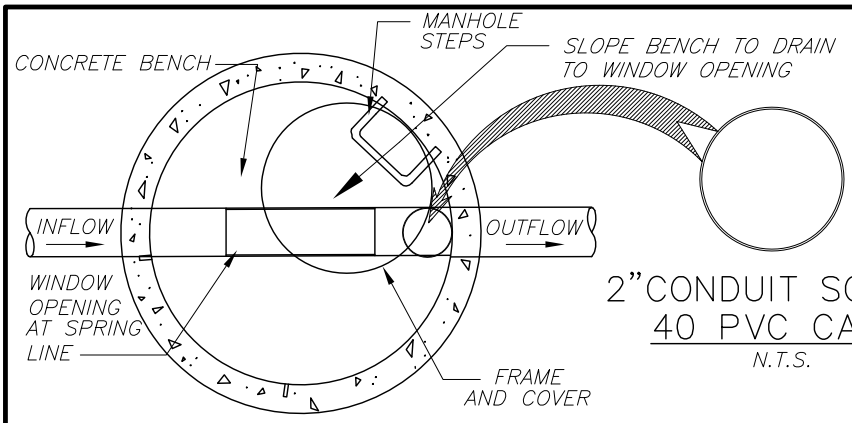
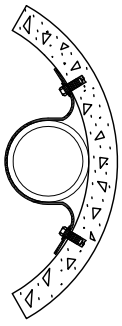
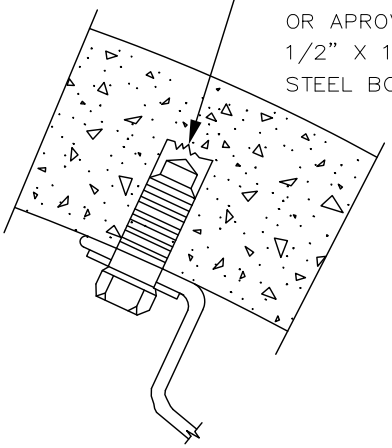


MANHOLE PLAN VIEW
N.T.S.

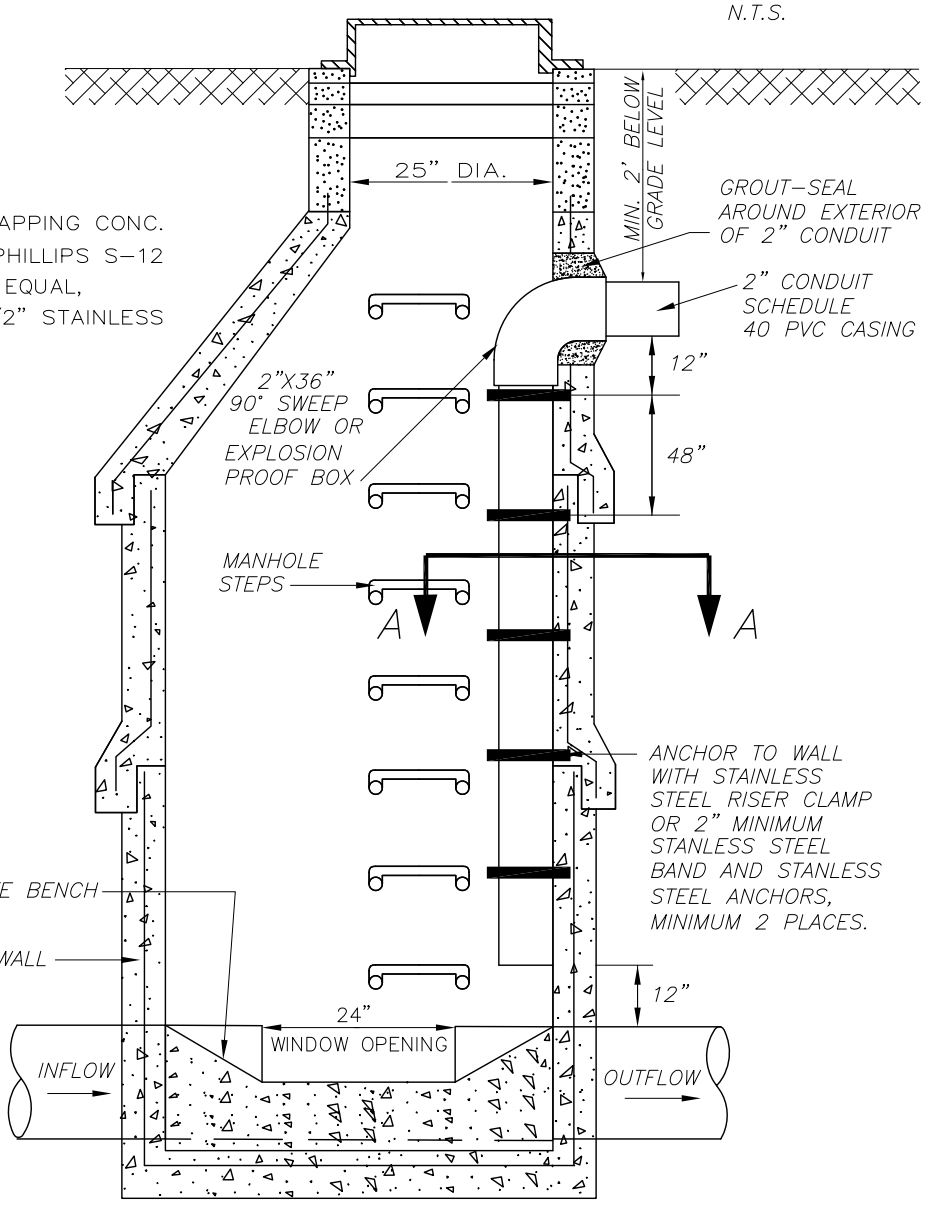
2"CONDUIT SCHEDULE 40 PVC CASING
N.T.S.



