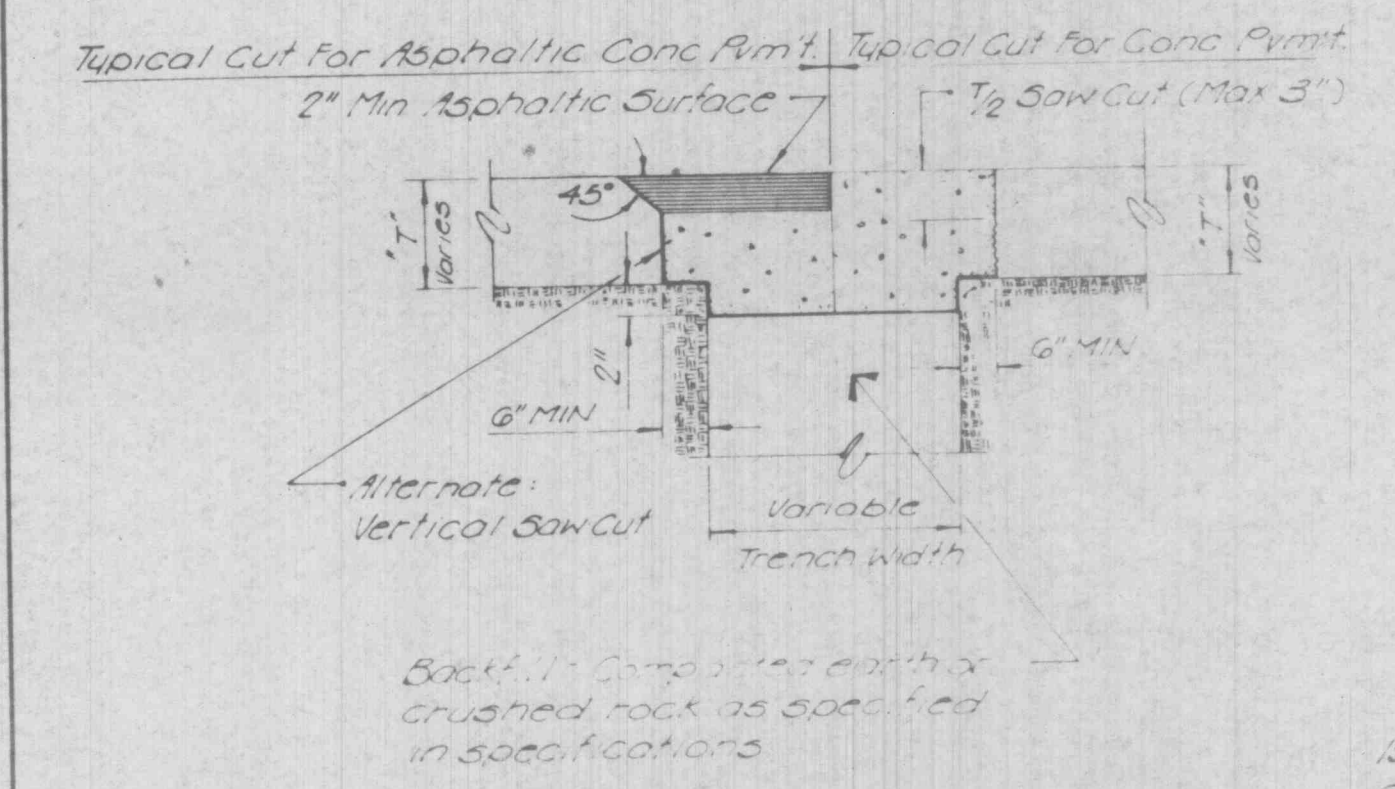


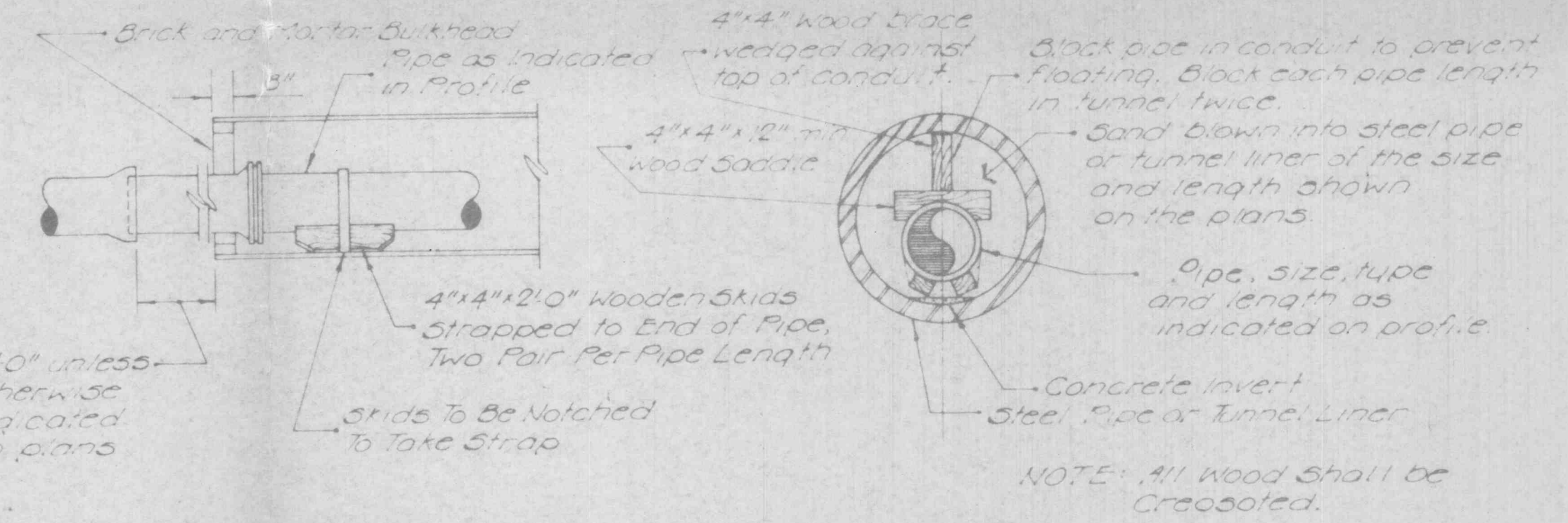
**TYPICAL SERVICE ASSEMBLY**



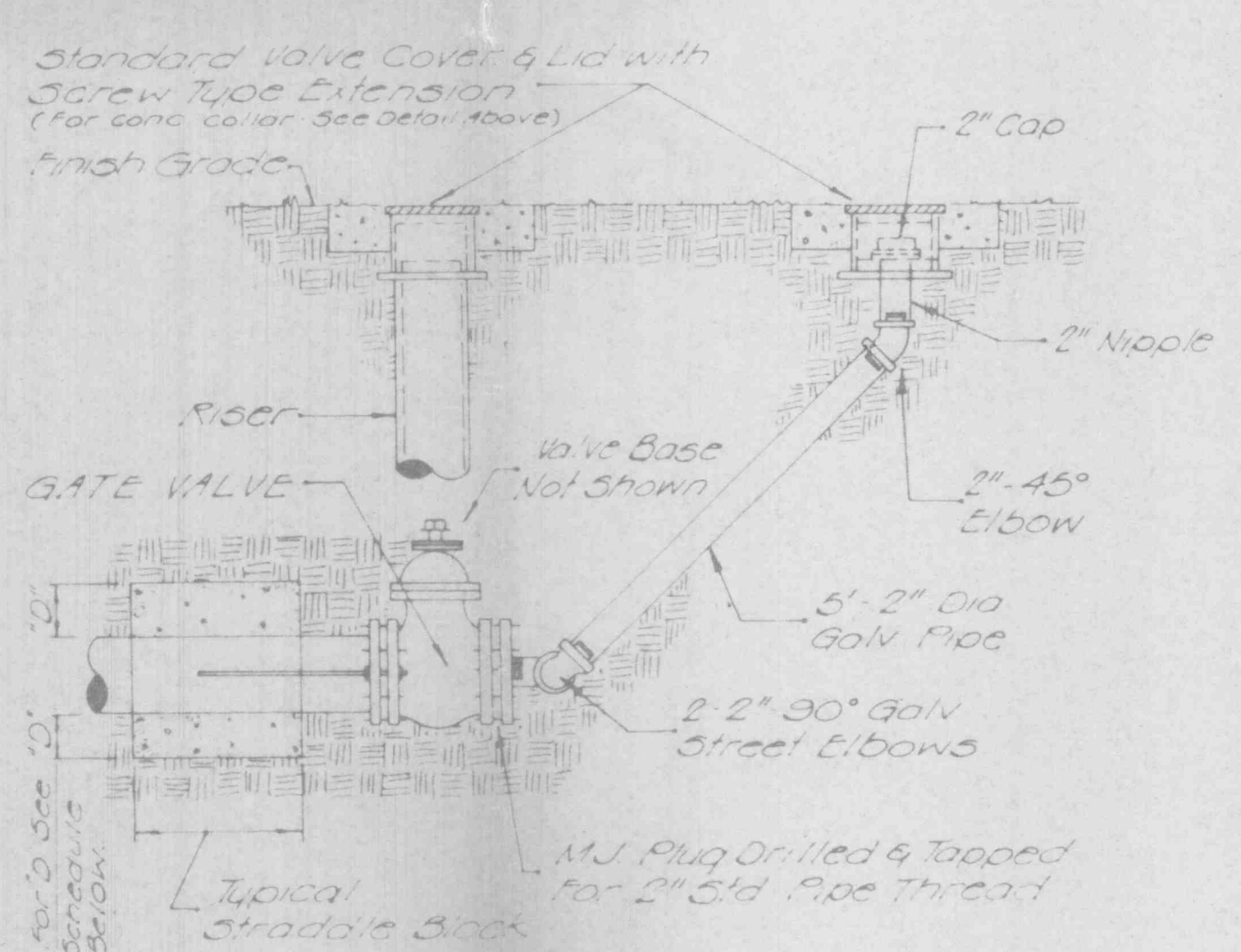
**STRADDLE BLOCK DETAIL**



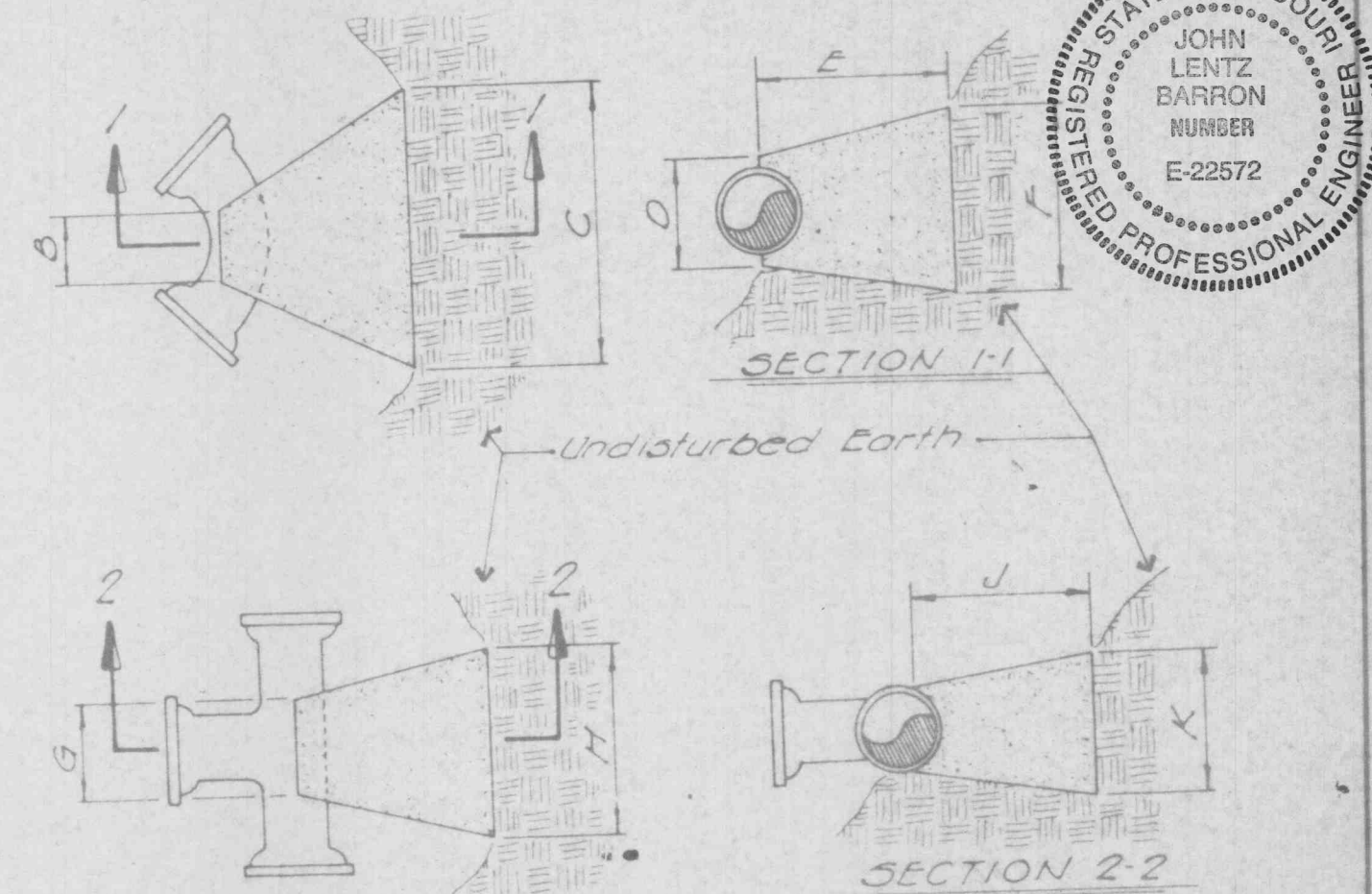
