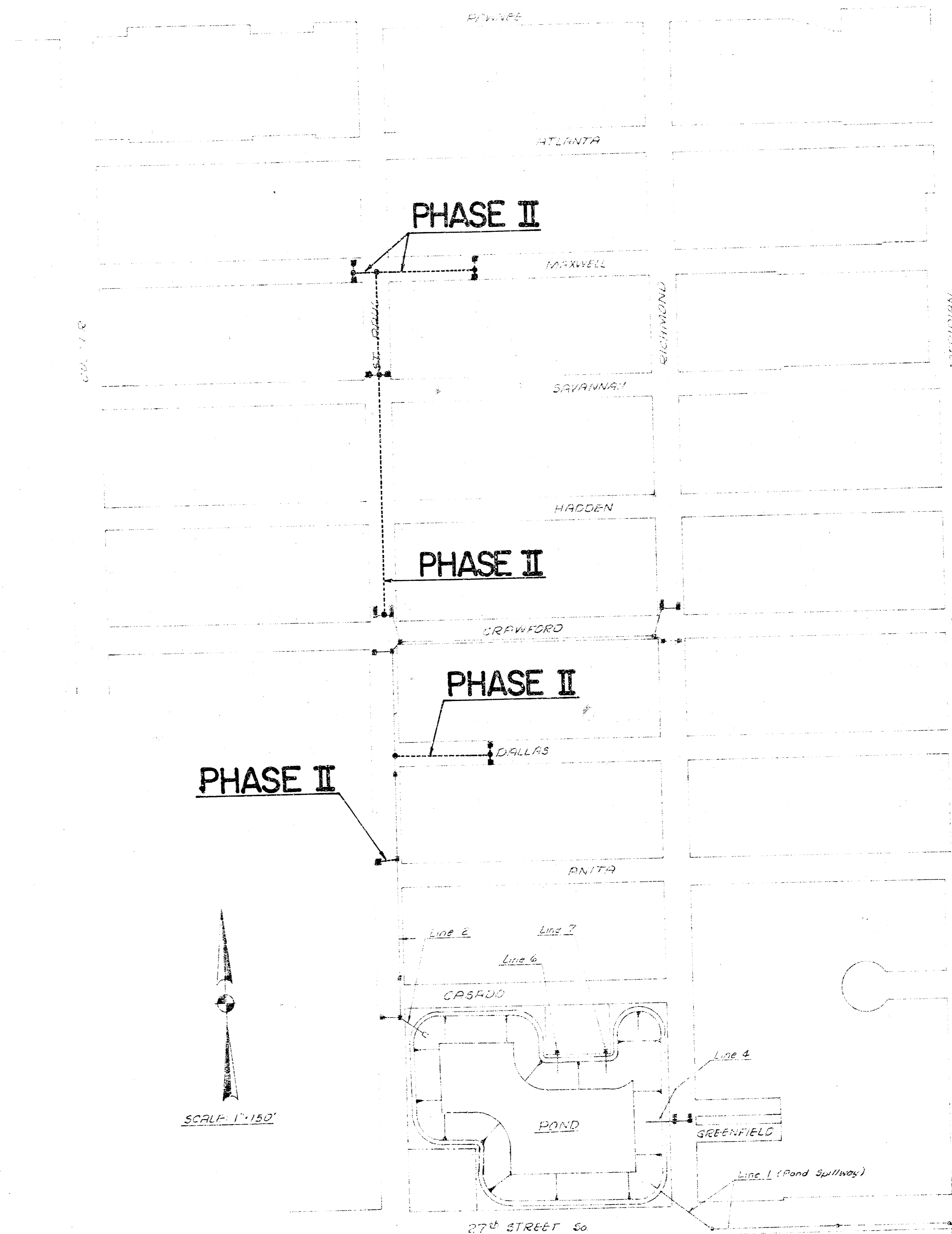


# STORM WATER SEWER NO. 194, PHASE II



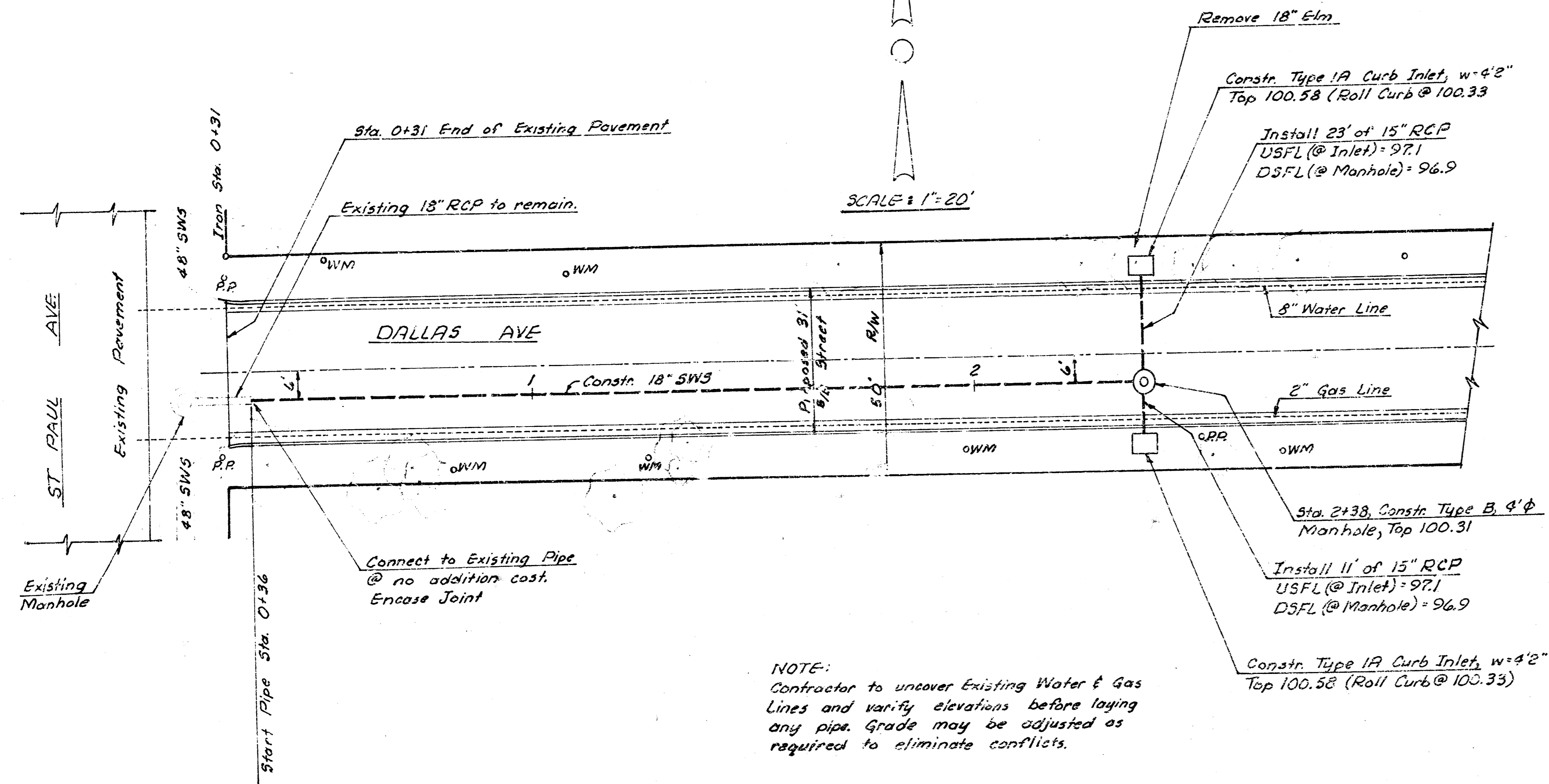
R. W. BRUGGEMAN, DIRECTOR OF ENGINEERING  
CITY OF WICHITA, KANSAS

PROJECT NO. 468-75-245-80962-000-000-001

DATE: \_\_\_\_\_

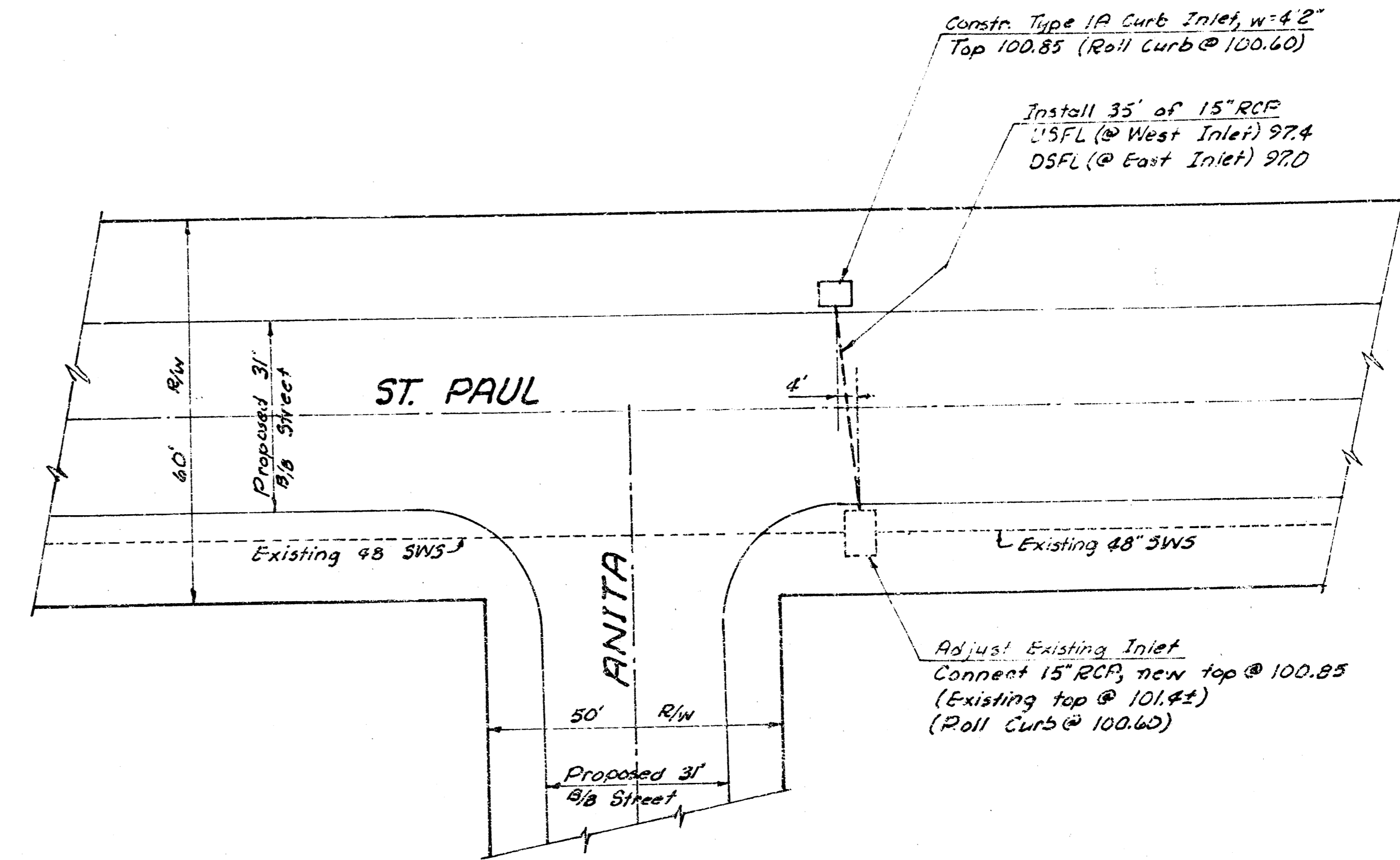
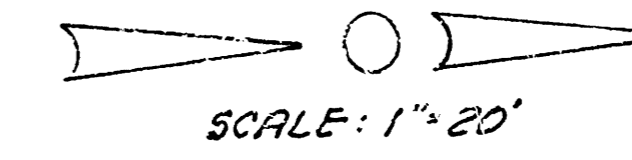
STORM WATER SEWER #194, PHASE II

