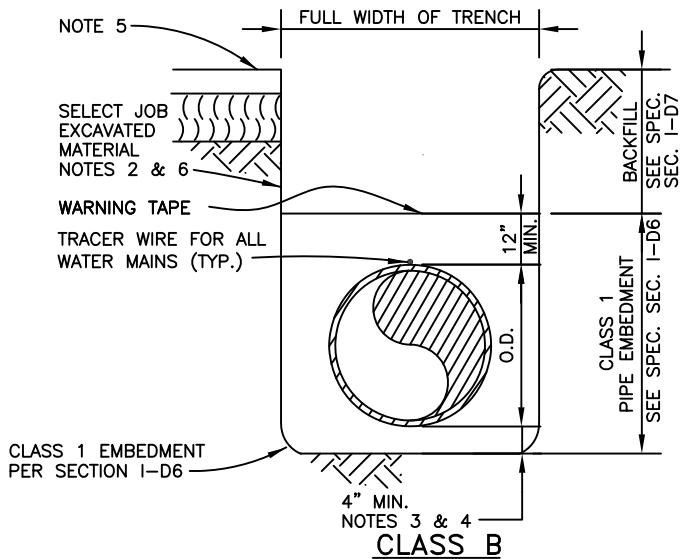


CLASS A
(NOTE 1)



CLASS B

NOTES

1. REQUIRED IN SPECIAL CASES SUCH AS WHERE LESS THAN MINIMUM COVER CAN BE ATTAINED.
2. IMPORTED MATERIAL SHALL BE USED WHEN NATIVE MATERIAL IS UNSUITABLE AS PER SPEC. SEC. I-D7.
3. SHALL BE 5 INCHES MIN. WHEN TRENCH BOTTOM IS UNSUITABLE AS PER SPEC. SEC I-D4-5.
4. ADDITIONAL EXCAVATION REQUIRED AT BELL ENDS TO MAINTAIN MIN. DEPTH OF AGGREGATE BELOW PIPE BELL.
5. FOR RESURFACING AND RESTORATION REQUIREMENTS, SEE SPEC. I-D9.
6. BACKFILL REQUIREMENTS ABOVE THE PIPE EMBEDMENT ZONE IN THESE STANDARD SPECIFICATIONS AND DRAWINGS APPLY ONLY WHEN THERE ARE NO GOVERNING CITY OR AGENCY REQUIREMENTS.
7. FOR TRENCH BOTTOMS WITH SOFT OR UNSTABLE MATERIAL, REFERENCE SPEC. SEC. I-D4-5.
8. PIPE EMBEDMENT MATERIAL SHALL BE FREE OF VEGETABLE MATTER, RECYCLED MATERIAL (INCLUDING RECYCLED AGGREGATE BASE), AND OTHER DELETERIOUS SUBSTANCES.

