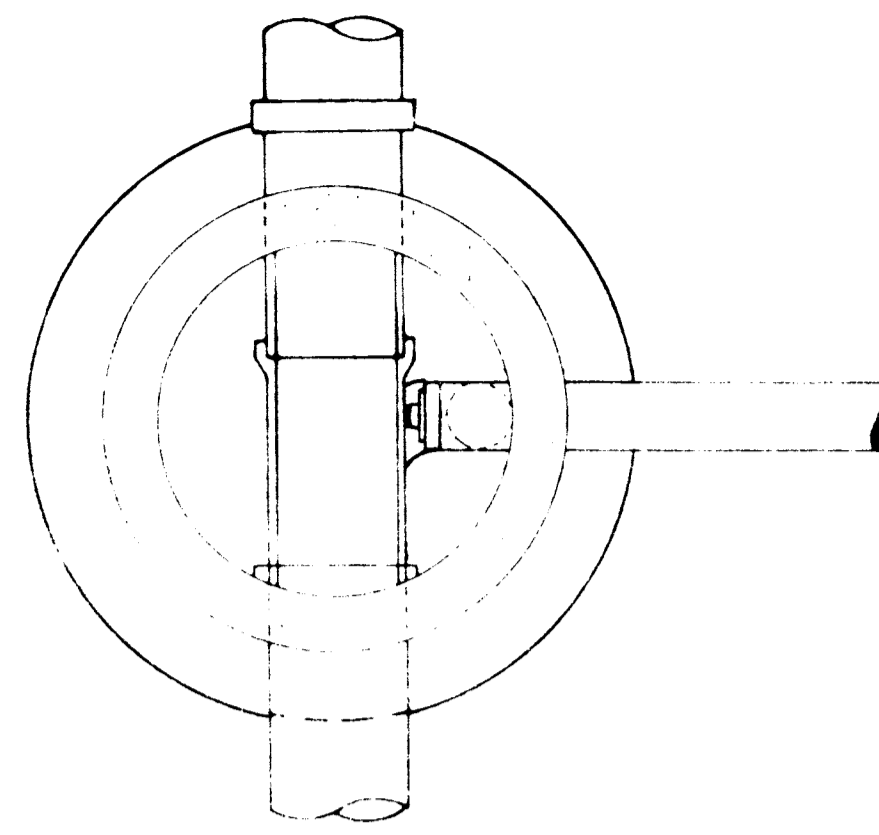
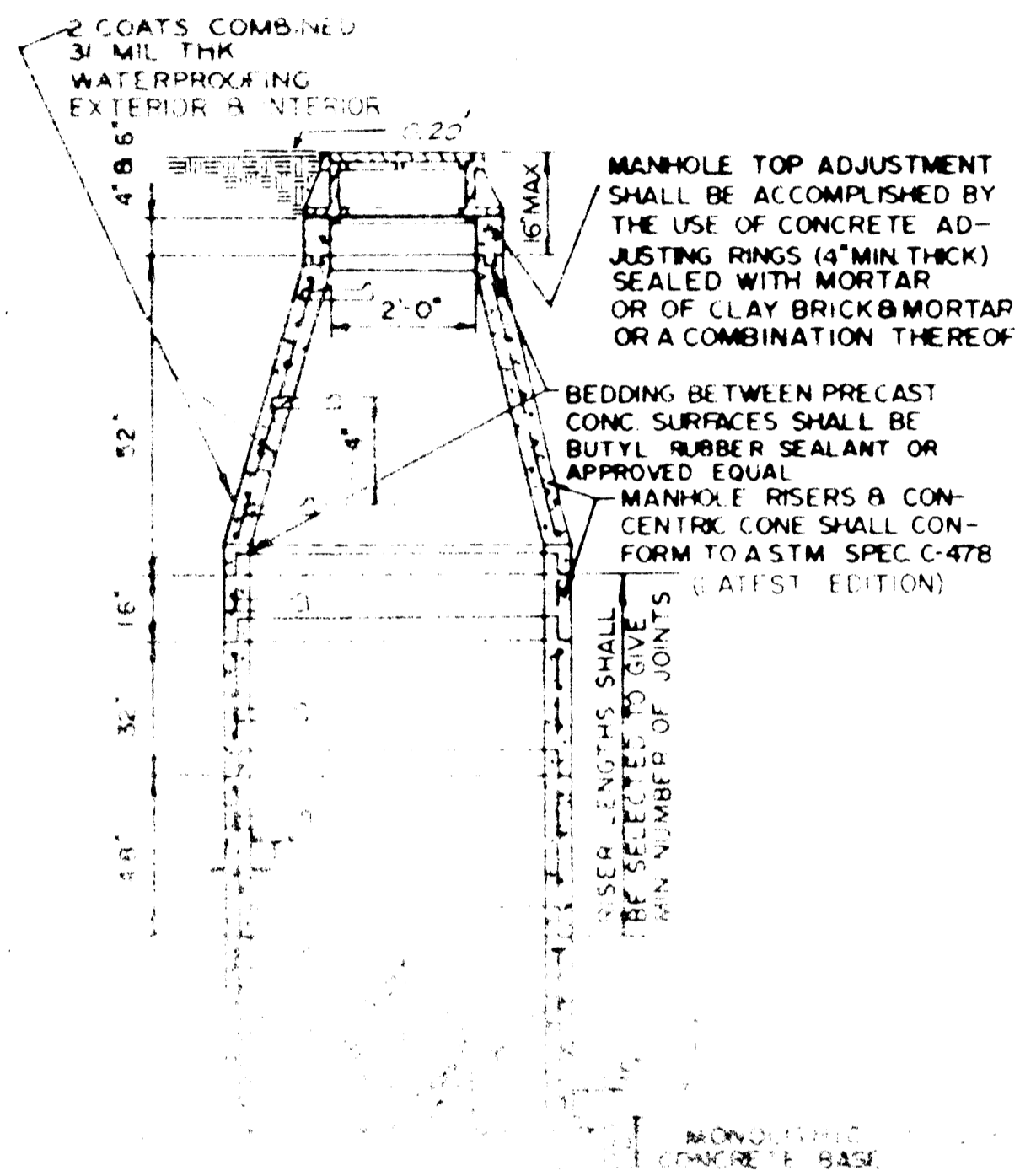