BM 101.35 R.R. Spk. in S.W. ft. Street Light Pole @ N.E. Cor. Dallas & St. Paul  
 B.M. 102.03 R.R. Spk. in N.W. ft. P.P. @ S.E. Cor. Anita & St. Paul

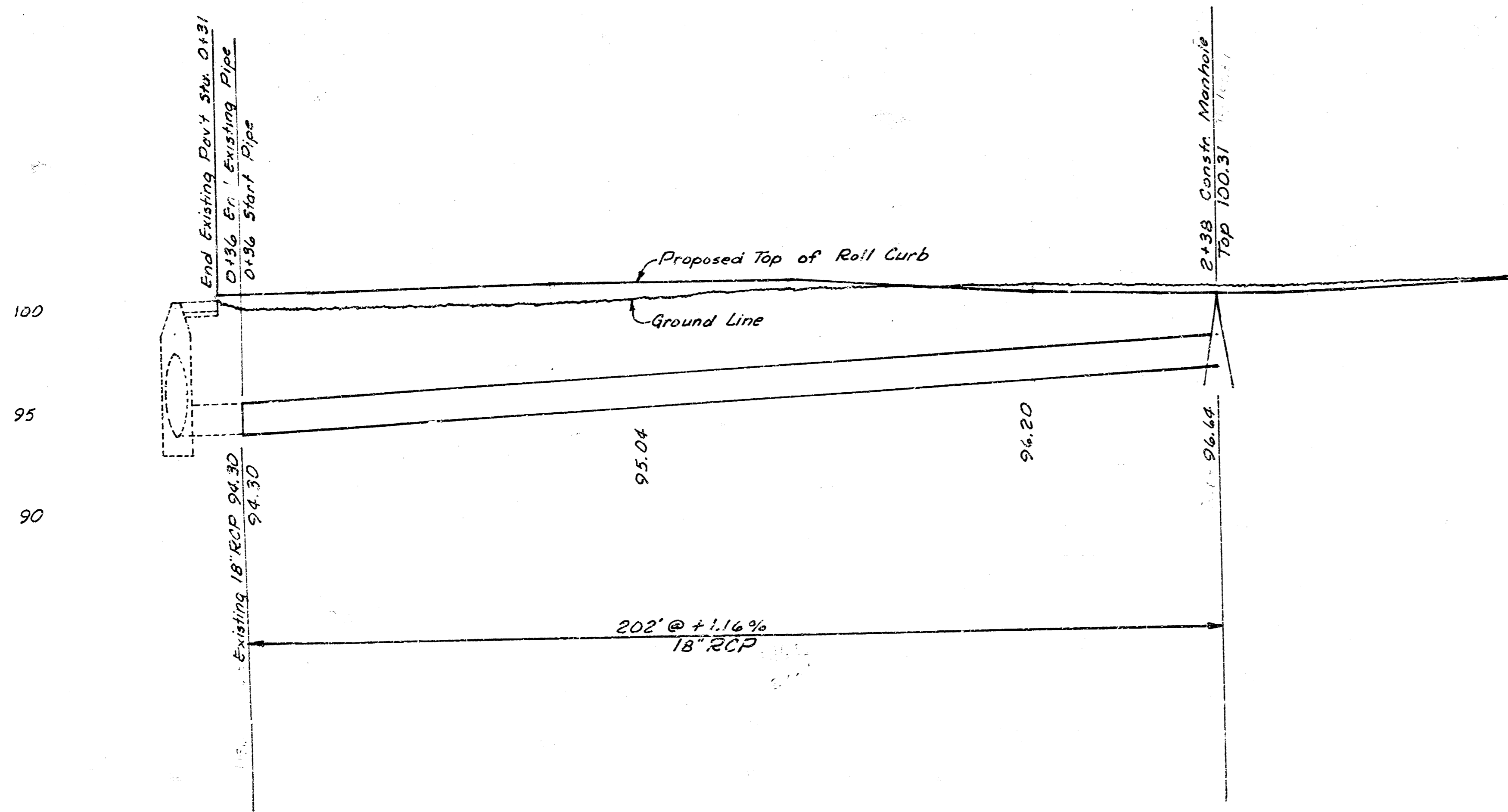


NOTE:  
 Contractor to uncover Existing Water & Gas Lines and verify elevations before laying any pipe. Grade may be adjusted as required to eliminate conflicts.