Dublin San Ramon Services District

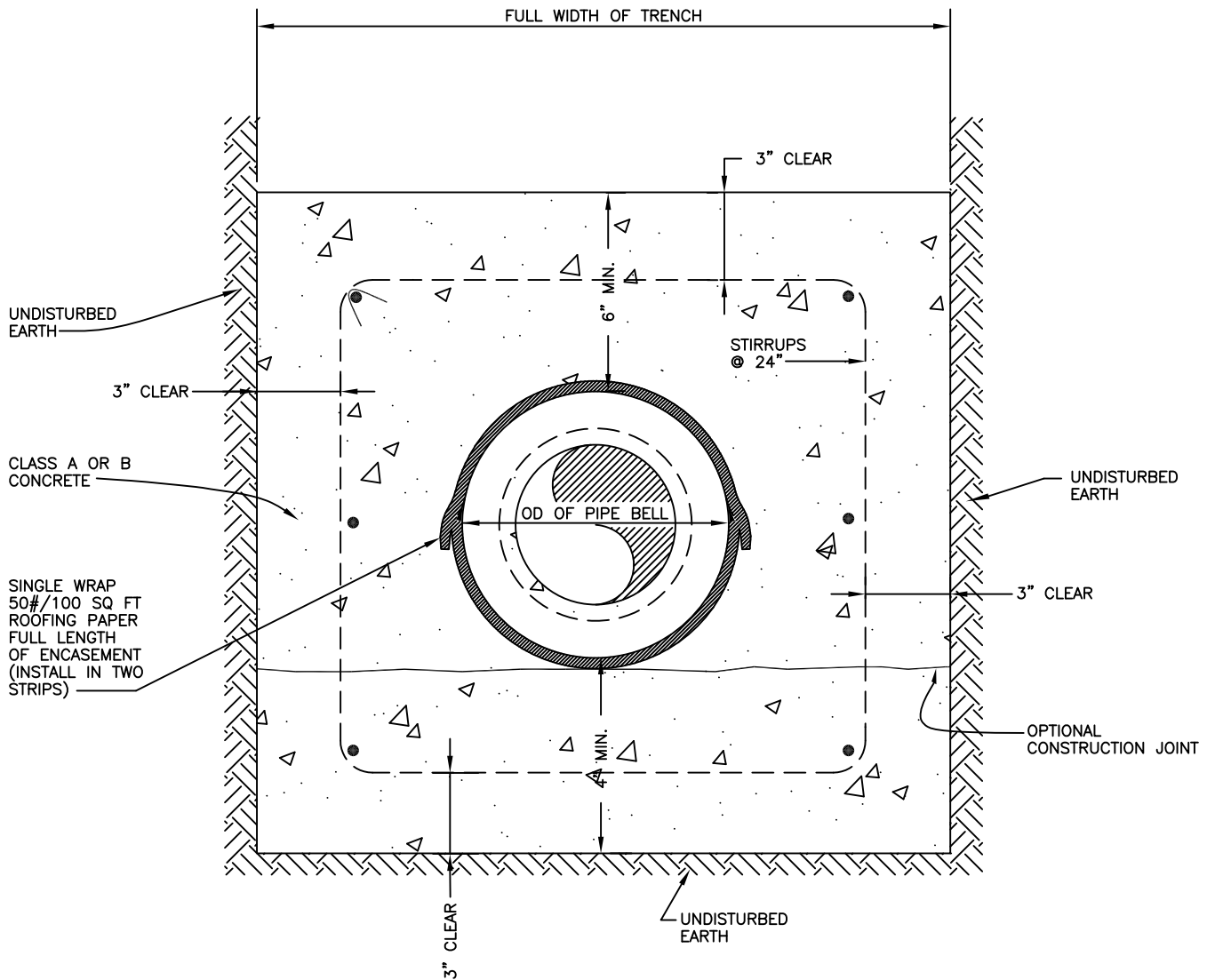
DATE
DEC 2019

STANDARD TRENCH SECTION FOR WATER
AND SEWER MAINS AND SIDE SEWER INSTALLATIONS

DESIGNED
BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
G-1



NOTES

1. ALL REINFORCING. #4 BARS AS SHOWN.
2. EACH JOINT SHALL BE TIED DOWN TO PREVENT FLOATING USING A METHOD APPROVED BY THE DISTRICT ENGINEER.
3. APPROVAL REQUIRED FROM THE DISTRICT ENGINEER PRIOR TO USE OF THE ABOVE DETAIL.

