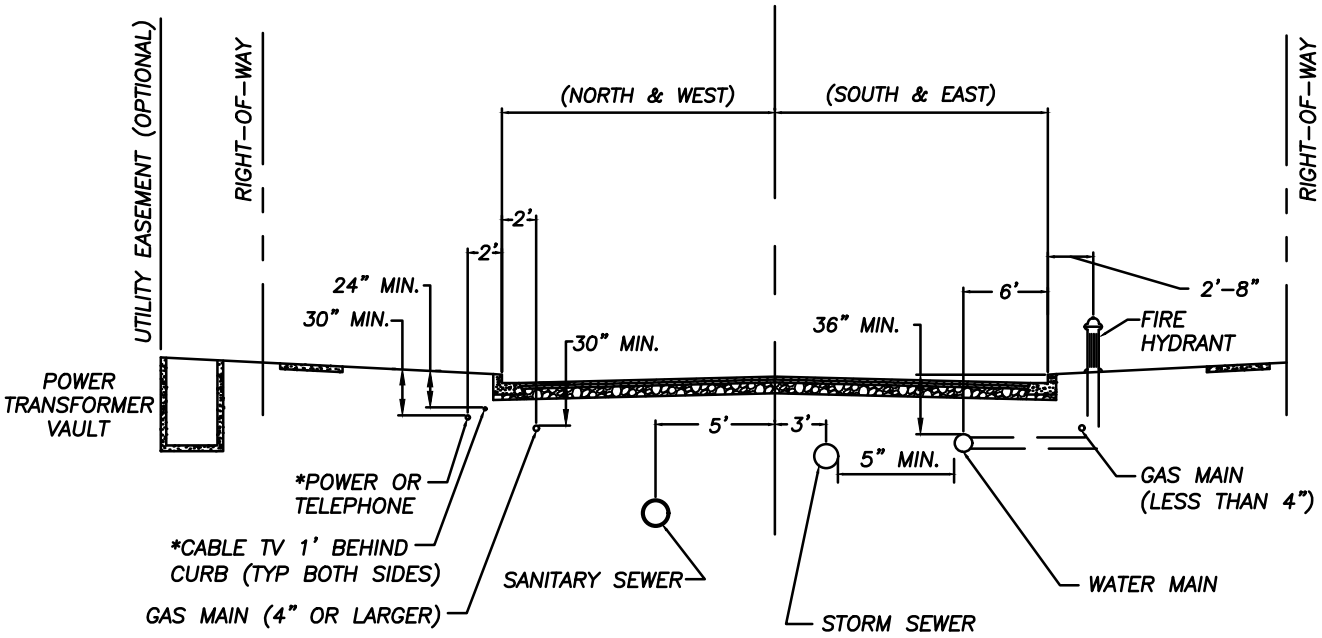
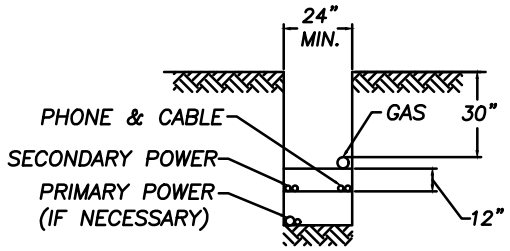
ENGINEERING STANDARDS FOR PUBLIC WORKS CONSTRUCTION

APPENDIX A

Engineering Standard Details and Street Tree Selection

Approved by Ridgefield City Council, Resolution 655
October 10, 2024





JOINT TRENCH DETAIL (OPTIONAL)

NOTES:

1. LOCATIONS SHOWN ARE TYPICAL. ON STREETS WITH CENTER TURN LANES OR MEDIANS, THE LOCATION OF THE SEWER OR STORM LINES MAY BE ADJUSTED TO KEEP MANHOLES OUT OF MEDIANS AND MANHOLES CONES ARE TO BE ROTATED TO KEEP MANHOLE COVER LOCATED OUTSIDE OF WHEEL PATH.

2. ANY VARIATION FROM THIS DESIGN MUST BE APPROVED BY THE CITY ENGINEER.

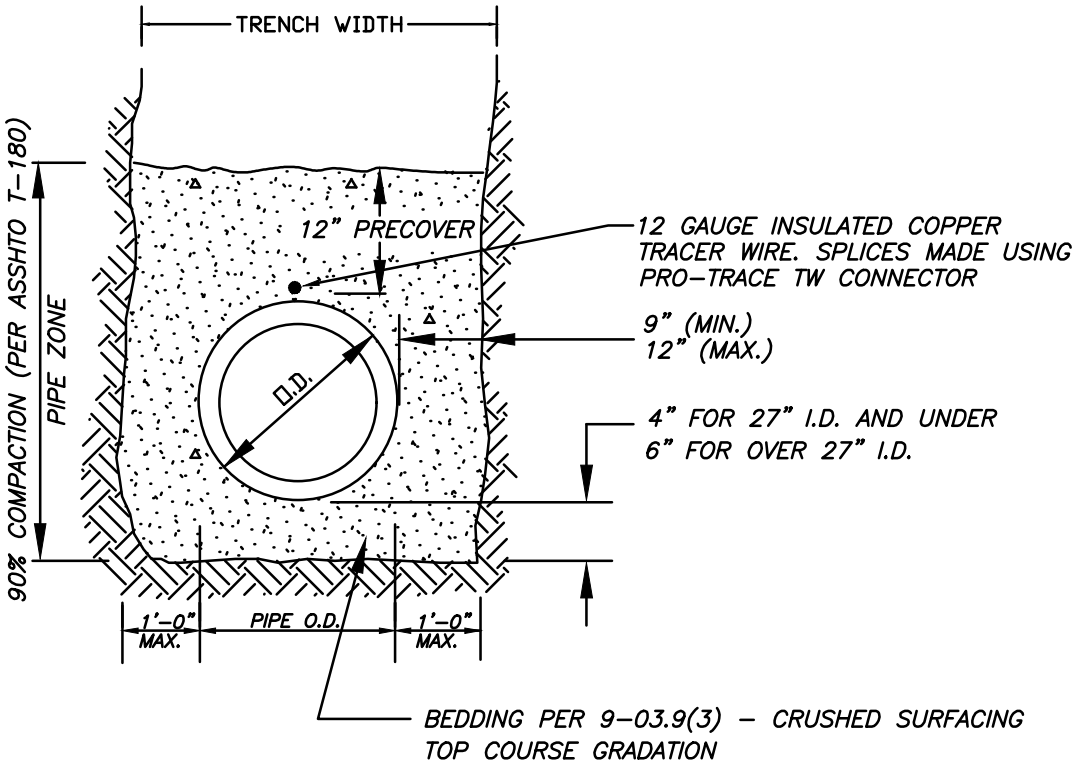
3. FRANCHISE UTILITIES – IF SIX FOOT UTILITY EASEMENT IS PRESENT ALONG PROPERTY FRONTAGE, PLACEMENT SHALL BE AT BACK OF SIDEWALK WITHIN UTILITY EASEMENT. ALTERNATE LOCATIONS CONSIDERED ONLY TO SALVAGE CORE ROADWAY, OR TO AVOID SUBSTANTIAL CONFLICT WITH EXISTING UTILITIES. GAS VALVES ARE TO BE LOCATED 2' MIN. FROM FACE OF CURB.

MINIMUM COVER:

GAS – 30"
CABLE TV – 24" IN STREET
18" IN SIDEWALK–EXISTING SUBDIVISION
ALL OTHERS – 36"

REV. 2/26/08 SCH

UNDERGROUND UTILITY LOCATIONS



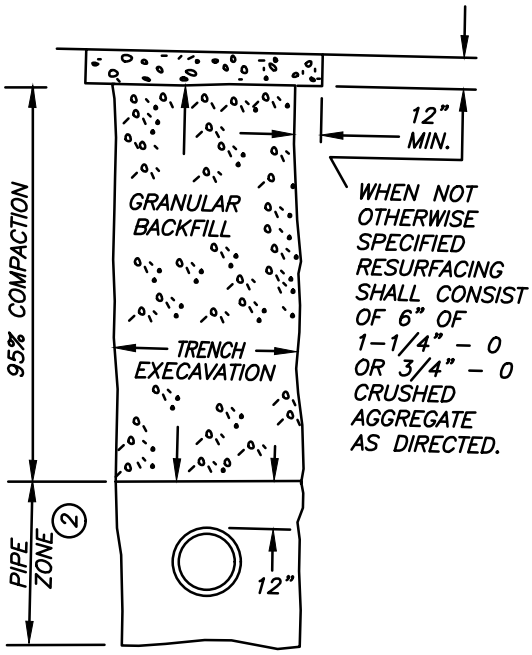
NOTES:

1. 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.
2. BEDDING AND BACKFILL MATERIALS IN THE PIPE ZONE SHALL BE COMPACTED AS SPECIFIED PRIOR TO BACK-FILLING THE REMAINDER OF THE TRENCH.
3. FOR ROCK AND OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVEREXCAVATED A MINIMUM OF 6" AND REFILLED WITH GRANULAR MATERIALS AS DIRECTED BY THE ENGINEER.
4. BACKFILL AND COMPACTION ABOVE THE PIPE ZONE SHALL BE AS SHOWN IN STANDARD PLAN NO. G-1.3.
5. CITY WATER LINE SHALL HAVE 36" MINIMUM COVER FROM TOP OF PIPE TO FINISHED GRADE.

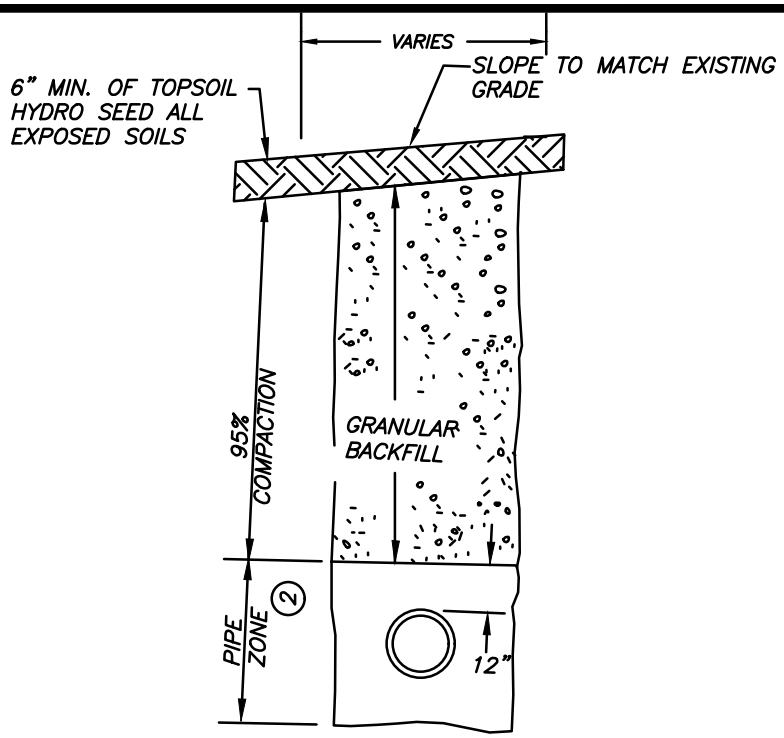
REV. 4/7/17 BGK

STANDARD PIPE BEDDING

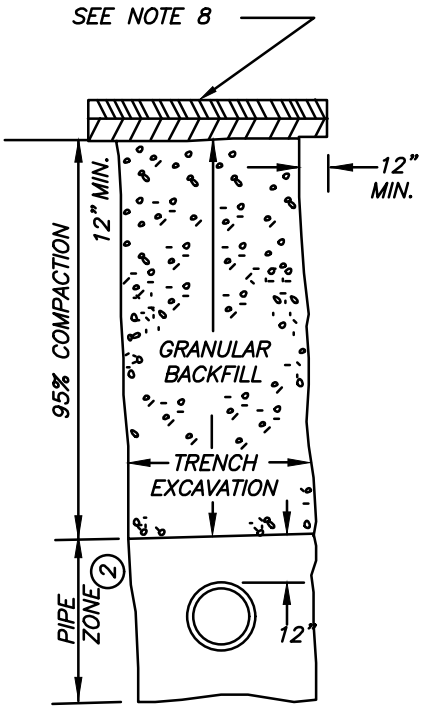
STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **G-1.2**



GRAVEL STREET OR SHOULDER



UNIMPROVED AREAS



PAVED SURFACED

NOTES:

1. SEE WSDOT SPECIFICATION FOR COMPACTION REQUIRMENTS. COMPACTION PERCENTAGES REFER TO MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR (AASHTO T-180)
2. FOR PIPE ZONE BEDDING AND COMPACTION REQUIREMENTS, SEE STD. PLAN NO. G-1.2
3. CONTRACTOR MAY USE UP TO 2-1/2" DEPTH OF 5/8"-0 OR 3/4" - 0 CRUSHED AGGREGATE IN LIEU OF 1-1/4" - 0 BASE ROCK UNDER SURFACING FOR LEVELING COURSE.
4. ALL EXISTING PAVED SURFACES SHALL BE SAW CUT A MINIMUM OF 12" OUTSIDE OF EDGE OF TRENCH TO PROVIDE A NEAT STRAIGHT EDGE.
5. THE EDGES OF ALL EXISTING ASPHALT SURFACES SHALL BE CLEANED AND A TACK COAT SHALL BE APPLIED PER STD. SPEC. SECTION 5-04.3(5)A. ALL JOINTS SHALL BE SEALED WITH AR-4000 AND SANDED.
6. ALL BACKFILL SHALL BE MECHANICALLY COMPACTED IN LIFTS WHICH DO NOT EXCEED RATED CAPABILITY OF EQUIPMENT USED, BUT IN NO CASE EXCEED 12" LOOSE.
7. GRANULAR BACKFILL SHALL BE CRUSHED SURFACING IN ACCORDANCE WITH WSDOT SECTION 9-03.9(3) BASE COURSE GRADATION.
8. CLASS ½", PG 58-22 SUPERPAVE, ASPHALT SHALL BE PLACED IN 2 LIFTS, 5" DEPTH FOR ARTERIALS, 4" DEPTH FOR COLLECTOR & RESIDENTIAL STREETS.
9. FOR UTILITIES INSTALLED WITHIN THE TRAVEL LANE AND PARALLEL WITH THE CENTERLINE OF THE ROAD, A HALF STREET GRIND AND OVERLAY SHALL BE REQUIRED

REV. 08/01/24 CPG

TYPICAL TRENCH SECTIONS

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **G-1.3**

GENERAL WATER NOTES:

1. ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE "CITY OF RIDGEFIELD ENGINEERING STANDARDS FOR PUBLIC WORKS CONSTRUCTION" AND THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND MUNICIPAL CONSTRUCTION" HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS" PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION, EXCEPT AS NOTED HEREIN OR ON THE STANDARD PLANS. ALL REFERENCES TO AWWA AND/OR APWA SPECIFICATIONS SHALL MEAN THEIR LATEST REVISION.

2. ALL WATER LINE CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF RIDGEFIELD, PRIOR TO COVER. ALL TESTING SHALL BE APPROVED PRIOR TO PAVING. THE CONTRACTOR SHALL NOTIFY THE CITY DEVELOPMENT INSPECTOR AT LEAST 48 HOURS PRIOR TO THE START OF CONSTUCTION. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO THE BEGINNING OF CONSTRUCTION.

3. ALL PIPES FURNISHED SHALL BE NEW, AND CONFORM TO THE REQUIREMENTS OF AWWA DI CL52.

4. A TRAFFIC CONTROL PLAN IS REQUIRED PRIOR TO CONSTRUCTION WITHIN A CITY RIGHT-OF-WAY.

5. WHERE EXISTING SERVICE MUST BE INTERRUPTED, THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY AND NOTIFY ALL CUSTOMERS AFFECTED AS TO THE DATE AND DURATION OF THE INTERRUPTION. NOTIFICATION MUST BE DONE TWO (2) WORKING DAYS IN ADVANCE OF INTERRUPTION. THE CONTRACTOR SHALL SCHEDULE CONSTRUCTION TO PROVIDE MINIMUM INTERRUPTION OF SERVICES AS DETERMINED BY THE INSPECTOR. UNDER NO CIRCUMSTANCES SHALL A CONTRACTOR SCHEDULE A WATER MAIN SHUT-DOWN WITHOUT THE REQUIRED 48 HOUR NOTICE. THE CONTRACTOR SHALL NOT OPERATE THE CITY'S WATER FACILITIES WITHOUT APPROVAL FROM THE CONSTRUCTION INSPECTOR.

6. WHEN EXTENDING AN EXISTING LINE THE CONTRACTOR IS REQUIRED MAINTAIN PHYSICAL SEPARATION BETWEEN THE EXISTING AND NEW SYSTEM UNTIL THE NEW SYSTEM HAS BEEN TESTED AND DISINFECTED.. AFTER PASSING TESTS THE FITTINGS AND PIPE USED FOR THE CONNECTION TO THE EXISTING SYSTEM MUST BE WETTED WITH A CHLORINE SOLUTION UNDER INSPECTON OF CITY STAFF.

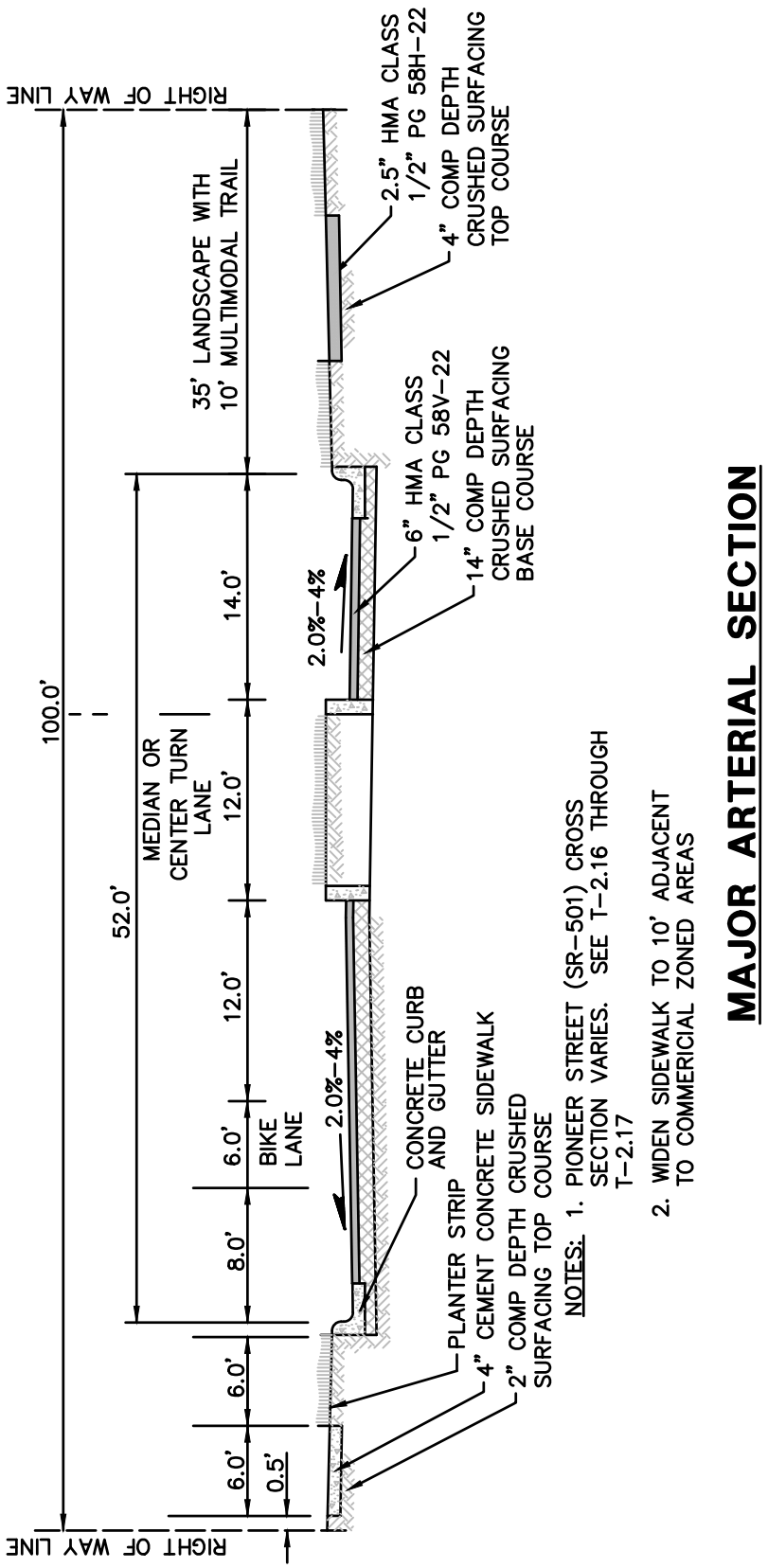
WATER METERS:

7. ALL WATER METERS WILL BE FURNISHED AND INSTALLED BY THE CITY.

REV 08/01/24 CPG

GENERAL WATER NOTES

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **G-4.1**



NOTES: 1. PIONEER STREET (SR-501) CROSS SECTION VARIES. SEE T-2.16 THROUGH T-2.17

2. WIDEN SIDEWALK TO 10' ADJACENT TO COMMERICIAL ZONED AREAS

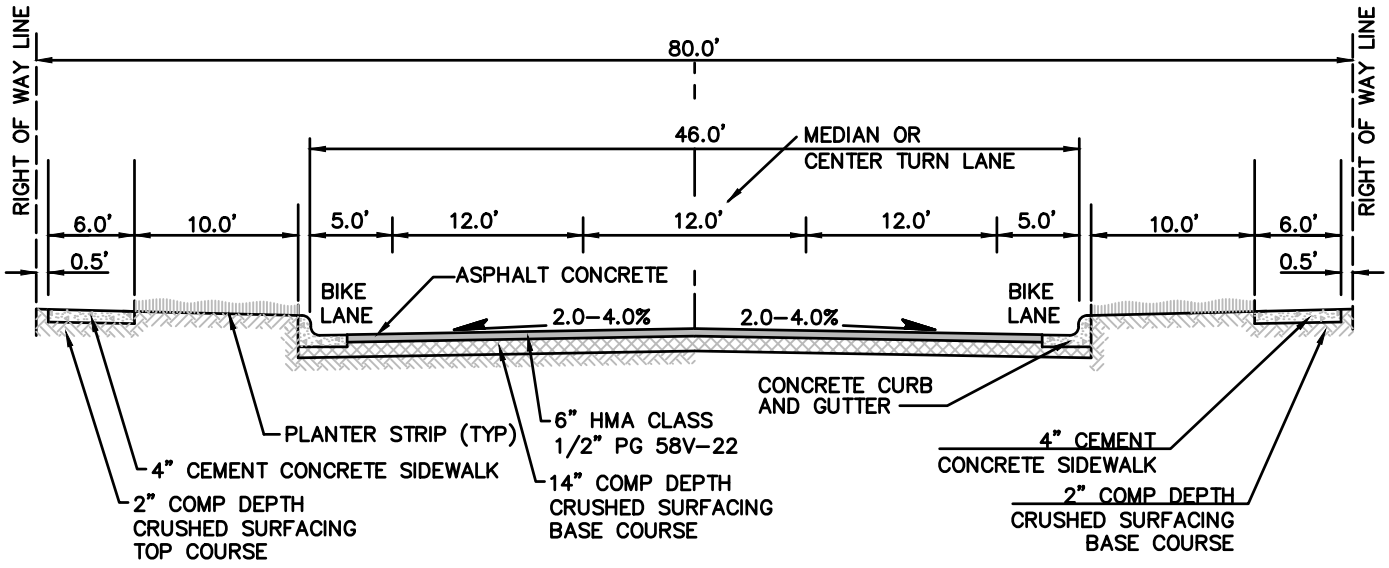
MAJOR ARTERIAL SECTION

NOT TO SCALE

REV. 08/01/24 CPG

MAJOR ARTERIAL SECTION

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **T - 2.1**



NOTE: WIDEN SIDEWALK TO 10'
ADJACENT TO COMMERCIAL
ZONED AREAS

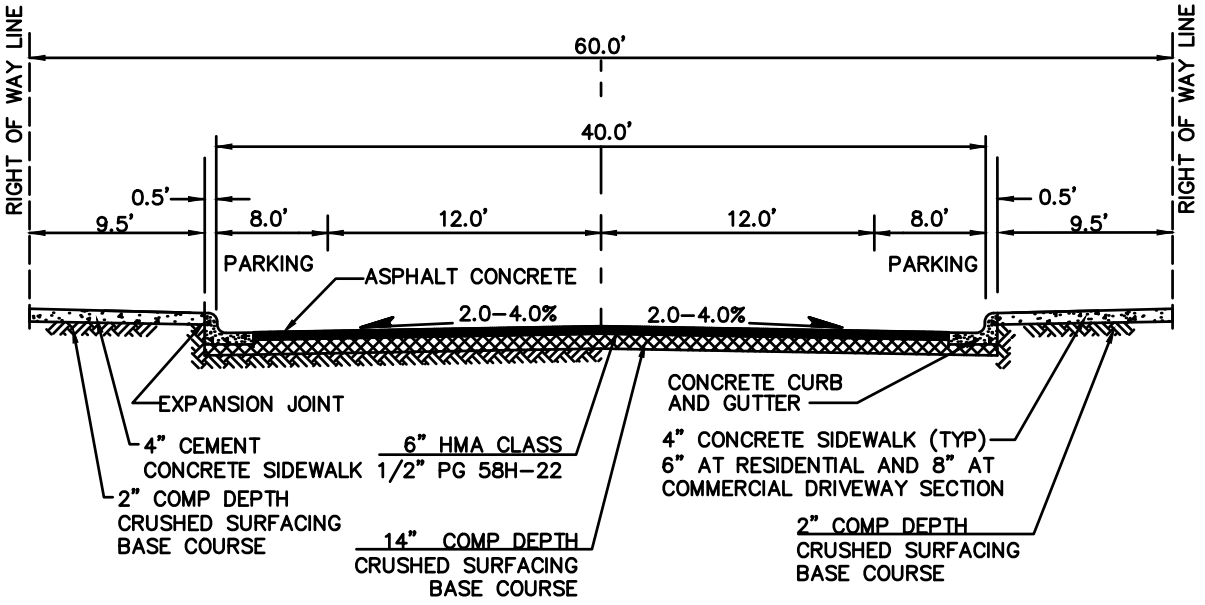
MINOR ARTERIAL SECTION

NOT TO SCALE

REV. 08/01/24 CPG

MINOR ARTERIAL SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 2.2



NOTES: TREE WELLS SHALL BE INSTALLED IN SIDEWALK AT 25' O.C OR AS DIRECTED BY PUBLIC WORKS DIRECTOR OR COMMUNITY DEVELOPMENT DIRECTOR

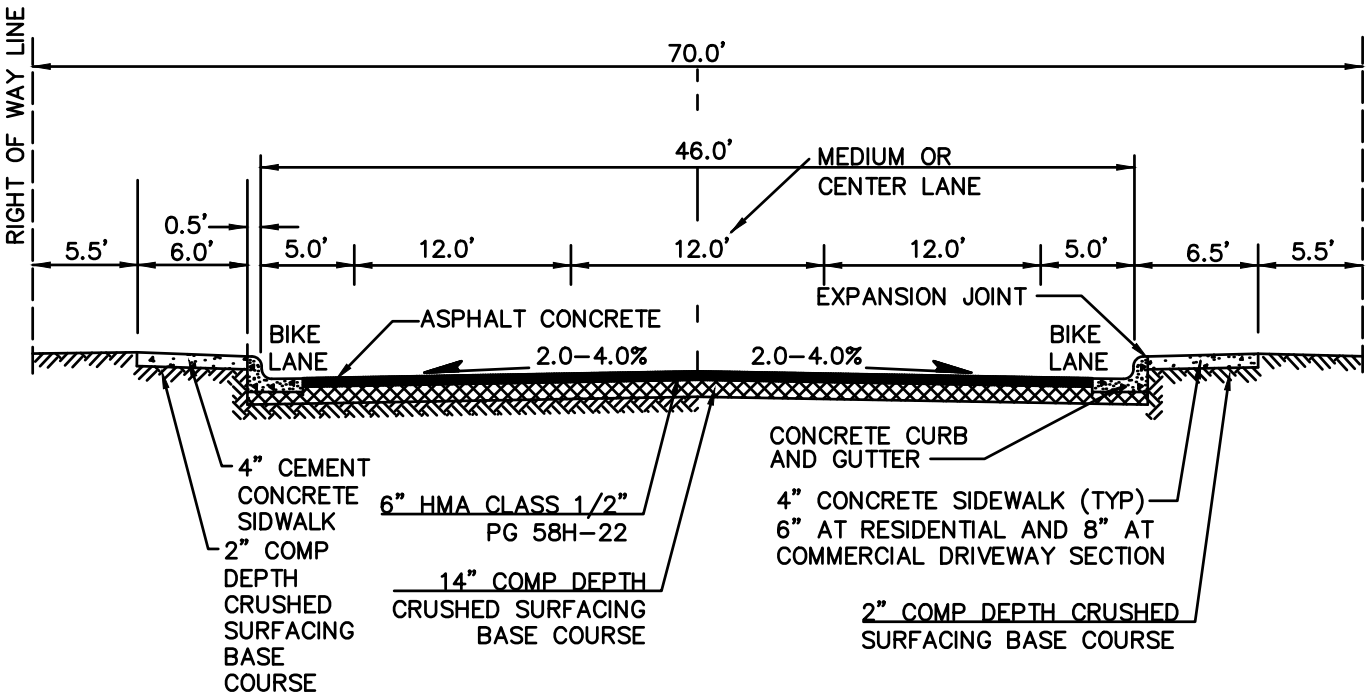
DOWNTOWN MINOR ARTERIAL SECTION

NOT TO SCALE

REV. 08/01/24 CPG

DOWNTOWN MINOR ARTERIAL SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 2.3



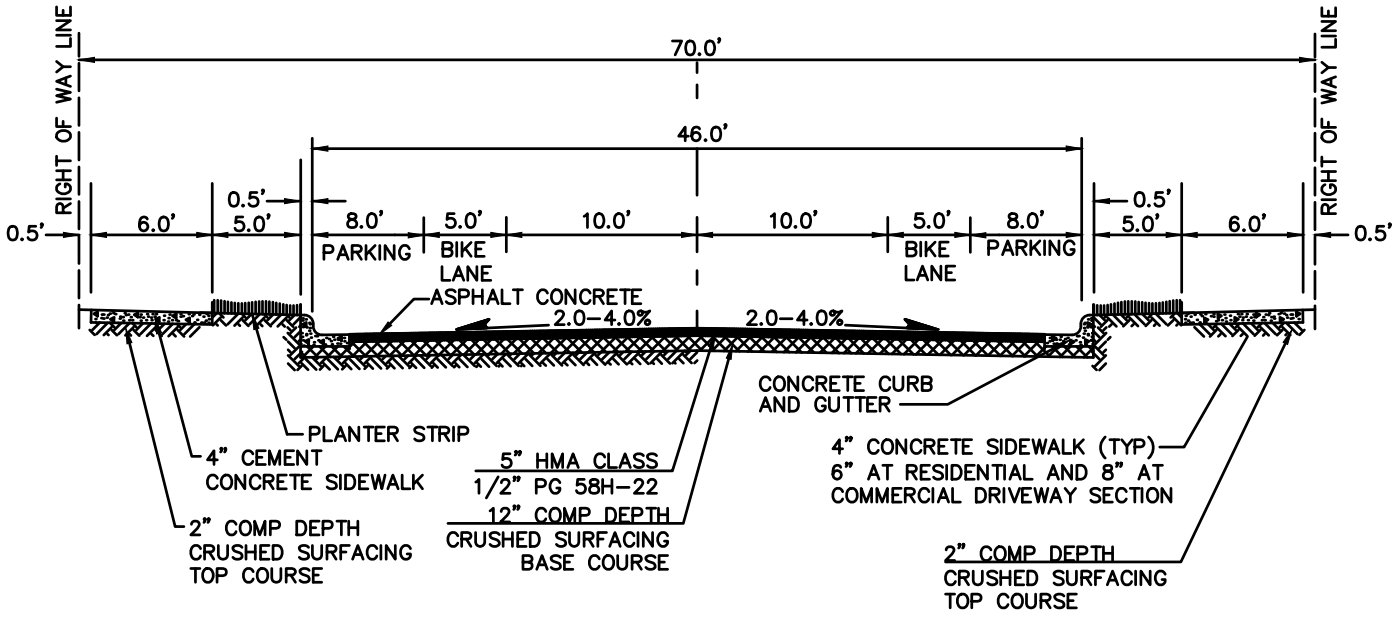
INDUSTRIAL / COMMERCIAL COLLECTOR SECTION

NOT TO SCALE

REV. 08/01/24 CPG

INDUSTRIAL / COMMERCIAL COLLECTOR SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 2.4



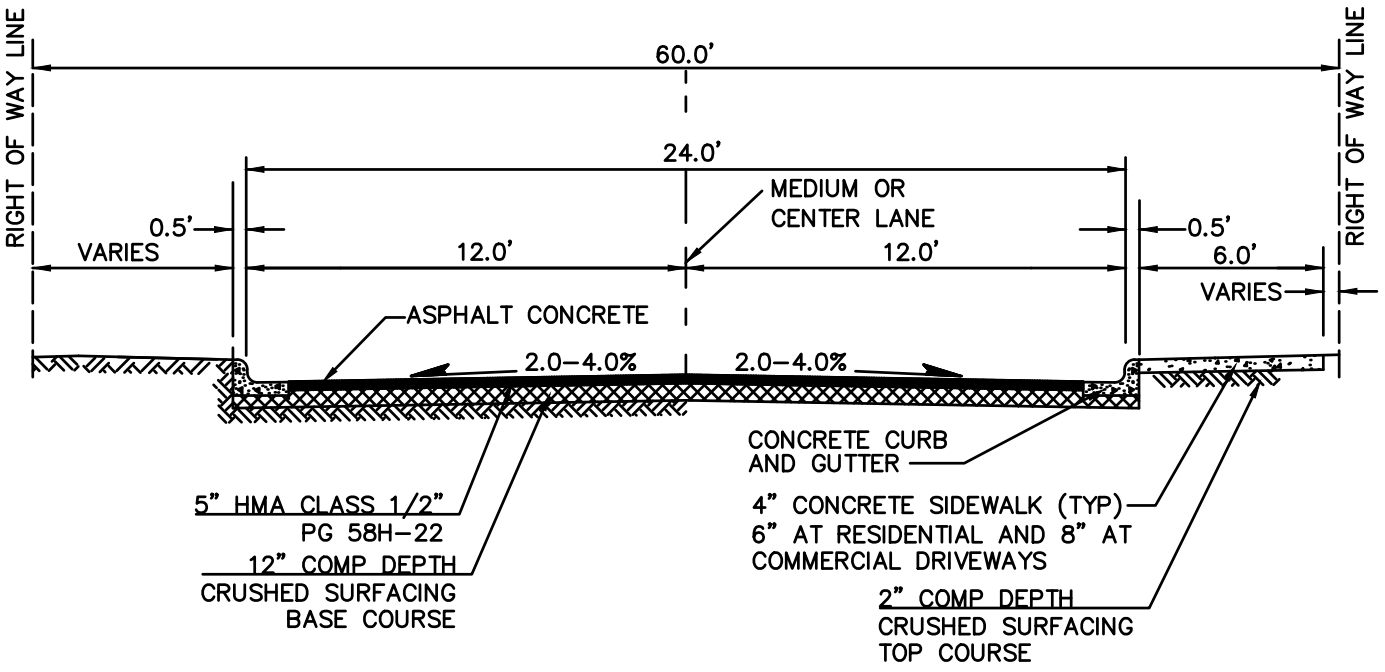
STANDARD COLLECTOR SECTION

NOT TO SCALE

REV. 08/01/24 CPG

STANDARD COLLECTOR SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 2.5



SCENIC COLLECTOR SECTION

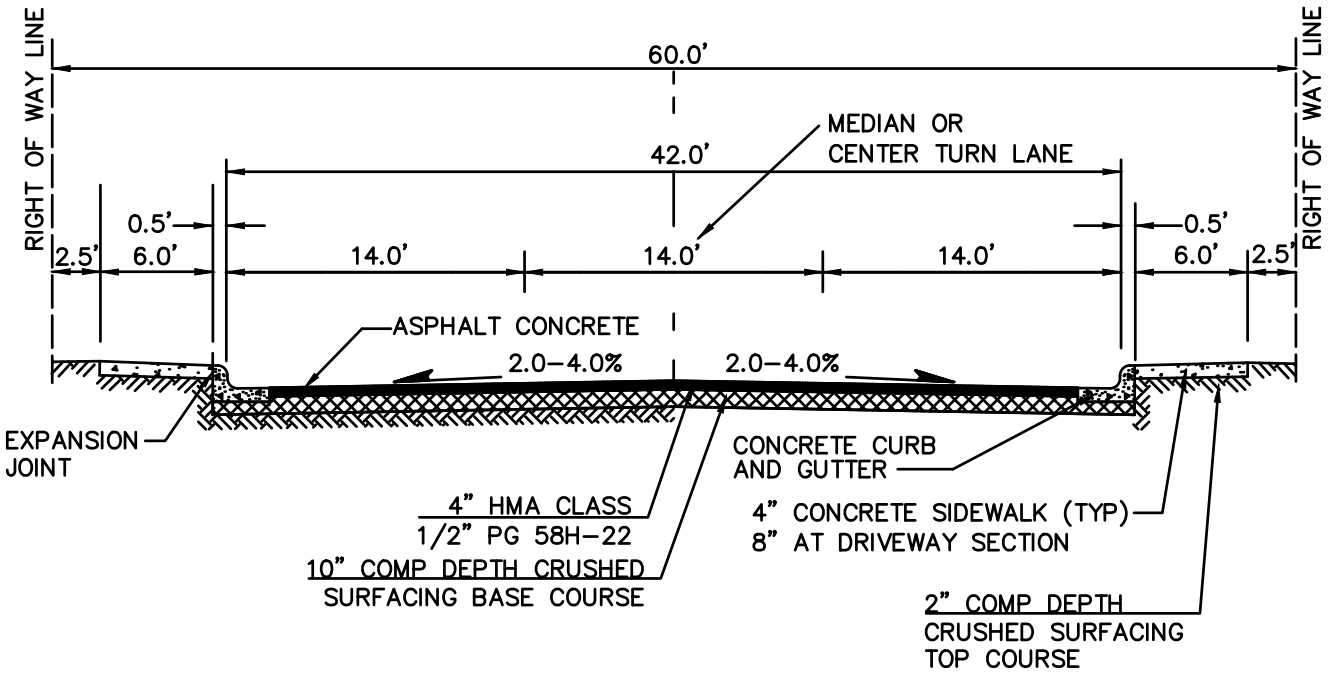
NOT TO SCALE

NOTE: SIDEWALK MAY BE A DETACHED PATH

REV. 08/01/24 CPG

SCENIC COLLECTOR SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 2.6



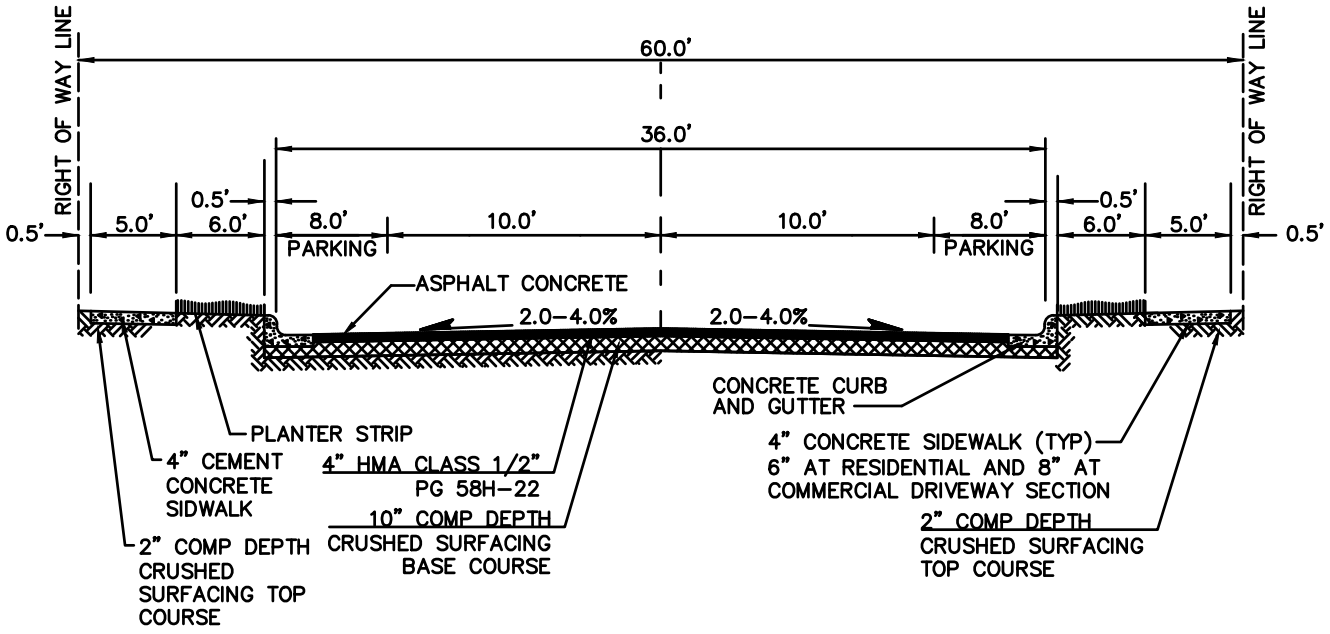
INDUSTRIAL LOCAL SECTION

NOT TO SCALE

REV. 08/01/24 CPG

INDUSTRIAL LOCAL SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 2.7



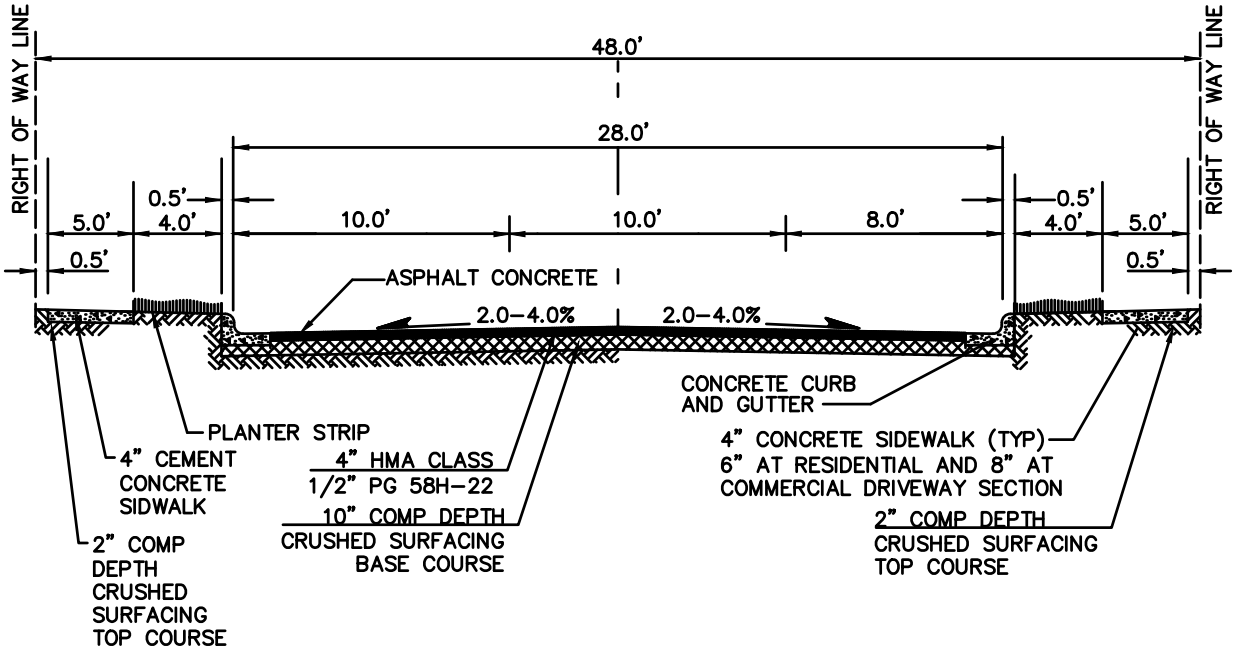
RESIDENTIAL ACCESS SECTION

NOT TO SCALE

REV. 08/01/24 CPG

RESIDENTIAL ACCESS SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 2.8



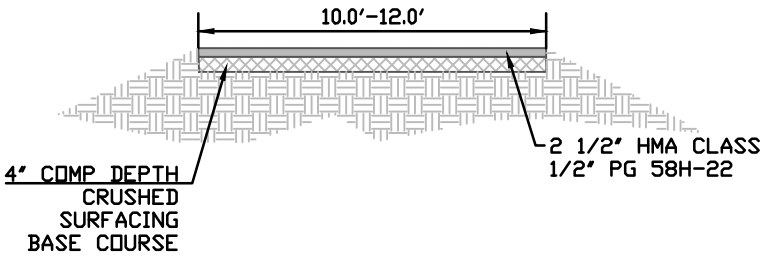
RESIDENTIAL LOCAL A SECTION

NOT TO SCALE

REV. 08/01/24 CPG

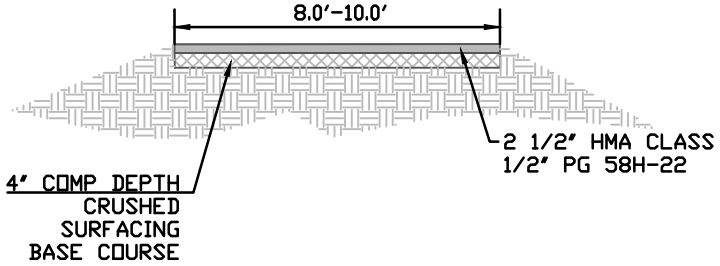
RESIDENTIAL LOCAL A SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 2.9



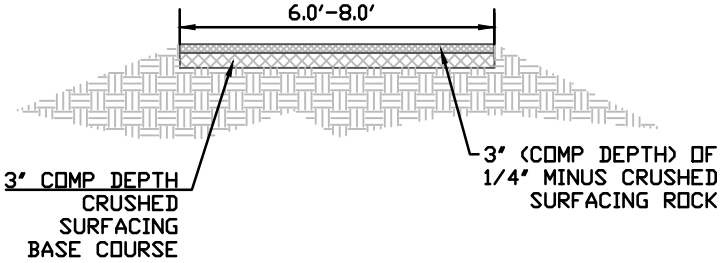
TRAIL TYPE 1

NOT TO SCALE



TRAIL TYPE 2

NOT TO SCALE



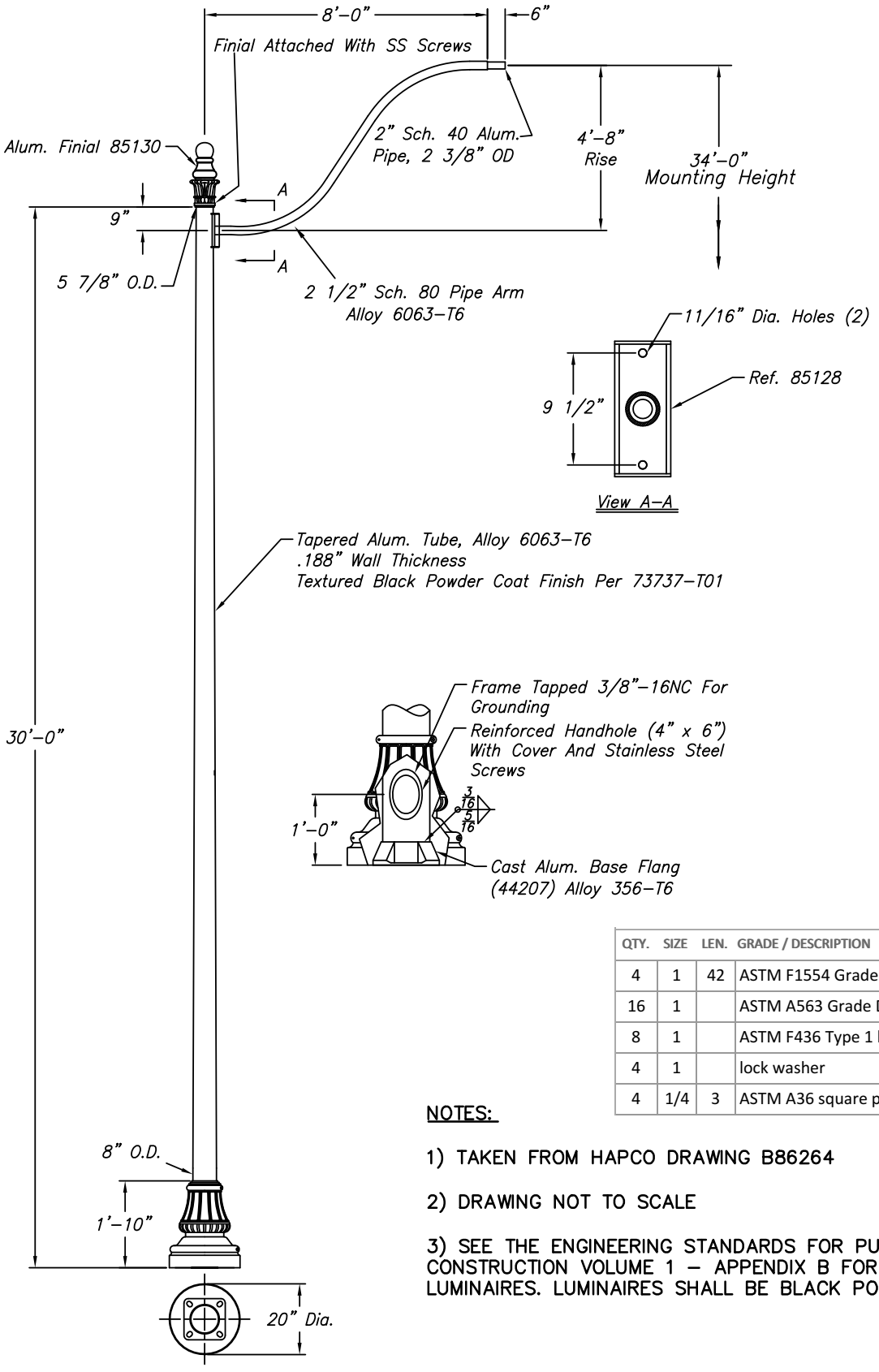
TRAIL TYPE 3

NOT TO SCALE

REV. 08/01/24 CPG

TRAIL SECTIONS

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **T - 2.10**



QTY.	SIZE	LEN.	GRADE / DESCRIPTION
4	1	42	ASTM F1554 Grade 55 all thread rod
16	1		ASTM A563 Grade DH heavy hex nut
8	1		ASTM F436 Type 1 hardened washer
4	1		lock washer
4	1/4	3	ASTM A36 square plate

NOTES:

1) TAKEN FROM HAPCO DRAWING B86264

2) DRAWING NOT TO SCALE

3) SEE THE ENGINEERING STANDARDS FOR PUBLIC WORKS CONSTRUCTION VOLUME 1 – APPENDIX B FOR APPROVED LUMINAIRES. LUMINAIRES SHALL BE BLACK POWDER COAT FINISH

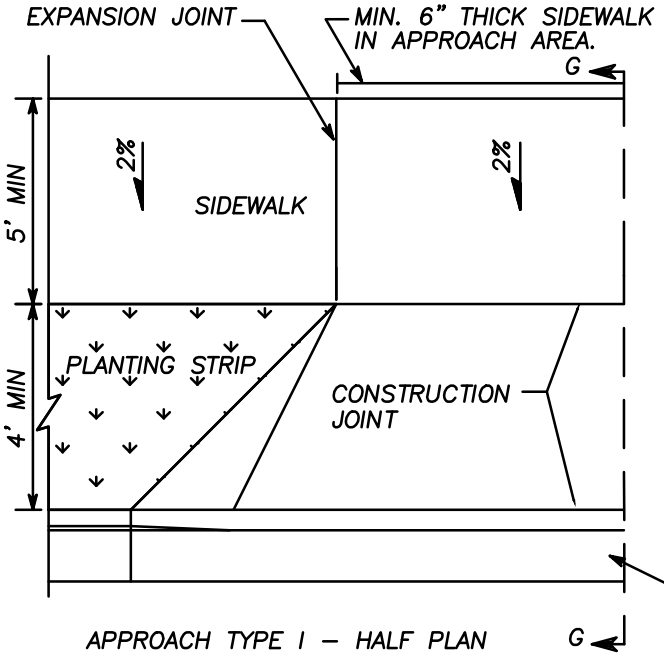
REV. 08/01/24 CPG

TYPICAL ARTERIAL/COLLECTOR LIGHT STANDARD

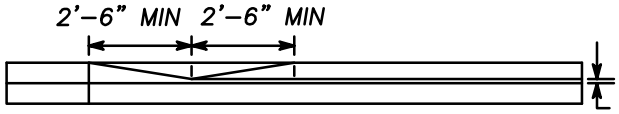
STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T-2.11

NOTES:

1. A MINIMUM 4' WIDE ACCESSIBLE ROUTE SHALL BE MAINTAINED IN ALL PEDESTRIAN ACCESSIBLE AREAS.
2. CONTRACTION POINTS SHALL BE PLACED ALONG SIDEWALKS IN ACCORD WITH SIDEWALK DETAIL. ALL JOINTS SHALL BE CLEANED AND EDGED.
3. CHANGES IN LEVEL UP TO 1/4" MAY BE VERTICAL AND WITHOUT EDGE TREATMENT. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 2:1.
4. CEMENT CONCRETE APPROACHES SHALL BE CONSTRUCTED OF AIR-ENTRAINED CLASS 3000 AND MAY BE POURED INTEGRAL WITH CURB.
5. EXISTING CURB, GUTTER, AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF APPROACH.
6. COMMERCIAL DRIVEWAY REQUIRES REINFORCING STEEL (#4 REBAR @ 12" O.C IN EACH DIRECTIONS) MAINTAIN MIN. 3" COVER.
7. 3" DEPTH 3/4"-0 CRUSHED AGGREGATE BASE COMPACTED TO 95% OF MAX. DRY DENSITY.
8. SUBGRADE PREPARATION PER WSDOT STD. SPEC. 2-06.3(1).