CLAMP DETAIL
(SECTION A–A)
N.T.S.



PARTITION ATTACHMENT



SECTION
N.T.S.

NOTES:

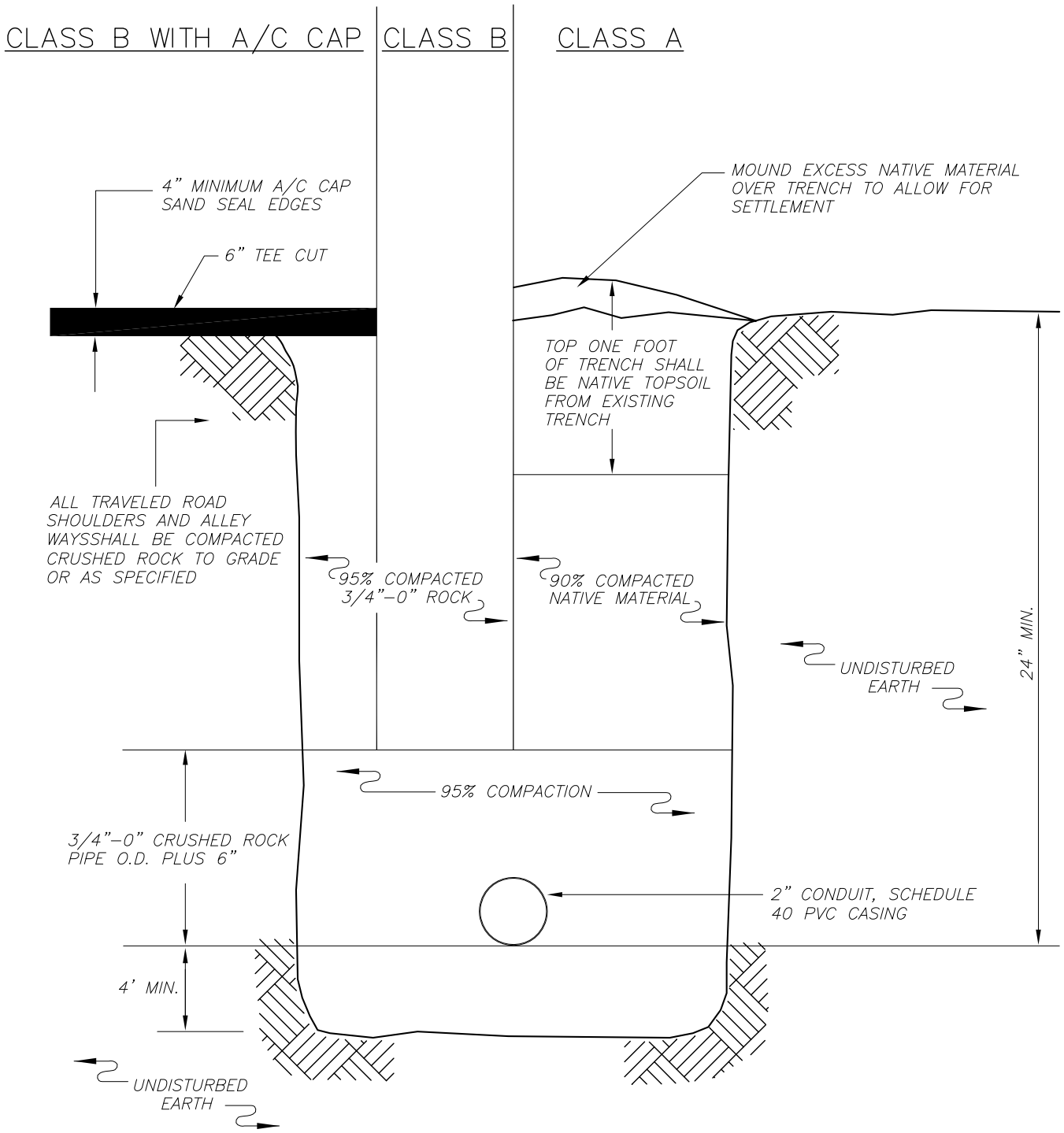
ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENT OF ASTM C478 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE DRAWING NO. 010. AND NO. 030

SANITARY SEWER PERMANENT FLOW MONITOR DERAILS (MANHOLE CONDUIT INSTALLATION)

DRAWING NO. 1100

REVISED 12–06

Clean Water Services



CONDUIT TRENCH BACKFILLDETAILS

REVISED 02-03

DRAWING NO. 1105

Clean Water Services

CLEAN WATER SERVICES OF WASHINGTON COUNTY

AIR TEST

PROJECT: _____ DATE: _____

CONTRACTOR: _____ PROJECT #: _____

TESTING COMPANY: _____ INSPECTOR: _____

DATE	LINE	DOWN STREAM MH #	UP STREAM MH #	DIA. (IN.)	LENGHT (FT.)	TIME (MIN.: SEC.)	START TEST	STOP TEST	PASS/FAIL

NOTES: ALL AIR TEST WILL BE PERFORMED IN ACCORDANCE WITH ASTM C924 AND CURRENT CONSTRUCTION STANDARDS RESOLUTION AND ORDER.

