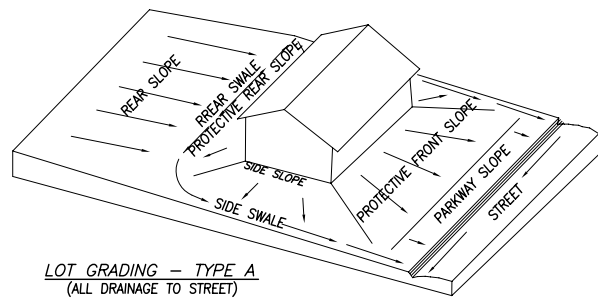
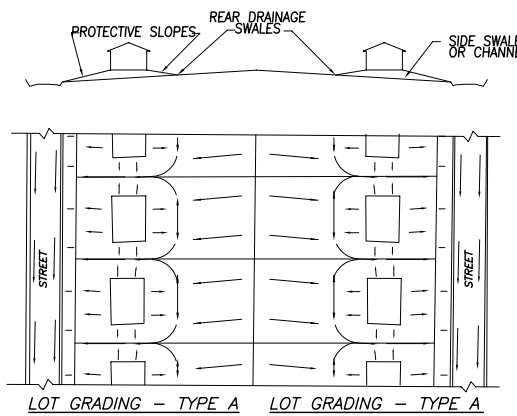


BLOCK GRADING TYPE 2
GENTLE CROSS SLOPE

BLOCK GRADING TYPE 4
VALLEY ALONG REAR LOT LINES

TYPICAL LOT EROSION CONTROL
DURING HOUSE CONSTRUCTION
BLOCK GRADING TYPE 1

TYPICAL LOT EROSION CONTROL
DURING HOUSE CONSTRUCTION
BLOCK GRADING TYPE 2



BLOCK GRADING TYPE 1
RIDGE ALONG REAR LOT LINES

RECOMMENDED GRADIENTS FOR DEVELOPMENT GRADIENTS (PERCENT)

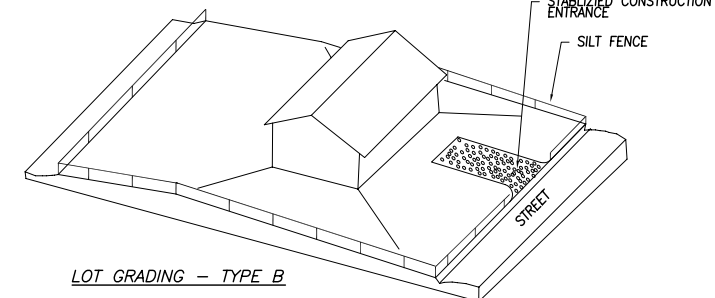
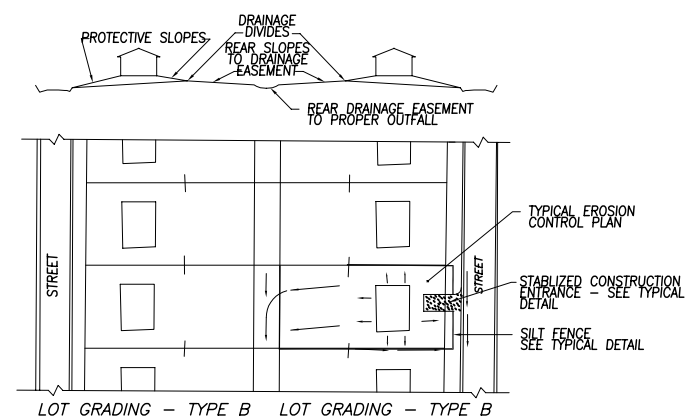
ACCESS AND PARKING	MINIMUM		MAXIMUM	
	CENTER LINE	CROWN OR CROSS SLOPE	CENTER LINE	CROWN OR CROSS SLOPE
2 STREETS	0.5%	1.0%	14.0%	5.0%
2 STREET INTERSECTIONS	0.5%	1.0%	5.0%	5.0%
3 DRIVEWAYS	0.5%	1.0%	14.0%	5.0%
4 SIDEWALKS	0.5%	2.0%		
CONCRETE	1.0%	2.0%		
BITUMINOUS				
BUILDING ENTRANCES & SHORT WALKS	1.0%		12.0%	5.0%
MAIN WALKS	0.5%		10.0%	5.0%
ADJOINING STEPS			2.0%	
LANDINGS			2.0%	
STEPPED RAMP TREADS	1.0%	1.0%	2.0%	2.0%
PARKING		0.5%	5.0%	5.0%

SLOPE GRADIENTS

	MINIMUM	MAXIMUM
SLOPE AWAY FROM FOUNDATIONS	5.0%	7.21%
PERVIOUS SURFACES	5.0%	7.21%
IMPERVIOUS SURFACES	5.0%	7.21%
SLOPE TO UPPER END OF A DRAINAGE SWALE	5.0%	2.5%
PERVIOUS SURFACES	2.0%	
GROUND FROST AREAS	1.0%	
NON-GROUND FROST AREAS	1.0%	
IMPERVIOUS SURFACES	0.5%	
USABLE OPEN AREA		5.0%
OTHER AREAS		50.0% (2:1)
SLOPES TO BE MAINTAINED BY MACHINE		33.0% (3:1)

NOTES:

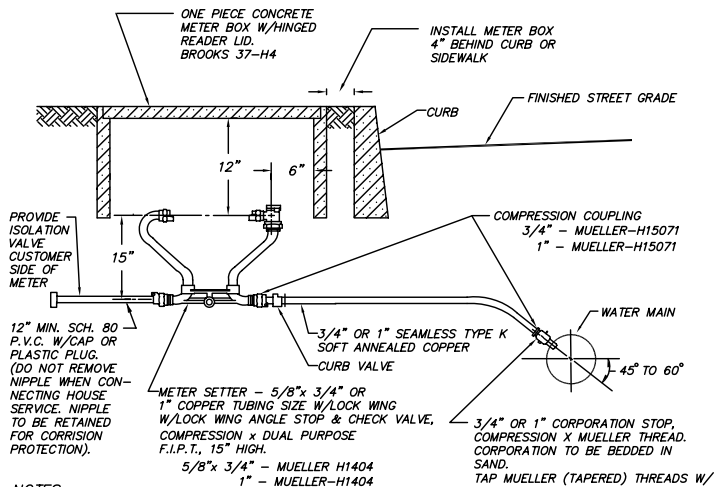
- APPROXIMATE EQUIVALENTS:
 .5% = 1/16" / FT
 1.0% = 1/8" / FT
 2.0% = 1/4" / FT
 5.0% = 5/8" / FT
 10.0% = 1 1/4" / FT
 12.0% = 1 1/2" / FT
 21% = 2 5/8" / FT
- DO NOT APPLY TO DEVELOPMENT ON LOTS FOR SINGLE FAMILY DETACHED DWELLINGS.
- VERTICAL TRANSITIONS SHALL PREVENT CONTACT OF CAR UNDERCARRIAGE OR BUMPER WITH DRIVEWAY SURFACE.
- 5.0% MAXIMUM FOR MAJOR USE BY ELDERLY TENANTS.
- MINIMUM FALL OF PROTECTIVE SLOPE AROUND BUILDINGS - 6", AND 10 FT LENGTH OR AS LIMITED BY PROPERTY LINES.
- CAN BE USED ONLY WHERE NO STEEP ADJACENT SLOPES WILL CONTRIBUTE STORM RUNOFF.
- MINIMUM LENGTH 4 FT.
- AREAS HAVING ANNUAL PRECIPITATION OF MORE THAN 50" USE 2.0%.



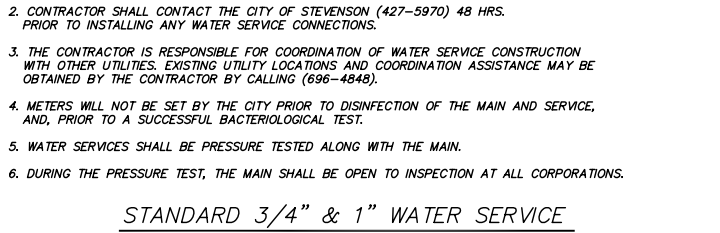
TYPICAL LOT EROSION CONTROL
DURING HOUSE CONSTRUCTION
BLOCK GRADING TYPE 4

By	APPR.	DATE	No.	REVISIONS	DESIGNED	SCALE
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R.J.H.		4/90	2	REVISED	CHECKED	VERT.
					FILE	NAME
					APPROVED	BY/NEW

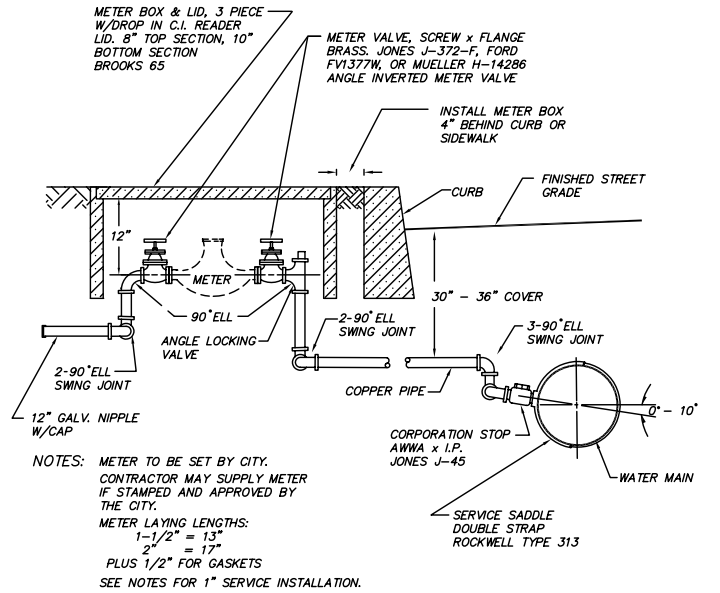
JOB NUMBER	CITY OF STEVENSON	DRAWING NUMBER
DATE	TYPICAL HOUSE CONSTRUCTION & EROSION CONTROL PLAN	SHEET of



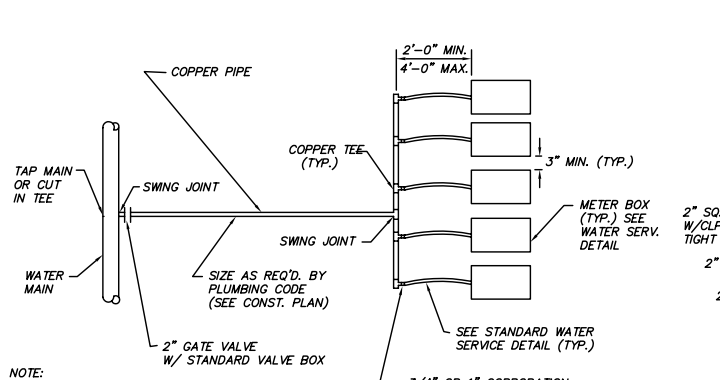
NOTES:
 1. PRIOR TO CITY INSTALLATION OF METERS, ALL SERVICE APPLICATIONS MUST BE COMPLETED AND APPROVED. SERVICE FEES PAID IN FULL AND AS BUILTS SUBMITTED AND APPROVED.
 2. CONTRACTOR SHALL CONTACT THE CITY OF STEVENSON (427-5970) 48 HRS. PRIOR TO INSTALLING ANY WATER SERVICE CONNECTIONS.
 3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF WATER SERVICE CONSTRUCTION WITH OTHER UTILITIES. EXISTING UTILITY LOCATIONS AND COORDINATION ASSISTANCE MAY BE OBTAINED BY THE CONTRACTOR BY CALLING (696-4848).
 4. METERS WILL NOT BE SET BY THE CITY PRIOR TO DISINFECTION OF THE MAIN AND SERVICE, AND, PRIOR TO A SUCCESSFUL BACTERIOLOGICAL TEST.
 5. WATER SERVICES SHALL BE PRESSURE TESTED ALONG WITH THE MAIN.
 6. DURING THE PRESSURE TEST, THE MAIN SHALL BE OPEN TO INSPECTION AT ALL CORPORATIONS.



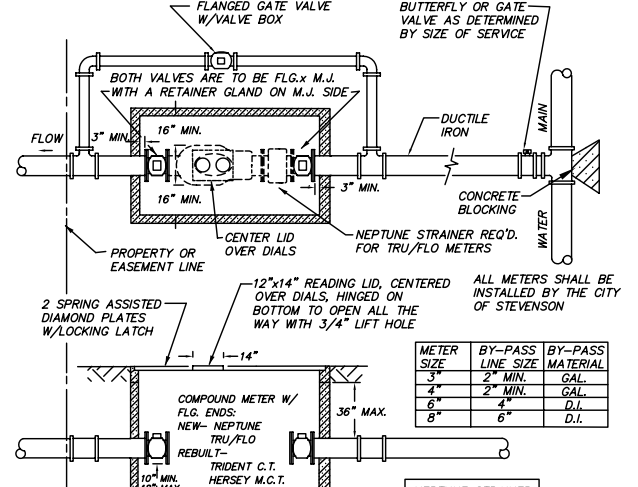
STANDARD 3/4" & 1" WATER SERVICE
N.T.S.



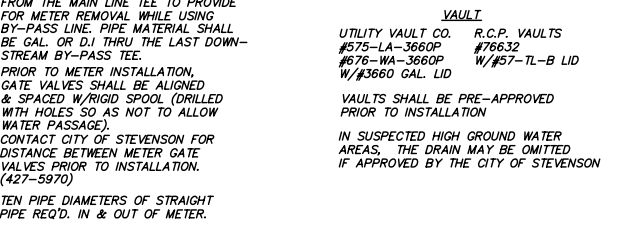
STANDARD 1-1/2" & 2" WATER SERVICE
N.T.S.



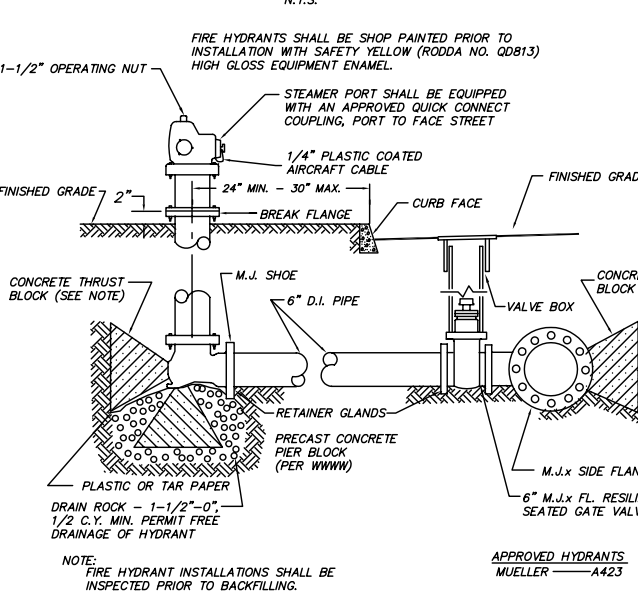
STANDARD MULTIPLE METER INSTALLATION
N.T.S.



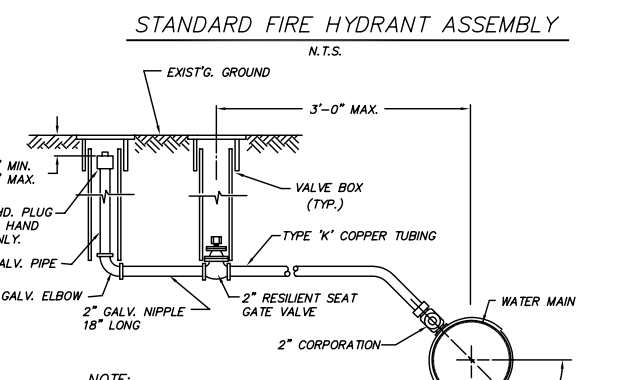
NOTE:
 ALL JOINTS SHALL BE RESTRAINED FROM THE MAIN LINE TEE TO PROVIDE FOR METER REMOVAL WHILE USING BY-PASS LINE. PIPE MATERIAL SHALL BE GALV OR DI THRU THE LAST DOWN-STREAM BY-PASS TEE.
 PRIOR TO METER INSTALLATION, GATE VALVES SHALL BE ALIGNED & SPACED W/RIGID SPOOL (DRILLED WITH HOLES SO AS NOT TO ALLOW WATER PASSAGE).
 CONTACT CITY OF STEVENSON FOR DISTANCE BETWEEN METER GATE VALVES PRIOR TO INSTALLATION. (427-5970)
 TEN PIPE DIAMETERS OF STRAIGHT PIPE REQ'D. IN & OUT OF METER.



