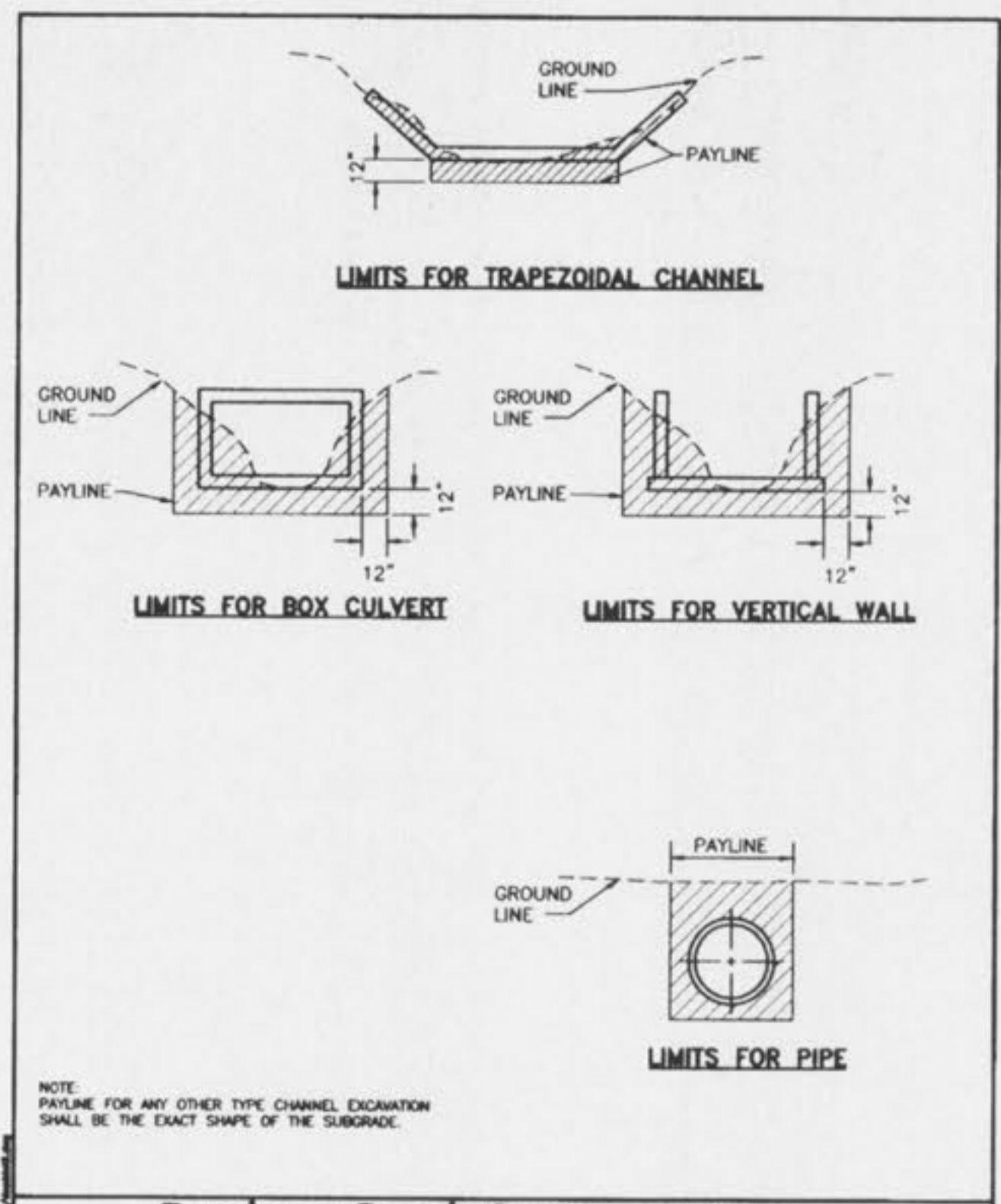


ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CU. FT. PER FT. CONCRETE ENCASUREMENT	INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CU. FT. PER FT. CONCRETE ENCASUREMENT
4	30	2.50	3.28				
6	30	2.50	3.59				
8	30	2.50	3.87				
10	30	2.50	4.09				
12	30	2.50	4.25				
15	36	3.00	5.55				
18	36	3.00	5.77	14 x 23	41	3.42	5.94
21	39	3.25	6.61				
24	42	3.50	7.39	19 x 30	49	4.08	7.68
27	45	3.75	8.18	22 x 34	53	4.42	8.61
30	49	4.08	9.30	24 x 38	58	4.83	9.70
