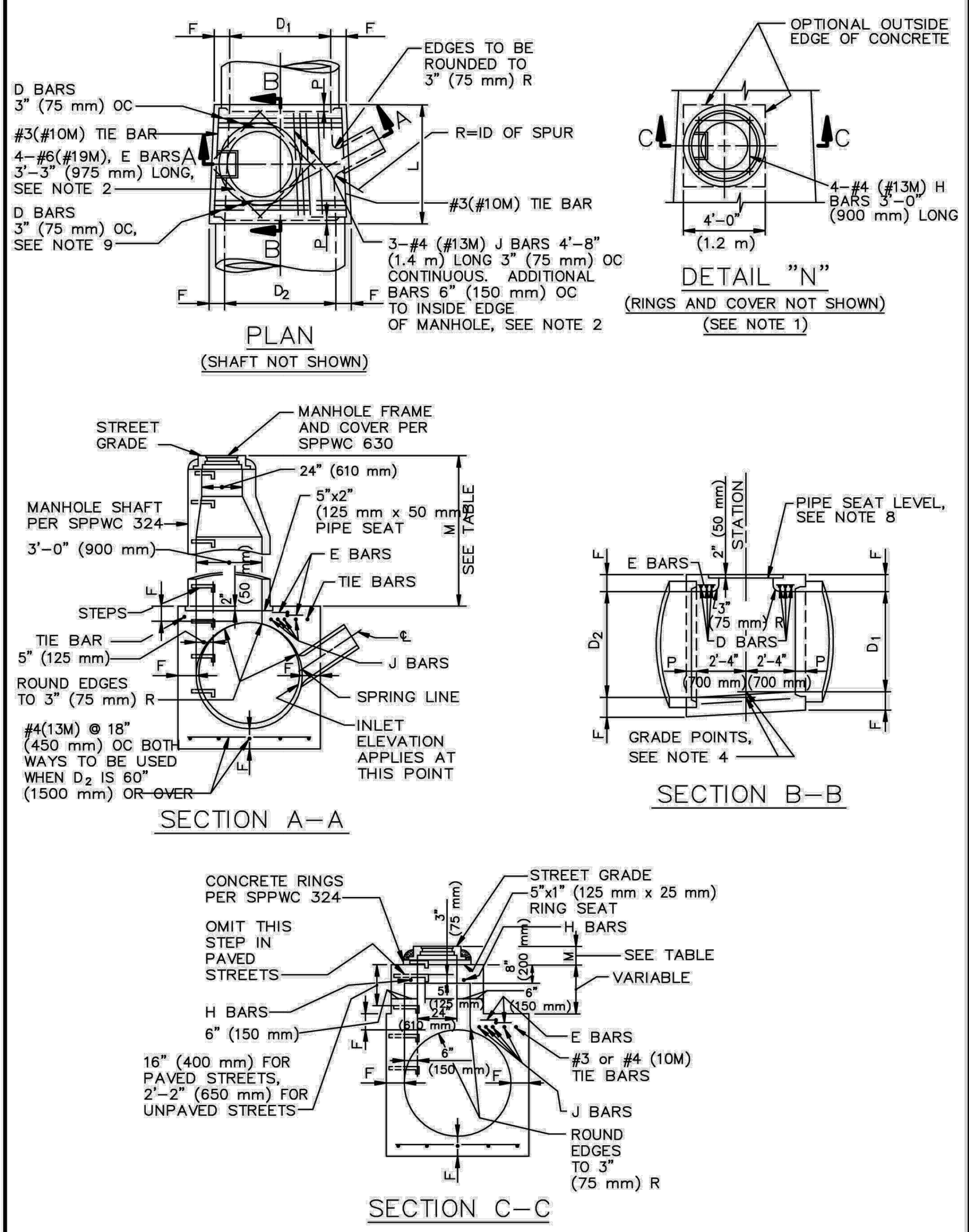


STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE PUBLIC WORKS STANDARDS INC. GREENBOOK COMMITTEE 1991 REV. 1996, 2009

MANHOLE PIPE–TO–PIPE MAIN LINE ID=36" (900 mm) OR LARGER — STANDARD PLAN 320–2, SHEET 1 OF 4

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

TABLE OF VALUES FOR F	
D_2	F
36" (900 mm)	6 1/2" (165 mm)
39" (975 mm)	7" (180 mm)
42" (1050 mm)	7 1/2" (190 mm)
45" (1125 mm)	7 3/4" (195 mm)
48" (1200 mm)	8" (205 mm)
51" (1275 mm)	8 1/2" (215 mm)
54" (1350 mm)	9" (230 mm)
57" (1425 mm)	9 1/4" (235 mm)
60" (1500 mm)	9 1/2" (240 mm)
63" (1575 mm)	10" (255 mm)
66" (1650 mm)	10 1/4" (260 mm)
69" (1725 mm)	10 3/4" (275 mm)
72" (1800 mm)	11" (280 mm)
78" (1950 mm)	11 3/4" (300 mm)
84" (2100 mm)	12 1/2" (320 mm)
90" (2250 mm)	13 1/4" (335 mm)
96" (2400 mm)	14" (355 mm)
102" (2550 mm)	15 1/2" (395 mm)
108" (2700 mm)	16" (405 mm)
114" (2850 mm)	16 1/2" (420 mm)
120" (3000 mm)	17" (430 mm)
126" (3150 mm)	17" (430 mm)
132" (3300 mm)	17 1/2" (445 mm)
138" (3450 mm)	17 1/2" (445 mm)
144" (3600 mm)	18" (455 mm)

TABLE OF VALUES FOR M (SEE NOTE 1)				
SECTION	PAVED STREET		UNPAVED STREET	
	MAX	MIN	MAX	MIN
A–A		2'–10 1/2" (867 mm)		3'–6" (1060 mm)
C–C	11" (282 mm)	8 1/2" (217 mm)	16" (410 mm)	15" (380 mm)

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION — MANHOLE PIPE–TO–PIPE MAIN LINE ID = 36" (900 mm) OR LARGER — STANDARD PLAN 320–2, SHEET 2 OF 4