STANDARD FIRE HYDRANT ASSEMBLY
N.T.S.



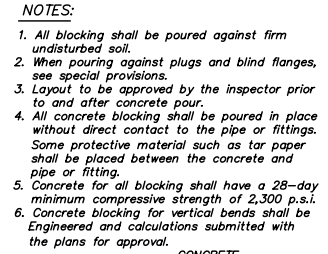
STANDARD BLOWOFF ASSEMBLY
N.T.S.



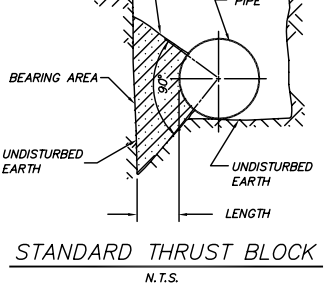
STANDARD BLOWOFF ASSEMBLY
N.T.S.

PIPE SIZE	BEARING AREA SQ. FT.	WGT. OF 10' LENGTH LBS.	WGT. OF 10' LENGTH PER SQ. FT. OF SOIL BEARING
4"	0.3	0.8	0.86
6"	0.7	1.9	1.06
8"	1.1	3.1	1.37
10"	1.5	4.4	1.88
12"	2.0	5.8	2.50
14"	2.5	7.2	3.12
16"	3.1	8.6	3.75
18"	3.7	10.0	4.38
20"	4.3	11.4	5.00
24"	6.1	16.3	7.11

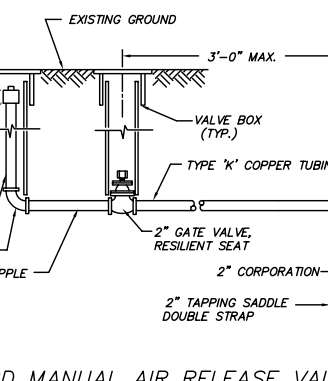
SOIL BEARING = 2000 LB/FT²



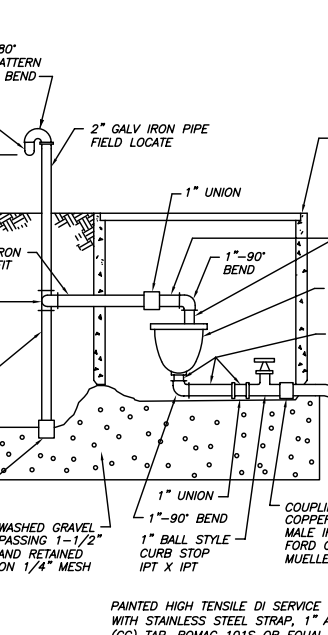
STANDARD THRUST BLOCK
N.T.S.



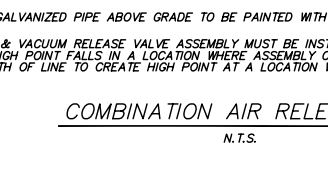
STANDARD MANUAL AIR RELEASE VALVE
N.T.S.



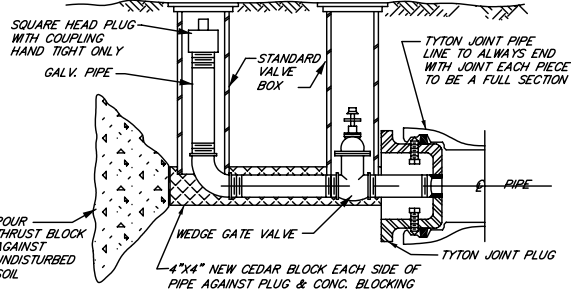
STANDARD VALVE BOX AND COVER
N.T.S.



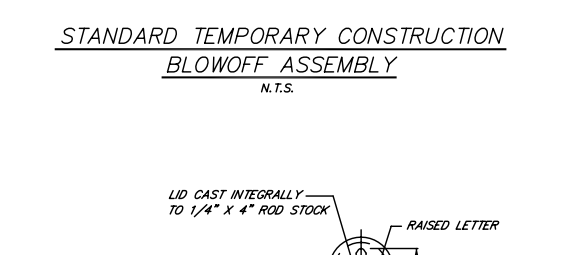
COMBINATION AIR RELEASE VALVE
N.T.S.



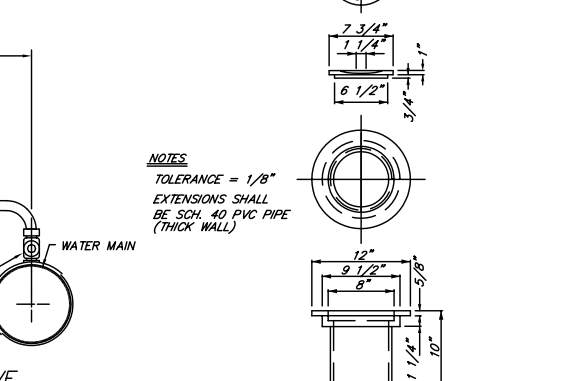
STANDARD BLOWOFF ASSEMBLY
N.T.S.



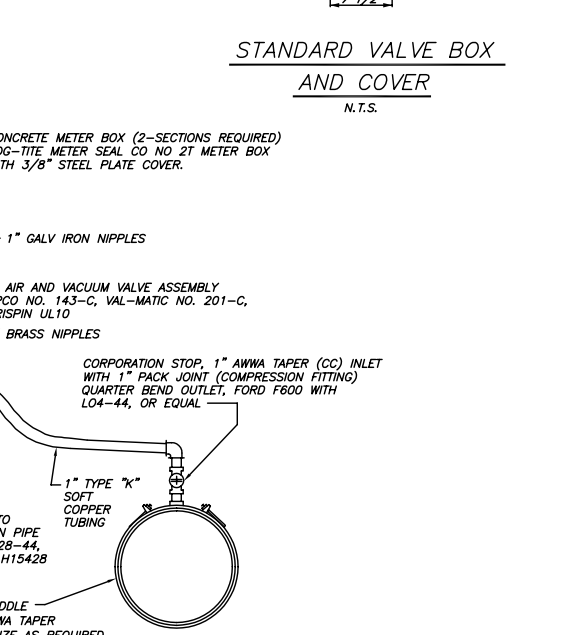
STANDARD TEMPORARY CONSTRUCTION BLOWOFF ASSEMBLY
N.T.S.



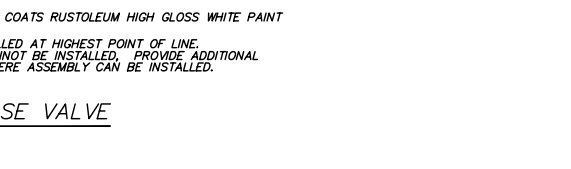
STANDARD THRUST BLOCK
N.T.S.



STANDARD VALVE BOX AND COVER
N.T.S.



COMBINATION AIR RELEASE VALVE
N.T.S.



STANDARD BLOWOFF ASSEMBLY
N.T.S.

GENERAL NOTES & REQUIREMENTS
 GENERAL
 Specifications for all materials and construction shall be in conformance with the "1991 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE & MUNICIPAL CONSTRUCTION" as prepared by the Washington State Chapter of the A.P.W.A. except as noted herein.
 All references to A.W.W.A. specifications shall mean their latest revision.
 The contractor shall notify the City of Stevenson (427-5970) 24 hours prior to the start of construction. Inspection and approval of the construction will be by the City of Stevenson. A satisfactory pressure and bacteriological test for the water construction is required for approval.
 When construction is to take place within a City or County right-of-way an approved traffic control plan will be required prior to the start of construction.
 Where existing service must be interrupted, the contractor shall notify the City of Stevenson and all customers affected as to the date and duration of the interruption. Notification must be done 24 hours in advance of interruption. The contractor shall schedule construction to provide minimum interruption of service as determined by the inspector. Under no circumstances shall a contractor schedule a water main shut-down without the required 24 hour notice. The contractor shall not operate the City's water facilities without approval from the construction inspector.

DUCTILE IRON PIPE
 All pipe furnished shall be new and conform to the requirements of A.W.W.A. C151.
 Pipe sizes 12 inch and smaller shall be Class 52 and pipe 14 inch and larger shall be Class 51, unless otherwise noted on the plans.
 All pipe shall be furnished in 18 to 20 foot lengths and shall be cement lined. Per A.W.W.A. C104.
 All rubber gasket joints for ductile iron pipe shall conform to the requirements of A.W.W.A. C111.
CAST IRON OR DUCTILE IRON FITTINGS
 All fittings shall conform to the requirements of A.W.W.A. C110 or C153.
 Fittings shall be of the size, type, iron, and type of joint as called for on the plans. All cast iron fittings shall have a pressure rating of 250 p.s.i. minimum. All ductile iron fittings shall be cement lined.
 Compact fittings will only be allowed on installations thru 12" diameter. All compact fittings shall be ductile iron, cement lined and have a pressure rating of 350 p.s.i.
 All rubber gasket joints for ductile iron and grey iron fittings shall conform to the requirements of A.W.W.A. C111.
 All reducers 6 inch and larger shall be restrained.
 Bolts for buried flanged fittings shall be galvanized or zinc-chromium plated and coated with 2 coats of bitumastic after installation. Bolts for mechanical joints shall be NSS Corten steel or ductile iron only.

TRENCH EXCAVATION and BACKFILL
 The minimum cover for all sizes of pipe shall be 36 inches below finished street grade or below existing ground, whichever is greater.
 Trench backfill materials shall be according to the backfill section shown on the plans and/or utility permit.
MECHANICAL COMPACTION
 Compaction of the trench backfill shall be done according to the appropriate section of the specifications. Each backfill layer shall be compacted to 95% of the maximum density as determined by the compaction control tests.
 Compaction control tests to determine optimum moisture content and maximum density shall be by the following methods:
 A. For non-granular materials - Method of test for Compaction Control of Granular Materials (MSDT Test Method No. 609)
 B. For granular materials - Method of test for Compaction of Granular Materials (MSDOT Test Method No. 606)
 C. Field Moisture and Density of backfill material shall be determined by the Nuclear Moisture/Density Gauge.

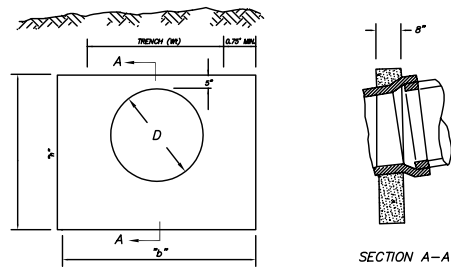
WATER SERVICES
 The services are to be installed by the contractor, and inspected by the City of Stevenson (427-5970), 24 hours after completion of the service lines. The water meters will be set by the City. Prior to installation of the service lines, it is required that the developer supply the City with a reproducible copy of the plot map indicating the address of each lot. No water meters will be set until these conditions are met.
VALVES
 Resilient-seated or wedge gate valves may be used for valve installations of 8 inch and smaller.
 Resilient-seated or wedge gate valves shall be used on all Fire Hydrant and Fire Protection Service installations.
 Resilient-seated or wedge gate valves shall conform to A.W.W.A. C509 and shall be epoxy coated on the inside.
 Butterfly valves may be used for valve installations of 6 inch and 8 inch, except for fire hydrant and fire protection installations.
 Butterfly valves shall be used for all valve installations of 10 inch and larger.
 Butterfly valves shall conform to A.W.W.A. C504 and shall be Class 150-B with short body.
 Butterfly valves shall be required to have a minimum of 28 turns to move from fully open to fully closed position. The operator shall be mounted directly on the valve with no exposed or external couplings. Units shall be fully gasketed and gasket packed. Valves shall be installed with the operator on the centerline of the road side of the pipe.
 All valves shall be furnished with an underground manual operator with an A.W.W.A. 2 inch square operating nut and shall open with a counter-clockwise rotation. Valves shall be furnished with joints as called for on the plans.

TAPPING SLEEVES and VALVES
 Tapping sleeves shall be rated at 150 p.s.i. working pressure with ANSI B16 Class 125 ball pattern.
 Tapping sleeves shall be pressure tested, on the pipe, at 150 p.s.i. for 15 minutes with no pressure drop prior to making the tap.
 Tapping sleeves furnished for size on size taps, 12 inch and smaller, on grey or ductile iron pipe shall be Olow FS205 or approved equal mechanical joint.
 Tapping sleeves furnished for reduced outlet taps, 12 inch and smaller, on grey or ductile iron pipe shall be Dresser 974 or approved equal.
 Tapping sleeves furnished for taps on grey or ductile iron pipe larger than 12 inch shall be epoxy coated steel with stainless steel bolts and shall be approved by the engineer prior to installation.
 Bolts for all cast iron tapping sleeves shall be NSS Corten steel or ductile iron only.
 Tapping sleeves furnished for size on size taps on steel pipe shall be JCM 416 weld-on or approved equal. A certified welder, approved by the City, shall be used for all weld-on taps.
 Tapping sleeves furnished for reduced outlet taps on steel pipe shall be Rockwell 622 or approved equal. Sleeves shall be epoxy coated and supplied with stainless steel bolts.
 After a tap is made, all exposed areas of the pipe and sleeve shall be coated with a bitumastic coating.
 Tapping sleeves furnished for taps on asbestos cement pipe shall be as called for on the plans or as approved by the engineer.
 Concrete blocking for tapping sleeves shall be the same as required for an equal size tee.
 Tapping valves shall have the same construction as specified for gate valves. Inlet end of valve shall be flanged and outlet end shall be mechanical joint.
 Tapping valves shall be manufactured by Mueller Co., Iowa Valve Co., Kennedy Valve Mfg. Co. or Waterloo Co.
 Tapping valves shall be supported by an 8" x 8" concrete block prior to making the tap.
 Tapping sleeves and valves shall be used only when specifically called for on the plans.

VALVE BOXES
 Valve boxes shall be Fort Vancouver Pattern, cast iron or approved equal.
 Valve box extensions shall be one piece and constructed of Sch. 40 P.V.C. (thick wall).
 Valve boxes not set in paved areas, shall be set on a concrete or asphalt pad (18" square, 2" thick).
 Operator nut shall have a factory extension added, if over 4" to finish grade, to a distance of 18" from finish grade.
FIELD TESTS
 All sizes of pipe may be tested hydrostatically at 150 p.s.i. for 15 minutes with no pressure drop.
DISINFECTION
 Water main disinfection shall be per A.W.W.A. C-651.

By	APPR.	DATE	No.	REVISIONS	DESIGNED	SCALE
					DRAWN	HOR.
					CHECKED	VERT.
					APPROVED	FIELD BOOK

JOB NUMBER	CITY OF STEVENSON	DRAWING NUMBER
DATE	STANDARD WATER LINE DETAILS	SHEET of



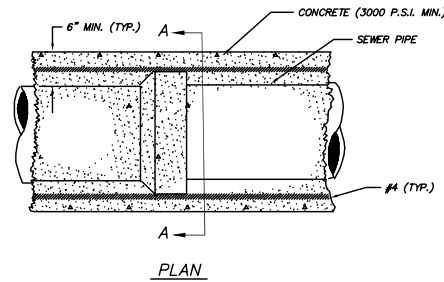
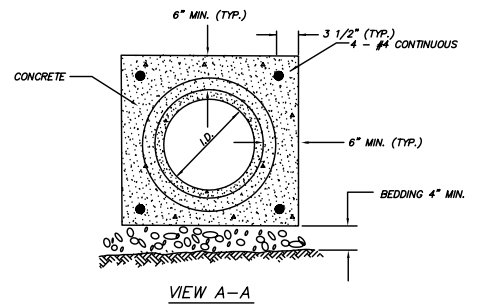
NOTES:

1. ALL CONCRETE TO BE 3000 P.S.I., 2" TO 4" SLUMP.
2. WALLS TO BE PLACED WHERE GRADE IS 20% OR OVER.
3. ANCHOR WALLS TO BE EQUALLY SPACED WITH MAXIMUM DISTANCE BETWEEN WALLS TO BE AS SHOWN IN TABLE "A".
4. PLACE WALL IMMEDIATELY BELOW BELL OF PIPE WHERE POSSIBLE.
5. CONCRETE SHALL BE POURED AGAINST FORMS OR STABLE UNDISTURBED SOIL.

