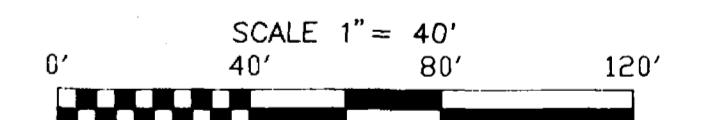


SEWER NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH CENTRAL GRAND VALLEY SANITATION DISTRICT AND THE CITY OF GRAND JUNCTION SPECIFICATIONS.
2. ALL CONCRETE SHALL BE COLORADO DIVISION OF HIGHWAYS CLASS "B".
3. ALL CEMENT USED IN MORTAR, CONCRETE BASES, GRADE RINGS, RISER SECTIONS, CONE AND FLAT TOPS, FOR MANHOLES AND/OR WET WELLS SHALL BE TYPE V OR MODIFIED TYPE II PORTLAND CEMENT WITH LESS THAN 5% TRICALCIUM ALUMINATE.
4. BACKFILL AROUND MANHOLES AND/OR WET WELLS SHALL BE PLACED IN 8" MAX. LIFTS AND COMPACTED TO 95% AASHTO T-99.
5. MANHOLE CONE AND FLAT TOP SECTIONS SHALL BE POSITIONED SUCH THAT THE MANHOLE RING AND COVER IS CENTERED OVER THE MAIN SEWER LINE.
6. SEE CITY OF MESA COUNTY STANDARD SPECIFICATIONS FOR ROADS AND UTILITIES FOR TESTING REQUIREMENTS.
7. ALL EXISTING PAVEMENT NOT DESIGNATED FOR REMOVAL WHICH IS DAMAGED BY CONSTRUCTION SHALL BE REPLACED IN-KIND BY CONTRACTOR.
8. VEHICULAR TRAFFIC SHALL BE KEPT OFF NEW CONCRETE FOR A MINIMUM OF FIVE DAYS.
9. ALL CONCRETE SHALL BE PROTECTED FROM FREEZING FOR FIVE DAYS AFTER BEING PLACED. NO CONCRETE SHALL BE PLACED ON FROZEN GROUND.
10. CONSTRUCT NEW MH A-1 OVER EXISTING SEWER IN PATTERSON ROAD. CUT EXISTING LINE TO SPRING LINE & NOTCH EXISTING PIPE TO NORTH & FORM NEW INVERT. CONTRACTOR TO PREVENT DEBRIS FROM ENTERING LINE & PROVIDE METHOD ON SEWER CONTAINMENT & DISPOSAL DURING CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER TO FIELD VERIFY EXISTING INVERT ELEVATION & ADJUST IF NECESSARY.

WATER NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH CLIFTON WATER DISTRICT SPECIFICATIONS.
2. ALL CONCRETE SHALL BE COLORADO DIVISION OF HIGHWAYS CLASS "B".
3. SEE MESA COUNTY SPECIFICATIONS FOR ROADS AND UTILITIES FOR TESTING REQUIREMENTS INCLUDING WATERLINE PRESSURE TESTING.
4. ALL EXISTING PAVEMENT NOT DESIGNATED FOR REMOVAL WHICH IS DAMAGED BY CONSTRUCTION SHALL BE REPLACED IN-KIND BY CONTRACTOR.
5. ALL CONCRETE SHALL BE PROTECTED FROM FREEZING FOR FIVE DAYS AFTER BEING PLACED. NO CONCRETE SHALL BE PLACED ON FROZEN GROUND.
6. MEASUREMENTS SHOWN ARE TO THE CENTER OF THE FITTINGS OR VALVE.



NOTE: SANITARY SEWER SERVICE LATERAL STATIONS ARE CALCULATED FROM THE DOWN STREAM MANHOLE.