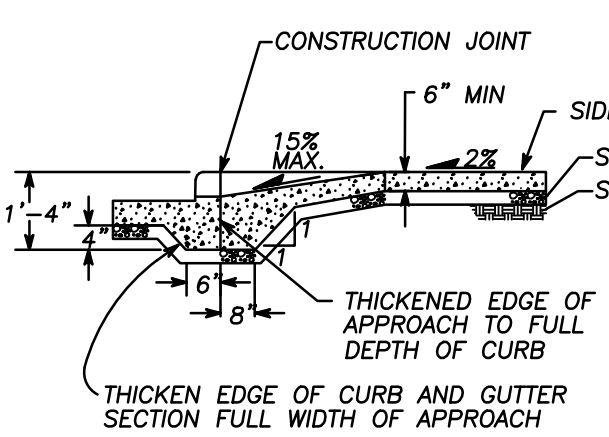


APPROACH TYPE I – HALF PLAN

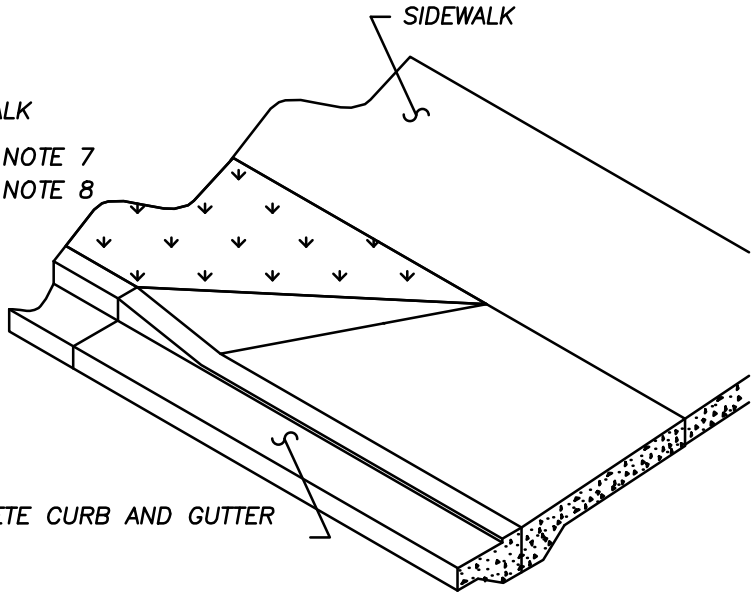


OPTIONAL APPROACH – HALF ELEVATION

NOTE: USE TYPE 1 APPROACH ONLY WHEN A SIDEWALK IS USED AT THE BACK OF THE APPROACH.



SECTION G-G

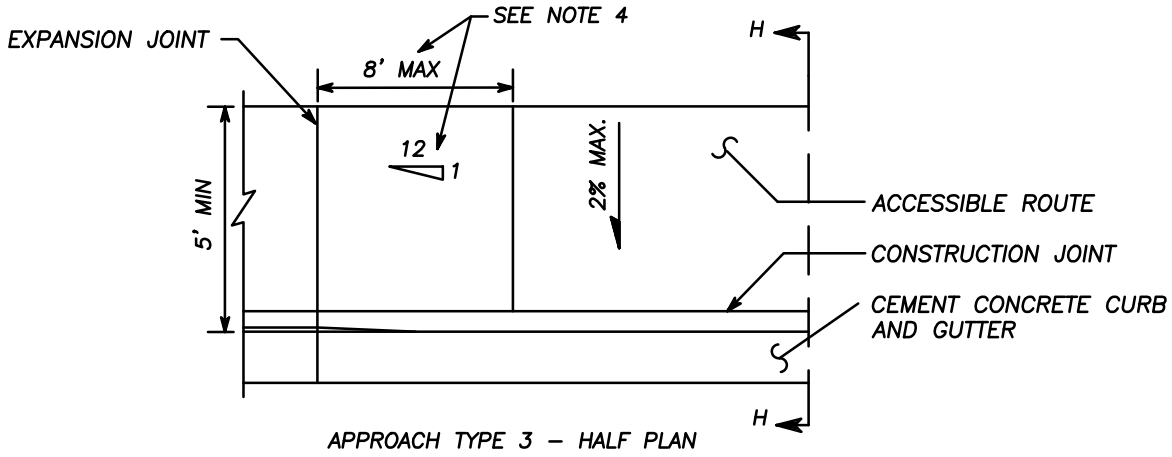


APPROACH TYPE I – HALF ISOMETRIC

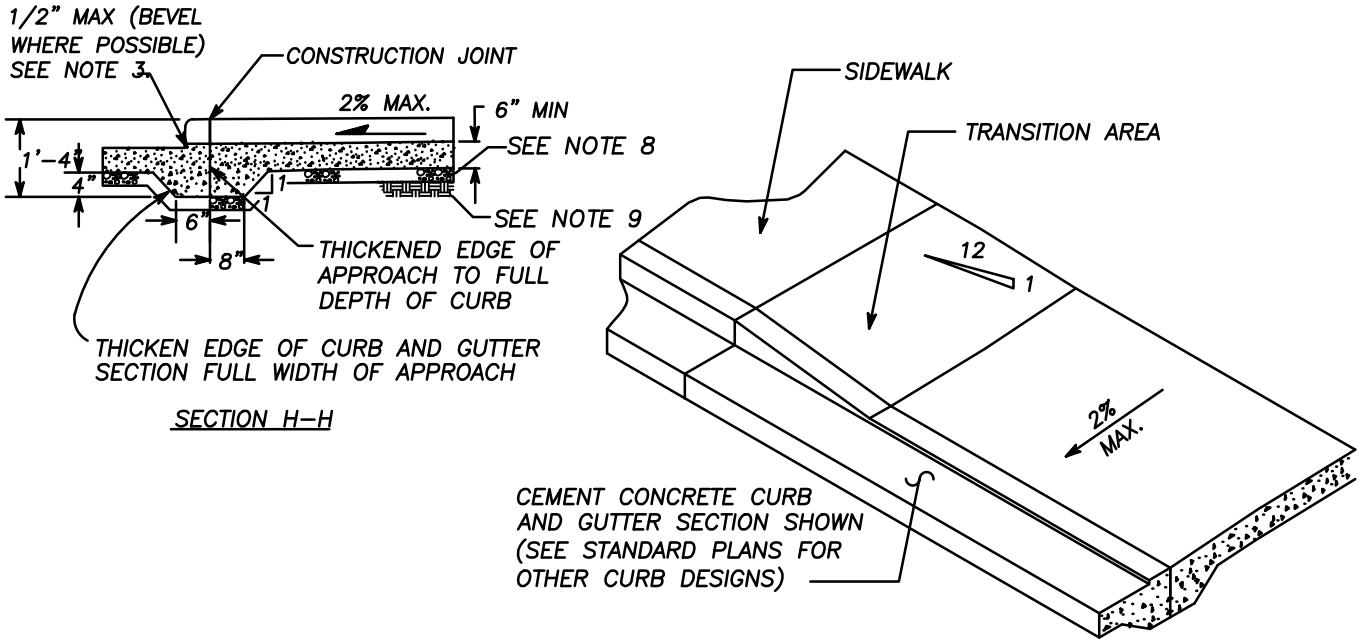
REV. 3/04/08 SCH

CONCRETE DRIVEWAY APPROACH STANDARD

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 2.13



APPROACH TYPE 3 – HALF PLAN



SECTION H–H

APPROACH TYPE 3 – HALF ISOMETRIC

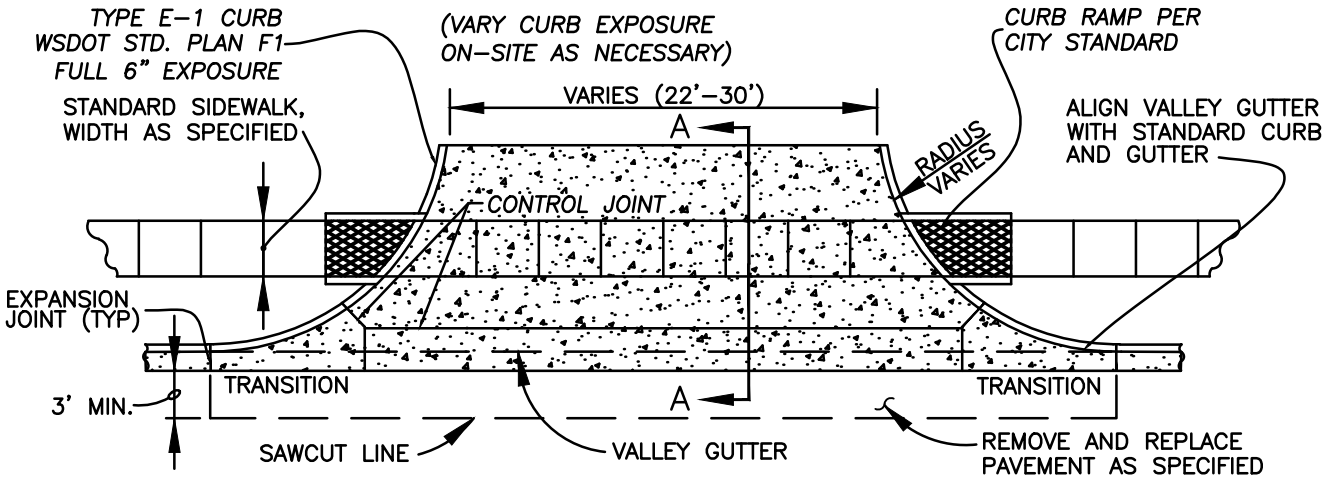
NOTES:

1. A MINIMUM 4' WIDE ACCESSIBLE ROUTE SHALL BE MAINTAINED IN ALL PEDESTRIAN ACCESSIBLE AREAS.
2. CONTRACTION JOINTS SHALL BE PLACED ALONG SIDEWALKS IN ACCORD WITH SIDEWALK DETAIL. ALL JOINTS SHALL BE CLEANED AND EDGED.
3. CHANGES IN LEVEL UP TO 1/4" MAY BE VERTICAL AND WITHOUT EDGE TREATMENT. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 2:1.
4. TRANSITION AREA TO BE SLOPED AT 1v TO 12h, UNLESS STREET GRADE WOULD CREATE A TRANSITION LENGTH GREATER THAN 8', THEN THE MAXIMUM LENGTH OF 8' GOVERNS SLOPE.
5. CEMENT CONCRETE APPROACHES SHALL BE CONSTRUCTED OF AIR–ENTRAINED CONCRETE CLASS 3000 AND MAY BE POURED INTEGRAL WITH CURB.
6. EXISTING CURB, GUTTER AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF APPROACH.
7. COMMERCIAL DRIVEWAY REQUIRES REINFORCING STEEL (#4 REBAR @ 12" O.C. IN EACH DIRECTION), MAINTAIN MIN. 3" COVER.
8. 3" DEPTH 3/4"–0 CRUSHED AGGREGATE BASE COMPACTED TO 95% OF MAX. DRY DENSITY.
9. SUBGRADE PREPARED PER WSDOT STD. SPEC. 2–06.3(1)

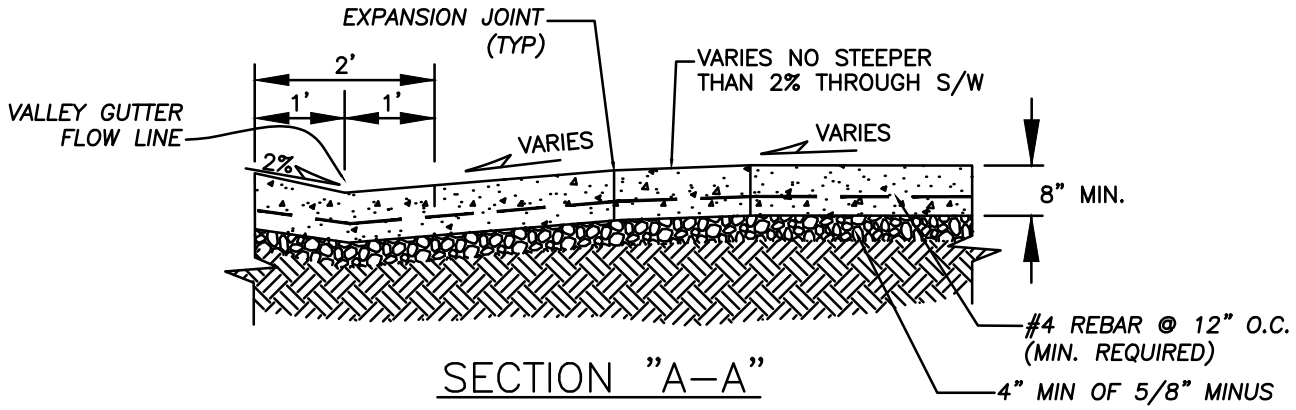
REV. 3/04/08 SCH

CONCRETE DRIVEWAY APPROACH TYPE 3

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **T - 2.14**



PLAN VIEW
COMMERCIAL DRIVEWAY ENTRANCE



SECTION "A-A"

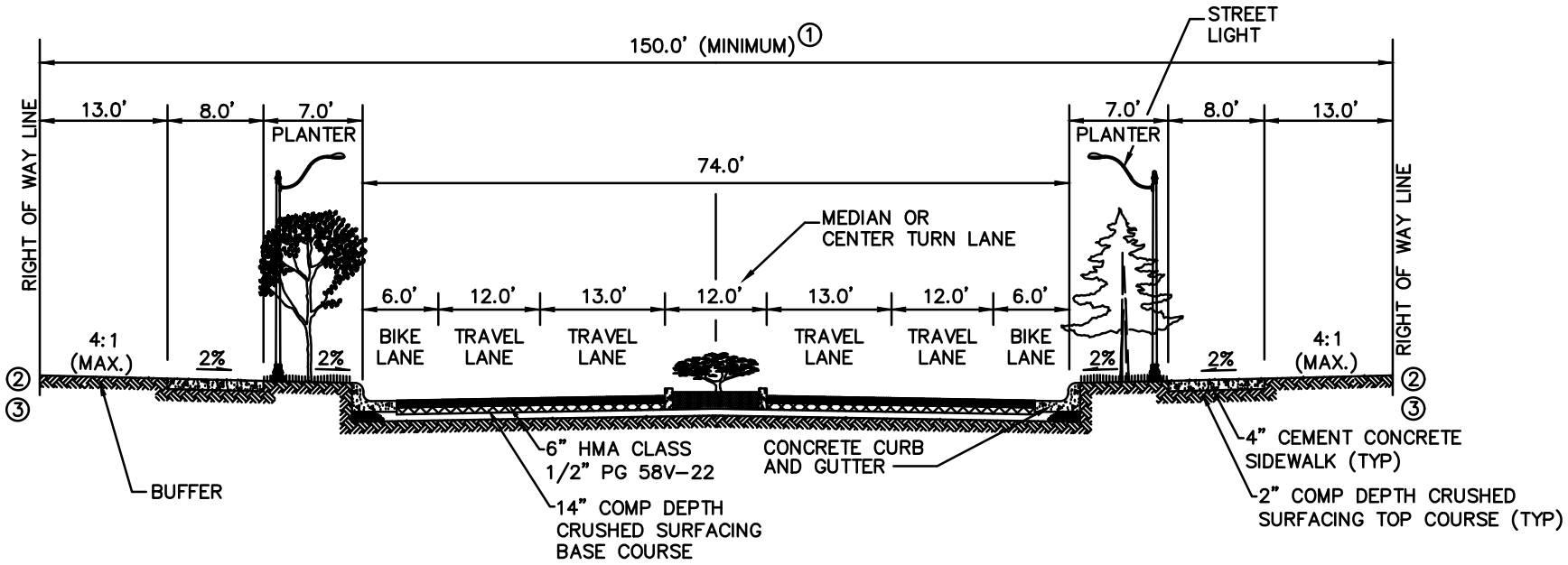
NOTES:

1. CONCRETE SHALL BE 3300 PSI (MIN. BREAKING STRENGTH @ 28 DAYS) WITH 3" SLUMP (±1"). TOTAL AIR CONTENT (% BY VOLUME OF CONCRETE) SHALL NOT BE LESS THAN 4% OR MORE THAN 7%. MEDIUM BROOM FINISH PARALLEL TO DRIVEWAY CENTERLINE.
2. ALL JOINTS SHALL BE FINISHED WITH 1/4" RADIUS EDGE UNLESS OTHERWISE NOTED.
3. DRIVEWAYS EXCEEDING 15' IN TOTAL WIDTH SHALL HAVE ADDITIONAL LONGITUDINAL JOINTS AS DIRECTED. CONTROL JOINT SPACING SHALL NOT EXCEED 15'.
4. DRIVEWAY SHALL BE CONSTRUCTED WITH REINFORCING STEEL, MINIMUM REQUIRED SHALL BE #4 REBAR @ 12" O.C WITH MIN. 3" COVER.
5. ALL EXISTING EDGES SHALL BE SAW CUT.
6. 4" DEPTH 5/8"-0 CRUSHED AGGREGATE BASE COMPACTED TO 95% OF MAX. DRY DENSITY.
7. SUBGRADE PREPARATION PER WSDOT STD. SPEC. 2-06.3(1).
8. EXISTING CURB SHALL BE REMOVED TO EXISTING JOINT OR SAWCUT SUCH THAT 3' MIN. OF NEW STREET SECTION IS CONSTRUCTED ADJACENT TO NEW DRIVEWAY.
9. MAXIMUM 2% CROSS SLOPE ACROSS PEDESTRIAN CROSSING.
10. CURB RADIUS TO BE 20-FOOT MINIMUM AND 35-FOOT MAXIMUM, AS APPROVED BY CITY ENGINEER.

REV. 2/08/08 SCH

MAJOR COMMERCIAL CONCRETE APPROACH STANDARD

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **T - 2.15**



PIONEER STREET FROM 45TH AVENUE TO 56TH PLACE

CROSS SECTION

NOT TO SCALE

① Additional right of way width may be required for additional turn lanes, stormwater treatment facilities, side slopes, and/or otherwise required by the City of Ridgefield.

② Additional on-site grading and/or construction of retaining walls outside the right of way may be required to match grade at right of way.

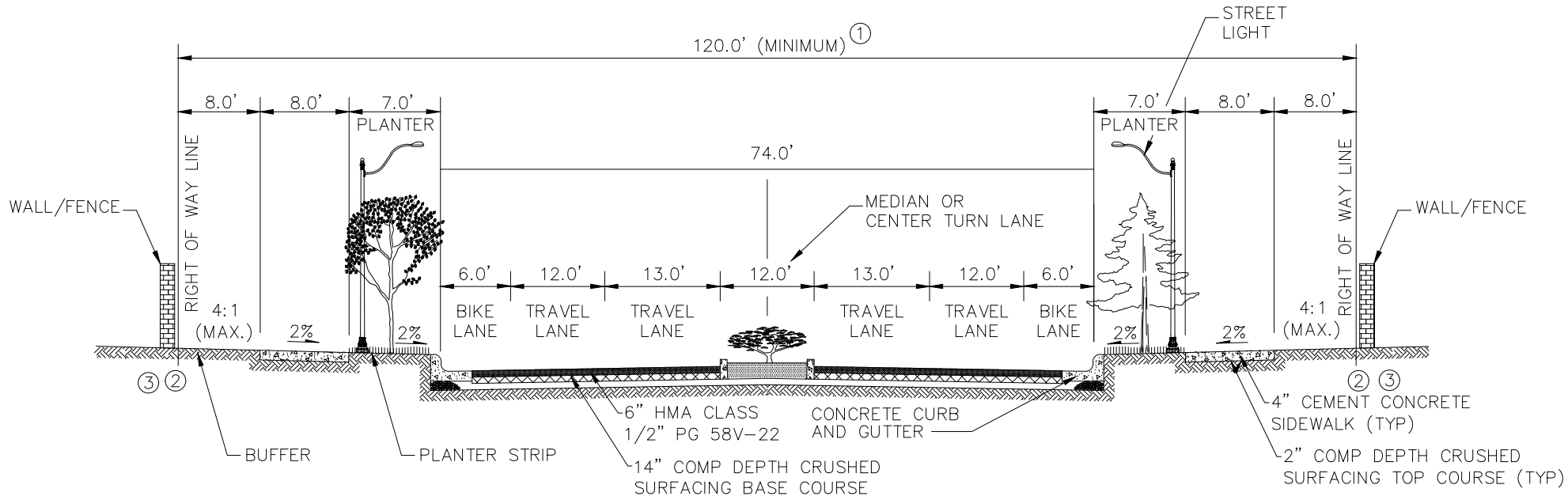
③ All new residential development shall be required to install brick, stone, or wrought iron fence at the right-of-way per city code.

④ Separate off-line facilities for treatment and detention of stormwater from the right-of-way are required and shall be located in separate tracts dedicated or donated to the City.

REV. 08/01/24 CPG

PIONEER STREET FROM 45TH AVENUE TO 56TH PLACE CROSS SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T – 2.16



PIONEER STREET FROM 32ND AVENUE TO 45TH AVENUE
CROSS SECTION

NOT TO SCALE

① Additional right of way width may be required for additional turn lanes, stormwater treatment facilities, side slopes, and/or otherwise required by the City of Ridgefield.

② Additional on-site grading and/or construction of retaining walls outside the right of way may be required to match grade at right of way.

③ All new residential development shall be required to install brick, stone, or wrought iron fence at the right-of-way per city code.

④ Separate off-line facilities for treatment and detention of stormwater from the right-of-way are required and shall be located in separate tracts dedicated or donated to the City.

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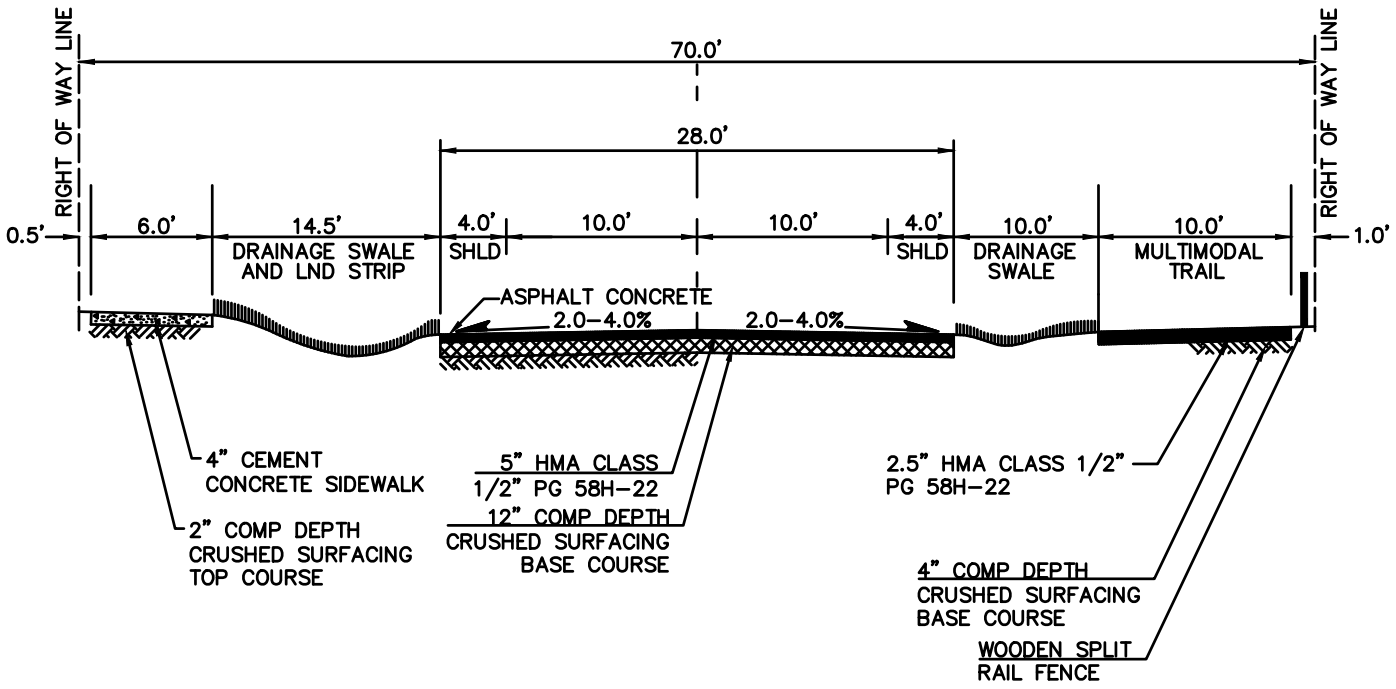
PIONEER STREET FROM 32ND AVENUE TO 45TH AVENUE CROSS SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T – 2.17



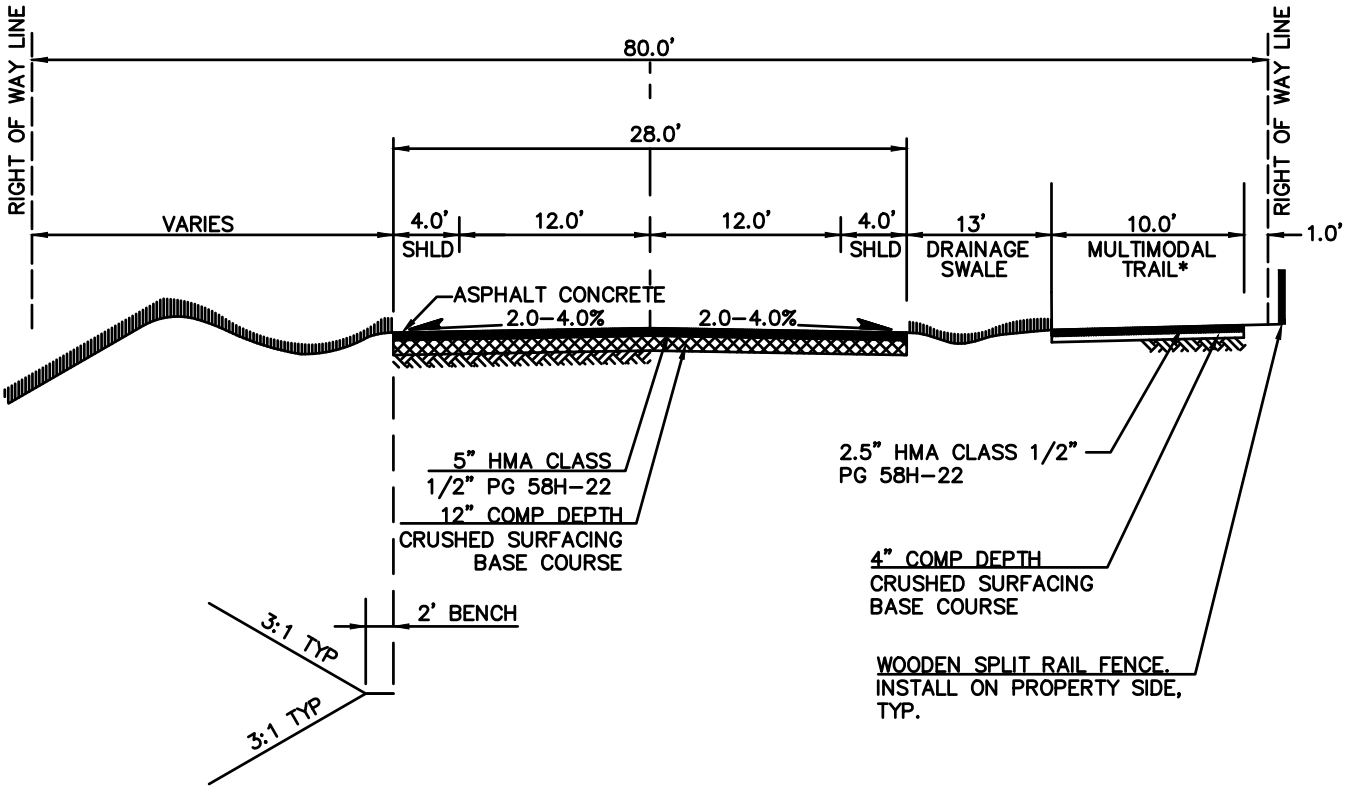
GEE CREEK PLATEAU COLLECTOR SECTION

NOT TO SCALE

REV. 08/01/24 CPG

GEE CREEK PLATEAU COLLECTOR SECTION

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **T - 2.18**



* TRAIL SHALL BE ON SOUTH AND EAST SIDES OF CARTY ROAD.

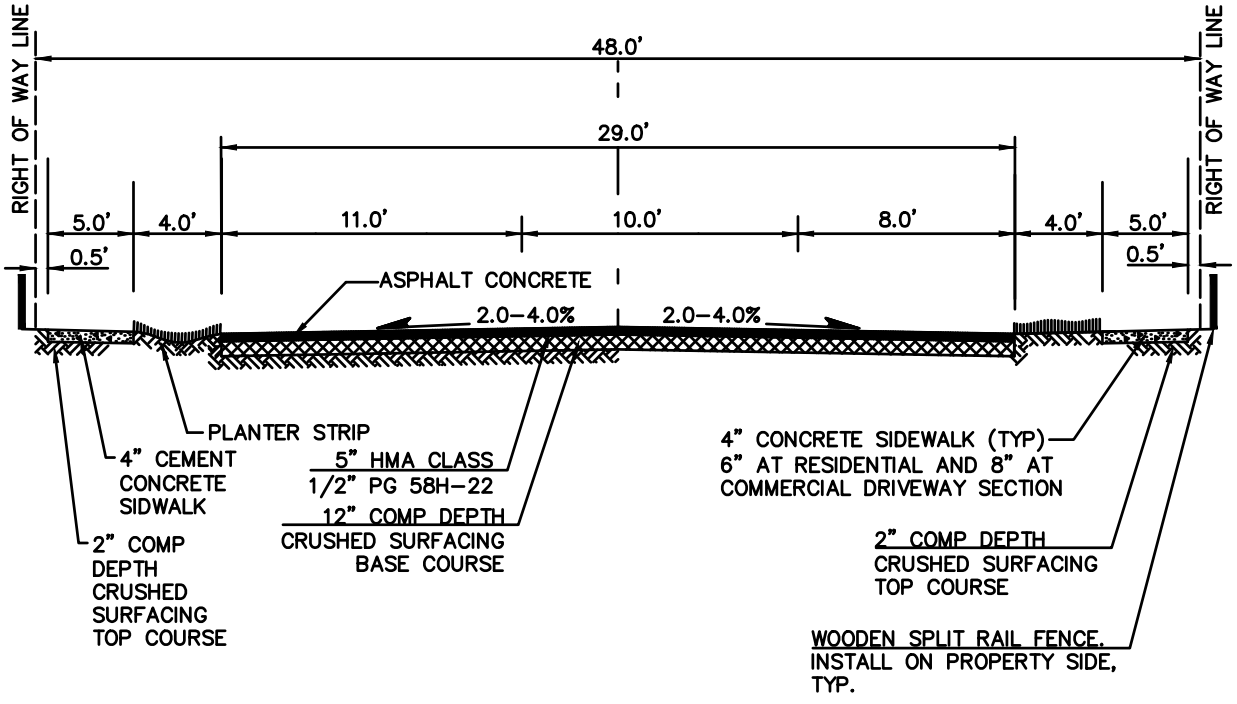
CARTY ROAD SUBAREA COLLECTOR SECTION

NOT TO SCALE

REV. 08/01/24 CPG

CARTY ROAD SUBAREA COLLECTOR SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 2.19



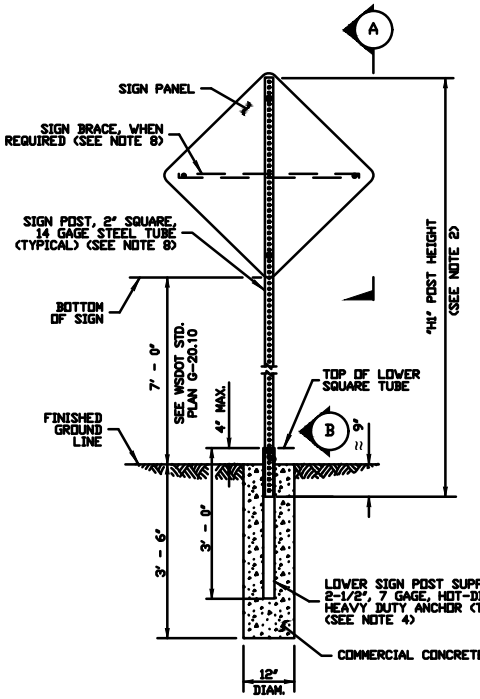
CARTY ROAD SUBAREA RESIDENTIAL LOCAL A SECTION

NOT TO SCALE

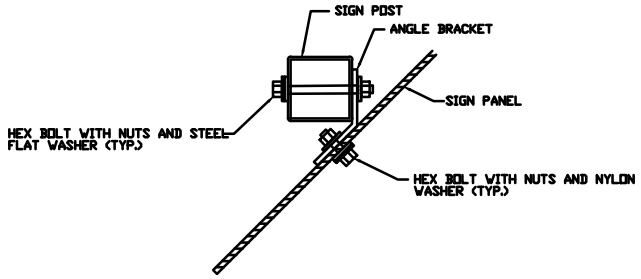
REV. 08/01/24 CPG

CARTY ROAD SUBAREA RESIDENTIAL LOCAL A SECTION

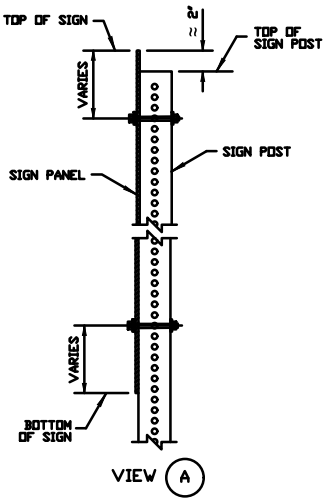
STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 2.20

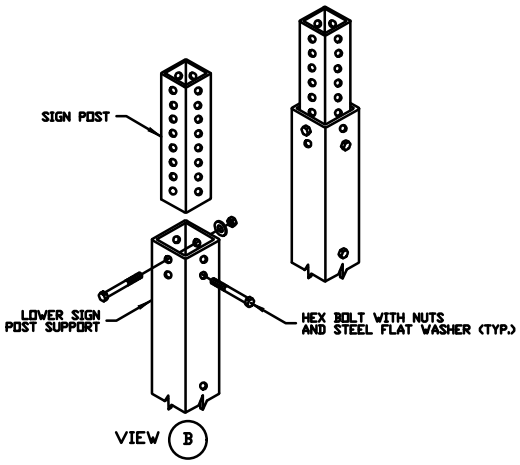


TYPE ST-4 SIGN SUPPORT



DETAIL 1





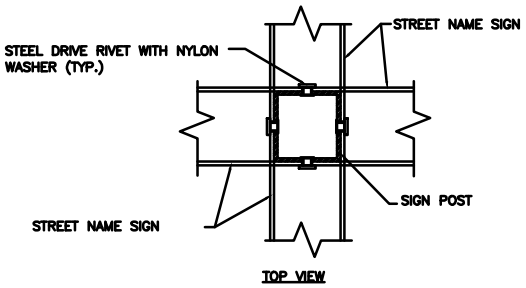
NOTES:

1. DIMENSIONS FOR THE PARTS USED TO ASSEMBLE THE BASE CONNECTIONS ARE INTENTIONALLY NOT SHOWN. BASE CONNECTIONS ARE PARENTED, MANUFACTURED PRODUCTS THAT ARE IN COMPLIANCE WITH NCHRP 350 CRASH TEST CRITERIA. THE BASE CONNECTION DETAIL ARE SHOWN ON THIS PLAN TO ILLUSTRATE HOW THE PARTS ARE ASSEMBLED.
2. STREET NAME SIGNS SHALL BE GREEN WITH WHITE BORDER. LETTERING SHALL FOLLOW MUTCD GUIDANCE. ON RESIDENTIAL STREET NAME SIGNS THE INITIAL UPPER CASE LETTER SHALL BE 6" TALL WITH SUBSEQUENT LOWER CASE LETTERS 4.5" TALL. STREET SIGNS SHOULD BE FLAT ALUMINUM.
3. FOR "H1" REFER TO THE SIGN SPECIFICATION TABLES IN THE CONTRACT.
4. DEPENDING UPON THE SIGN AREA, SIGN POST MAY BE A 2", 12 OR 14 GAGE POST OR 2-1/2", 12 OR 14 GAGE POST. SEE CONTRACT PLAN.
5. 2-1/2", 7 GAGE HEAVY DUTY ANCHOR IS REQUIRED WITH 2" POST. 3" 7 GAGE HEAVY DUTY ANCHOR IS REQUIRED WITH 2-1/2" POST. SEE CONTRACT PLAN.
6. ANGLE BRACKET SHALL BE USED FOR SIGN POST SQUARE TUBE GALVANIZED STEEL TUBE ATTACHMENT AT 45 DEGREES, SHOWN IN DETAIL 1.
7. HEX BOLT WITH NUTS AND NYLON WASHER SHALL BE USED FOR SIGN ATTACHMENT. HEX BOLT WITH NUTS AND STEEL FLAT WASHER SHALL BE USED FOR ANCHOR ATTACHMENT.
8. CONTRACT PLAN MAY ALLOW THE USE OF STEEL OR TIMBER SIGN SUPPORT SYSTEM, SPECIFIED IN THE WSDOT STANDARD PLAN. DEPENDING UPON THE SPECIFIC CONDITIONS AND SOIL TYPE, UPON APPROVAL BY THE ENGINEER.
9. SIGN AND BRACES ARE REQUIRED FOR SIGN WIDTHS OF 48" (IN) OR GREATER. FOR SIGN WIDTHS OF 36" (IN) OR LESS, SIGN BRACES ARE ONLY REQUIRED WHEN SPECIFIED IN THE CONTRACT. SEE WSDOT STANDARD PLAN G-50.10-03 FOR FURTHER DETAILS.

REV. 08/01/24 CPG

STREET NAME SIGNS

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **T - 3.1A**

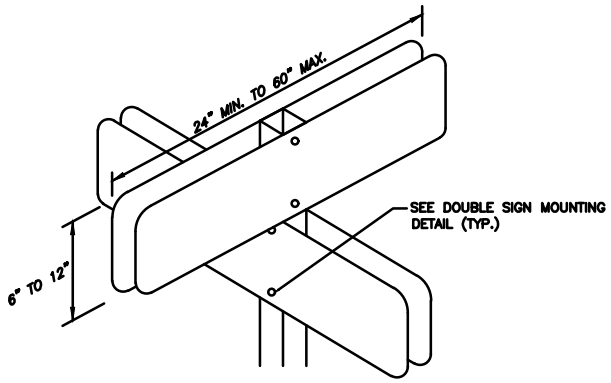


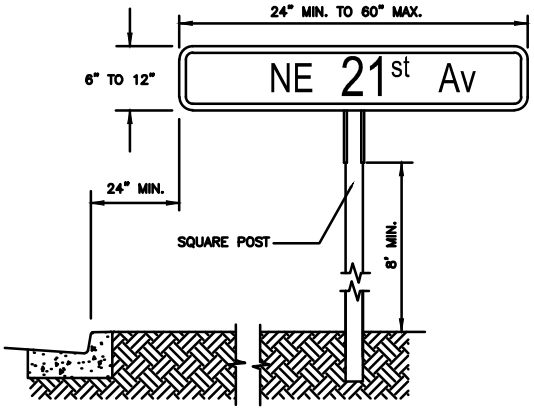
TOP VIEW

DOUBLE SIDED SIGN MOUNTING DETAIL

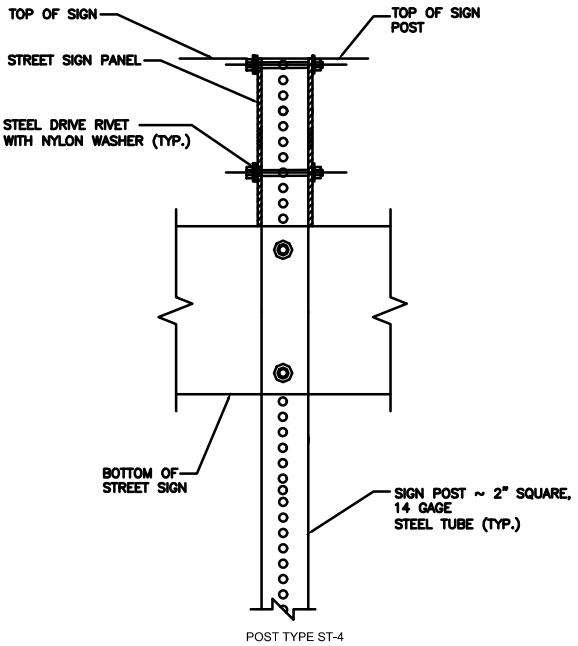
NOTES:

1. BOLT IN LIEU OF STEEL RIVET PERMITTED WITH THE ENGINEER'S APPROVAL. BOLTS WITH NUTS IN LIEU OF RIVETS REQUIRED FOR SIGNS 42 INCHES AND LONGER.
2. CONTRACT PLAN MAY ALLOW THE USE OF OTHER TYPES OF STEEL OR TIMBER SIGN SUPPORT SYSTEM, SPECIFIED IN THE WSDOT STANDARD PLAN, DEPENDING UPON SPECIFIC CONDITION AND SOIL TYPE.
3. SIGN BRACES ARE REQUIRED WHEN STREET NAME SIGNS ARE 42 INCHES OR GREATER IN WIDTH.