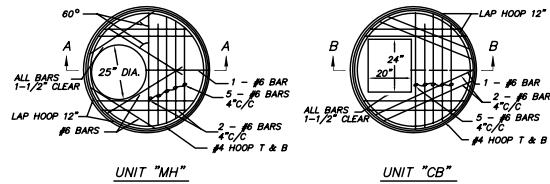
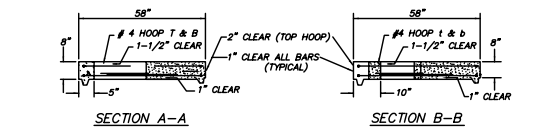
SLOPE %	TO	MAXIMUM SPACING (FT.) (MEASURED ON SLOPE)
20	35	36'
35	50	24'
50	100	16'

PIPE SIZE (D)	TRENCH WIDTH MAX. (W)	h	b	VOLUME OF CONCRETE (APPROX.)
6", 8", 10"	2.5'	3.0'	4.0'	0.29 C.Y.
12", 15"	2.5'	4.0'	4.0'	0.37 C.Y.
18", 21", 24"	3.5'	4.0'	5.0'	0.42 C.Y.
30", 36"	4.5'	5.0'	6.0'	0.62 C.Y.

STANDARD PLAN FOR ANCHOR WALLS
S-1.5

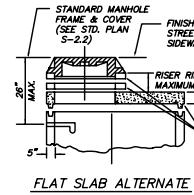


CONCRETE ENCASED SEWER PIPE
S-1.6



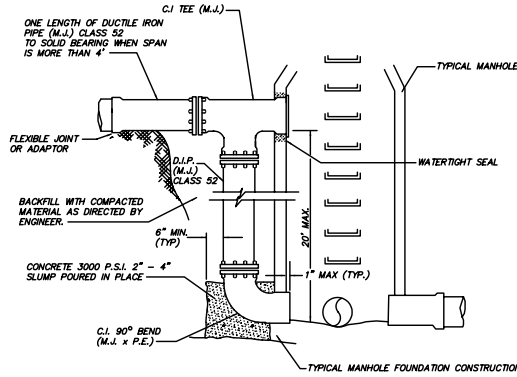
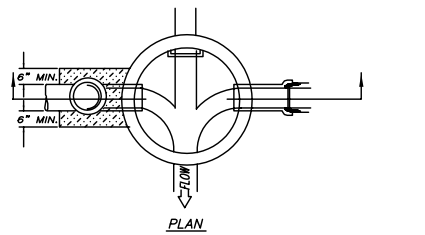
NOTES:

1. CONSTRUCTION SHALL CONFORM TO STD. PLAN NO. S-2.1 IF NOT OTHERWISE SHOWN.
2. ALL PRECAST SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 P.S.I. & 2" TO 4" SLUMP.
3. ALL REINFORCING SHALL BE GRADE 40 STEEL.
4. MANHOLES UNDER 6'-0" IN DEPTH FROM RIM TO SHELF SHALL HAVE UNIT "MH" TOP SLAB IN LIEU OF CONE AS SHOWN ON STD. PLAN S-2.1. UNIT "CB" TOP SLAB SHALL BE USED WHERE "TYPE 2" CATCH BASIN IS SPECIFIED. STANDARD RISER UNITS AND FRAME AND GRATE FOR CATCH BASIN SHALL BE USED IN CONJUNCTION WITH TYPE "CB" TOP SLAB.

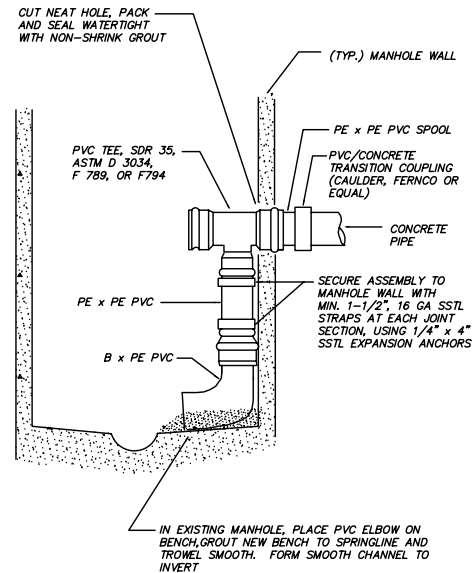


FLAT SLAB ALTERNATE

TOP SLAB FOR STANDARD PRECAST MANHOLE
S-2.5

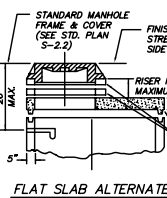
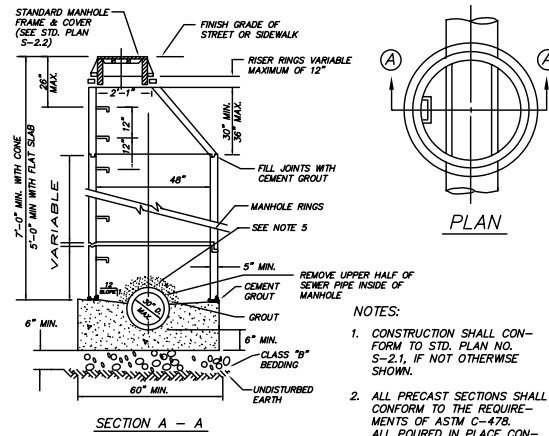


OUTSIDE DROP CONNECTION
S-2.6



NOTE: INSIDE DROP ASSEMBLY MAY BE USED ONLY WHEN SPECIFICALLY APPROVED BY CITY ENGINEER. MAXIMUM ONE ASSEMBLY PER 48" MANHOLE.

INSIDE DROP CONNECTION
S-2.7



FLAT SLAB ALTERNATE

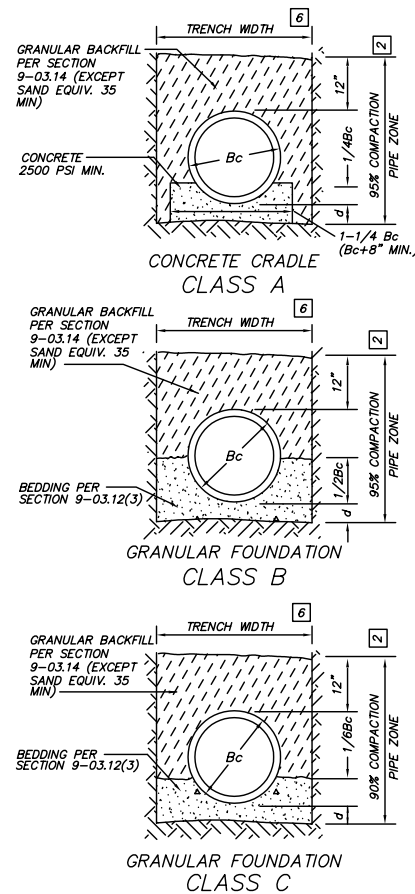
SAMPLING MANHOLE
S-2.8

NOTES:

1. CONSTRUCTION SHALL CONFORM TO STD. PLAN NO. S-2.1, IF NOT OTHERWISE SHOWN.
2. ALL PRECAST SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 P.S.I. AND 2" TO 4" SLUMP.
3. THE MANHOLE MAY BE POURED MONOLITHIC TO 8" ABOVE THE BARREL OF THE MAIN SEWER.
4. FLAT SLAB MANHOLE COVER NOT FOR USE IN TRAFFIC AREAS.
5. FOR GROUTED CONNECTIONS, THIS HOLE DIAMETER SHALL BE EQUAL TO THE OUTSIDE PIPE DIAMETER PLUS THE MANHOLE WALL THICKNESS.

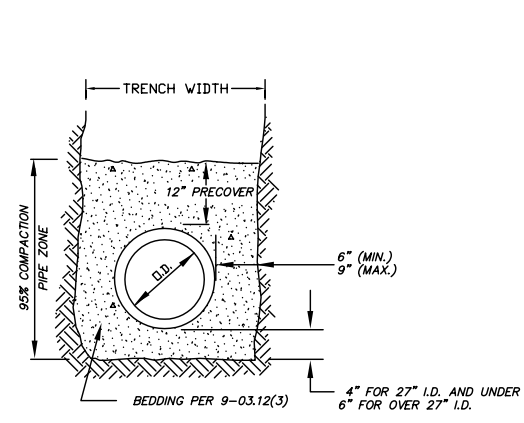
By	APPR.	DATE	No.	REVISIONS	DESIGNED	SCALE
					DRAWN	HOR.
					CHECKED	VERT.
					APPROVED	FIELD BOOK

JOB NUMBER	CITY OF STEVENSON	DRAWING NUMBER
DATE	STANDARD SEWER MAIN DETAILS	SHEET of



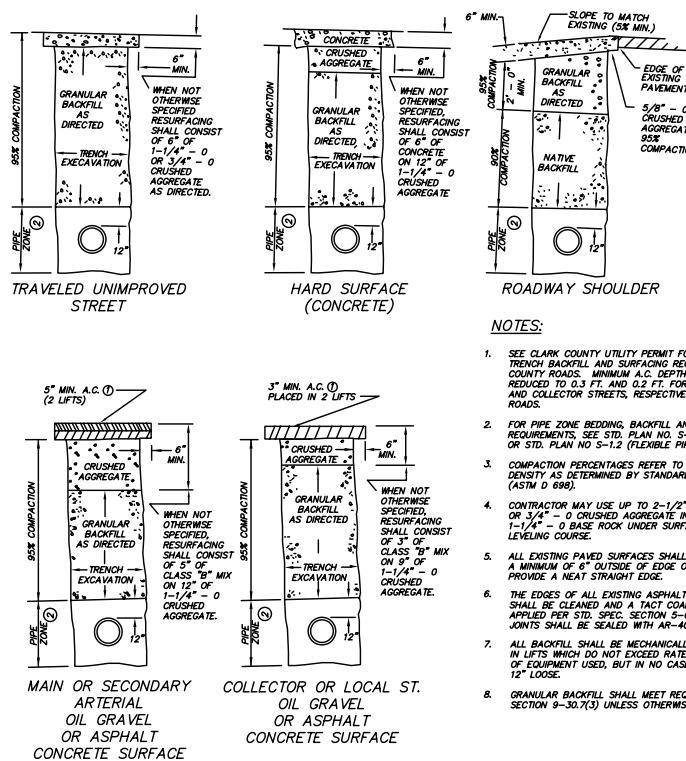
NOTES:

- WHERE DIRECTED BY THE ENGINEER GRANULAR TRENCH FOUNDATION STABILIZATION SHALL BE PLACED PRIOR TO PLACEMENT OF THE BEDDING, SIZE AND DEPTH ARE DEPEND- ENT ON SOIL CONDITIONS.
 - BEDDING AND BACKFILL MATERIALS IN THE PIPE ZONE SHALL BE COMPACTED AS SPECIFIED PRIOR TO BACKFILLING THE REMAINDER OF THE TRENCH.
- LEGEND:
 Bc = OUTSIDE DIAMETER
 D = INSIDE DIAMETER
 d = DEPTH OF BEDDING MATERIAL BELOW PIPE
- | DEPTH OF BEDDING MATERIAL BELOW PIPE | |
|--------------------------------------|---------|
| D | d (min) |
| 27" & SMALLER | 4" |
| LARGER THAN 27" | 6" |
- FOR ROCK AND OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVER- EXCAVATED A MINIMUM OF 6" AND RE- FILLED WITH GRANULAR MATERIAL AS DIRECTED BY THE ENGINEER.
 - NATIVE MATERIAL MAY BE USED IN LIEU OF IMPORTED MATERIAL FOR BEDDING SPECIFIED, PROVIDED THAT THE NATIVE MATERIAL CON- FORMS TO SECTION 9-03.12(3) OF THE STD. SPECIFICATIONS, AND IS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL SUBMIT A SAMPLE OF THE NATIVE MATERIAL TO THE ENGINEER AT LEAST 72 HOURS PRIOR TO USE. THE ENGINEER MAY APPROVE, REJECT OR REQUIRE LABORATORY TESTING OF THE MATERIAL.
 - BACKFILL AND COMPACTON ABOVE THE PIPE ZONE SHALL BE AS SHOWN IN STD. PLAN S-1.3
 - TRENCH WIDTH SHALL NOT EXCEED ONE AND ONE-HALF THE INSIDE DIAMETER OF THE PIPE PLUS 18" AT THE TOP OF THE PIPE ZONE.
 - FOR FLEXIBLE PIPE BEDDING SEE STD. PLAN S-1.2

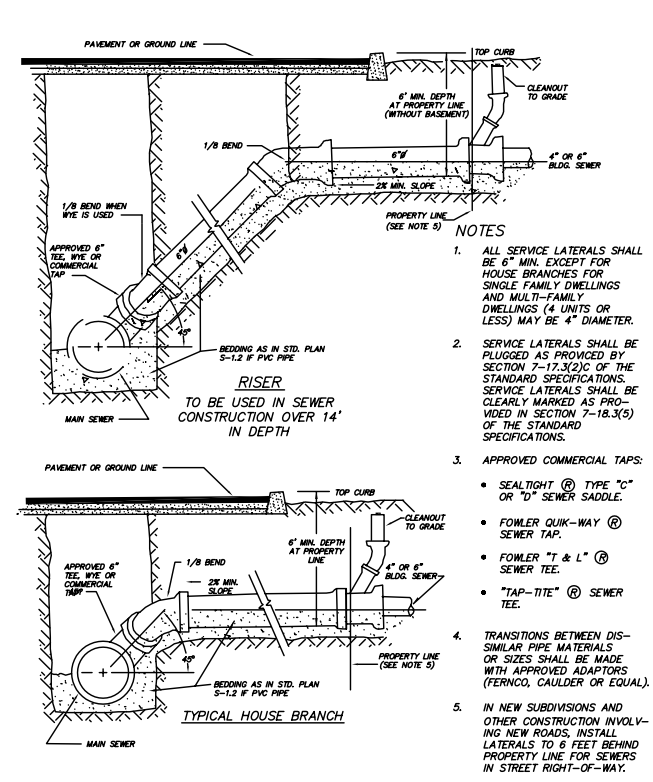


- NOTES:**
- WHERE DIRECTED BY THE ENGINEER GRANULAR TRENCH FOUNDATION STABILIZATION SHALL BE PLACED PRIOR TO PLACEMENT OF THE BEDDING. SIZE AND DEPTH ARE DEPENDENT ON SOIL CONDITIONS.
 - BEDDING AND BACKFILL MATERIALS IN THE PIPE ZONE SHALL BE COMPACTED AS SPECIFIED PRIOR TO BACK- FILLING THE REMAINDER OF THE TRENCH.
 - FOR ROCK AND OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVEREXCAVATED A MINIMUM OF 6" AND ROLLED WITH GRANULAR MATERIALS AS DIRECTED BY THE ENGINEER.
 - BACK FILL AND COMPACTON ABOVE THE PIPE ZONE SHALL BE AS SHOWN IN STANDARD PLAN NO. S-1.3
 - INSTALLATION SHALL CONFORM TO UNBELLE PLASTIC PIPE ASSN. STANDARD SPEC. UN-B-5 (LATEST EDITION) EXCEPT AS NOTED.
 - FINAL INSTALLATION TO BE TESTED PER SECTION 7-17.3(4) OF THE STANDARD SPECIFICATIONS.
 - ALTERNATE PRE-COVER MATERIALS ARE ALLOWABLE FROM PIPE CENTERLINE TO ONE FOOT ABOVE THE TOP OF PIPE. ALTERNATE PRE-COVER MATERIALS MUST BE PREAPPROVED BY THE INSPECTOR AND MAY BE SAND, CRUSHER SCREENING, GRAVEL, OR OTHER CLEAN GRANULAR MATERIALS CONTAINING NO ROCK LARGER THAN 1-1/4" IN LENGTH.
- APPROVAL FOR SUCH ALTERNATE MATERIALS WILL BE GRANTED UPON SUBMISSION BY TEST OF ITS COMPLIANCE WITH THESE REQUIREMENTS. SUBMIT 50 LB. SAMPLE FOR TESTING TO THE CITY INSPECTOR AND OBTAIN APPROVAL OF MATERIAL PRIOR TO STARTING PIPE INSTALLATION WORK. THE TEST REQUIRES A MINIMUM OF FIVE BUSINESS DAYS TO COMPLETE.