Dublin San Ramon Services District

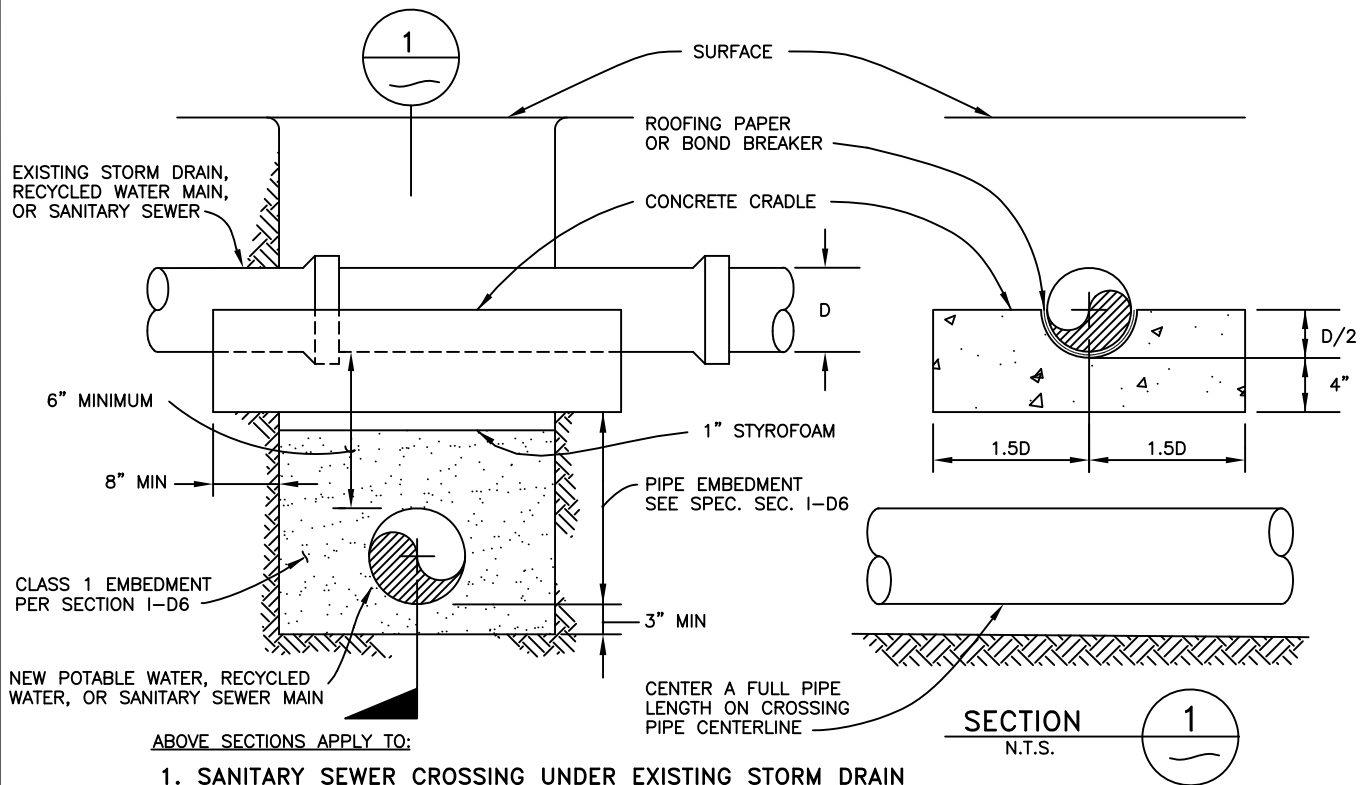
DATE
DEC 2019

CONCRETE ENCASEMENT SECTION

DESIGNED
BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

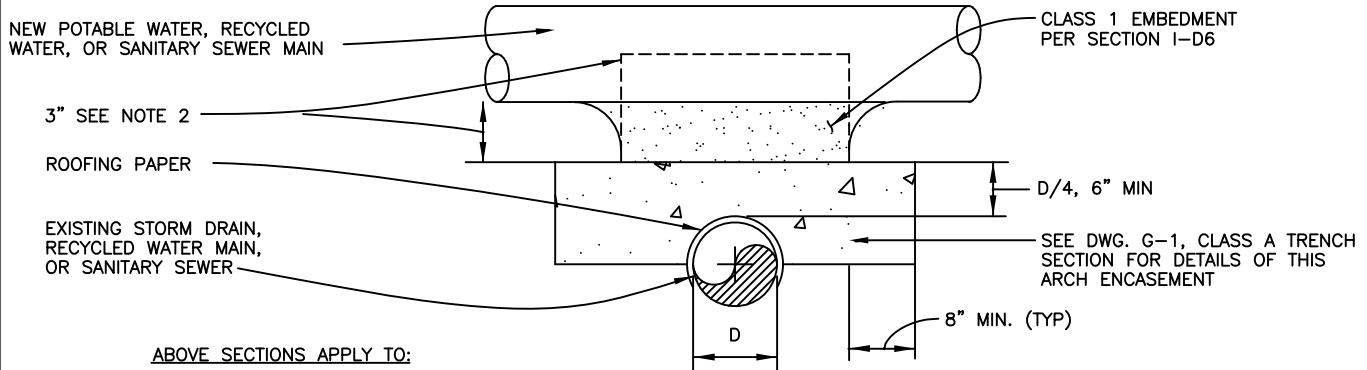
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G-2



ABOVE SECTIONS APPLY TO:

1. SANITARY SEWER CROSSING UNDER EXISTING STORM DRAIN OR SANITARY SEWER
2. RECYCLED WATER CROSSING UNDER EXISTING STORM DRAIN OR RECYCLED WATER
3. POTABLE WATER CROSSING UNDER EXISTING STORM DRAIN

N.T.S.



ABOVE SECTIONS APPLY TO:

1. SANITARY SEWER CROSSING OVER EXISTING STORM DRAIN OR SANITARY SEWER
2. RECYCLED WATER CROSSING OVER EXISTING STORM DRAIN OR RECYCLED WATER
3. POTABLE WATER CROSSING OVER EXISTING STORM DRAIN

N.T.S.