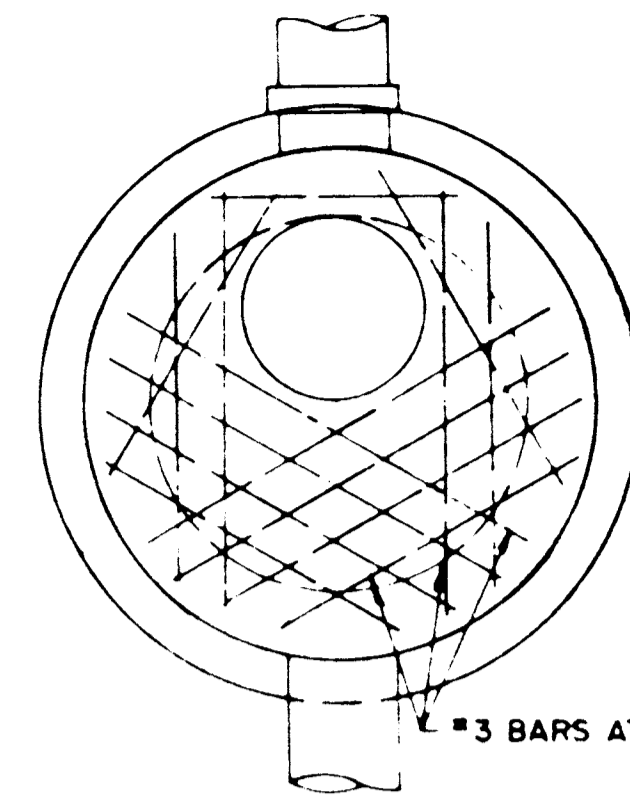