GROUND MOUNTED
STREET NAME SIGN



POST TYPE ST-4

STREET NAME SIGN
INSTALLATION DETAIL

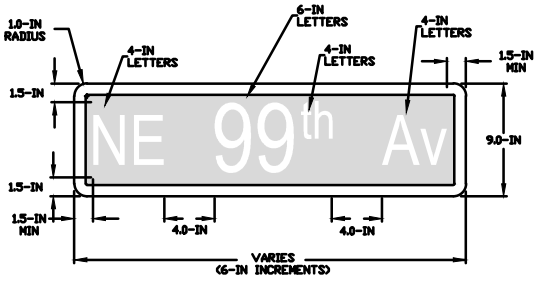
REV. 08/01/24 CPG

STREET NAME SIGNS

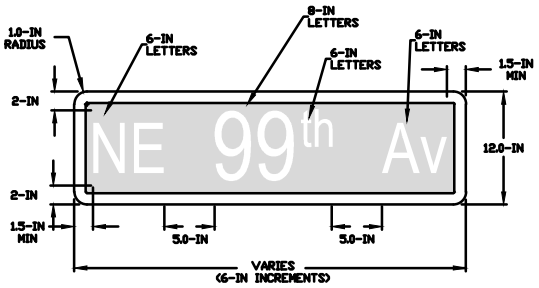
STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 3.1B

D-3 STREET NAME SIGNS

ALL STREETS EXCEPT AS NOTED BELOW

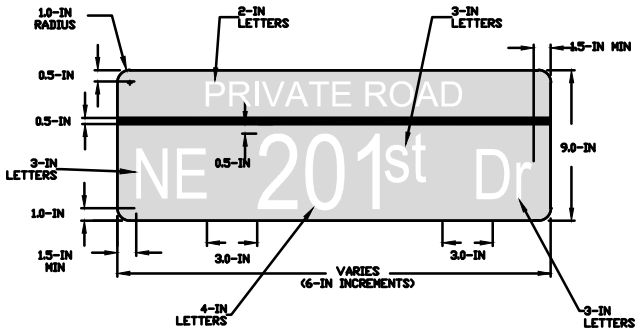


MULTI-LANE STREETS WITH POSTED SPEED > 40 MPH



D-3P PRIVATE ROAD NAME SIGNS

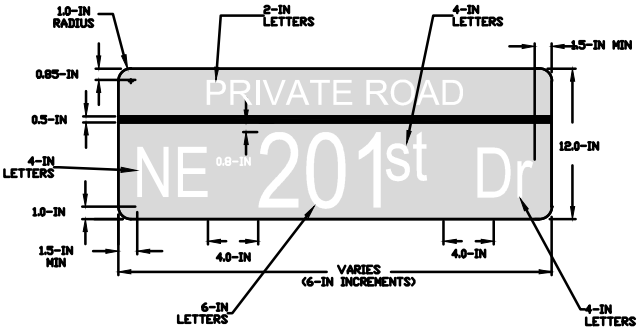
LOCAL TWO-LANE STREETS WITH POSTED SPEED ≤ 25 MPH



TWO-LANE STREETS WITH POSTED SPEED > 25 MPH

OR

MULTI-LANE STREETS WITH POSTED SPEED ≤ 40 MPH



NOTES:

1. LETTERS AND NUMBERS ARE "C" SERIES LETTERS. THE "B" SERIES FONT MAY BE USED IF THE SIGN BLADE IS GREATER THAN 48 INCHES IN LENGTH.
2. D-3 STREET NAME SIGNS AND D3-P PRIVATE ROAD NAME SIGNS SHALL BE WHITE ON DOUBLE SIDED GREEN TYPE IV ALUMINUM SHEETING MATERIAL.
3. SIGN BLADES SHALL BE IN 6-IN INCREMENTS (18-IN, 24-IN, 30-IN, ETC). 1.5-IN CLEAR FROM LETTERING TO SIDES OF SIGNS SHALL BE MINIMUM, WITH MESSAGE CENTERED ON SIGN BLADE.
4. SIGN BLADES UNDER 36-IN IN LENGTH SHALL BE ON 0.080 ALUMINUM. 36-IN OR LONGER BLADES SHALL BE ON 0.125-IN ALUMINUM.

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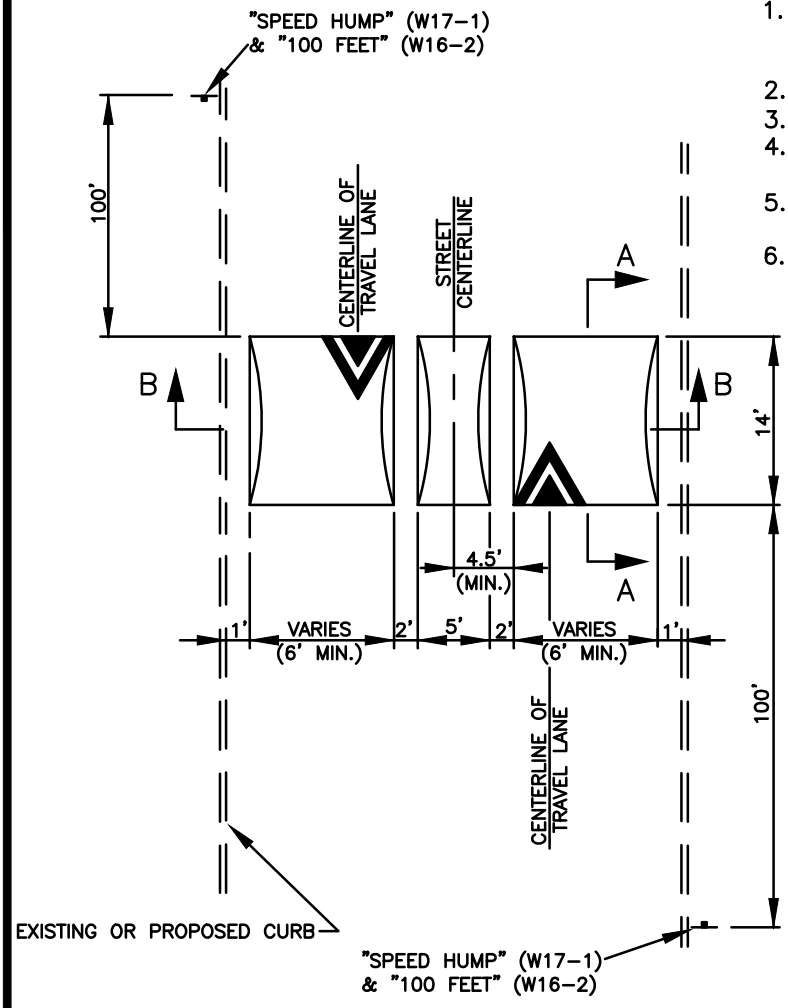
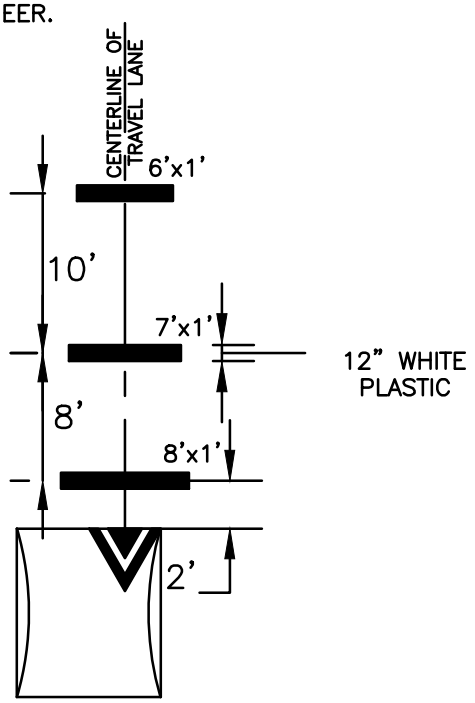
STREET NAME SIGNS

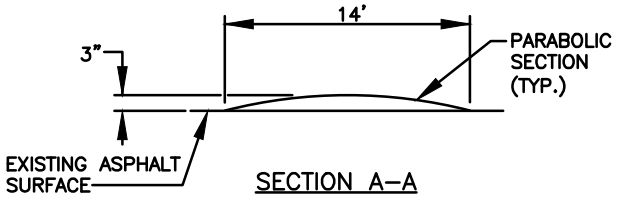
STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET T - 3.1C

NOTES:
1. ALL STRIPING TO BE WSDOT TYPE B THERMOPLASTIC MATERIAL AND IS REQUIRED IN BOTH DIRECTIONS.
2. SIGNAGE PER LATEST EDITION OF MUTCD.
3. SPEED HUMP TO BE CLASS "A" ASPHALT.
4. SIGN MOUNTING PER DETAIL T–3.1A AND T–3.1B.
5. MAY BE USED ON LOCAL "A" OR NEIGHBORHOOD COLLECTOR CLASSIFIED STREET.
6. MAY BE USED ONLY WHEN APPROVED BY THE CITY ENGINEER.

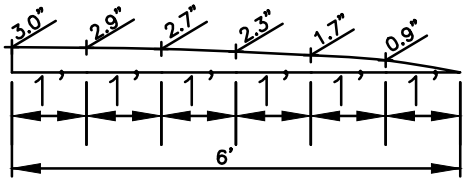




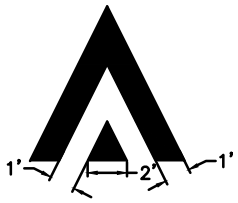
TYPICAL STRIPING



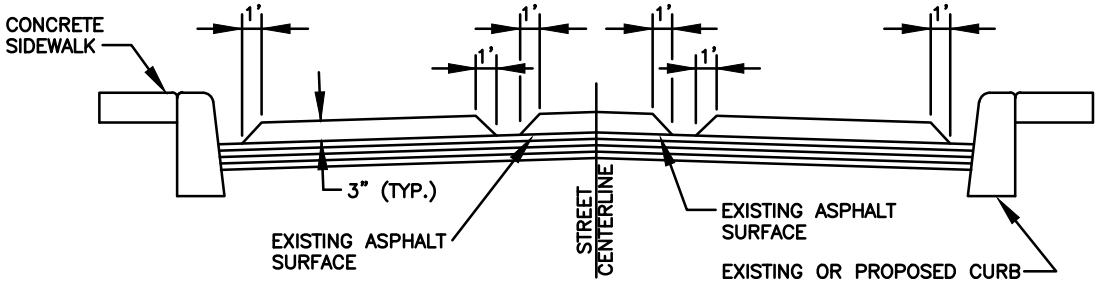
SECTION A–A



PARABOLIC SECTION



PAVEMENT MARKING DETAIL

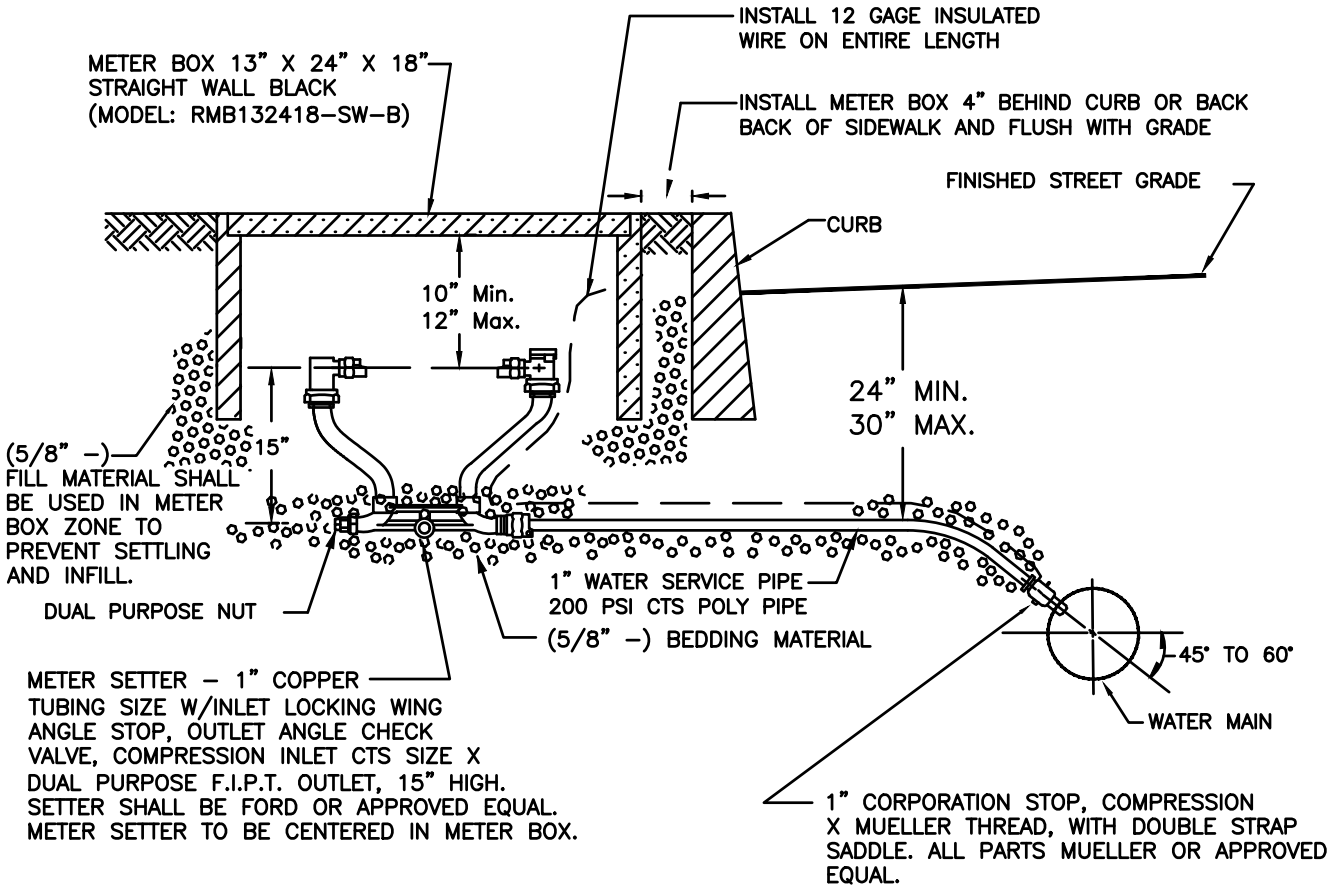


SECTION B–B

REV. 08/01/24 CPG

SPEED HUMP

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **T - 3.2**



NOTES:

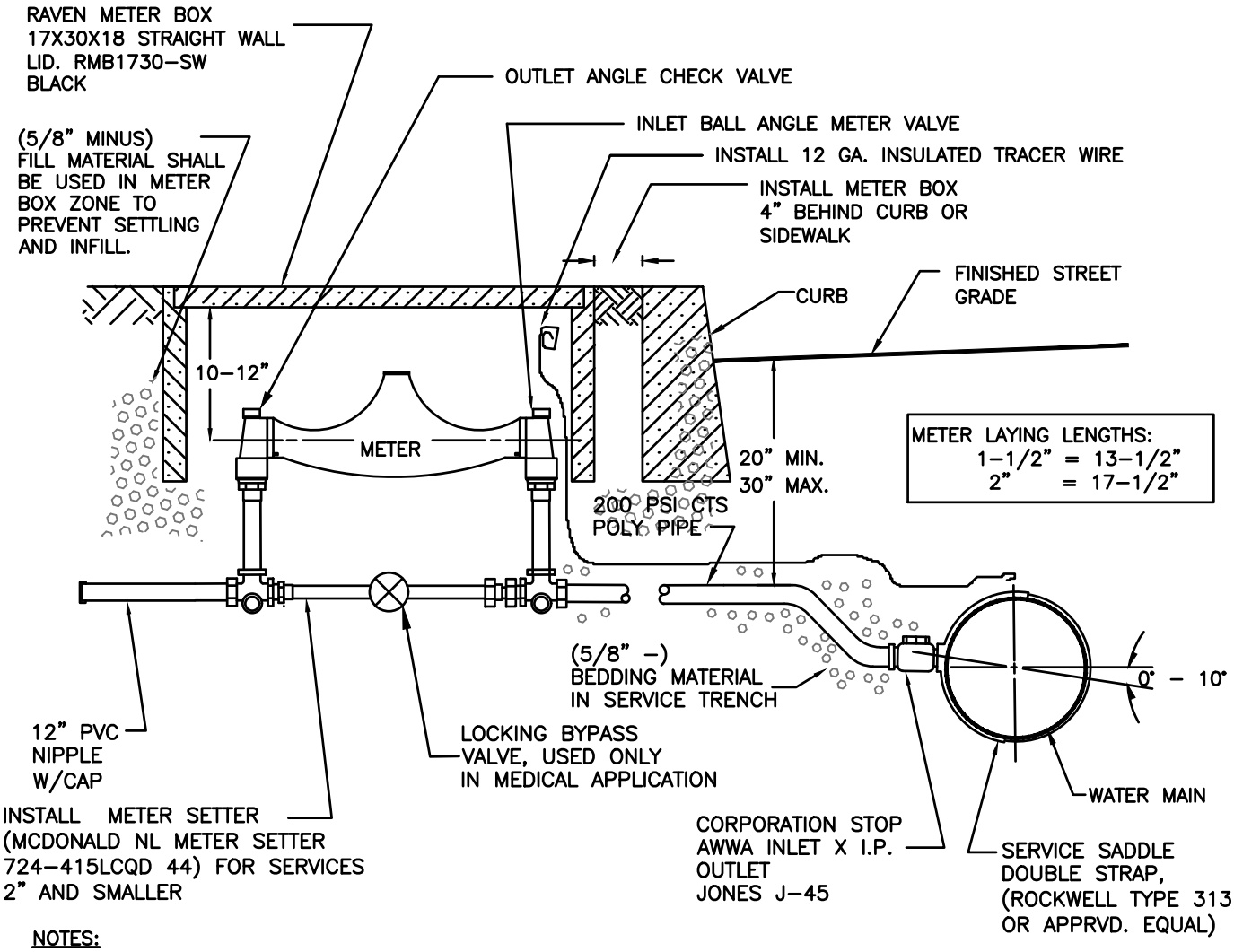
1. METER BOX SHALL BE MANUFACTURED BY RAVEN PRODUCTS UNLESS OTHERWISE APPROVED
2. METER BOX IS NOT ALLOWED IN HARD SURFACE AREAS.
3. ALL METERS SHALL BE INSTALLED BY THE CITY OF RIDGEFIELD
4. PRIOR TO INSTALLATION OF METER A REQUEST FOR METER INSTALLATION MUST BE SUBMITTED, ALL SERVICE FEES PAID IN FULL AND THE WATER MAIN SHALL BE TESTED AND ACCEPTED BY THE CITY. ALLOW 1-2 WEEKS FOR METER INSTALLATION.
6. PRIOR TO FINAL OCCUPANCY OF BUILDING BACKFILL MUST BE PLACED AROUND METER BOX, THE BOX SET TO FINISHED GRADE AND SURROUNDING LANDSCAPING INSTALLED. CALL PUBLIC WORKS AT 360-857-5014 FOR FINAL INSPECTION PRIOR TO FINAL OCCUPANCY. ALLOW 48 HOURS FOR FINAL INSPECTION.
7. WATER SERVICES UP TO AND INCLUDING THE SETTER SHALL BE PRESSURE TESTED WITH THE MAIN.
8. LICENSED PLUMBER TO INSTALL OR REATTACH CUSTOMER SIDE PLUMBING.

N.T.S

REV. 08/01/24 CPG

STANDARD WATER SERVICE - 1"

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W - 1.2**



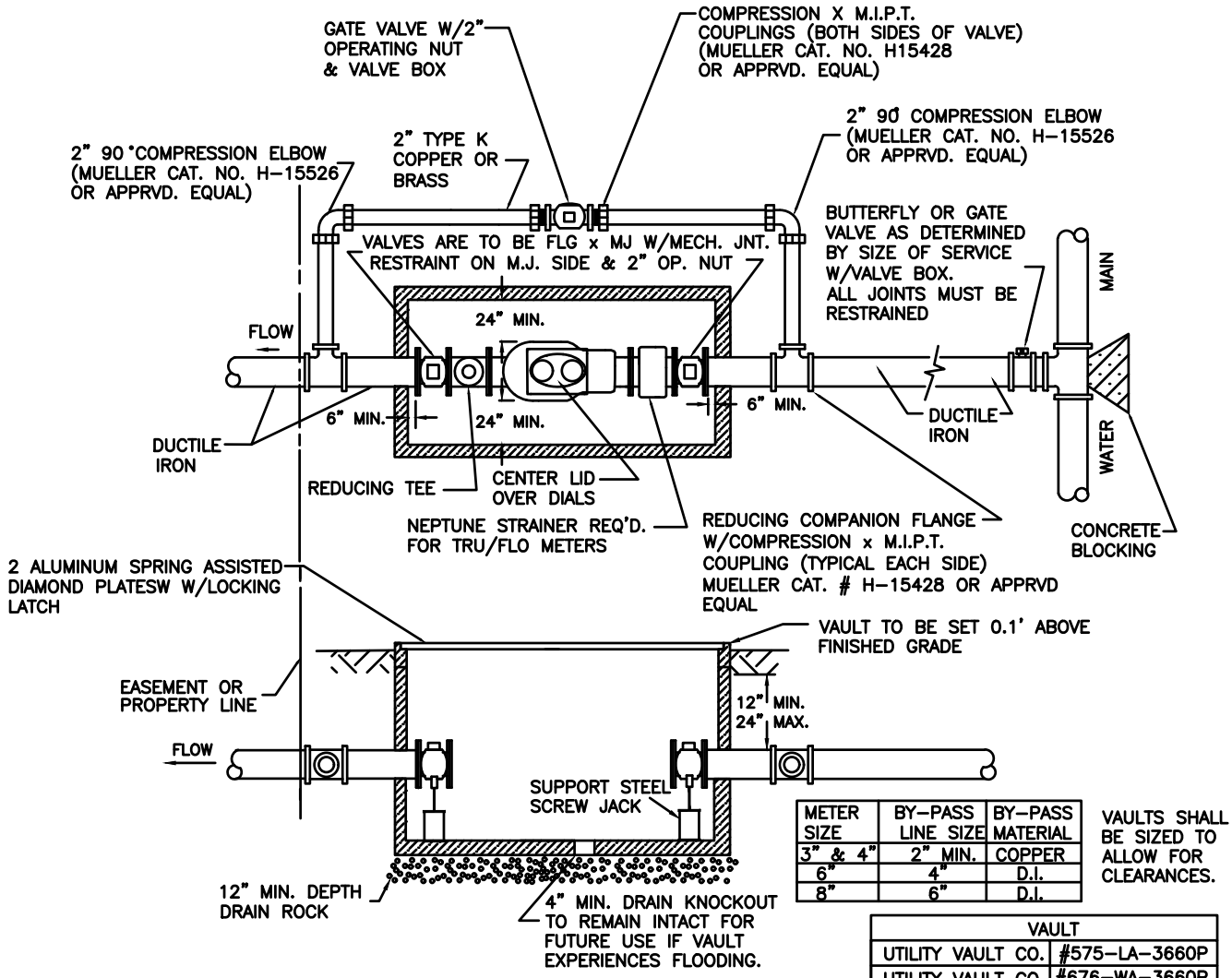
NOTES:

1. ALL METERS SHALL BE INSTALLED BY THE CITY OF RIDGEFIELD.
2. 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.
3. CONTRACTOR SHALL CONTACT CITY PUBLIC WORKS OFFICE (360)887-8251 48 HOURS PRIOR TO INSTALLING ANY WATER SERVICE CONNECTIONS.
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 FOR INSPECTION OF ALL CORPORATION STOPS.
7. USE 1-7/8" BIT FOR ALL 2" SADDLE TAPS AND 1-3/8" BIT FOR 1-1/2" SADDLE TAPS.
8. USE PRO-TRACE CONNECTORS.
9. METER BOX NOT ALLOWED IN HARD SURFACE AREAS.

REV 8/01/24 CPG

STANDARD WATER SERVICE - 1 1/2" & 2"

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W-1.3**



METER SIZE	BY-PASS LINE SIZE	BY-PASS MATERIAL
3" & 4"	2" MIN.	COPPER
6"	4"	D.I.
8"	6"	D.I.

VAULTS SHALL BE SIZED TO ALLOW FOR CLEARANCES.

VAULT	
UTILITY VAULT CO.	#575-LA-3660P
UTILITY VAULT CO.	#676-WA-3660P
R.C.P. VAULTS	#76632
R.C.P. VAULTS	W/#57-TL-B LID

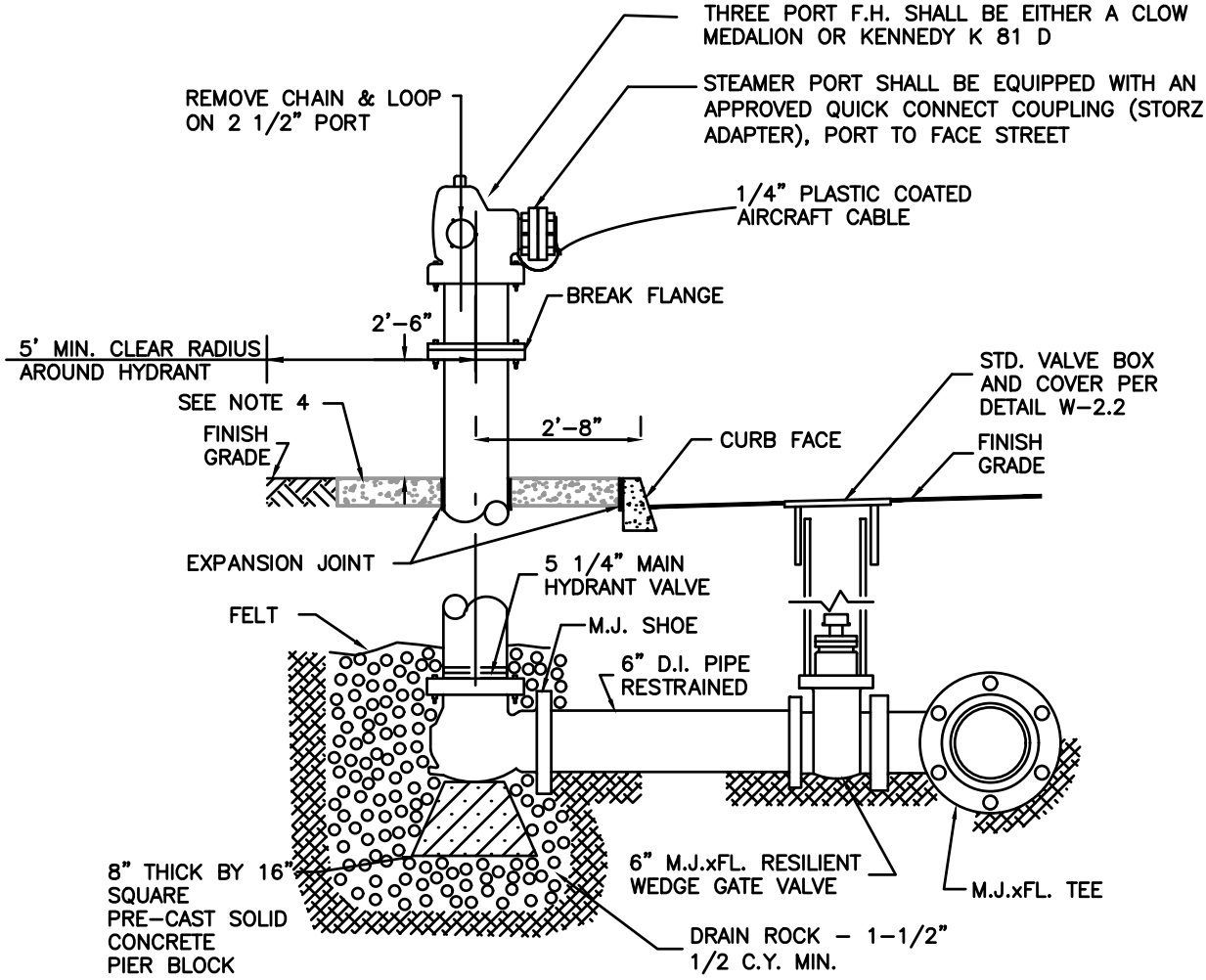
NOTE:

1. TEN PIPE DIAMETERS OF STRAIGHT PIPE REQ'D. IN & OUT OF METER. (IF USING 6" PIPE, NO BENDS ALLOWED WITHIN 5' OF THE METER IN EITHER DIRECTION. IE: 6" x 10 = 60")
2. CONTRACTOR SHALL USE APPROPRIATE METHODS TO ENSURE COPPER PIPE, FITTINGS AND JOINTS WILL REMAIN LEAK-TIGHT.
3. ALL METERS 3" AND LARGER SHALL BE INSTALLED BY THE CONTRACTOR.
4. METER BOX IS NOT ALLOWED WITHOUT PRIOR APPROVAL.
5. VAULT LID DRAINS TO BE PIPED TO CURB OR STORM SEWER.
6. VAULT TO SEALED AND WATER TIGHT
7. METER TYPE TO BE APPROVED BY PUBLIC WORKS PRIOR TO INSTALLATION

REV. 08/01/24 CPG

STANDARD WATER SERVICE - 3" AND LARGER

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET W - 1.4



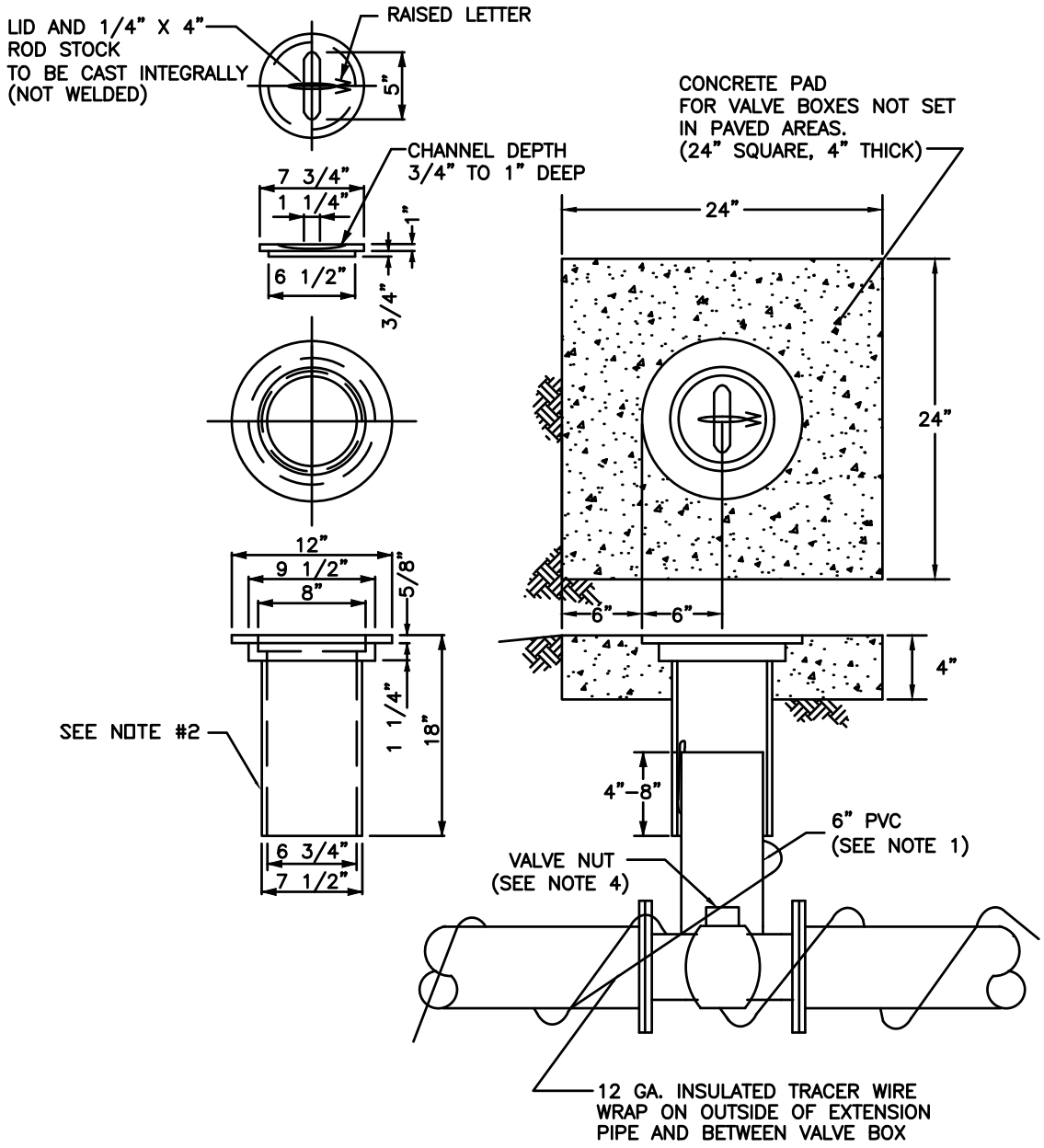
NOTES:

1. FIRE HYDRANT INSTALLATIONS SHALL BE APPROVED BY THE CITY INSPECTOR PRIOR TO BACKFILLING.
2. FIRE HYDRANT LOCATIONS SHALL BE AS SHOWN ON THE PLANS. FIRE HYDRANTS SHALL NOT BE SET UNTIL LOCATION AND DEPTH ARE APPROVED BY THE CITY.
3. FIRE HYDRANT STANDARD BURY IS 4' UNLESS OTHERWISE NOTED ON THE PLANS.
4. A 4'x4'x4" CONCRETE PAD SHALL BE CENTERED AROUND THE FIRE HYDRANT.
5. CONCRETE PAD SHALL BE PLACED FLUSH W/BACK OF CURB OR SIDEWALK. EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE CONCRETE PAD AND CURB/SIDEWALK.
6. ALL PIPING MUST BE RESTRAINED, WITHOUT EXCEPTION.
7. FIRE HYDRANTS SHALL BE FACTORY PAINTED WITH SAFETY YELLOW HIGH GLOSS EQUIPMENT ENAMEL. HYDRANT SHALL BE FRESHLY PAINTED PRIOR TO CITY ACCEPTANCE.
8. FIRE HYDRANT MAINS SHALL BE 8" MIN., A 6" MAIN CAN BE USED FOR A DEAD-END RUN OF LESS THAN 50' TO A HYDRANT SUBJECT TO ADEQUATE FIRE FLOW.
9. NO BENDS SHALL BE ALLOWED ON FIRE HYDRANT RUNS.
10. TONING WIRE SHALL BE RUN UP TO STORZ ADAPTER.

REV. 08/01/24 CPG

STANDARD FIRE HYDRANT ASSEMBLY

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W - 2.1**



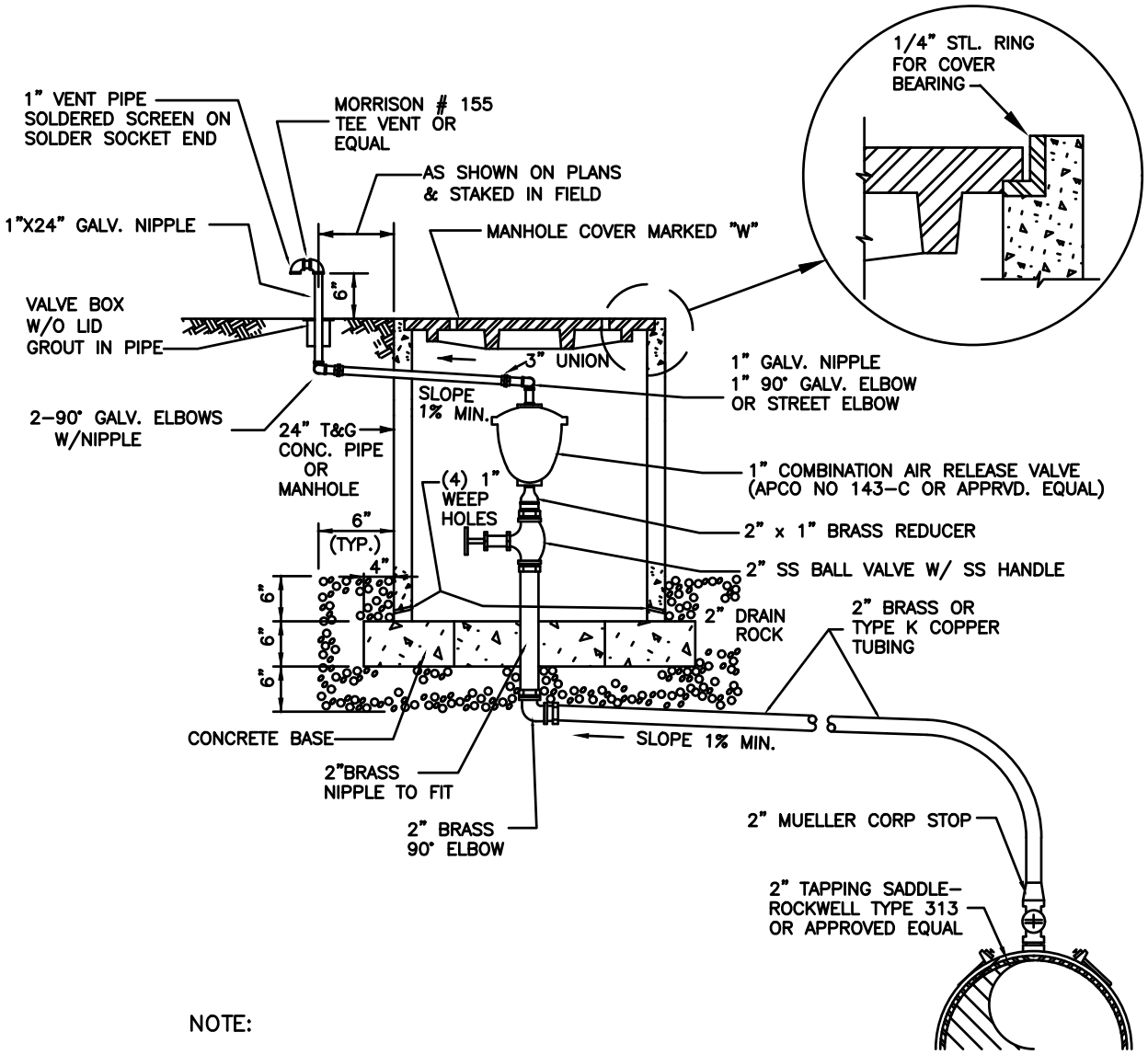
NOTES:

1. EXTENSION SHALL BE 6" ASTM D 3034 SDR 35 PVC PIPE (ONE PIECE).
2. U.S FILTER/PACIFIC WATER WORKS NO. 910 OR EQUAL.
3. THERE SHALL BE 1/2" CLEARANCE UNDER THE PIN CAST INTO THE LID.
4. VALVE OPERATOR EXTENSION TERMINATING AT 24" BELOW FINISHED GRADE AND ROCK GUARD REQUIRED WHEN VALVE NUT IS DEEPER THAN 4 FEET.

REV. 08/01/24 CPG

STANDARD VALVE BOX AND COVER

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W-2.2**



NOTE:

1) PLACE VENT AND AIR RELEASE UNIT ASSEMBLY OUTSIDE OF HARD SURFACE AREA IN R.O.W. OR 15' EASEMENT DEDICATED TO THE CITY OF RIDGEFIELD.

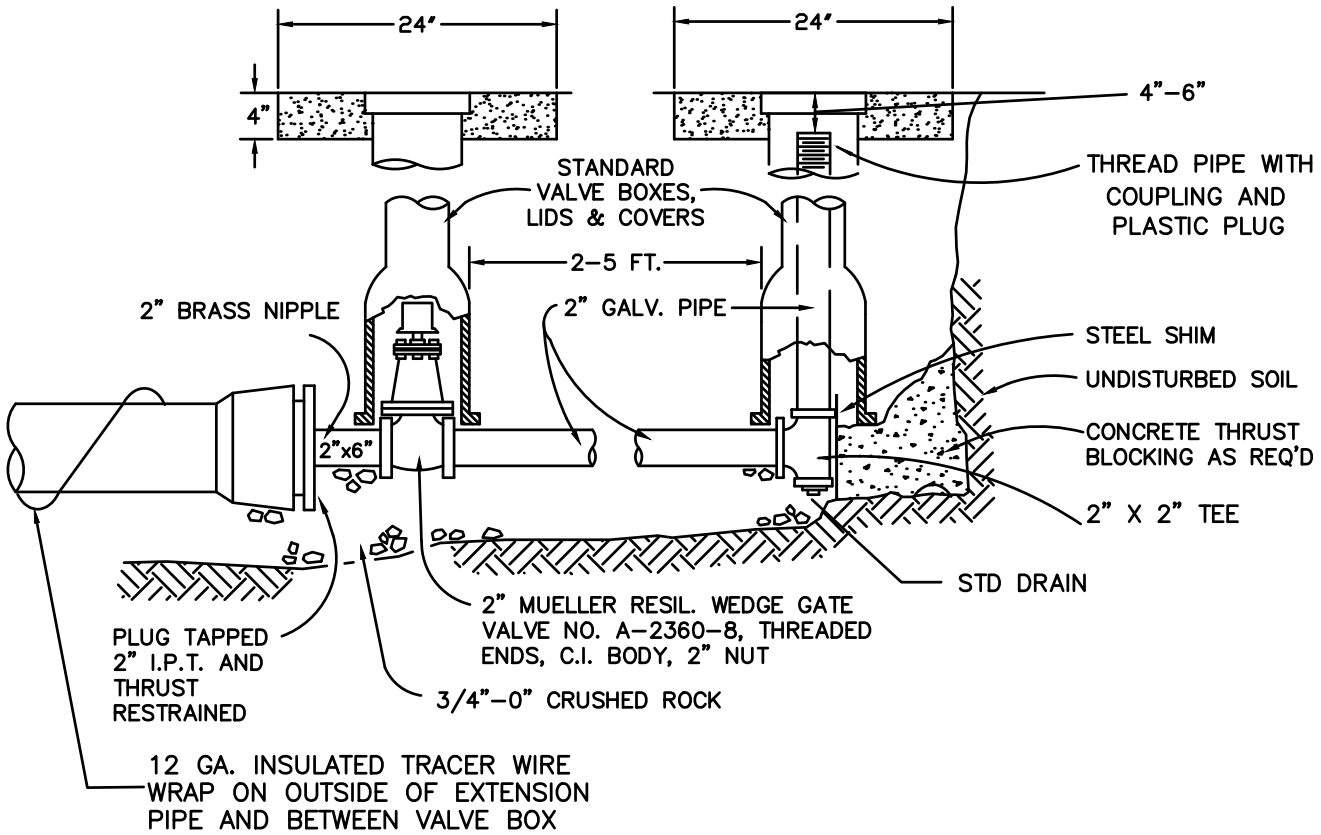
2) MUST BE USED FOR ALL AIR RELEASE LOCATIONS UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

3) TONING WIRE SHALL BE BROUGHT UP TO THE BOTTOM OF THE LID.

REV. 08/01/24 CPG

COMBINATION AIR RELEASE VALVE

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W - 2.4**



NOTES:

1. VALVE BOX TO BE CONCRETE ENCASED AS SHOWN, IF NOT IN PAVED AREA.
2. BLOW–OFF UNIT SHALL BE BACKFILLED WITH 3/4"–0" CRUSHED ROCK AND COMPACTED TO 95% OF MAX. DENSITY DETERMINED BY AASHTO T–180.
3. PLACE BLOW–OFF STANDPIPE 3 FT. INSIDE R.O.W. LINE AT END OF STREET (2 FT. FROM BARRICADE).
4. TONING WIRE SHALL FOLLOW STANDARDS OF STANDARD VALVE BOX ASSEMBLY CITY OF RIDGEFIELD STANDARD DETAIL W–2.2.