NOTES:

1. CROSSING OF POTABLE WATER MAINS, RECYCLED WATER MAINS, AND SANITARY SEWERS: SEPARATION, CONSTRUCTION, AND PIPE CRITERIA SHALL BE AS REQUIRED BY SECTION I-C5 AND THE STATE WATER RESOURCES CONTROL BOARD (APPENDIX C).
2. IF CLASS 2 AGGREGATE BASE MATERIAL CANNOT BE ATTAINED, THEN RAISE PIPE CRADLE TO CONTACT LOWER HALF OF NEW PIPE. PROVIDE ROOFING PAPER OR BOND BREAKER BETWEEN NEW PIPE AND CONCRETE AS SHOWN IN SECTION 1 ABOVE.
3. APPROVAL OF THE DISTRICT ENGINEER REQUIRED TO USE ABOVE DETAILS.

Dublin San Ramon Services District

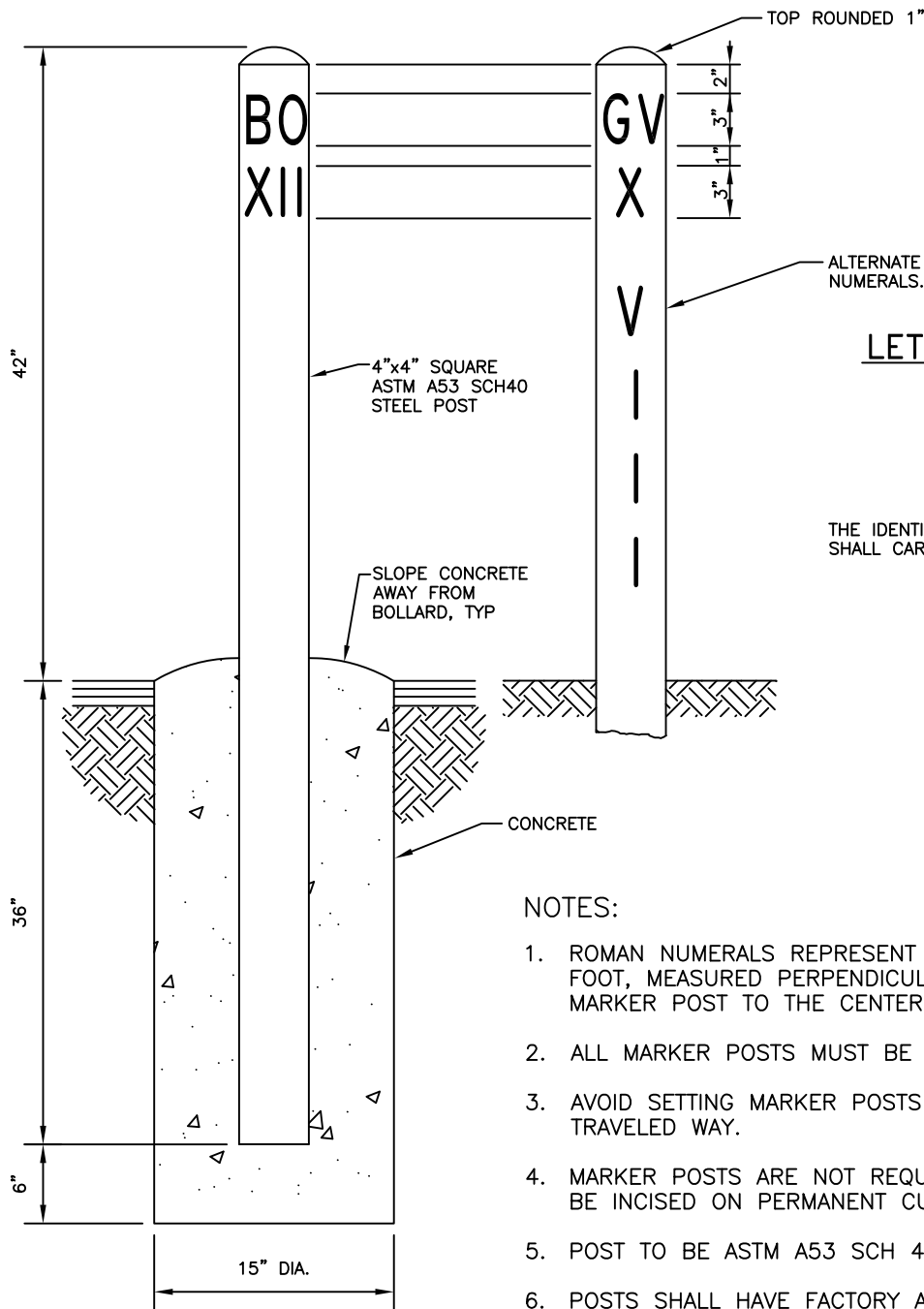
DATE
MAY 2022

CLOSE CROSSING DETAIL

DESIGNED
RM

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
G-3



ALTERNATE ARRANGEMENT FOR LONG NUMERALS.

LETTERS	FACILITY
BO	BLOW OFF
GV	GATE VALVE
AV	AIR VALVE

THE IDENTIFICATION FOR BY PASS VALVES SHALL CARRY THE ADDITIONAL LETTERS "BP"

WM	WATER MAIN
RW	RECYCLED WATER MAIN
SM	SEWER MAIN
LS	LATERAL SEWER
MH	MANHOLE
CO	CLEANOUTS

NOTES:

1. ROMAN NUMERALS REPRESENT THE DISTANCE TO THE NEAREST FOOT, MEASURED PERPENDICULAR, FROM THE FACE OF THE MARKER POST TO THE CENTER OF THE FACILITY.
2. ALL MARKER POSTS MUST BE SET TRUE, FACING THE FACILITY.
3. AVOID SETTING MARKER POSTS ON PRIVATE PROPERTY OR IN TRAVELED WAY.
4. MARKER POSTS ARE NOT REQUIRED WHERE REFERENCES CAN BE INCISED ON PERMANENT CURBS.
5. POST TO BE ASTM A53 SCH 40 STEEL FILLED WITH CONCRETE.
6. POSTS SHALL HAVE FACTORY APPLIED PRIMER COAT AND FIELD APPLIED EPOXY TOP COAT. TOP COAT SHALL BE WHITE WITH RED LETTERS AND NUMERALS.
7. MARKER POSTS FOR RECYCLED WATER SHALL BE AS PER NOTE 5, EXCEPT POSTS SHALL BE PAINTED PURPLE.
8. SEE DRAWING G-4A FOR ROMAN NUMERAL CHART.