INSPECTORS SIGNATURE: _____

AIR TEST FORM

DRAWING NO. 1200 REVISED 02-03

Clean Water Services

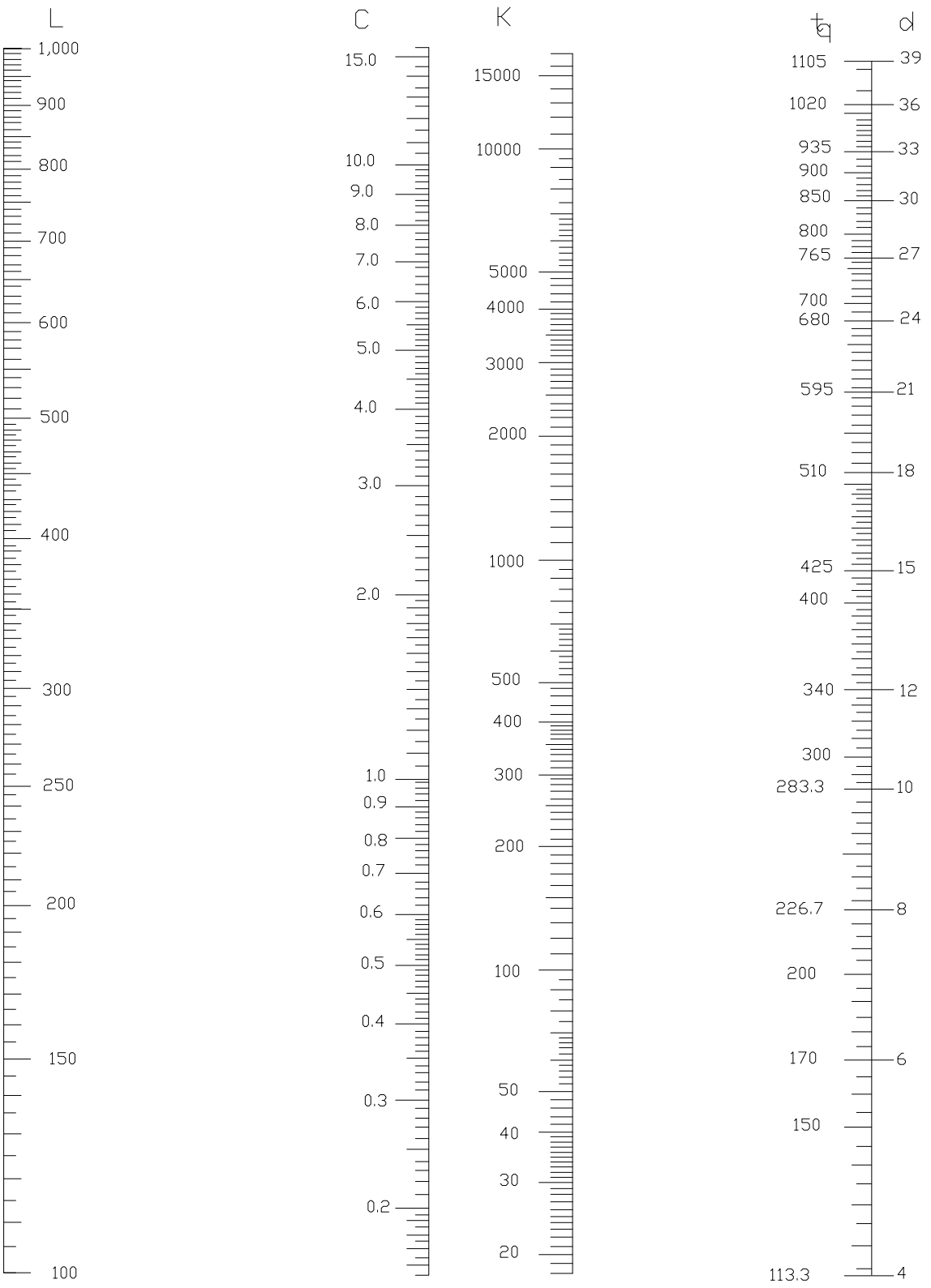


FIG. #1

NOMOGRAPH FOR THE SOLUTION OF $K = .011d^2L$, $C = .0003882dL$, $tq = K \div C$

NOMOGRAPH

DRAWING NO. 1205

REVISED 02-03

Clean Water Services

CLEAN WATER SERVICES OF WASHINGTON COUNTY

MANHOLE VACUUM TEST

PROJECT: _____ DATE: _____

CONTRACTOR: _____ PROJECT #: _____

TESTING COMPANY: _____ INSPECTOR: _____

DATE	M.H. #	SIZE	DEPTH	REQUIRED TIME	TIME		NOTES / COMMENTS
					START	END	

NOTES: ALL MANHOLE VACUUM TESTS WILL BE CONDUCTED IN ACCORDANCE WITH ASTM AND CURRENT CONSTRUCTION STANDARDS RESOLUTION AND ORDER.