33	53	4.42	10.53	27 x 42	62	5.17	10.71
36	56	4.67	11.43	29 x 45	66	5.50	11.72
39	DISCONTINUED			32 x 49	71	5.92	13.14
42	63	5.25	13.38	34 x 53	75	6.25	14.05
48	70	5.83	15.67	38 x 60	83	6.92	16.18
54	77	6.42	18.15	43 x 68	92	7.67	18.81
60	84	7.00	20.73	48 x 76	101	8.42	21.59
66	91	7.58	23.45	53 x 83	109	9.08	24.35
72	98	8.17	26.37	58 x 91	118	9.83	27.45
78	105	8.75	29.39	63 x 98	126	10.50	30.50
84	112	9.33	32.57	68 x 106	135	11.25	33.91
90	119	9.92	35.90	72 x 113	143	11.92	36.99
96	126	10.50	39.37	77 x 121	152	12.67	40.69
102	133	11.08	42.99	82 x 128	160	13.33	44.45
108	140	11.67	46.75	87 x 136	168	14.00	47.79
114	147	12.25	50.66	92 x 143	176	14.67	51.70
120	154	12.83	54.72	97 x 151	185	15.42	56.01
126	161	13.42	58.92				
132	168	14.00	63.27	106 x 166	202	16.83	64.48
144	182	15.17	72.40	116 x 180	218	18.17	73.59

DUCKETT CREEK SANITARY DISTRICT

PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE

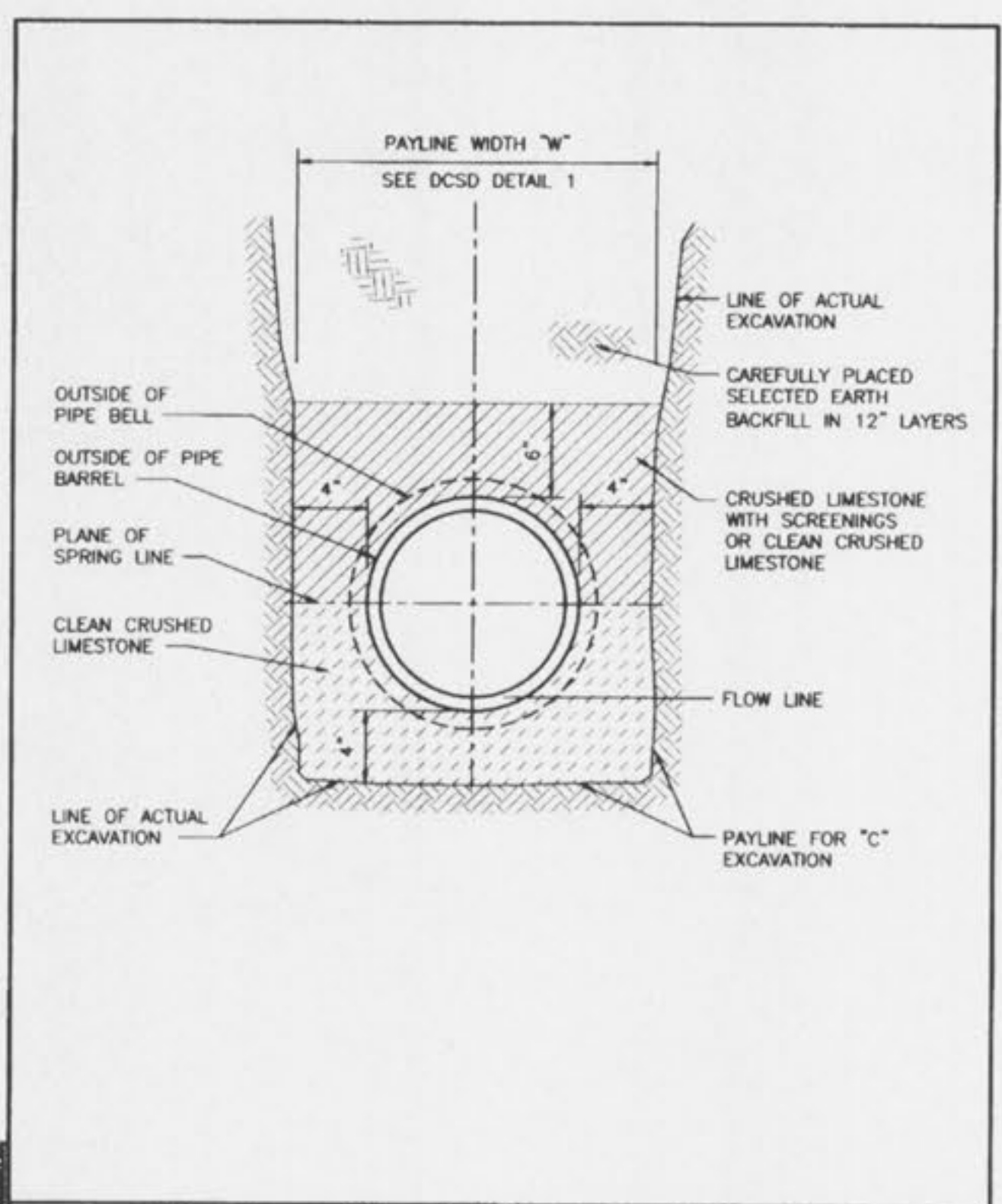
Drawn By: BSM	App. By: KLA	Detail No. 1
Check By: MDOB	Date: 12-21-99	