PIPE BEDDING DETAIL (FLEXIBLE PIPE) S-1.2



TYPICAL TRENCH SECTIONS: BACKFILL, BEDDING & SURFACING S-1.3

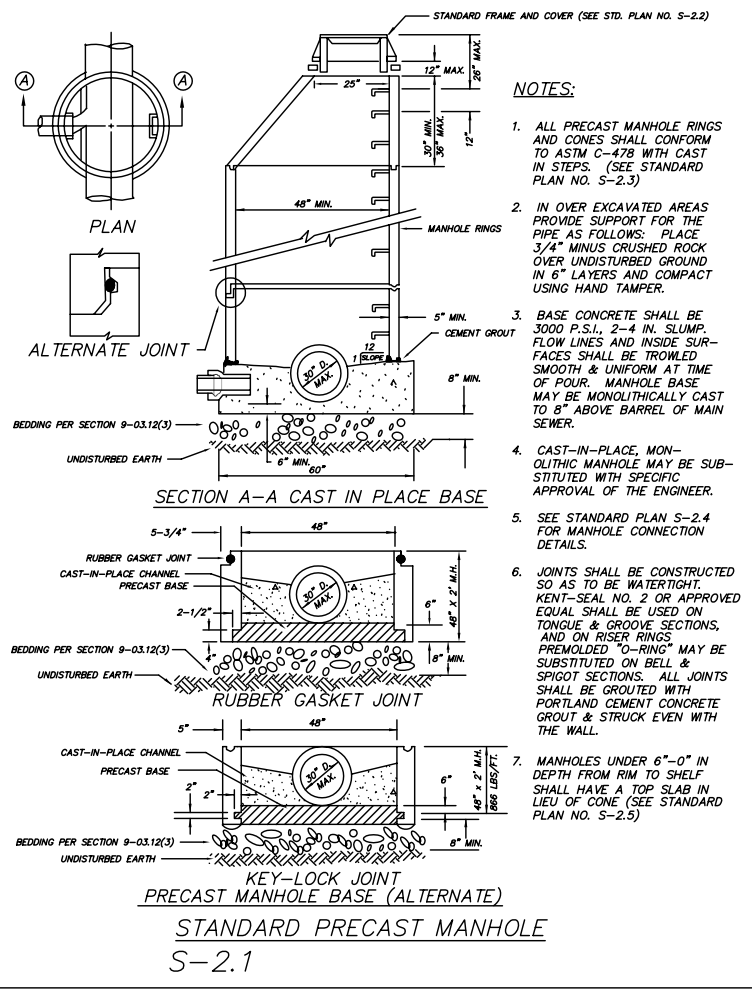


SERVICE LATERAL CONNECTIONS S-1.4

- NOTES:**
- ALL SERVICE LATERALS SHALL BE 6" MIN. EXCEPT FOR HOUSE BRANCHES FOR SINGLE FAMILY DWELLINGS AND MULTI-FAMILY DWELLINGS (4 UNITS OR LESS) MAY BE 4" DIAMETER.
 - SERVICE LATERALS SHALL BE PLUGGED AS PROVIDED BY SECTION 7-17.3(2) OF THE STANDARD SPECIFICATIONS. SERVICE LATERALS SHALL BE CLEARLY MARKED AS PROVIDED IN SECTION 7-18.3(5) OF THE STANDARD SPECIFICATIONS.
 - APPROVED COMMERCIAL TAPS:
 - SEALTITE (R) TYPE "C" OR "D" SEWER SADDLE.
 - FOMLER QUIK-WAY (R) SEWER TAP.
 - FOMLER "T & L" (R) SEWER TEE.
 - "TAP-TITE" (R) SEWER TEE.
 - TRANSITIONS BETWEEN DIS- SIMILAR PIPE MATERIALS OR SIZES SHALL BE MADE WITH APPROVED ADAPTORS (FERRO, CALDER OR EQUAL).
 - IN NEW SUBDIVISIONS AND OTHER CONSTRUCTION INVOLV- ING NEW ROADS, INSTALL LATERALS TO 6 FEET BEHIND PROPERTY LINE FOR SEWERS IN STREET RIGHT-OF-WAY.

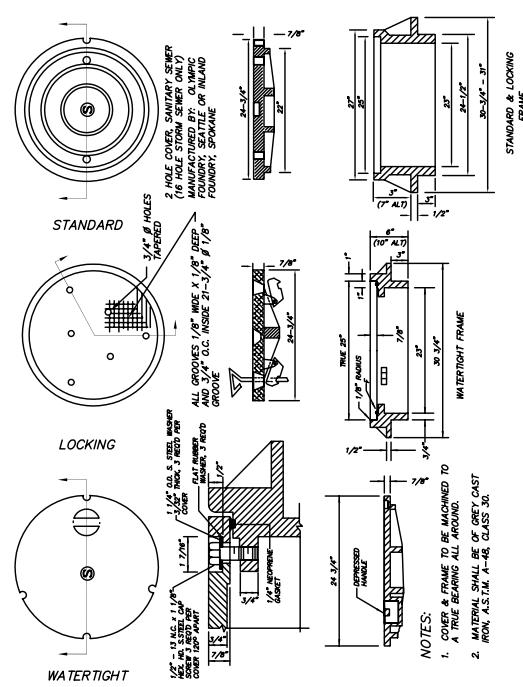
CONSTRUCTION SPECIFICATIONS FOR SANITARY SEWER

- All materials and installation of sanitary sewers shall be in conformance with the 1991 edition of the Standard Specifications for Road, Bridge, and Municipal Construction, hereinafter referred to as the "Standard Specifications", prepared by the Washington State Chapter of the American Public Works Association (APWA) and the Washington State Department of Transportation, except as noted herein or on the standard plans. Wherever the standard specifications refer to the owner as either the "State" or "Secretary" or when reference is made to the Department of Transportation it shall be understood that the standard specifications should read the "City".
- All sanitary sewer construction is subject to inspection and approval by the City of Stevenson. The contractor shall notify the City of Stevenson (427-5970) at least 48 hours prior to the start of construction. The city may require that a preconstruction conference be held.
- The contractor is required to notify all utilities 48 hours prior to commencement of work.
- Final acceptance of sanitary sewers are subject to Sections 1-05.11, 1-05.12, 7-17.3(4)D, 7-17.3(4)E, 7-17.3(4)H and 7-17.3(4)I of the Standard Specifications. The contractor shall guarantee all work for a period of two (2) years.
- All pipe and fittings shall conform to the following:
 - Concrete pipe, nonreinforced, shall conform to ASTM C 14, Class 2, except as otherwise noted. Concrete pipe, reinforced, shall conform to ASTM C 76, and shall be of the class noted on the plans or in the special provisions.
 - Polyvinylchloride (PVC) sewer pipe 15" diameter or less shall conform to ASTM D3034, SDR 35 or ASTM F 789. It shall have a minimum pipe stiffness of 46 psi. PVC pipe 18" diameter and larger shall conform to ASTM F 679 or ASTM F 794, Series 46. All PVC pipe shall have an integral bell gasketed joint with elastomeric gasket and shall be furnished in 12-1/2 foot laying lengths.
 - Ductile Iron (DI) pipe shall conform to ANSI A21.51 or AWWA C151, with push-on joints, Class 52, unless otherwise noted.
- Installation of pipe and manholes shall conform to the following:
 - Concrete pipe shall be installed in conformance with the standard plans (Class C, unless otherwise noted)
 - PVC pipe shall be installed in accordance with manufacturer's recommendations and shall conform to the standard plans.
 - Manholes shall conform with the standard plans.
- Manholes, cleanouts, service lateral connections, trench excavation, pipe bedding and street restoration, and appurtenances shall conform to the details shown on the standard plans. All other construction shall conform to the standard details contained in the Standard Plans For Road, Bridge and Municipal Construction.
- The contractor shall comply with the provisions of all permits issued, or easements granted to the city in conjunction with the construction of sanitary sewers. The contractor shall obtain a street cut permit for work within the city right-of-way.
- The contractor shall submit an approved traffic control plan. Inside the city this plan shall be approved by the City of Stevenson (427-5970) and outside the city it shall be approved by Skamania County (424-5141). Approval shall be obtained prior to beginning construction.

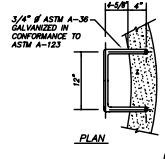


- NOTES:**
- ALL PRECAST MANHOLE RINGS AND CONES SHALL CONFORM TO ASTM C-478 WITH CAST IN STEPS. (SEE STANDARD PLAN NO. S-2.3)
 - IN OVER EXCAVATED AREAS PROVIDE SUPPORT FOR THE PIPE AS FOLLOWS: PLACE 3/4" MINUS CRUSHED ROCK OVER UNDISTURBED GROUND IN 6" LAYERS AND COMPACT USING HAND TAMPER.
 - BASE CONCRETE SHALL BE 3000 P.S.I., 2-4 IN. SLUMP. FLOW LINES AND INSIDE SUR- FACES SHALL BE TROWEL SMOOTH & UNIFORM AT TIME OF POUR. MANHOLE BASE MAY BE MONOLITHICALLY CAST TO 8" ABOVE BARREL OF MAIN SEWER.
 - CAST-IN-PLACE, MON- OLTIC MANHOLE MAY BE SUB- STITUTED WITH SPECIFIC APPROVAL OF THE ENGINEER.
 - SEE STANDARD PLAN S-2.4 FOR MANHOLE CONNECTION DETAILS.
 - JOINTS SHALL BE CONSTRUCTED SO AS TO BE WATER-TIGHT. KENT-SEAL NO. 2 OR APPROVED EQUAL SHALL BE USED ON TONGUE & GROOVE SECTIONS, AND ON RISER RINGS. PREMOULDED "O-RING" MAY BE SUBSTITUTED ON BELL & SPIGOT SECTIONS. ALL JOINTS SHALL BE GROUTED WITH PORTLAND CEMENT CONCRETE GROUT & STRUCK EVEN WITH THE WALL.
 - MANHOLES UNDER 6'-0" IN DEPTH FROM RIM TO SHELF SHALL HAVE A TOP SLAB IN LIEU OF CONE (SEE STANDARD PLAN NO. S-2.5)

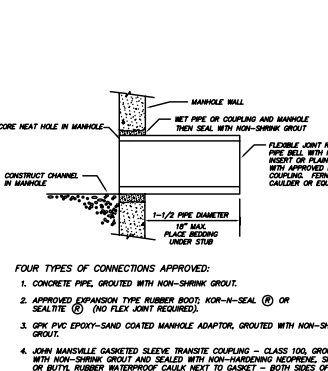
STANDARD MANHOLE FRAMES & COVERS S-2.2



- NOTES:**
- COVER & FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
 - MATERIAL SHALL BE OF GREY CAST IRON, A.S.T.M. A-48, CLASS 30.



MANHOLE STEP DETAILS S-2.3

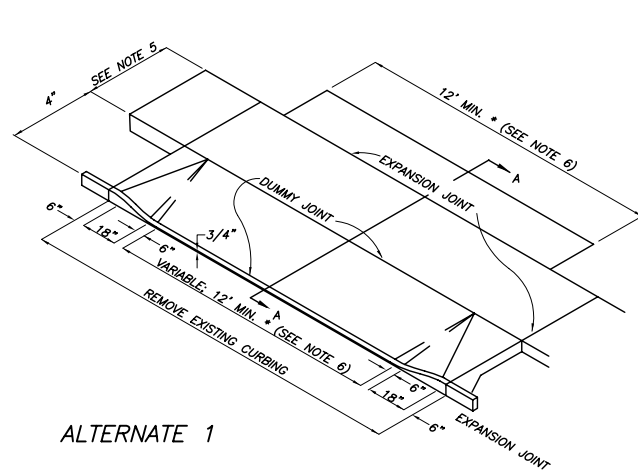


- NOTES:**
- CENTER STUB OR SLEEVE IN HOLE 1/2" GROUTED SPACE ALL AROUND. CORE HOLE 4" LARGER THAN O.D. OF STUB OR SLEEVE.
 - STANDARD GROUT WILL NOT BE ACCEPTED AS A SUBSTITUTE FOR NON-SHRINK GROUT. NON-SHRINK GROUT SHALL BE FINE STAL, SGA-32, EDC 1-3 OR AS APPROVED.
 - STUB-OUTS INSTALLED FOR FUTURE EXTENSION ARE TO BE PLUGGED AT BOTH ENDS.

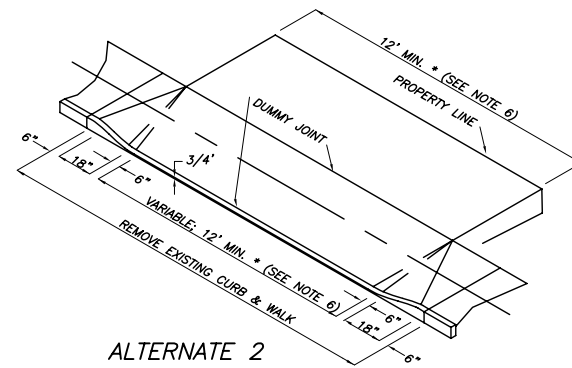
MANHOLE CONNECTION DETAILS S-2.4

By	APPR.	DATE	No.	REVISIONS	DESIGNED	SCALE
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					CHECKED	VERT.
					APPROVED	FIELD BOOK

JOB NUMBER	CITY OF STEVENSON	DRAWING NUMBER
DATE	STANDARD SEWER MAIN DETAILS	SHEET of



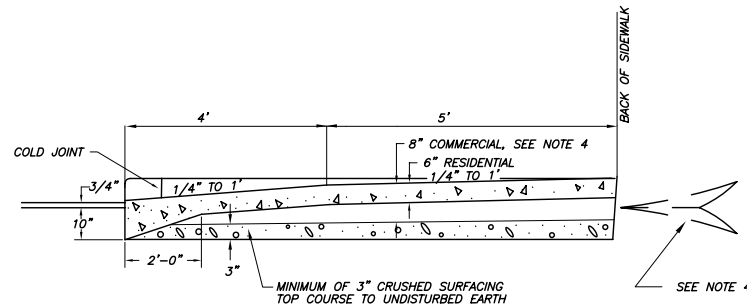
ALTERNATE 1



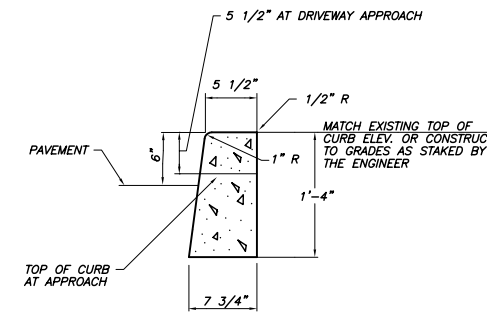
ALTERNATE 2

DRIVEWAY NOTES:

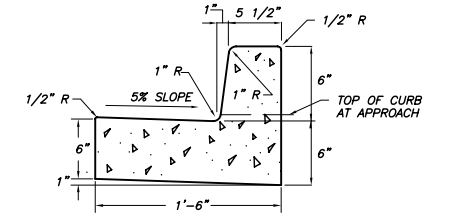
1. JOINTS: WHERE DRIVEWAY EXCEEDS 16' WIDTH, A 2" DUMMY JOINT SHALL BE PLACED LONGITUDINALLY ALONG CENTERLINE. TRANSVERSE DRIVEWAY JOINTS AS SHOWN OR DIRECTED BY ENGINEER.
2. MATERIAL & PROCEDURES SHALL BE IN ACCORDANCE WITH SECTIONS 6-02 & 8-14 OF THE STANDARD SPECIFICATIONS.
3. CONCRETE: SHALL BE CLASS B PER STANDARDS 6-02 OF THE STANDARD SPECIFICATIONS.
4. VERTICAL CURVES: SHALL NOT EXCEED A 3 1/4" HUMP OR A 2" DEPRESSION IN A 19' CHORD.
5. PLACEMENT: SEE SKAMANIA COUNTY ROAD STDS. (CCC CHAPTER 12) AND APPROVED PLAT PLANS FOR SIDEWALK LOCATIONS AND ADDITIONAL DETAILS.
6. * = 15' MIN. DRIVEWAY WIDTH ON ALL COUNT ARTERIALS.
7. COMMERCIAL DRIVEWAYS REQUIRE REINFORCING STEEL (6x6 - W 2.9 x W 2.9 WWF, MIN.)
8. CONCRETE SHALL HAVE BROOM FINISH PARALLEL TO DRIVEWAY CENTERLINE.