1+00 RECORD DIMENSION  
1.00 OR ELEVATION

BENCHMARK IS THE EAST SIDE OF THE STORM SEWER MANHOLE. ELEVATION IS 4716.24

**RECORD DRAWING**  
**RECORD DRAWING NO. 3 OF 4**

**SEWER & WATER PLAN**

**SHADOWBROOK FILING ONE**

**TAL** THOMAS A. LOGUE  
LAND DEVELOPMENT CONSULTANTS  
227 SOUTH 9TH STREET GRAND JUNCTION, COLORADO 81501 (303) 244-9180 (303) 243-0099

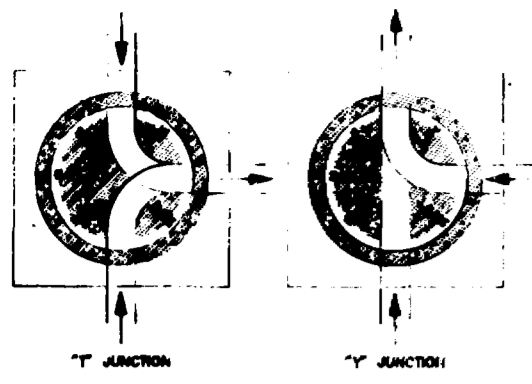
**HART GROUP, PC**  
ENGINEERS DESIGNERS PLANNERS  
227 SOUTH 9TH STREET GRAND JUNCTION, COLORADO 81501 (303) 244-9180

PROJECT NO. C:\SC12\WORK\93111 SHEET OF  
DATE: FEBRUARY, 1994 SW-1 2

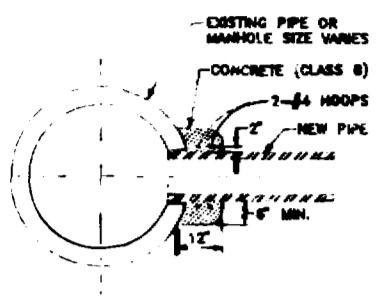
CENTRAL GRAND VALLEY SANITATION DISTRICT  
SHEETS SW-1 TO SW-2  
APPROVED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE.  
BY: *[Signature]* DATE: 4-17-94  
ACCEPTED AS CONSTRUCTED  
BY: *[Signature]* DATE: 9-15-94