BLOW–OFF
SIZES REQUIRED

MAIN SIZE	BLOW–OFF SIZE
<12"	2"
≥12"	4"

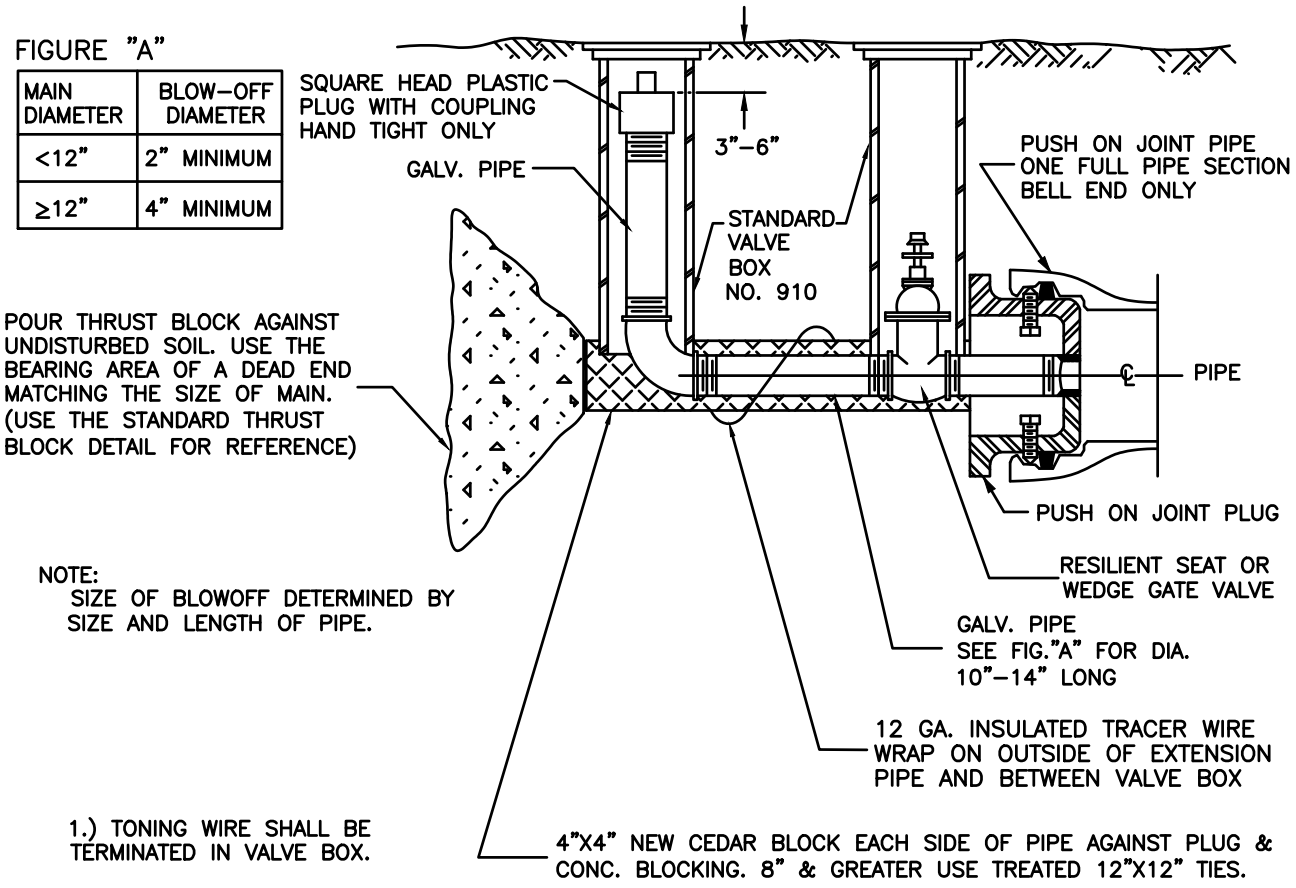
REV 4/7/17 BGK

STANDARD BLOWOFF ASSEMBLY

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET W-2.5

FIGURE "A"

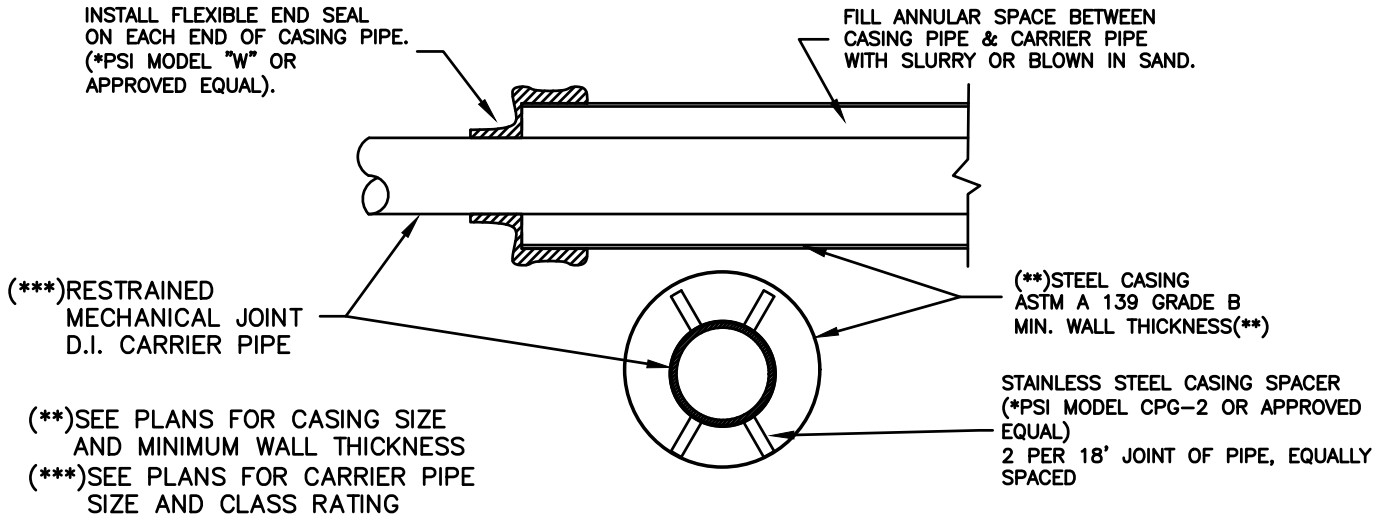
MAIN DIAMETER	BLOW-OFF DIAMETER
<12"	2" MINIMUM
≥12"	4" MINIMUM



STANDARD TEMPORARY BLOWOFF ASSEMBLY

N.T.S.

REV. 08/01/24 CPG



(**)SEE PLANS FOR CASING SIZE AND MINIMUM WALL THICKNESS
(***)SEE PLANS FOR CARRIER PIPE SIZE AND CLASS RATING

*Pipeline Seal and Insulator, Inc.

CASING SIZING REQUIREMENTS

CARRIER PIPE	MINIMUM CASING REQUIREMENTS	WALL THICKNESS
4"	16" A36 STEEL	3/8"
6"	16" A36 STEEL	3/8"
8"	24" A36 STEEL	3/8"
10"	24" A36 STEEL	3/8"
12"	24" A36 STEEL	3/8"
16"	36" A36 STEEL	5/8"
24"	48" A36 STEEL	5/8"

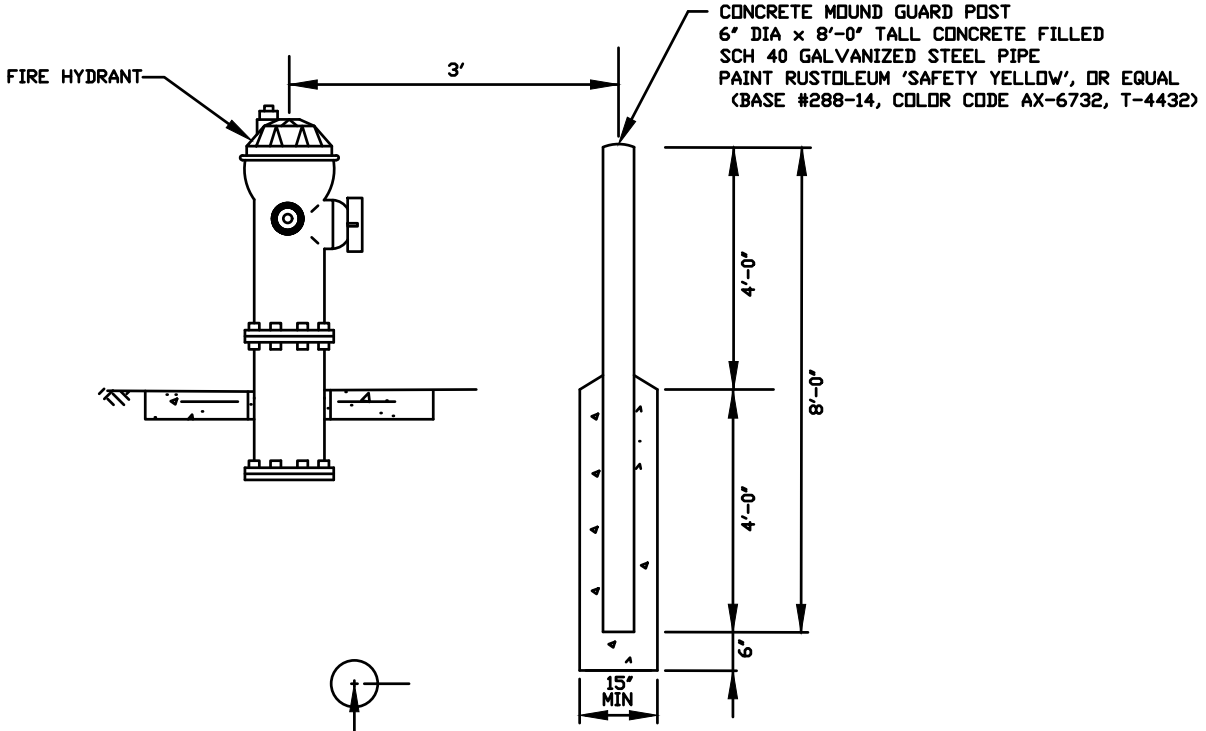
NOTES

1. CASING TO BE EXTENDED 5' BEYOND ANY CURB, WALLS, STRUCTURES OR FOOTINGS
2. PUBLIC AND PRIVATE MAINS SHALL BE PLACED IN SEPARATE CASINGS.
3. WRITTEN PERMISSION FROM THE OWNER OF THE RAILROAD TRACKS IS REQUIRED PRIOR TO OBTAINING CITY OF RIDGEFIELD PERMITS TO PROCEED.
4. NO PRIVATE UTILITIES SHALL BE ALLOWED IN CITY OF RIDGEFIELD CASINGS.

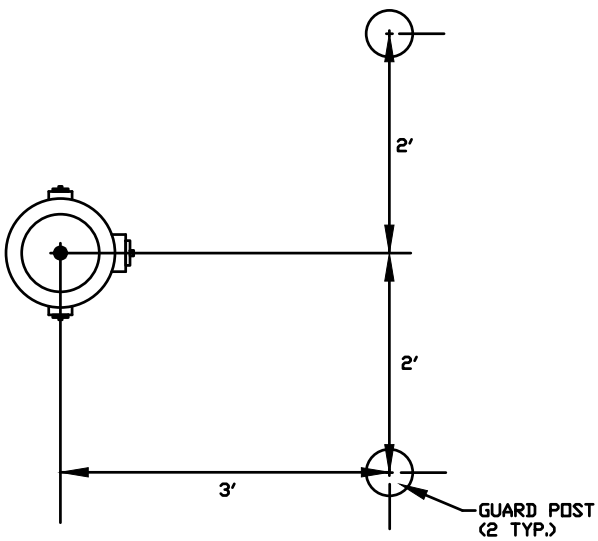
REV. 2/06/08 SCH

PIPE AND CASING DETAIL

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W-2.8**



SECTION



PLAN

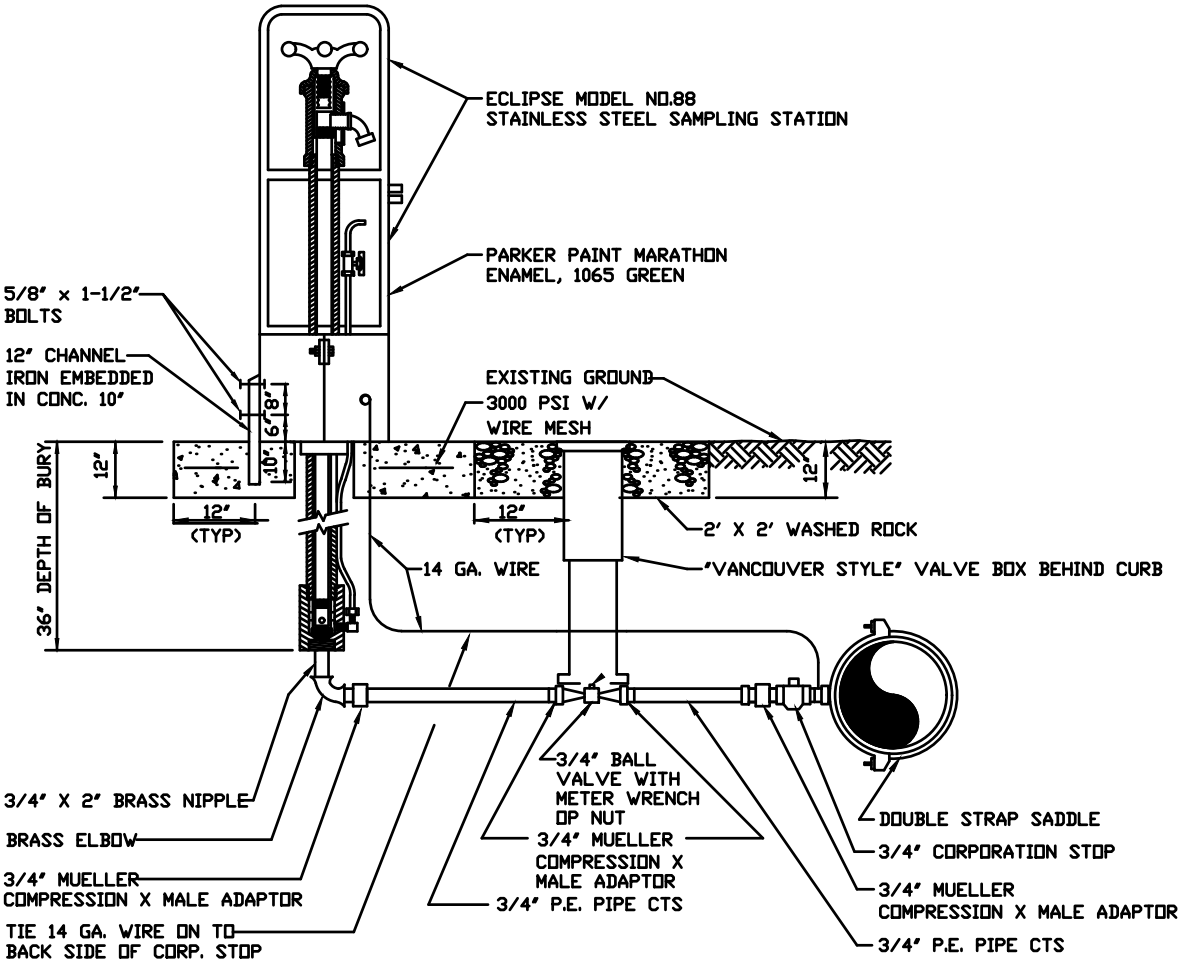
NOTES:

1. CONCRETE GUARD POSTS SHALL BE INSTALLED WHEN REQUIRED BY CITY ENGINEER

REV. 05/08/23 JRJ

FIRE HYDRANT GUARD POST

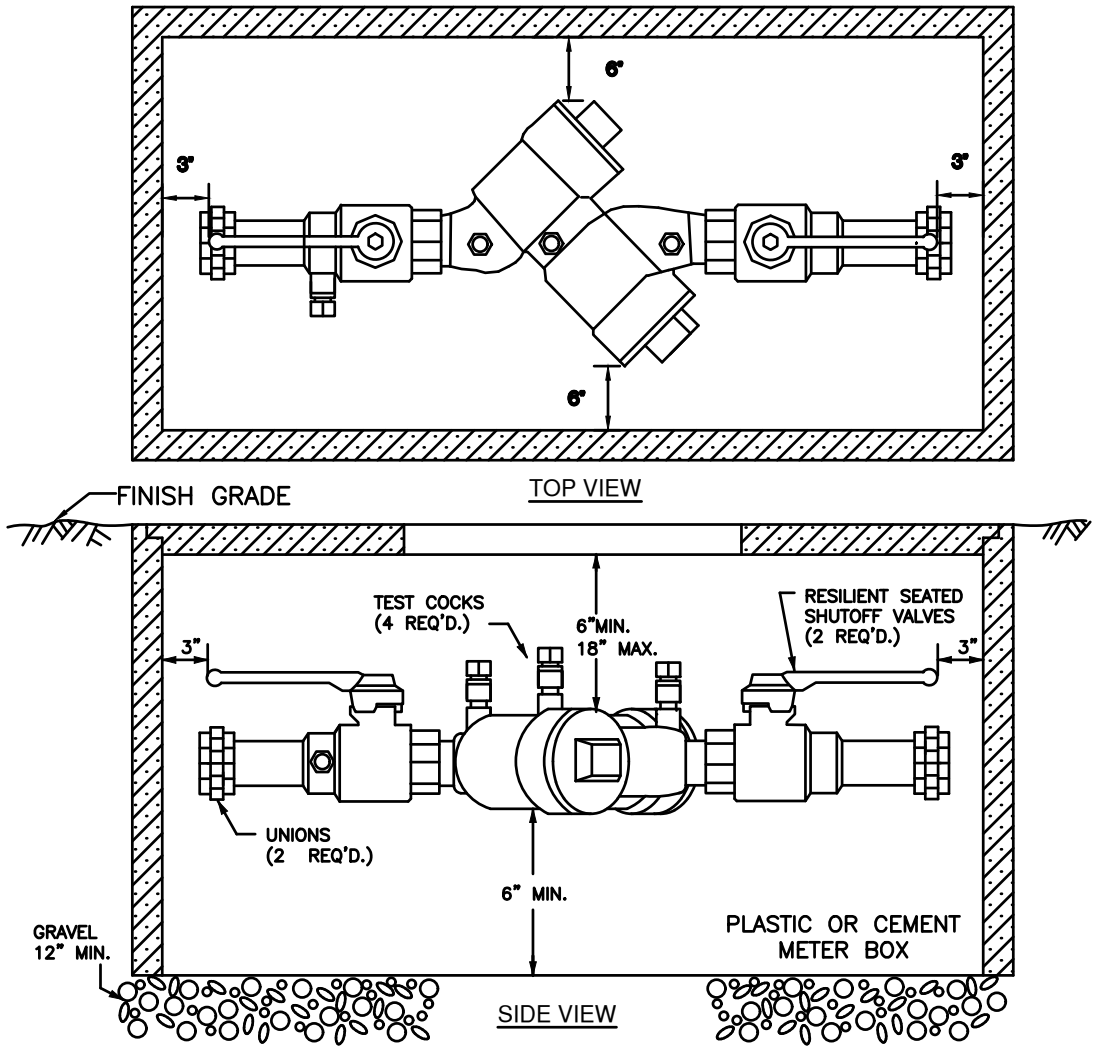
STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W - 2.9**



REV. 08/01/24 CPG

WATER SAMPLING STATION

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W - 2.10**



NOTES:

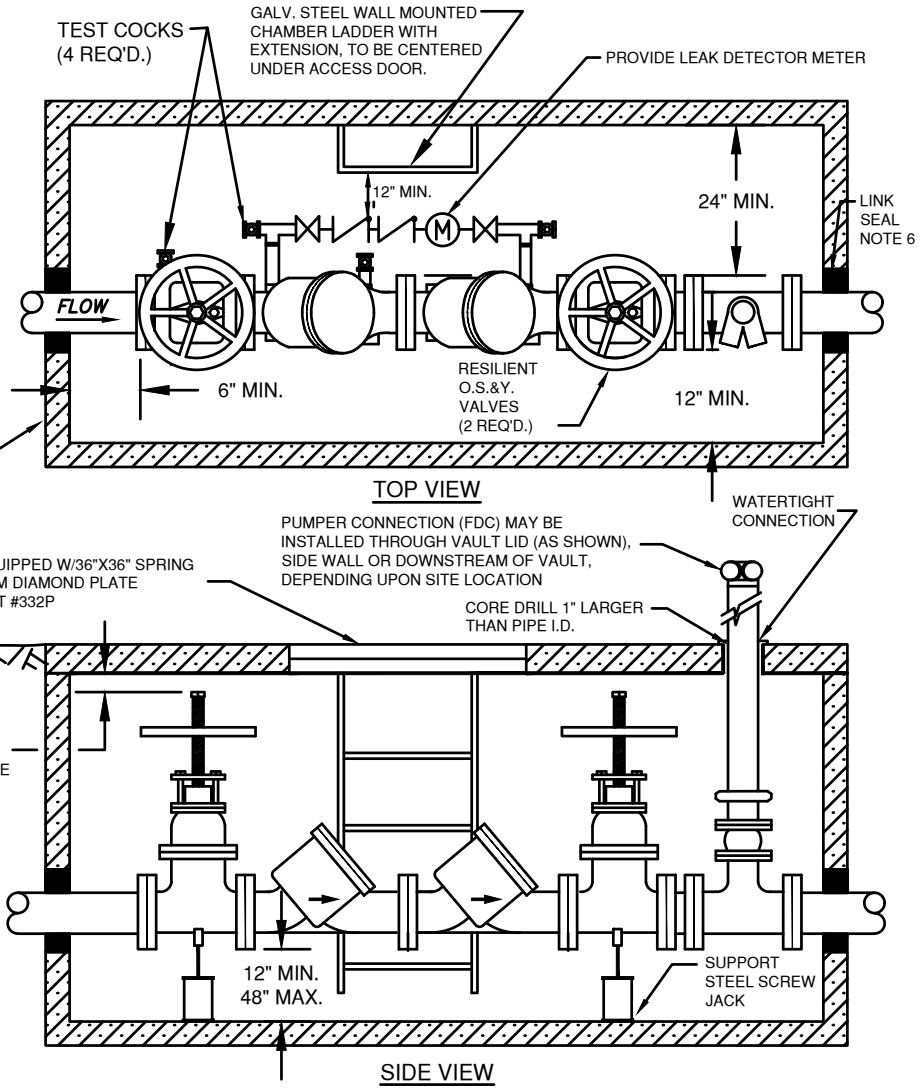
1. APPROVED DOUBLE CHECK VALVE ASSEMBLY (DCVA) TO LAY HORIZONTAL WITH GROUND. (VERTICAL ALLOWED IF APPROVED BY WA. DEPT. OF HEALTH)
2. DCVA MAY BE INSTALLED ABOVE OR BELOW GROUND PROVIDED ALL CLEARANCES ARE MET.
3. DESIGN FOR BACK SIPHONAGE AND BACK PRESSURE.
4. TEST COCKS TO EITHER FACE OUTWARDS OR UPWARDS FROM ASSEMBLY.
5. THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
6. DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
7. DCVA MUST BE ACCESSIBLE.
8. PROTECT DCVA FROM FREEZING.
9. DCVA SHALL BE APPROVED BY THE STATE OF WASHINGTON DEPARTMENT OF HEALTH.
10. A PLUMBING PERMIT IS REQUIRED-CONTACT THE CITY PERMITS COUNTER
11. DCVA MUST BE TESTED AFTER INSTALLATION, THEN ANNUALLY BY A WA. STATE CERTIFIED BACKFLOW TESTER. RESULTS SHALL BE SENT TO THE CITY PUBLIC WORKS OFFICE.

DOUBLE CHECK VALVE ASSEMBLY - 2" & SMALLER

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W - 3.1**

UTILITY VAULT SIZING CHART
(OR APPROVED EQUAL)

DEPTH OF PIPE UP TO	DCVA SIZE	FDC TEE INSIDE VAULT	FDC TEE OUTSIDE VAULT
4'	4"	675-WA W/2 -332P	575-WA W/2
6'	4"	676-WA	577-WA
4'	6"	687-WA	675-WA W/2
6'	6"		676-WA
6'	8"	5106-WA	687-WA
6'	10"	5106-WA	5106-WA



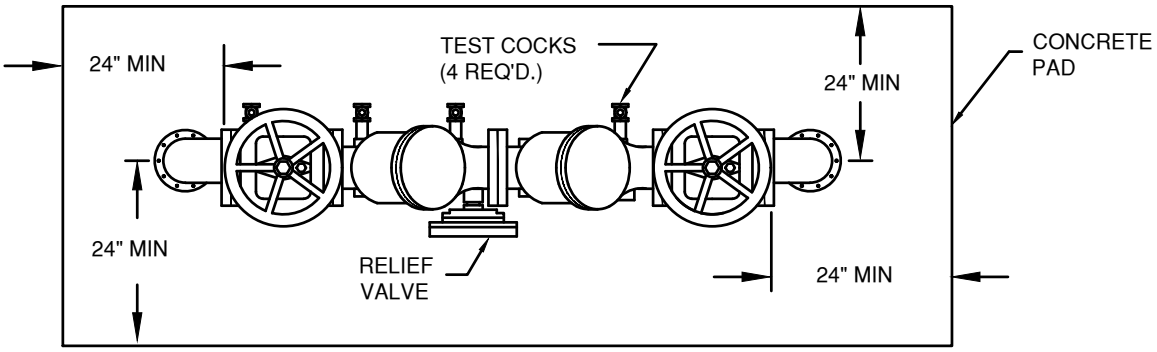
NOTES:

1. THE DCVA MAY BE INSTALLED ABOVE OR BELOW GROUND PROVIDED ALL CLEARANCES ARE MET.
2. APPROVED DCVA TO LAY HORIZONTAL WITH THE GROUND. (VERTICAL IF APPROVED BY DEPT. OF HEALTH)
3. DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
4. THE WATER LINE SHALL BE DISINFECTED, FLUSHED AND PRESSURE TESTED PRIOR TO INSTALLING THE BACKFLOW ASSEMBLY. THE DCVA SHALL BE PROTECTED FROM FREEZING AND FLOODING.
5. ALL PIPE, VALVE AND FITTING JOINTS, FROM SUPPLY MAIN, SHALL BE FLANGED OR RESTRAINED.
6. PIPE ENTRANCE AND EXIT TO BE PROVIDED WITH LINK SEAL APPROVED EQUAL MECHANICAL SEAL.
7. ALL VAULTS SHALL BE PRE-APPROVED PRIOR TO INSTALLATION.
8. DCVA SHALL BE INSTALLED AT THE PROPERTY LINE OR EASEMENT LINE AND ON OWNER'S PROPERTY.
9. DCVA SHALL HAVE A MINIMUM OF 3' CLEARANCE FROM ALL STRUCTURES.
10. DCVA 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 PUBLIC WORKS OFFICE.

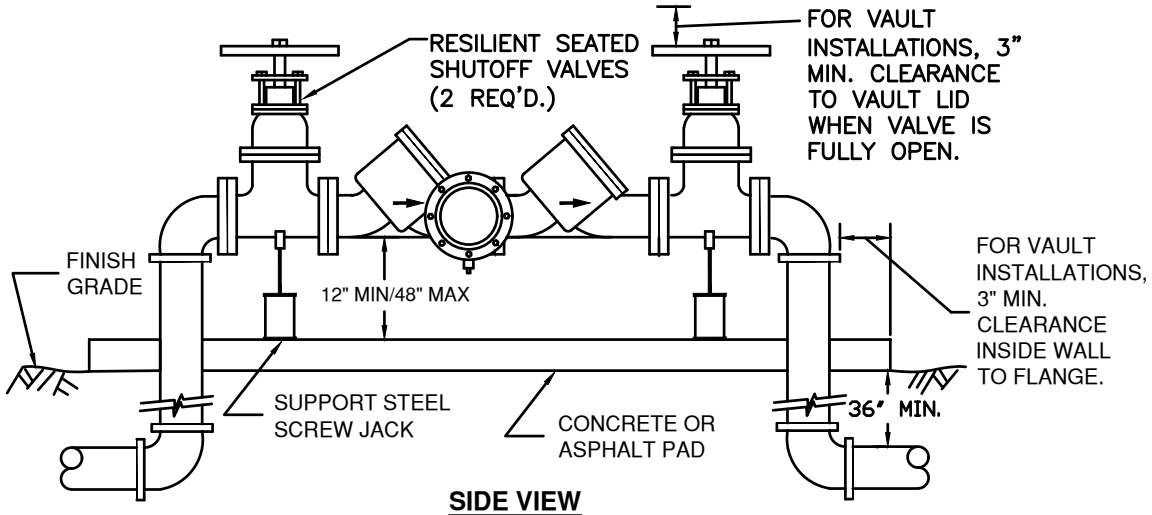
REV. 3/07/08 SCH

DOUBLE CHECK VALVE ASSEMBLY - 2 1/2" & LARGER

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W - 3.3**



TOP VIEW



SIDE VIEW

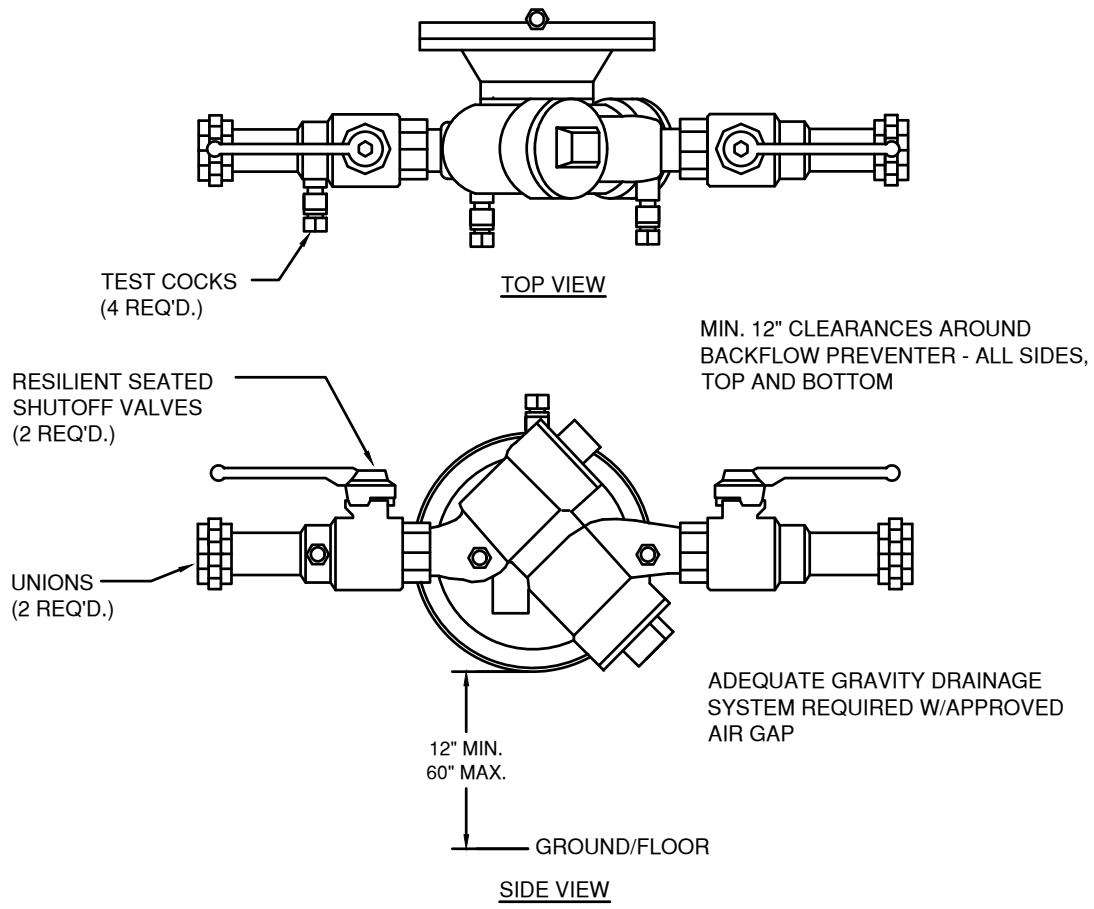
NOTE:

1. APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) TO LAY HORIZONTAL ONLY. (VERTICAL IF APPROVED BY DEPT. OF HEALTH)
2. DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
3. THE WATER LINE SHALL BE DISINFECTED, FLUSHED AND PRESSURE TESTED PRIOR TO INSTALLING THE RPBA. THE RPBA SHALL BE PROTECTED FROM FREEZING AND FLOODING.
4. ALL PIPE, VALVES AND FITTING JOINTS FROM SUPPLY MAIN, SHALL BE FLANGED AND RESTRAINED.
5. PIPE ENTRANCE AND EXIT PROVIDED WITH LINK SEAL, OR APPROVED EQUAL MECHANICAL SEAL.
6. ALL ENCLOSURES SHALL BE PRE-APPROVED PRIOR TO INSTALLATION.
7. RPBA SHALL BE INSTALLED AT PROPERTY LINE OR EASEMENT LINE AND ON OWNER'S PROPERTY.
8. ADEQUATE GRAVITY DRAINAGE SYSTEM REQUIRED WITH APPROVED AIR GAP.
9. MINIMUM 24" CLEARANCE ON ALL SIDES AROUND RPBA.
10. THE RPBA SHALL BE TESTED AFTER INSTALLATION AND PRIOR TO ACCEPTANCE, ALSO YEARLY THEREAFTER BY A CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY PUBLIC WORKS OFFICE.
11. A CITY APPROVED VALVE IS REQUIRED BETWEEN THE SUPPLY MAIN AND THE R.P.B.A.
12. PROVIDE HEAT AND/OR INSULATION TO PREVENT FREEZING.
13. SUPPORT PIPE AND FITTINGS TO BE SCHEDULE 80 OR AS APPROVED BY CITY ENGINEER.

(ABOVE GROUND INSTALLATION ONLY)

REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY 2-1/2" & LARGER

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W - 3.4**



NOTES:

1. APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) TO LAY HORIZONTAL WITH GROUND. (VERTICAL ALLOWED IF APPROVED BY WA. DEPT. OF HEALTH)
2. DESIGN RPBA FOR BACK SIPHONAGE AND BACK PRESSURE.
3. THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
4. DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
5. RPBA MUST BE ACCESSIBLE.
6. PROTECT RPBA FROM FREEZING.
7. A PLUMBING PERMIT IS REQUIRED-CONTACT THE APPROPRIATE JURISDICTION'S PERMITS COUNTER
8. RPBA MUST BE TESTED AFTER INSTALLATION, THEN ANNUALLY BY A WA. STATE CERTIFIED BACKFLOW TESTER. RESULTS SHALL BE SENT TO THE CITY PUBLIC WORKS OFFICE.
9. RPBA SHALL BE APPROVED BY THE STATE OF WASHINGTON. A LIST OF THE APPROVED DEVICES IS AVAILABLE FROM THE DEPARTMENT OF HEALTH.
10. A CITY APPROVED VAULT AND LID REQUIRED. PROVIDE HEAT AND/OR INSULATION TO PREVENT FREEZING,
11. SUPPORT PIPES AND FITTINGS TO BE SCHEDULE 80 PVC OR, AS APPROVED BY THE CITY ENGINEER.

(ABOVE GROUND INSTALLATION ONLY)

REV. 4/15/08 SCH

REDUCE PRESSURE PRINCIPLE BACKFLOW ASSEMBLY - 2" & SMALLER

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **W - 3.5**

STANDARD NOTES FOR EROSION CONTROL PLAN

1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN BMP'S AS SHOWN AND PERFORM ALL ACTIONS NECESSARY TO PREVENT EROSION, AND CONTROL SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. CONTRACTOR SHALL COMPLY WITH THE CITY OF RIDGEFIELD MUNICIPAL CODE 18.755.050–060.

2. ALL EROSION CONTROL MEASURES SHALL BE IN–PLACE AND IN WORKING CONDITION PRIOR TO DISTURBING AND EXPOSING ANY SOIL SURFACES.

3. ALL EROSION PREVENTION AND CONTROL BMP'S SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. NEEDED REPAIRS SHALL BE MADE AS SOON AS POSSIBLE. THEY ARE TO REMAIN IN PLACE AND OPERATIONAL DURING ALL PHASES OF CONSTRUCTION. CONSTRUCTION ACTIVITIES SHALL NOT CONTINUE OR RESUME UNTIL REPAIRS TO EROSION CONTROL FACILITIES ARE MADE AND THE FACILITIES ARE FUNCTIONAL. ANY SEDIMENT LEAVING THE SITE OR DISCHARGING TO A SENSITIVE AREA SHALL BE STOPPED AND CONTROLLED IMMEDIATELY. CONTAMINATED AREAS SHALL BE CLEANED AND RESTORED.

4. CLEARING LIMITS AND WORK AREA LIMITS SHALL BE DELINEATED AND MARKED. DO NOT DISTURB MORE AREA THAN NEEDED FOR CONSTRUCTION REQUIREMENTS.

5. ALL SENSITIVE OR CRITICAL AREAS (WETLANDS, STEEP SLOPES, NATURAL WATERWAYS) AND BUFFERS SHALL BE CLEARLY DELINEATED AND MARKED AND PROTECTED FROM SEDIMENT DEPOSITION.

6. SEDIMENT LADEN RUNOFF SHALL BE PREVENTED FROM ENTERING ALL EXISTING STORM WATER CATCH BASINS AND INLETS.

7. NO DENUDED SOILS SHALL REMAIN UNSTABILIZED FOR MORE THAN TWO DAYS DURING THE PERIOD OCTOBER 1 THRU APRIL 30 OR FOR MORE THAN SEVEN DAYS DURING THE PERIOD OF MAY 1 THROUGH OCTOBER 1. ALL DISTURBED SOIL SURFACES SHALL BE STABILIZED BY A SUITABLE BMP.

   7.1. DEVELOPMENTS WITH TEN ACRES OR FEWER NET DEVELOPABLE AREA SHALL HAVE NO MORE THAN 2.5 DISTURBED ACRES, AT ANY GIVEN TIME.
   7.2. DEVELOPMENTS WITH GREATER THAN TEN ACRES OF NEW DEVELOPABLE AREA SHALL HAVE NO MORE THAN 5 DISTURBED ACRES, OR 25% OF THE NET DEVELOPABLE AREA, WHICHEVER IS FEWER, AT ANY GIVEN TIME.
   7.3. THE PUBLIC WORKS DIRECTOR MAY APPROVE ADDITIONAL DISTURBED AREA IN WRITING FOLLOWING A FULL INSPECTION OF ALL BMP'S.

8. WHERE FEASIBLE, NO MORE THAN 500 FEET OF TRENCH SHALL BE OPEN AT ONE TIME. EXCAVATED MATERIAL SHALL BE PLACED ON THE UP–HILL SIDE OF TRENCHES PROVIDED IT DOES NOT CONFLICT WITH SAFETY REQUIREMENTS.

9. DEWATERING DEVICES SHALL DISCHARGE INTO A SEDIMENT TRAP OR SEDIMENT POND. NO DISCHARGE SHALL BE MADE TO A PAVED STREET OR STORMWATER COLLECTION SYSTEM WITHOUT FIRST REMOVING SEDIMENT.

10. SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. RUNOFF SHALL BE PREVENTED FROM UNDERCUTTING THE BASE OF SLOPES.

11. ANY SOIL OR DEBRIS TRANSPORTED ONTO ROADWAYS AND SIDEWALKS SHALL BE REMOVED. DEPOSITS SHALL BE COMPLETELY REMOVED BY SHOVELING AND/OR SWEEPING. WASHING SHALL NOT BE UTILIZED UNLESS SPECIFICALLY APPROVED IN WRITING BY THE CITY. SHOULD THERE BE ANY EVIDENCE OF SEDIMENT, MUD, OR DEBRIS BEING TRANSPORTED ONTO A ROAD SURFACE, IT WILL BE CLEANED IMMEDIATELY AND A WHEEL WASH SHALL BE INSTALLED.

12. ALL CONVEYANCE CHANNELS, BOTH TEMPORARY AND PERMANENT SHALL BE STABILIZED TO PREVENT EROSION OF THE CHANNEL. STABILIZATION SHALL EXTEND TO AREAS AT OUTLETS AND DOWNSTREAM REACHES VULNERABLE TO EROSION.

13. IF SPECIFIED BMP'S ARE UTILIZED BUT ARE INSUFFICIENT TO PREVENT SEDIMENT FROM REACHING WATER BODIES, ADJACENT PROPERTIES, OR PUBLIC RIGHTS–OF–WAY THEN ADDITIONAL BMP'S SHALL BE IMPLEMENTED IMMEDIATELY.

REV. 08/01/24 CPG

EROSION CONTROL GENERAL NOTES

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-1.0A**

STANDARD NOTES FOR EROSION CONTROL PLAN (CONTINUED)

14. STABILIZED AREAS SHALL BE PROVIDED FOR EMPLOYEE PARKING AND STORAGE OF CONSTRUCTION MATERIALS. EROSION CONTROL BMP'S SHALL BE UTILIZED AS NECESSARY TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING OR SEDIMENT BEING TRANSPORTED FROM THESE AREAS FROM VEHICLE ACTIVITY.

15. INLET PROTECTION MUST ALLOW FOR OVERFLOW IN A SEVERE STORM EVENT.

16. REPAIR OR REPLACE MATERIALS AS NEEDED TO ENSURE PROPER FUNCTION.

17. ALL POLLUTANTS THAT OCCUR DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORM WATER.

18. ALL EROSION AND SEDIMENT CONTROL BMPS SHALL BE REGULARLY INSPECTED, MAINTAINED, AND REPAIRED AS NEEDED BY THE PROPERTY OWNER OR PERMIT HOLDER TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. A MAINTENANCE LOG SHALL BE PROVIDED AND KEPT AS PERMANENT RECORD. THE MAINTENANCE LOG SHALL BE IN A DESIGNATED ON-SITE LOCATION. INSPECT ONCE DAILY ON ACTIVE SITES, ONCE EVERY TWO WEEKS ON INACTIVE SITES, AND WITHIN 24 HOURS FOLLOWING A 0.5 INCH RAIN EVENT.

19. ALL CONSTRUCTION ACTIVITIES SHALL BE SUPERVISED BY AN INDIVIDUAL WHO SHALL HAVE SUCCESSFULLY COMPLETED FORMAL TRAINING IN EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION BY A RECOGNIZED ORGANIZATION ACCEPTABLE TO THE CITY. A CERTIFICATION OR SUFFICIENT EVIDENCE OF SUCCESSFUL COMPLETION OF SUCH TRAINING SHALL BE SUBMITTED PRIOR TO CONSTRUCTION.

20. ALL TEMPORARY BMP'S SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED.

21. CONSTRUCTION SHALL NOT BE CONSIDERED COMPLETE AND ACCEPTABLE UNTIL ALL DISTURBED SOIL SURFACES HAVE BEEN PROTECTED FROM EROSION.

22. VEGETATED STABILIZATION AND LANDSCAPING SHALL BE FERTILIZED, WATERED AND MAINTAINED TO ENSURE THAT GROWTH OF VEGETATION IS ESTABLISHED AND SUSTAINED.

23. DURING DRY WEATHER CONSTRUCTION PERIODS THE CONTRACTOR SHALL PROVIDE PROJECT-SPECIFIC DUST CONTROL MEASURES. THE CONTRACTOR SHALL MAINTAIN THE DUST CONTROL MEASURES THROUGH DRY WEATHER PERIODS UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED. IMMEDIATELY RE-STABILIZE AREAS DISTURBED BY CONTRACTOR'S OPERATIONS OR OTHER ACTIVITIES (WIND, WATER, VANDALISM, ETC.).

24. ENTRY ONTO THE CONSTRUCTION SITE SHALL BE RESTRICTED TO A SINGLE APPROVED ENTRANCE AS SHOWN ON THE PLAN.

25. MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES WHICH INVOLVE POTENTIAL CONTAMINANTS (OIL, SOLVENTS, HYDRAULIC FLUID, ETC.) MUST BE CONDUCTED IN A MANNER WHICH PREVENTS CONTAMINATION OF SOILS, SURFACE WATER AND GROUND WATER. TARPS, DRIP PANS, OR OTHER APPROPRIATE MEASURES SHALL BE USED AS NECESSARY.

26. STRIPPING, TOPSOIL, AND UNSUITABLE MATERIAL STOCKPILES SHALL BE HYDROSEEDED. MAINTENANCE OF STOCKPILE AREAS AND REAPPLICATION OF HYDROSEED COVERING SHALL BE REQUIRED IF BARE SOIL IS PRESENT.

TEMPORARY EROSION CONTROL SEED MIX

	% WEIGHT	% PURITY	% GERMINATION
CHEWINGS OR ANNUAL BLUE GRASS ***FESTUCA RUBRA VAR. COMMUTATA OR POA ANNA***	40	98	90
PERENNIAL RYE - ***LOLIUM PERENNE***	50	98	90
REDTOP OR COLONIAL BENTGRASS ***AGROSTIS ALBA*** OR ***AGROSTIS TENUIS***	5	92	85
WHITE DUTCH CLOVER ***TRIFOLIUM REPENS***	5	98	90

27. THE CONTRACTOR SHALL REMOVE ALL ACCUMULATED SEDIMENT FROM THE CATCH BASINS, UTILITY TRENCHES, AND STORM PIPES PRIOR TO ACCEPTANCE BY THE CITY.

REV. 08/01/24 CPG

EROSION CONTROL GENERAL NOTES

MATTING NOTES:

1. THERE ARE A WIDE RANGE OF MATERIALS AND COMBINATION OF MATERIALS USED TO PRODUCE MATTING INCLUDING, BUT NOT LIMITED TO: STRAW, JUTE, WOOD FIBER, COIR (COCONUT FIBER), PLASTIC NETTING, AND BONDED FIBER MATRIX.

2. GENERALLY, MATTING IS USED ON SLOPES 2:1 AND STEEPER

3. SURFACE MUST BE GRADED SMOOTH TO REMOVE ALL DEBRIS AND UNDULATIONS LARGER THAN 2" IN ANY DIRECTION.

4. APPLY SEED AND FERTILIZER PRIOR TO MATTING. INSTALL SO THAT MATTING IS IN COMPLETE CONTACT WITH SOIL SURFACE.

5. ORGANIC MATTING MATERIALS (EXCELSIOR, JUTE, AND COIR) BIODEGRADE AND ARE USEFUL FOR APPLICATIONS REQUIRING STABILIZATION FOR UP TO THREE MONTHS. USE ORGANIC BLANKETS, WHICH RETAIN MOISTURE AND PROVIDE ORGANIC MATTER TO THE SOIL, FOR SLOPE PROTECTION AND SHORT–TERM WATERWAY PROTECTION AND TO IMPROVE THE SPEED AND SUCCESS OF REVEGETATION.
   - EXCELSIOR BRAND (ASPEN WOOD FIBER), WOVEN STRAW, AND COIR BLANKETS MAY BE INSTALLED WITHOUT MULCH BECAUSE THEY PROVIDE COMPLETE SURFACE PROTECTION.

6. SYNTHETIC MATS ARE MADE FROM NON–BIODEGRADABLE MATERIALS AND WILL REMAIN IN PLACE FOR YEARS (SOME PHOTODEGRADATION DOES OCCUR). USE SYNTHETIC BLANKETS FOR LONG–TERM (LONGER THAN 3 MONTHS) STABILIZATION OF WATERWAYS.
   - TURF REINFORCEMENT MATS (TRM) ARE MADE FROM POLYMER NETTING OR MONOFILAMENTS FORMED INTO A SYNTHETIC 3–D MAT. TRMs PROTECT SEED AND INCREASE GERMINATION AND ALSO ACTS AS PART OF THE ROOT STRUCTURE; GIVING THE TURF HIGHER STRENGTH.
   - EROSION CONTROL AND REVEGETATION MATS (ECRM), COMPOSED OF HEAT–FUSED MONOFILAMENTS AND MONOFILAMENTS STITCHED BETWEEN NETTING ACT AS PERMANENT MULCH. ECRM ALLOW GROWTH THROUGH THE MAT.

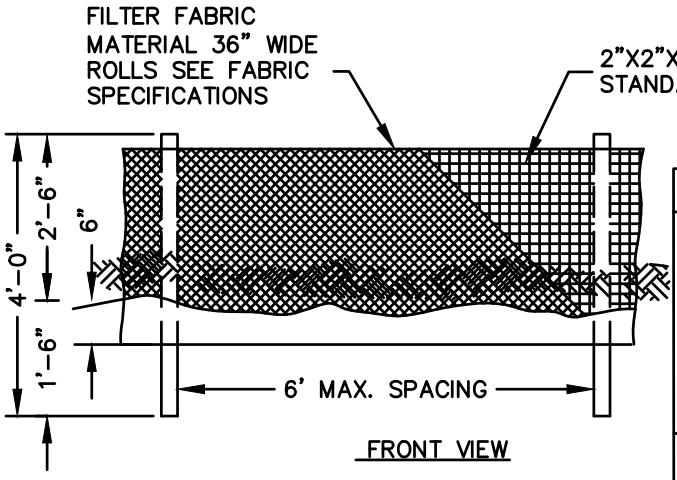
7. REPAIR ANY DAMAGED AREAS OF THE NET OR BLANKET AND STAPLE INTO THE GROUND ANY AREAS NOT IN CLOSE CONTACT WITH THE GROUND SURFACE.