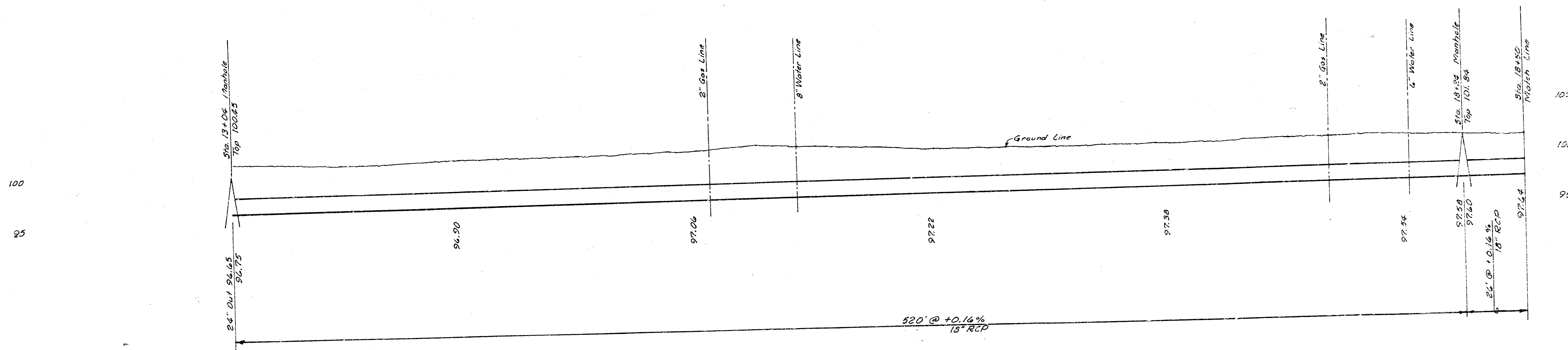
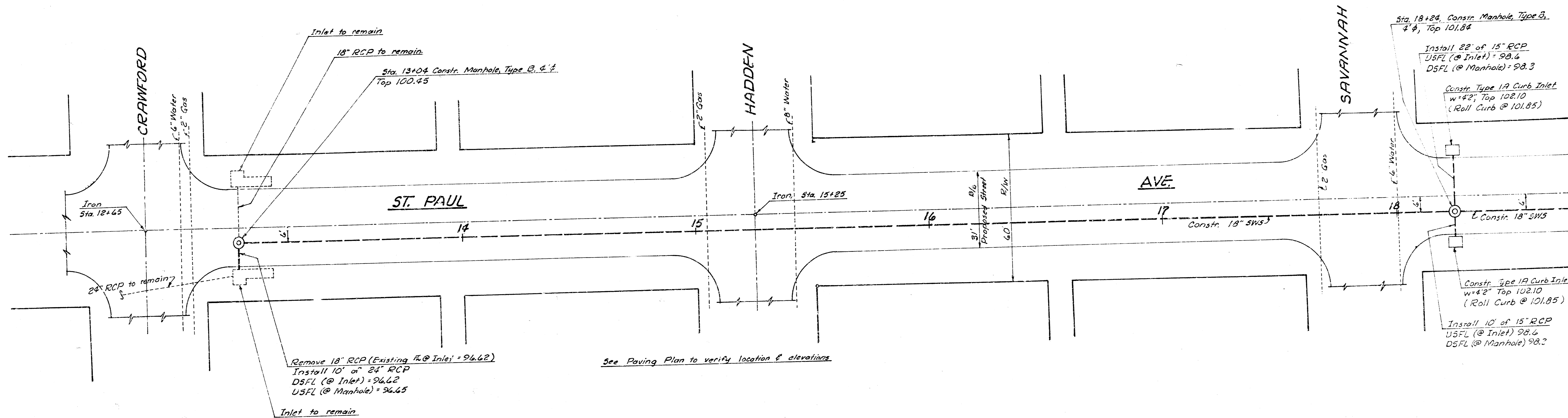
BM 101.72 R.R. Spk. W-ft. Street Light Pole @ S.E. Cor. Casado & St. Paul



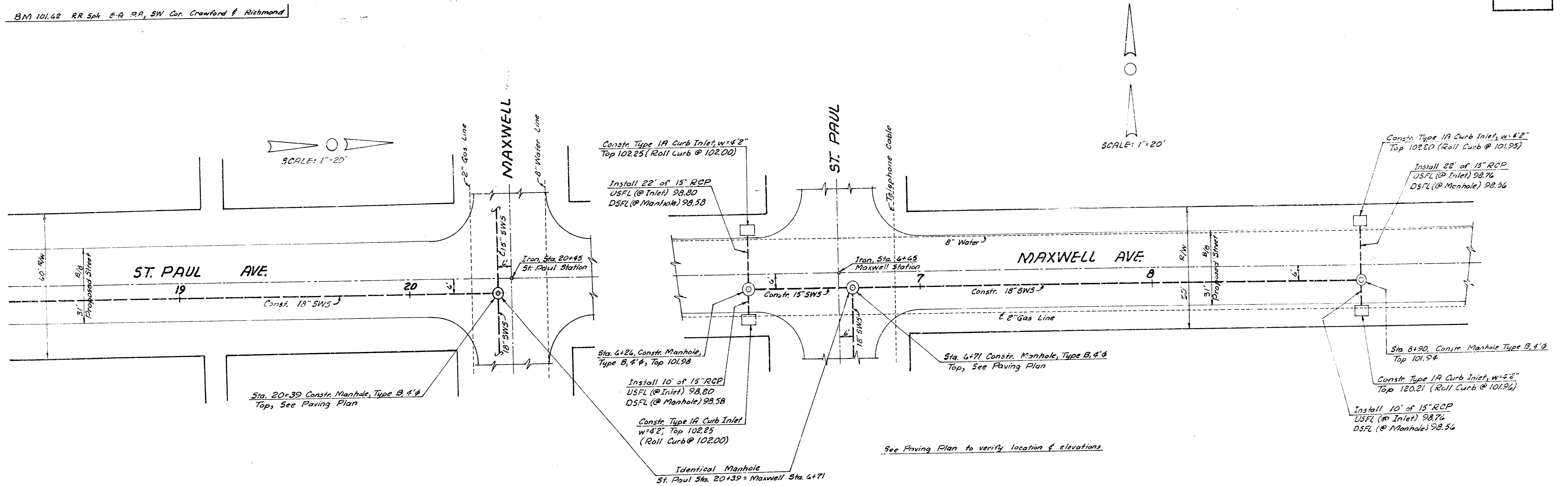
See Paving Plan to verify locations and elevations