REVISED 4/14/1994

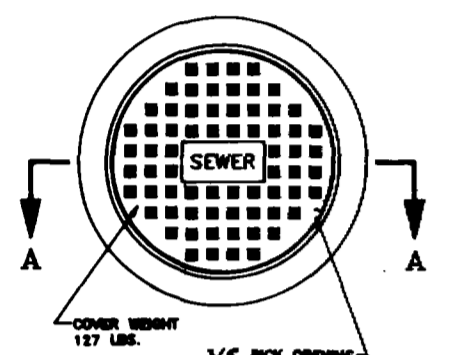
Rec 9-15-94  
02087101.tif



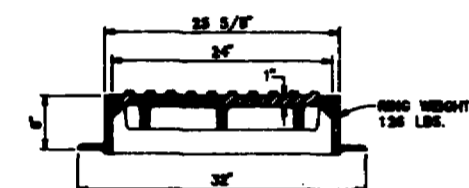
SECTION B-B



CONNECTION TO EXISTING MANHOLE OR INLET BOX

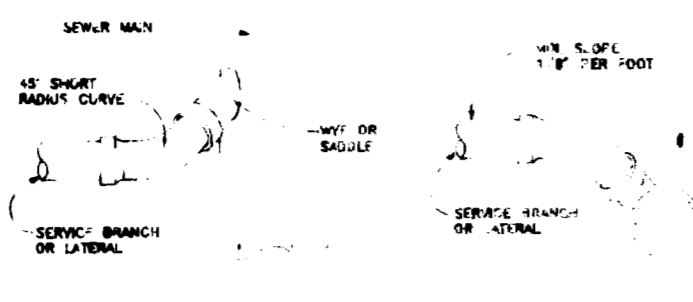


STANDARD CAST IRON MANHOLE RING & COVER

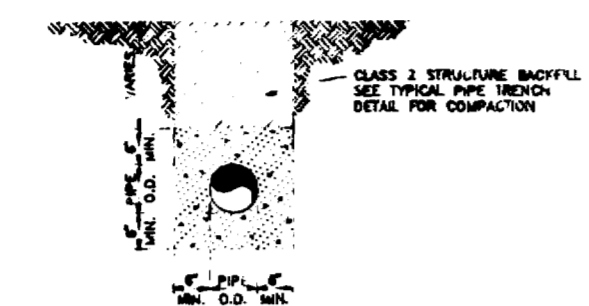


SECTION A-A

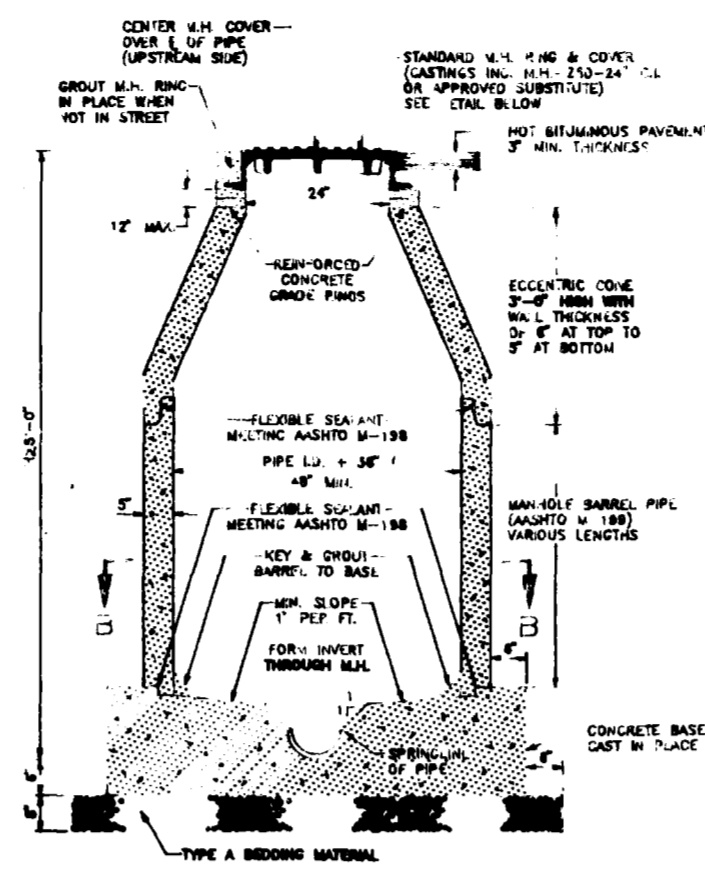
# SEWER DETAILS



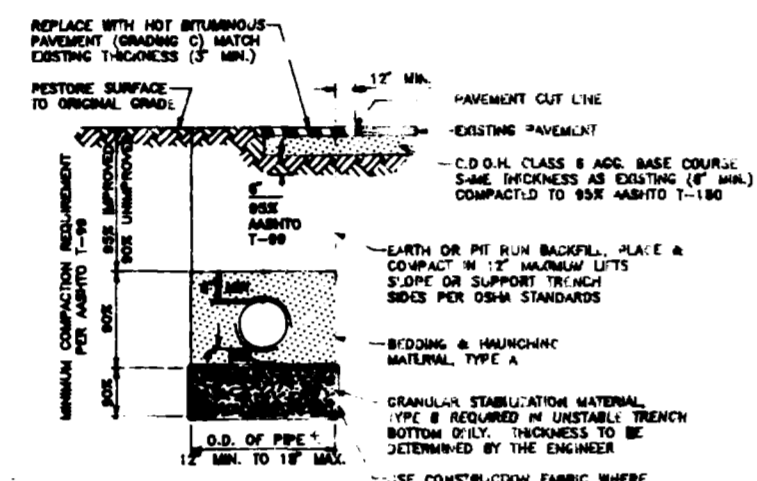
TYPICAL SERVICE 'Y' CONNECTION



CONCRETE ENCASMENT DETAIL



STANDARD MANHOLE

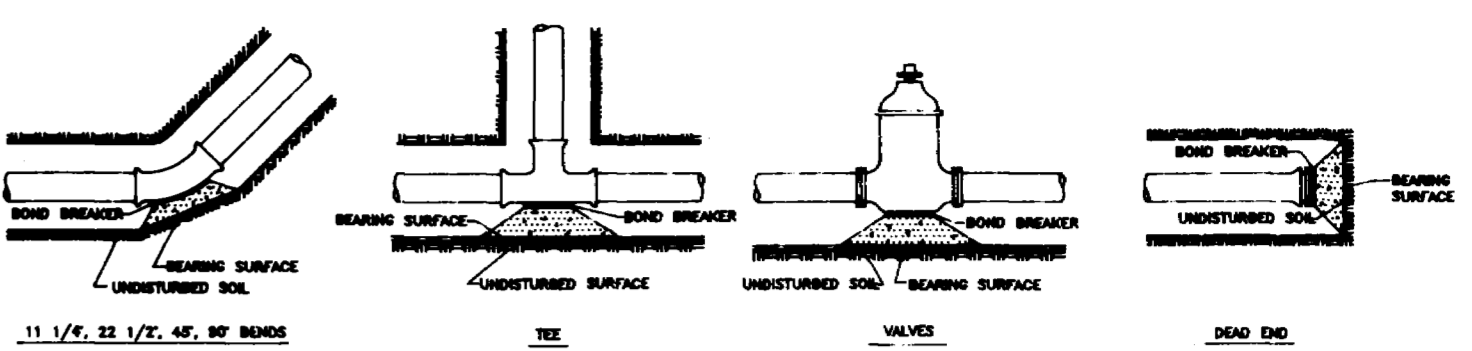


TYPICAL TRENCH DETAIL

PERCENT BY WEIGHT PASSING SQUARE NO. 20 SIEVE		
PIPE BELONGING TO MANHOLES (TYPE A)	SPRINKLER STABILIZATION MATERIAL (TYPE B)	PIT RUN AGGREGATE (TO BE USED WHERE SPECIFIED OR CALLED FOR BY CONTRACTOR)
8 INCH	100	100
7 INCH	100	100
6 INCH	100	100
NO. 200	20 MAX	15 MAX

NOTE: ALL BACKFILL MATERIAL SHALL BE PLACED PAST MIDDLE OF 12\"/>

# WATER DETAILS



TYPICAL THRUST BLOCK DETAILS

## SEWER NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH CENTRAL GRAND VALLEY SANITATION DISTRICT AND THE CITY OF GRAND JUNCTION SPECIFICATIONS.
2. ALL CONCRETE SHALL BE COLORADO DIVISION OF HIGHWAYS CLASS "B".
