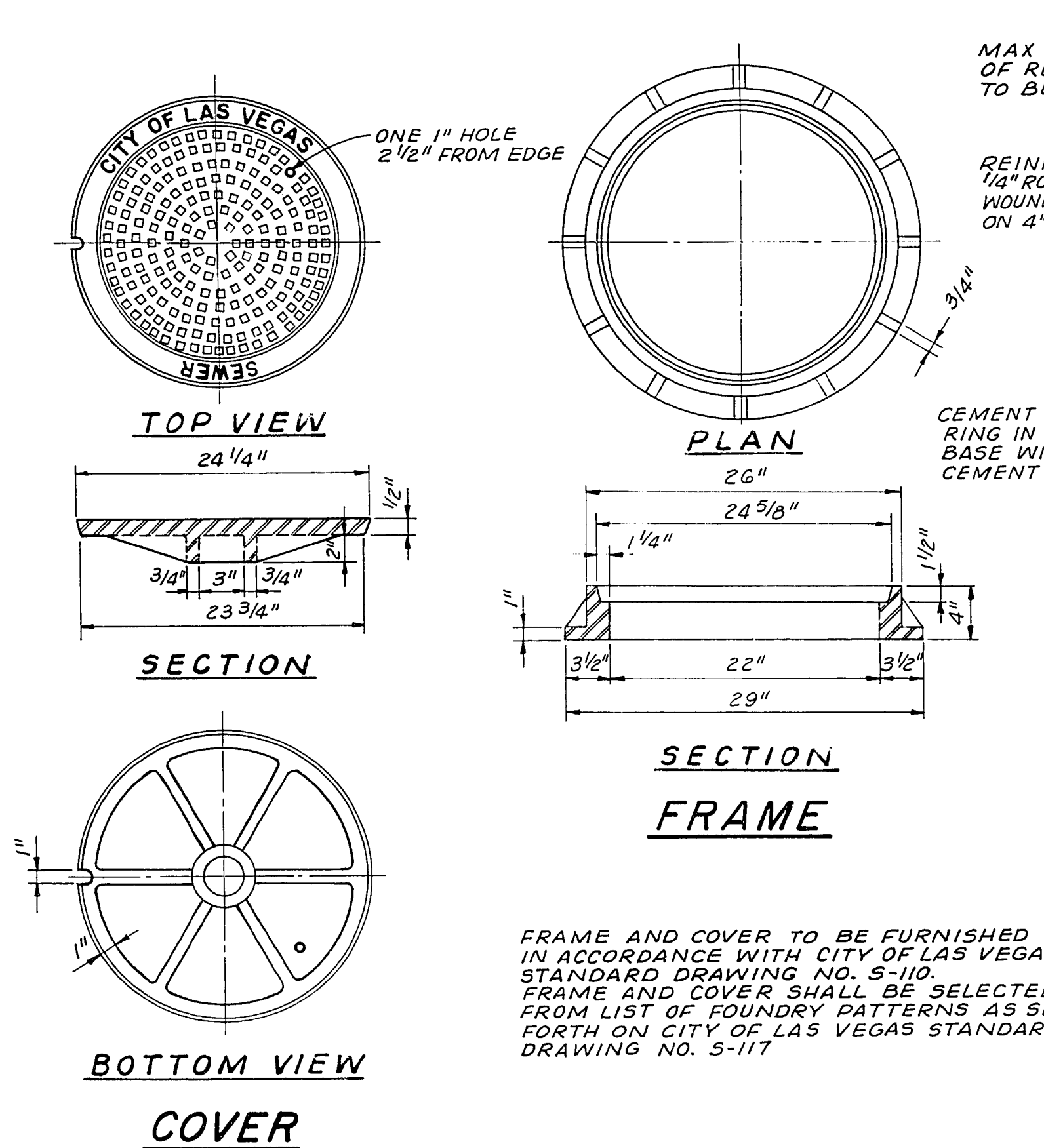
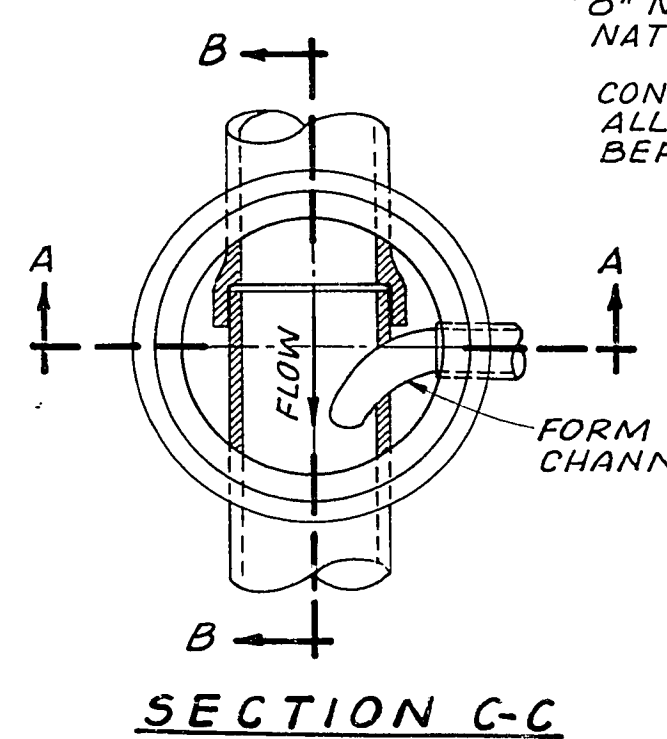