DUCKETT CREEK SANITARY DISTRICT

PAYLINE LIMITS FOR EXCAVATION

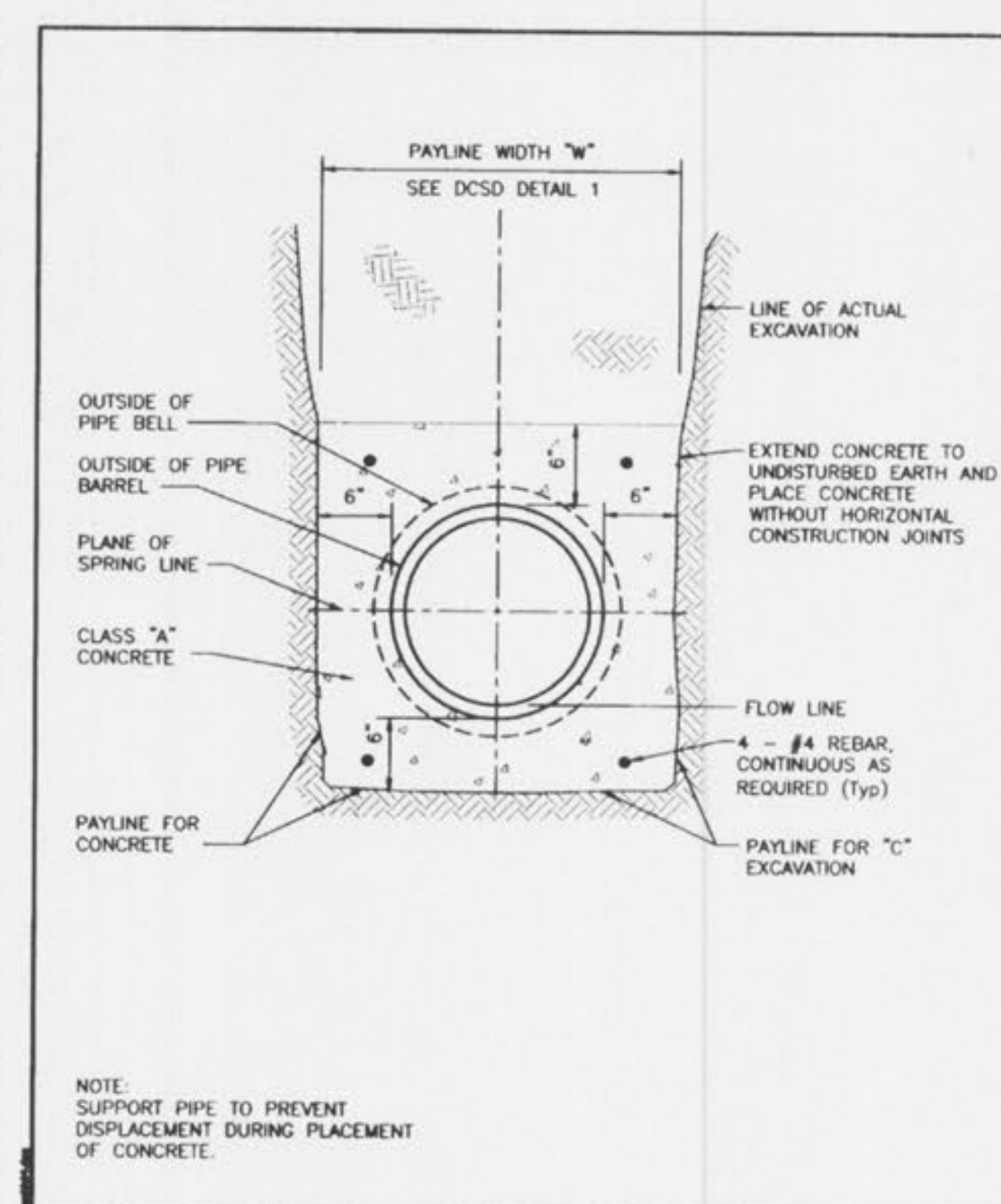
Drawn By: BSM	App. By: KLA	Detail No. 2
Check By: MDOB	Date: 12-21-99	



DUCKETT CREEK SANITARY DISTRICT

PIPE BEDDING CLASS "C" (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)