8. IF EROSION OCCURS, REPAIR AND PROTECT THE ERODED AREA.

REV. 08/01/24 CPG

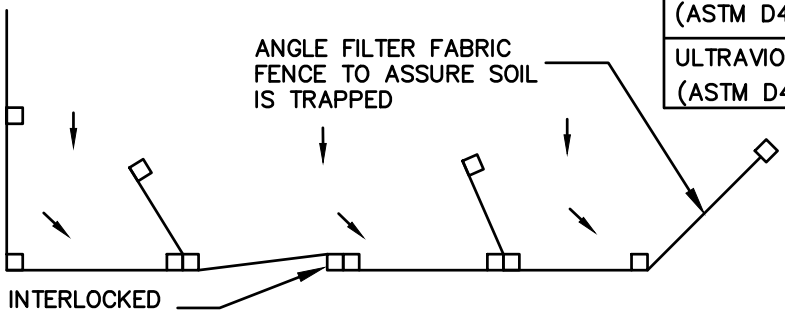
MATTING GENERAL NOTES

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-1.1**

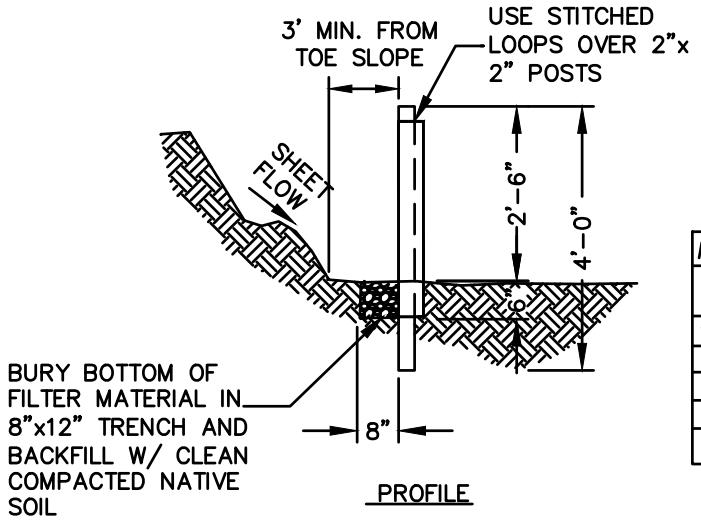


FRONT VIEW

SILT FENCE FABRIC SPECIFICATIONS	
POLYMERIC MESH AOS (ASTM D4751)	0.60 MM MAXIMUM FOR SLIT WOVENS (#30 SIEVE). 0.30 MM MAXIMUM FOR ALL OTHER GEOTEXTILE TYPES (#50 SIEVE). 0.15 MM MAXIMUM FOR ALL FABRIC TYPES (#100 SIEVE).
WATER PERMITTIVITY (ASTM D4491)	0.02 SEC^{-1} MINIMUM
GRAB TENSILE STRENGTH (ASTM D4632)	180 LBS. MINIMUM FOR EXTRA STRENGTH FABRIC. 100 LBS. MINIMUM FOR STANDARD STRENGTH FABRIC.
GRAB TENSILE STRENGTH (ASTM D4632)	30% MAXIMUM
ULTRAVIOLET RESISTANCE (ASTM D4355)	70% MAXIMUM



PLAN VIEW



PROFILE

NOTES:

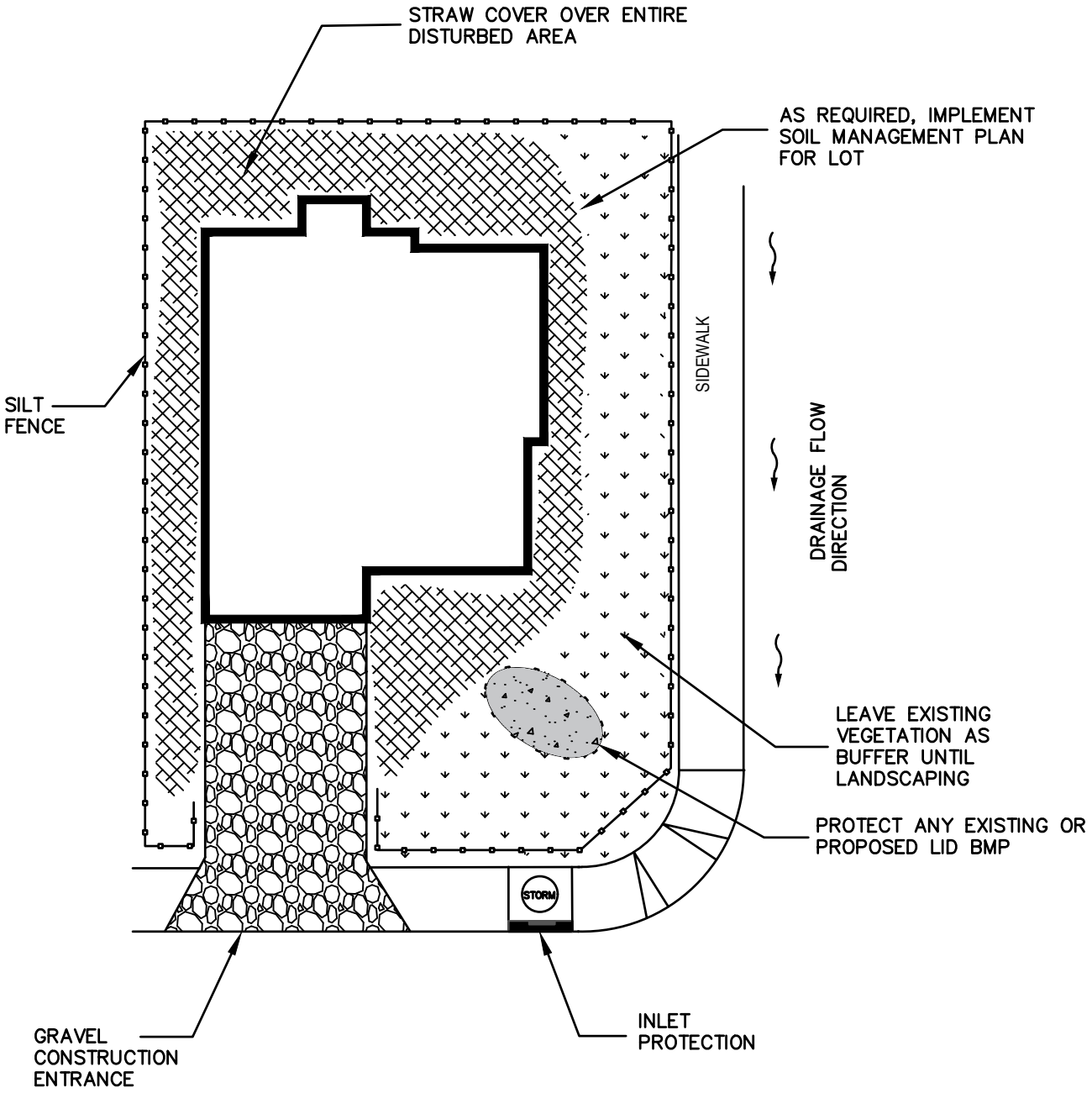
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
3. SILT FENCE TO BE SPACED ON SLOPES PER TABLE BELOW.
4. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
5. DAMAGED SILT FENCE SHALL BE REMOVED AND REPLACED PROMPTLY.
6. STAPLING OF SILT FENCE ONTO WOODEN POSTS IS NOT ALLOWED.
7. REFER TO BMP C233 IN VOLUME II OF THE WESTERN WASHINGTON MANUAL FOR MORE INFORMATION.

INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS		
% SLOPE	SLOPE	MAX. SPACING ON SLOPE
10% FLATTER	10:1 OR FLATTER	300 FT.
10>%<15	10:1>x<7.5:1	150 FT.
15>%<20	7.5:1>x<5:1	100 FT.
20>%<30	5:1>x<3.5:1	50 FT.
30>%<50	3.5:1>x<2:1	25 FT.

REV. 08/01/24 CPG

SILT FENCE

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET EC-2.0



REV. 01/29/24 CPG

SINGLE FAMILY EROSION PREVENTION PLAN

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-2.1A**

SINGLE FAMILY RESIDENTIAL EROSION PREVENTION PLAN

NOTES:

THE FOLLOWING BMP'S WILL BE REQUIRED FOR ALL CONSTRUCTION UNLESS IT CAN BE SHOWN THAT IT IS NOT NECESSARY:

1. A GRAVEL CONSTRUCTION ENTRANCE SHALL BE PLACED FROM THE CURB TO THE STRUCTURE PRIOR TO POURING THE FOUNDATION. THE ROCK MUST EXTEND THE FULL WIDTH OF THE INGRESS/EGRESS AREA (MIN. 20'). ¾" ROCK IS THE MINIMUM SIZE ROCK ALLOWED AND LARGER ROCK IS PREFERABLE. THE CONSTRUCTION ENTRANCE SHALL BE KEPT FREE OF EXCESSIVE MUD AND SHALL BE REPAIRED TO GOOD WORKING CONDITION, AS NECESSARY. IF IT IS DISCOVERED THAT THE CONSTRUCTION ENTRANCE IS BEING CIRCUMVENTED, CONSTRUCTION FENCING WILL BE IMMEDIATELY REQUIRED AROUND THE ENTIRE PROPERTY PERIMETER.

2. SILT FENCE SHALL BE INSTALLED ON THE ENTIRE FRONTAGE OF ALL IMPERVIOUS SURFACES, AT ANY PROPERTY LINE COMMON WITH AN ALREADY DEVELOPED PROPERTY, AT ANY PROPERTY LINE ADJACENT TO A STORMWATER FACILITY, AND AT ANY PROPERTY LINE WHERE STEEP SLOPES AND/OR CRITICAL AREAS (WETLAND BUFFERS, ETC.) EXIST. THE CORRECTLY INSTALLED SILT FENCE SHALL "J-HOOK" AT THE ENDS. THE PURPOSE OF THIS FENCE IS TO PROTECT NEIGHBORING PROPERTIES, CRITICAL AREAS AND RIGHTS-OF-WAY FROM SEDIMENT DEPOSITS, DELINEATE CLEARING LIMITS, AND TO CHANNEL ALL CONSTRUCTION TRAFFIC TO THE GRAVEL CONSTRUCTION AREA.

3. INLET PROTECTION MUST BE INSTALLED PER RIDGEFIELD STANDARD DETAIL EC-4.1 CATCH BASIN INSERT OR RIDGEFIELD STANDARD DETAIL EC-4.2 SEDIMENT DAM. INLET PROTECTION SHALL BE MAINTAINED UNTIL FINAL LANDSCAPING. THIS INCLUDES THE REMOVAL OF SEDIMENT BUILDUP IN FRONT OF THE INLET AND REPLACEMENT AS NECESSARY.

4. NO DISCHARGE SHALL BE MADE TO A PAVED STREET OR STORMWATER COLLECTION SYSTEM WITHOUT FIRST REMOVING SEDIMENT. SEDIMENT LADEN RUNOFF SHALL BE PREVENTED FROM ENTERING ALL EXISTING STORMWATER CATCH BASINS AND INLETS.

5. DENUDED SOILS SHALL BE STABILIZED AS QUICKLY AS POSSIBLE, AND SHALL BE EXPOSED NO MORE THAN 48 HOURS. ON STEEPER SLOPES, STRAW COVERING MAY NOT BE APPROVED AND A MORE ROBUST MEASURE MAY BE NEEDED. THE STRAW COVERING SHALL BE THICK ENOUGH SO THAT NO BARE EARTH IS VISIBLE.

6. CONSIDER THE PLACEMENT OF STRAW WATTLES BEHIND ADA CURBING (RIDGEFIELD STANDARD DETAIL EC-6.0) AND AT DRIVEWAY DROPS DURING THE WET SEASON (OCTOBER 1ST TO APRIL 30TH). STRAW WATTLES CAN EASILY BE DRIVEN OVER WITH VEHICLES OR EQUIPMENT WHILE MAINTAINING SITE CONTAINMENT.

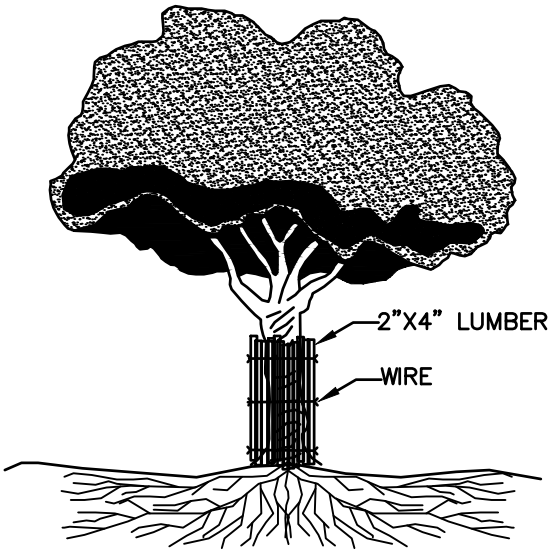
7. PROTECT EXISTING AND PROPOSED LID STRUCTURES AND SYSTEMS FROM IMPACTS BY EROSION, COMPACTION, AND SEDIMENTATION. PREVENT COMPACTION OF AREAS PLANNED FOR LID BMP'S BY EXCLUDING CONSTRUCTION EQUIPMENT. AVOID UNNECESSARY FOOT TRAFFIC, AND ALLOW NECESSARY FOOT TRAFFIC ONLY WHEN SOILS ARE NOT WET. HIGH VISIBILITY FENCING OR SILT FENCE MAY BE NECESSARY TO PROTECT LID AREAS.

8. IN DEVELOPMENTS WHERE A BUILDER IS BUILDING MORE THAN ONE RESIDENCE, A CONCRETE WASHOUT SHALL BE INSTALLED AND MAINTAINED.

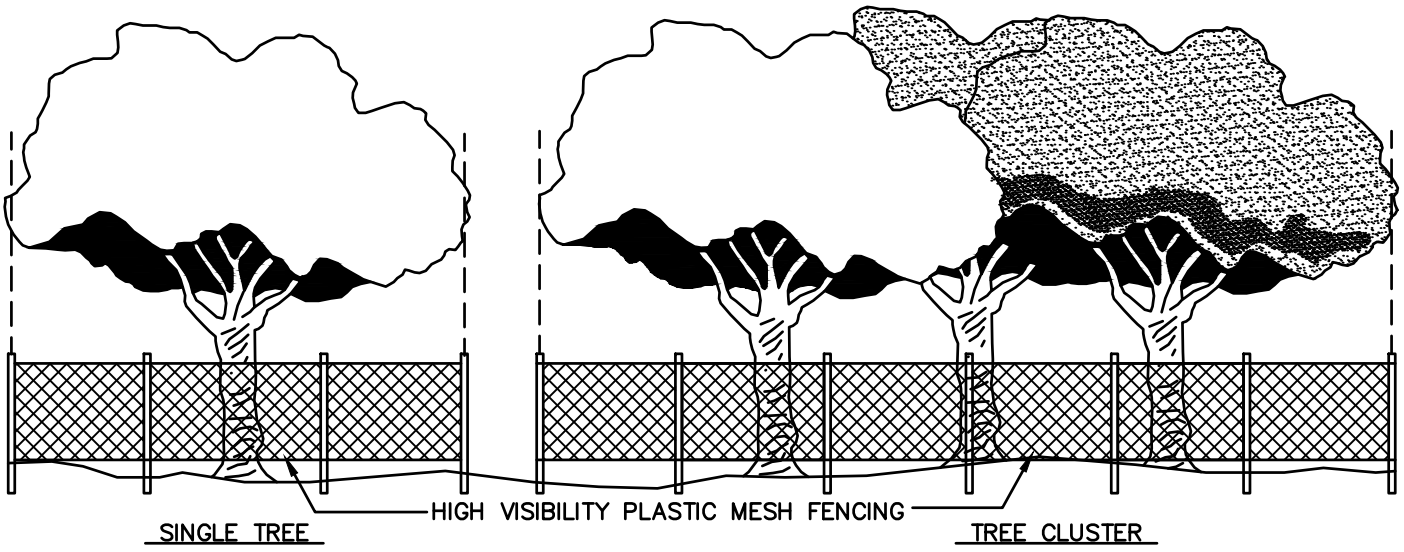
9. IF SPECIFIED BMP'S ARE UTILIZED BUT ARE INSUFFICIENT TO PREVENT SEDIMENT FROM REACHING WATER BODIES, ADJACENT PROPERTIES, OR PUBLIC RIGHTS-OF-WAY THEN ADDITIONAL BMP'S SHALL BE IMPLEMENTED IMMEDIATELY.

REV. 08/01/24 CPG

SINGLE FAMILY EROSION PREVENTION NOTES



TRUNK PROTECTION



FOR NOTES SEE RIDGEFIELD STANDARD DETAIL EC-2.2B

REV. 08/01/24 CPG

TREE PROTECTION FENCE NOTES

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-2.2A**

THE FOLLOWING ACTIVITIES ARE PROHIBITED WITHIN THE LIMITS OF THE CRITICAL ROOT ZONE OF ANY PROTECTED TREE SUBJECT TO THE PROVISIONS OF THE TREE PRESERVATION ORDINANCE R.M.C. 18.840. THE FOLLOWING PROCEDURES SHALL BE FOLLOWED ON ALL TYPES OF CONSTRUCTION PROJECTS (INCLUDING RESIDENTIAL, COMMERCIAL, AND MUNICIPAL / PUBLIC WORKS PROJECTS).

1. MATERIAL STORAGE: NO STORAGE OR PLACEMENT OF MATERIALS INTENDED FOR USE IN CONSTRUCTION OR WASTE MATERIALS ACCUMULATED DUE TO EXCAVATION OR DEMOLITION SHALL BE PLACED WITHIN THE LIMITS OF THE CRITICAL ROOT ZONE OF ANY PROTECTED TREE.
2. EQUIPMENT CLEANING/LIQUID DISPOSAL: NO EQUIPMENT SHALL BE CLEANED OR OTHER LIQUIDS, INCLUDING, WITHOUT LIMITATION, PAINT, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR OR SIMILAR MATERIALS DEPOSITED OR ALLOWED TO FLOW INTO THE CRITICAL ROOT ZONE OF A PROTECTED TREE.
3. TREE ATTACHMENTS; NO SIGNS, WIRES OR OTHER ATTACHMENTS, OTHER THAN THOSE OF A PROTECTIVE NATURE, SHALL BE ATTACHED TO ANY PROTECTED TREE.
4. VEHICULAR TRAFFIC: NO VEHICULAR AND/OR CONSTRUCTION EQUIPMENT TRAFFIC OR PARKING SHALL TAKE PLACE WITHIN THE CRITICAL ROOT ZONE OF ANY PROTECTED TREE OTHER THAN ON EXISTING STREET PAVEMENT. THIS RESTRICTION DOES NOT APPLY TO SINGLE INCIDENT ACCESS WITHIN THE CRITICAL ROOT ZONE FOR PURPOSES OF ESTABLISHING THE BUILDING PAD AND ASSOCIATED LOT GRADING, VEHICULAR TRAFFIC NECESSARY FOR ROUTINE UTILITY MAINTENANCE, EMERGENCY RESTORATION OF UTILITY SERVICE, OR ROUTINE MOWING OPERATIONS.
5. NO HEAVY EQUIPMENT, INCLUDING BUT NOT LIMITED TO TRUCKS, TRACTORS, TRAILERS, BULLDOZERS, BOBCAT TRACTORS, TRENCHERS, COMPRESSORS, AND HOISTS, SHALL BE ALLOWED INSIDE THE DRIP–LINE OF ANY PROTECTED TREE ON ANY CONSTRUCTION SITE WITHOUT PRIOR WRITTEN APPROVAL OF THE ADMINISTRATIVE OFFICIAL.

THE FOLLOWING PROCEDURES SHALL BE FOLLOWED ON ALL TYPES OF CONSTRUCTION PROJECTS (INCLUDING RESIDENTIAL, COMMERCIAL, AND MUNICIPAL / PUBLIC WORKS PROJECTS).

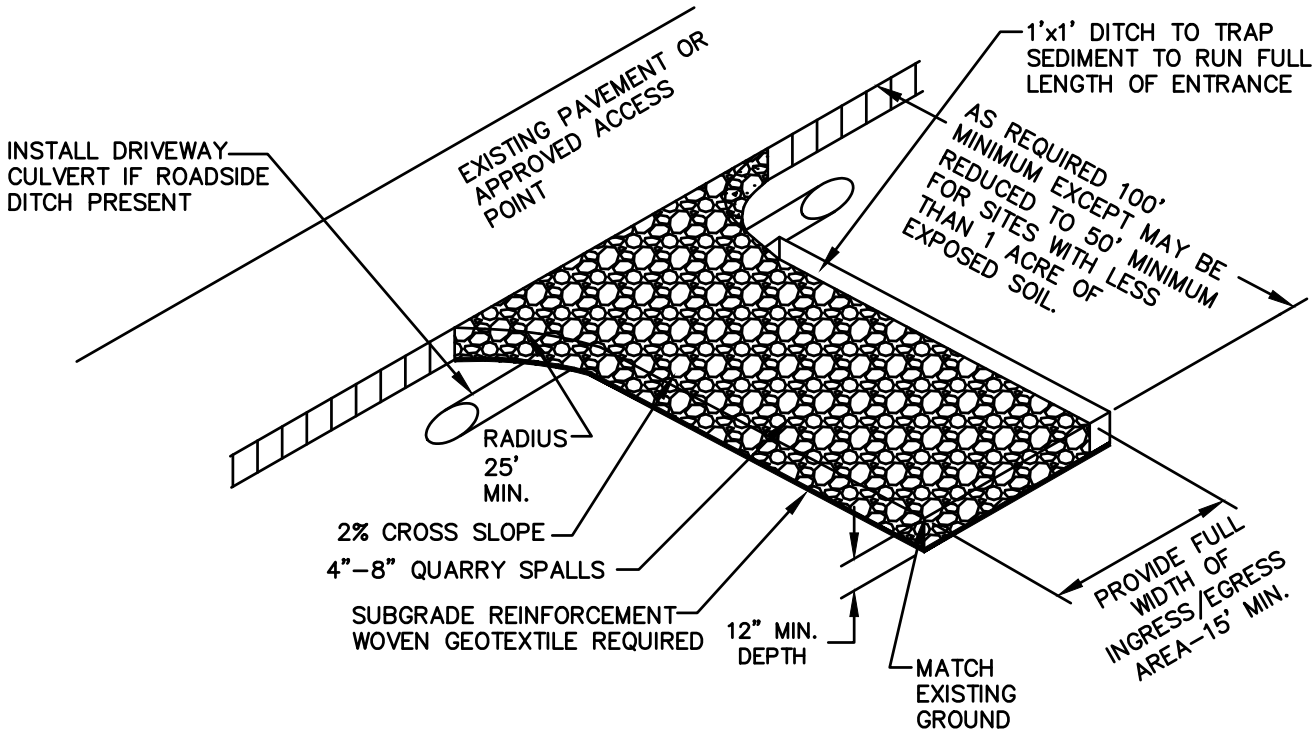
1. PROTECTIVE FENCING: PRIOR TO THE ISSUANCE OF ANY BUILDING OR EARTH DISTURBANCE PERMIT, OR COMMENCING CONSTRUCTION, THE OWNER, CONTRACTOR OR SUBCONTRACTOR SHALL CONSTRUCT AND MAINTAIN, FOR EACH PROTECTED TREE ON A CONSTRUCTION SITE, A PROTECTIVE FENCING WHICH ENCIRCLES THE OUTER LIMITS OF THE CRITICAL ROOT ZONE OF THE TREE TO PROTECT IT FROM CONSTRUCTION ACTIVITY OR IN CASES OF HEAVILY WOODED SITES, AS APPROVED BY THE CITY ENGINEER.
2. ALL PROTECTIVE FENCING SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF ANY SITE WORK AND REMAIN IN PLACE UNTIL ALL EXTERIOR CONSTRUCTION ACTIVITY AT THE SITE HAS BEEN COMPLETED.
3. PROTECTIVE FENCING SHALL BE AT LEAST FOUR (4) FEET HIGH, CLEARLY VISIBLE.
4. THE USE OF ORANGE VINYL CONSTRUCTION FENCING OR OTHER SIMILAR FENCING IS GENERALLY PERMITTED ONLY IF THERE IS NO CONSTRUCTION OR VEHICULAR ACTIVITY WITHIN TEN (10) FEET OF THE FENCE. IF CONSTRUCTION ACTIVITY OR VEHICULAR TRAFFIC IS EXPECTED WITHIN TEN (10) FEET OF THE FENCE, THE FENCE SHALL BE CONSTRUCTED OF CHAIN LINK OR OTHER SIMILAR METAL, WOODEN MATERIAL, OR SEMI–RIGID VINYL TAPE FENCING SUPPORTED WITH A TOP SUPPORT WIRE OR EQUIVALENT SUPPORT MATERIAL AFFIXED TO METAL OR WOODEN POSTS, ALL OF WHICH SHALL BE SIX (6) FEET IN HEIGHT.
5. ALL PROTECTIVE FENCING SHALL BE SUPPORTED AT A MAXIMUM OF TEN (10) FOOT INTERVALS BY APPROVED METHODS SUFFICIENT ENOUGH TO KEEP THE FENCE UPRIGHT AND IN PLACE FOR THE DURATION OF THE CONSTRUCTION.
6. THE OWNER SHALL CAUSE THE REQUIRED FENCING TO BE INSTALLED AND MAINTAINED FOR THE DURATION OF THE CONSTRUCTION.
7. FOR PERMITS INVOLVING TRENCHING SUCH AS SEWER SERVICES, IRRIGATION SYSTEMS, OR UNDERGROUND ELECTRICAL WORK, THE APPLICANT SHALL PROVIDE SUFFICIENT PLANS TO PROVIDE PROTECTION OF THE TREES IN THE VICINITY OF THE WORK.
8. ALL OF THE ABOVE CONDITIONS MUST BE ADHERED TO AND INSPECTED BY A CITY INSPECTOR PRIOR TO THE ISSUANCE OF ANY PERMITS.
9. IN SITUATIONS WHERE A PROTECTED TREE REMAINS IN THE IMMEDIATE AREA OF INTENDED CONSTRUCTION AND THE TREE MAY BE IN DANGER OF BEING DAMAGED BY CONSTRUCTION EQUIPMENT OR OTHER ACTIVITY, THE CONTRACTOR OR SUBCONTRACTOR SHALL PROTECT THE TREE WITH 2"X4" LUMBER ENCIRCLED WITH WIRE OR OTHER MEANS THAT DO NOT DAMAGE THE TREE. THE INTENT IS TO PROTECT THE TRUNK OF THE TREE AGAINST INCIDENTAL CONTACT BY LARGE CONSTRUCTION EQUIPMENT.

FOR DETAIL SEE RIDGEFIELD STANDARD DETAIL EC–2.2A

REV. 08/01/24 CPG

TREE PROTECTION FENCE NOTES

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-2.2B**



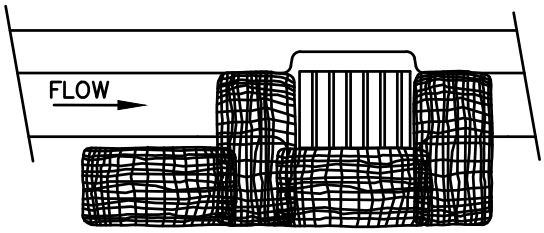
NOTES:

1. INSTALL WOVEN GEOTEXTILE FABRIC TO PREVENT SUB–SOIL PUMPING.
2. VEHICLE WHEELWASH AREA, IF REQUIRED, SHALL BE INSTALLED AND USED TO REMOVE SEDIMENT FROM VEHICLES THAT ARE ABOUT TO ENTER AN ESTABLISHED ROAD. SEE DETAIL EC–3.01.
3. AT TIME OF PRE–CONSTRUCTION CONFERENCE, THE CITY INSPECTOR MAY REQUIRE THE ENTRANCE TO BE PAVED TO THE EDGE OF THE RIGHT–OF–WAY PRIOR TO THE INSTALLATION OF A CONSTRUCTION ENTRANCE TO AVOID DAMAGE TO THE EXISTING ROADWAY.
4. THE CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) IS TO ENSURE THAT ALL VEHICLES USE THIS ENTRANCE AND ARE TO BE INSPECTED AND CLEANED OF SOILS BEFORE LEAVING PROJECT, AND THAT THE ENTRANCE IS TO BE KEPT CLEAN AT ALL TIMES.
5. TOP DRESS THE PAD WITH CLEAN 3" MINUS ROCK WHEN THE CONSTRUCTION ENTRANCE BECOMES CLOGGED WITH SEDIMENT.
6. ANY SEDIMENT CARRIED FROM THE SITE ONTO THE STREET SHALL BE CLEANED UP IMMEDIATELY. PRESSURE WASHING NOT ALLOWED. SWEEPING IS THE PREFERRED METHOD.
7. REFER TO BMP C105 IN VOLUME II OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

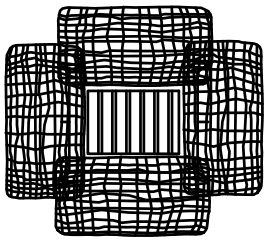
REV. 08/01/24 CPG

STABILIZED CONSTRUCTION ENTRANCE / EXIT

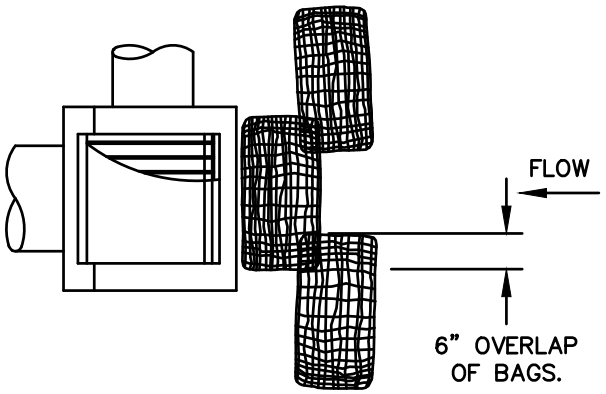
STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-3.0**



CATCH BASIN AT CURB LINE



AREA DRAIN OR CATCH BASIN



DITCH INLET

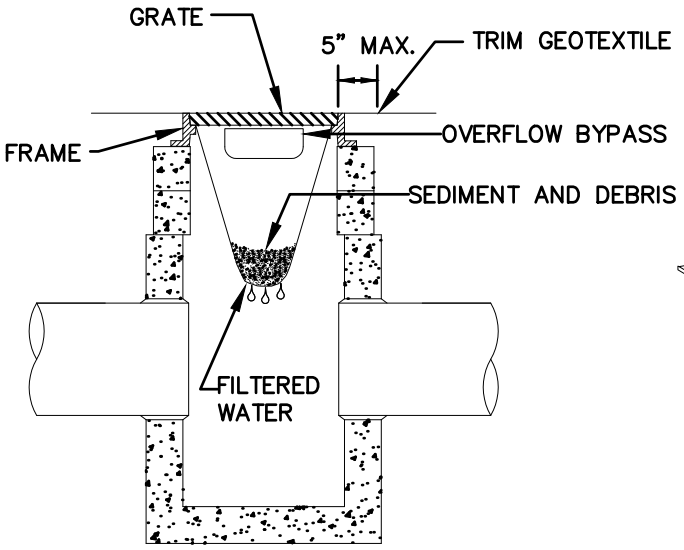
NOTES:

1. BIO–FILTER BAGS ARE NOT TO BE USED WITHIN CITY OF RIDGEFIELD ROW UNLESS APPROVED BY CITY ENGINEER. IF APPROVED, BIO–FILTER BAGS SHALL BE USED IN CONJUNCTION WITH CATCH BASIN INSERT (RIDGEFIELD STANDARD DETAIL EC–4.1), OR SEDIMENT DAM (RIDGEFIELD STANDARD DETAIL EC–4.2).
2. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPE.
3. BIO–FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.

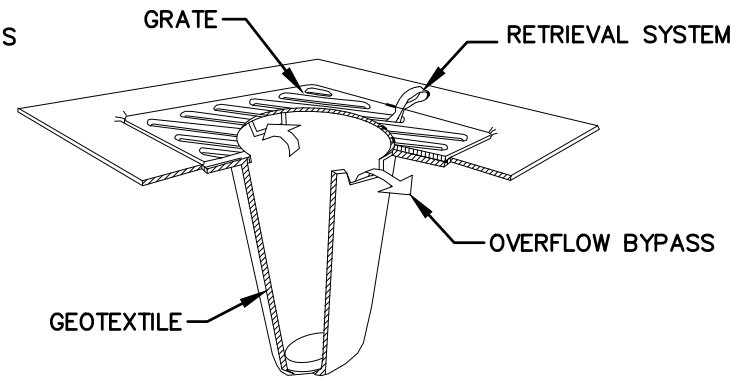
REV. 08/01/24 CPG

INLET PROTECTION (BIO–FILTER BAG)

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-4.0**



CROSS SECTION



ISOMETRIC VIEW

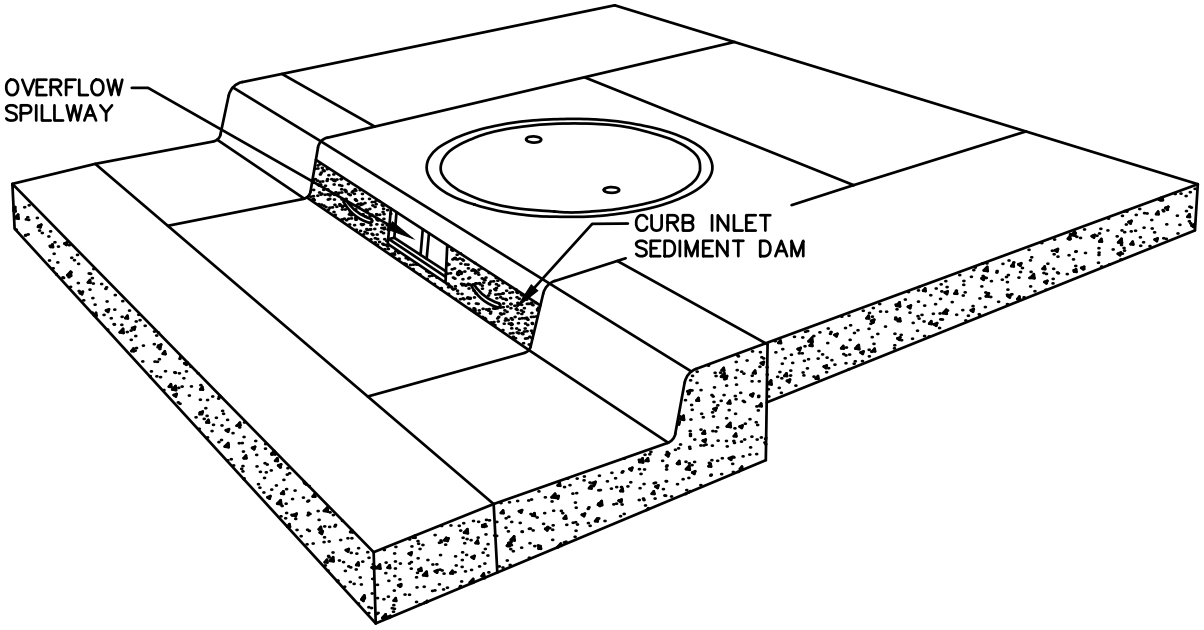
NOTES:

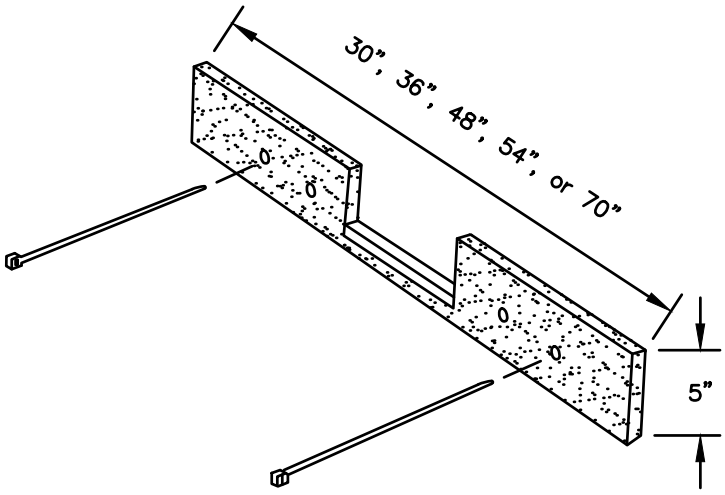
1. THE INLET SEDIMENT CONTROL DEVICE SHALL BE OF HIGH FLOW DESIGN (200 GAL/MIN/SQ FT), AS PER THE MANUFACTURER'S SPECS.
2. SUBSTITUTION OF A SHEET OF FILTER FABRIC PLACED OVER THE OPENING OF THE INLET IS NOT APPROVED.
3. THE FILTER SHALL BE REPLACED OR CLEANED WHEN THE INSERT BECOMES HALF FULL.
4. FOR SEDIMENT DAM REFER TO RIDGEFIELD STANDARD DETAIL EC–4.2.
5. REFER TO BMP C220 IN VOLUME II OF THE WESTERN WASHINGTON MANUAL FOR MORE INFORMATION.

REV. 08/01/24 CPG

INLET PROTECTION (CATCH BASIN INSERT)

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-4.1**





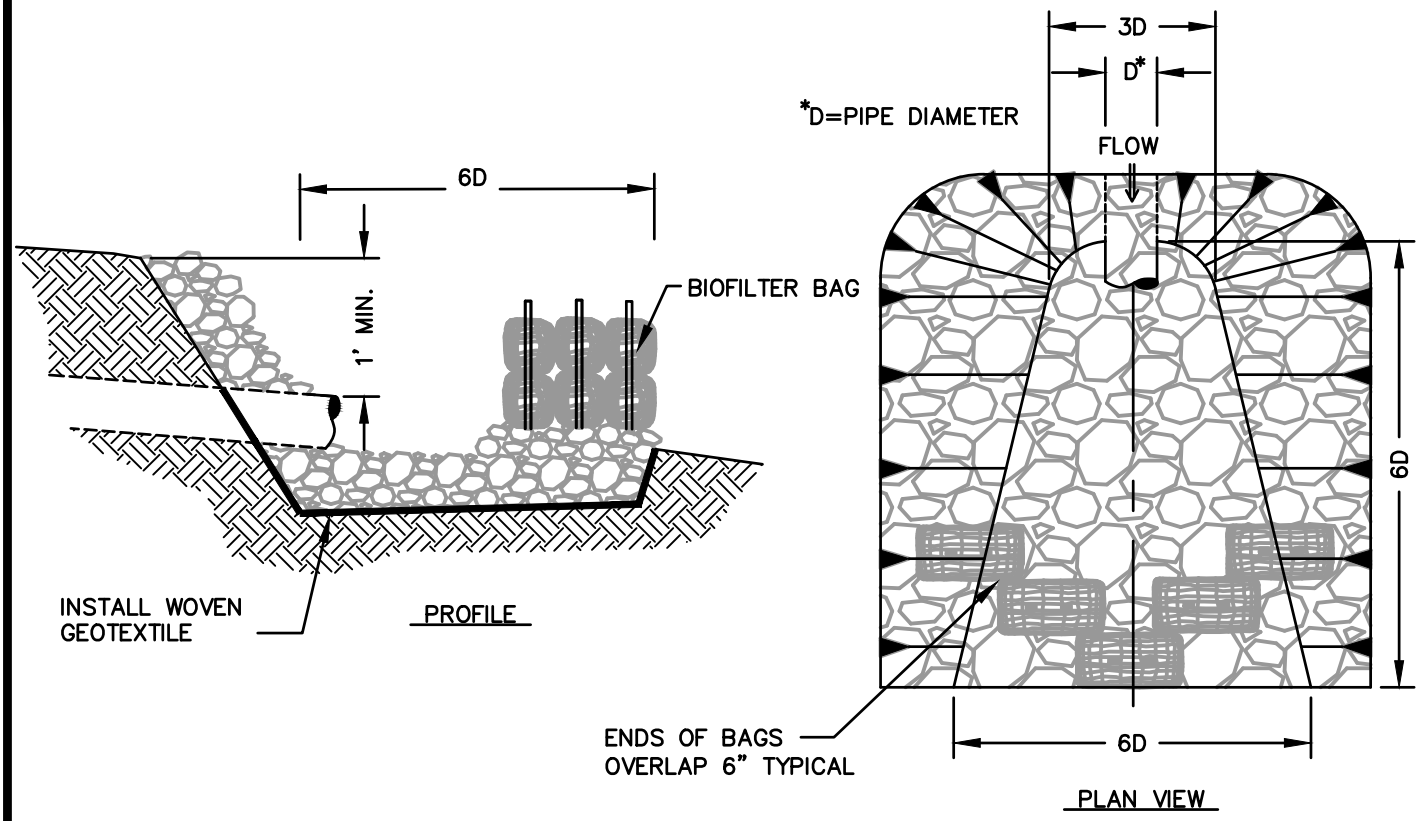
NOTES:

1. SEDIMENT DAM SHALL BE MADE FROM 100% NON-WOVEN POLYFIBER

REV. 08/01/24 CPG

INLET PROTECTION (SEDIMENT DAM)

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-4.2**



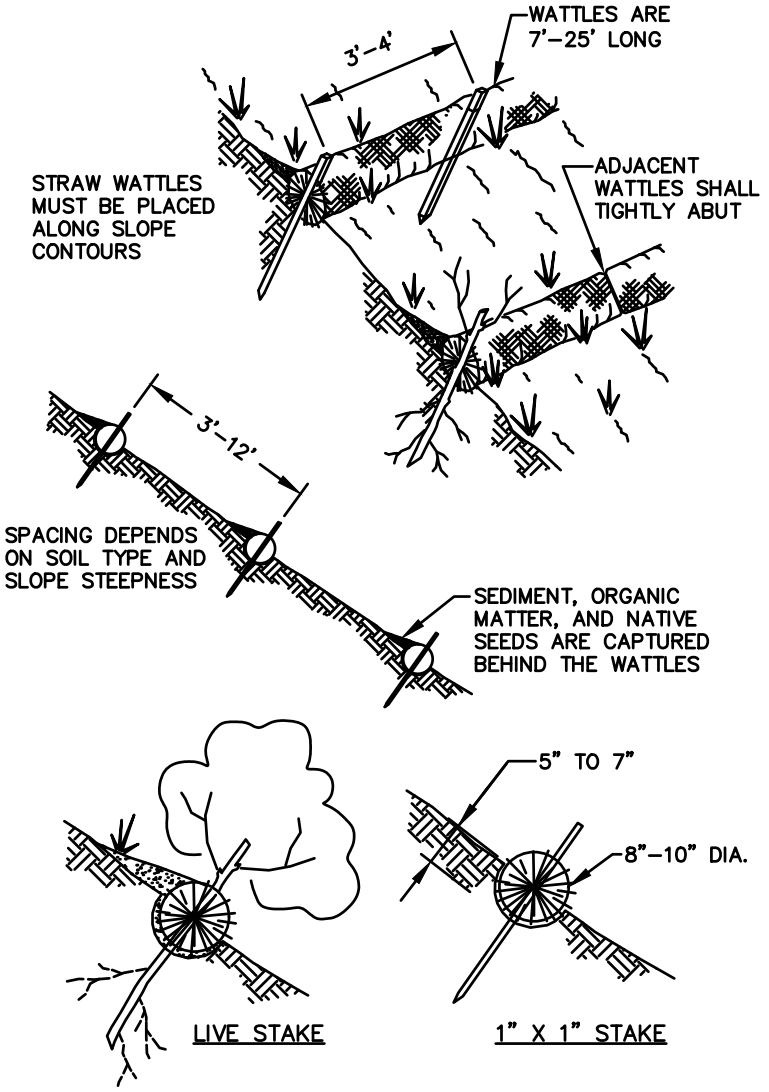
NOTES:

1. BIO–FILTER BAGS ONLY REQUIRED WHEN DISCHARGING SEDIMENT LADEN WATER. FOR STAKING OF BAGS REFER TO RIDGEFIELD STANDARD DETAIL EC–4.0.
2. RIP–RAP SIZING GOVERNED BY THE SIDE SLOPES ON THE OUTLET CHANNEL, ASSUMED TO BE 3:1.
3. PLACE WOVEN GEOTEXTILE ALONG BOTTOM AND SIDE SLOPES TO CROWN OF PIPE, AND INSTALL ROCK TO 1' ABOVE PIPE CROWN ALONG BOTH SIDES OF CHANNEL.
4. RIP–RAP SHALL BE IN ACCORDANCE WITH SECTION 9–13.1 OF THE WSDOT STANDARD SPECIFICATIONS.
5. IF THERE IS SCOURING AT THE OUTLET, PROTECT THE ERODED AREA BY INCREASING THE SIZE OF THE RIP RAP AREA.
6. REFER TO BMP C209 IN VOLUME II OF THE WESTERN WASHINGTON MANUAL FOR MORE INFORMATION.