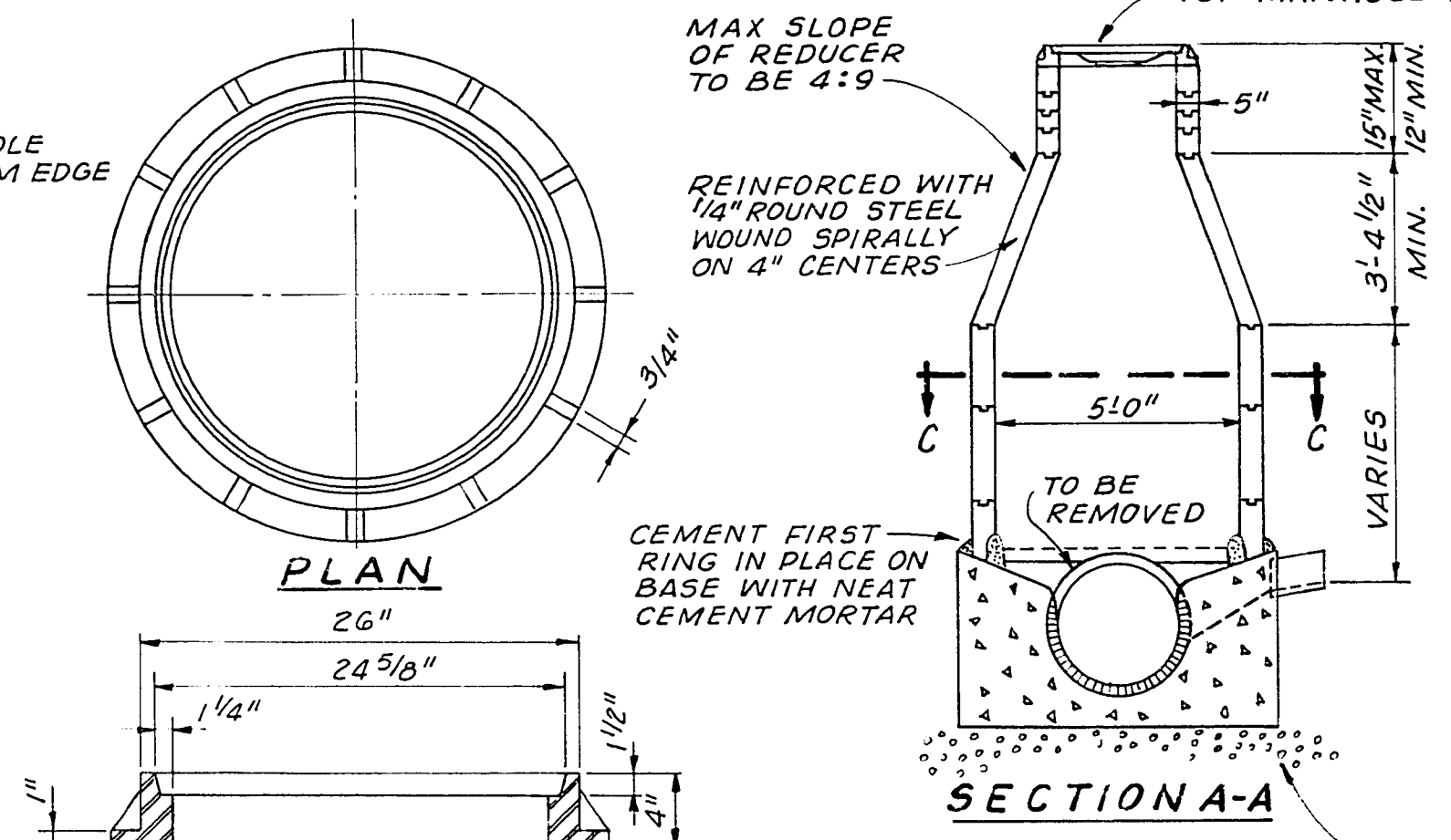