INSPECTORS SIGNATURE: _____

MANHOLE VACUUM TEST

DRAWING NO. 1210 REVISED 02-03

Clean Water Services

CLEAN WATER SERVICES OF WASHINGTON COUNTY

MANHOLE HYDROSTATIC TEST

PROJECT: _____ DATE: _____

CONTRACTOR: _____ PROJECT #: _____

TESTING COMPANY _____ INSPECTOR _____

DATE	M.H. #	DEPTH	ALLOWABLE LOSS / HR.	ACTUAL LOSS/HR.	TIME		PASS/FAIL
					START	END	

COMMENTS:

NOTE:

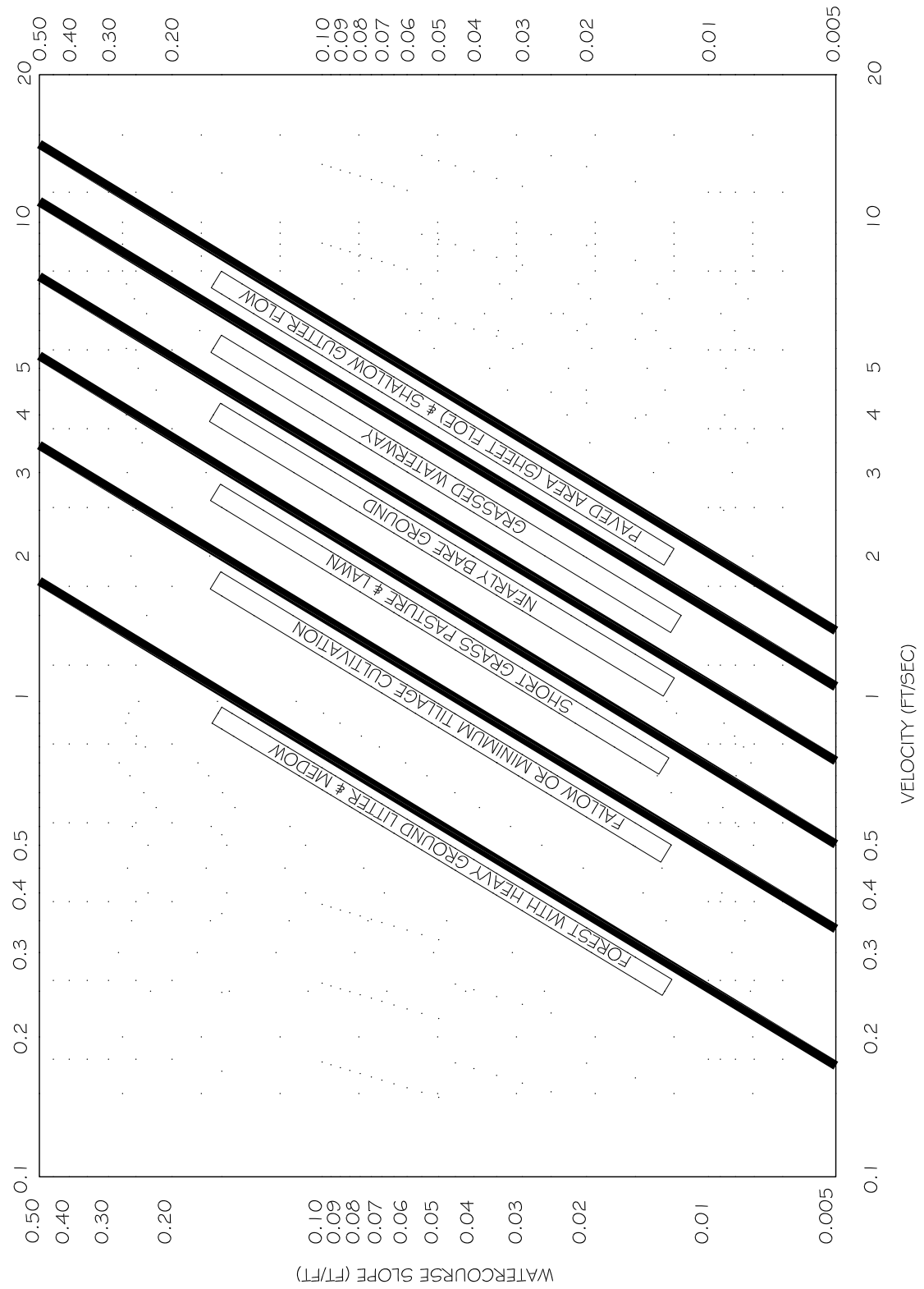
ALL MANHOLE HYDROSTATIC TEST WILL BE CONDUCTED IN ACCORDANCE WITH ASTM AND CURRENT CONSTRUCTION STANDARDS RESOLUTION ORDER, ALLOWABLE LEAKAGE SHALL NOT EXCEED 0.2 GALLONS PER HOUR PER FOOT OF HEAD MEASURED FROM INVERT TO TOP OF FRAME.