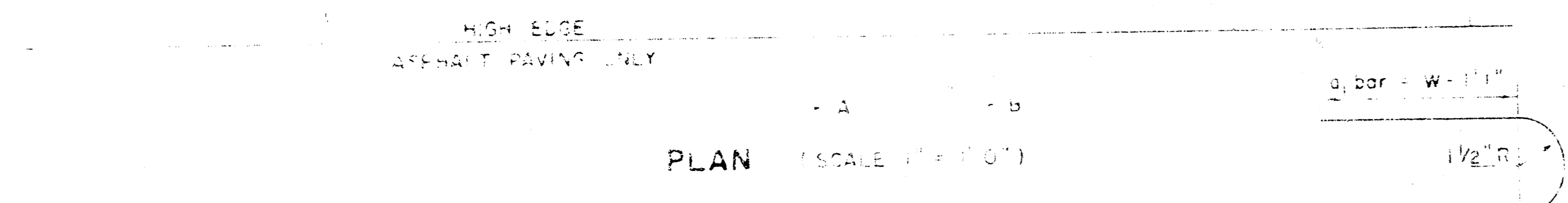
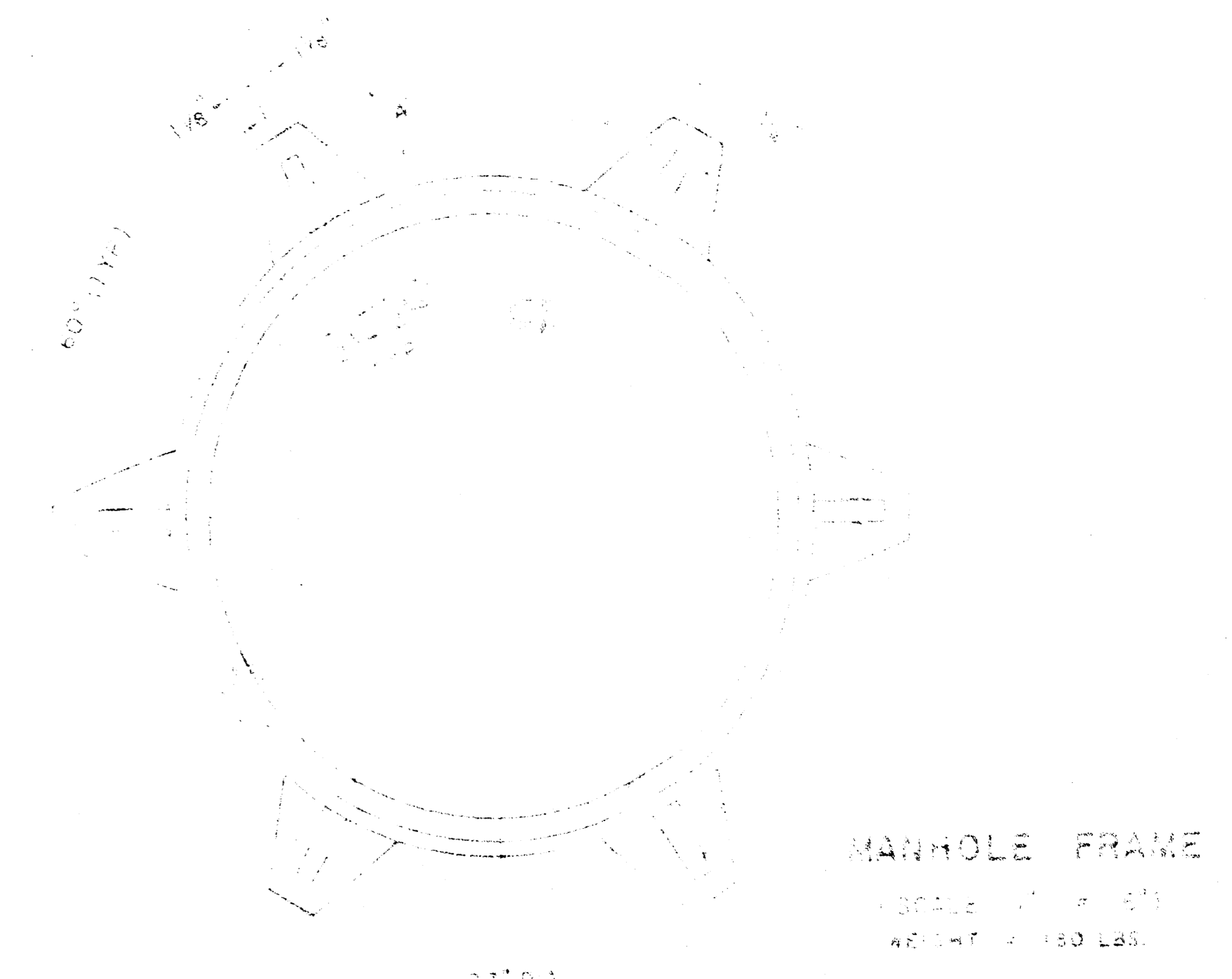
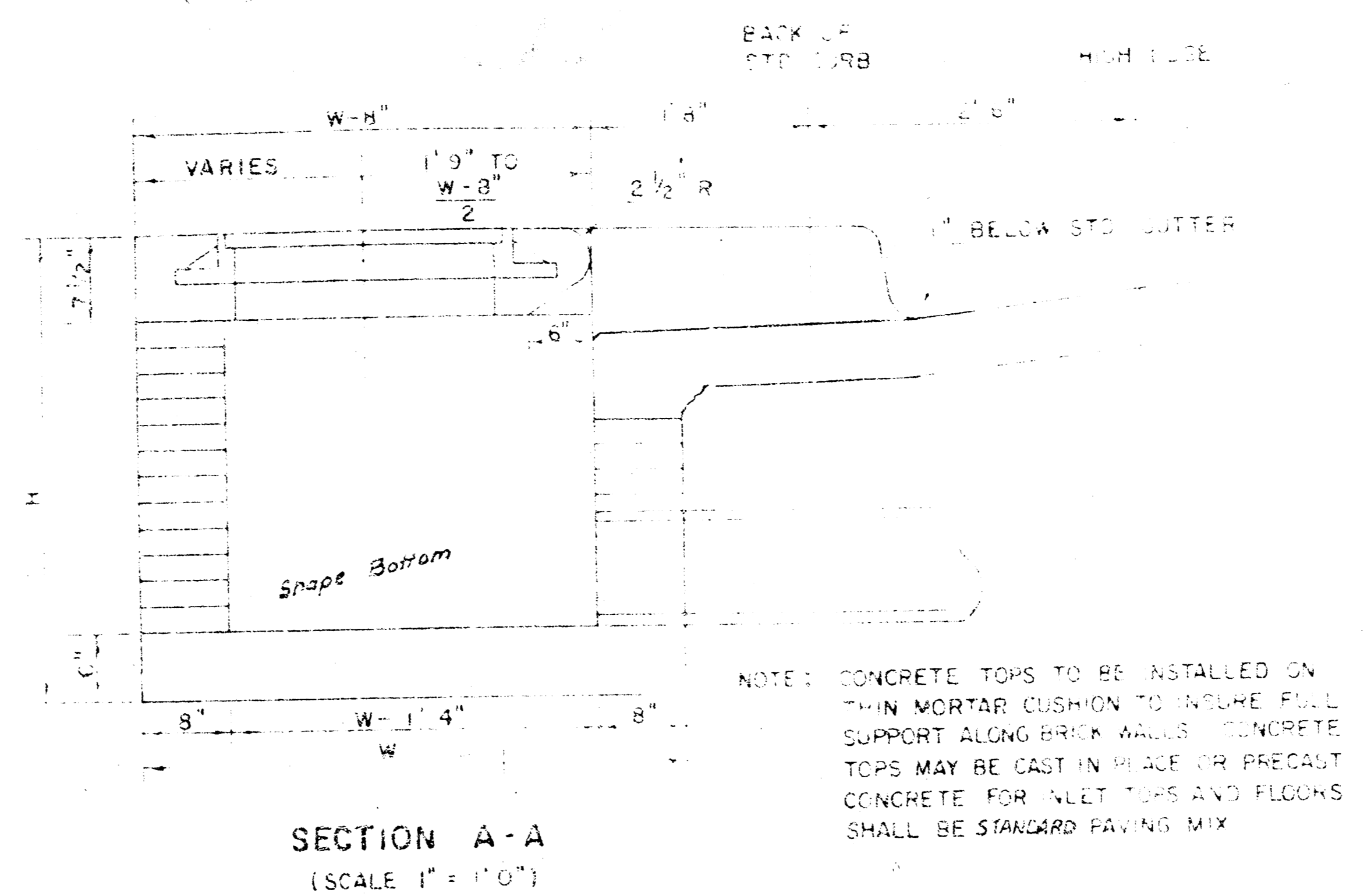
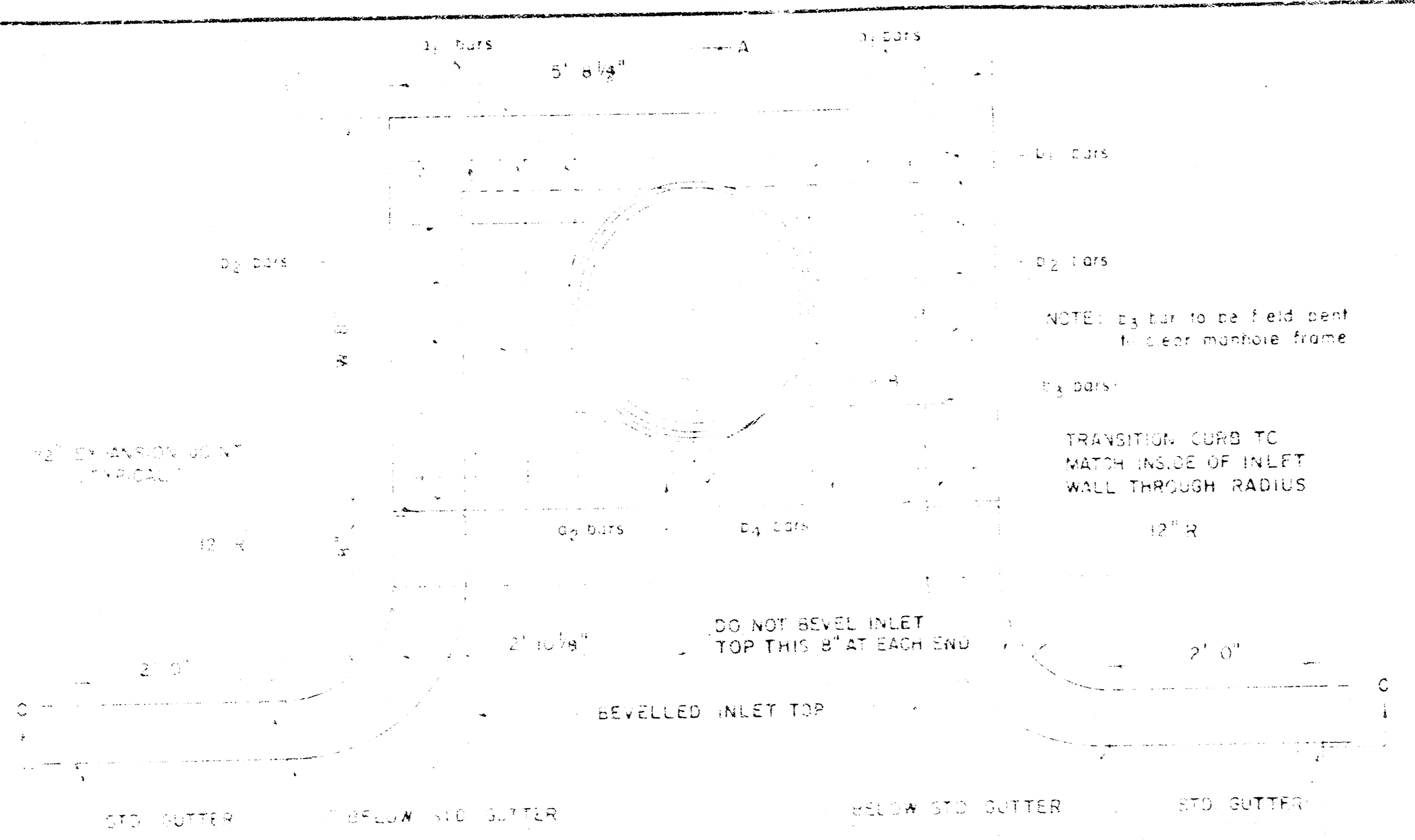