NOTES

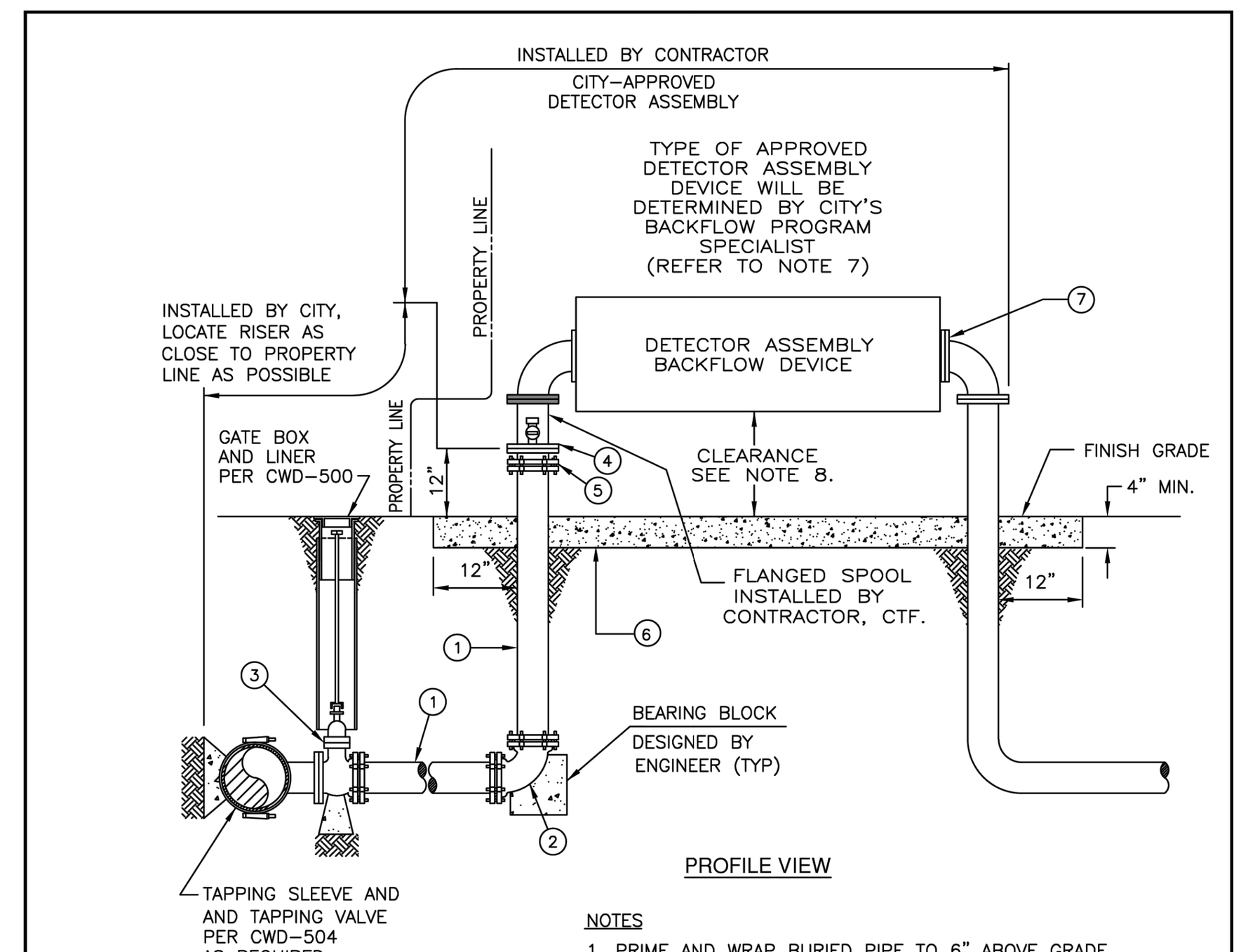
1. WHEN DEPTH M FROM STREET GRADE TO THE TOP OF THE BOX IS LESS THAN 2'–10 1/2" (867 mm) FOR PAVED STREETS OR 3'–6" (1060 mm) FOR UNPAVED STREETS, CONSTRUCT MONOLITHIC SHAFT PER SECTION C–C AND DETAIL "N". SHAFT FOR ANY DEPTH OF MANHOLE MAY BE CONSTRUCTED PER SECTION C–C. WHEN DIAMETER D_1 IS 48" (1200 mm) OR LESS, CENTER OF SHAFT MAY BE LOCATED PER NOTE 2.
2. CENTER OF MANHOLE SHAFT SHALL BE LOCATED OVER CENTER LINE OF STORM DRAIN WHEN DIAMETER D_1 IS 48" (1200 mm) OR LESS, IN WHICH CASE PLACE E BARS SYMMETRICALLY AROUND SHAFT AT 45° WITH CENTERLINE AND OMIT J BARS.
3. L AND P SHALL HAVE THE FOLLOWING VALUES UNLESS OTHERWISE SHOWN ON THE PROJECT DRAWINGS:
   A. D_2=96" (2400 mm) OR LESS, L=5'–6" (1.7 m), P=5" (130 mm)
   B. D_2 OVER 96" (2400 mm), L=6'–0" (1.8 m), P=8" (210 mm)
   L MAY BE INCREASED OR LOCATION OF MANHOLE SHIFTED TO MEET PIPE ENDS. WHEN L GREATER THAN THAT SHOWN ABOVE IS SPECIFIED, D BARS SHALL BE CONTINUED 6" (150 mm) OC.
4. STATIONS OF MANHOLES SHOWN ON PLANS APPLY AT CENTERLINE OF SHAFT. ELEVATIONS ARE SHOWN AT CENTERLINE OF SHAFT AND REFER TO THE PROLONGED INVERT GRADE LINES.
5. REINFORCEMENT SHALL CONFORM TO ASTM A 615M, GRADE 300 (ASTM A 615, GRADE 40), AND SHALL TERMINATE 1 1/2" (40 mm) CLEAR OF CONCRETE SURFACES UNLESS OTHERWISE SHOWN.
6. FLOOR OF MANHOLE SHALL BE STEEL TROWELED TO SPRING LINE.
7. BODY OF MANHOLE SHALL BE POURED IN ONE CONTINUOUS OPERATION EXCEPT THAT A CONSTRUCTION JOINT WITH A LONGITUDINAL KEYWAY MAY BE PLACED AT SPRING LINE.
8. THICKNESS OF THE DECK SHALL VARY WHEN NECESSARY TO PROVIDE A LEVEL SEAT BUT SHALL NOT BE LESS THAN THE TABULAR VALUES FOR F SHOWN ON SHEET 2.
9. D BARS SHALL BE #4 (#13M) FOR D_2=39" (975 mm) OR LESS, #5 (#16M) FOR D_2= 42" (1050 mm) TO 84" (2100 mm) INCLUSIVE AND #6 (#19M) FOR D_2= 90" (2250 mm) OR OVER.
10. CENTERLINE OF INLET PIPE SHALL INTERSECT INSIDE FACE OF CONE AT SPRING LINE UNLESS OTHERWISE SHOWN.
11. STEPS SHALL CONFORM TO SPPWC 635 OR 636. UNLESS OTHERWISE SHOWN, STEPS SHALL BE UNIFORMLY SPACED 14" (350 mm) TO 15" (375 mm) OC. THE LOWEST STEP SHALL NOT BE MORE THAN 24" (600 mm) ABOVE THE INVERT.
12. THE FOLLOWING CRITERIA SHALL BE USED FOR THIS MANHOLE:
    A. MAIN LINE = 36" (900 mm) INSIDE DIAMETER OR LARGER. EXCEPT IF THE MAIN LINE RCP DOWNSTREAM OF MANHOLE IS 36" (900 mm) TO 42" (1050 mm) INSIDE DIAMETER AND THE MAIN LINE RCP UPSTREAM IS 33" (825 mm) OR LESS SPPWC 321 SHALL BE USED.