REV. 08/01/24 CPG

TEMPORARY OUTLET PROTECTION (RIP–RAP)

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-5.0**



LIVE STAKE

1" X 1" STAKE

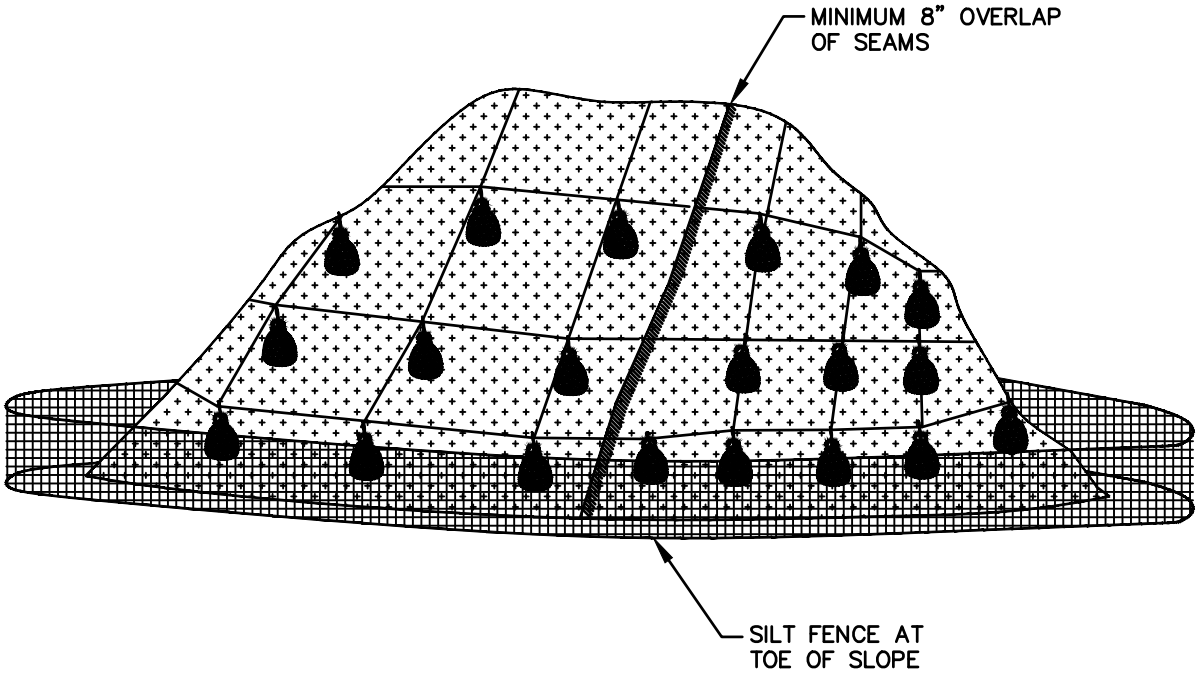
NOTES:

1. PREPARE THE SLOPE BEFORE THE WATTLING PROCEDURE IS STARTED.
2. SHALLOW GULLIES SHOULD BE SMOOTHED AS WORK PROGRESSES.
3. DIG SMALL TRENCHES ACROSS THE SLOPE ON CONTOUR, TO PLACE WATTLES IN. THE TRENCH SHOULD BE DEEP ENOUGH TO BURY THE WATTLE 1/2 – 2/3 OF ITS THICKNESS OR 5"–7".
4. START BUILDING TRENCHES AND INSTALL WATTLES FROM THE BOTTOM OF THE SLOPE AND WORK UP.
5. CONSTRUCT TRENCHES AT CONTOUR INTERVALS OF 10–25 FEET APART DEPENDING ON STEEPNESS OF SLOPE. THE STEEPER THE SLOPE, THE CLOSER TOGETHER THE TRENCHES.
6. LAY THE WATTLE ALONG THE TRENCHES FITTING IT SNUGLY AGAINST THE SOIL. MAKE SURE NO GAPS EXIST BETWEEN THE SOIL AND THE STRAW WATTLE.
7. USE A STRAIGHT BAR TO DRIVE HOLES THROUGH THE WATTLE AND INTO THE SOIL FOR THE WILLOW OR WOODEN STAKES.
8. DRIVE THE STAKE THROUGH PREPARED HOLE INTO SOIL. LEAVE ONLY 1 OR 2 INCHES OF STAKE EXPOSED ABOVE WATTLE.
9. INSTALL STAKES AT LEAST EVERY 4 FEET APART THROUGH THE WATTLE. ADDITIONAL STAKES MAY BE DRIVEN ON THE DOWNSLOPE SIDE OF THE TRENCHES ON HIGHLY EROSIVE OR VERY STEEP SLOPES.
10. RESEED OR REPLANT VEGETATION IF NECESSARY UNTIL THE SLOPE IS STABILIZED.
11. RUNOFF SHALL NOT RUN UNDER OR AROUND WATTLE.
12. WATTLES ARE EFFECTIVE FOR ONE OR TWO SEASONS.
13. REFER TO BMP C235 IN VOLUME II OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

REV. 08/01/24 CPG

WATTLE

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-6.0**



NOTES:

1. PLASTIC SHEETING SHALL BE A MINIMUM OF 0.06 MILLIMETERS THICK.
2. PLASTIC SHEETING MAY BE USED ON DISTURBED AREAS THAT REQUIRE COVER MEASURES FOR LESS THAN 30 DAYS.
3. DO NOT USE PLASTIC COVERING UPSLOPE OF AREAS SUCH AS STEEP AND/OR UNSTABLE SLOPES THAT MIGHT BE ADVERSELY AFFECTED BY CONCENTRATED RUNOFF.
4. WHEN POSSIBLE, INSTALL AN INTERCEPTOR DIKE AT THE TOP OF THE PLASTIC TO DIVERT FLOWS AWAY FROM THE PLASTIC WHEN USED ON SIDE SLOPES.
5. TOE–IN THE TOP OF THE SHEETING IN A 6"x6" TRENCH BACKFILLED WITH COMPACTED NATIVE MATERIAL.
6. INSTALL A GRAVEL BERM, RIPRAP, OR OTHER SUITABLE PROTECTION AT THE TOP OF THE SLOPE IN ORDER TO DISSIPATE RUNOFF VELOCITY.
7. ANCHOR THE PLASTIC USING SANDBAGS OR OTHER SUITABLE TETHERED ANCHOR SYSTEM EVERY 3–6 FEET ALONG SEAMS.
8. OVERLAP SEAMS 8" (MIN.), TAPE, ROLL AND STAKE THE SEAMS AND THEN WEIGH DOWN THE ENTIRE LENGTH.
9. REPLACE TORN SHEETS AND REPAIR OPEN SEAMS. COMPLETELY REMOVE AND REPLACE PLASTIC WHEN IT BEGINS TO DETERIORATE.
10. REFER TO BMP C123 IN VOLUME II OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

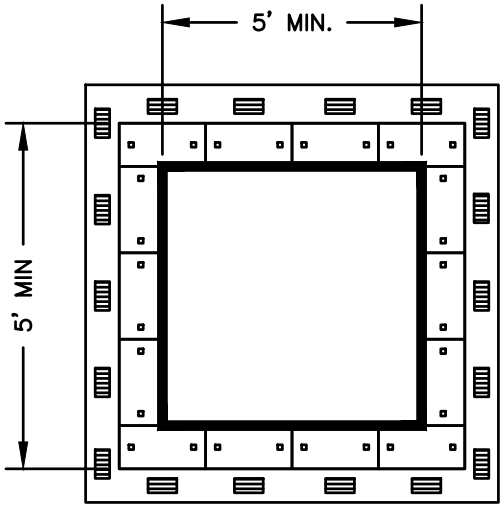
REV. 08/01/24 CPG

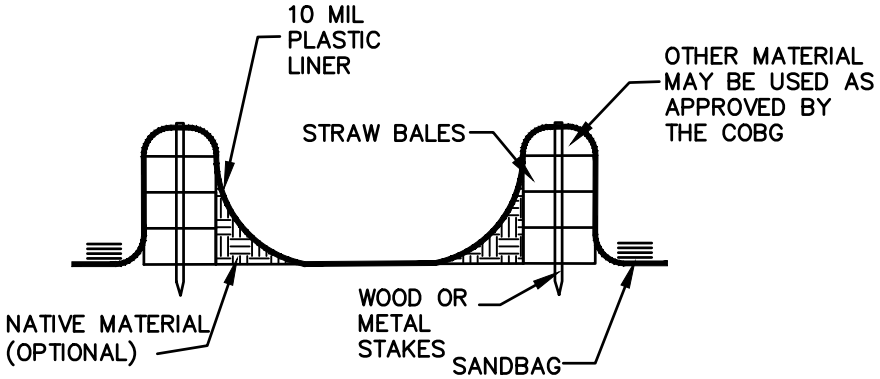
PLASTIC COVERING

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-7.0**

NOTES:

1. NO WASHING OUT OF CONCRETE TRUCKS OR WASHING OF SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS IS ALLOWED.
2. EXCESS CONCRETE IS NOT ALLOWED TO BE DUMPED ON-SITE, EXCEPT IN DESIGNATED TEMPORARY CONCRETE WASHOUT PIT AREAS.
3. ON-SITE TEMPORARY CONCRETE WASHOUT AREAS WILL BE LOCATED AT LEAST 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES AS DETERMINED IN THE FIELD.
4. TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASH GENERATED BY WASHOUT OPERATIONS.
5. WASHOUT FACILITIES WILL BE CLEANED OUT OR REPLACED ONCE THE WASHOUT IS 75% FULL.
6. PLASTIC LINING MATERIAL WILL BE A MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND WILL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS.
7. WHEN WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR WORK, THE HARDENED CONCRETE WILL BE REMOVED AND DISPOSED OF OFFSITE. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE REMOVED FROM THE SITE AND DISPOSED OF.





REV. 08/01/24 CPG

CONCRETE WASHOUT

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **EC-8.0**

GENERAL NOTES:

1. MATERIALS AND WORKMANSHIP FOR DRAINAGE WORK SHALL CONFORM TO THE LATEST EDITION OF THE WSDOT/APWA "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE & MUNICIPAL CONSTRUCTION".

2. MATERIALS AND WORKMANSHIP FOR STORM SEWER WORK SHALL CONFORM TO THE LATEST EDITION OF THE "CITY OF RIDGEFIELD STANDARD DETAILS" & "VOLUME 1 AND VOLUME 2 – ENGINEERING STANDARDS FOR PUBLIC WORKS CONSTRUCTION."

3. THE CONTRACTOR IS TO VERIFY ALL INVERT AND TOP ELEVATIONS OF EXISTING STORM SEWERS, AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION AND TO NOTIFY THE ENGINEER OF ANY POTENTIAL CONFLICTS. THE CONTRACTOR SHALL POTHOLE OVER ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION TO DETERMINE THEIR EXACT LOCATION. CALL 811 OR (360) 696–4848 (UTILITY COORDINATING COUNCIL), FOR LOCATION OF EXISTING UTILITIES, A MINIMUM OF 2 WORKING DAYS PRIOR TO START OF CONSTRUCTION.

5. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND/OR CONTRACTOR TO PROCURE ALL APPLICABLE PERMITS, LICENSES AND CERTIFICATES RELATIVE TO THE TRADES TO COMPLETE THE PROJECT AND FOR THE USE OF SUCH WORK WHEN COMPLETED. COMPLIANCE SHALL BE AT ALL LEVELS, FEDERAL, STATE AND CITY, RELATING TO THE PERFORMANCE OF THIS WORK.

6. THE CONTRACTOR SHALL OBTAIN ALL OFFSITE CONSTRUCTION EASEMENTS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THAT ALL OFFSITE UTILITIES EASEMENTS HAVE BEEN OBTAINED BY THE OWNER PRIOR TO THE COMMENCEMENT OF ANY OFFSITE CONSTRUCTION.

7. PIPES OVER 15" DIA. SHALL HAVE A TRASH SCREEN AT END OF PIPE, EXCEPT WHERE PIPE IS LOCATED WITHIN A FENCED STORM FACILITY. (SEE RIDGEFIELD STANDARD DETAIL ST–6.6)

8. LOCKING LID MUST BE USED ON MANHOLES LOCATED IN NON–HARDSCAPE AREAS EXCEPT WHERE MANHOLE IS LOCATED WITHIN FENCED STORM FACILITY.

9. MATERIAL CERTIFICATION FOR ALL STORM MANHOLES, CATCH BASINS, AND CURB INLETS SHALL BE PROVIDED TO THE CITY INSPECTOR.

10. ALL ROOF AND LOWPOINT DRAINS TO BE DIRECTED TO APPROVED DRAINAGE PER PLANS.

TESTING:

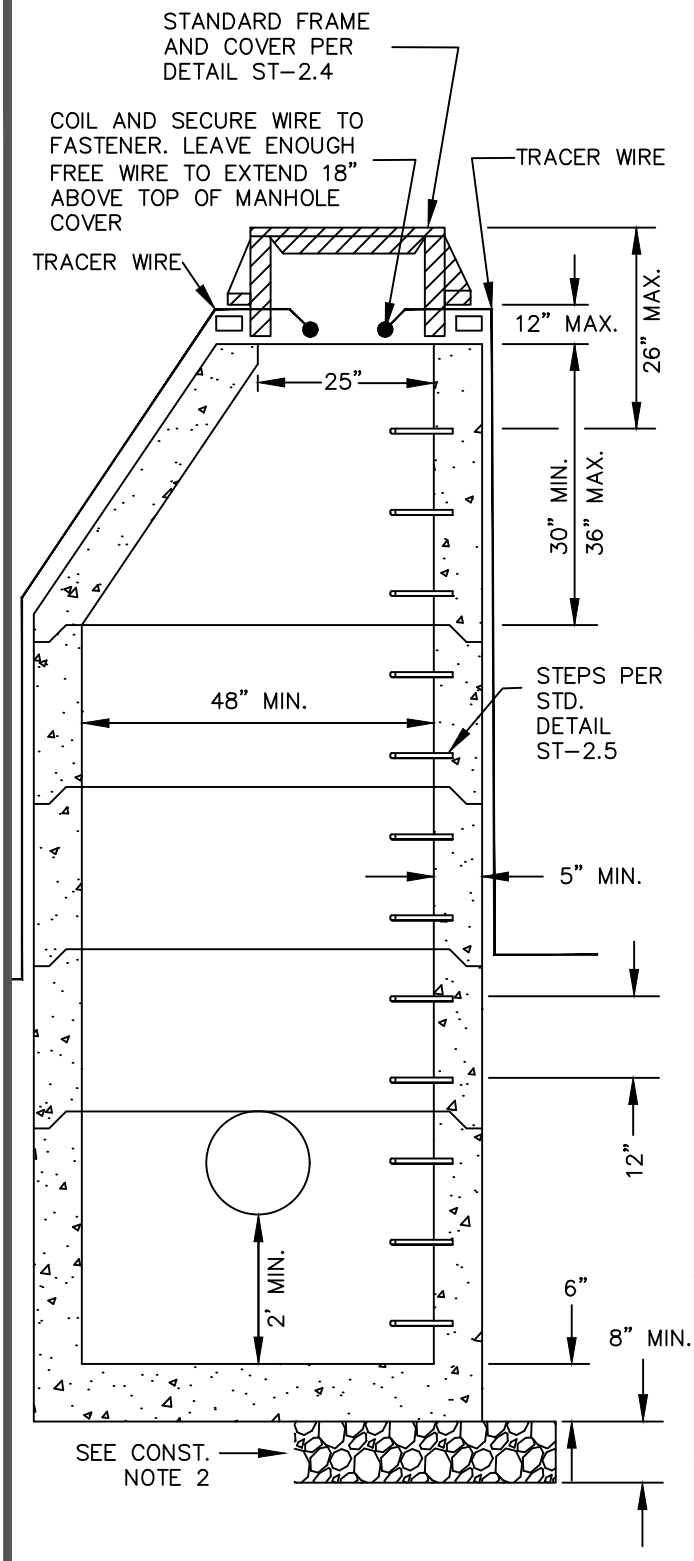
1. ALL MAIN LINE RUNS AND LATERALS SHALL BE TESTED FOLLOWING REQUIRMENTS OF ENGINEERING STANDARDS FOR PUBLIC WORKS CONSTRUCTION – VOLUME 2. VARIATIONS IN EXCESS OF REQUIRED TOLERANCES MUST BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CITY.

2. EXFILTRATION TEST WSDOT SPECIFICATION 7–04.3(1)B FOR DETAINAGE OR AS REQUIRED BY CITY ENGINEER.

REV. 8/01/24 CPG

STORMWATER GENERAL NOTES & TESTING

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-1.0**



CONSTRUCTION NOTES:

1. IN OVER EXCAVATED AREAS PROVIDE SUPPORT FOR THE PIPE AS FOLLOWS: PLACE ¾" MINUS CRUSHED ROCK OVER UNDISTURBED GROUND IN 6" LAYERS AND COMPACT.
2. BACKFILL MATERIAL BELOW & TO SIDE OF STRUCTURE SHALL BE ASTM D2321 CLASS I OR II CRUSHED STONE OR GRAVEL, PLACED UNIFORMLY. BACKFILL TO MEET WSDOT 7-05 & AASHTO T-99 95% COMPACTION.
3. ALL DIMENSIONS SUBJECT TO ALLOWABLE SPECIFICATION TOLERANCES.
4. ANY PROTRUDING ENDS OF PIPES SHALL BE TRIMMED FLUSH WITH THE INSIDE WALLS AND GROUTED TO THE SATISFACTION OF ENGINEER.
5. LIFT HOLES MUST BE GROUTED.

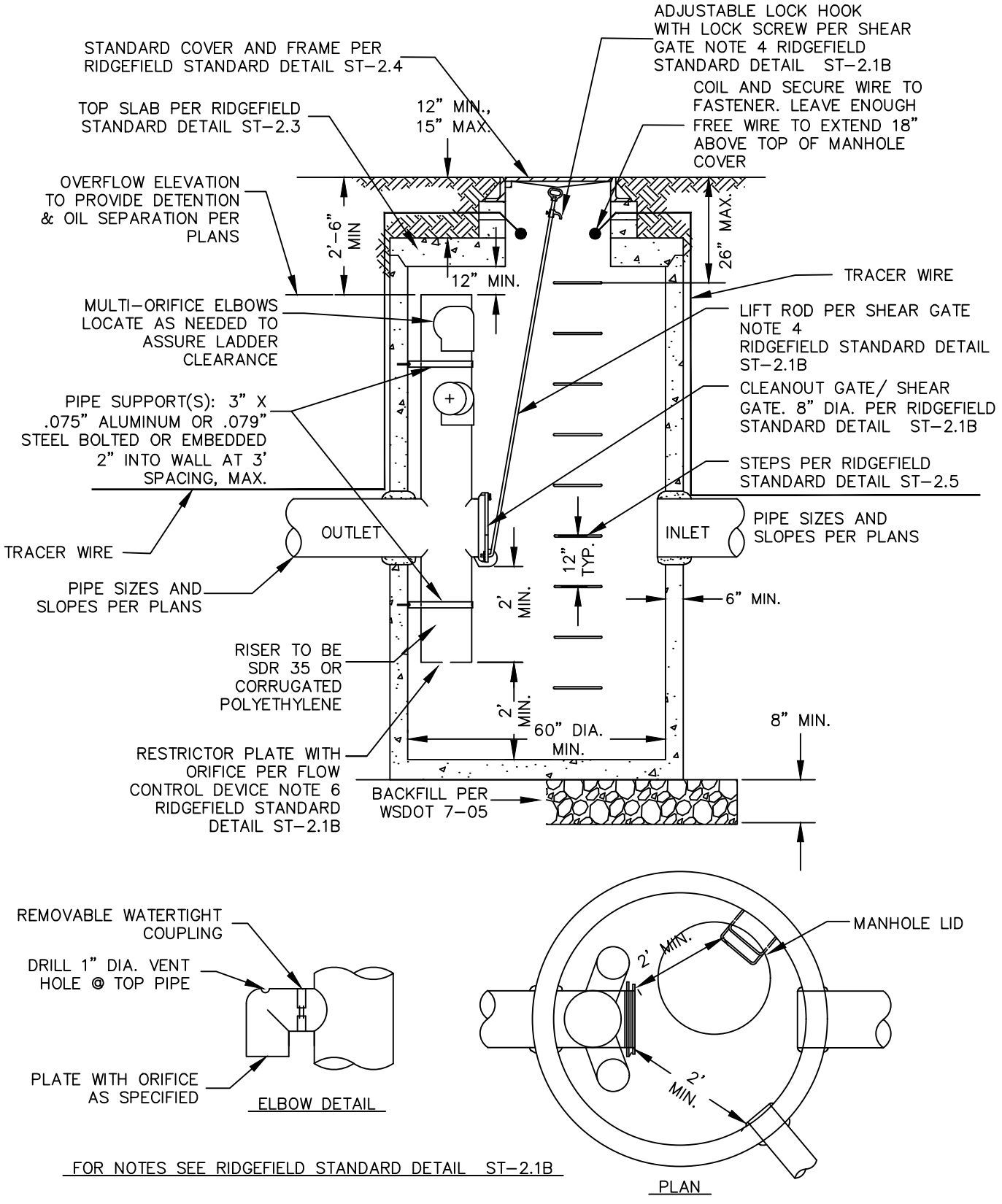
STRUCTURE NOTES:

1. MANHOLE TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 & C890 UNLESS SHOWN ON PLANS OR NOTED IN WSDOT STANDARD SPECIFICATIONS.
2. ALL PRECAST MANHOLE SECTIONS AND CONES SHALL CONFORM TO ASTM C-478 WITH CAST IN STEPS.
3. BASE CONCRETE SHALL BE 3000 P.S.I., 2-4 IN. SLUMP. FLOW LINES AND INSIDE SURFACES SHALL BE TROWELED SMOOTH & UNIFORM AT TIME OF POUR.
4. CAST-IN-PLACE, MONOLITHIC MANHOLE MAY BE SUBSTITUTED WITH SPECIFIC APPROVAL OF THE CITY ENGINEER.
5. JOINTS SHALL BE CONSTRUCTED SO AS TO BE WATERTIGHT. KENT-SEAL NO. 2 OR APPROVED EQUAL SHALL BE USED ON TONGUE & GROOVE SECTIONS, AND ON RISER RINGS PREMOLDED "O-RING" MAY BE SUBSTITUTED ON BELL & SPIGOT SECTIONS. ALL JOINTS SHALL BE GROUTED WITH PORTLAND CEMENT CONCRETE GROUT & STRUCK EVEN WITH THE WALL.
6. MANHOLES UNDER 5'-0" IN DEPTH FROM RIM TO INVERT SHALL HAVE A TOP SLAB IN LIEU OF CONE, SEE RIDGEFIELD STANDARD DETAIL ST-2.3.
7. WHIRLY GIG © MANHOLE RISER COLLAR SYSTEM MAY BE USED IN PLACE OF RISER RING.
8. ALL REINFORCED STEEL SHALL HAVE 1 ½" CLEAR COVER UNLESS OTHERWISE NOTED, AND SHALL BE GRADE 60 (ASTM A615).
9. STEEL REINFORCED OR POLYPROPYLENE FIBER REINFORCED UNITS ARE ALLOWABLE.

REV. 8/01/24 CPG

MANHOLE

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST - 2.0

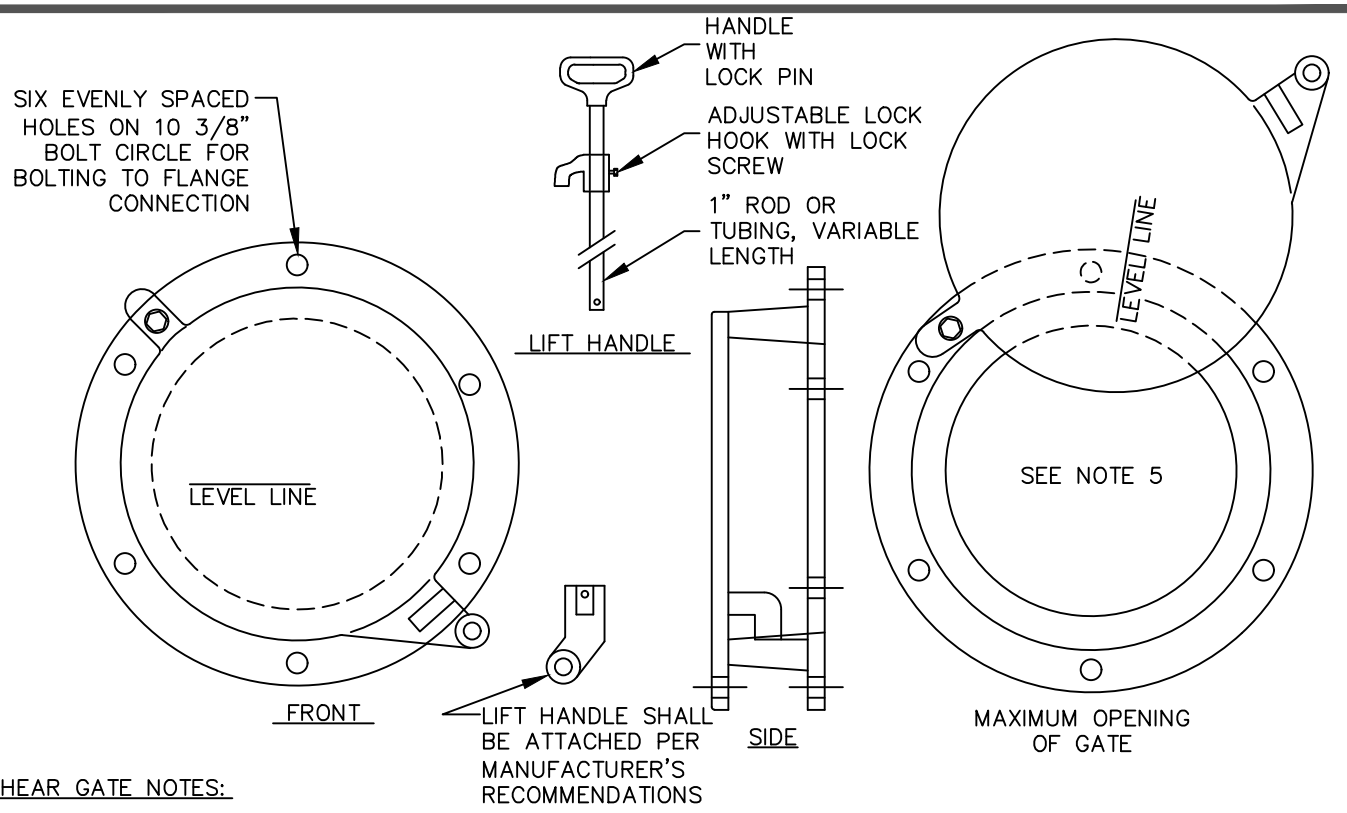


FOR NOTES SEE RIDGEFIELD STANDARD DETAIL ST-2.1B

REV. 8/01/24 CPG

FLOW CONTROL MANHOLE (TEE TYPE)

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-2.1A



SHEAR GATE NOTES:

1. SHEAR GATE SHALL BE ALUMINUM ALLOY PER ASTM B-26-ZG-32a OR CAST IRON ASTM A48 CLASS 30B AS REQUIRED.
2. GATE SHALL BE 8" DIA. UNLESS OTHERWISE SPECIFIED.
3. GATE SHALL BE JOINED TO TEE SECTION BY BOLTING (THROUGH FLANGE), WELDING, OR OTHER SECURE MEANS.
4. LIFT ROD: AS SPECIFIED BY MFR. WITH HANDLE EXTENDING TO WITHIN ONE FOOT OF COVER AND ADJUSTABLE HOOK LOCK FASTENED TO FRAME OR UPPER HANDHOLD. IF ATTACHED TO STEPS, MAKE SURE IT DOES NOT CREATE A TRIP HAZARD OR REDUCE ENTRY SPACE. MUST BE OPERATIONAL WITHOUT ENTERING MANHOLE.
5. GATE SHALL NOT OPEN BEYOND THE CLEAR OPENING BY LIMITED HINGE MOVEMENT, STOP TAB, OR SOME OTHER DEVICE.
6. NEOPRENE RUBBER GASKET REQUIRED BETWEEN RISER MOUNTING FLANGE AND GATE FLANGE.
7. MATING SURFACES OF LID AND BODY TO BE MACHINED FOR PROPER FIT.
8. FLANGE MOUNTING BOLTS SHALL BE 3/8" DIA. STAINLESS STEEL.
9. ALTERNATE CLEANOUT/SHEAR GATES TO THE DESIGN SHOWN ARE ACCEPTABLE, PROVIDED THEY MEET THE MATERIAL SPECIFICATIONS ABOVE AND HAVE SIX BOLTS, 10-3/8" BOLT CIRCLE FOR BOLTING TO THE FLANGE CONNECTION.

FLOW CONTROL DEVICE NOTES:

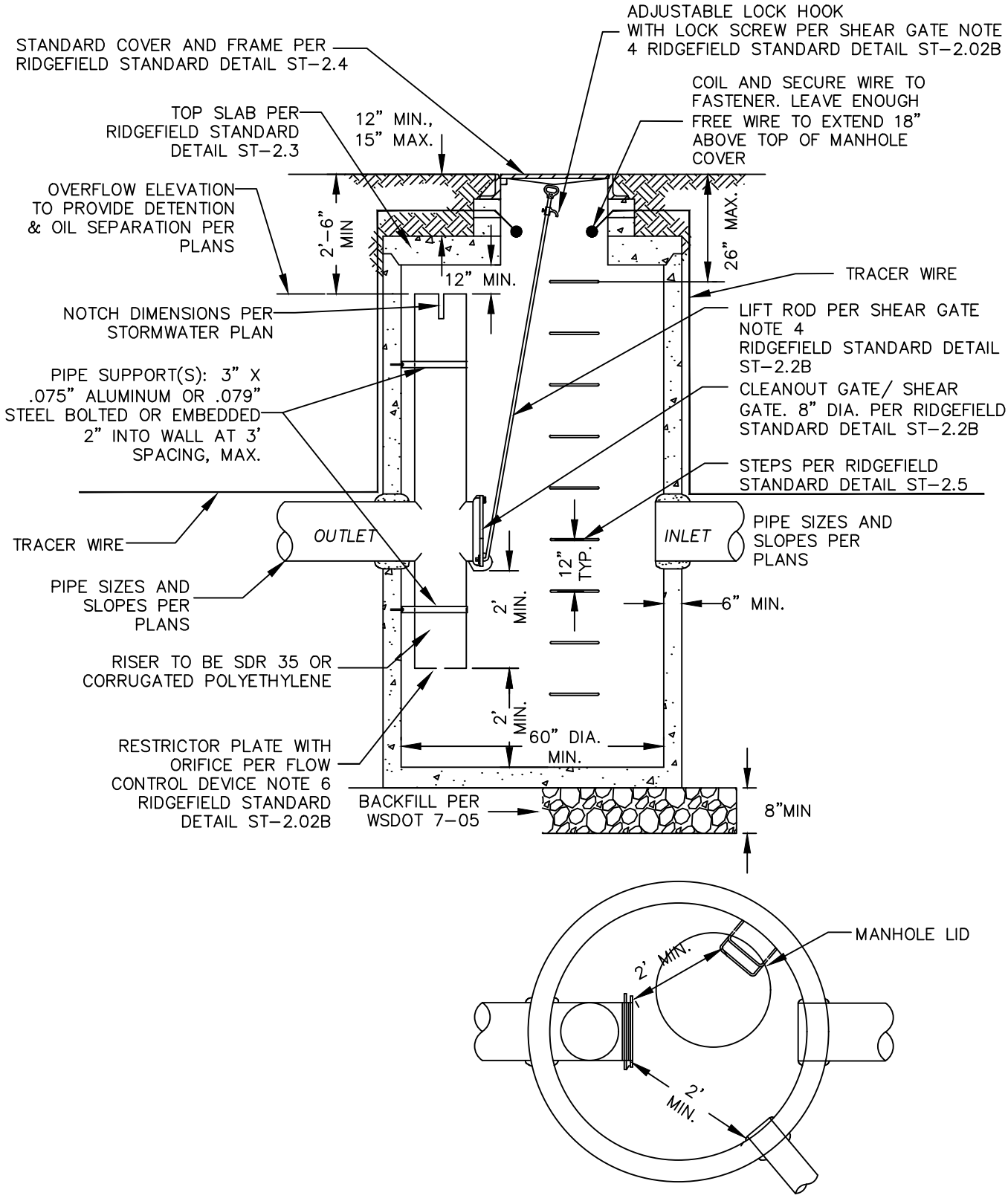
1. FOR DETAILS SHOWING GRADE RING, LADDER, STEPS, HANDHOLDS, AND TOP SLABS, SEE RIDGEFIELD STANDARD DETAIL ST-2.1A.
2. THE RESTRICTOR/SEPARATOR AND PIPE SUPPORTS SHALL BE OF THE SAME MATERIAL AND SHALL BE FABRICATED FROM 0.060" ALUMINUM OR 0.064" ALUMINIZED STEEL OR 0.064" GALVANIZED STEEL PIPE IN ACCORDANCE WITH AASHTO M 36, M 196, M 197 AND M 274. GALVANIZED STEEL SHALL HAVE TREATMENT 1.
3. THE VERTICAL RISER STEM OF THE RESTRICTOR/SEPARATOR SHALL BE THE SAME DIAMETER AS THE HORIZONTAL OUTLET PIPE WITH AN 8" MIN. SIZE.
4. FRAME AND LADDER, OR STEPS TO BE OFFSET SO THAT:
   A. CLEANOUT GATE IS VISIBLE FROM TOP.
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE.
   C. FRAME IS CLEAR OF CURB (IF ANY EXISTS).
5. MULTI-ORIFICE ELBOWS MAY BE LOCATED AS SHOWN OR ALL ON ONE SIDE OF RISER TO ASSURE LADDER CLEARANCE. SIZE OF ELBOWS TO BE DETERMINED BY ENGINEER.
6. RESTRICTOR PLATE WITH ORIFICE AS SPECIFIED IN THE PLANS. OMIT PLATE IF ONLY FOR OIL POLLUTION CONTROL. SPECIFIED OPENING TO BE CUT ROUND AND SMOOTH EDGED.

FOR DETAIL SEE RIDGEFIELD STANDARD DETAIL ST-2.1A

REV. 8/01/24 CPG

FLOW CONTROL MANHOLE (TEE TYPE) NOTES

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-2.1B



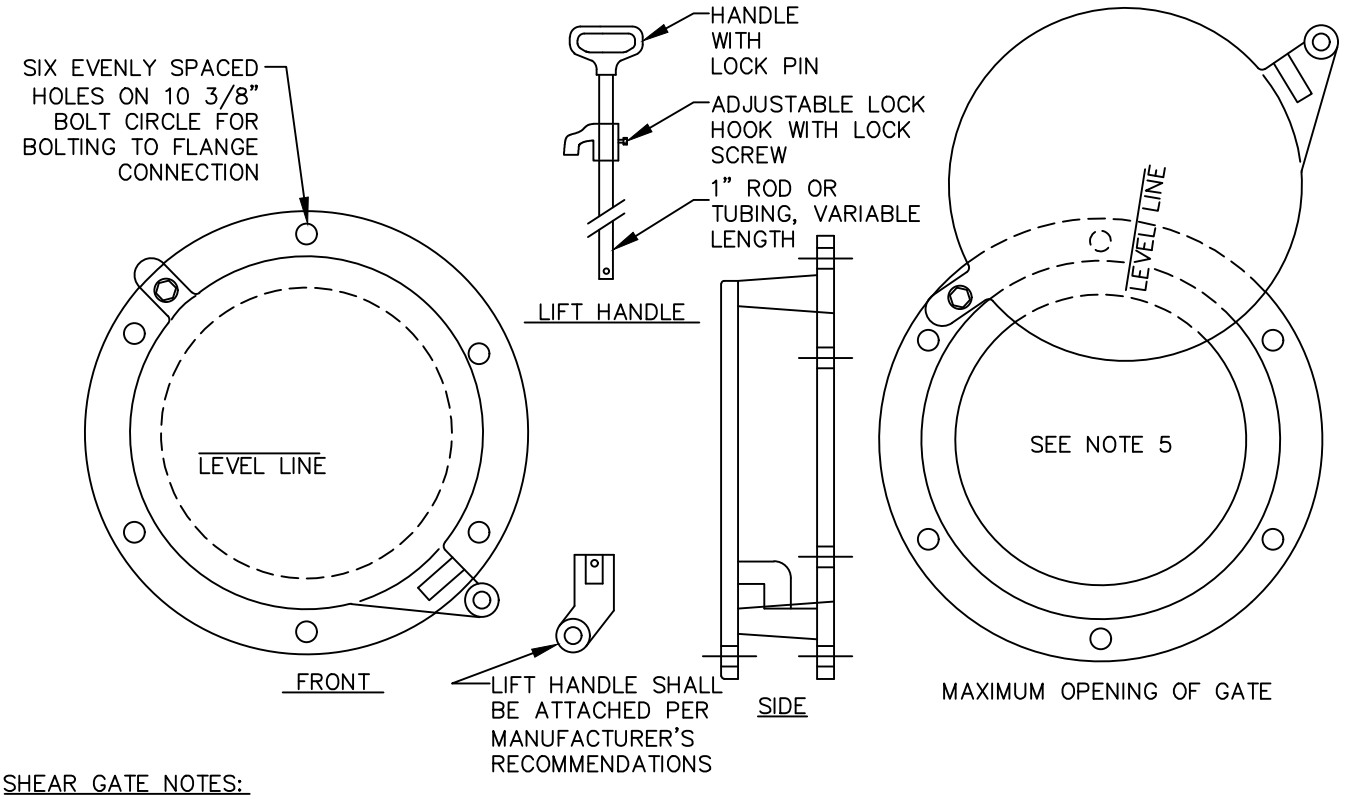
FOR NOTES SEE RIDGEFIELD STANDARD DETAIL ST–2.2B

PLAN

REV. 8/01/24 CPG

FLOW CONTROL MANHOLE (NOTCH TYPE)

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST - 2.2A**



SHEAR GATE NOTES:

1. SHEAR GATE SHALL BE ALUMINUM ALLOY PER ASTM B-26-ZG-32a OR CAST IRON ASTM A48 CLASS 30B AS REQUIRED.
2. GATE SHALL BE 8" DIA. UNLESS OTHERWISE SPECIFIED.
3. GATE SHALL BE JOINED TO TEE SECTION BY BOLTING (THROUGH FLANGE), WELDING, OR OTHER SECURE MEANS.
4. LIFT ROD: AS SPECIFIED BY MFR. WITH HANDLE EXTENDING TO WITHIN ONE FOOT OF COVER AND ADJUSTABLE HOOK LOCK FASTENED TO FRAME OR UPPER HANDHOLD. IF ATTACHED TO STEPS, MAKE SURE IT DOES NOT CREATE A TRIP HAZARD OR REDUCE ENTRY SPACE. MUST BE OPERATIONAL WITHOUT ENTERING MANHOLE.
5. GATE SHALL NOT OPEN BEYOND THE CLEAR OPENING BY LIMITED HINGE MOVEMENT, STOP TAB, OR SOME OTHER DEVICE.
6. NEOPRENE RUBBER GASKET REQUIRED BETWEEN RISER MOUNTING FLANGE AND GATE FLANGE.
7. MATING SURFACES OF LID AND BODY TO BE MACHINED FOR PROPER FIT.
8. FLANGE MOUNTING BOLTS SHALL BE 3/8" DIA. STAINLESS STEEL.
9. ALTERNATE CLEANOUT/SHEAR GATES TO THE DESIGN SHOWN ARE ACCEPTABLE, PROVIDED THEY MEET THE MATERIAL SPECIFICATIONS ABOVE AND HAVE SIX BOLTS, 10-3/8" BOLT CIRCLE FOR BOLTING TO THE FLANGE CONNECTION.

FLOW CONTROL DEVICE NOTES:

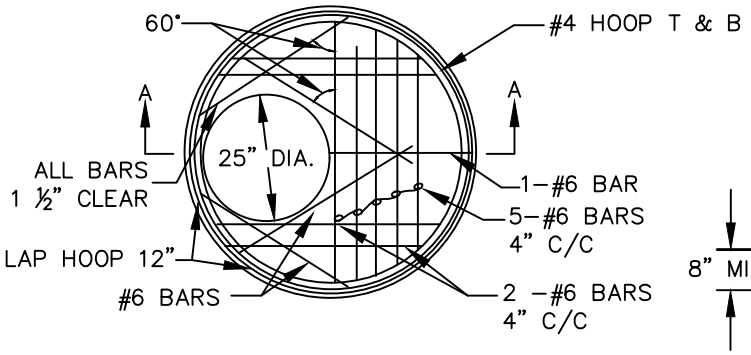
1. FOR DETAILS SHOWING GRADE RING, LADDER, STEPS, HANDHOLDS, AND TOP SLABS, SEE RIDGEFIELD STANDARD DETAIL ST-2.2A.
2. THE RESTRICTOR/SEPARATOR AND PIPE SUPPORTS SHALL BE OF THE SAME MATERIAL AND SHALL BE FABRICATED FROM 0.060" ALUMINUM OR 0.064" ALUMINIZED STEEL OR 0.064" GALVANIZED STEEL PIPE IN ACCORDANCE WITH AASHTO M 36, M 196, M 197 AND M 274. GALVANIZED STEEL SHALL HAVE TREATMENT 1.
3. THE VERTICAL RISER STEM OF THE RESTRICTOR/SEPARATOR SHALL BE THE SAME DIAMETER AS THE HORIZONTAL OUTLET PIPE WITH AN 8" MIN. SIZE.
4. FRAME AND LADDER, OR STEPS TO BE OFFSET SO THAT:
   A. CLEANOUT GATE IS VISIBLE FROM TOP.
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE.
   C. FRAME IS CLEAR OF CURB (IF ANY EXISTS).
5. MULTI-ORIFICE ELBOWS MAY BE LOCATED AS SHOWN OR ALL ON ONE SIDE OF RISER TO ASSURE LADDER CLEARANCE. SIZE OF ELBOWS TO BE DETERMINED BY ENGINEER.
6. RESTRICTOR PLATE WITH ORIFICE AS SPECIFIED IN THE PLANS. OMIT PLATE IF ONLY FOR OIL POLLUTION CONTROL. SPECIFIED OPENING TO BE CUT ROUND AND SMOOTH EDGED.

FOR DETAIL SEE RIDGEFIELD STANDARD DETAIL ST-2.2A

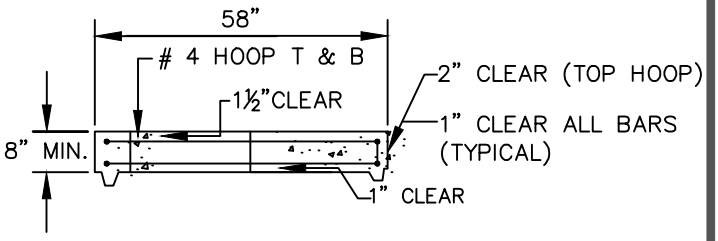
REV. 8/01/24 CPG

FLOW CONTROL MANHOLE (NOTCH TYPE) NOTES

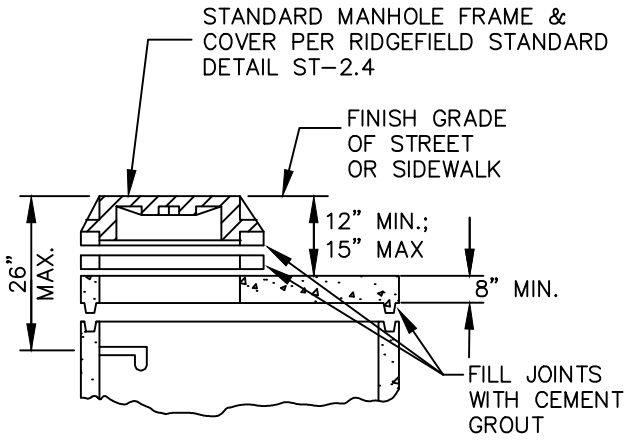
STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST - 2.2B



PLAN VIEW



SECTION A-A



FLAT SLAB ALTERNATE

NOTES:

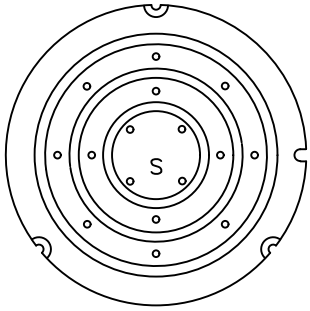
1. ALL PRECAST SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 P.S.I. & 2" TO 4" SLUMP. INSIDE SURFACES SHALL BE TROWELED SMOOTH AND UNIFORM AT TIME OF POUR.
3. ALL REINFORCING SHALL BE GRADE 40 STEEL.
4. MANHOLES UNDER 5'-0" IN DEPTH FROM RIM TO INVERT SHALL HAVE TOP SLAB IN LIEU OF CONE.
5. WHIRLY GIG ©MANHOLE RISER COLLAR SYSTEM MAY BE USED IN PLACE OF RISER RING.

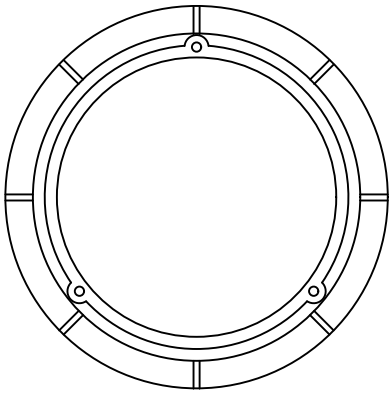
REV. 8/01/24 CPG

TOP SLAB FOR MANHOLE

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST - 2.3**

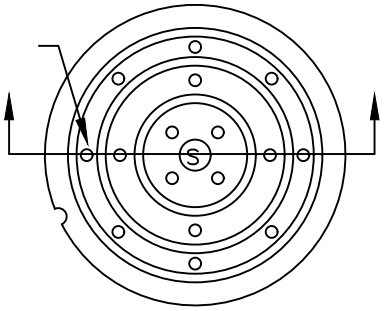
LOCKING



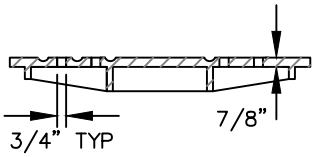


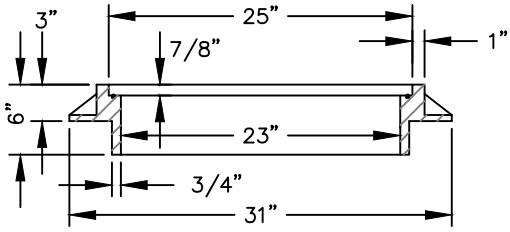
7/8" ø HOLES

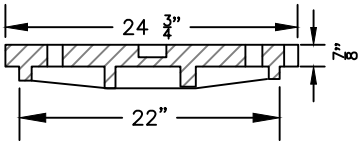
STANDARD



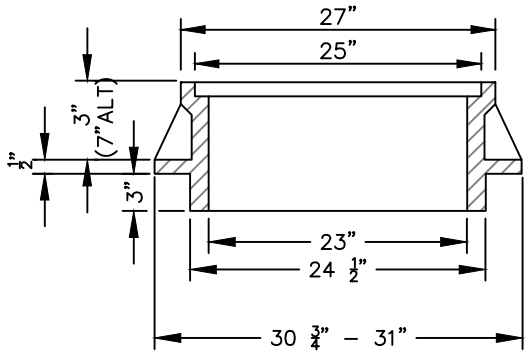
16 HOLE STORM SEWER ONLY







LOCKING LID TO BE D&L FOUNDRY PART NUMBER A-2107-R5-03 HALF & HALF OR APPROVED EQUAL.



STANDARD & LOCKING FRAME

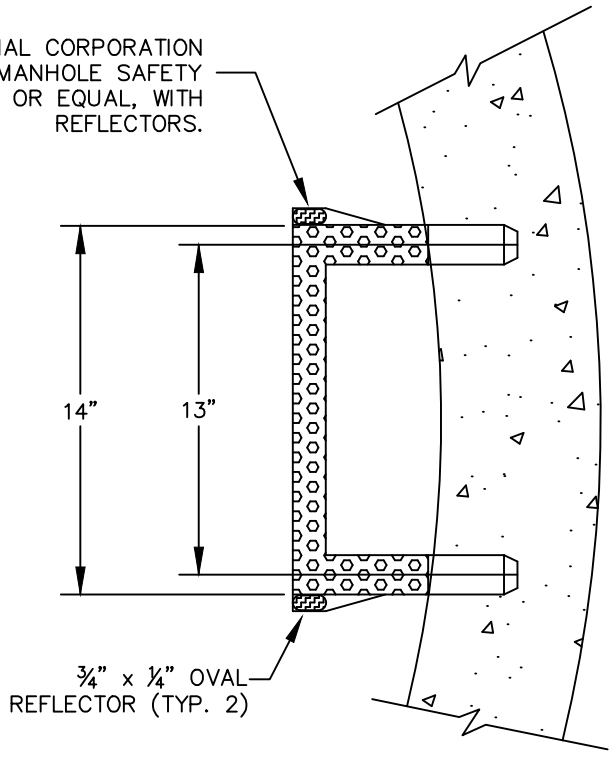
NOTES:

1. COVER & FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
2. MATERIAL SHALL BE OF GRAY CAST IRON. A.S.T.M. A-48, CLASS 30.
3. LOCKING LID MUST BE USED ON MANHOLES LOCATED IN NON-HARDSCAPE AREAS EXCEPT IN FENCED STORM FACILITIES.