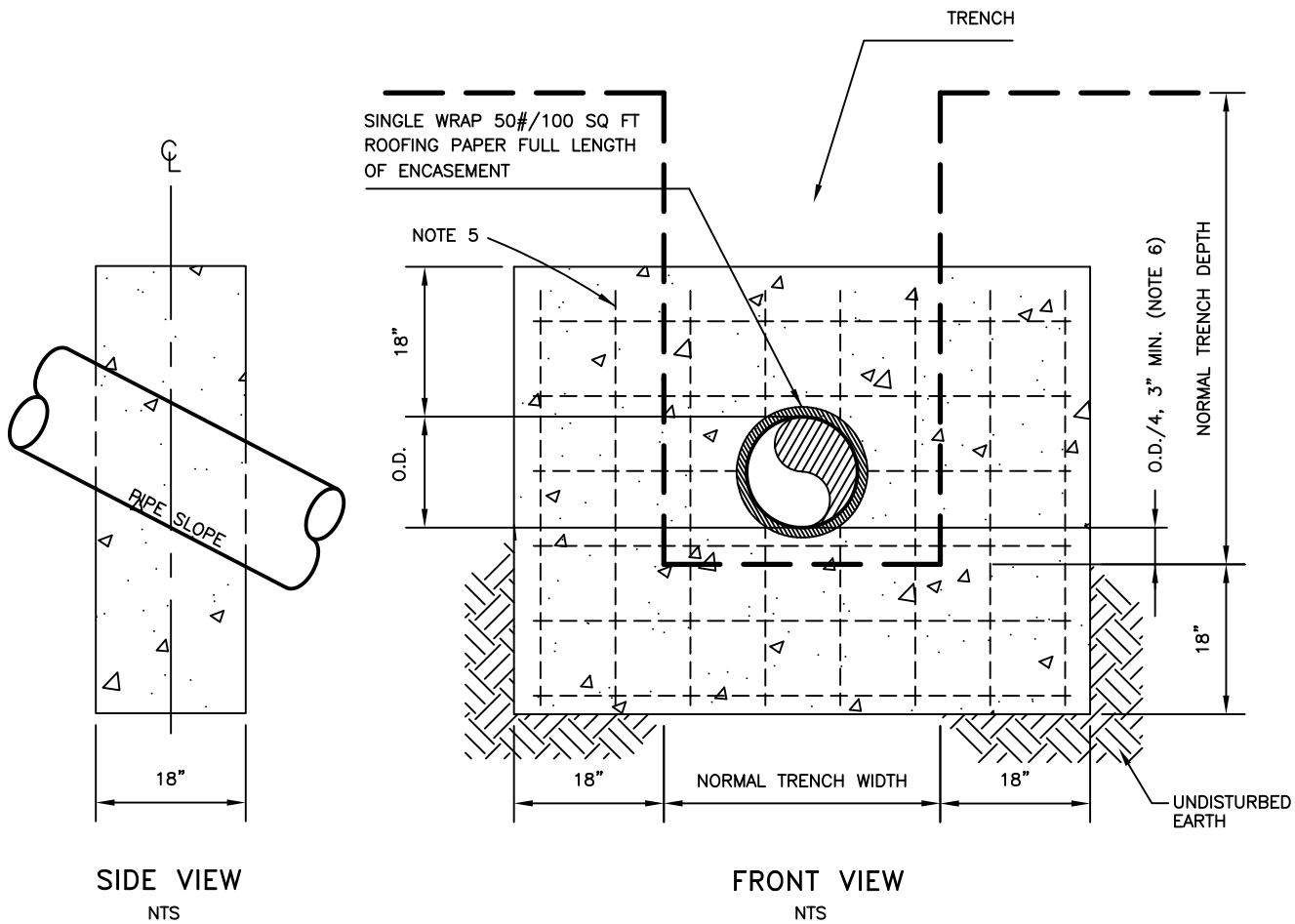
REV. 04/07

Dublin San Ramon Services District	DATE DEC 2019
MARKER POST (4" x 4")	DESIGNED BD
SIGNED COPY ON FILE AT DISTRICT OFFICE	DRAWING G-4

1	I	32	XXXII	63	LXIII	94	XCIV
2	II	33	XXXIII	64	LXIV	95	XCV
3	III	34	XXXIV	65	LXV	96	XCVI
4	IV	35	XXXV	66	LXVI	97	XCVII
5	V	36	XXXVI	37	LXVII	98	XCVIII
6	VI	37	XXXVII	38	LXVIII	99	XCIX
7	VII	38	XXXVIII	69	LXIX	100	C
8	VIII	39	XXXIX	70	LXX	500	D
9	IX	40	XL	71	LXXI		
10	X	41	XLI	72	LXXII		
11	XI	42	XLII	73	LXXIII		
12	XII	43	XLIII	74	LXXIV		
13	XIII	44	XLIV	75	LXXV		
14	XIV	45	XLV	76	LXXVI		
15	XV	46	XLVI	77	LXXVII		