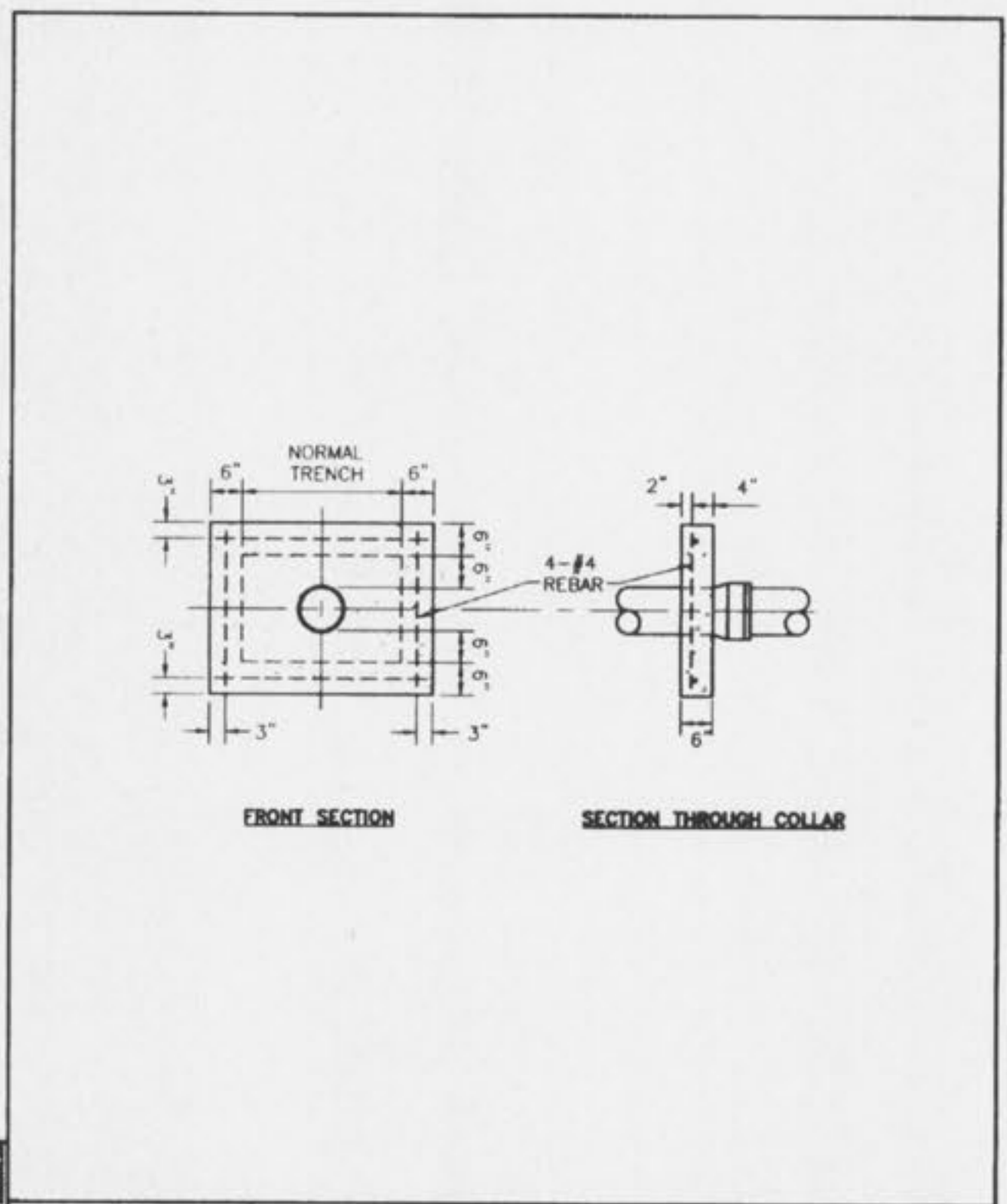
Drawn By: BSM	App. By: KLA	Detail No. 3
Check By: MDOB	Date: 12-21-99	