REV. 8/01/24 CPG

MANHOLE FRAMES AND COVERS

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST - 2.4

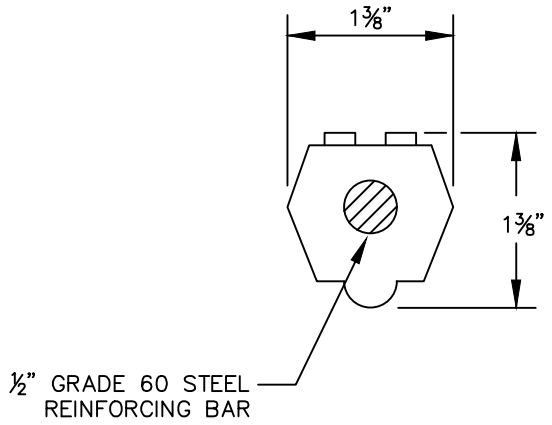


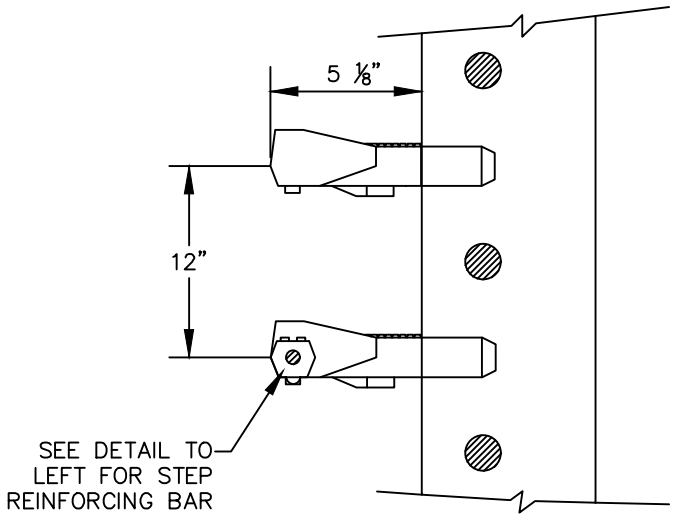
PLAN

NOTES:

1. ALL STEPS MUST MEET ASTM C-478 AND AASHTO M-199 SPECIFICATIONS, POLYPROPYLENE ASTM D4104-08, THE 1/2" GRADE 60 DEFORMED REINFORCING BAR ASTM A-615.

2. INSTALLATION METHOD MUST RESIST 1,500 LB. HORIZONTAL PULL OUT FORCE AND 500 LB. VERTICAL LOAD



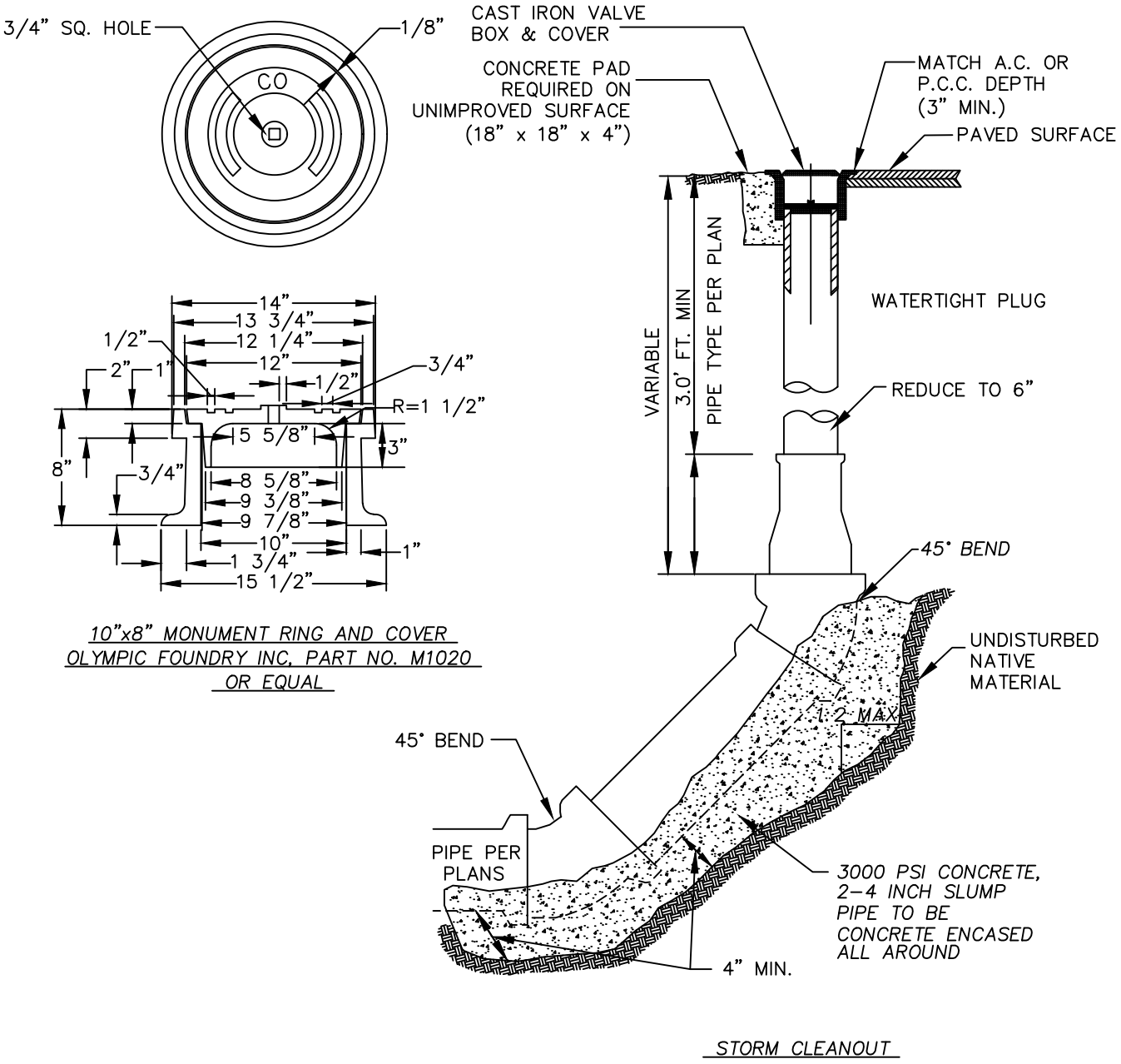


ELEVATION

REV. 8/01/24 CPG

MANHOLE STEP

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-2.5



10"x8" MONUMENT RING AND COVER OLYMPIC FOUNDRY INC. PART NO. M1020 OR EQUAL

STORM CLEANOUT

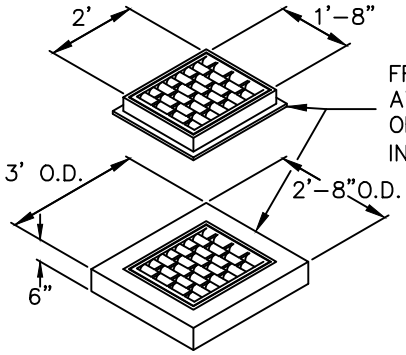
NOTES:

1. VALVE BOX SHALL BE GRAY CAST IRON MATERIAL CONFORMING TO ASTM A-46 CLASS 30.
2. CLEANOUT SHALL BE INSTALLED OUTSIDE OF RIGHT OF WAY UNLESS ENGINEER RECEIVES PRIOR APPROVAL FROM CITY.

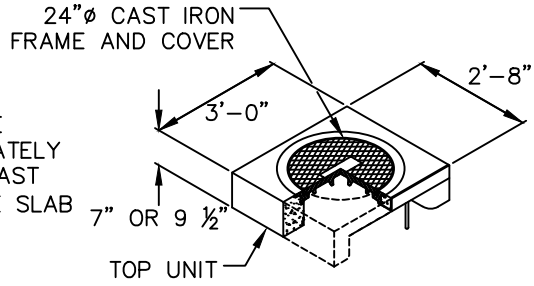
REV. 8/01/24 CPG

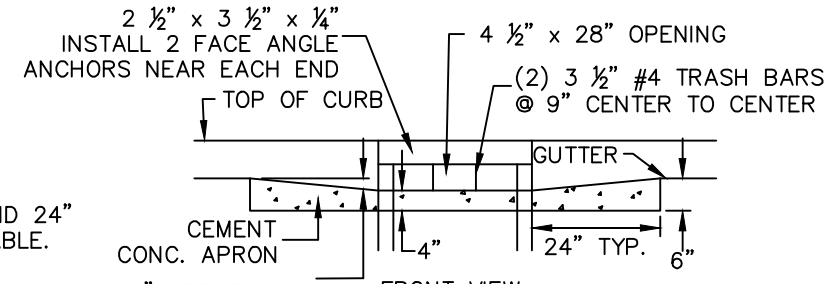
STORM CLEANOUT

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-2.6**

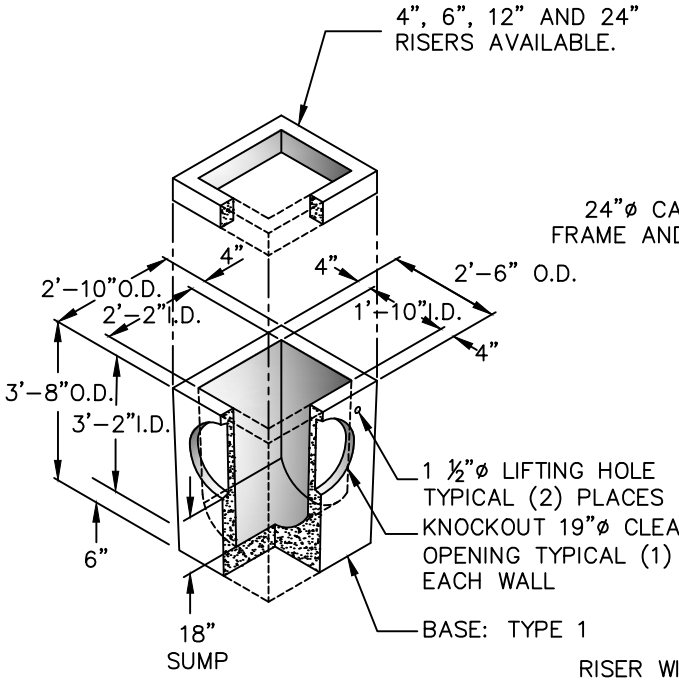


CATCH BASIN TOP

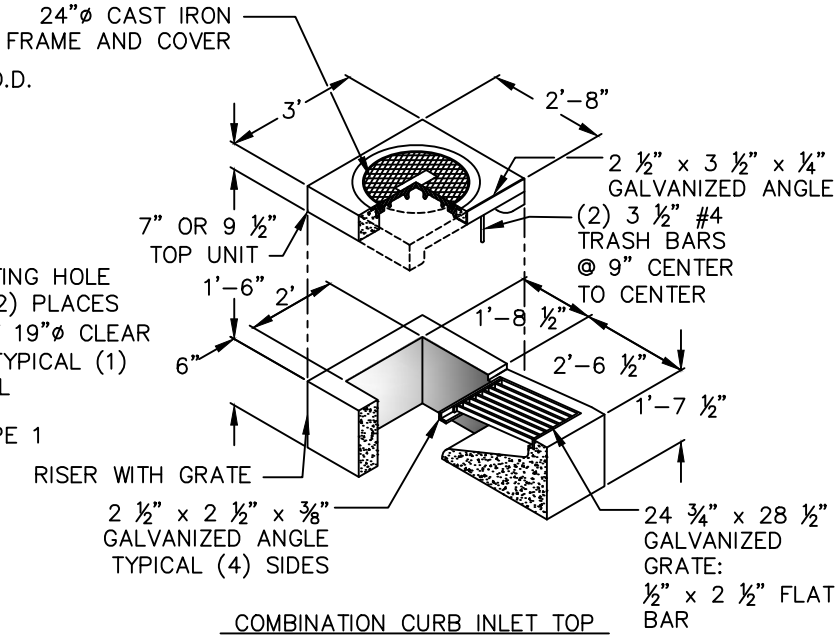




FRONT VIEW
CURB INLET TOP
(CITY OF RIDGEFIELD PREFERRED TOP)



BASE UNIT



COMBINATION CURB INLET TOP

FOR NOTES SEE RIDGEFIELD STANDARD DETAIL ST-3.0B

REV. 8/01/24 CPG

CATCH BASIN (TYPE 1)

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-3.0A**

CONSTRUCTION NOTES:

1. IN OVER EXCAVATED AREAS PROVIDE SUPPORT FOR THE PIPE AS FOLLOWS: PLACE ¾" MINUS CRUSHED ROCK OVER UNDISTURBED GROUND IN 6" LAYERS AND COMPACT.
2. BACKFILL MATERIAL BELOW & TO SIDE OF STRUCTURE SHALL BE ASTM D2321 CLASS I OR II CRUSHED STONE OR GRAVEL, PLACED UNIFORMLY. BACKFILL TO MEET WSDOT STANDARD SPECIFICATION SECTION 7-05 & AASHTO T-99 95% COMPACTION.
3. ALL DIMENSIONS SUBJECT TO ALLOWABLE SPECIFICATION TOLERANCES.
4. LATERALS WILL BE CONSTRUCTED TO ENTER THE STRUCTURE PERPENDICULAR TO THE WALL. THE LATERAL WILL ENTER ONLY AT THE LOCATION OF KNOCKOUT WITH NO LATERALS ALLOWED TO ENTER THE BASE AT THE CORNERS. IF NEEDED, A 45° BEND (MAX.) MAY BE USED WITHIN 5 FEET OF STRUCTURE.
5. TAPER GUTTER DOWN TO INLET. (CURB INLET & COMBINATION CURB INLET ONLY)
6. GUTTER PAN TO BE UTILIZED ON CATCH BASIN TOP AND COMBINATION CURB INLET TOP PER STD. DETAIL ST-5.00.
7. USE VANED GRATE WHERE LONGITUDINAL SLOPE IS 4% OR GREATER, SEE RIDGEFIELD STANDARD DETAIL ST-5.2.
8. USE HERRINGBONE GRATE WHERE LONGITUDINAL SLOPE IS LESS THAN 4%, SEE RIDGEFIELD STANDARD DETAIL ST-5.2.
9. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0".
10. ANY PROTRUDING ENDS OF PIPES SHALL BE TRIMMED FLUSH WITH THE INSIDE WALLS AND GROUTED TO THE SATISFACTION OF ENGINEER.
11. LIFT HOLES MUST BE GROUTED.

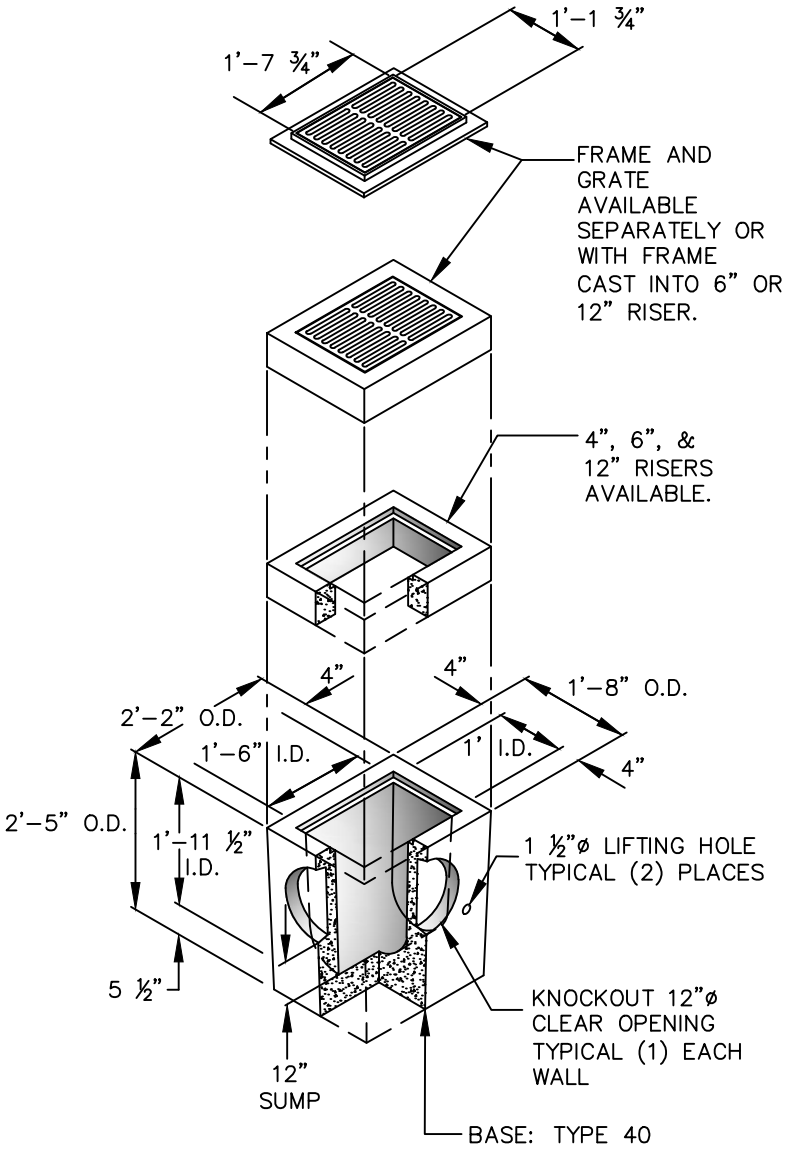
STRUCTURE NOTES:

1. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 & C890 UNLESS SHOWN ON PLANS OR NOTED IN WSDOT STANDARD SPECIFICATIONS.
2. BASE CONCRETE SHALL BE 3000 P.S.I., 2-4 IN. SLUMP. FLOW LINES AND INSIDE SURFACES SHALL BE TROWELED SMOOTH & UNIFORM AT TIME OF POUR.
3. CAST-IN-PLACE, MONOLITHIC BASE UNIT MAY BE SUBSTITUTED WITH SPECIFIC APPROVAL OF THE ENGINEER.
4. ALL JOINTS SHALL BE GROUTED WITH PORTLAND CEMENT CONCRETE GROUT & STRUCK EVEN WITH THE WALL. RISERS SHALL BE PREMOLDED.
5. ALL REINFORCED STEEL SHALL HAVE 1 ½" CLEAR COVER UNLESS OTHERWISE NOTED, AND SHALL BE GRADE 60 (ASTM A615).
6. STEEL REINFORCED OR POLYPROPYLENE FIBER REINFORCED UNITS ARE ALLOWABLE.
7. BASE UNIT SHALL HAVE 18" SUMP BELOW INVERT OUT.

SEE RIDGEFIELD STANDARD DETAIL ST-3.0A FOR STRUCTURE DETAIL

REV. 8/01/24 CPG

CATCH BASIN (TYPE 1) NOTES



CONSTRUCTION NOTES:

1. IN OVER EXCAVATED AREAS PROVIDE SUPPORT FOR THE PIPE AS FOLLOWS: PLACE ¾" MINUS CRUSHED ROCK OVER UNDISTURBED GROUND IN 6" LAYERS AND COMPACT.
2. BACKFILL MATERIAL BELOW & TO SIDE OF STRUCTURE SHALL BE ASTM D2321 CLASS I OR II CRUSHED STONE OR GRAVEL, PLACED UNIFORMLY. BACKFILL TO MEET WSDOT STANDARD SPECIFICATION SECTION 7–05 & AASHTO T–99 95% COMPACTION.
3. ALL DIMENSIONS SUBJECT TO ALLOWABLE SPECIFICATION TOLERANCES.
4. LATERALS WILL BE CONSTRUCTED TO ENTER THE STRUCTURE PERPENDICULAR TO THE WALL. THE LATERAL WILL ENTER ONLY AT THE LOCATION OF KNOCKOUT WITH NO LATERALS ALLOWED TO ENTER THE BASE AT THE CORNERS. IF NEEDED, A 45° BEND (MAX.) MAY BE USED WITHIN 5 FEET OF STRUCTURE.
5. GUTTER PAN TO BE UTILIZED PER RIDGEFIELD STANDARD DETAIL ST–5.0.
6. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'–0".
7. ANY PROTRUDING ENDS OF PIPES SHALL BE TRIMMED FLUSH WITH THE INSIDE WALLS AND GROUTED TO THE SATISFACTION OF ENGINEER.
8. LIFT HOLES MUST BE GROUTED.

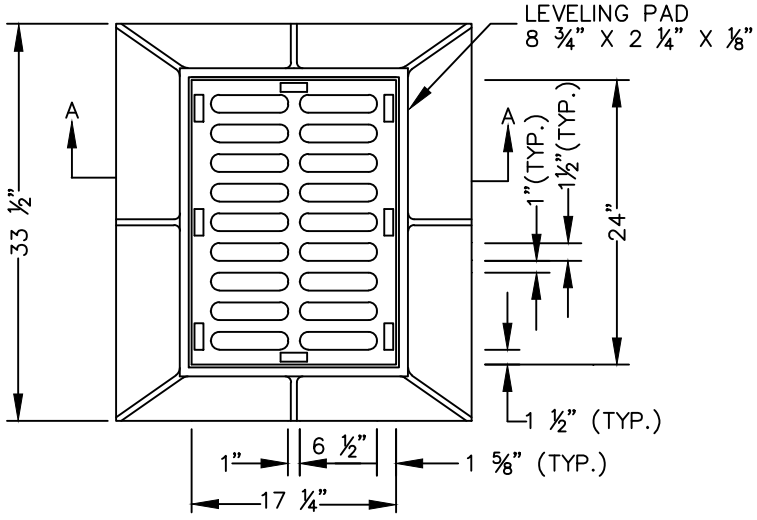
STRUCTURE NOTES:

1. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 & C890 UNLESS SHOWN ON PLANS OR NOTED IN WSDOT STANDARD SPECIFICATIONS.
2. BASE CONCRETE SHALL BE 3000 P.S.I., 2–4 IN. SLUMP. FLOW LINES AND INSIDE SURFACES SHALL BE TROWELED SMOOTH & UNIFORM AT TIME OF POUR.
3. CAST–IN–PLACE, MONOLITHIC BASE UNIT MAY BE SUBSTITUTED WITH SPECIFIC APPROVAL OF THE ENGINEER.
4. ALL JOINTS SHALL BE GROUTED WITH PORTLAND CEMENT CONCRETE GROUT & STRUCK EVEN WITH THE WALL. RISERS SHALL BE PREMOLDED.
5. ALL REINFORCED STEEL SHALL HAVE 1 ½" CLEAR COVER UNLESS OTHERWISE NOTED, AND SHALL BE GRADE 60 (ASTM A615).
6. STEEL REINFORCED OR POLYPROPYLENE FIBER REINFORCED UNITS ARE ALLOWABLE.
7. BASE UNIT SHALL HAVE 12" SUMP BELOW INVERT OUT.

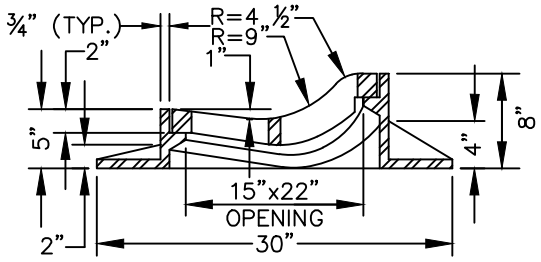
REV. 8/01/24 CPG

CATCH BASIN (TYPE 40)

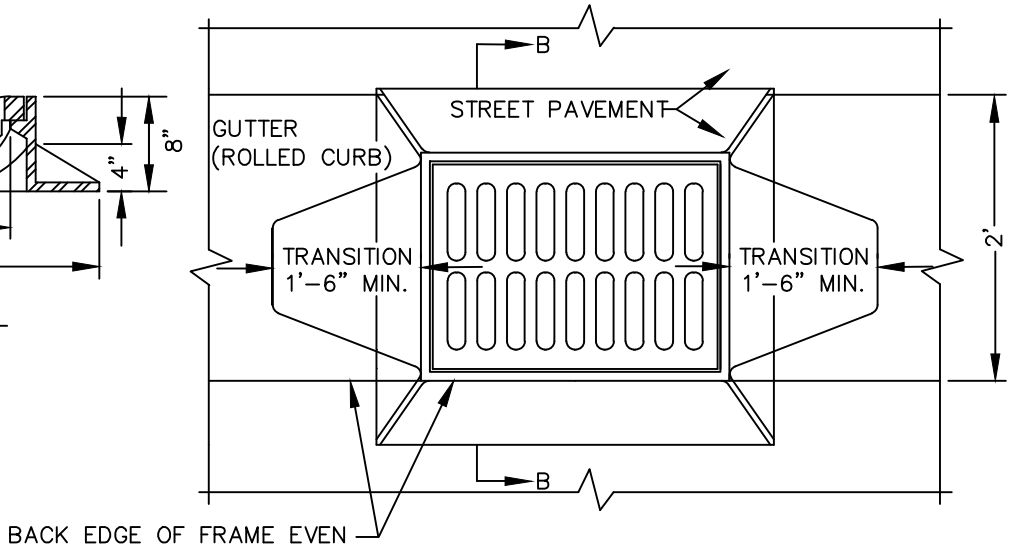
STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-3.1**



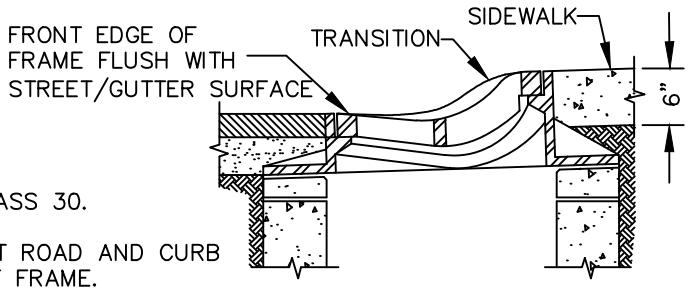
PLAN



SECTION A–A



PLAN



SECTION B–B

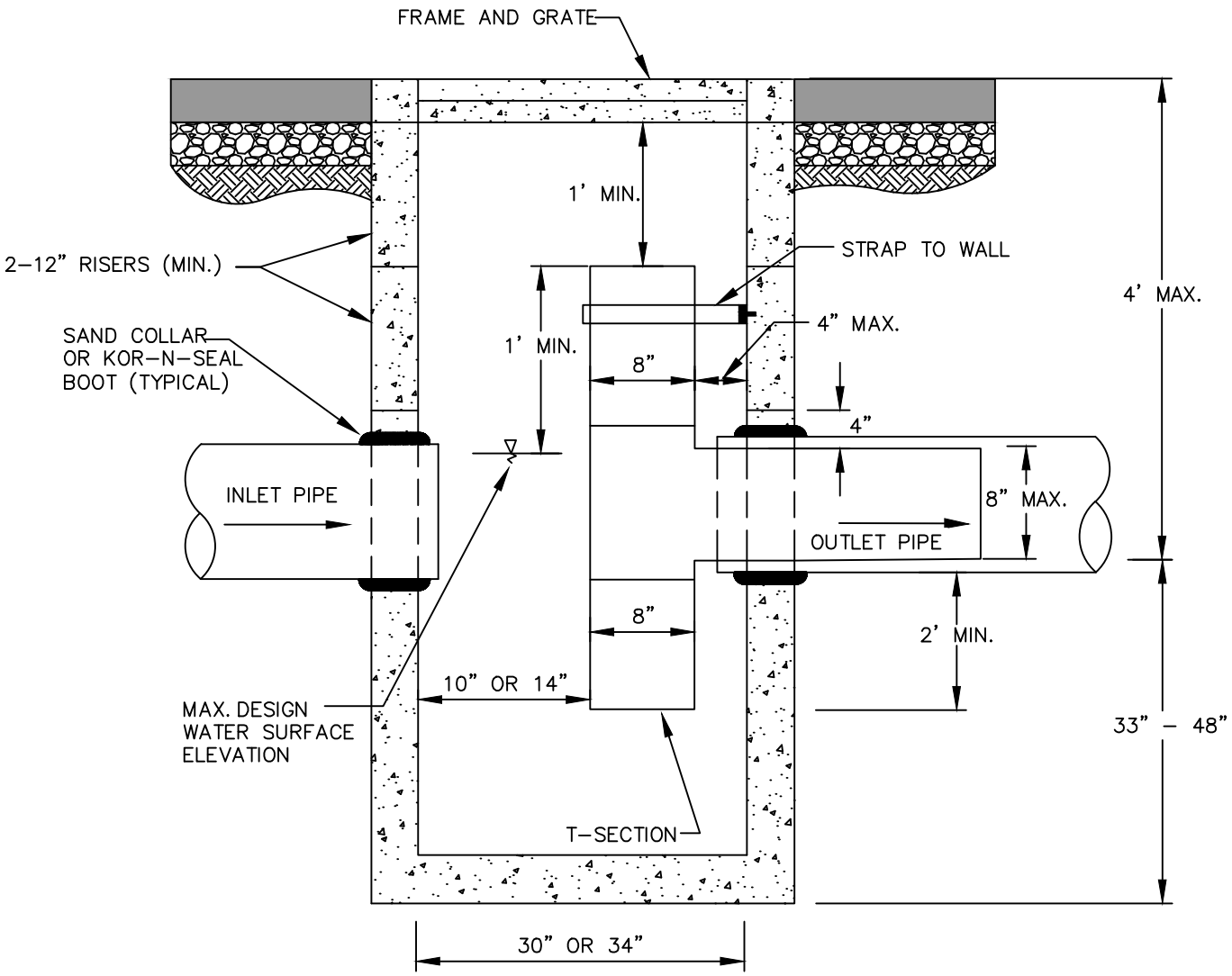
NOTES:

1. MATERIAL IS CAST IRON ASTM A48 CLASS 30.
2. SET FRAME TO GRADE AND CONSTRUCT ROAD AND CURB TO BE FLUSH AT FRONT AND BACK OF FRAME.

REV. 8/01/24 CPG

CATCH BASIN (ROLLED CURB)

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-3.2**



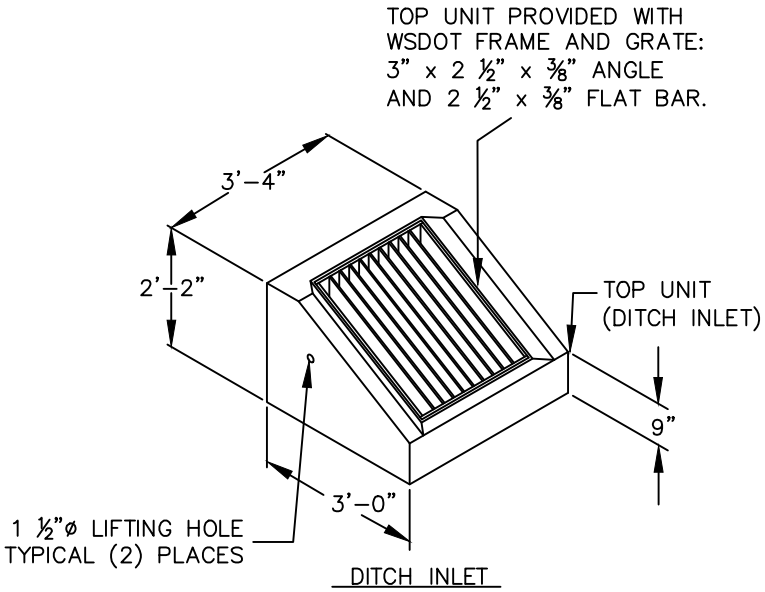
NOTES:

1. MAX. OUTLET PIPE DIAMETER IS 8 INCHES. VERTICAL RISER SECTION SHALL BE ALIGNED PLUMB VERTICALLY. HORIZONTAL RISER SECTION SHALL MATCH OUTLET PIPE SLOPE.
2. ALL METAL PARTS AND SURFACES MUST BE CORROSION RESISTANT. STEEL HARDWARE SHALL BE GALVANIZED. PIPES SHALL BE GALVANIZED, ASPHALT COATED (TREATMENT_1) OR ALUMINIZED. COMPLETE CORROSION PROTECTION MUST BE ASSURED.
3. APPLY NON–SHRINK GROUT TO INSIDE AND OUTSIDE OF ALL JOINTS, RINGS, RISERS AND FRAMES.
4. PENETRATE CARRIER PIPE THROUGH WALL.
5. USE APPROVED WATERTIGHT STRUCTURE ADAPTOR.
6. SLIP SMOOTH–BORE HORIZONTAL LEG OF FLOW CONTROL TEE INSIDE CARRIER PIPE.
7. NOT FLOW CONTROL JOINT OUTSIDE OF STRUCTURE.
8. SEE VOLUME V OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

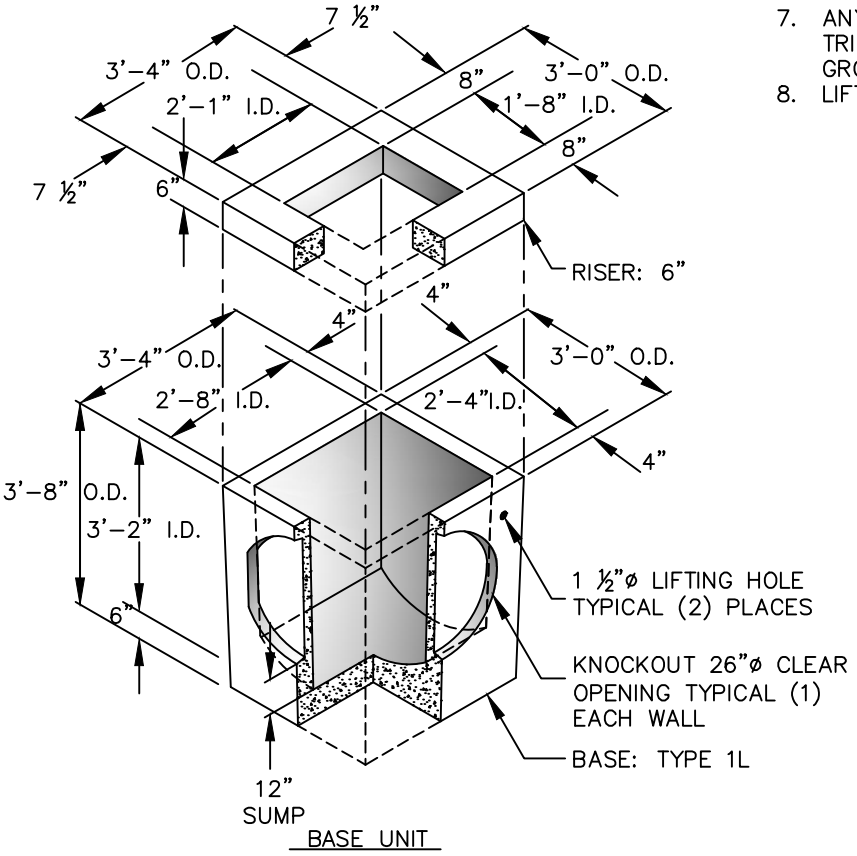
REV. 8/01/24 CPG

SPILL CONTROL (SC) SEPARATOR

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-3.3**



DITCH INLET



BASE UNIT

CONSTRUCTION NOTES:

1. IN OVER EXCAVATED AREAS PROVIDE SUPPORT FOR THE PIPE AS FOLLOWS: PLACE ¾" MINUS CRUSHED ROCK OVER UNDISTURBED GROUND IN 6" LAYERS AND COMPACT.
2. BACKFILL MATERIAL BELOW & TO SIDE OF STRUCTURE SHALL BE ASTM D2321 CLASS I OR II CRUSHED STONE OR GRAVEL, PLACED UNIFORMLY. BACKFILL TO MEET WSDOT STNDARD SPECIFICATION SECTION 7-05 & AASHTO T-99 95% COMPACTION.
3. ALL DIMENSIONS SUBJECT TO ALLOWABLE SPECIFICATION TOLERANCES.
4. LATERALS WILL BE CONSTRUCTED TO ENTER THE STRUCTURE PERPENDICULAR TO THE WALL. THE LATERAL WILL ENTER ONLY AT THE LOCATION OF KNOCKOUT WITH NO LATERALS ALLOWED TO ENTER THE BASE AT THE CORNERS. IF NEEDED, A 45° BEND (MAX.) MAY BE USED WITHIN 5 FEET OF STRUCTURE.
5. INSTALL REMOVABLE OUTLET TRAP OR EQUAL PER STD. DETAIL ST-5.01.
6. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0".
7. ANY PROTRUDING ENDS OF PIPES SHALL BE TRIMMED FLUSH WITH THE INSIDE WALLS AND GROUTED TO THE SATISFACTION OF ENGINEER.
8. LIFT HOLES MUST BE GROUTED.

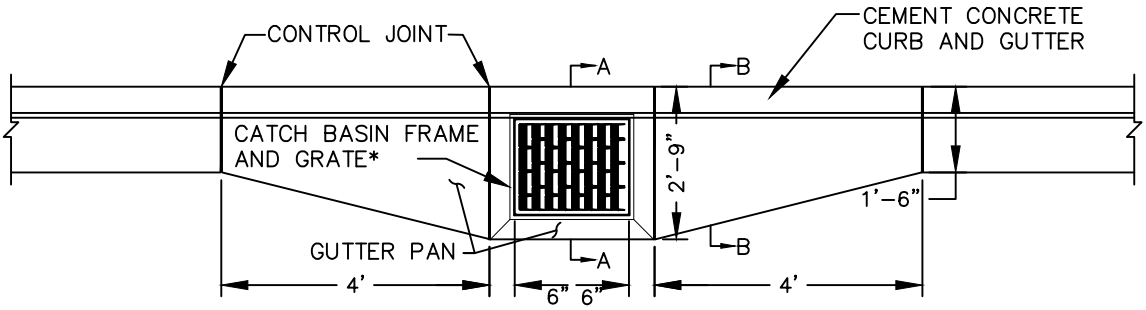
STRUCTURE NOTES:

1. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 & C890 UNLESS SHOWN ON PLANS OR NOTED IN WSDOT STANDARD SPECIFICATIONS.
2. BASE CONCRETE SHALL BE 3000 P.S.I., 2-4 IN. SLUMP. FLOW LINES AND INSIDE SURFACES SHALL BE TROWELED SMOOTH & UNIFORM AT TIME OF POUR.
3. CAST-IN-PLACE, MONOLITHIC BASE UNIT MAY BE SUBSTITUTED WITH SPECIFIC APPROVAL OF THE ENGINEER.
4. ALL JOINTS SHALL BE GROUTED WITH PORTLAND CEMENT CONCRETE GROUT & STRUCK EVEN WITH THE WALL. RISERS SHALL BE PREMOLDED.
5. ALL REINFORCED STEEL SHALL HAVE 1 ½" CLEAR COVER UNLESS OTHERWISE NOTED, AND SHALL BE GRADE 60 (ASTM A615).
6. STEEL REINFORCED OR POLYPROPYLENE FIBER REINFORCED UNITS ARE ALLOWABLE.
7. BASE UNIT SHALL HAVE 12" SUMP BELOW INVERT OUT.

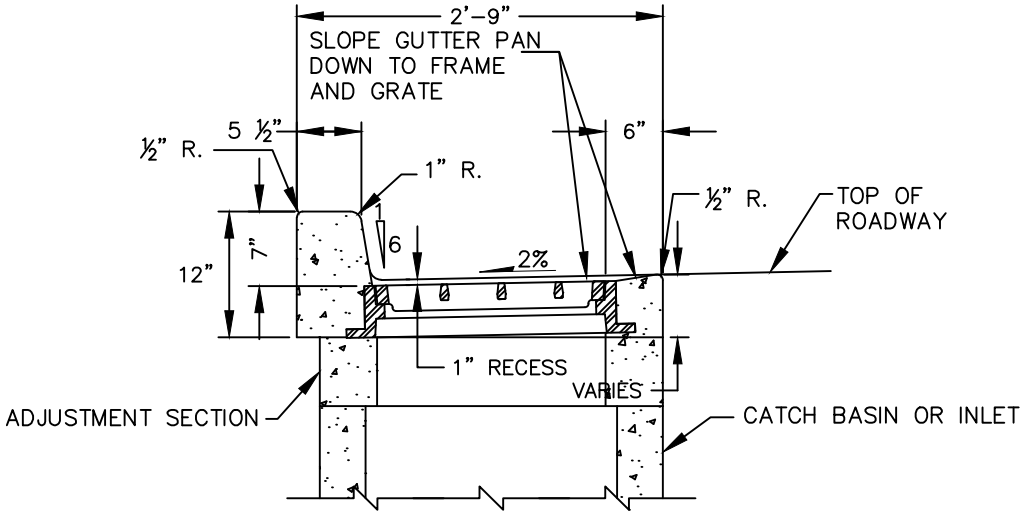
REV. 8/01/24 CPG

DITCH INLET (TYPE 1L)

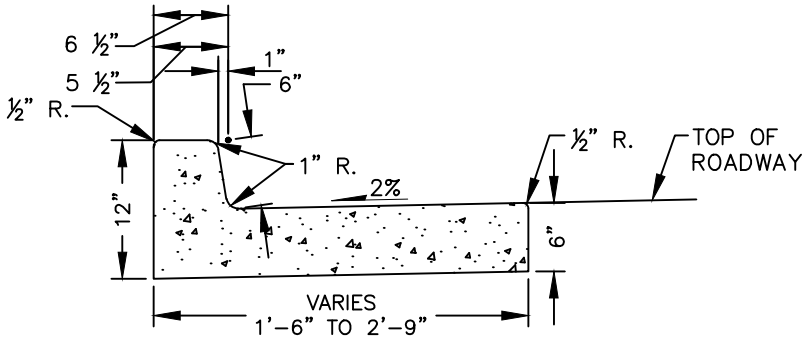
STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-4.0**



PLAN VIEW



SECTION A



SECTION B

*NOTES:

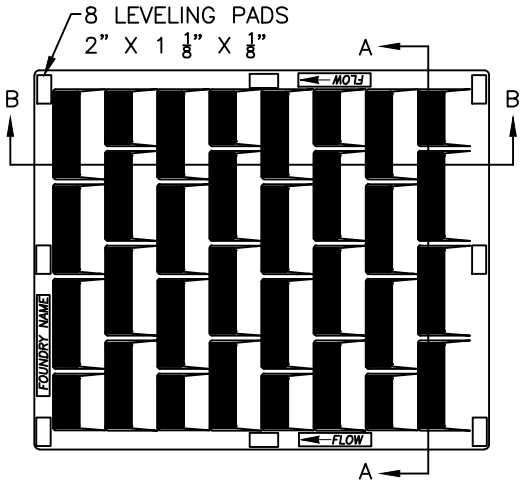
1. USE VANED GRATE WHERE LONGITUDINAL SLOPE IS 4% OR GREATER, SEE RIDGEFIELD STANDARD DETAIL ST-5.1.

2. USE HERRINGBONE GRATE WHERE LONGITUDINAL SLOPE IS LESS THAN 4%, SEE RIDGEFIELD STANDARD DETAIL ST-5.1.

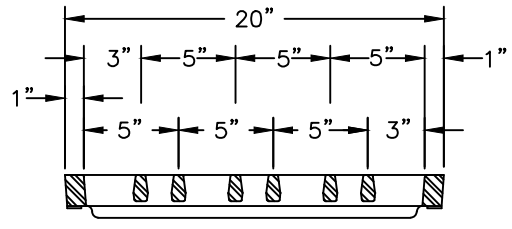
REV. 8/01/24 CPG

GUTTER PAN

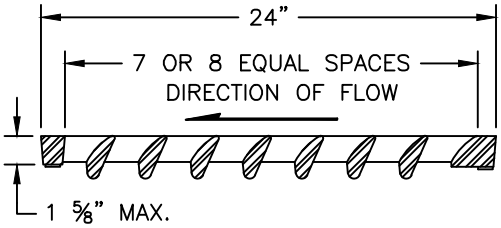
STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-5.0



PLAN VIEW

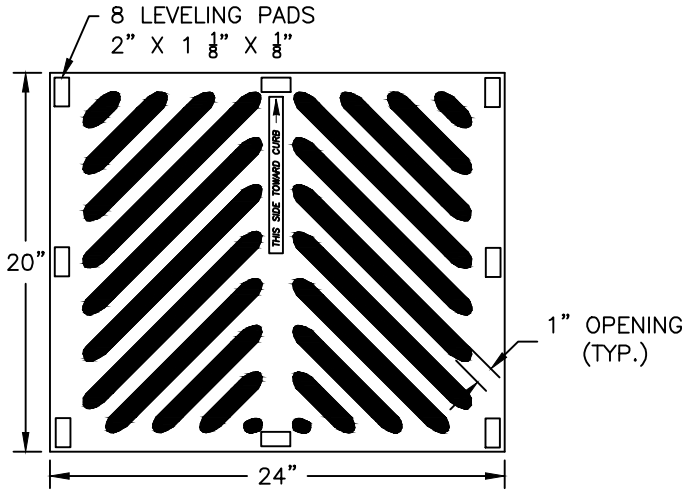


SECTION A–A



SECTION B–B

VANED



HERRINGBONE

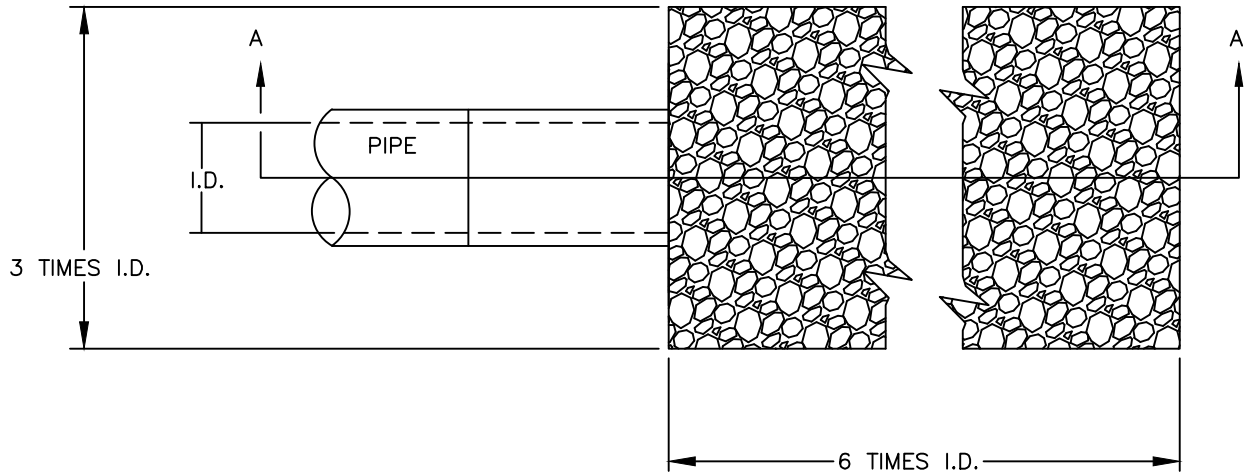
NOTES:

1. MATERIAL IS CAST IRON ASTM A48 CLASS 30.
2. USE VANED GRATE WHERE LONGITUDINAL SLOPE IS 4% OR GREATER.
3. USE HERRINGBONE GRATE WHERE LONGITUDINAL SLOPE IS LESS THAN 4%.
4. REFER TO WSDOT STANDARD SPECIFICATION SECTION 9–05.15(2) FOR ADDITIONAL REQUIREMENTS.
5. THE THICKNESS OF THE GRATE SHALL NOT EXCEED 1 5/8".