WALL THICKNESS	
DIA. M.H.	"D" DIM. PRE-CAST
42" & 48"	5"
60"	6"
72"	7"

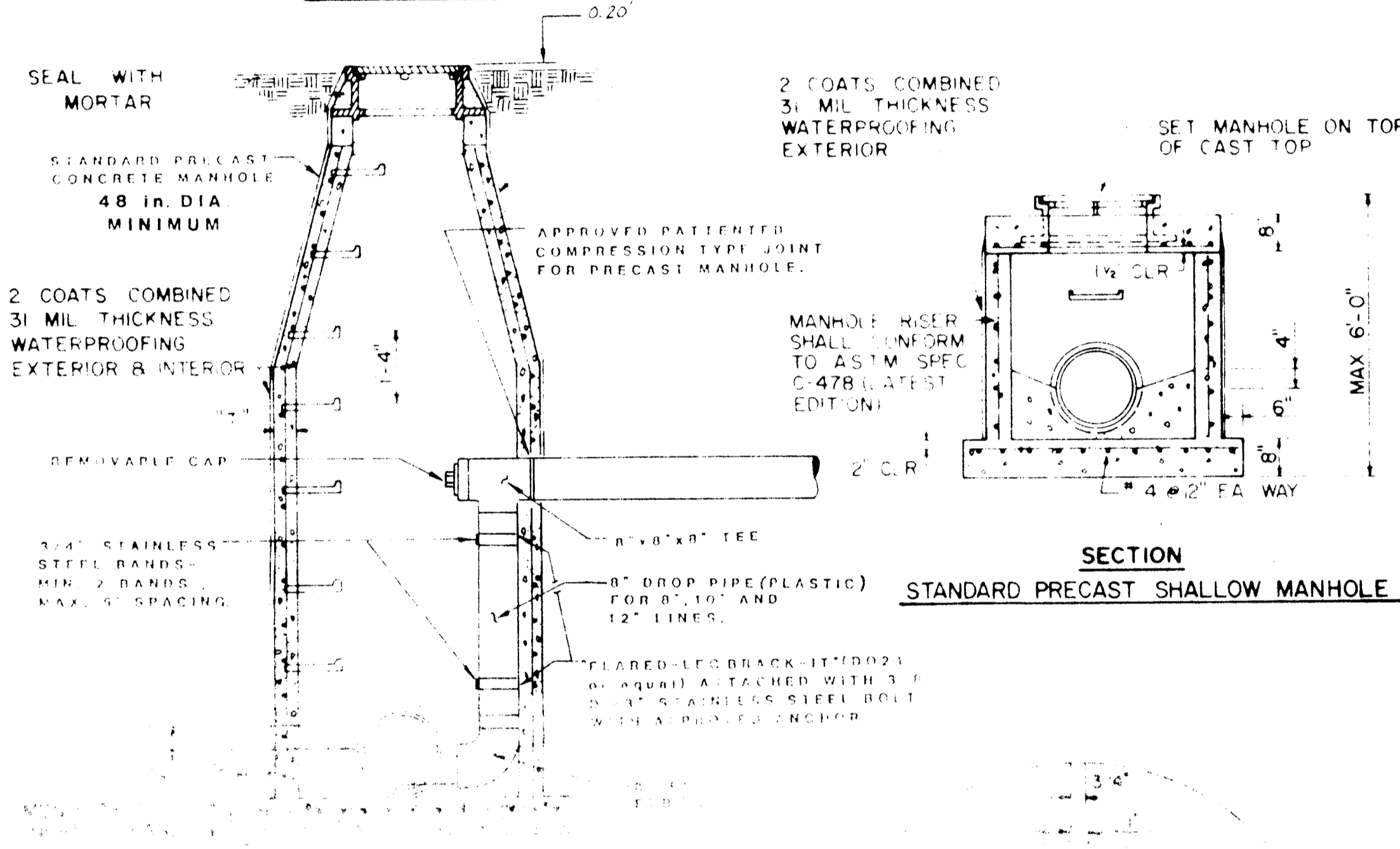
MANHOLE BASE THICKNESS	
DEPTH (FEET)	"D" DIM.
0-20	8" w/ 4 BARS @ 12" CTRS. EACH WAY
20-30	8" w/ 4 BARS @ 9" CTRS. EACH WAY
30-40	10" w/ 5 BARS @ 10" CTRS. EACH WAY