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION — MANHOLE PIPE–TO–PIPE MAIN LINE ID = 36" (900 mm) OR LARGER — STANDARD PLAN 320–2, SHEET 3 OF 4

    B. THE OUTSIDE DIAMETER OF THE LATERAL MUST BE LESS THAN OR EQUAL TO 1/2 THE INSIDE DIAMETER OF THE MAIN LINE. IF THE UPSTREAM AND DOWNSTREAM DIAMETERS OF THE MANHOLE ARE NOT THE SAME, THE GOVERNING INSIDE DIAMETER OF THE MAIN LINE SHALL BE CONSIDERED TO BE THAT WHERE THE EXTENDED CENTERLINE OF THE LATERAL ENTERS THE MANHOLE.
    C. IN NO INSTANCE SHALL THE INSIDE DIAMETER OF THE LATERAL TO THE MANHOLE BE GREATER THAN 30" (750 mm).
13. MANHOLE FRAME AND COVER SHALL CONFORM TO SPPWC 630 UNLESS OTHERWISE SHOWN.
14. MANHOLE SHAFT SHALL CONFORM TO SPPWC 324 UNLESS OTHERWISE SHOWN.
15. WHERE A MANHOLE SHAFT – 36" (900 mm) WITHOUT REDUCER IS SPECIFIED REFER TO SPPWC 326.
16. WHERE A PRESSURE MANHOLE SHAFT – WITH ECCENTRIC REDUCER IS SPECIFIED REFER TO SPPWC 328.
17. WHERE A PRESSURE MANHOLE SHAFT – 914 mm (36") WITHOUT REDUCER IS SPECIFIED REFER TO SPPWC 329.
18. THE FOLLOWING SPPWC ARE INCORPORATED HEREIN:
    324 MANHOLE SHAFT – WITH ECCENTRIC REDUCER
    326 MANHOLE SHAFT – 36" (900 mm) WITHOUT REDUCER
    328 PRESSURE MANHOLE SHAFT – WITH ECCENTRIC
    329 PRESSURE MANHOLE SHAFT 36" (914 mm) WITHOUT REDUCER
    630 24" (610 mm) MANHOLE FRAME AND COVER
    633 36" (914 mm) MANHOLE FRAME AND COVER
    635 STEEL STEP
    636 POLYPROPYLENE PLASTIC STEP

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION — MANHOLE PIPE–TO–PIPE MAIN LINE ID = 36" (900 mm) OR LARGER — STANDARD PLAN 320–2, SHEET 4 OF 4

SPPWC 320–2 STORM DRAIN MANHOLE
N.T.S.
01



MATERIALS
ITEM
(1) DUCTILE IRON PIPE (CLASS 350)
(2) 90° ELL (MJ X MJ, RESTRAINED).
(3) GATE VALVE (FLG X MJ).
(4) TEMPORARY BLIND FLANGE WITH 1" IPT TAP AND 1" BALL CORPORATION STOP FOR SAMPLE (BY CITY FORCES).
(5) FLANGE X MECHANICAL JOINT ADAPTER, AS REQUIRED.
(6) 4" MIN. CONCRETE SLAB–NECESSARY FOR EROSION PREVENTION
(7) TEST PLATE REQUIRED FOR PRESSURE TEST.