**PAVEMENT REPAIR DETAIL**



**TUNNEL LINER DETAIL**



**FLUSHING ASSEMBLY**



BENDS					
B	C	D	E	F	
6" 11 1/4"	8" 5"	12" 24"	12" 24"	12" 24"	10"
6" 22 1/2"	8" 19"	12" 24"	12" 24"	12" 24"	13"
6" 45"	8" 30"	12" 24"	12" 24"	12" 24"	14"
6" 90"	8" 30"	12" 24"	12" 24"	12" 24"	17"
8" 11 1/4"	8" 20"	12" 24"	12" 24"	12" 24"	10"
8" 22 1/2"	8" 22"	12" 24"	12" 24"	12" 24"	17"
8" 45"	8" 30"	12" 24"	12" 24"	12" 24"	17"
8" 90"	8" 30"	12" 24"	12" 24"	12" 24"	17"
12" 11 1/4"	8" 30"	12" 24"	12" 24"	12" 24"	15"
12" 22 1/2"	8" 35"	12" 24"	12" 24"	12" 24"	20"
12" 45"	8" 40"	12" 24"	12" 24"	12" 24"	40"
12" 90"	8" 60"	12" 24"	12" 24"	12" 24"	52"

TEES					
	G	H	J	K	
6" x 6" x 6"	12"	24"	24"	24"	18"
8" x 6" x 6"	12"	24"	24"	24"	24"
8" x 8" x 8"	12"	24"	24"	24"	18"
12" x 12" x 12"	12"	24"	24"	24"	24"
12" x 12" x 12"	12"	36"	24"	24"	36"