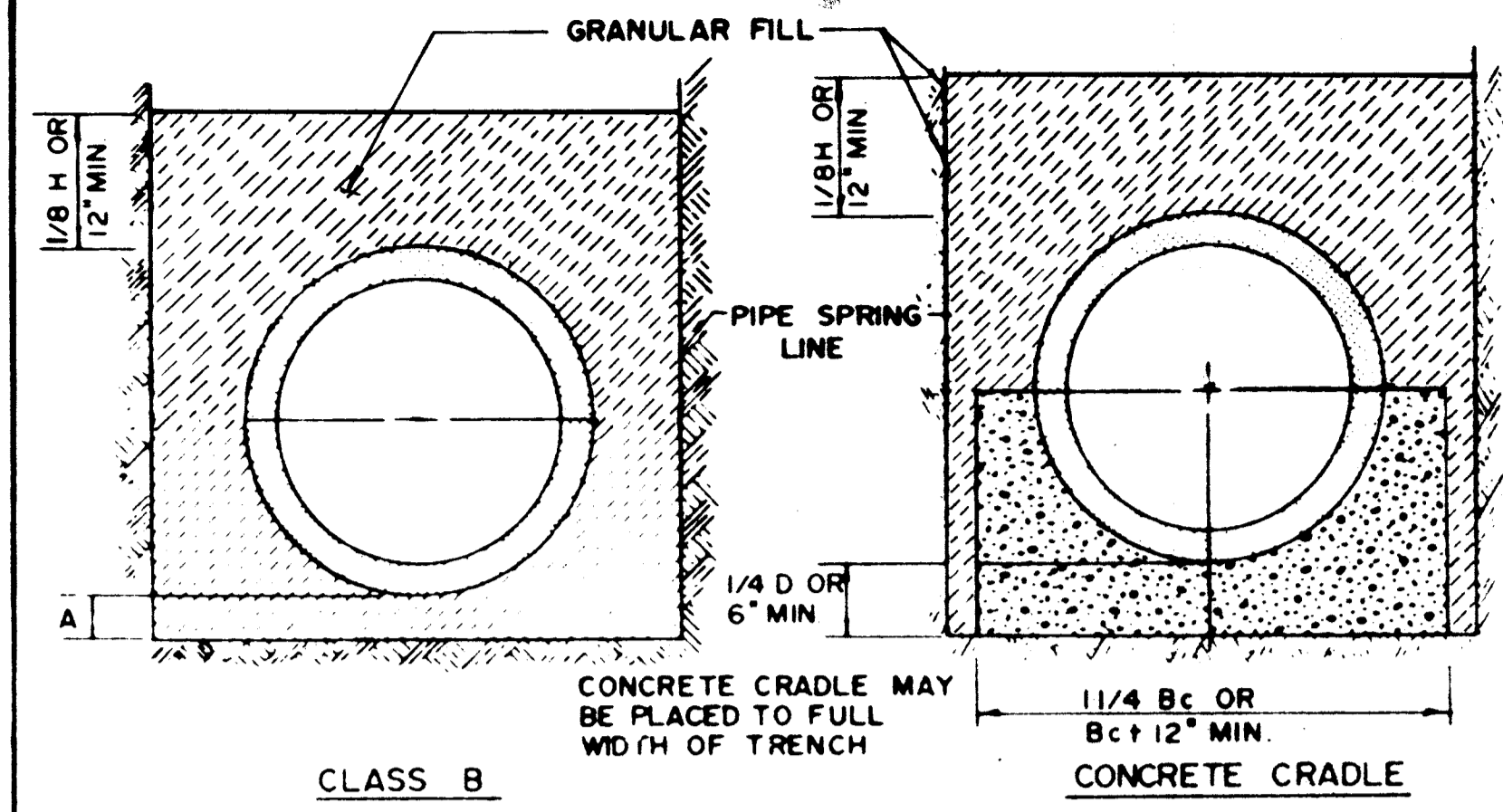
PLAN
DROP MANHOLE



PLAN
STANDARD SHALLOW MANHOLE



SECTION
STANDARD PRECAST SHALLOW MANHOLE



CLASS B

CONCRETE CRADLE

BEDDING DETAILS

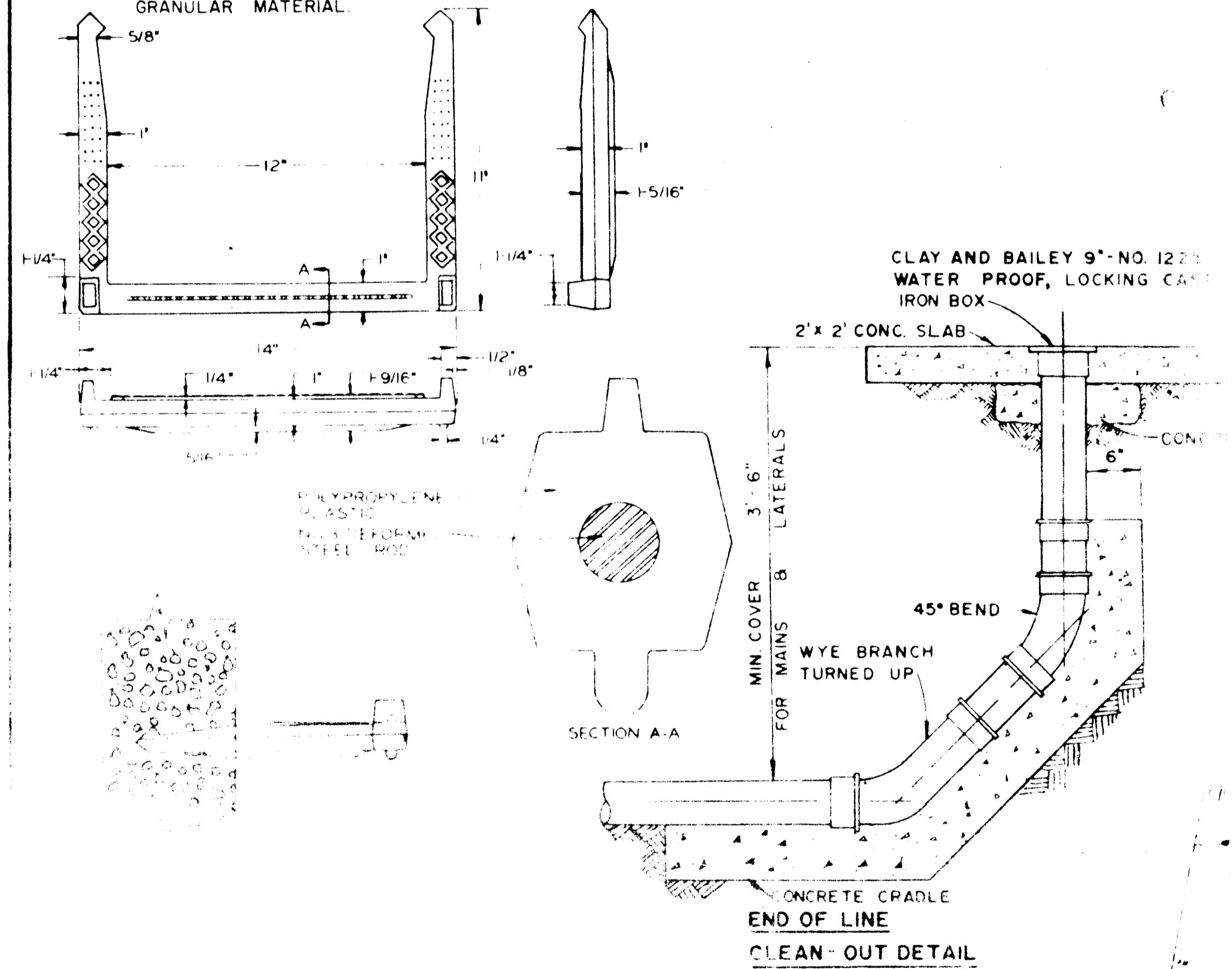
LEGEND:
Bc OUTSIDE DIA. OF PIPE
H BACKFILL COVER ABOVE TOP OF PIPE
D NOMINAL PIPE SIZE
A FILL BELOW PIPE (SEE TABLE BELOW)

GRANULAR FILL
CONCRETE CRADLE

TABLE OF FILL BELOW PIPE	
D	A MIN.
27" & SMALLER	3"
30" TO 60"	4"
66" & LARGER	6"

NOTES

- 1 GRANULAR FILL TO BE CRUSHED STONE OR PEA GRAVEL WITH NOT LESS 95% PASSING 1/2" AND NOT LESS THAN 95% TO BE RETAINED ON A #4, TO BE PLACED IN NOT MORE THAN 6" LAYERS AND COMPACTED BY SLICING WITH A SHOVEL (1/2" & #4 REFERS TO SIEVE SIZE)