INSPECTORS SIGNATURE: _____

MANHOLE HYDROSTATIC TEST

DRAWING NO. 1215 REVISED 02-03

Clean Water Services



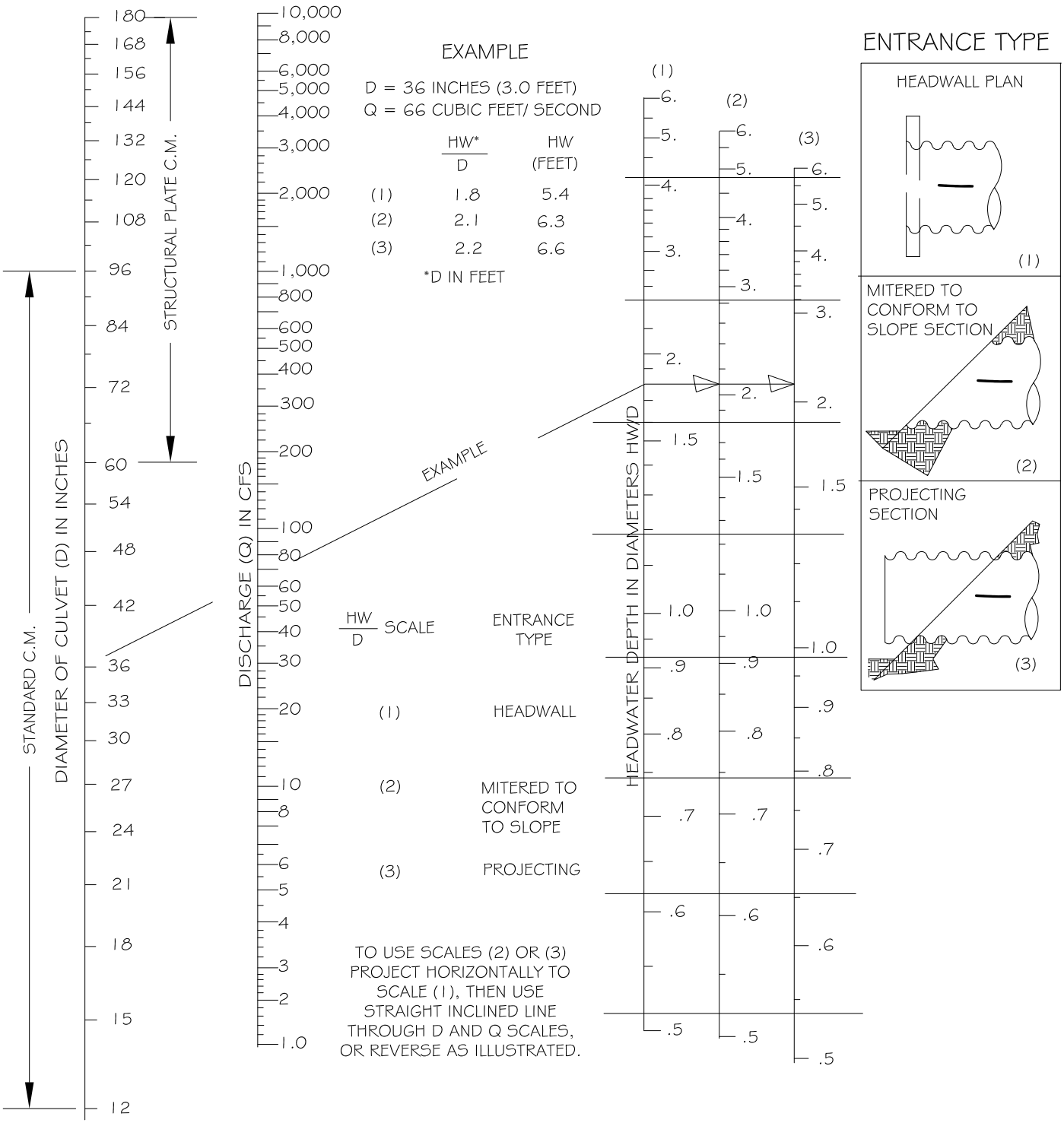
* FOR USE WITH THE RATIONAL METHOD ONLY, FARM SOIL CONSERVATION SERVICE, TECH. RELEASE NO. 55, JANUARY 1975