PROJECT DESCRIPTION
<b>SWS 194, Phase II</b>
PROJECT NUMBER
468-76-245-80962-000-000-001
Sheet 3 of 6



PROJECT DESCRIPTION  
**SWS 194, Phase II**  
 PROJECT NUMBER  
 468-76-245-80962-000-000-001  
 Sheet 10/6





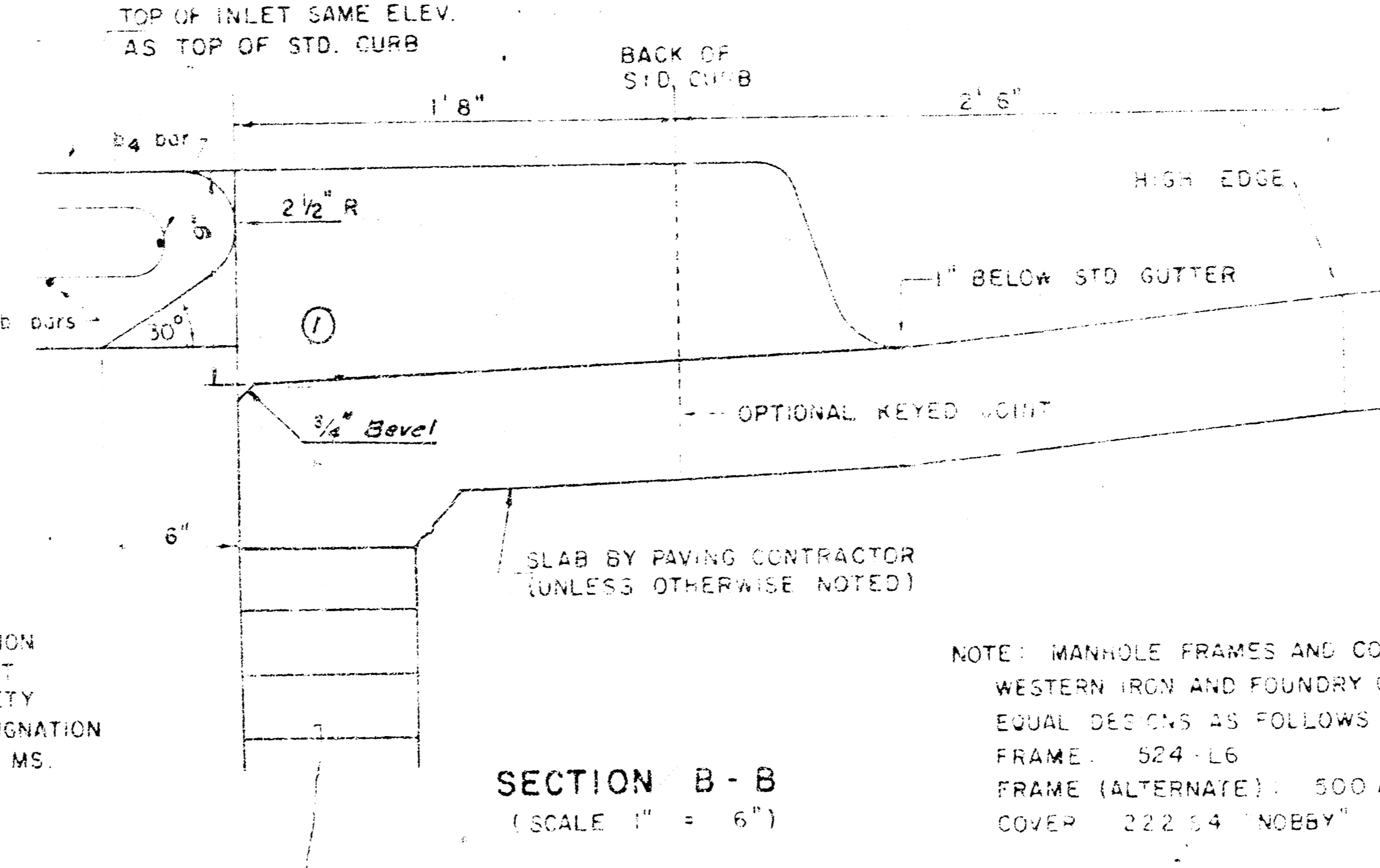
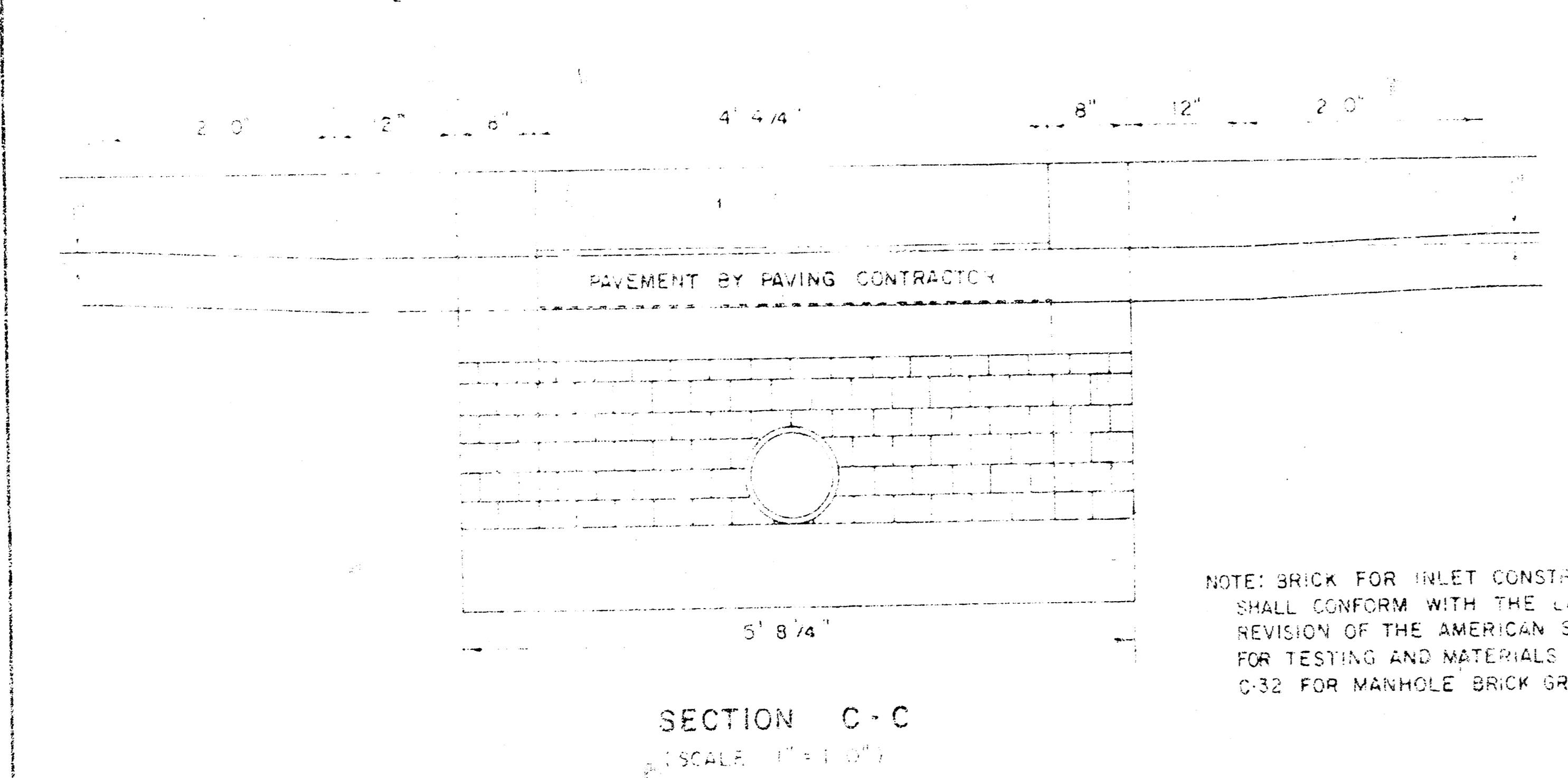
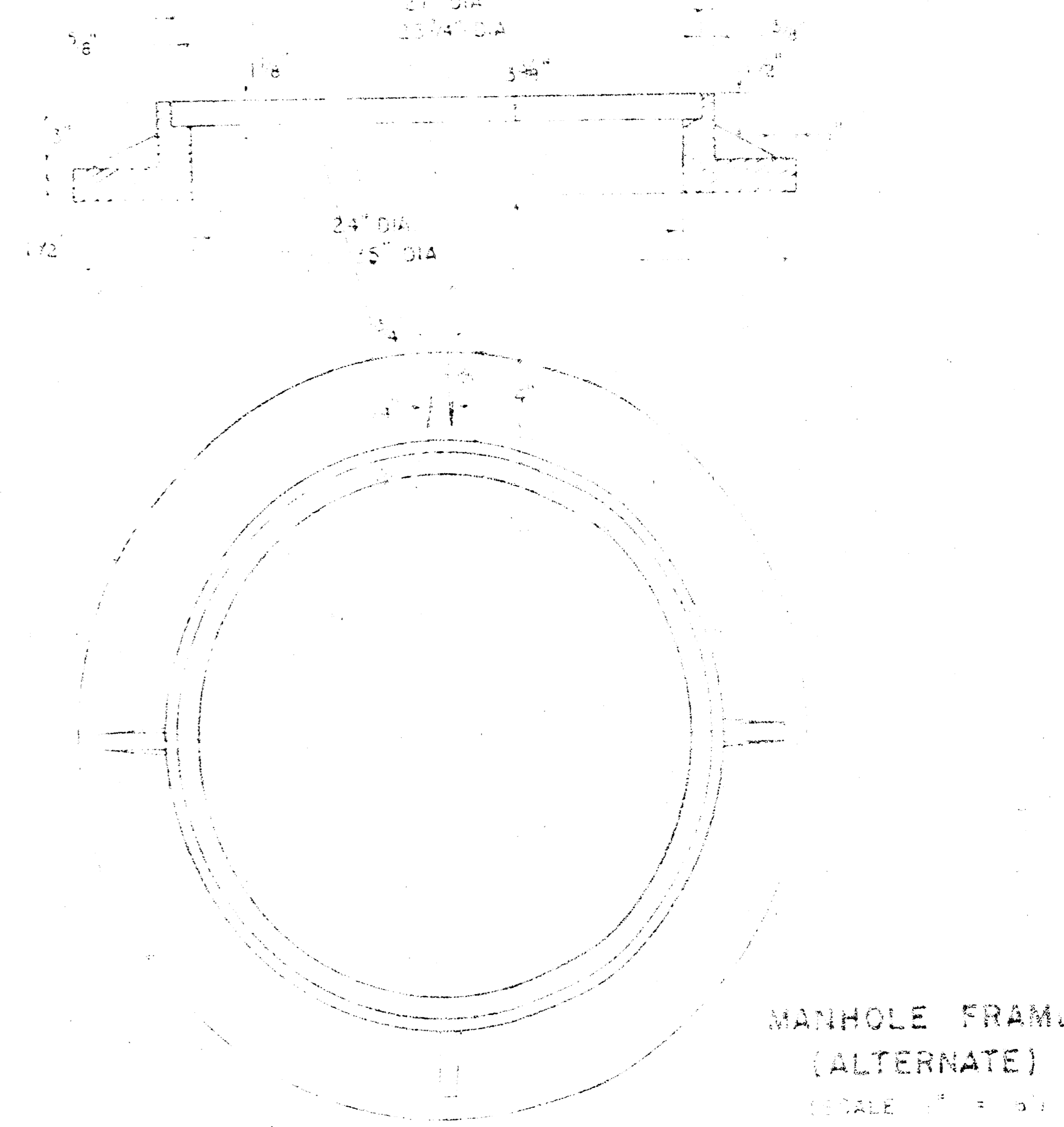
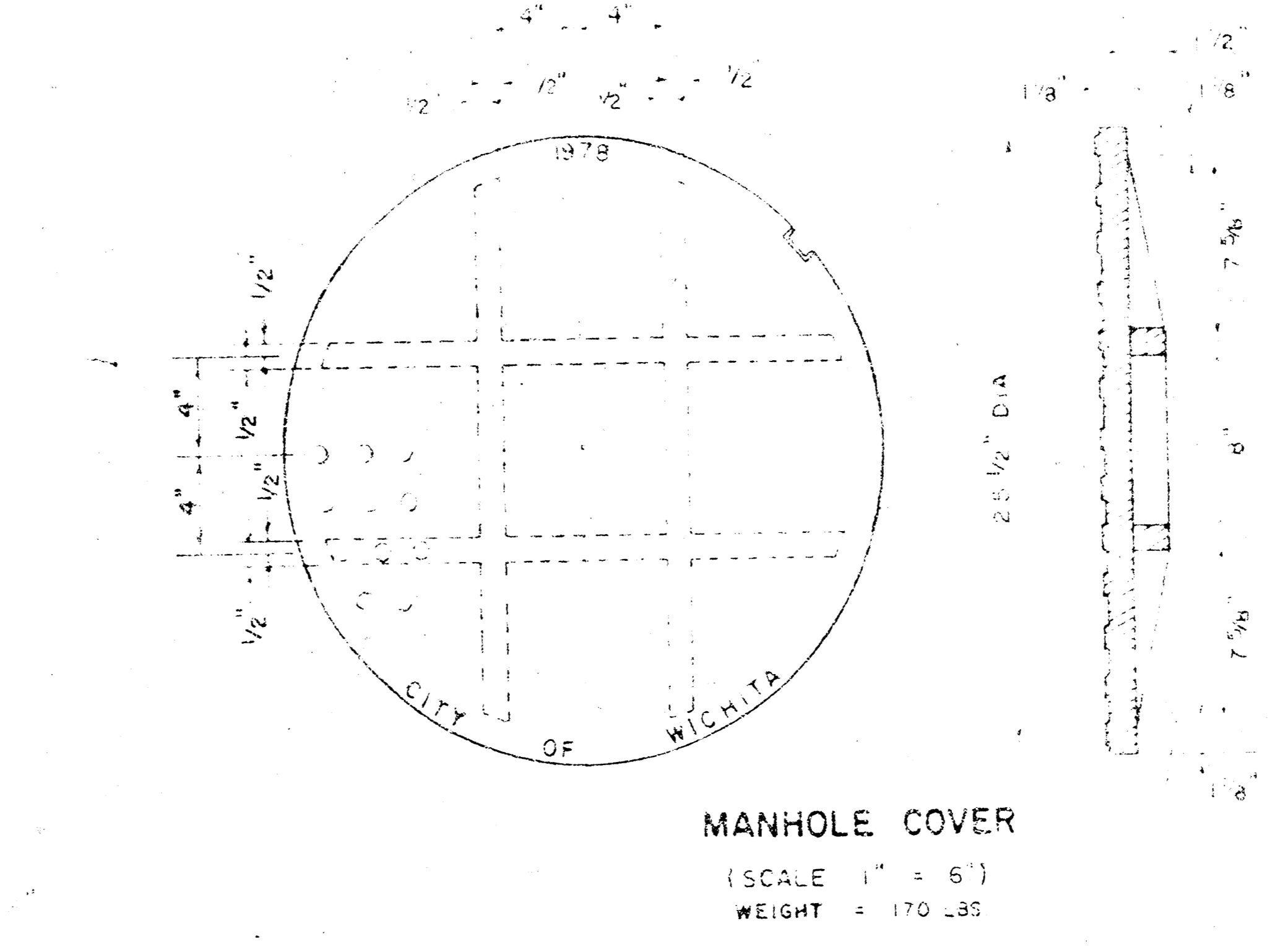
**STEEL SCHEDULE**

BAR NUMBER	SIZE	LENGTH	WT. LBS.
1	1/2"	11' 0"	1.11
2	1/2"	11' 0"	1.11
3	1/2"	11' 0"	1.11
4	1/2"	11' 0"	1.11
5	1/2"	11' 0"	1.11
6	1/2"	11' 0"	1.11
7	1/2"	11' 0"	1.11
8	1/2"	11' 0"	1.11

**BENDING DIAGRAM**

W	PRECAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 2"	36" x 5 8/14" x 7 1/2"	21" B SMALLER	0.46 *
5' 0"	44" x 5 8/14" x 7 1/2"	24" B 30"	0.57 *
6' 0"	54" x 5 8/14" x 7 1/2"	36" B 42"	0.71 *
7' 0"	64" x 5 8/14" x 7 1/2"	48" B 54"	0.84 *
8' 0"	74" x 5 8/14" x 7 1/2"	60" B 66"	0.97 *