RESIDENTIAL/COMMERCIAL DRIVEWAY
NOT TO SCALE



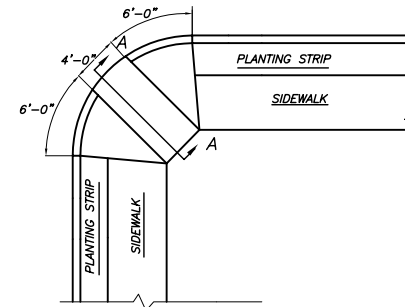
CEMENT CONCRETE CURB
NOT TO SCALE



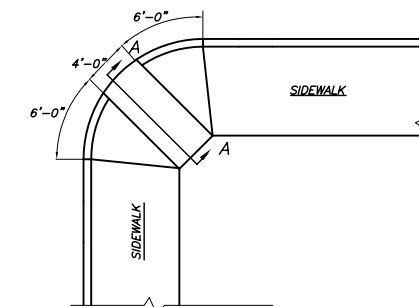
CURB & GUTTER
NOT TO SCALE

CURB NOTES:

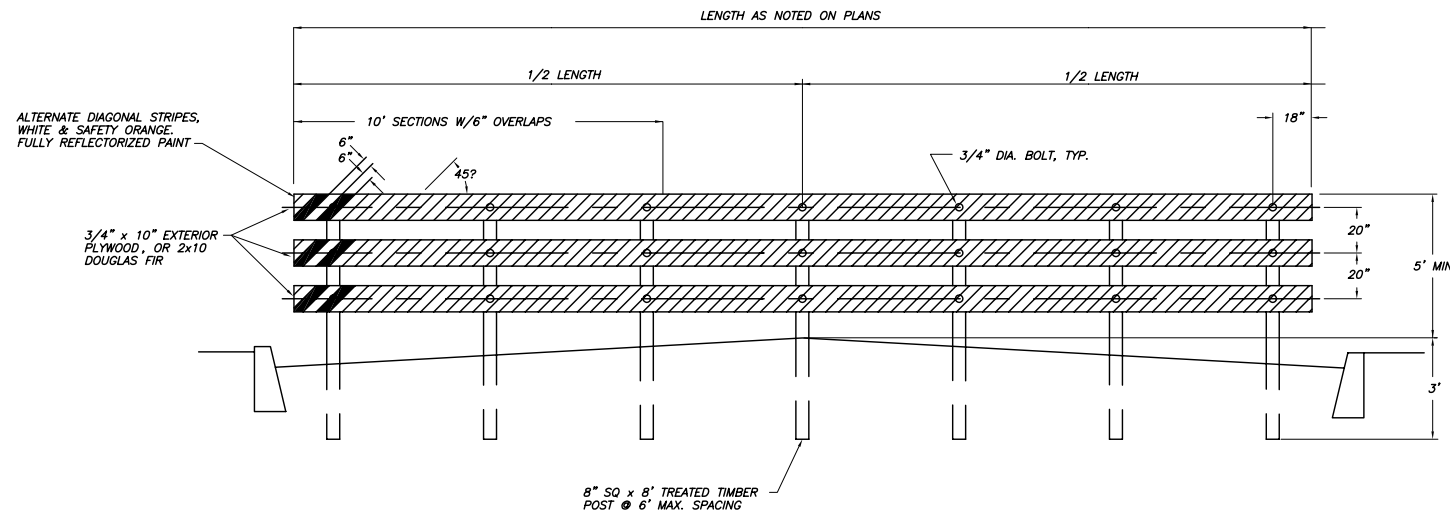
1. IF CURBS ARE CONSTRUCTED ACROSS EXISTING DRIVEWAY THEN DRIVEWAY APRON IS REQUIRED.
2. CURBS ADJACENT TO PAVEMENT OR SIDEWALK SHALL HAVE EXPANSION AND/OR CONTRACTION JOINTS TO MATCH.
3. COMPACT SUBGRADE AND AGGREGATE TO 95% OF MAXIMUM DENSITY.



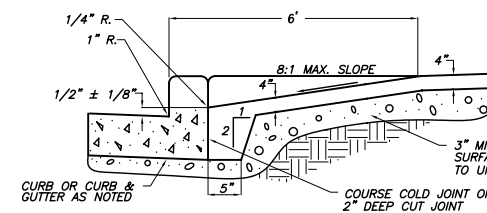
CURB RAMP
TYPE 1



CURB RAMP
TYPE 2



STANDARD STREET BARRICADE, TYPE III



SECTION A-A
CURB RAMP DETAIL
NOT TO SCALE

NOTES:

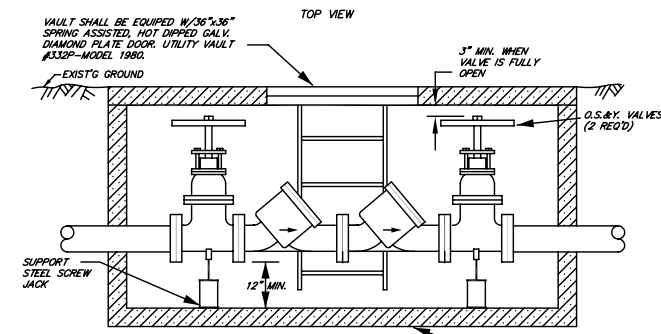
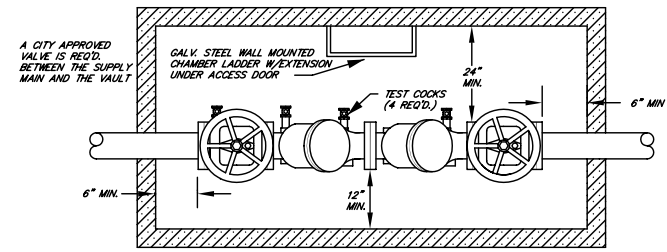
1. WHEEL CHAIR RAMP WILL BE PLACED AT ALL INTERSECTIONS REQUIRING SIDEWALKS SLOPED SURFACES SHALL BE BROOM FINISHED TO PROVIDE TEXTURED NON-SLIP TYPE SURFACE.
2. CURB RAMP SHALL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES, BUT NOT AT END OF RAMP ADJACENT TO ROADWAY PAVEMENT.

SIDEWALK NOTES:

1. CONTRACTION JOINTS (3/8" x 1/2") SHALL BE CONSTRUCTED AT 15' INTERVALS OR AS DIRECTED BY SKAMANIA COUNTY.
2. ALL UTILITY POLES, METER BOXES, AND OTHER OBSTRUCTIONS SHALL HAVE A 3/8" EXPANSION JOINT MATERIAL PLACED AROUND THEM.
3. ALL SIDEWALK EDGES SHALL HAVE A 1/4" RADIUS.

By	APPR.	DATE	No.	REVISIONS	DESIGNED	SCALE
					DRAWN	HOR.
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					APPROVED	FIELD BOOK

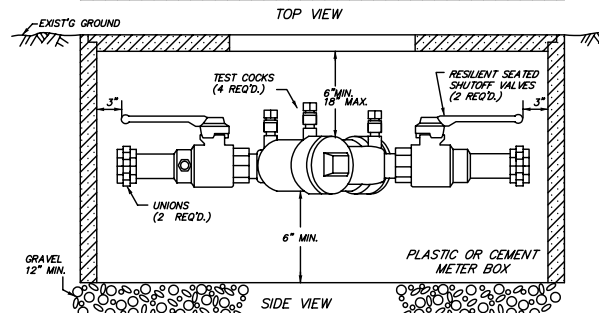
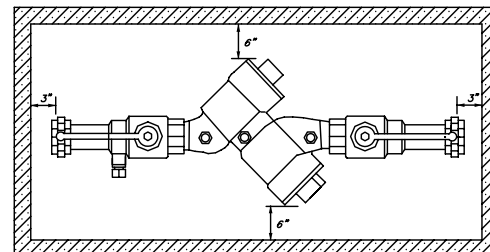
JOB NUMBER	CITY OF STEVENSON	DRAWING NUMBER
DATE	STANDARD ROAD DETAILS	SHEET of



NOTE:

- APPROVED DOUBLE CHECK VALVE ASSEMBLY TO LAY HORIZONTAL WITH THE GROUND.
- DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
- THE WATER LINE SHALL BE DISINFECTED, FLUSHED, AND PRESSURE TESTED PRIOR TO INSTALLING THE BACKFLOW ASSEMBLY. THE BACKFLOW ASSEMBLY SHALL BE PROTECTED FROM FREEZING AND FLOODING.
- THE DCVA MAY BE INSTALLED ABOVE OR BELOW GROUND PROVIDED ALL CLEARANCES ARE MET.
- ALL PIPE, VALVE, AND FITTING JOINTS, FROM THE SUPPLY MAIN, SHALL BE FLANGED AND RESTRAINED.
- FIRE DEPT. CONNECTION SHALL NOT EXIT THROUGH THE TOP OF THE VAULT.
- GROUT PIPE ENTRANCE AND EXIT, IN VAULT, WITH WATER-TITE GROUT.
- ALL VAULTS SHALL BE PRE-APPROVED PRIOR TO INSTALLATION.
- VAULTS SHALL BE INSTALLED AT PROPERTY LINE OR EASEMENT LINE AND ON OWNERS PROPERTY.
- VAULTS SHALL HAVE A MINIMUM OF 3' CLEARANCE FROM ALL STRUCTURES.
- THE BACKFLOW ASSEMBLY SHALL BE TESTED AFTER INSTALLATION AND PRIOR TO ACCEPTANCE AND ALSO YEARLY THEREAFTER BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF STEVENSON WATER DEPARTMENT.

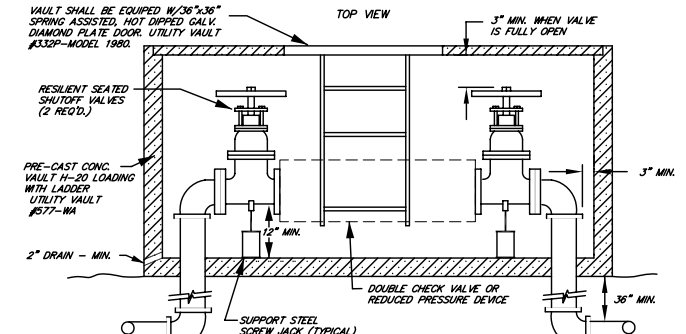
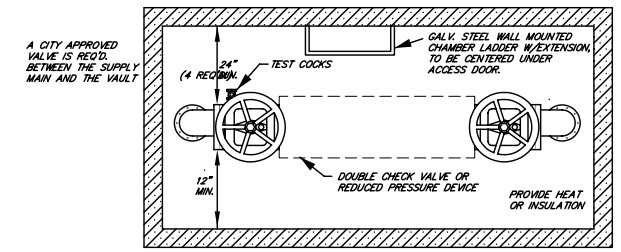
(BELOW GROUND INSTALLATION)
STANDARD DOUBLE CHECK VALVE ASSEMBLY 2 1/2" & LARGER
 N.T.S.



NOTE:

- APPROVED DOUBLE CHECK VALVE ASSEMBLY TO LAY HORIZONTAL WITH GROUND.
- DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
- TEST COCKS TO EITHER FACE OUTWARDS OR UPWARDS FROM ASSEMBLY.
- THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
- THE DCVA MAY BE INSTALLED ABOVE OR BELOW THE GROUND PROVIDED ALL CLEARANCES ARE MET.
- DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
- MUST BE PROTECTED FROM FREEZING CONDITIONS.
- THE BACKFLOW ASSEMBLY SHALL BE A STATE APPROVED MODEL.
- A PLUMBING PERMIT IS REQUIRED- PLEASE CONTACT YOUR LOCAL PLUMBING PERMIT CENTER.
- MUST BE TESTED AFTER INSTALLATION AND YEARLY THEREAFTER BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF STEVENSON WATER DEPARTMENT.

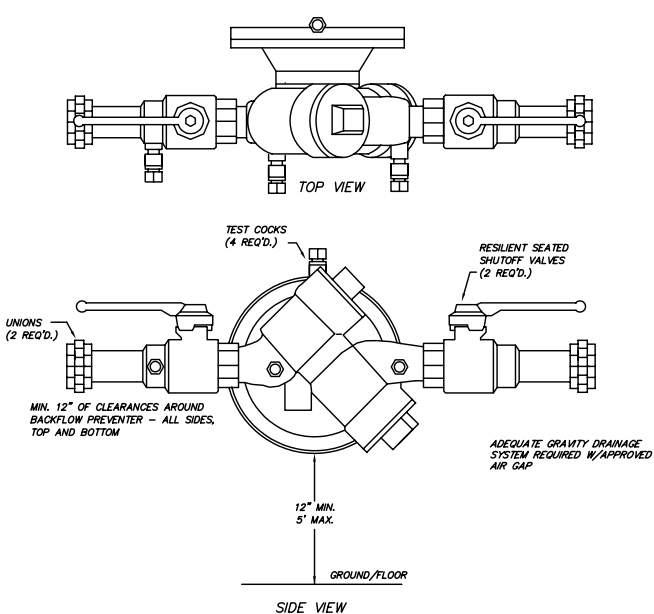
(BELOW GROUND INSTALLATION)
STANDARD DOUBLE CHECK VALVE ASSEMBLY- 2" & SMALLER
 N.T.S.



NOTE:

- APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY TO LAY HORIZONTAL ONLY.
- DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
- THE WATER LINE SHALL BE DISINFECTED, FLUSHED, AND PRESSURE TESTED PRIOR TO INSTALLING THE BACKFLOW ASSEMBLY. THE BACKFLOW ASSEMBLY SHALL BE PROTECTED FROM FREEZING AND FLOODING.
- ALL PIPE, VALVES, AND FITTING JOINTS, FROM SUPPLY MAIN, SHALL BE FLANGED AND RESTRAINED.
- FIRE DEPT. CONNECTION SHALL NOT EXIT THROUGH THE TOP OF THE VAULT.
- GROUT PIPE ENTRANCE AND EXIT, IN VAULT, WITH WATER-TITE GROUT.
- ALL VAULTS SHALL BE PRE-APPROVED PRIOR TO INSTALLATION.
- VAULTS SHALL BE INSTALLED AT PROPERTY LINE OR EASEMENT LINE AND ON OWNERS PROPERTY.
- VAULTS SHALL HAVE A MINIMUM OF 3' CLEARANCE FROM ALL STRUCTURES.
- THE BACKFLOW ASSEMBLY SHALL BE TESTED AFTER INSTALLATION AND PRIOR TO ACCEPTANCE AND ALSO YEARLY THEREAFTER BY A CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF STEVENSON WATER DEPARTMENT.