3. ALL CEMENT USED IN MORTAR, CONCRETE BASES, GRADE RINGS, RISER SECTIONS, CONE AND FLAT TOPS, FOR MANHOLES AND/OR WET WELLS SHALL BE TYPE V OR MODIFIED TYPE II PORTLAND CEMENT WITH LESS THAN 5% TRICALCIUM ALUMINATE.
4. BACKFILL AROUND MANHOLES AND/OR WET WELLS SHALL BE PLACED IN 8" MAX. LIFTS AND COMPACTED TO 95% AASHTO T-99.
5. MANHOLE CONE AND FLAT TOP SECTIONS SHALL BE POSITIONED SUCH THAT THE MANHOLE RING AND COVER IS CENTERED OVER THE MAIN SEWER LINE.
6. SEE CITY OF MESA COUNTY STANDARD SPECIFICATIONS FOR ROADS AND UTILITIES FOR TESTING REQUIREMENTS.
7. ALL EXISTING PAVEMENT NOT DESIGNATED FOR REMOVAL WHICH IS DAMAGED BY CONSTRUCTION SHALL BE REPLACED IN-KIND BY CONTRACTOR.
8. VEHICULAR TRAFFIC SHALL BE KEPT OFF NEW CONCRETE FOR A MINIMUM OF FIVE DAYS.
9. ALL CONCRETE SHALL BE PROTECTED FROM FREEZING FOR FIVE DAYS AFTER BEING PLACED. NO CONCRETE SHALL BE PLACED ON FROZEN GROUND.
10. CONSTRUCT NEW MH A-1 OVER EXISTING SEWER IN PATTERSON ROAD. CUT EXISTING LINE TO SPRING LINE & NOTCH EXISTING PIPE TO NORTH & FORM NEW INVERT. CONTRACTOR TO PREVENT DEBRIS FROM ENTERING LINE & PROVIDE METHOD ON SEWER CONTAINMENT & DISPOSAL DURING CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER TO FIELD VERIFY EXISTING INVERT ELEVATION & ADJUST IF NECESSARY.
11. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE CENTRAL GRAND VALLEY SANITATION DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THEIR STANDARDS AND SPECIFICATIONS.
12. THE CONTRACTOR SHALL HAVE ONE SIGNED COPY OF THE PLANS AT THE JOB SITE AT ALL TIMES.
13. ALL SANITARY SEWER PIPE TO BE PVC SDR 35 UNLESS OTHERWISE NOTED.
14. ALL SEWER MAINS SHALL BE LAID TO GRADE UTILIZING A PIPE LASER.
15. ALL SERVICE LINE CONNECTIONS TO THE NOW MAIN SHALL BE ACCOMPLISHED WITH FULL BODY WYES OR TEES. TAPPING SADDLES WILL NOT BE ALLOWED.
16. A MINIMUM OF 10 FOOT SEPARATION SHALL BE MAINTAINED AT ALL TIMES BETWEEN THE WATERLINE AND SEWER LINE (EXCEPT AT SPECIFIED CROSSINGS).
17. SEWER SERVICE STUB-OUT SHALL EXTEND 14 FEET BEYOND THE PROPERTY LINE AND SHALL BE GLUE CAPPED AND MARKED WITH A 2X4 POST AND PAINTED GREEN.
18. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 24 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
19. THE CONTRACTOR WILL BE REQUIRED TO OBTAIN THE MESA COUNTY UNDERGROUND UTILITY PERMIT REQUIRED FOR WORK WITHIN THE PATTERSON ROAD RIGHT-OF-WAY.