AVERAGE VELOCITIES FOR ESTIMATING TRAVEL TIME FOR OVERLAND FLOWS*

DRAWING NO. 1250

REVISED 02-03

Clean Water Services

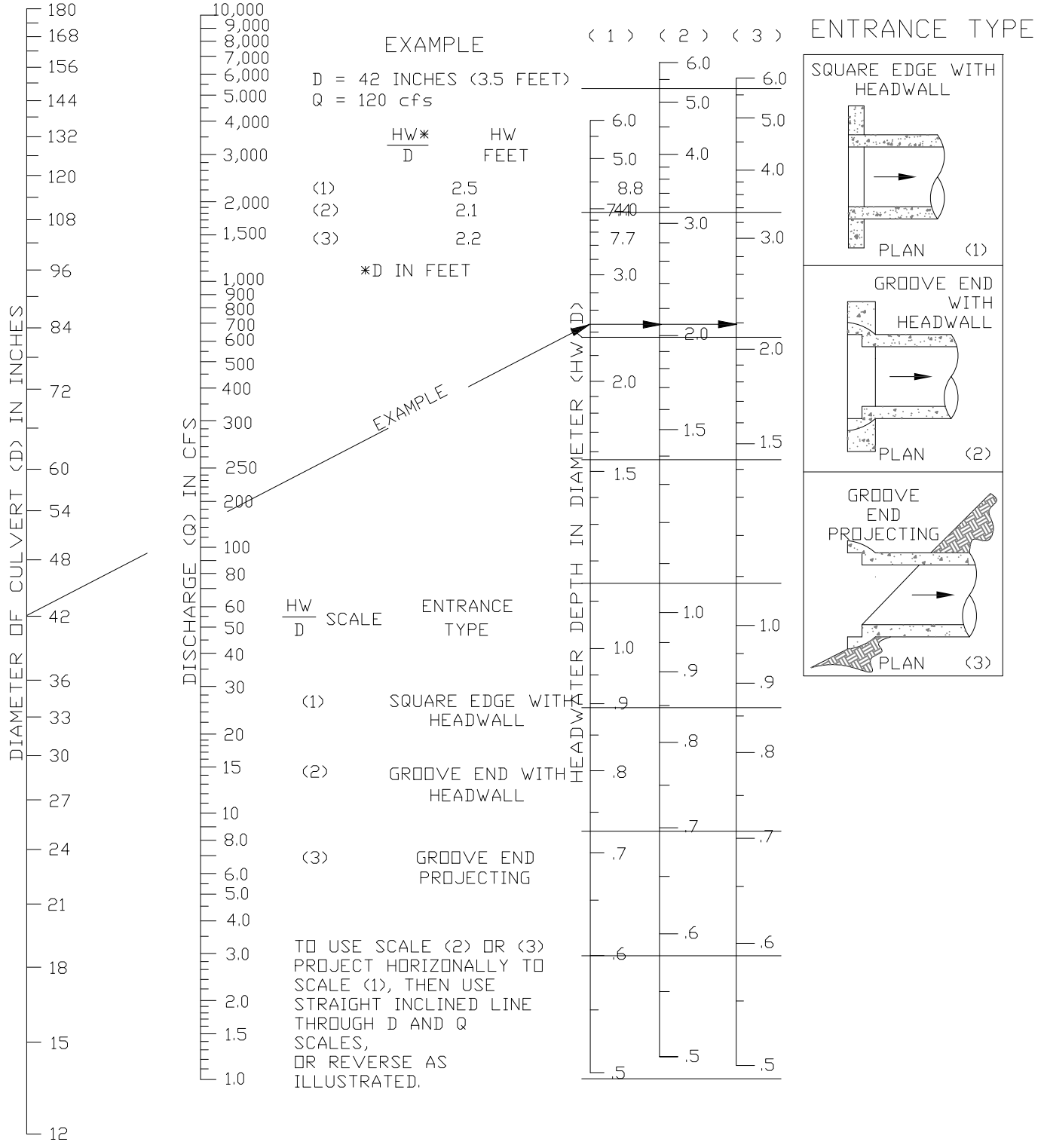


HEADWATER DEPTH FOR CORRUGATED PIPE WITH INLET CONTROL

DRAWING NO. 1255

REVISED 02-03

Clean Water Services

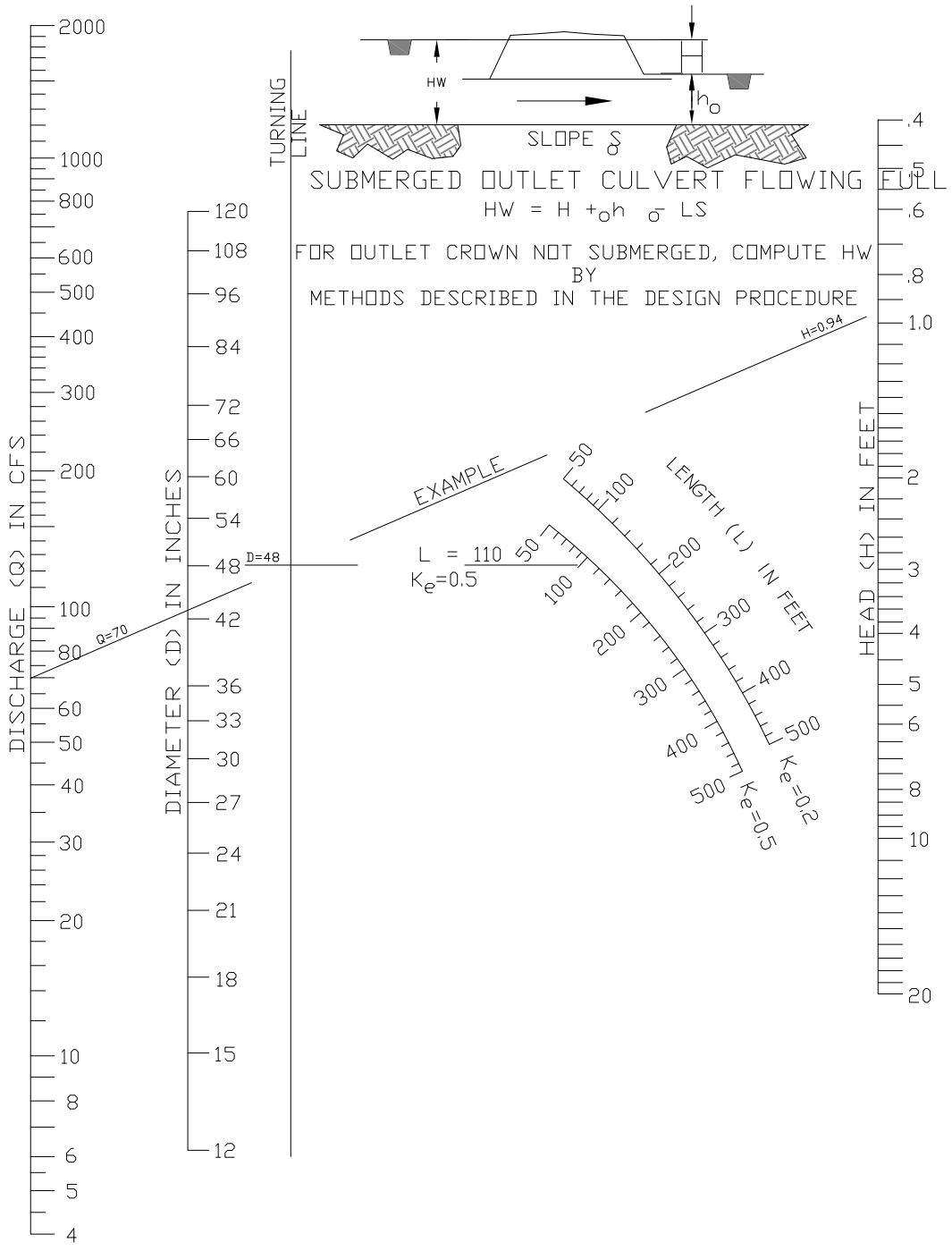


HEADWATER DEPTH FOR SMOOTH INTERIOR PIPE CULVERTS WITH INLET CONTROL

DRAWING NO. 1260

REVISED 02-03

Clean Water Services

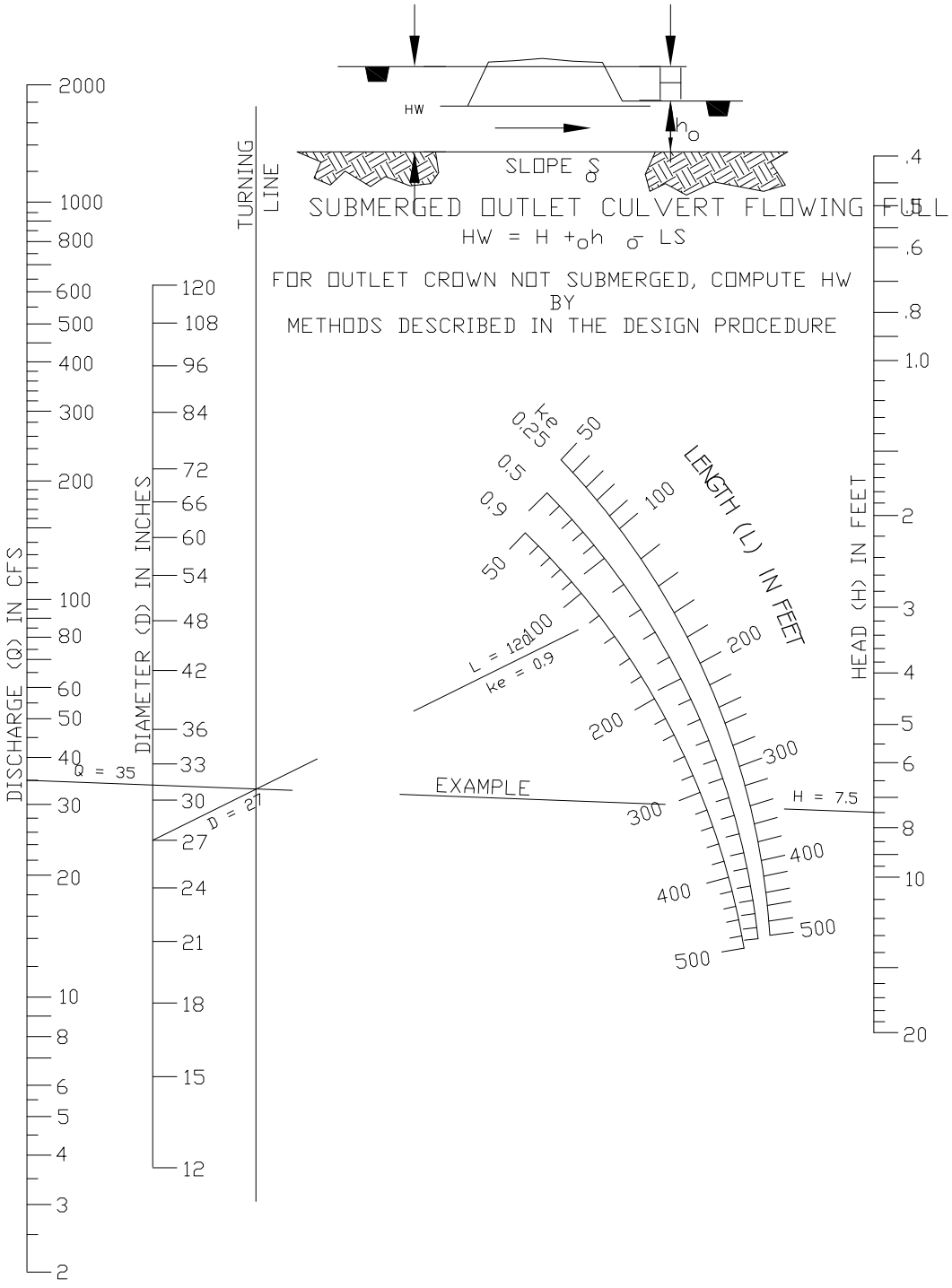


HEAD FOR CULVERTS (PIPE W / "N" = 0.012), FLOWING FULL WITH OUTLET CONTROL

DRAWING NO. 1265

REVISED 02-03

Clean Water Services



HEAD FOR CULVERTS (PIPE W / "N" = 0.024), FLOWING FULL WITH OUTLET CONTROL

DRAWING NO. 1270

REVISED 02-03

Clean Water Services

RATIONAL METHOD RAINFALL INTENSITIES

RAINFALL INTENSTITY IS FOR EAST WASHINGTON COUNTY AND IS SHOWN AS INCHES PER HOUR

TIME OF CONCENTRATION (MINUTES)	STORM EVENT: YEAR AND PROBABILITY					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
0	1.90	2.50	3.00	3.40	4.00	4.50
5	1.90	2.50	3.00	3.40	4.00	4.50