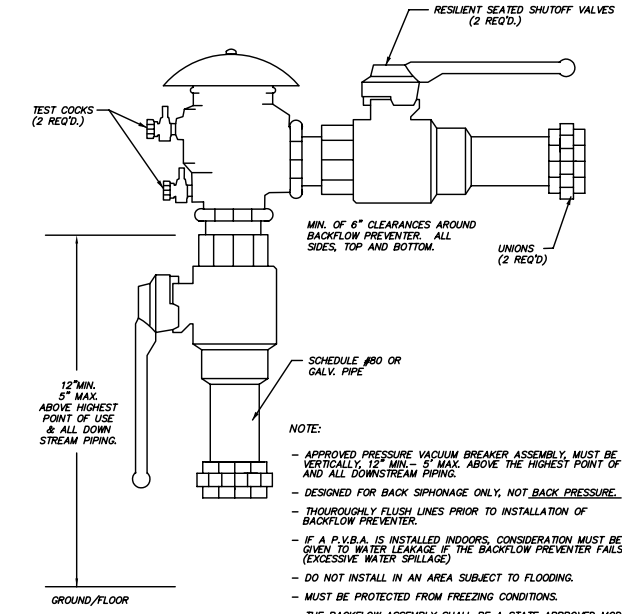
(ABOVE GROUND INSTALLATION)
STANDARD REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY OR DOUBLE CHECK VALVE ASSEMBLY 2 1/2" & LARGER
 N.T.S.



NOTE:

- APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY TO LAY HORIZONTAL ONLY.
- DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
- THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
- DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
- MUST BE INSTALLED IN AN INSULATED "HOT BOX" ENCLOSURE TO PROTECT FROM FREEZING CONDITIONS.
- THE BACKFLOW ASSEMBLY SHALL BE A STATE APPROVED MODEL.
- A PLUMBING PERMIT IS REQUIRED- PLEASE CONTACT YOUR LOCAL PLUMBING PERMIT CENTER.
- MUST BE TESTED AFTER INSTALLATION AND YEARLY THEREAFTER BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF STEVENSON WATER DEPARTMENT.

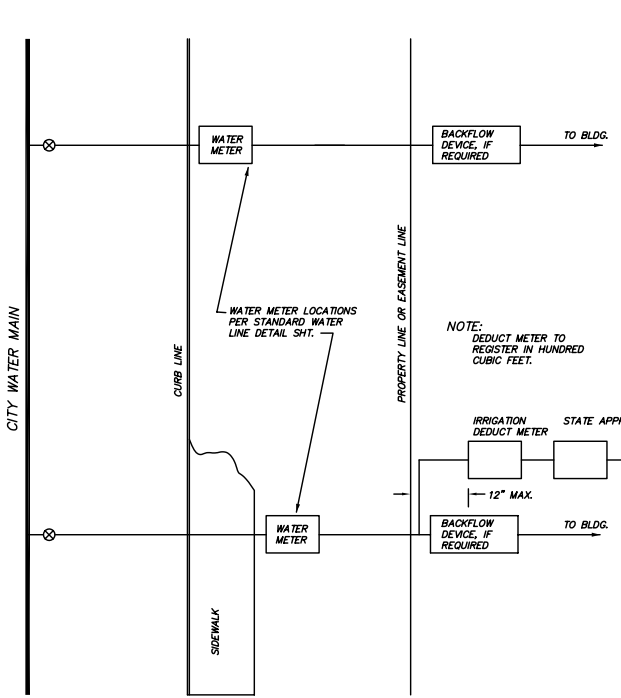
(ABOVE GROUND INSTALLATION)
STANDARD REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY- 2" & SMALLER
 N.T.S.



NOTE:

- APPROVED PRESSURE VACUUM BREAKER ASSEMBLY, MUST BE INSTALLED VERTICALLY, 12" MIN.- 5" MAX. ABOVE THE HIGHEST POINT OF USE AND ALL DOWNSTREAM PIPING.
- DESIGNED FOR BACK SIPHONAGE ONLY, NOT BACK PRESSURE.
- THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
- IF A P.V.B.A. IS INSTALLED INDOORS, CONSIDERATION MUST BE GIVEN TO WATER LEAKAGE IF THE BACKFLOW PREVENTER FAILS (EXCESSIVE WATER SPILLAGE).
- DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
- MUST BE PROTECTED FROM FREEZING CONDITIONS.
- THE BACKFLOW ASSEMBLY SHALL BE A STATE APPROVED MODEL.
- A PLUMBING PERMIT IS REQUIRED- PLEASE CONTACT YOUR LOCAL PLUMBING PERMIT CENTER.
- MUST BE TESTED AFTER INSTALLATION AND YEARLY THEREAFTER BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF STEVENSON WATER DEPT.

(ABOVE GROUND INSTALLATION)
STANDARD PRESSURE VACUUM BREAKER ASSEMBLY- 2" & SMALLER
 N.T.S.



STANDARD DEDUCT METER & BACKFLOW LOCATION
 N.T.S.

By	APPR.	DATE	No.	REVISIONS	DESIGNED	SCALE
					DRAWN	HOR.
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					APPROVED	FILE NAME

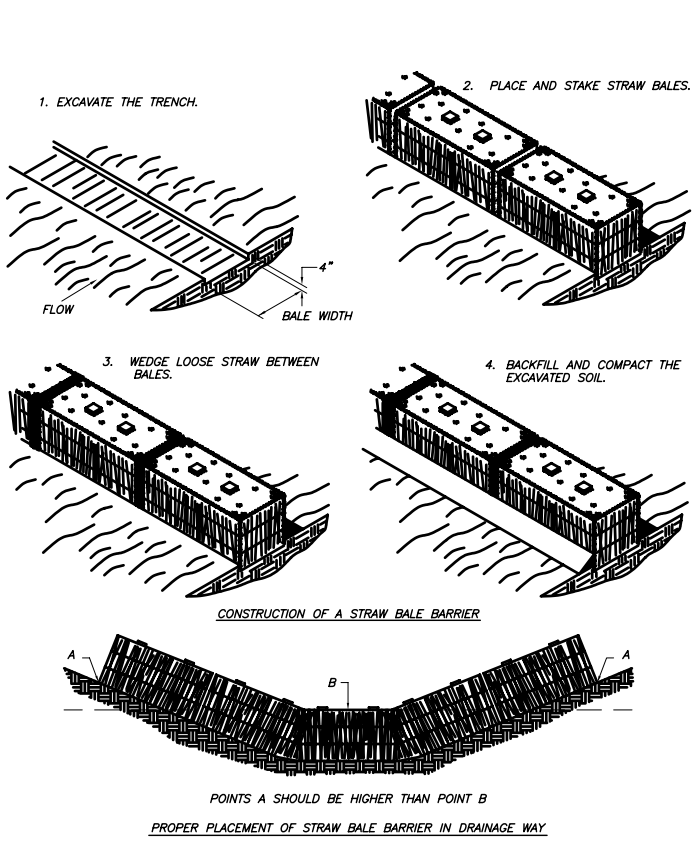
D.C.V.A. or R.P.B.A.

MAKE _____
 MODEL NO. _____
 SIZE _____

OWNER:
 NAME _____
 ADDRESS _____
 PHONE _____

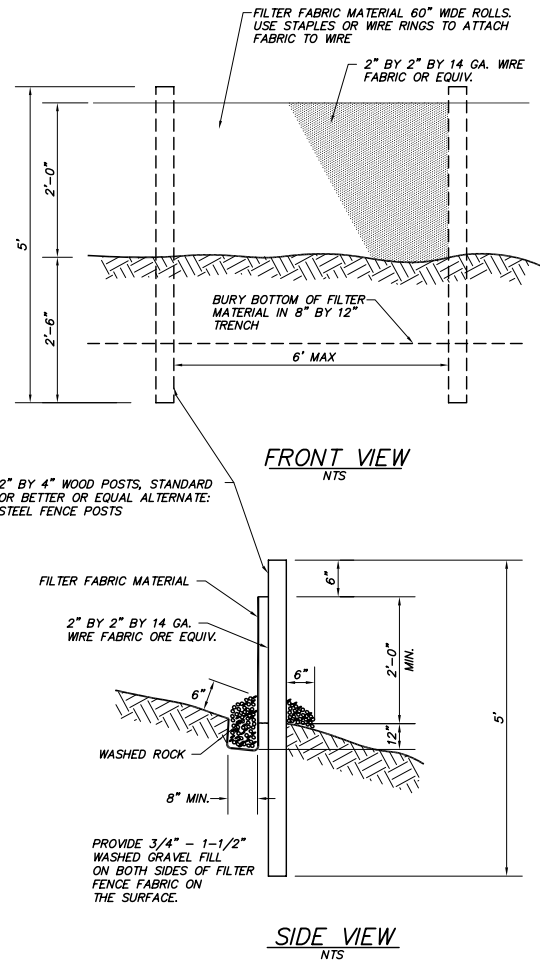
ENGINEER (CONTRACTOR):
 NAME _____
 ADDRESS _____
 PHONE _____

JOB NUMBER	CITY OF STEVENSON	DRAWING NUMBER
DATE	BACKFLOW PREVENTION DETAILS	SHEET of

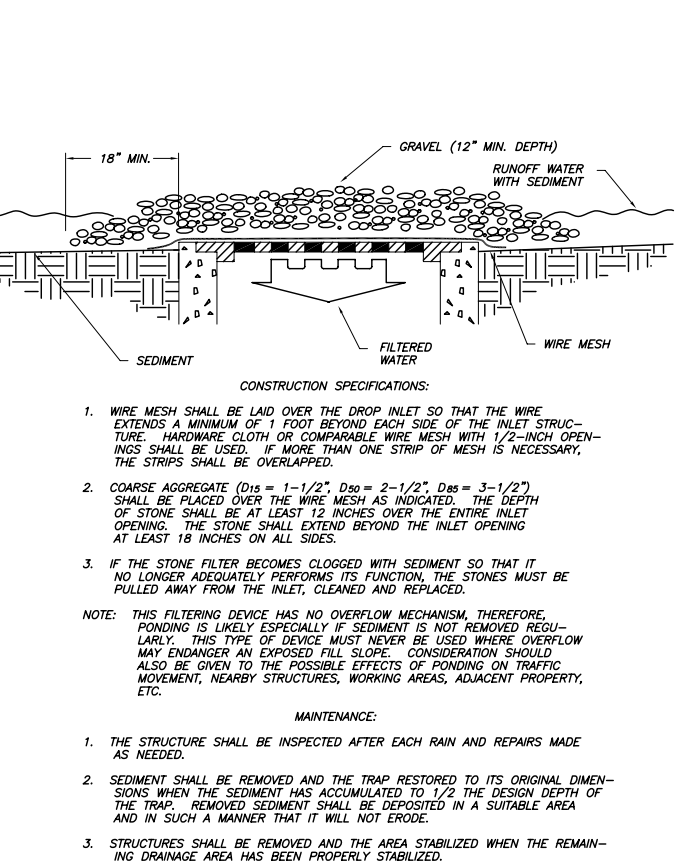


HAY BALE PLACEMENT DETAIL

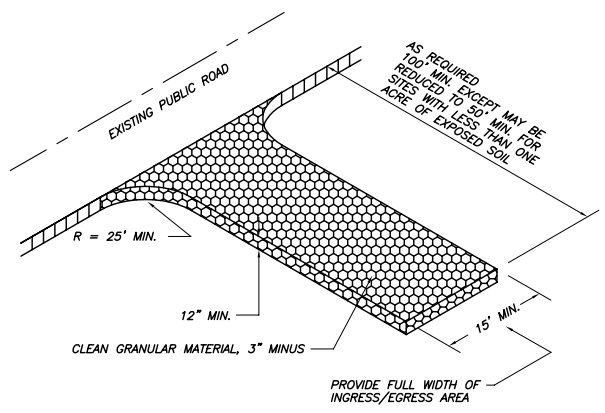
- CONSTRUCTION SPECIFICATIONS:
- SHEET FLOW APPLICATIONS
- BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE ON THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
 - ALL BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED. STRAW BALES SHALL BE INSTALLED SO THAT BINDINGS ARE ORIENTED AROUND THE SIDES, RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES (IN ORDER TO PREVENT DETERIORATION OF THE BINDINGS).
 - THE BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED AND CHINKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE BARRIER. BACKFILL SOIL SHALL CONFORM TO THE GROUND LEVEL ON THE DOWNHILL SIDE AND SHALL BE BUILT UP TO 4 INCHES AGAINST THE UPHILL SIDE OF THE BARRIER.
 - EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN THROUGH THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER. STAKES OR RE-BARS SHALL BE DRIVEN DEEP ENOUGH INTO THE GROUND TO SECURELY ANCHOR THE BALES.
 - THE GAPS BETWEEN BALES SHALL BE CHINKED (FILLED BY WEDGING) WITH STRAW TO PREVENT WATER FROM ESCAPING BETWEEN THE BALES. (LOOSE STRAW SCATTERED OVER THE AREA IMMEDIATELY UPHILL FROM A STRAW BALE BARRIER TENDS TO INCREASE BARRIER EFFICIENCY).
 - INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 - STRAW BALE BARRIERS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.
- CHANNEL FLOW APPLICATIONS
- BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE, ORIENTED PERPENDICULAR TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
 - THE REMAINING STEPS FOR INSTALLING A STRAW BALE BARRIER FOR SHEET FLOW APPLICATIONS APPLY HERE, WITH THE FOLLOWING ADDITION.
 - THE BARRIER SHALL BE EXTENDED TO SUCH A LENGTH THAT THE BOTTOMS OF THE END BALES ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE TO ASSURE THAT SEDIMENT-LADEN RUNOFF WILL FLOW EITHER THROUGH OR OVER THE BARRIER BUT NOT AROUND IT.
- MAINTENANCE:
- STRAW BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
 - CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.
 - NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
 - SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
 - ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE STRAW BALE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.



- CONSTRUCTION SPECIFICATIONS:
- SILT FENCE: THIS SEDIMENT BARRIER UTILIZES STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS. IT IS DESIGNED FOR SITUATIONS IN WHICH ONLY SHEET OR OVERLAND FLOWS ARE EXPECTED.
- THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE).
 - THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY SEALED.
 - POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 30 INCHES).
 - A TRENCH SHALL BE EXCAVATED APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
 - WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, THE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
 - THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
 - WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE OTHER PROVISIONS OF ITEM NO. 6 APPLYING.
 - THE TRENCH SHALL BE BACKFILLED WITH 3/4 INCH MINIMUM DIAMETER WASHED GRAVEL.
 - SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
- MAINTENANCE:
- SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
 - SHOULD THE FABRIC ON A SILT FENCE OF FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
 - SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
 - ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

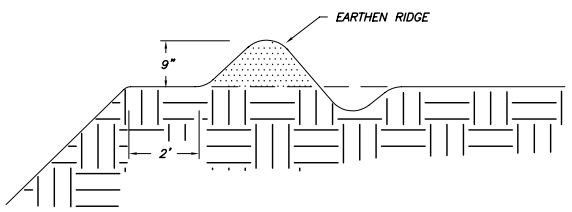


GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



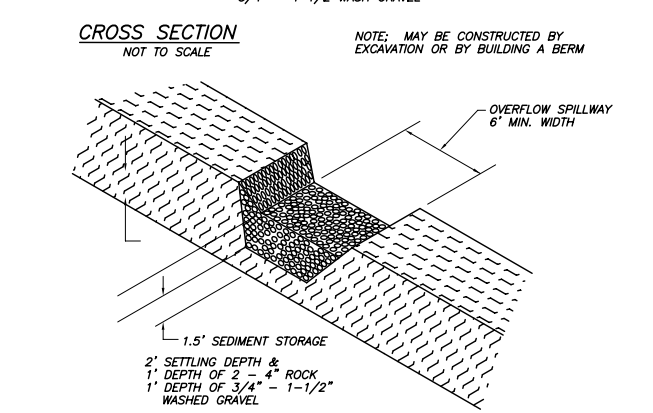
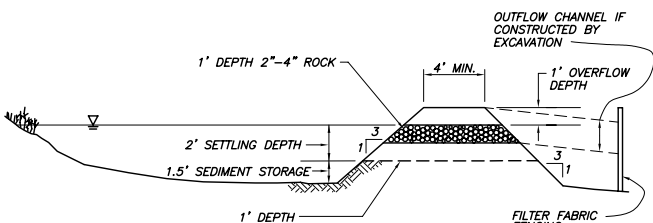
- CONSTRUCTION SPECIFICATIONS
- THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHOULD BE CONSTRUCTED ACCORDING TO SPECIFICATIONS. IF WASH RACKS ARE, THEY SHOULD BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- MAINTENANCE
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE. AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE



- CONSTRUCTION SPECIFICATIONS:
- THE DIVERSION SHALL BE CONSTRUCTED AT THE TOP OF THE FILL AT THE END OF EACH WORK DAY AS NEEDED.
 - THE DIVERSION SHALL BE LOCATED AT LEAST 2 FEET INSIDE THE TOP EDGE OF THE FILL.
 - THE SUPPORTING RIDGE OF THE LOWER SIDE SHALL BE CONSTRUCTED WITH A UNIFORM HEIGHT ALONG ITS ENTIRE LENGTH.
- MAINTENANCE:
- SINCE THE PRACTICE IS TEMPORARY AND UNDER MOST SITUATIONS WILL BE COVERED THE NEXT WORK DAY, THE MAINTENANCE REQUIRED SHOULD BE LOW. IF THE PRACTICE IS TO REMAIN IN USE FOR MORE THAN ONE DAY, AN INSPECTION WILL BE MADE AT THE END OF EACH WORK DAY AND REPAIRS MADE TO THE MEASURE IF NEEDED. THE CONTRACTOR SHOULD AVOID THE PLACEMENT OF ANY MATERIAL OVER THE STRUCTURE WHILE IT IS IN USE. CONSTRUCTION TRAFFIC SHOULD NOT BE PERMITTED TO CROSS THE DIVERSION.