TABLE FOR CONCRETE THRUST BLOCKING

BEARING AREAS (IN SQ. FT.)	SIZES				
	8\"/>				
3	1.5	0.8	0.3	0	0.7
4	1.8	1.0	0.5	0	1.3
6	4.0	3.7	1.1	0	3.8
8	7.1	3.8	2.0	0	5.9
10	11.1	6.0	3.0	1.5	7.8
12	16.0	8.8	4.4	2.2	11.3
14	21.7	11.8	6.0	3.0	15.4
15	25.0	13.5	7.0	3.5	17.8
16	28.1	15.5	8.0	4.0	20.0
18	36.0	19.4	10.0	5.0	25.4
20	44.2	24.0	12.7	6.1	31.1
21	49.0	26.5	14.1	6.8	34.6
22	54.3	29.0	14.8	7.4	38.3
24	64.0	34.5	17.7	8.8	45.0
30	100.0	54.0	27.8	13.8	71.0
36	144.0	79.0	41.0	20.0	101.0

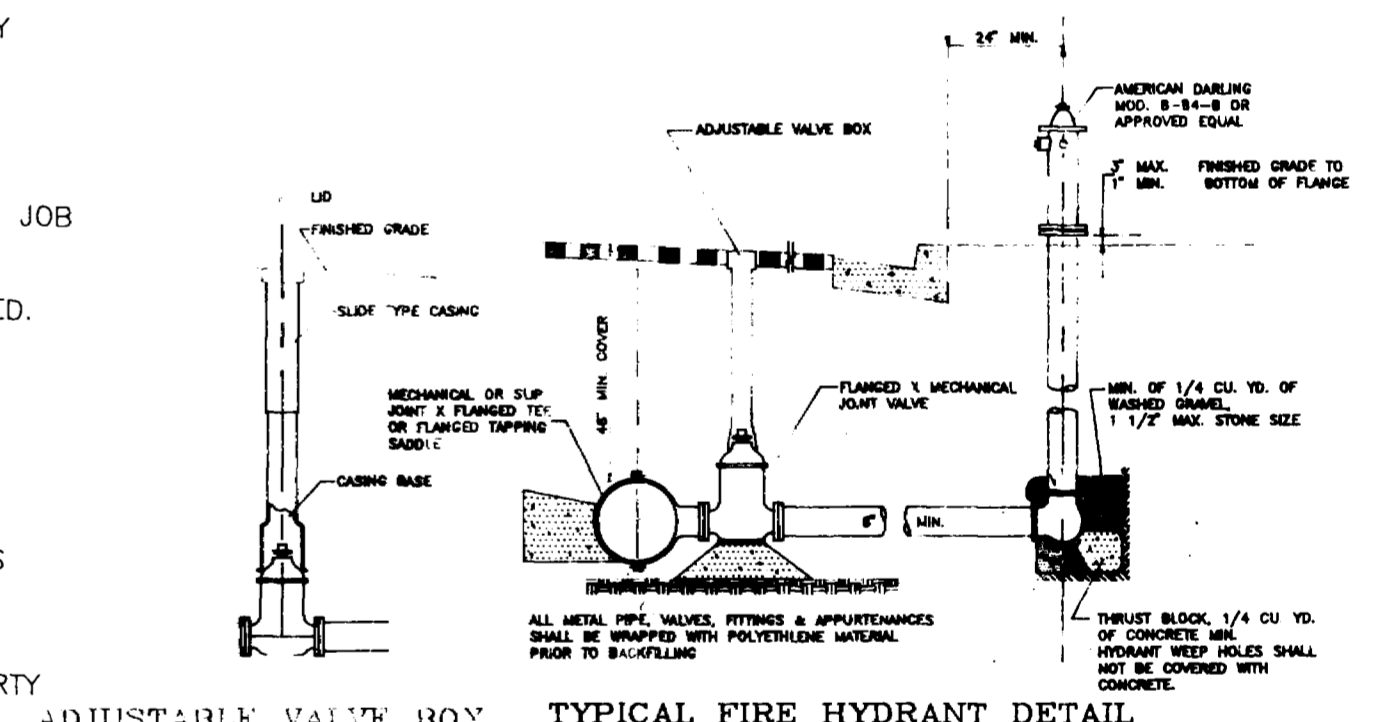
NOTE: SEE SPEC. S. 5.3.1.1.1.1.1

AREAS GIVEN IN TABLE ARE BASED UPON A FINAL STATIC PRESSURE OF 100 P.S.I. AND SOIL BEARING CAPACITY OF 1,000 P.S.F. PER SQ. FT.

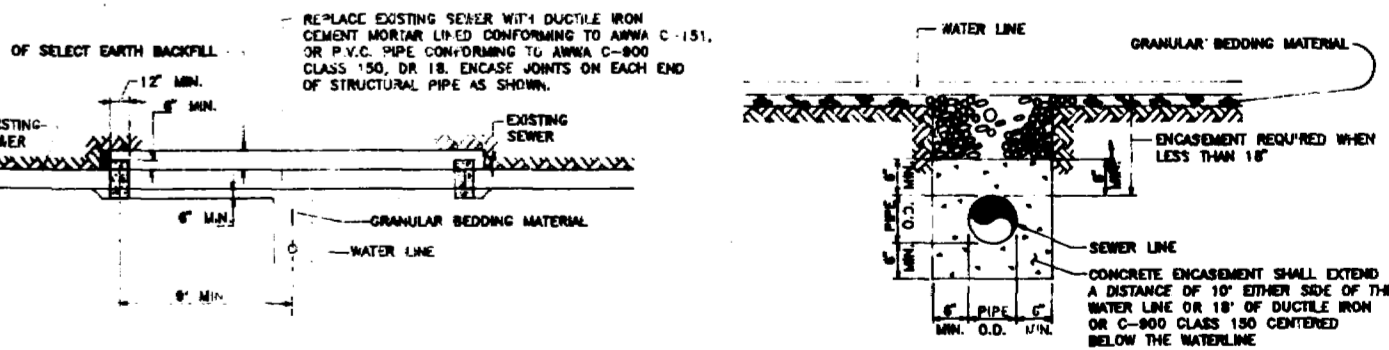
BY AREA, BEARING CAPACITY AND SOIL BEARING CAPACITY MAY BE OBTAINED BY INTERPOLATING VALUES BY A CORRECTION FACTOR "F".

F = ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF LBS. / SQ. IN. / ACTUAL SOIL BEARING CAPACITY IN HUNDREDS OF LBS. / SQ. IN.