16	XVI	47	XLVII	78	LXXVIII		
17	XVII	48	XLVIII	79	LXXIX		
18	XVIII	49	XLIX	80	LXXX		
19	XIX	50	L	81	LXXXI		
20	XX	51	LI	82	LXXXII		
21	XXI	52	LII	83	LXXXIII		
22	XXII	53	LIII	84	LXXXIV		
23	XXIII	54	LIV	85	LXXXV		
24	XXIV	55	LV	86	LXXXVI		
25	XXV	56	LVI	87	LXXXVII		
26	XXVI	57	LVII	88	LXXXVIII		
27	XXVII	58	LVIII	89	LXXXIX		
28	XXVIII	59	LIX	90	XC		
29	XXIX	60	LX	91	XCI		
30	XXX	61	LXI	92	XCII		
31	XXXI	62	LXII	93	XCIII		

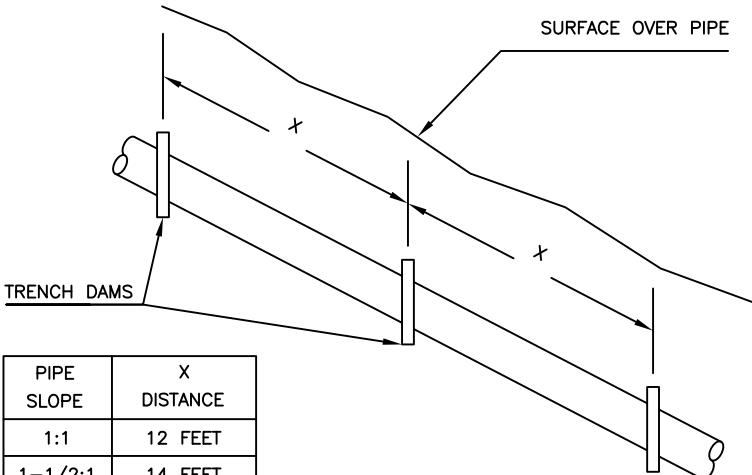
REV. 01/04

Dublin San Ramon Services District	DATE JAN. 2004
ROMAN NUMERAL CHART	DESIGNED ATJ
SIGNED COPY ON FILE AT DISTRICT OFFICE	DRAWING G-4A