WHEN MANHOLE IS IN PAVED STREET, RAISE MANHOLE FRAME TO PAVEMENT GRADE AND EXTEND PAVING TO FRAME. IN UNPAVED R/W'S, MANHOLE FRAME MUST BE EXTENDED TO ELEVATION SHOWN ON THE PLANS



MANHOLE FRAME & COVER

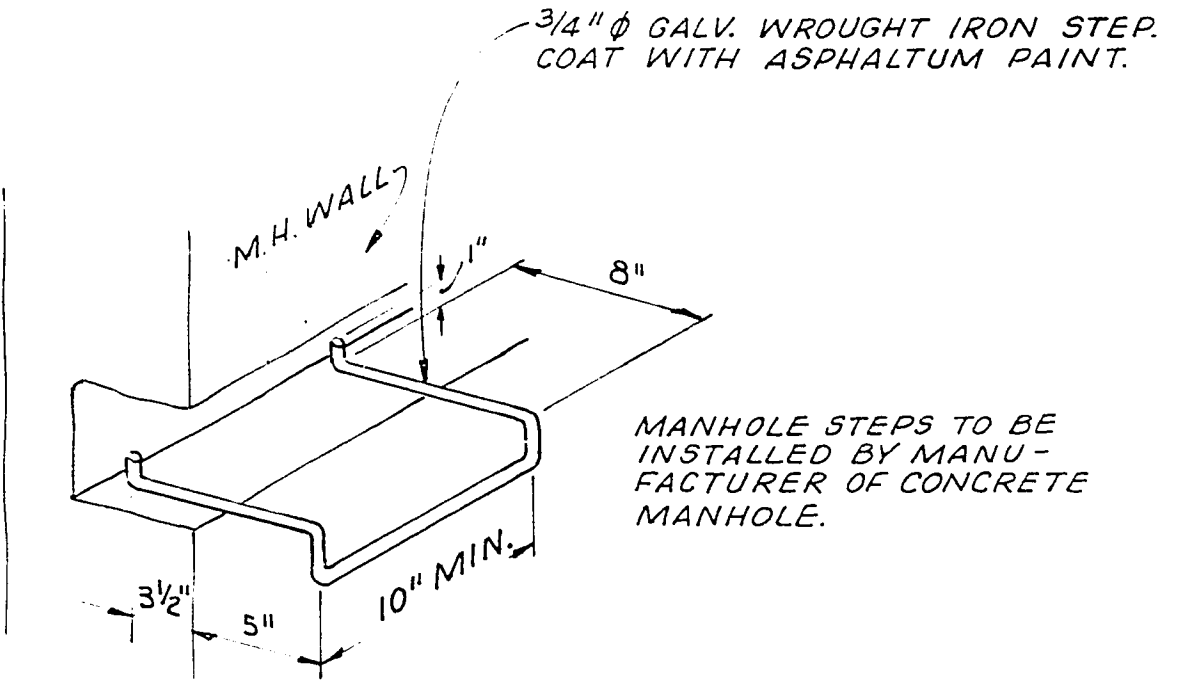
NO SCALE
AS BUILT NOTE:
ALL FRAMES & COVERS BY MALIN BROS. ENGRY, PHOENIX.