\* GROSS VOLUME



DETAIL STANDARD TYPE IA CURB INLET  
 CITY OF WICHITA, KANSAS  
 R.W. BRUGGEMAN, DIRECTOR OF ENGINEERING/  
 CITY ENGINEER  
 JUNE, 1981

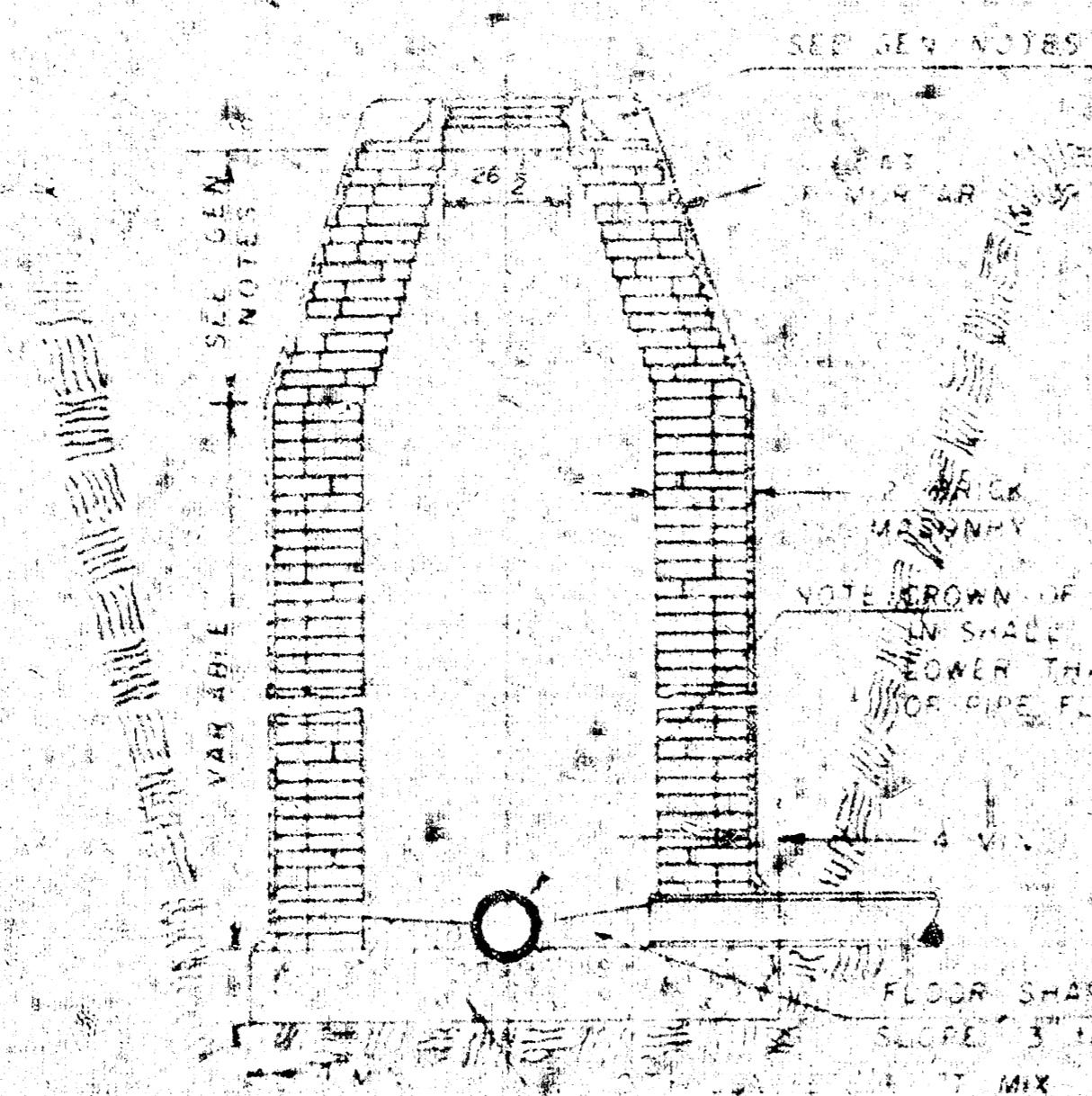
# SEWER APPURTENANCES DETAILS

ADOPTED AS STANDARD DESIGN  
BY

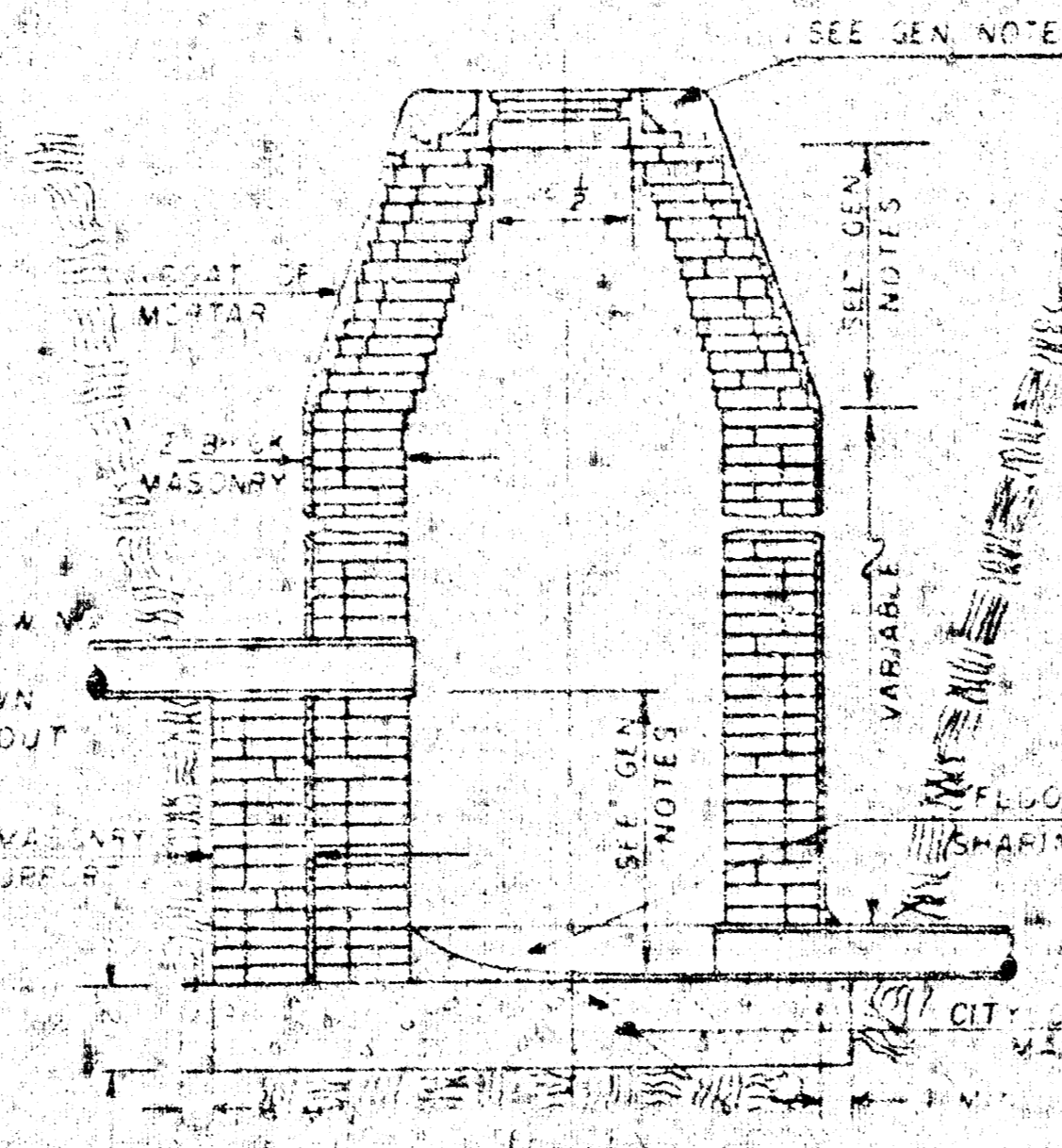
City of Wichita, Kansas

REVISED MAY 1961

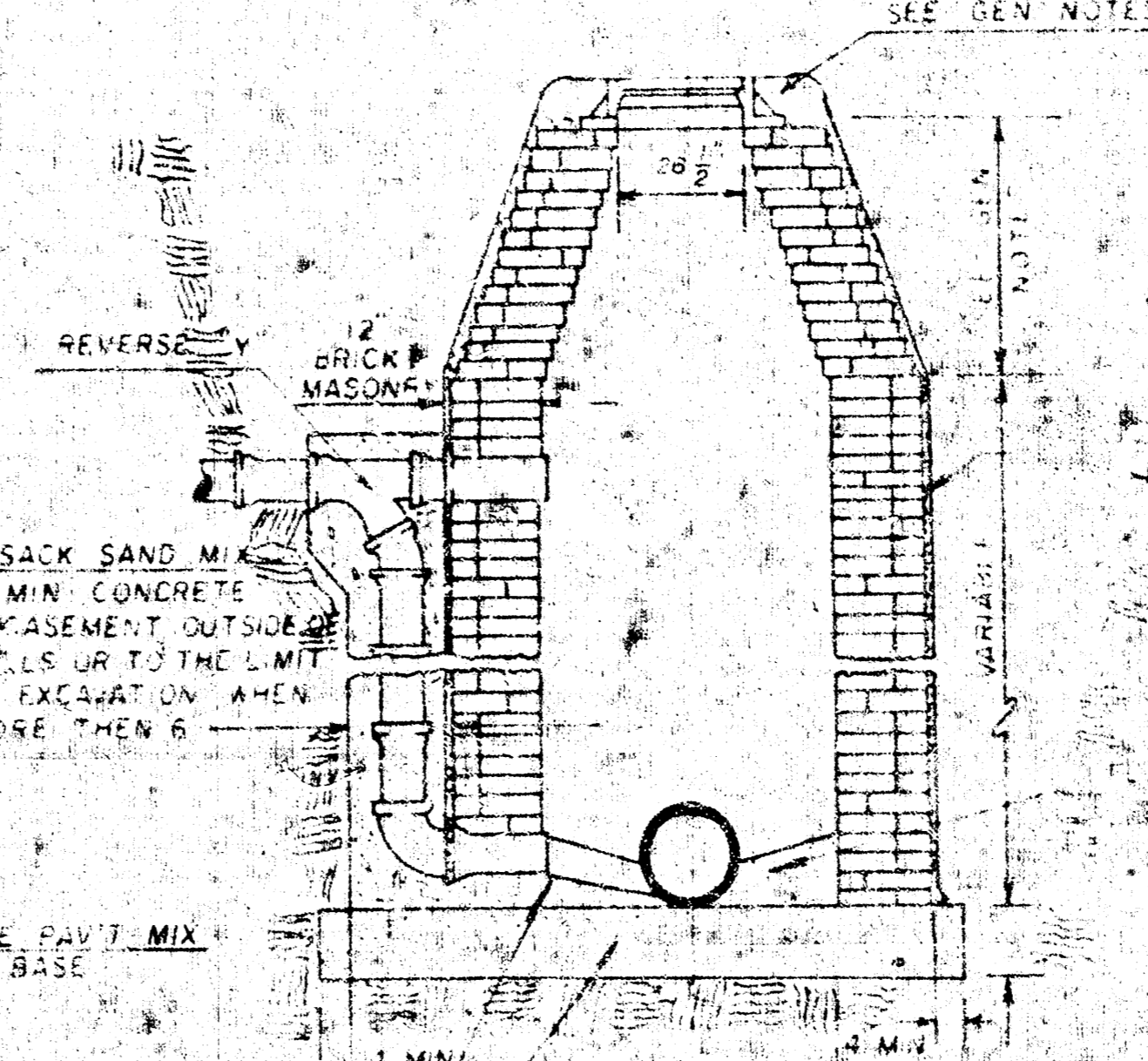
TYPE "B" MANHOLE



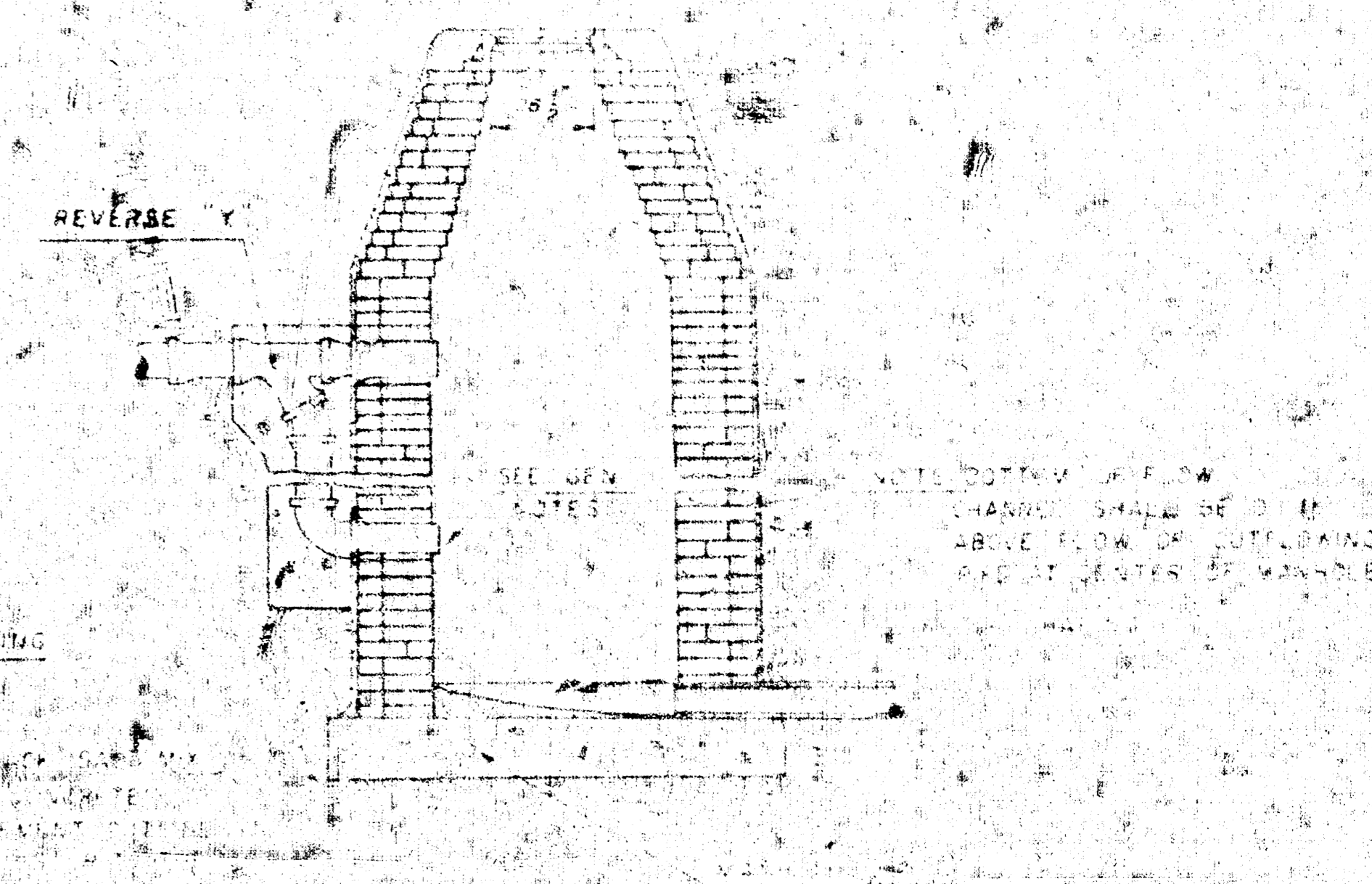
TYPE "B" INSIDE DROP MANHOLE



TYPE "B" OUTSIDE DROP MANHOLE



DETAIL OF OUTSIDE DROP  
CONSTRUCTED ON EXISTING MANHOLE



GENERAL NOTES

- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SUBSTITUTED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHIN THE SUBMITTAL MIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. TYPE "B" MANHOLES CAN BE USED ON SEWERS HAVING DEPTHS GREATER THAN 16' OR WHEN THE MANHOLE IS LOCATED IN PUBLIC STREET PAVEMENT. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4'. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5'. THE HEIGHT OF THE CORBELS ON 4' DIAMETER MANHOLES SHALL BE 4'. MANHOLES HAVING A DIAMETER OF 5' SHALL HAVE CORBELS 6' IN HEIGHT. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED 6" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND ROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH THE OPENING USING AN APPROVED WATERSTOP METHOD FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWINGS. THE VERTICAL DROP FROM THE LOWER PIPE OR FROM EXISTING DROP CONNECTIONS SHALL NOT EXCEED 4' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES SIZED LARGER THAN 12", EXCEPT THE CROWN OF THE LOWER PIPE SHALL NEVER BE SET BELOW THE CROWN OF ANY LARGER OUTFLOWING PIPE. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF-CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AND STUCK. FLOW CHANNELS SHALL BE FURNISHED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 1/8" PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO REAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM MADE OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWINGS.
- THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 4' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD MANHOLES TYPE "B" AND STANDARD INSIDE DROP MANHOLES TYPE "B" SHALL BE BIDD AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES TYPE "B" SHALL BE BIDD AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.