NOTES

1. TRENCH DAM MATERIAL SHALL BE CLASS B CONCRETE.
2. BEARING AREA OF TRENCH DAM SHALL BE RESTING ON UNDISTURBED EARTH.
3. NO FITTINGS OR BELL SHALL BE LOCATED WITHIN 5' OF TRENCH DAM.
4. REMOVE ALL ORGANIC MATERIAL PRIOR TO POURING CLASS B CONCRETE.
5. TRENCH DAM SHALL HAVE #4 REBAR MAT PLACED 1' ON CENTER.
6. SHALL BE 5 INCHES MIN. WHEN TRENCH BOTTOM IS UNSUITABLE AS PER SPEC. SEC I-D4-5.
7. TRENCH DAMS REQUIRED ON ALL SLOPES OF 10% OR STEEPER AS DETERMINED BY THE DISTRICT ENGINEER.

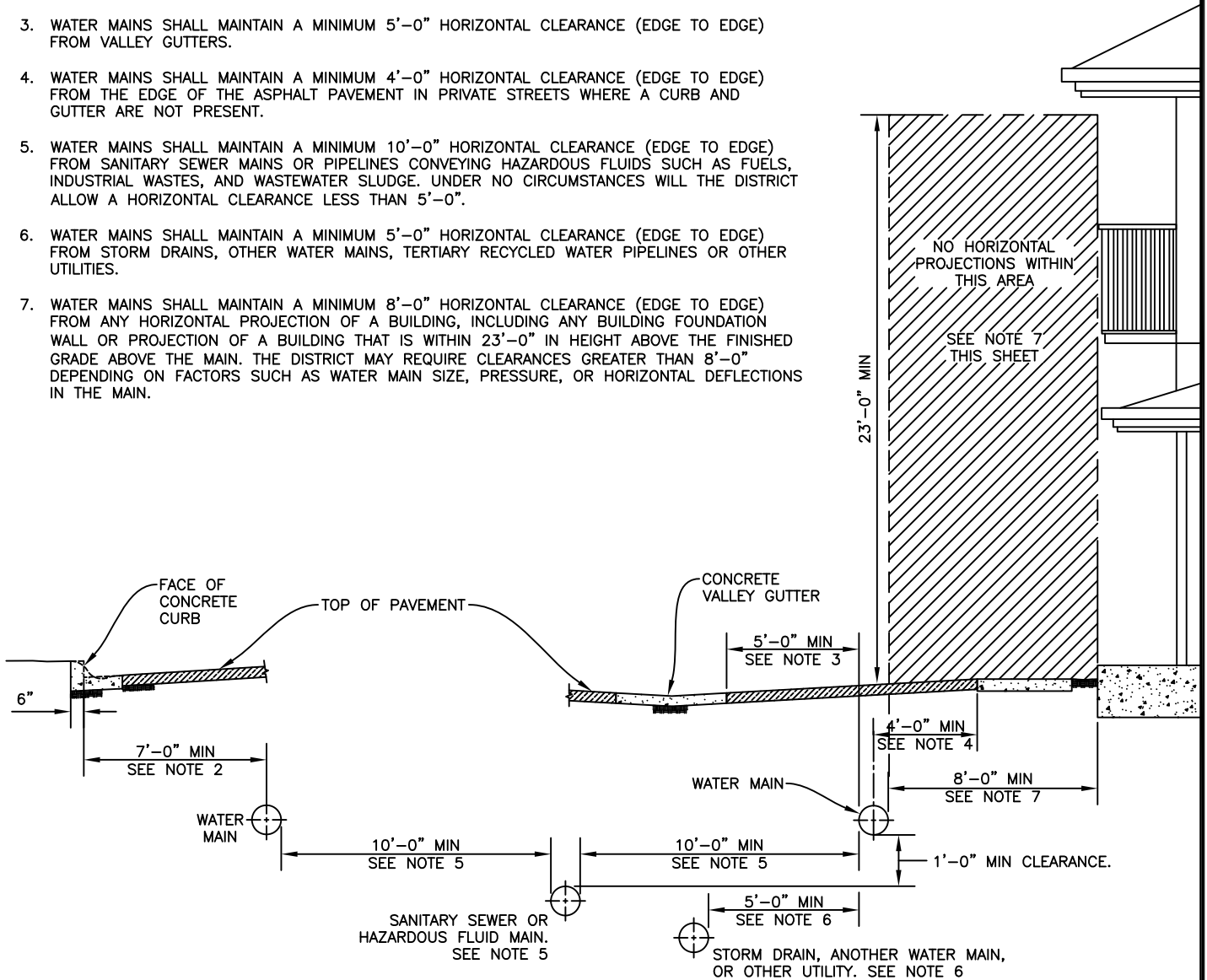


PIPE SLOPE	X DISTANCE
1:1	12 FEET
1-1/2:1	14 FEET
2:1	16 FEET
2-1/2:1	18 FEET
3:1	20 FEET

Dublin San Ramon Services District	DATE DEC 2019
STANDARD TRENCH DAM FOR WATER AND SEWER MAINS AND SIDE SEWER INSTALLATIONS	DESIGNED BD
SIGNED COPY ON FILE AT DISTRICT OFFICE	DRAWING G-5

NOTES:

1. THIS IS A GRAPHICAL REPRESENTATION OF APPENDIX C OF SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES, EXCEPT FOR NOTE 6.
2. WHERE A WATER MAIN SHALL BE INSTALLED IN THE SAME SIDE OF THE STREET AS ON-STREET PARKING, THE WATER MAIN SHALL BE 7'-0" FROM THE FACE OF CURB. ON STREETS WITHOUT ON-STREET PARKING, THE WATER MAIN SHALL BE AT LEAST 5'-0" FROM THE FACE OF CURB, AS MEASURED FROM THE FACE OF CURB TO THE CENTERLINE OF THE MAIN.