PRECAST REINFORCED CONCRETE MANHOLE

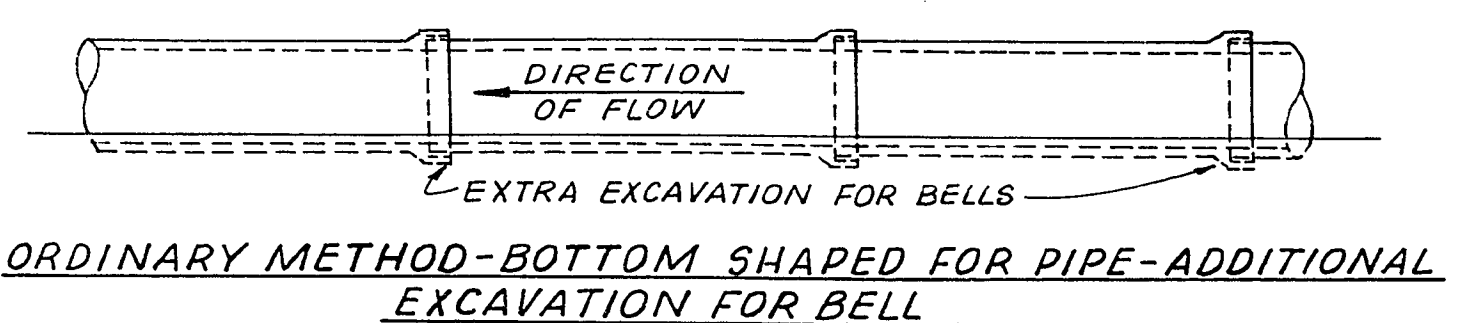
NO SCALE
AS BUILT NOTE:
ALL MANHOLES ECCENTRIC. FURNISHED BY HYDRO CONDUIT

THE CONTRACTOR SHALL COMPLY STRICTLY WITH THE FOLLOWING CONDITIONS:
1. FROM REDUCER CONE TO GROUND SURFACE, MANHOLE MUST BE COMPLETED WITH RISER RINGS.
2. RISERS WILL BE INSTALLED IN THE EXACT SIZE AND SEQUENCE AS DETAILED BELOW COMMENCING AT TOP OF REDUCER CONE AND WORKING UPWARD.
3. MINIMUM RISERS, WHICH MUST BE USED IS THREE (3) - SEQUENCE--1-6", AND 2-3"
4. MAXIMUM RISERS, WHICH MUST BE USED IS FOUR (4) - SEQUENCE--1-6", AND 3-3"
INVERTS SHALL BE TRUE TO GRADE AND FINISHED WITH A SMOOTH SURFACE. WHEN MANHOLE FORMS A JUNCTION OF SEWERS, SPECIAL CARE SHALL BE USED IN FORMING CHANNELS TO FACILITATE FLOW OF SEWAGE.
5. ECCENTRIC PRECAST MANHOLES WILL BE ACCEPTABLE UPON APPROVAL, BY THE ENGINEER OF SHOP DRAWINGS SUBMITTED BY THE CONTRACTOR.