10	1.30	1.70	2.20	2.50	3.00	3.50
15	1.10	1.40	1.80	2.10	2.50	2.90
20	0.90	1.20	1.50	1.80	2.10	2.40
30	0.75	0.95	1.20	1.40	1.65	1.90
40	0.60	0.75	1.00	1.15	1.30	1.60
50	0.55	0.70	0.85	1.00	1.15	1.35
70	0.45	0.55	0.70	0.82	0.95	1.10
100	0.40	0.45	0.55	0.67	0.75	0.90
180>	0.35	0.40	0.50	0.60	0.70	0.85

RATIONAL METHOD
RAINFALL INTENSITIES

DRAWING NO. 1275 REVISED 05-07

Clean Water Services

24-HOUR RAINFALL DEPTHS

RECURRENCE INTERVAL (YEARS)	TOTAL PRECIPITATION DEPTH (INCHES)
2	2.5
5	3.10
10	3.45
25	3.90
50	4.20
100	4.50

24–HOURS
RAINFALL DEPTHS

DRAWING NO. 1280

REVISED 12–06

Clean Water Services

DESIGN STORM DISTRIBUTION CHART

THE FOLLOWING TABLE CONTAINS THE NRCS TYPE 1A PRECIPITATION DISTRIBUTION. THE TABLE IS FROM THE "SUB BASIN HYDROLOGIC MODELING CRITERIA" BY KRAMER, CHIN, & MAYO INC., 1991

HOUR	PERCENT RAINFALL		RAINFALL DEPTH (INCHES)					
	INCREMENTAL	CUMULATIVE	2 YEAR 2.50	5 YEAR 3.10	10 YEAR 3.45	25 YEAR 3.90	50 YEAR 4.20	100 YEAR 4.50
1	2.40	2.40	0.06	0.07	0.08	0.09	0.10	0.11
2	2.60	5.00	0.07	0.08	0.09	0.10	0.11	0.12