DUCKETT CREEK SANITARY DISTRICT

TYPICAL CONCRETE ENCASUREMENT

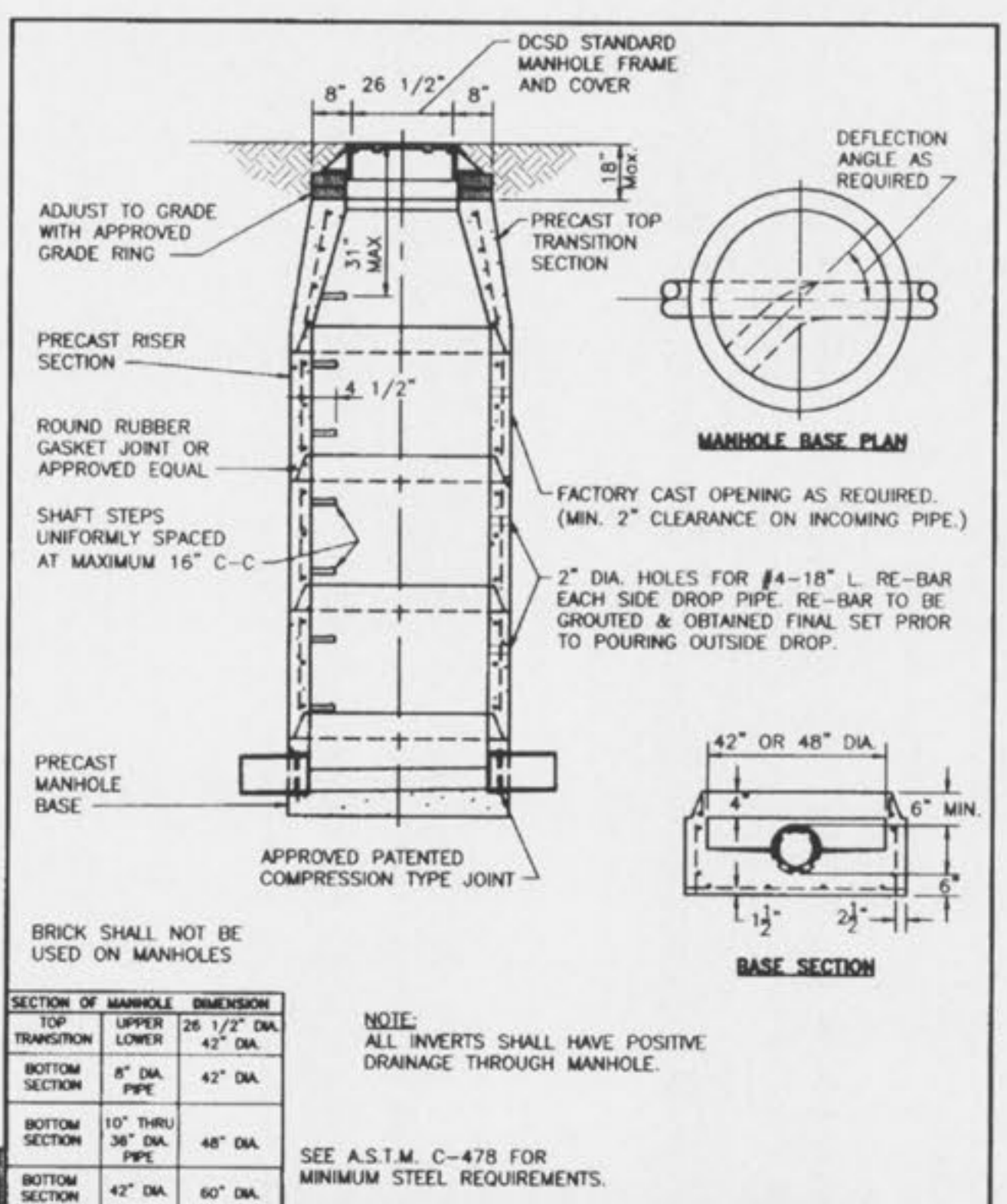
Drawn By: BSM	App. By: KLA	Detail No. 4
Check By: MDOB	Date: 12-21-99	