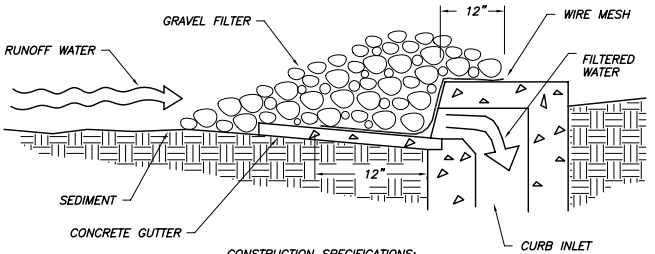
TEMPORARY FILL DIVERSION



SEDIMENT TRAP OUTLET

SILTATION POND

- CONSTRUCTION SPECIFICATIONS:
- THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. TO FACILITATE CLEANOUT, THE POOL AREA SHOULD BE CLEARED.
 - FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHOULD BE COMPACTED IN 8-INCH LAYER BY TRAVERSING WITH CONSTRUCTION EQUIPMENT.
 - THE EARTHEN EMBANKMENT SHALL BE SEED WITH TEMPORARY OR PERMANENT VEGETATION WITHIN 15 DAYS OF CONSTRUCTION.
 - CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED.
 - THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE UPSLOPE DRAINAGE AREA HAS BEEN STABILIZED.
- MAINTENANCE:
- SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN VOLUME OF THE TRAP. SEDIMENT REMOVED FROM THE BASIN SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
 - THE STRUCTURE SHOULD BE CHECKED REGULARLY TO INSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT. THE HEIGHT OF THE OUTLET SHOULD BE CHECKED TO INSURE THAT ITS CENTER IS AT LEAST ONE FOOT BELOW THE TOP OF THE EMBANKMENT.

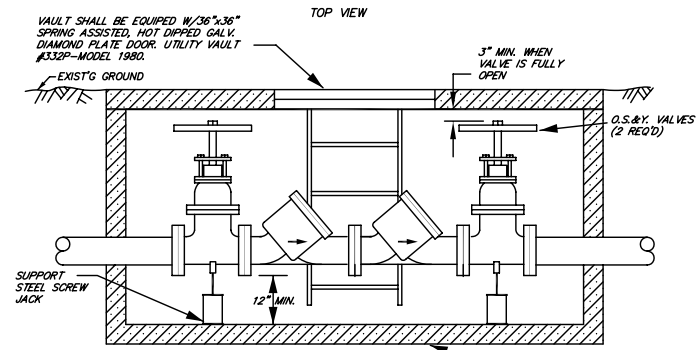
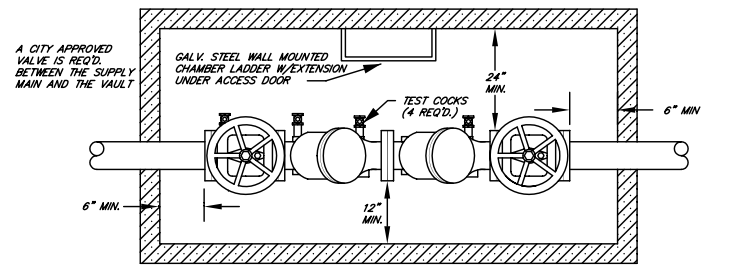


- CONSTRUCTION SPECIFICATIONS:
- HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE PLACED OVER THE CURB INLET OPENING SO THAT AT LEAST 12 INCHES OF WIRE EXTENDS ACROSS THE INLET COVER AND AT LEAST 12 INCHES OF WIRE EXTENDS ACROSS THE CONCRETE GUTTER FROM THE INLET OPENING, AS ILLUSTRATED.
 - STONE SHALL BE PILED AGAINST THE WIRE SO AS TO ANCHOR IT AGAINST THE GUTTER AND INLET COVER AND TO COVER THE INLET OPENING COMPLETELY. COARSE AGGREGATE (D₁₅ = 1-1/2", D₅₀ = 2-1/2", D₈₅ = 3-1/2") SHALL BE USED.
 - IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCK, CLEANED AND REPLACED.
- MAINTENANCE:
- THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
 - SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
 - STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

GRAVEL CURB INLET SEDIMENT FILTER

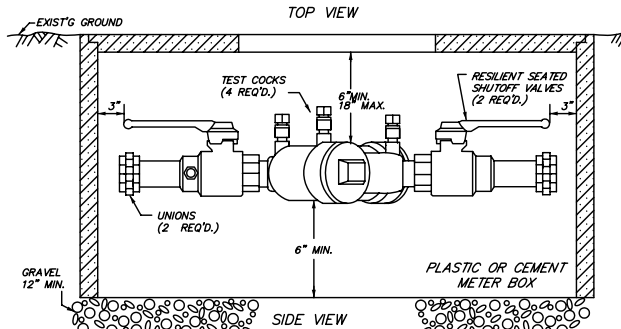
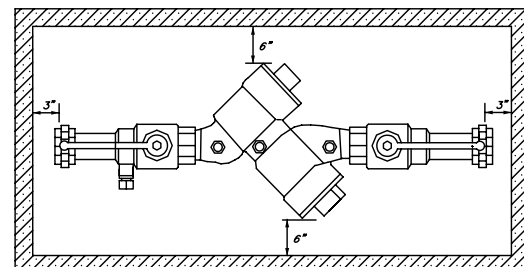
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R.J.H.		4/90	2	REVISED	CHECKED	VERT.
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					APPROVED	BFW

JOB NUMBER	CITY OF STEVENSON	DRAWING NUMBER
DATE	STANDARD EROSION CONTROL DETAILS	SHEET of



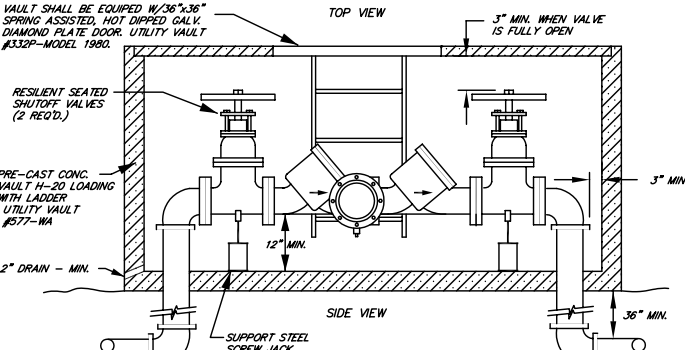
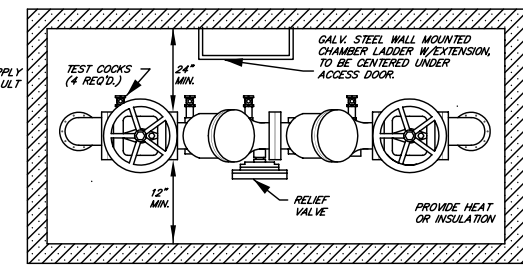
- NOTE:
- APPROVED DOUBLE CHECK VALVE ASSEMBLY TO LAY HORIZONTAL WITH THE GROUND.
 - DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
 - THE WATER LINE SHALL BE DISINFECTED, FLUSHED, AND PRESSURE TESTED PRIOR TO INSTALLING THE BACKFLOW ASSEMBLY. THE BACKFLOW ASSEMBLY SHALL BE PROTECTED FROM FREEZING AND FLOODING.
 - THE DCVA MAY BE INSTALLED ABOVE OR BELOW GROUND PROVIDED ALL CLEARANCES ARE MET.
 - ALL PIPE, VALVE, AND FITTING JOINTS, FROM THE SUPPLY MAIN, SHALL BE FLANGED AND RESTRAINED.
 - FIRE DEPT. CONNECTION SHALL NOT EXIT THROUGH THE TOP OF THE VAULT.
 - GROUT PIPE ENTRANCE AND EXIT, IN VAULT, WITH WATER-TITE GROUT.
 - ALL VAULTS SHALL BE PRE-APPROVED PRIOR TO INSTALLATION.
 - VAULTS SHALL BE INSTALLED AT PROPERTY LINE OR EASEMENT LINE AND ON OWNERS PROPERTY.
 - VAULTS SHALL HAVE A MINIMUM OF 3' CLEARANCE FROM ALL STRUCTURES.
 - THE BACKFLOW ASSEMBLY SHALL BE TESTED AFTER INSTALLATION AND PRIOR TO ACCEPTANCE AND ALSO YEARLY THEREAFTER BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF STEVENSON WATER DEPARTMENT.

(BELOW GROUND INSTALLATION)
STANDARD DOUBLE CHECK VALVE ASSEMBLY 2 1/2" & LARGER
 N.T.S.



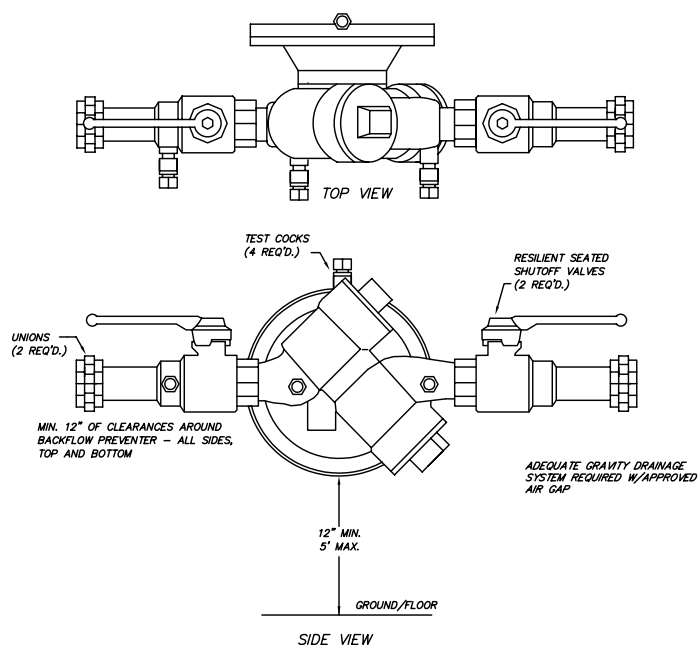
- NOTE:
- APPROVED DOUBLE CHECK VALVE ASSEMBLY TO LAY HORIZONTAL WITH GROUND.
 - DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
 - TEST COCKS TO EITHER FACE OUTWARDS OR UPWARDS FROM ASSEMBLY.
 - THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
 - THE DCVA MAY BE INSTALLED ABOVE OR BELOW THE GROUND PROVIDED ALL CLEARANCES ARE MET
 - DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
 - MUST BE PROTECTED FROM FREEZING CONDITIONS.
 - THE BACKFLOW ASSEMBLY SHALL BE A STATE APPROVED MODEL.
 - A PLUMBING PERMIT IS REQUIRED- PLEASE CONTACT YOUR LOCAL PLUMBING PERMIT CENTER.
 - MUST BE TESTED AFTER INSTALLATION AND YEARLY THEREAFTER BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF STEVENSON WATER DEPARTMENT.

(BELOW GROUND INSTALLATION)
STANDARD DOUBLE CHECK VALVE ASSEMBLY- 2" & SMALLER
 N.T.S.



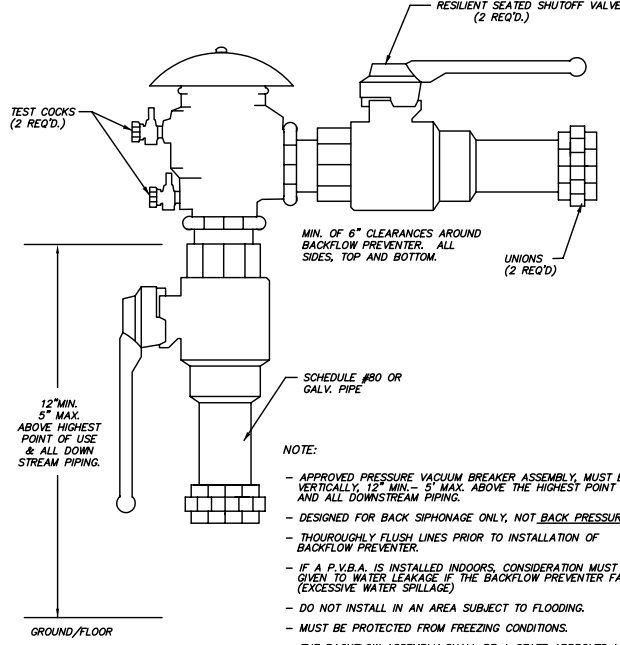
- NOTE:
- APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY TO LAY HORIZONTAL ONLY.
 - DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
 - THE WATER LINE SHALL BE DISINFECTED, FLUSHED, AND PRESSURE TESTED PRIOR TO INSTALLING THE BACKFLOW ASSEMBLY. THE BACKFLOW ASSEMBLY SHALL BE PROTECTED FROM FREEZING AND FLOODING.
 - ALL PIPE, VALVES, AND FITTING JOINTS, FROM SUPPLY MAIN, SHALL BE FLANGED AND RESTRAINED.
 - FIRE DEPT. CONNECTION SHALL NOT EXIT THROUGH THE TOP OF THE VAULT.
 - GROUT PIPE ENTRANCE AND EXIT, IN VAULT, WITH WATER-TITE GROUT.
 - ALL VAULTS SHALL BE PRE-APPROVED PRIOR TO INSTALLATION.
 - VAULTS SHALL BE INSTALLED AT PROPERTY LINE OR EASEMENT LINE AND ON OWNERS PROPERTY.
 - VAULTS SHALL HAVE A MINIMUM OF 3' CLEARANCE FROM ALL STRUCTURES.
 - THE BACKFLOW ASSEMBLY SHALL BE TESTED AFTER INSTALLATION AND PRIOR TO ACCEPTANCE AND ALSO YEARLY THEREAFTER BY A CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF STEVENSON WATER DEPARTMENT.

(ABOVE GROUND INSTALLATION)
STANDARD REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY 2 1/2" & LARGER
 N.T.S.