3	3.20	8.20	0.08	0.10	0.11	0.12	0.13	0.14
4	3.80	12.00	0.10	0.12	0.13	0.15	0.16	0.17
5	4.44	16.44	0.11	0.14	0.15	0.17	0.19	0.20
6	5.18	21.62	0.13	0.16	0.18	0.20	0.22	0.23
7	6.48	28.10	0.16	0.20	0.22	0.25	0.27	0.29
8	16.44	44.54	0.41	0.51	0.57	0.64	0.69	0.74
9	7.58	52.12	0.19	0.23	0.26	0.30	0.32	0.34
10	5.28	57.40	0.13	0.16	0.18	0.21	0.22	0.24
11	4.96	62.36	0.12	0.15	0.17	0.19	0.21	0.22
12	4.32	66.68	0.11	0.13	0.15	0.17	0.18	0.19
13	4.02	70.70	0.10	0.12	0.14	0.16	0.17	0.18
14	3.42	74.12	0.09	0.11	0.12	0.13	0.14	0.15
15	3.28	77.40	0.08	0.10	0.11	0.13	0.14	0.15
16	3.00	80.40	0.08	0.09	0.10	0.12	0.13	0.14
17	2.80	83.20	0.07	0.09	0.10	0.11	0.12	0.13
18	2.40	85.60	0.06	0.07	0.08	0.09	0.10	0.11
19	2.40	88.00	0.06	0.07	0.08	0.09	0.10	0.11
20	2.40	90.40	0.06	0.07	0.08	0.09	0.10	0.11
21	2.40	92.80	0.06	0.07	0.08	0.09	0.10	0.11
22	2.40	95.20	0.06	0.07	0.08	0.09	0.10	0.11
23	2.40	97.60	0.06	0.07	0.08	0.09	0.10	0.11
24	2.40	100.00	0.06	0.07	0.08	0.09	0.10	0.11

DESIGN STORM
DISTRIBUTION CHART

Clean Water Services

DRAWING NO. 1285

REVISED 12-06