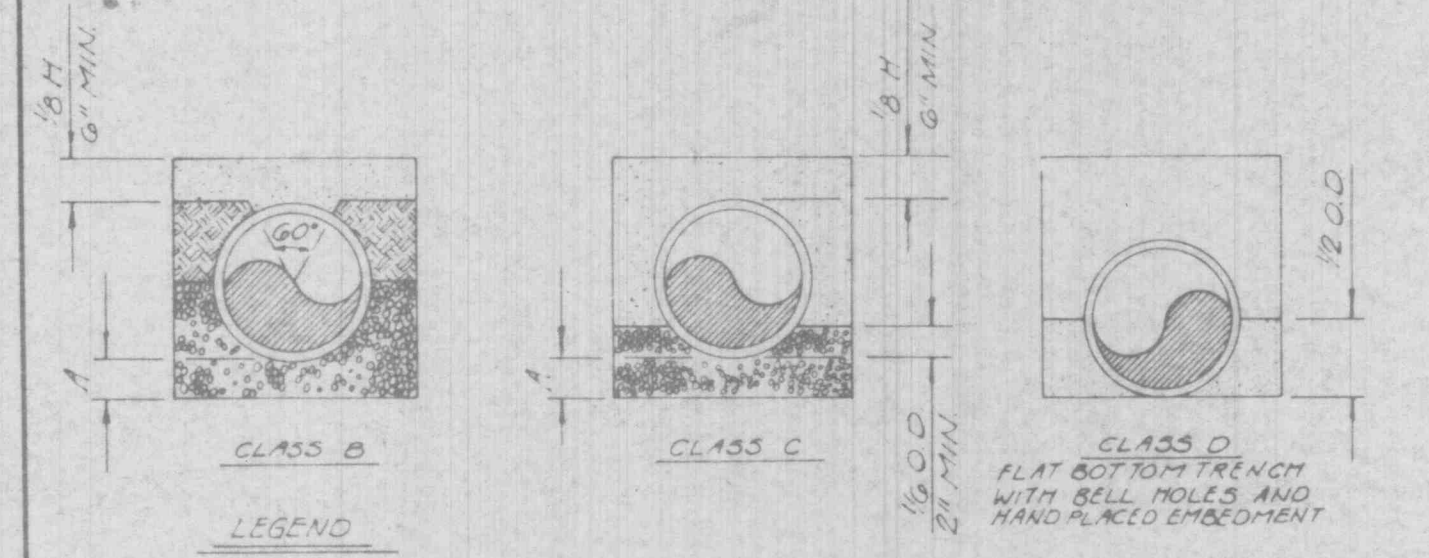
  

CUBIC FEET OF CONCRETE REQUIRED					
BEND	11 1/4"	22 1/2"	45"	90"	
6"	1.7	2.4	3.5	5.3	
8"	2.1	3.1	5.0	8.5	
12"	3.7	5.9	9.7	17.5	