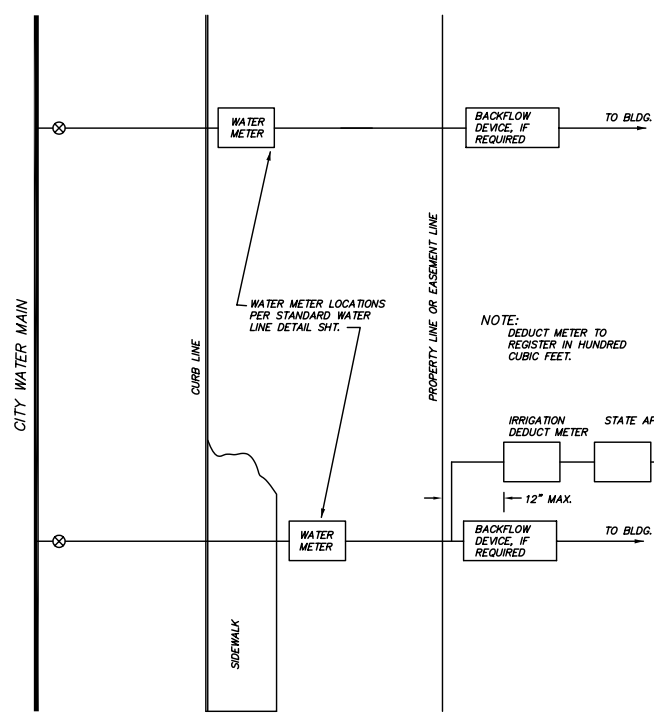
- NOTE:
- APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY TO LAY HORIZONTAL ONLY.
 - DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
 - THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
 - DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
 - MUST BE PROTECTED FROM FREEZING CONDITIONS.
 - THE BACKFLOW ASSEMBLY SHALL BE A STATE APPROVED MODEL.
 - A PLUMBING PERMIT IS REQUIRED- PLEASE CONTACT YOUR LOCAL PLUMBING PERMIT CENTER.
 - MUST BE TESTED AFTER INSTALLATION AND YEARLY THEREAFTER BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF STEVENSON WATER DEPARTMENT.

(ABOVE GROUND INSTALLATION)
STANDARD REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY- 2" & SMALLER
 N.T.S.



- NOTE:
- APPROVED PRESSURE VACUUM BREAKER ASSEMBLY, MUST BE INSTALLED VERTICALLY 12" MIN.- 5' MAX. ABOVE THE HIGHEST POINT OF USE AND ALL DOWNSTREAM PIPING.
 - DESIGNED FOR BACK SIPHONAGE ONLY, NOT BACK PRESSURE.
 - THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
 - IF A P.V.B.A. IS INSTALLED INDOORS, CONSIDERATION MUST BE GIVEN TO WATER LEAKAGE IF THE BACKFLOW PREVENTER FAILS. (EXCESSIVE WATER SPILLAGE)
 - DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
 - MUST BE PROTECTED FROM FREEZING CONDITIONS.
 - THE BACKFLOW ASSEMBLY SHALL BE A STATE APPROVED MODEL.
 - A PLUMBING PERMIT IS REQ'D.- PLEASE CONTACT YOUR LOCAL PLUMBING PERMIT CENTER.
 - MUST BE TESTED AFTER INSTALLATION AND YEARLY THEREAFTER BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY OF STEVENSON WATER DEPT.

(ABOVE GROUND INSTALLATION)
STANDARD PRESSURE VACUUM BREAKER ASSEMBLY- 2" & SMALLER
 N.T.S.



STANDARD DEDUCT METER & BACKFLOW LOCATION
 N.T.S.

D.C.V.A. or R.P.B.A.

MAKE _____
 MODEL NO. _____
 SIZE _____

OWNER:

NAME _____
 ADDRESS _____

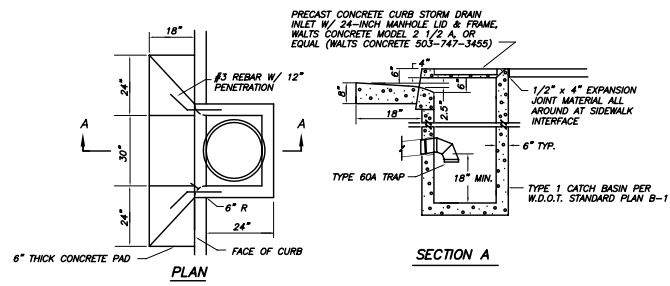
PHONE _____

ENGINEER (CONTRACTOR):

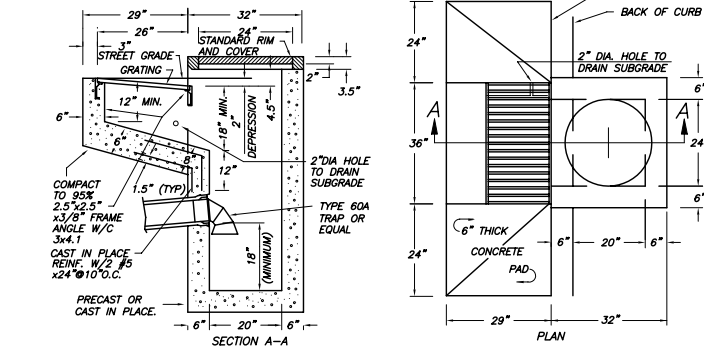
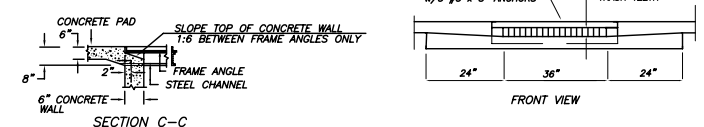
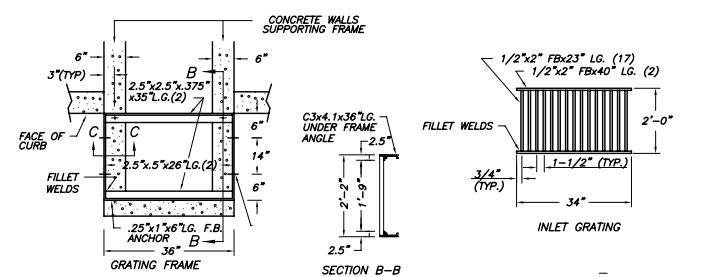
NAME _____
 ADDRESS _____
 PHONE _____

By	APPR.	DATE	No.	REVISIONS	DESIGNED	SCALE
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R.J.H.		4/90	2	REVISED		VERT.
					CHECKED	FILE
					APPROVED	NAME BFNEW

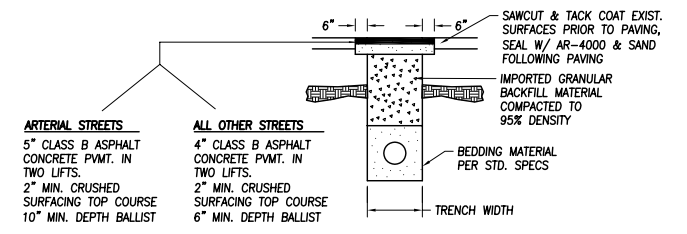
JOB NUMBER	CITY OF STEVENSON	DRAWING NUMBER
	BACKFLOW PREVENTION DETAILS	
DATE		SHEET of



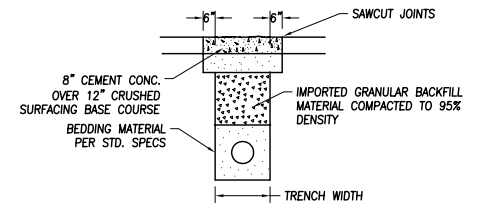
CURB INLET, TYPE 1
NOT TO SCALE



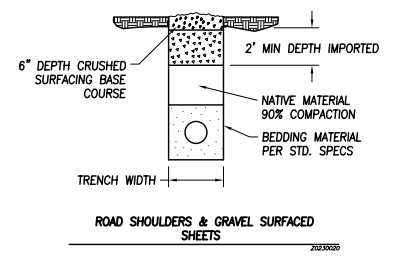
COMBINATION CURB INLET
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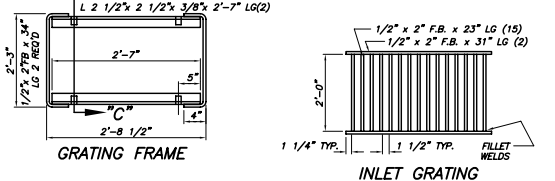
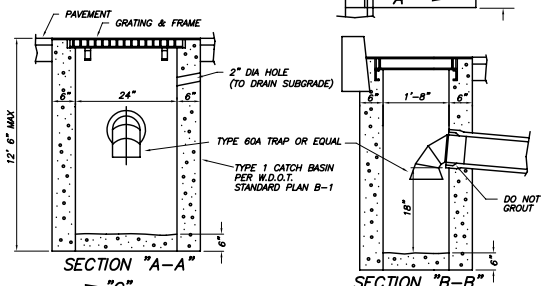
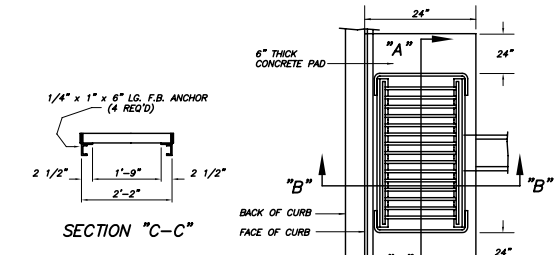
BITUMINOUS PAVED STREETS
NTS



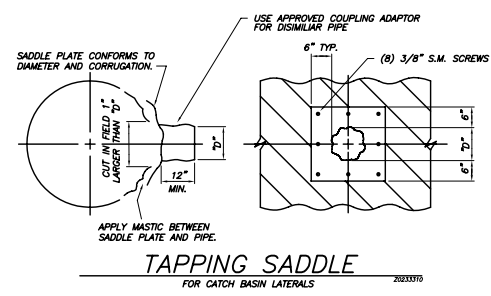
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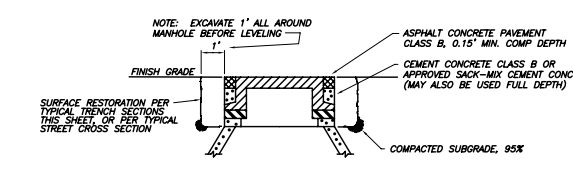
TYPICAL TRENCH SECTIONS
NTS



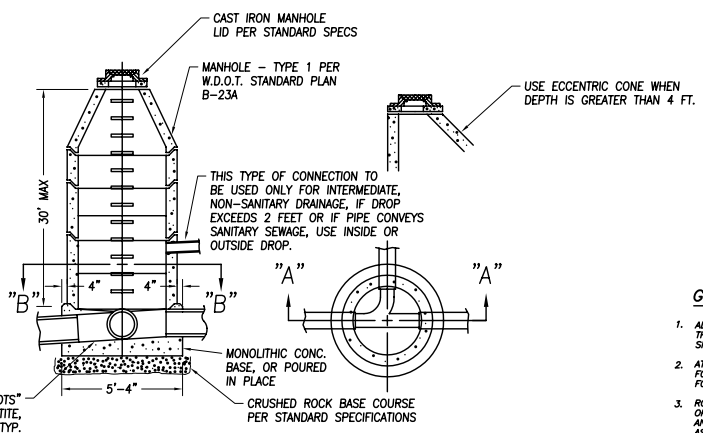
STANDARD CATCH BASIN
NOT TO SCALE



TAPPING SADDLE
FOR CATCH BASIN LATERALS



MANHOLE LID ADJUSTMENT FOR FACILITIES IN ROADWAY
NOT TO SCALE



STANDARD MANHOLE
NTS

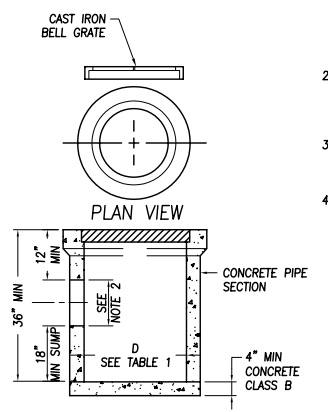
GENERAL NOTES:

- ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE WDOT/APWA STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION.
- AT LEAST 48 HOURS PRIOR TO UNDERGROUND WORK, CALL FOR UTILITY LOCATES. SEE SITE TOPOGRAPHY PLAN FOR APPROXIMATE UTILITY LOCATIONS.
- ROOF DRAIN PIPES SHALL BE SCHED. 40 PVC LAYED AT MIN. 1% SLOPE WITH MINIMUM OF 2 FOOT COVER. ROOF DRAINS TERMINATED AT VACANT LOTS SHALL BE PLUGGED AND MARKED WITH 2x4. ROOF DRAIN LOCATIONS SHOWN ON DRAINAGE PLAN ARE ASSUMED. VERIFY WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.

ALLOWABLE STRUCTURES AND PIPE SIZES

CATCH BASIN TYPE ⁽¹⁾	MAXIMUM PIPE DIAMETER	
	COMP. SPIRAL RIB CREP, HDPE, PVC	CONCRETE AND DUCTILE IRON
INLET ⁽²⁾	12"	12"
TYPE 1 ⁽³⁾	18"	12"
TYPE 1E ⁽³⁾	24"	18"
TYPE 2-48-INCH DIA.	30"	24"
TYPE 2-54-INCH DIA.	36"	30"
TYPE 2-72-INCH DIA.	54"	48"
TYPE 2-96-INCH DIA.	72"	72"
STD. MANHOLE DIA.		
48 INCH DIA.	30"	24"
60 INCH DIA.	36"	30"
72 INCH DIA.	54"	48"

- CATCH BASINS, INCLUDING MANHOLE STEPS, LADDERS, AND HANDHOLDS SHALL CONFORM TO SKAMANIA COUNTY ROAD STANDARDS.
- GENERALLY THESE PIPE MATERIALS WILL BE ONE SIZE LARGER THAN CONCRETE DUE TO SIMILAR WALL THICKNESS. HOWEVER, FOR ANGLED CONNECTIONS OR THOSE WITH SEVERAL PIPES ON THE SAME PLANE, THIS WILL NOT APPLY.
- MAXIMUM 5 VERTICAL FEET ALLOWED BETWEEN GRADE AND INVERT ELEVATION.
- NORMALLY ALLOWED ONLY FOR USE IN PRIVATELY MAINTAINED DRAINAGE SYSTEMS AND MUST DISCHARGE TO A C.B. IMMEDIATELY DOWNSTREAM.



AREA INLET
NTS

TABLE 1

OUTLET PIPE DIA (D)	INLET DIA (D)
6"	12"
8"	18"
12"	24"

TRENCHING NOTES:

- SEE SKAMANIA COUNTY UTILITY PERMIT FOR ADDITIONAL TRENCH BACKFILL AND SURFACING REQUIREMENTS.
- ALL BACKFILL SHALL BE MECHANICALLY COMPACTED IN LIFTS WHICH DO NOT EXCEED RATED CAPABILITY OF EQUIPMENT USED, BUT IN NO CASE EXCEED 12" LOOSE.
- NATIVE MATERIAL MAY BE SUBSTITUTED FOR IMPORTED GRANULAR MATERIAL PROVIDED IT MEETS REQUIREMENTS OF SECTION 9-30.7(3) OF THE STANDARD SPECIFICATIONS.

NOTES:

- AREA INLETS TO BE CONSTRUCTED FROM CONCRETE PIPE, IN ACCORDANCE WITH ASTM C 14 UNLESS OTHERWISE SHOWN ON THE PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
- CUTOUT HOLE SIZE IS EQUAL TO OUTLET PIPE OUTSIDE DIAMETER PLUS AREA INLET WALL THICKNESS. INSTALL TYPE 60A TRAP OR APPROVED EQUAL.
- CONNECTION TO OUTLET PIPE TO BE MORTARED AND MADE FLUSH WITH INSIDE OF THE AREA INLET WALL.
- CAST IRON BELL GRATE SHALL MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621D. THE GRATE SHALL HAVE SLOTS (HOLES) THAT CONSTITUTE 50% OPEN AREA FOR DRAINAGE. INLET BELL SURFACE SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.

By	APPR.	DATE	No.	REVISIONS	DESIGNED	HOR.	SCALE
R.J.H.		4/30	1	REVISED			
R.J.H.		4/30	2	REVISED			

JOB NUMBER	CITY OF STEVENSON	DRAWING NUMBER
DATE	STANDARD DRAINAGE DETAILS	SHEET of