3. WATER MAINS SHALL MAINTAIN A MINIMUM 5'-0" HORIZONTAL CLEARANCE (EDGE TO EDGE) FROM VALLEY GUTTERS.
4. WATER MAINS SHALL MAINTAIN A MINIMUM 4'-0" HORIZONTAL CLEARANCE (EDGE TO EDGE) FROM THE EDGE OF THE ASPHALT PAVEMENT IN PRIVATE STREETS WHERE A CURB AND GUTTER ARE NOT PRESENT.
5. WATER MAINS SHALL MAINTAIN A MINIMUM 10'-0" HORIZONTAL CLEARANCE (EDGE TO EDGE) FROM SANITARY SEWER MAINS OR PIPELINES CONVEYING HAZARDOUS FLUIDS SUCH AS FUELS, INDUSTRIAL WASTES, AND WASTEWATER SLUDGE. UNDER NO CIRCUMSTANCES WILL THE DISTRICT ALLOW A HORIZONTAL CLEARANCE LESS THAN 5'-0".
6. WATER MAINS SHALL MAINTAIN A MINIMUM 5'-0" HORIZONTAL CLEARANCE (EDGE TO EDGE) FROM STORM DRAINS, OTHER WATER MAINS, TERTIARY RECYCLED WATER PIPELINES OR OTHER UTILITIES.
7. WATER MAINS SHALL MAINTAIN A MINIMUM 8'-0" HORIZONTAL CLEARANCE (EDGE TO EDGE) FROM ANY HORIZONTAL PROJECTION OF A BUILDING, INCLUDING ANY BUILDING FOUNDATION WALL OR PROJECTION OF A BUILDING THAT IS WITHIN 23'-0" IN HEIGHT ABOVE THE FINISHED GRADE ABOVE THE MAIN. THE DISTRICT MAY REQUIRE CLEARANCES GREATER THAN 8'-0" DEPENDING ON FACTORS SUCH AS WATER MAIN SIZE, PRESSURE, OR HORIZONTAL DEFLECTIONS IN THE MAIN.



Dublin San Ramon Services District	DATE JAN 2021
CLEARANCE REQUIREMENTS FOR WATER MAINS FROM OTHER UTILITIES AND STRUCTURES	DRAWN BY RM
SIGNED COPY ON FILE AT DISTRICT OFFICE	DRAWING G-6