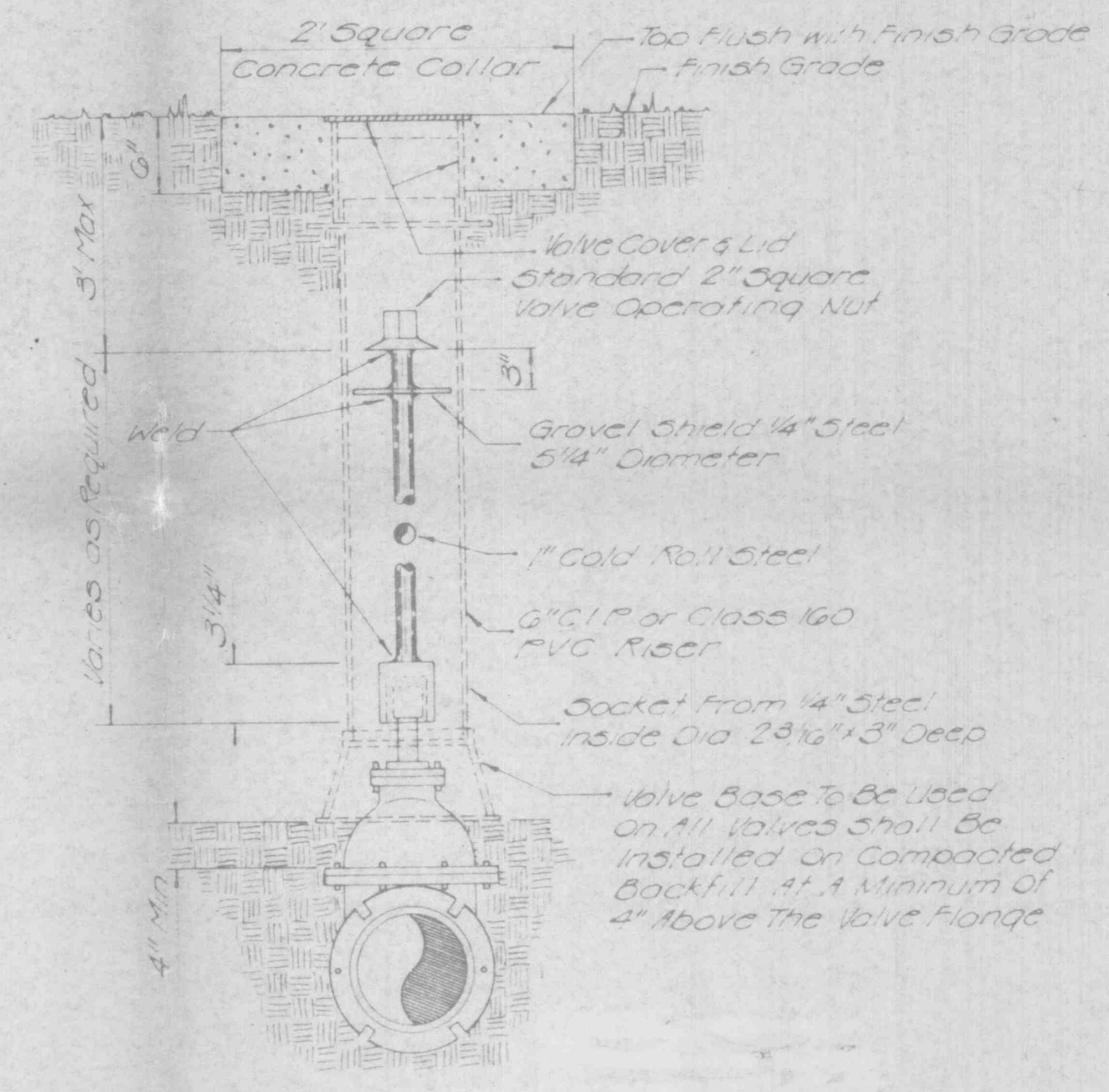
  

TEE X					
	6"	8"	12"	PLUG	
6"	4.0	~	4.0	~	4.0
8"	4.0	5.0	~	5.0	~
12"	4.5	5.5	10.5	10.5	~

**BACKING BLOCKS**

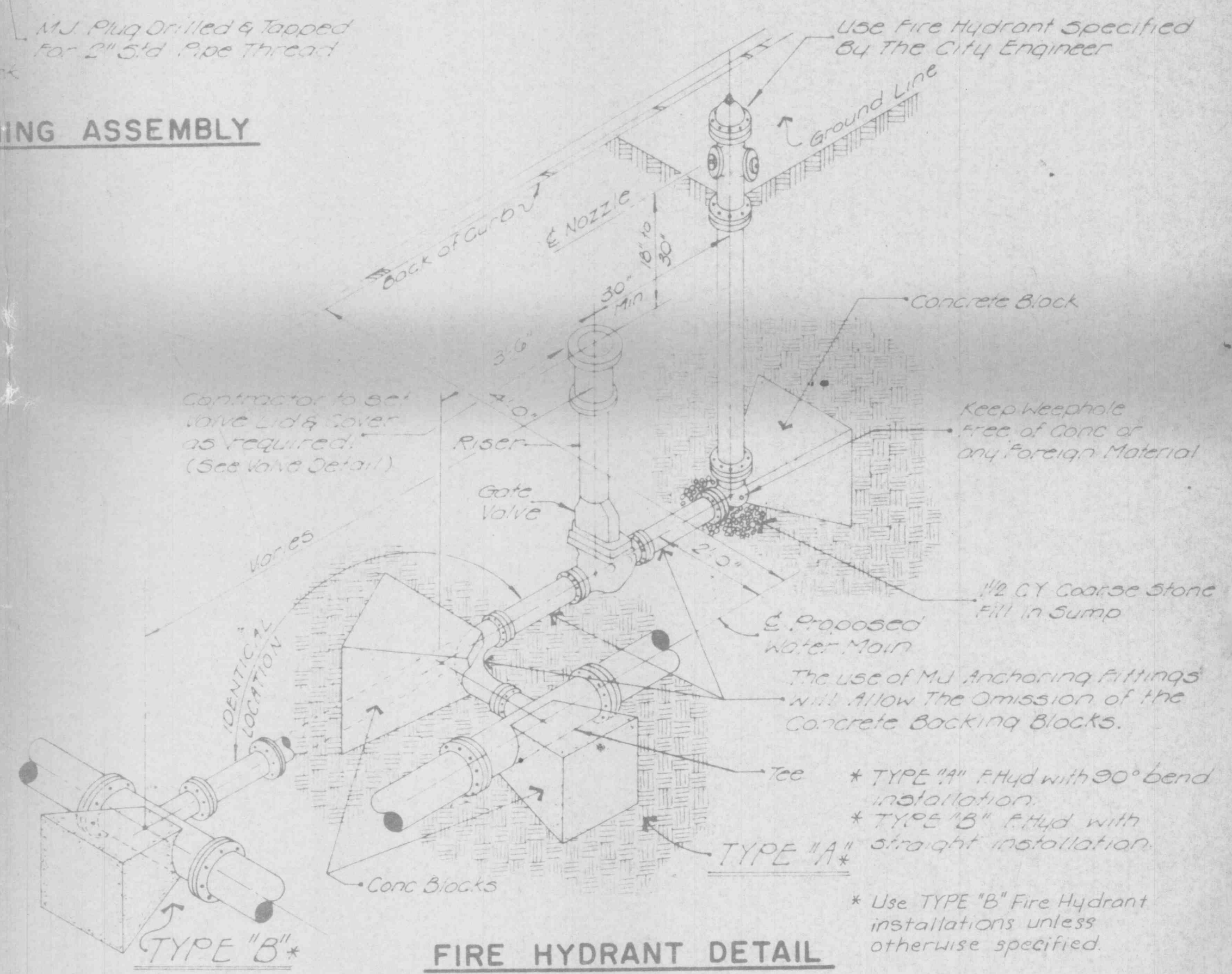


**WATER MAIN EMBEDMENT**



**FIRE HYDRANT DETAIL**

- GENERAL NOTES**
- All construction shall be done in accordance with the standards set forth by the City and installation shall be done under the supervision of the City Engineer.
  - Water Main Pipe to be Class 200 P.V.C. (SDR 21) with Integral Bells in accordance with ASTM D-2241.
  - All fittings shall be mechanical joint, cast iron.
  - All fire hydrants shall have 5-1/4" valve opening, pump nozzle and 2 hose nozzles with 6" inlet connection, as specified by City Engineer.
  - Bids for fire hydrants shall include 6" valve and box.
  - Water and sewer main crossings shall conform to the Missouri Department of Natural Resources Standards.
  - Trench backfill shall be granular material through street crossings. All trench backfill to be compacted to 95% maximum density.
  - Testing, sterilization and flushing shall be performed to the satisfaction of the City Engineer.
  - All house service connections are to be done in a manner prescribed by the City Engineer.
  - The price for the construction items shall include the cost for labor and materials for installation.
  - All bends, tees and hydrants shall be blocked with concrete per the detail.
  - Provide 42" Minimum Cover from finish grade on water mains.



\* TYPE "A" Fire Hydrant with 90 degree bend installation.  
 \* TYPE "B" Fire Hydrant with straight installation.  
 \* Use TYPE "B" Fire Hydrant installations unless otherwise specified.