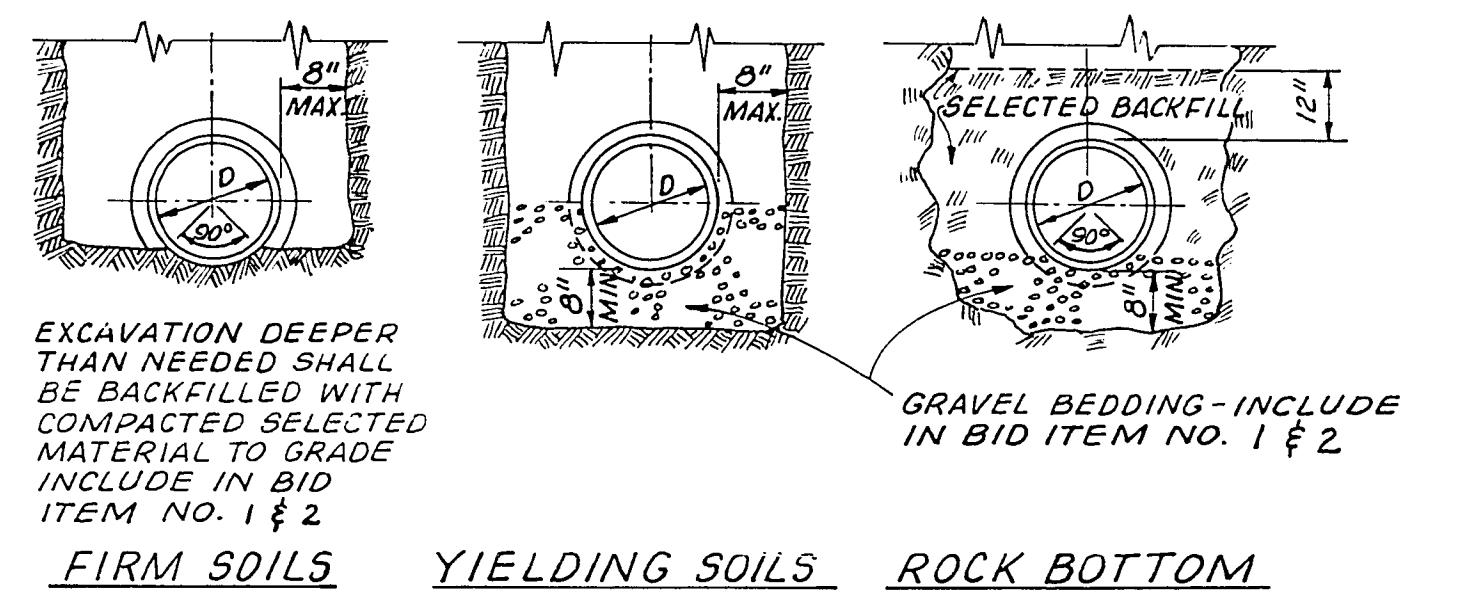


DETAIL OF WROUGHT IRON MANHOLE STEP

NO SCALE
PAY FOR MANHOLE STEPS TO BE INCLUDED IN BID ITEM NO. 7
MEASUREMENT FOR PAVEMENT CLASS "A-SPECIAL" EXCEPT AS SPECIFIED
IF DITCH BANK CAVES IN, THIS ADDITIONAL AREA SHALL BE REPAVED AT NO COST TO THE CITY.