NOTES

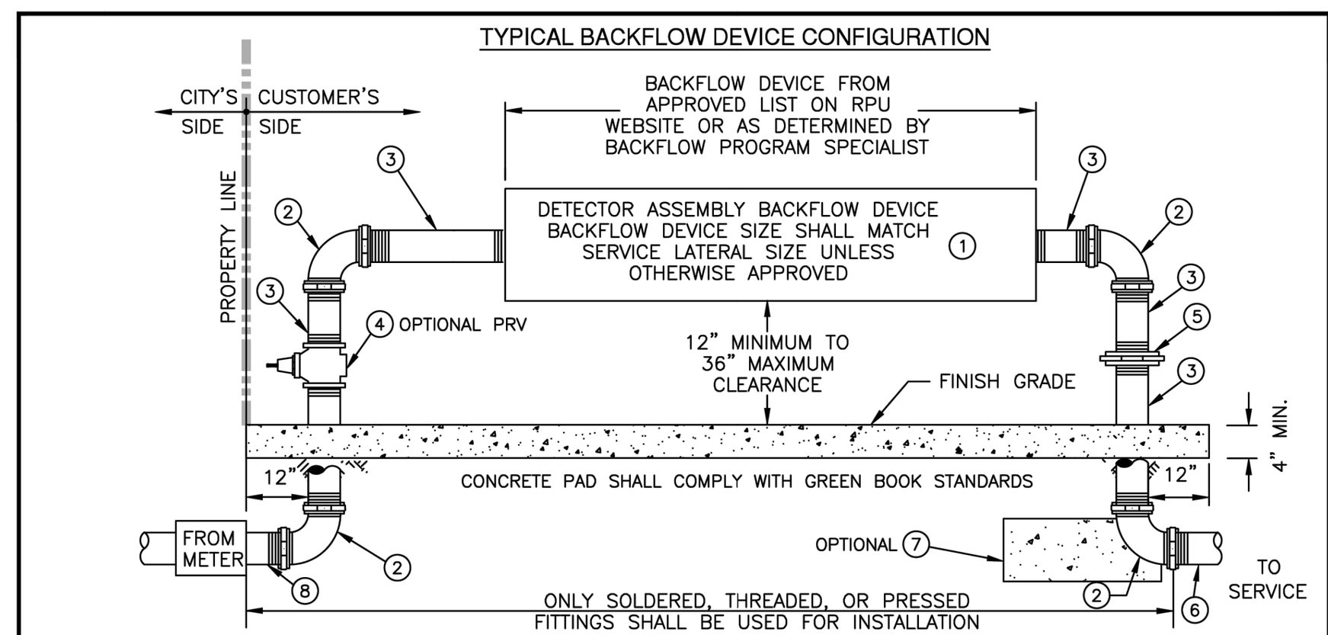
1. PRIME AND WRAP BURIED PIPE TO 6" ABOVE GRADE WITH POLYKEN #927 AND #900, OR APPROVED EQUAL.
2. CITY FORCES WILL BLIND FLANGE CONNECTION POINT. WATER INSPECTOR IS TO BE PRESENT WHEN BLIND FLANGE IS REMOVED AND DETECTOR ASSEMBLY IS INSTALLED.
3. FACILITIES TO BE DISINFECTED PER SPECIFICATION 205, PART 5.
4. CONTRACTOR TO SWAB CONNECTING VALVES WITH 600 PPM CHLORINE WHEN MAKING CONNECTION.
5. CONTRACTOR TO PAINT ALL ABOVE GRADE PIPING AND DETECTOR ASSEMBLY.
6. FOR 10" DETECTOR ASSEMBLY INSTALL 12" LATERAL AND PIPING. CUSTOMER TO SUPPLY 12" x 10" FLANGED REDUCERS ON BOTH SIDES OF DETECTOR ASSEMBLY.
7. CONTACT CITY BACKFLOW PROGRAM SPECIALIST FOR DETECTOR ASSEMBLY SPECIFICATION, AND FOR INSPECTION AND TESTING IMMEDIATELY AFTER INSTALLATION AT (951) 351–6320.
8. FOR DETECTOR ASSEMBLY CLEARANCE REQUIREMENTS REFER TO CWD–616–1 AND CWD–617.
9. RESTRAIN ALL JOINTS WITH APPROVED RESTRAINT ASSEMBLY.

WATER DISTRIBUTION & TRANSMISSION PIPELINE CONSTRUCTION METHODS — 4" THROUGH 12" ABOVE GROUND FIRE SERVICE

CITY OF RIVERSIDE PUBLIC UTILITIES STANDARD DRAWING — APPROV. — 1/8/2013 DATE — CWD-615

CITY OF RIVERSIDE STD CWD–615
N.T.S.
02

TYPICAL BACKFLOW DEVICE CONFIGURATION



NOTES: APPLIES TO BOTH NEW AND EXISTING SERVICES.

1. **PRIOR TO INSTALLATION, LOCATION OF THE BACKFLOW DEVICE SHALL BE SUBJECT TO APPROVAL OF THE BACKFLOW PROGRAM SPECIALIST (951) 351–6282/6167. DEVICE SHALL BE LOCATED AS CLOSE TO THE METER AS PRACTICAL (MIN. 18", MAX. 24" BACK OF PROPERTY LINE.)**
2. ANY DEVIATION FROM NOTE #1 IS SUBJECT TO CONDITIONS AS DESCRIBED WITHIN CWD–616–2.
3. **INSPECTION OF THE PLUMBING AND TESTING OF THE BACKFLOW DEVICE IS REQUIRED PRIOR TO BACKFILLING, POURING CONCRETE, AND SERVICE ACTIVATION. CALL (951) 351–6282 OR (951) 351–6167 TO SCHEDULE APPOINTMENT.**
4. THE BACKFLOW ASSEMBLY INSTALLATION, INCLUDING ALL APPURTENANCES AND MATERIALS, SHALL BE LEAD–FREE AND IN COMPLIANCE WITH THE APPROVED MATERIALS SPECIFIED BELOW.
5. NO OUTLETS, TEES, OR CONNECTIONS SHALL BE ALLOWED BETWEEN THE METER AND THE BACKFLOW DEVICE.

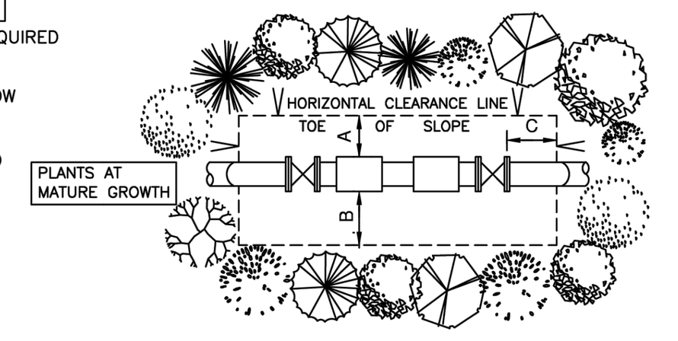
ITEM	EACH	DESCRIPTION
(1)	1	LEAD–FREE REDUCED PRESSURE PRINCIPLE BACKFLOW DEVICE
(2)	4	90 DEGREE ELBOW, BRASS OR HARD DRAWN COPPER**
(3)	4	RISER & NIPPLES, BRASS OR HARD DRAWN COPPER**
(4)	1	PRV VALVE (FOR PRESSURE IN EXCESS OF 80 PSI)**