DUCKETT CREEK SANITARY DISTRICT

CONCRETE ANTI-SLIP COLLAR FOR PVC PIPE ON PIPE SLOPES FROM 15% TO 50%

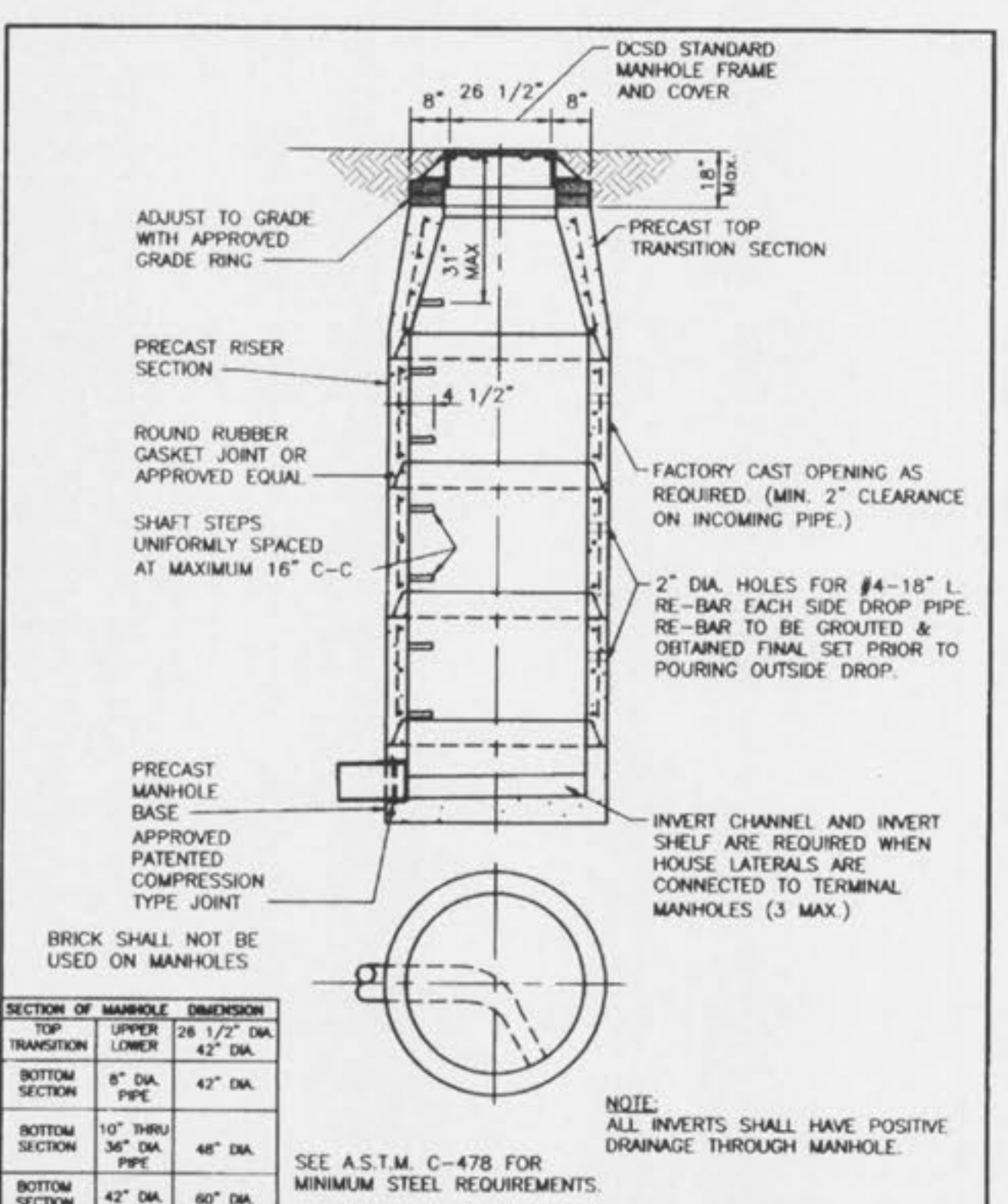
Drawn By: BSM	App. By: KLA	Detail No. 5
Check By: MDOB	Date: 12-21-99	



DUCKETT CREEK SANITARY DISTRICT

PRE-CAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 18"