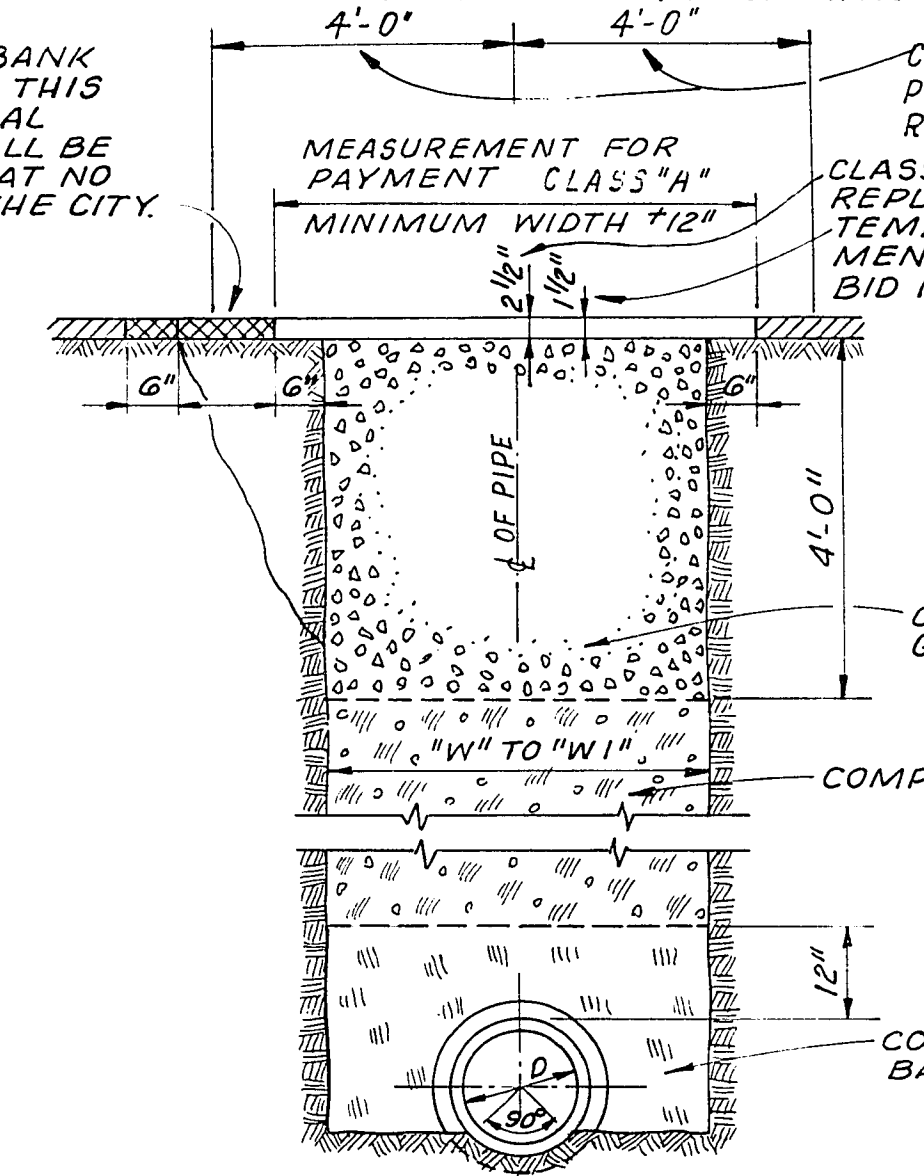


ORDINARY METHOD - BOTTOM SHAPED FOR PIPE - ADDITIONAL EXCAVATION FOR BELL



PIPE LAYING

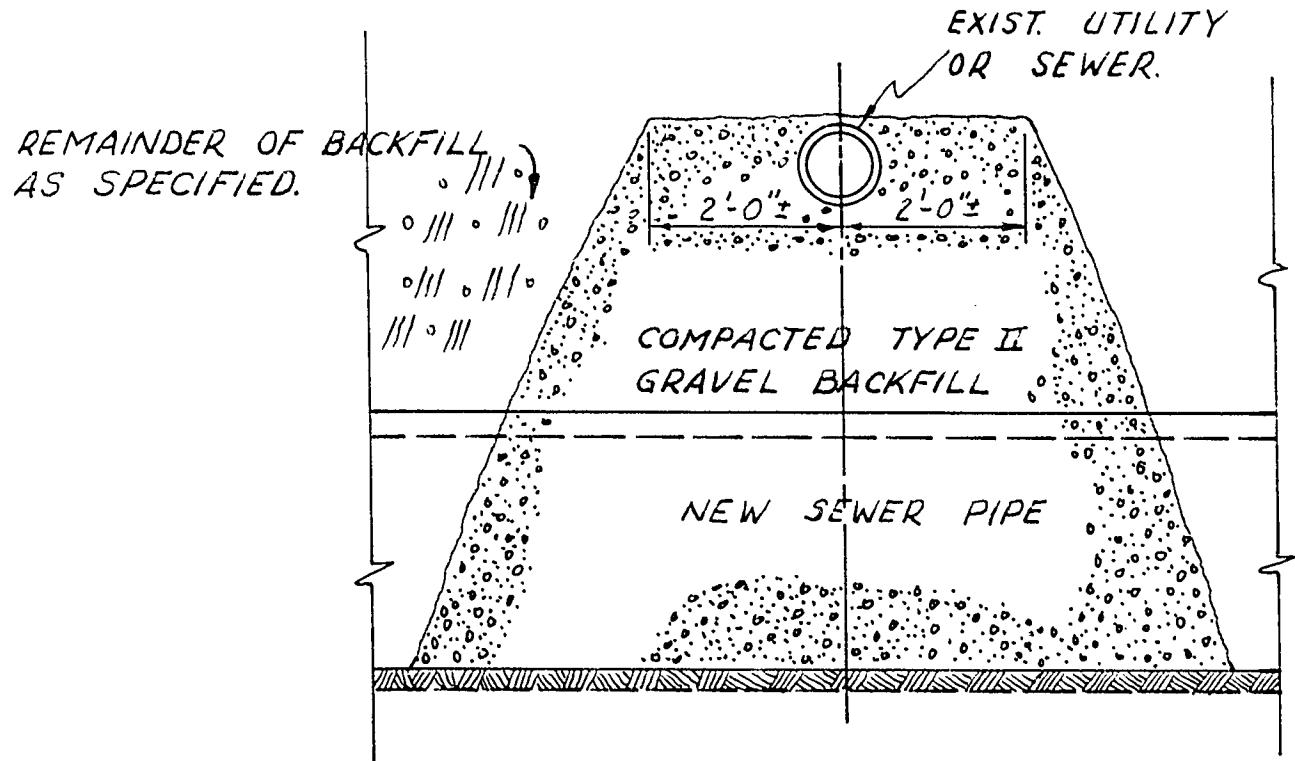
NO SCALE
EXCAVATION DEEPER THAN NEEDED SHALL BE BACKFILLED WITH COMPACTED SELECTED MATERIAL TO GRADE INCLUDE IN BID ITEM NO. 1 & 2
FIRM SOILS YIELDING SOILS ROCK BOTTOM