ITEM	EACH	DESCRIPTION
(5)	1	BRASS OR COPPER UNION* **
(6)	1	SCH 80 PVC NIPPLE CUT TO LENGTH WITH SLIP x SLIP COUPLER
(7)	1	CONCRETE THRUST BLOCK (OPTIONAL)
(8)	1	SERVICE LINE, BRASS OR HARD DRAWN COPPER**

*A SECOND UNION ON OPPOSITE RISER MAY BE REQUIRED IF CLEARANCE REQUIREMENTS ARE NOT MAINTAINED.
**BRASS OR COPPER MAY BE SUBSTITUTED WITH STAINLESS STEEL PER DISCRETION OF CITY BACKFLOW PROGRAM SPECIALIST.

ADEQUATE AND SAFE CLEARANCE MUST BE PROVIDED TO PERMIT TESTING AND REPAIR WORK

MINIMUM CLEARANCE SCHEDULE			
SIZE	A	B	C
3/4" THROUGH 2 1/2"	12"	18"	12"



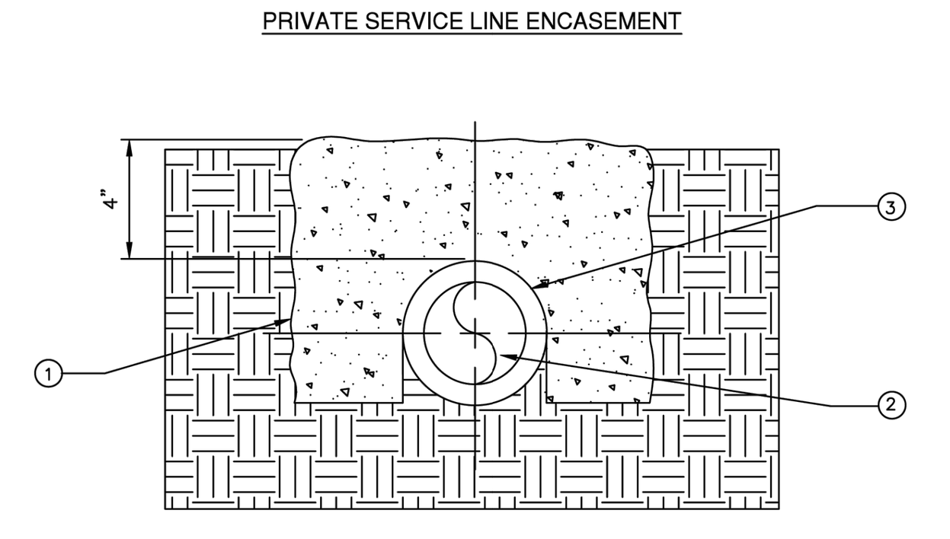
OVERHEAD VIEW OF CLEARANCE REQUIREMENTS

APPROVALS		
DIVISION	INITIAL	DATE
PLANNING	B. YAMAMOTO	8/25/22
DESIGN	J. FARLEY	8/25/22
CONTRACT ADMIN.	E. ESCOBAR	8/25/22
OPERATIONS	R. GLENNEY	8/25/22

WATER DISTRIBUTION & TRANSMISSION PIPELINE CONSTRUCTION METHODS — BACKFLOW PREVENTION ASSEMBLY 3/4" - 2 1/2" ABOVE GROUND INSTALLATION

CITY OF RIVERSIDE PUBLIC UTILITIES STANDARD DRAWING — APPROVED BY — 8/25/22 DATE — CWD-616-1

PRIVATE SERVICE LINE ENCASEMENT



ITEM	DESCRIPTION
(1)	4" CONCRETE ENCASEMENT ALL SIDES*
(2)	BRASS OR COPPER WATER SERVICE LINE
(3)	CORROSION BARRIER

*ENCASEMENT AND/OR SLEEVING MAY BE REQUIRED BY CITY BACKFLOW PROGRAM SPECIALIST FROM METER BOX TO BACKFLOW ASSEMBLY.

IF DETERMINED BY PUBLIC UTILITIES THAT A BACKFLOW DEVICE IS UNABLE TO BE INSTALLED IN ACCORDANCE WITH CWD–616–1, NOTE 1, AN ALTERNATIVE LOCATION MAY BE APPROVED AND THE FOLLOWING CONDITIONS SHALL APPLY.

CONDITIONS:

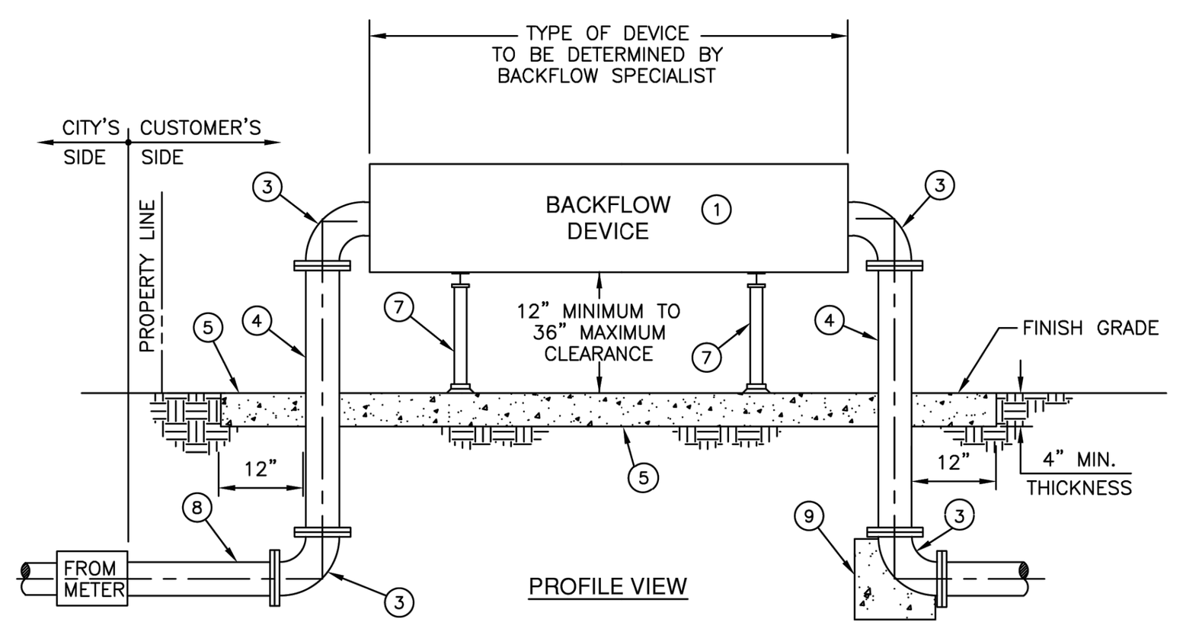
1. A DRAWING DEPICTING THE PROPOSED PATH OF PIPING FROM THE WATER METER TO THE BACKFLOW DEVICE AND THE FINAL LOCATION OF DEVICE MUST BE SUBMITTED TO PUBLIC UTILITIES FOR APPROVAL.
2. ONCE APPROVED, INSTALLER MUST COORDINATE WITH THE BACKFLOW PROGRAM SPECIALIST TO OVERSEE, INSPECT, AND DOCUMENT THE INSTALLATION. CORROSION BARRIER TO BE INSPECTED PRIOR TO POURING OF CONCRETE.
3. MATERIALS SHALL REMAIN IN COMPLIANCE AS SPECIFIED WITHIN CWD–616–1.
4. MATERIALS SHALL BE IN COMPLIANCE WITH THE APPROVED MATERIALS SPECIFIED ON THE TABLE ABOVE.

APPROVALS		
DIVISION	INITIAL	DATE
PLANNING	B. YAMAMOTO	8/25/22
DESIGN	J. FARLEY	8/25/22
CONTRACT ADMIN.	E. ESCOBAR	8/25/22
OPERATIONS	R. GLENNEY	8/25/22

WATER DISTRIBUTION & TRANSMISSION PIPELINE CONSTRUCTION METHODS — BACKFLOW PREVENTION ASSEMBLY ALTERNATIVE LOCATION INSTALLATION

CITY OF RIVERSIDE PUBLIC UTILITIES STANDARD DRAWING — APPROVED BY — 8/25/22 DATE — CWD-616-2

CITY OF RIVERSIDE STD CWD–616
N.T.S.
03



NOTES:

1. PRIOR TO INSTALLATION, LOCATION OF THE BACKFLOW DEVICE SHALL BE SUBJECT TO THE APPROVAL OF THE BACKFLOW PROGRAM SPECIALIST (951) 351–6320/6282. DEVICE SHALL BE LOCATED AS CLOSE TO METER AS PRACTICAL (MIN. 18", MAX. 24" BACK OF RW)
2. PLACE BOTTOM OF DEVICE A MINIMUM OF 12 INCHES AND NOT MORE THAN 36 INCHES ABOVE FINISH GRADE.
3. INSPECTION OF PLUMBING IS REQUIRED PRIOR TO CONCRETE THRUST BLOCK AND/OR ABOVE GROUND SLAB BEING POURED.
4. MATERIALS SHALL BE IN COMPLIANCE WITH THE APPROVED MATERIALS SPECIFIED BELOW.
5. THE DEVICE MUST BE INSPECTED AND TESTED IMMEDIATELY AFTER INSTALLATION. TO SCHEDULE AN APPOINTMENT CALL (951) 351–6320/6282.

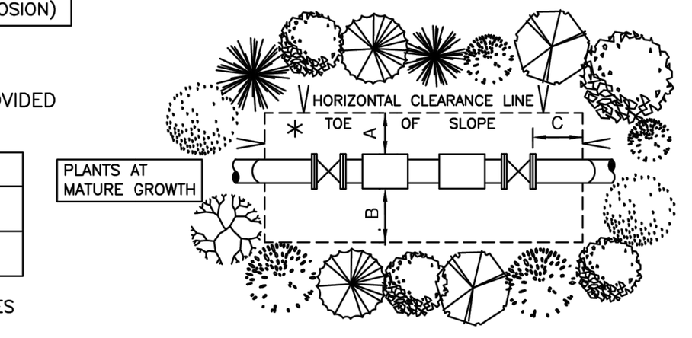
ITEM	EACH	DESCRIPTION
(1)	1	BACKFLOW DEVICE (TYPE OF DEVICE TO BE DETERMINED BY BACKFLOW PROGRAM SPECIALIST)
(3)	2	90 DEGREE ELBOW
(4)	2	FLANGED RISER PIPE
(5)		CONCRETE PAD (NECESSARY TO PREVENT CORROSION)

ITEM	EACH	DESCRIPTION
(7)	2	PIPE SUPPORT
(8)	1	SERVICE LINE (NO PVC)
(9)	1	CONCRETE THRUST BLOCK

ADEQUATE AND SAFE CLEARANCE MUST BE PROVIDED TO PERMIT TESTING AND REPAIR WORK

MINIMUM CLEARANCE SCHEDULE			
SIZE	* A	B	C
3" AND UP	24"	24"	12"

*REFERENCE TO INCLINE AND DECLINE SLOPES



OVERHEAD VIEW OF CLEARANCE REQUIREMENTS

WATER DISTRIBUTION & TRANSMISSION PIPELINE CONSTRUCTION METHODS — BACKFLOW PREVENTION ASSEMBLY 3" & LARGER ABOVE GROUND INSTALLATION