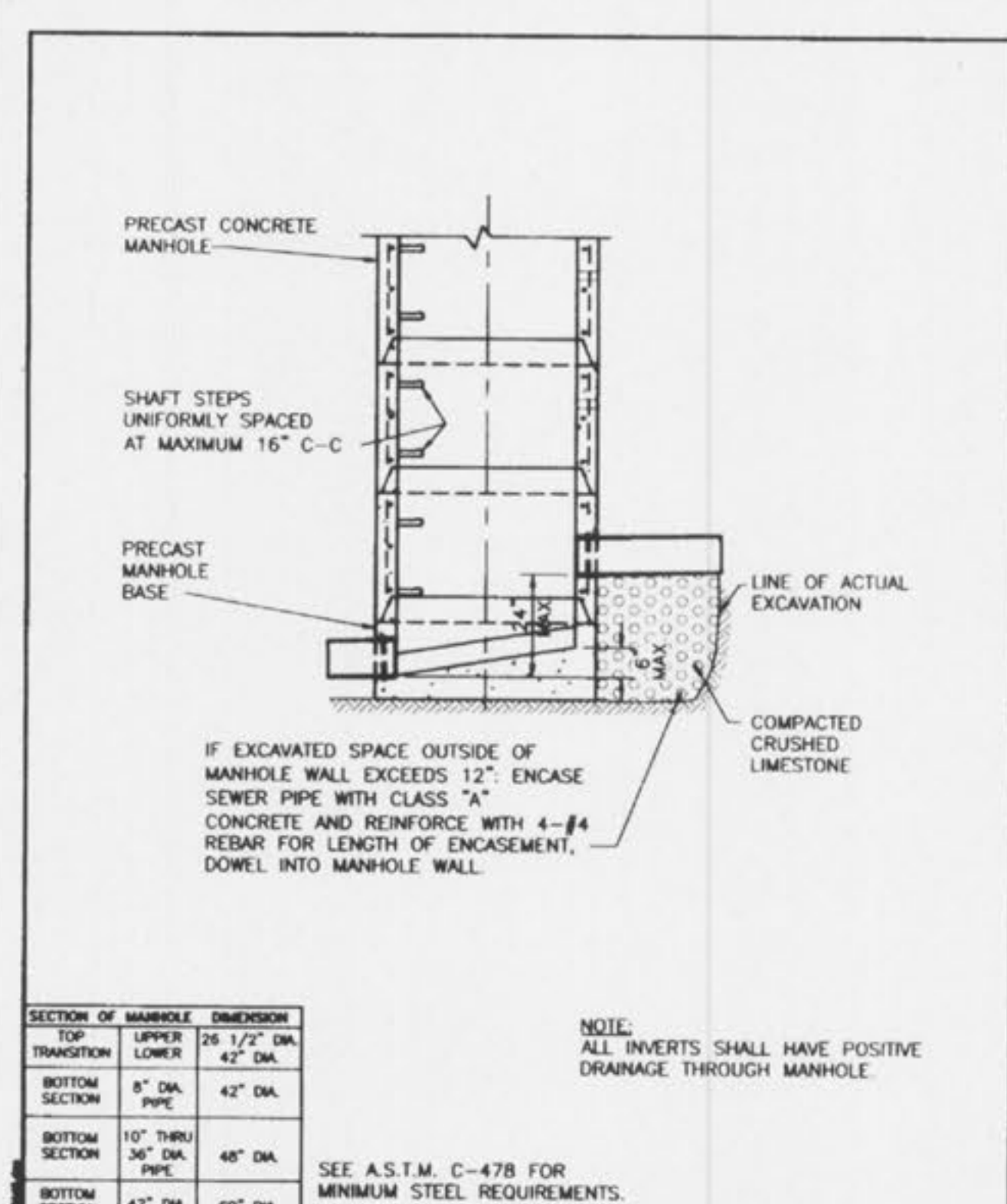
Drawn By: BSM	App. By: KLA	Detail No. 7
Check By: MDOB	Date: 12-30-99	



DUCKETT CREEK SANITARY DISTRICT

TERMINAL MANHOLE FOR SEWERS 8" THROUGH 18"

Drawn By: BSM	App. By: KLA	Detail No. 8
Check By: MDOB	Date: 01-03-00	



DUCKETT CREEK SANITARY DISTRICT

INSIDE FOULWATER DROP MANHOLE (SWEEP INVERT)

Drawn By: BSM	App. By: KLA	Detail No. 9
Check By: MDOB	Date: 01-04-00	

THE UNDERGROUND UTILITIES SHOWN HEREON WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NONEXISTENCE, SIZE, TYPE, NUMBER OR LOCATION OF THESE OR OTHER UTILITIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN, AND SAID UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319, RSMo.

PREPARED FOR:
N & K HIGHWAYS, L.L.C.
 5091 NEW BAUMGARTNER ROAD
 ST. LOUIS, MISSOURI 63129
 (314) 487-6717

PREPARED BY:
STERLING CO.
 ENGINEERS & SURVEYORS
 5055 NEW BAUMGARTNER ROAD
 ST. LOUIS, MISSOURI 63129
 (314)-487-0440 FAX 487-8944
 E-Mail: Sterling@sterling-eng-sur.com

DRAWN: DESIGNED: CHECKED:
SPRING ORCHARD
 PROJECT: SHEET TITLE: DCSD DETAILS

NO. 01 01 008
 M.S.D. P/N/A SHEET CD5
 DATE: 01/03/00