- 2 ALL BEDDING DETAILS APPLY TO BUILDING SEWER SERVICE LINES AS WELL AS OTHER SEWERS.
- 3 CONCRETE CRADLE SHALL BE USED WHEN TRENCH WIDTH EXCEEDS 24" PLUS THE PIPE DIAMETER
- 4 PVC PIPE SHALL BE BEDDED IN ACCORDANCE WITH ASTM D 2321 USING CLASS 1 (3/4" TO 1/4") GRANULAR MATERIAL.



CLEAN-OUT DETAIL

GBA
GEORGE BUTLER ASSOCIATES
REGISTERED PROFESSIONAL ENGINEERS ARCHITECTS
PLANNERS

OFFICES:
SUITE 200, 1000 N. GARDEN AVENUE, DALLAS, TEXAS 75202
1000 WEST CENTER SQUARE, DALLAS, TEXAS 75202
1000 WEST CENTER SQUARE, DALLAS, TEXAS 75202
1000 WEST CENTER SQUARE, DALLAS, TEXAS 75202

**ROYAL OAKS PHASE #2
SANITARY SEWER
CONSTRUCTION DETAILS**
PREPARED FOR
MR. EDWARD C. KREUTZ

DESIGNED BY *FLK* DRAWN BY *S.A.S.* CHECKED BY *G.R.H.*

Revised Aug. 6, 1987, By MJH & FLK