PAVEMENT REPLACEMENT BACKFILL & PIPE BEDDING

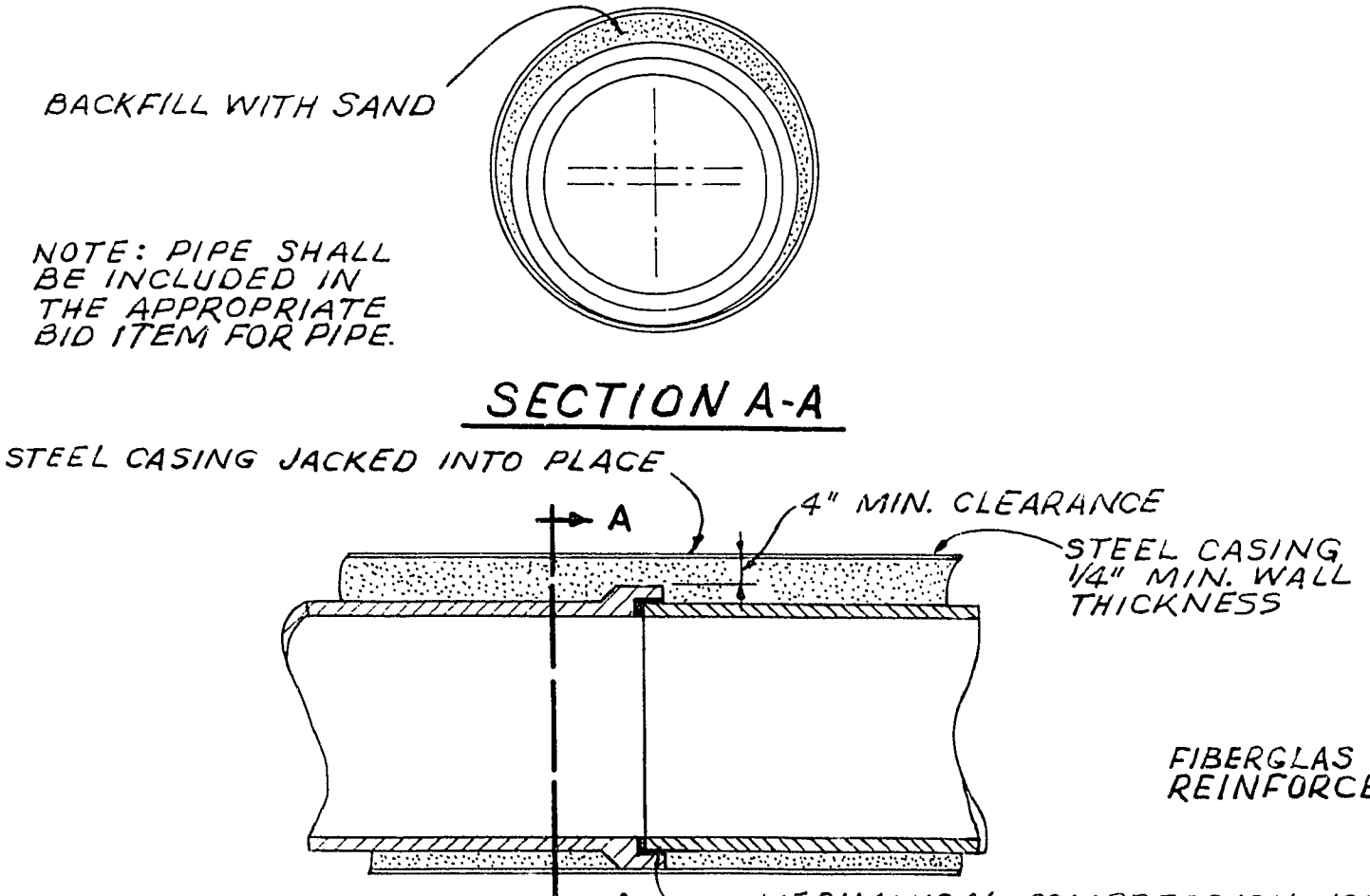
CLASS "A-SPECIAL" PERMANENT PAVEMENT REPLACEMENT BID ITEM NO. 11
CLASS "A" PERMANENT PAVEMENT REPLACEMENT - BID ITEM NO. 10
TEMPORARY PAVEMENT REPLACEMENT TO BE INCLUDED IN BID ITEM NO. 10 & 11
NOTE: ALL BACKFILL SHALL BE COMPACTED TO 90% OF MAX. SOIL DENSITY

PIPE SIZES INCHES	MAX TRENCH WIDTH, INCHES "W"	MIN TRENCH WIDTH, INCHES "W"
8"	26"	24"
10"	28"	26"
12"	30"	28"
15"	34"	32"
18"	38"	36"
21"	42"	39"
24"	46"	42"
27"	50"	45"
30"	54"	48"
33"	59"	54"
36"	63"	58"
39"	67"	62"
42"	72"	66"
45"	75"	69"
48"	78"	72"
51"	81"	75"



BACKFILL UNDER UTILITIES

INCLUDE IN ITEM NO. 1 & 2



STEEL PIPE CASING

NO SCALE
BID ITEM NO. 9

APPROVED
DIRECTOR OF PUBLIC WORKS
R.P. SAUER 5-27-65
R. P. SAUER
SUPERINTENDENT OF SANITATION
L.A. ANTON 5-27-65
L. A. ANTON

AS BUILT

JOHN CAROLLO ENGINEERS
PHOENIX - BERKELEY
LAS VEGAS, NEVADA
OGDEN - MESQUITE AVE. SEWER
MAIN ST. TO 23 RD. ST.

DESIGNED BY: JOHN A. CAROLLO
CHECKED BY: ROBERT M. CUSHING
DATE: APR. 65
DRAWING NO.: 7820b-1421.3
SHEET: 11 OF 11