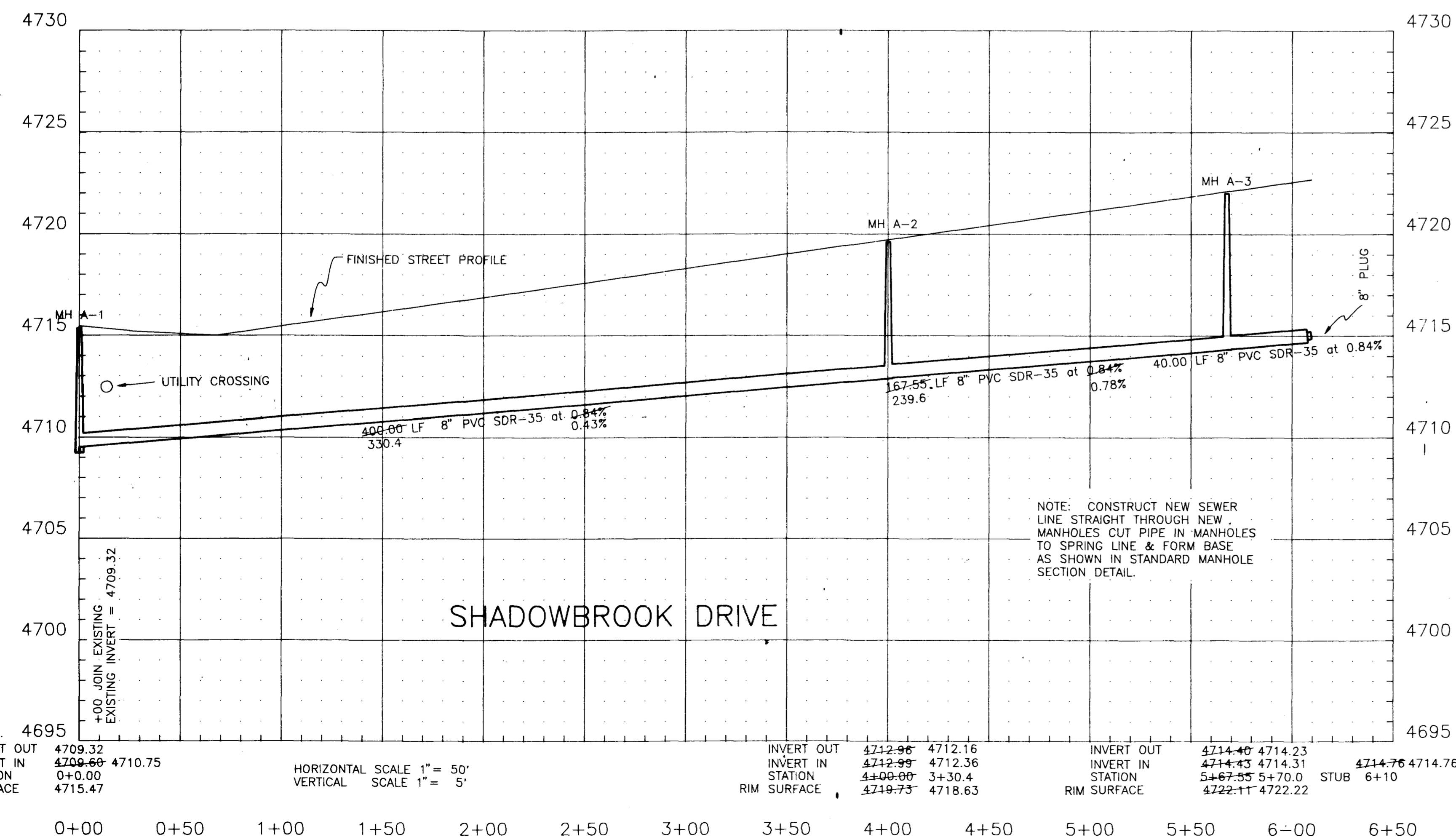
90 SEWER - DIMENSIONS SHALL BE DETERMINED BY THE ENGINEER.



ADJUSTABLE VALVE BOX & TYPICAL FIRE HYDRANT DETAIL



TYPICAL WATER AND SEWER LINE CROSSINGS



NOTE: CONSTRUCT NEW SEWER LINE STRAIGHT THROUGH NEW MANHOLES CUT PIPE IN MANHOLES TO SPRING LINE & FORM BASE AS SHOWN IN STANDARD MANHOLE SECTION DETAIL.

# RECORD DRAWING

## RECORD DRAWING NO. 4 OF 4

<b>SAN SEWER PROFILE &amp; DETAILS</b>	
<b>SHADOWBROOK FILING ONE</b>	
THOMAS A. LOGUE LAND DEVELOPMENT CONSULTANTS 227 SOUTH 9TH STREET GRAND JUNCTION, COLORADO 81501 (303) 245-4099	
<b>HART GROUP PC</b> ENGINEERS DESIGNERS PLANNERS 227 SOUTH 9TH STREET GRAND JUNCTION, COLORADO 81501 (303) 244-8180	
PROJECT NO. C:\SC12\WORK\93111	SHEET OF
DATE: FEBRUARY, 1994	SW-2 2