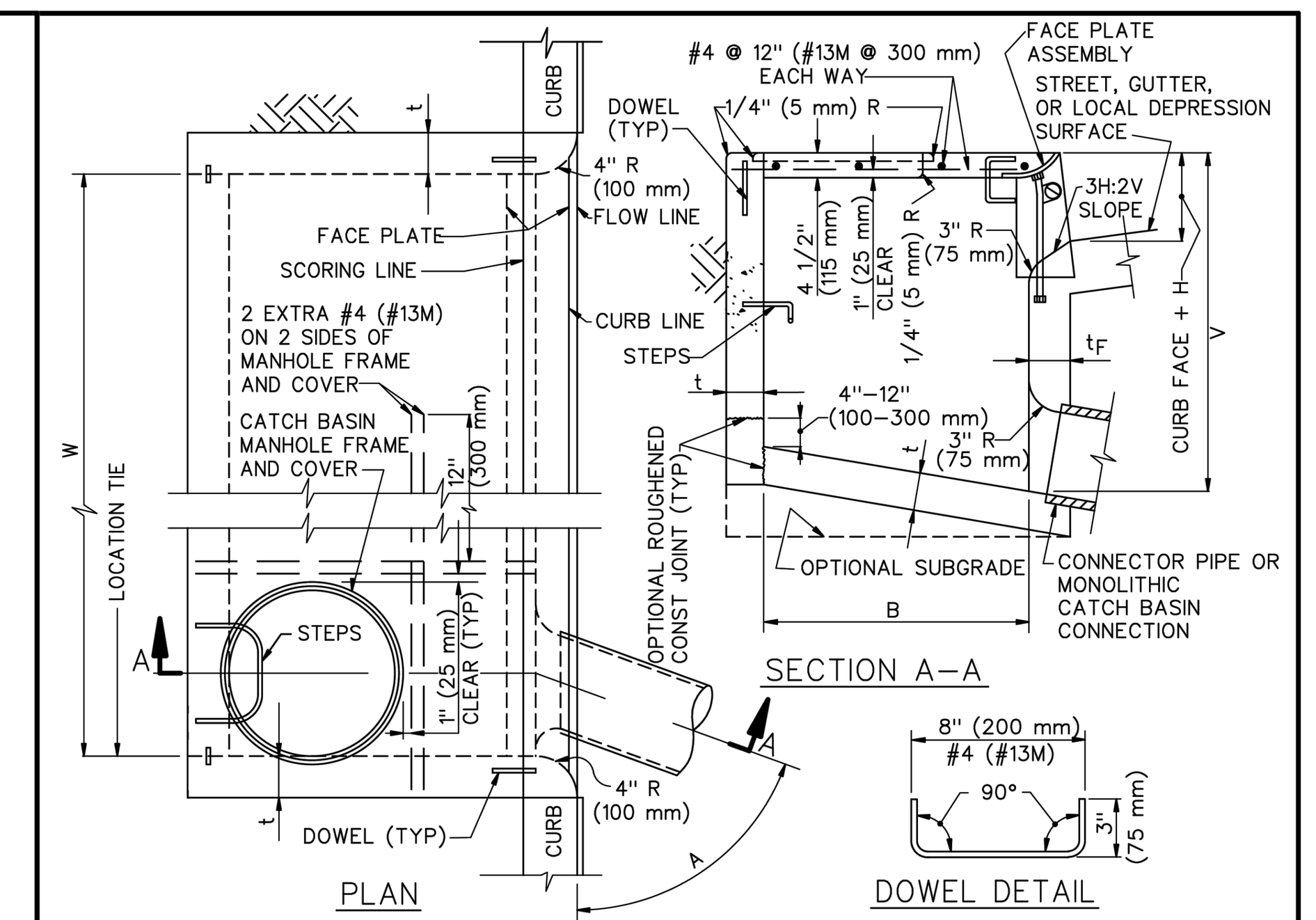
CITY OF RIVERSIDE PUBLIC UTILITIES STANDARD DRAWING — APPROV. — 1/8/2013 DATE — CWD-617

CITY OF RIVERSIDE STD CWD–617
N.T.S.
04

NOTES:

1. WHERE THE BASIN IS TO BE CONSTRUCTED WITHIN THE LIMITS OF EXISTING OR PROPOSED SIDEWALK OR IS CONTIGUOUS TO SUCH SIDEWALK, THE TOP SLAB OF THE BASIN MAY BE POURED EITHER MONOLITHIC WITH THE SIDEWALK OR SEPARATELY, USING THE SAME CLASS OF CONCRETE AS IN THE BASIN. WHEN POURED MONOLITHICALLY, THE SIDEWALK SHALL BE PROVIDED WITH A WEAKENED PLANE OR A 1" (25 mm) DEEP SAWCUT CONTINUOUSLY AROUND THE EXTERNAL PERIMETER OF THE CATCH BASIN WALLS, INCLUDING ACROSS THE FULL WIDTH OF THE SIDEWALK. SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH, AND SCORING TO EXISTING OR PROPOSED CURB AND WALK ADJACENT TO THE BASIN.
2. ALL CURVED CONCRETE SURFACES SHALL BE FORMED BY CURVED FORMS, AND SHALL NOT BE SHAPED BY PLASTERING.
3. FLOOR OF BASIN SHALL BE GIVEN A STEEL TROWEL FINISH AND SHALL HAVE A LONGITUDINAL AND LATERAL SLOPE OF 1V:12H MINIMUM AND 1V:3H MAXIMUM, EXCEPT WHERE THE GUTTER GRADE EXCEEDS 8%, IN WHICH CASE THE LONGITUDINAL SLOPE OF THE FLOOR SHALL BE THE SAME AS THE GUTTER GRADE. SLOPE FLOOR FROM ALL DIRECTIONS TO THE OUTLET.
4. DIMENSIONS:
   B = 3'–2" (970 mm) UNLESS OTHERWISE NOTED.
   V = THE DIFFERENCE IN ELEVATION BETWEEN THE TOP OF THE CURB AND THE INVERT OF THE CATCH BASIN AT THE OUTLET. 4.5' (1.35 m) UNLESS OTHERWISE NOTED).
   V_U= THE DIFFERENCE IN ELEVATION BETWEEN THE TOP OF THE CURB AND THE INVERT AT THE UPSTREAM END OF THE BASIN. IT SHALL BE DETERMINED BY THE REQUIREMENTS OF NOTE 3, BUT SHALL NOT BE LESS THAN CURB FACE PLUS 12" (300 mm).
   V_I = THE DIFFERENCE IN ELEVATION BETWEEN THE TOP OF THE CURB AND THE INVERT OF THE INLET, NOTED ON THE PLANS.
   H = 2" (50 mm) UNLESS OTHERWISE NOTED.
   W = NOTED ON THE PLANS.
   A = THE ANGLE, IN DEGREES, INTERCEPTED BY THE CENTERLINE OF THE CONNECTOR PIPE AND THE CATCH BASIN WALL TO WHICH THE CONNECTOR PIPE IS ATTACHED.
5. PLACE CONNECTOR PIPES AS INDICATED ON THE PLANS. UNLESS OTHERWISE SPECIFIED, THE CONNECTOR PIPE SHALL BE LOCATED AT THE DOWNSTREAM END OF THE BASIN. WHERE THE CONNECTOR PIPE IS SHOWN AT A CORNER, THE CENTERLINE OF THE PIPE SHALL INTERSECT THE INSIDE CORNER OF THE BASIN. THE PIPE MAY BE CUT AND TRIMMED AT A SKEW NECESSARY TO ENSURE MINIMUM 3" (75 mm) PIPE EMBEDMENT, ALL AROUND, WITHIN THE CATCH BASIN WALL, AND 3" (75 mm) RADIUS OF ROUNDING OF STRUCTURE CONCRETE, ALL AROUND, ADJACENT TO PIPE ENDS. A MONOLITHIC CATCH BASIN CONNECTION SHALL BE USED TO JOIN THE CONNECTOR PIPE TO THE CATCH BASIN WHENEVER ANGLE "A" IS LESS THAN 70° OR GREATER THAN 110°, OR WHENEVER THE CONNECTOR PIPE IS LOCATED IN A CORNER. THE OPTIONAL USE OF A MONOLITHIC CATCH BASIN CONNECTION IN ANY CASE IS PERMITTED. MONOLITHIC CATCH BASIN CONNECTIONS MAY BE CONSTRUCTED TO AVOID CUTTING STANDARD LENGTHS OF PIPE.
6. STEPS SHALL BE LOCATED AS SHOWN. IF THE CONNECTOR PIPE INTERFERES WITH THE STEPS, THEY SHALL BE LOCATED AT THE CENTERLINE OF THE DOWNSTREAM END WALL. STEPS SHALL BE SPACED 12" (300 mm) APART. THE TOP STEP SHALL BE 7" (175 mm) BELOW THE TOP OF THE MANHOLE AND PROJECT 2–1/2" (65 mm). ALL OTHER STEPS SHALL PROJECT 5" (125 mm).
7. DOWELS ARE REQUIRED AT EACH CORNER AND AT 7' (2.0 m) ON CENTER (MAXIMUM) ALONG THE BACKWALL.
8. THE FOLLOWING SPPWC ARE INCORPORATED HEREIN:
   308 MONOLITHIC CATCH BASIN CONNECTION
   309 CATCH BASIN REINFORCEMENT
   310 CATCH BASIN FACE PLATE ASSEMBLY AND PROTECTION BAR
   312 CATCH BASIN MANHOLE FRAME AND COVER
   635 STEEL STEP 636 POLYPROPYLENE PLASTIC STEP

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION — **CURB OPENING CATCH BASIN** — STANDARD PLAN 300–4, SHEET 2 OF 2



STRUCTURAL DATA							
WALL AND SLAB DIMENSIONS AND REINFORCEMENT REQUIREMENTS							
MAX W	MAX V	t	t_F	REINFORCMENT REQUIRED IN			
				FRONT WALL	REAR WALL	BOTTOM SLAB	END WALL
3.5' (1.0 m)	8' (2.4 m)	6" (150 mm)	6" (150 mm)	NO	REINFORCEMENT		REQUIRED
3.5' (1.0 m)	12' (3.6 m)	8" (200 mm)	8" (200 mm)				
7' (2.0 m)	6' (1.8 m)	6" (150 mm)	6" (150 mm)				
7' (2.0 m)	12' (3.6 m)	8" (200 mm)	8" (200 mm)				
14' (4.0 m)	4' (1.2 m)	6" (150 mm)	6" (150 mm)	REINFORCEMENT			
	8' (2.4 m)	6" (150 mm)	8" (200 mm)				
	12' (3.6 m)	8" (200 mm)	10" (250 mm)				
21' (6 m) AND 28' (9 m)	4' (1.2 m)	6" (150 mm)	6" (150 mm)			REQUIRED	
	6' (1.8 m)	6" (150 mm)	8" (200 mm)				
	8' (2.4 m)	8" (200 mm)	8" (200 mm)				
	10' (3.0 m)	8" (200 mm)	10" (250 mm)				
	12' (3.6 m)	8" (200 mm)	10" (250 mm)				

FOR W > 28' (9 m), V > 12' (3.6 m) OR B > 4' (1.2 m), SEE PLANS

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

PROMULGATED BY THE PUBLIC WORKS STANDARDS INC. GREENBOOK COMMITTEE 1984 REV. 1992, 1996, 2009, 2021

CURB OPENING CATCH BASIN — STANDARD PLAN 300–4, SHEET 1 OF 2

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

SPPWC 300–4 CURB OPENING CATCH BASIN
N.T.S.
05

BOULDER ASSOCIATES
300 SPECTRUM CENTER DR, SUITE 730
IRVINE, CALIFORNIA 92618
949.727.9000

Kimley»Horn
© 2025 KIMLEY–HORN AND ASSOCIATES, INC.
1100 TOWN AND COUNTRY RD SUITE 700, ORANGE, CA 92868
PHONE: 714–939–1030 FAX: 714–938–9488
WWW.KIMLEY–HORN.COM

PROJECT P246459.00

PACIFIC GROVE ACUTE PSYCHIATRIC FACILITY

5900 BROCKTON AVE., RIVERSIDE, CA 92506

DESIGN DEVELOPMENT
PACKAGE 1 - SITE

DATE

REVISIONS

#	DESCRIPTION	DATE

HCAI
H241744-33-00
APPROVAL STAMP

SHEET TITLE
DETAILS

SHEET NUMBER
C7.2