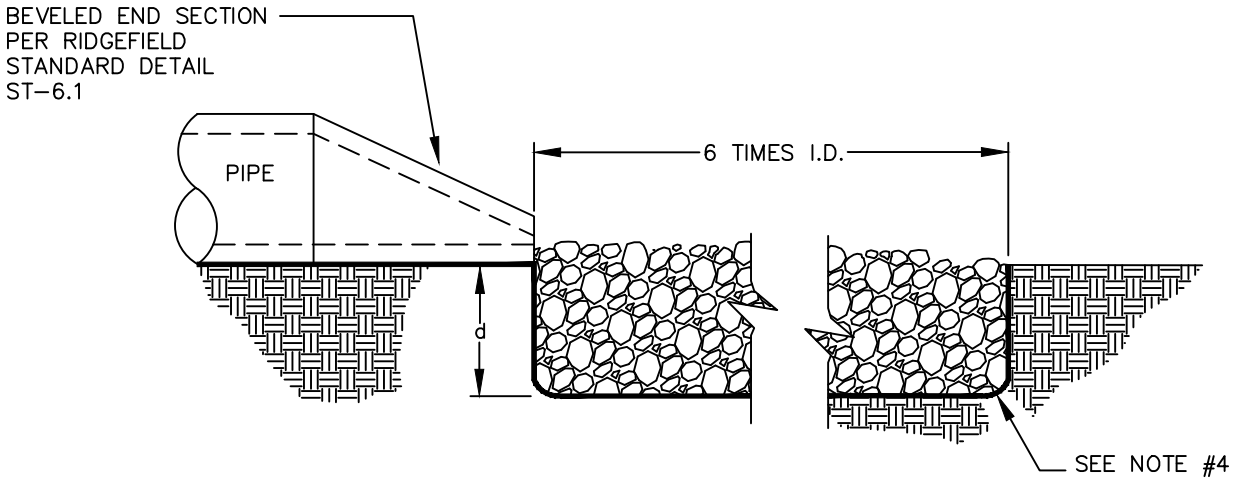
REV. 8/01/24 CPG

STORM GRATES

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-5.1



PLAN VIEW



SECTION 'A–A'

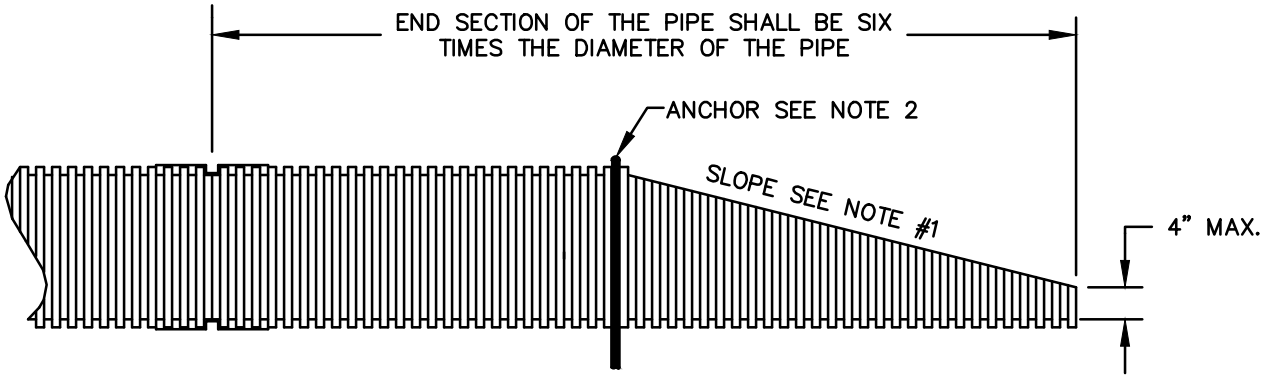
NOTES:

1. ROCK MATERIAL SHALL BE BETWEEN 3" AND 8" AND INSTALLED PER WSDOT STANDARD SPECIFICATION SECTION 9–13.1.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 4.5".
3. IN A WELL–DEFINED CHANNEL EXTEND RIP–RAP UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHALL BE INSTALLED BETWEEN THE RIP–RAP AND SOIL FOUNDATION.

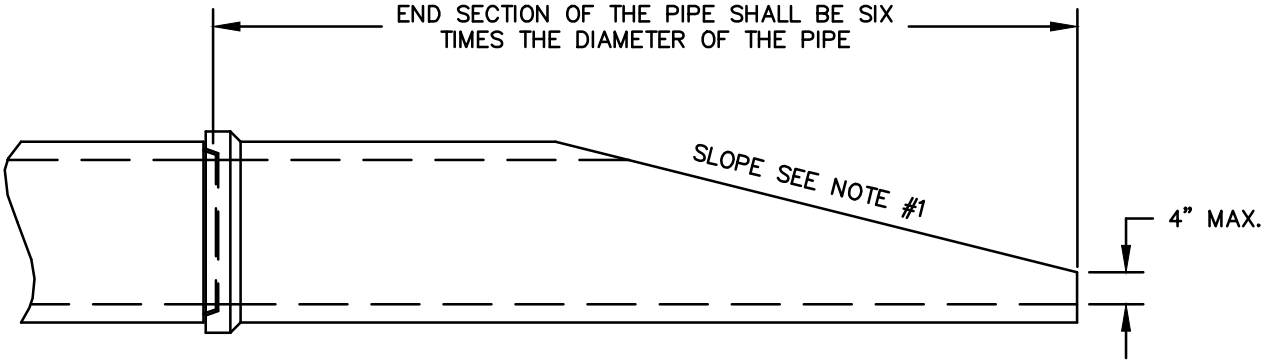
REV. 8/01/24 CPG

RIP–RAP

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-6.0



CORRUGATED POLYETHYLENE



DUCTILE IRON OR CONCRETE PIPE

NOTES:

1. THE CULVERT ENDS SHALL BE BEVELED TO MATCH THE EMBANKMENT OR DITCH SLOPE, WITHOUT EXCEEDING THE LIMITS SHOWN ON THE PLAN. SLOPE FOR BEVELED END SECTION SHALL MATCH BANK SIDE SLOPE UP TO A MAX. OF 3:1.

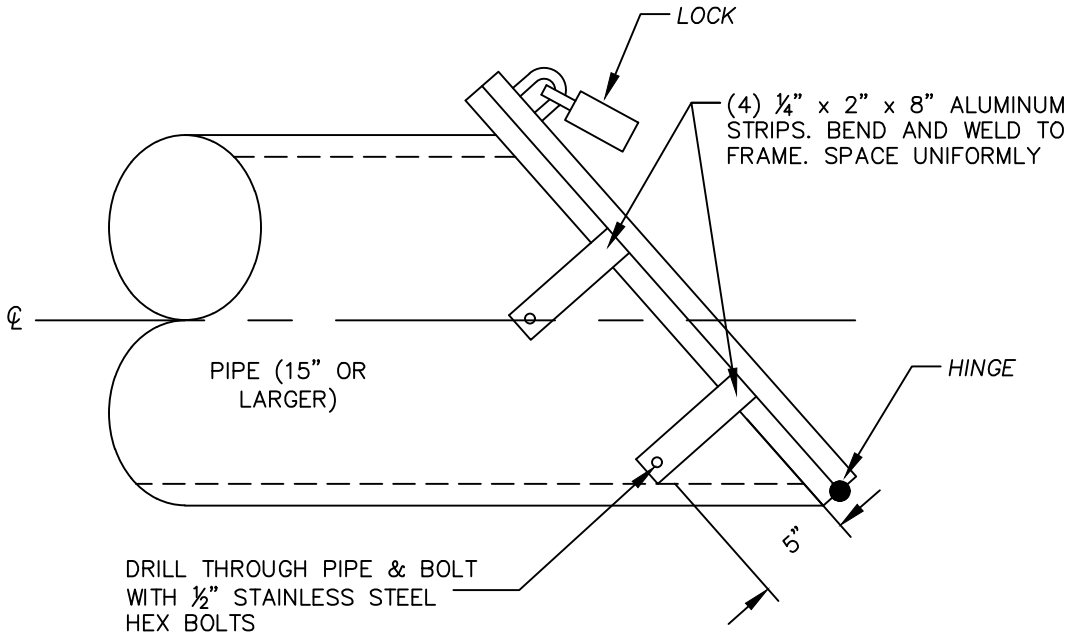
2. THE END OF CORRUGATED POLYETHYLENE SHALL BE ANCHORED. SEE RIDGEFIELD STANDARD DETAIL ST–7.0.

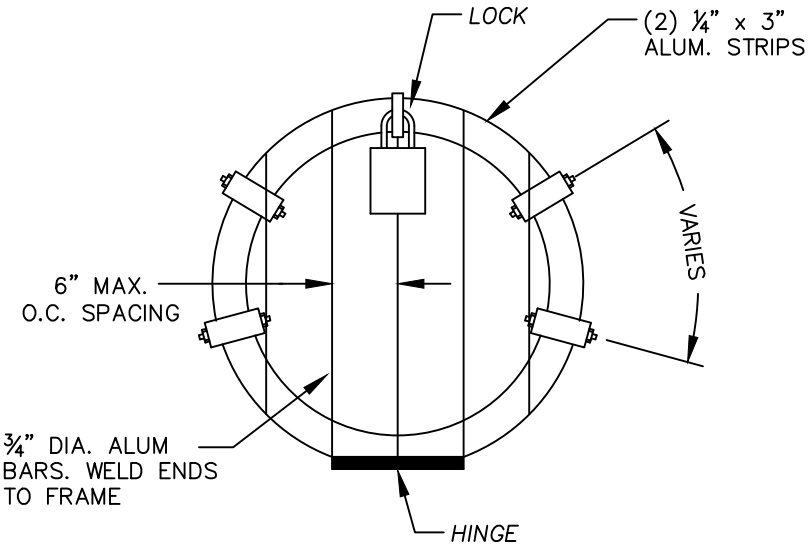
3. FOR PIPES 15" OR LARGER, TRASH SCREEN REQUIRED. SEE RIDGEFIELD STANDARD DETAIL ST–6.2.

REV. 8/01/24 CPG

BEVELED END SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-6.1





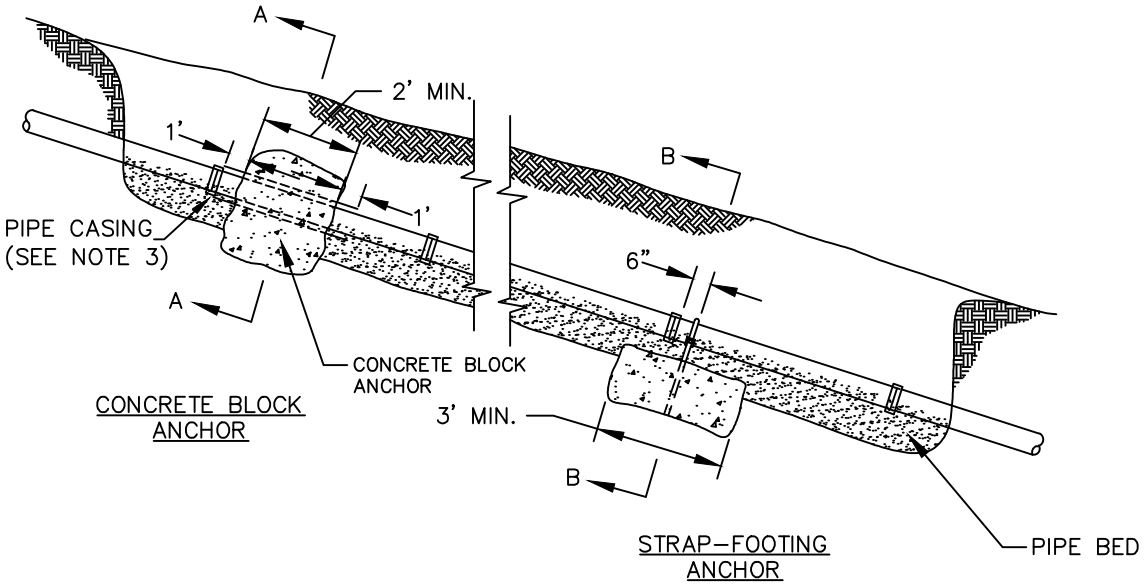
NOTES:

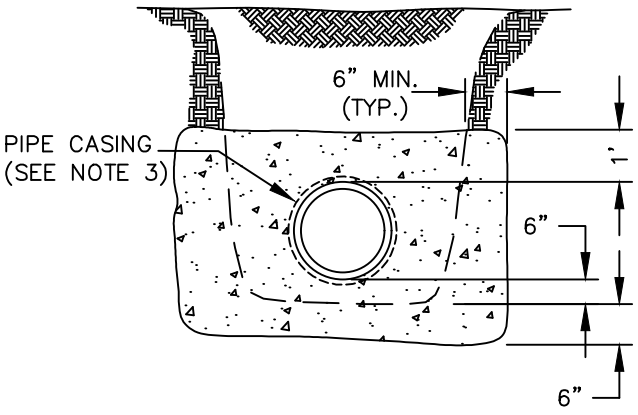
1. WELD ALL JOINTS.
2. SUBMITTAL SHOP DRAWING REQUIRED TO CITY INSPECTOR FOR REVIEW AND APPROVAL.
3. CONTRACTOR TO BE RESPONSIBLE FOR SUPPLYING LOCK. SPECIFICATIONS ON LOCK TO BE PROVIDED BY CITY INSPECTOR.

REV. 8/01/24 CPG

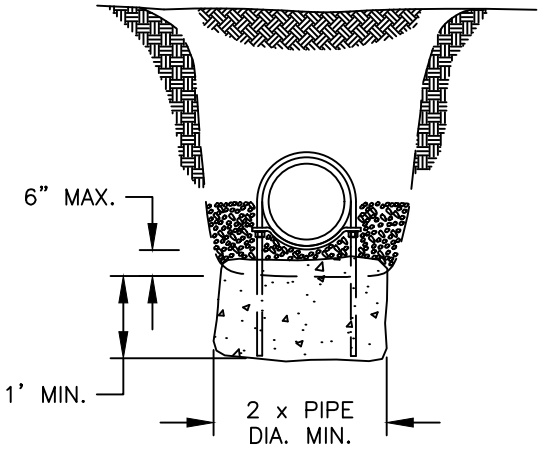
TRASH SCREEN

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-6.2





SECTION A–A



SECTION B–B

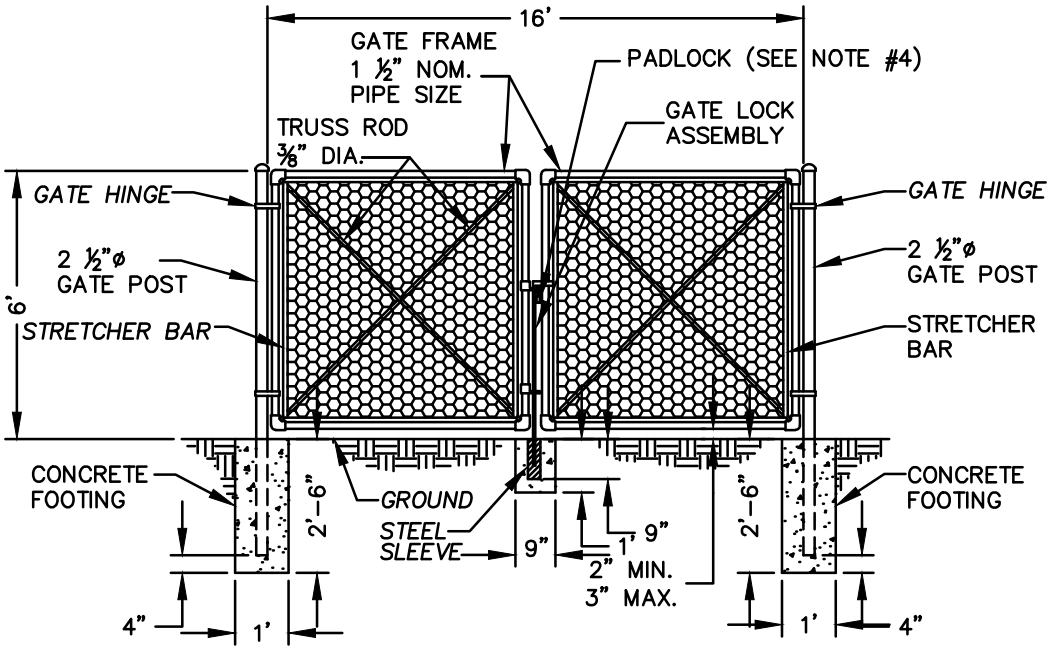
NOTES:

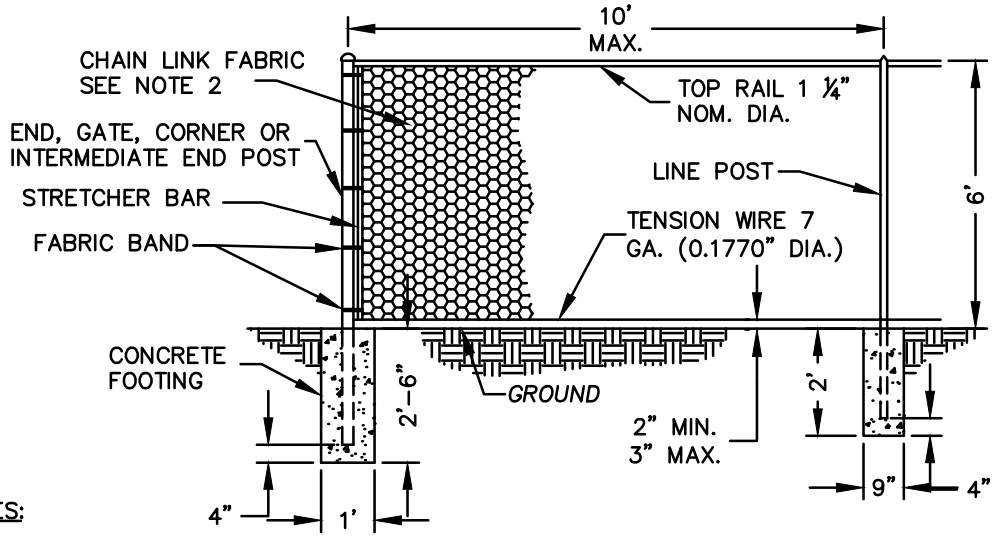
1. CONCRETE SHALL BE 3000 PSI MIN. MEETING WSDOT STANDARD SPECIFICATION SECTION 6–02.3(2)B.
2. CONCRETE SHALL BE POURED AGAINST FORMS OR STABLE UNDISTURBED SOIL.
3. FOR HDPE, PIPE MUST BE FREE TO SLIDE INSIDE A 4' (MIN.) LONG SECTION OF PIPE ONE SIZE DIAMETER LARGER.
4. ANCHORS TO BE USED WHERE GRADE IS 20% OR GREATER. MINIMUM SPACING AS FOLLOWS:
   NOT OVER 36' CENTER TO CENTER ON GRADES OF 20% AND UP TO 35%
   NOT OVER 24' CENTER TO CENTER ON GRADES OF 35% AND UP TO 50%
   NOT OVER 16' CENTER TO CENTER ON GRADES OF 50% AND MORE

REV. 8/01/24 CPG

PIPE ANCHOR

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-7.0





NOTES:

1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION.

2. CHAIN LINK FENCE FABRIC TO MEET OR EXCEED REQUIREMENTS OF WSDOT STANDARD SPECIFICATION SECTION 9-16.1(1)A. CHAIN LINK FENCE FABRIC SHALL BE HOT DIP GALVANIZED WITH A MINIMUM OF 0.8 OUNCE PER SQUARE FOOT OF SURFACE AREA. FENCING MATERIALS SHALL BE COATED WITH AN ULTRAVIOLET INSENSITIVE PLASTIC OR OTHER INERT MATERIAL AT LEAST 2 MILS IN THICKNESS. ANY PRETREATED OR COATING SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. THE MANUFACTURER'S WRITTEN SPECIFICATIONS DETAILING THE PRODUCT AND METHOD OF FABRICATION SHALL BE PROVIDED TO CITY OF BATTLE GROUND PRIOR TO CONSTRUCTION.

3. FENCE SHALL BE BLACK VINYL COATED.

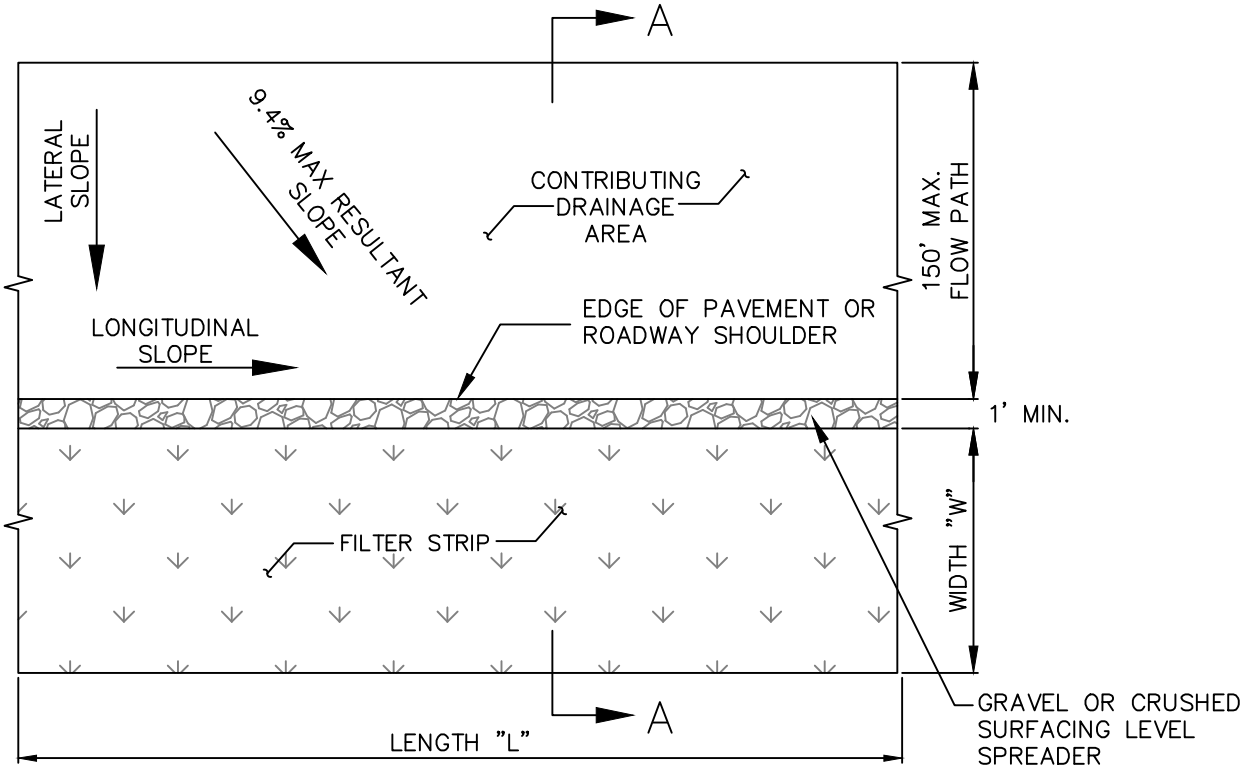
4. FENCE SHALL BE STRETCHED FROM CORNER POST TO CORNER POST. WRAPPING OF FENCE AROUND CORNER POST IS NOT PERMITTED.

5. CONTRACTOR TO BE RESPONSIBLE FOR SUPPLYING LOCK. SPECIFICATIONS ON LOCK TO BE PROVIDED BY CITY INSPECTOR.

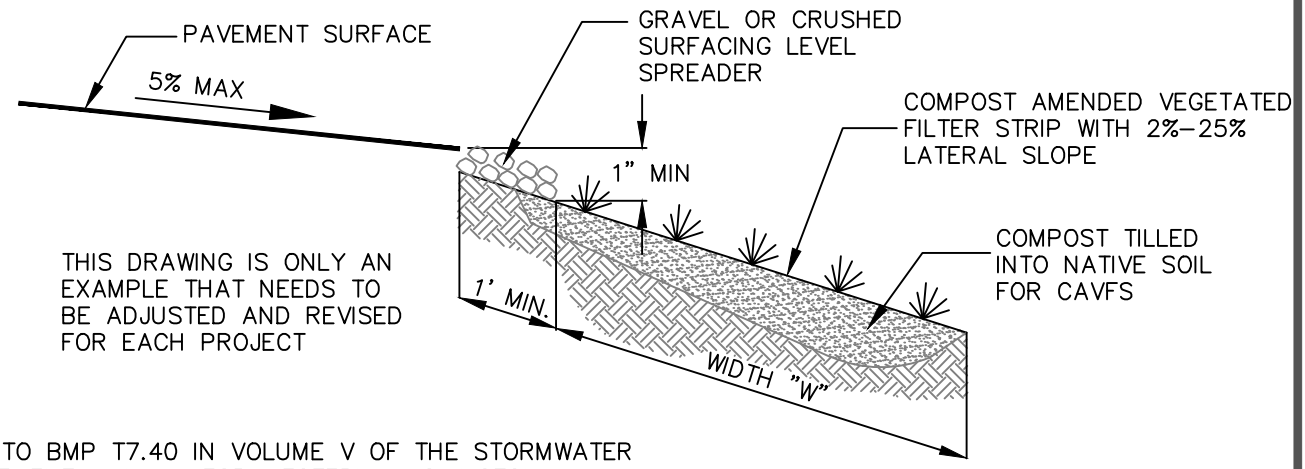
REV. 8/01/24 CPG

CHAIN LINK FENCE & GATE

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-8.0



PLAN



THIS DRAWING IS ONLY AN EXAMPLE THAT NEEDS TO BE ADJUSTED AND REVISED FOR EACH PROJECT

NOTE:

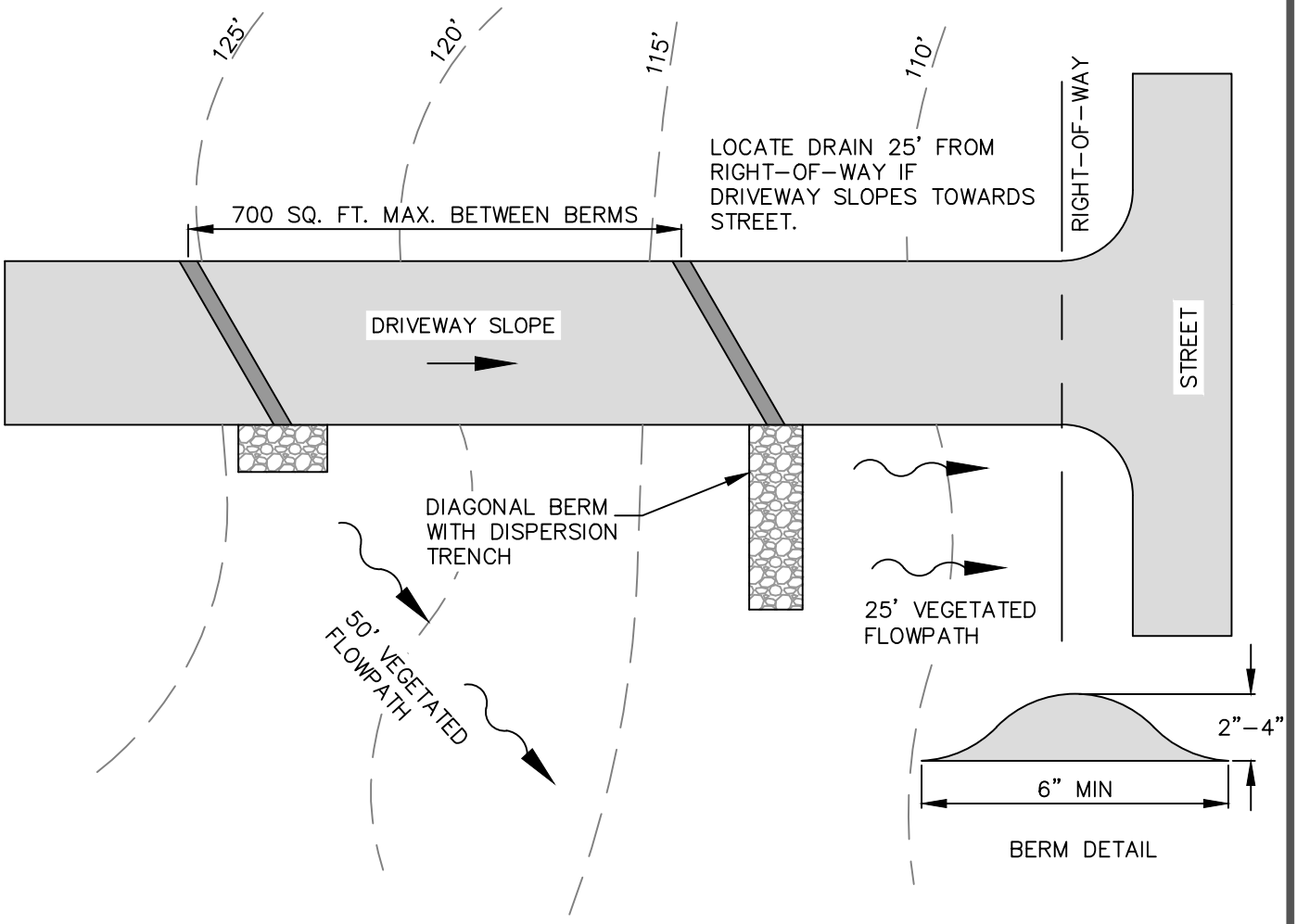
REFER TO BMP T7.40 IN VOLUME V OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON.

SECTION A–A

REV. 8/01/24 CPG

COMPOST AMENDED VEGETATED FILTER STRIP

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-10.0



STEEP DRIVEWAY WITH DIAGONAL BERMS

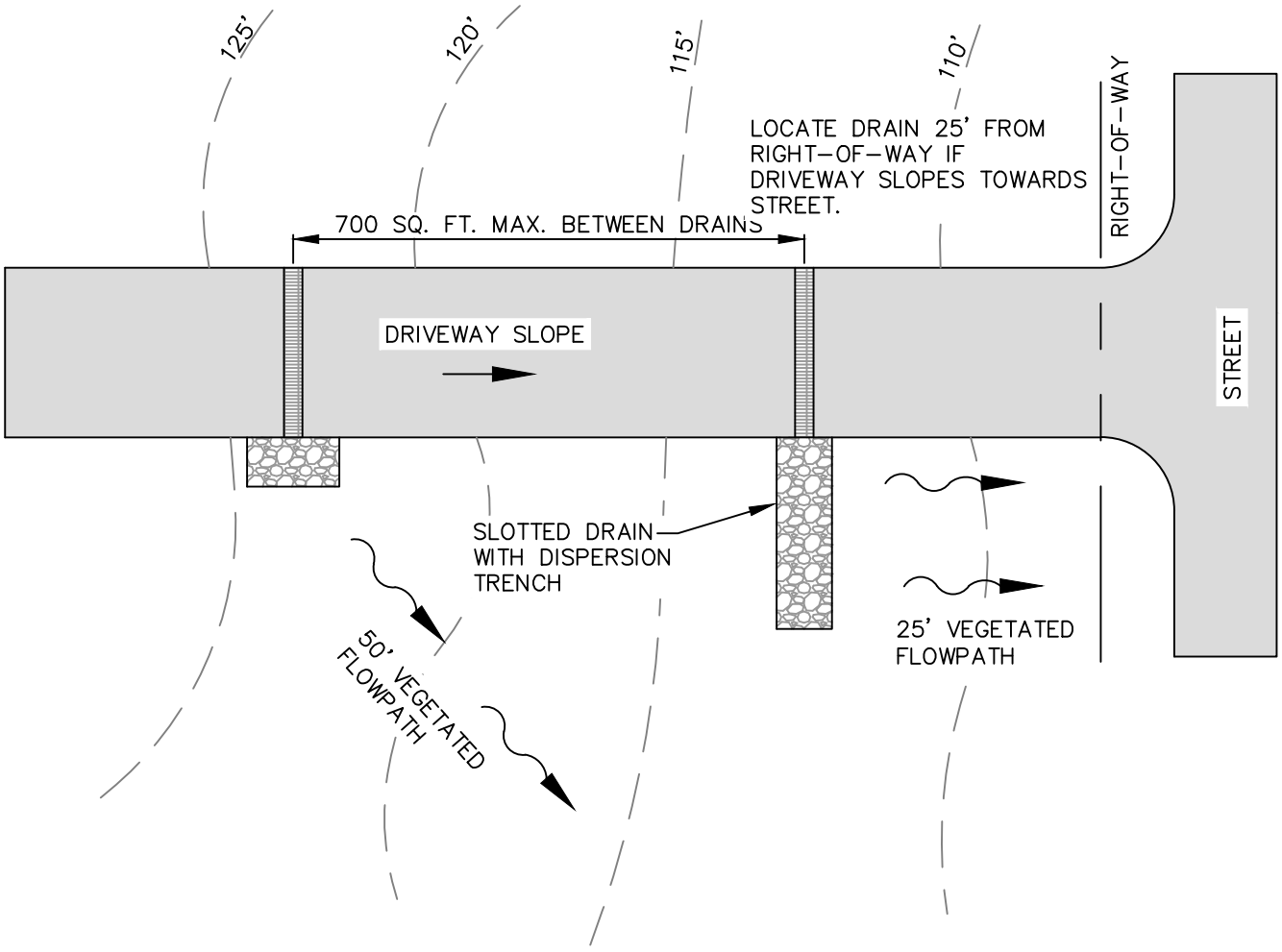
NOTE:

REFER TO BMP T5.11 IN VOLUME V OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

REV. 8/01/24 CPG

CONCENTRATED FLOW DISPERSION – DIAGONAL BERMS

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-10.1**



STEEP DRIVEWAY WITH SLOTTED DRAINS

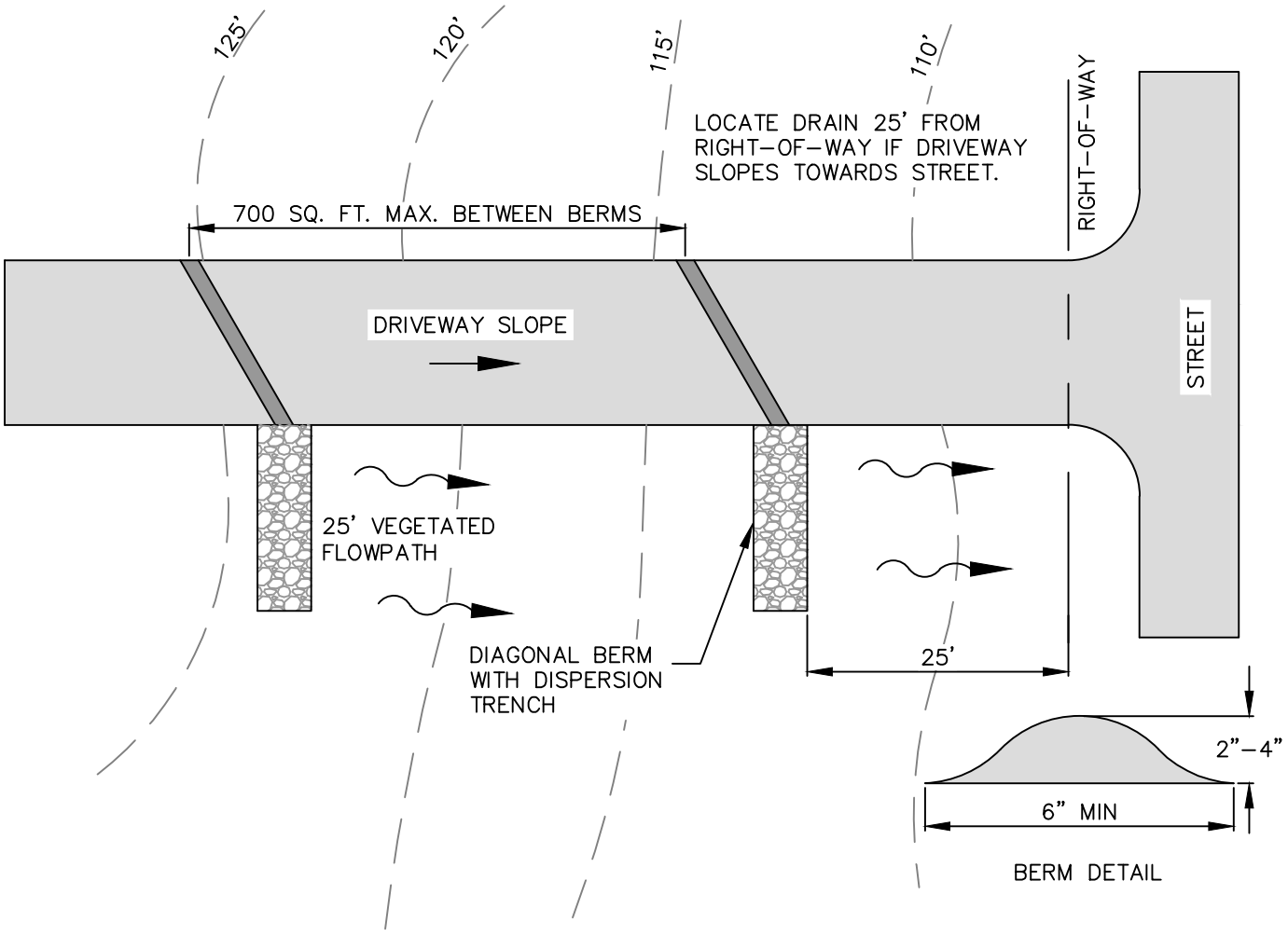
NOTE:

REFER TO BMP T5.11 IN VOLUME V OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

REV. 8/01/24 CPG

CONCENTRATED FLOW DISPERSION – SLOTTED DRAINS

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-10.2**



SHEET FLOW DRIVEWAY DISPERSION TRENCH
DRIVEWAY SLOPE VARIES AND SLOPES TOWARDS STREET

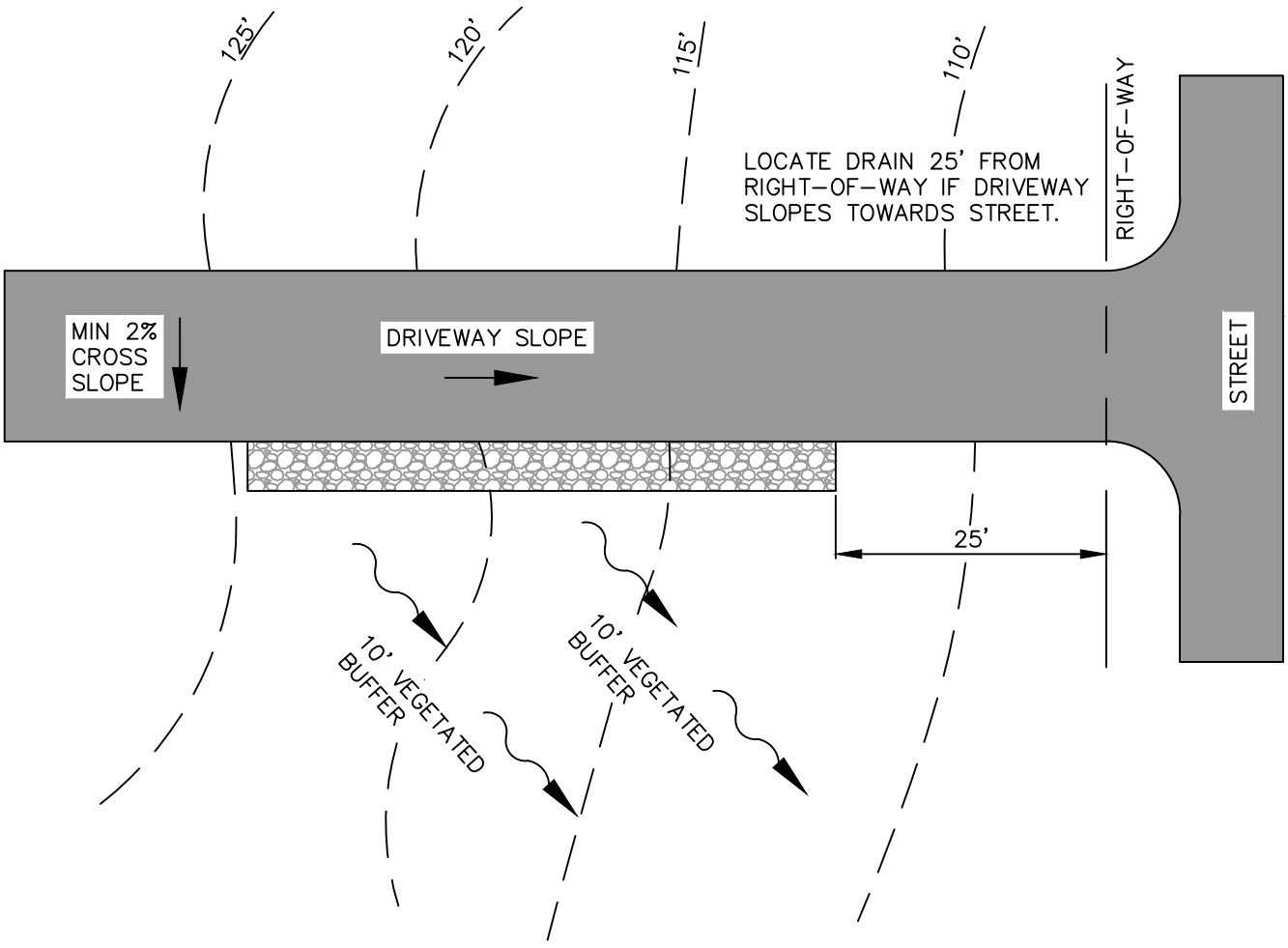
NOTE:

REFER TO BMP T5.12 IN VOLUME V OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

REV. 8/01/24 CPG

SHEET FLOW DISPERSION TRENCH

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-10.3**



SHEET FLOW DISPERSION FROM A DRIVEWAY
FLAT TO MODERATELY SLOPING DRIVEWAYS

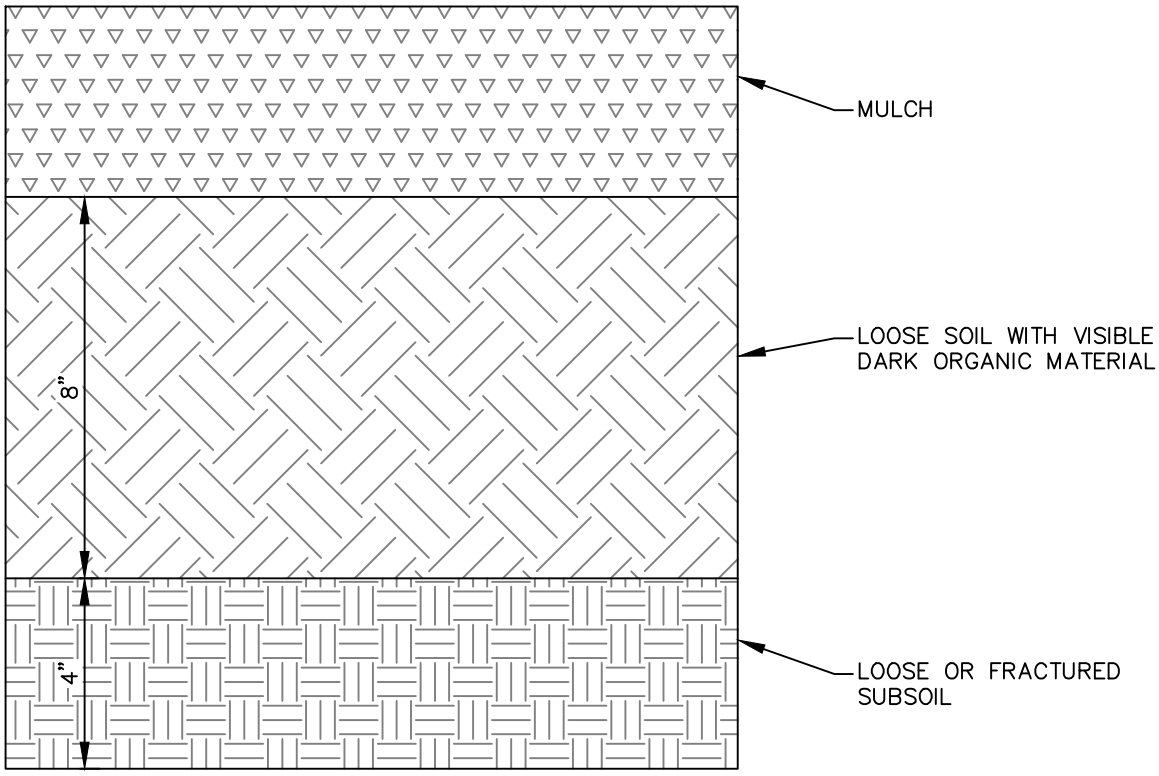
NOTE:

REFER TO BMP T5.12 IN VOLUME V OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

REV. 8/01/24 CPG

SHEET FLOW DISPERSION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-10.4



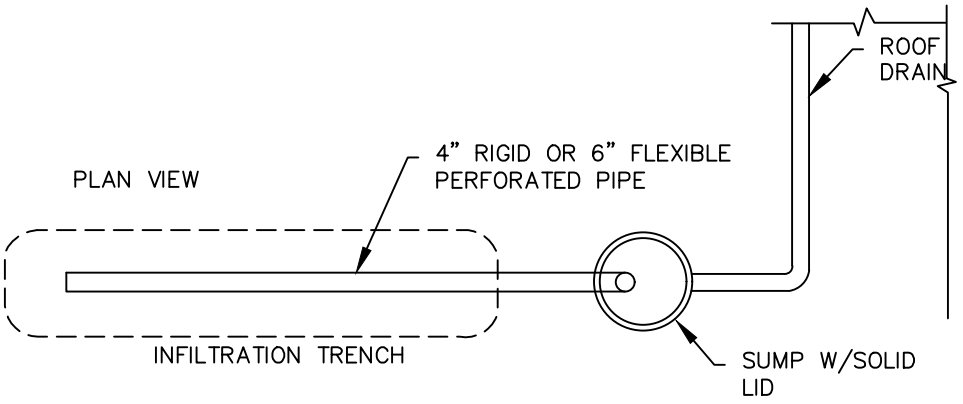
NOTE:

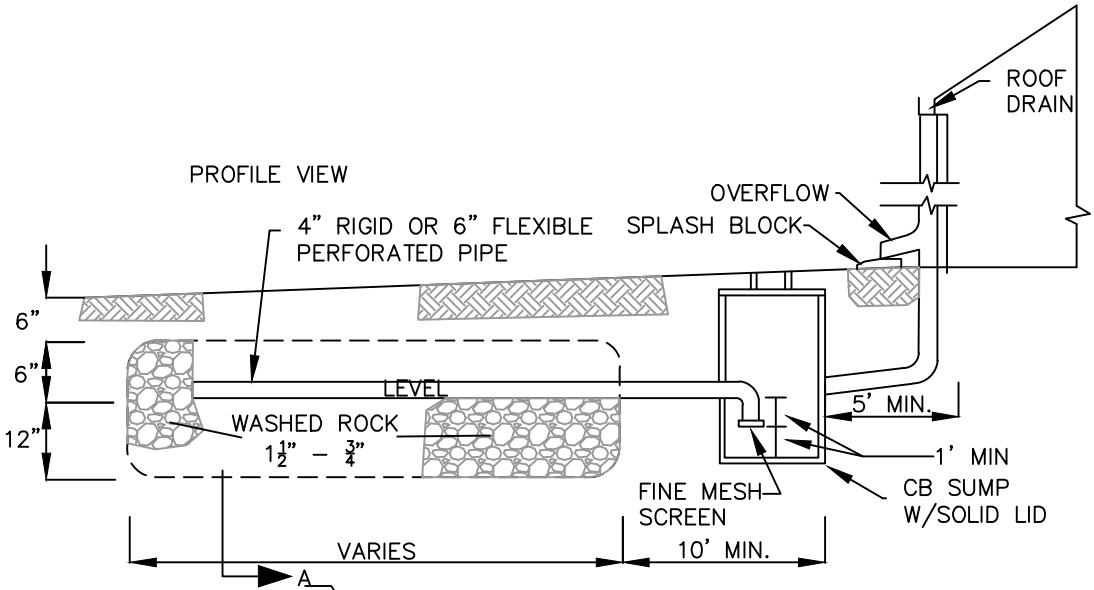
REFER TO BMP T5.13 IN VOLUME V OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

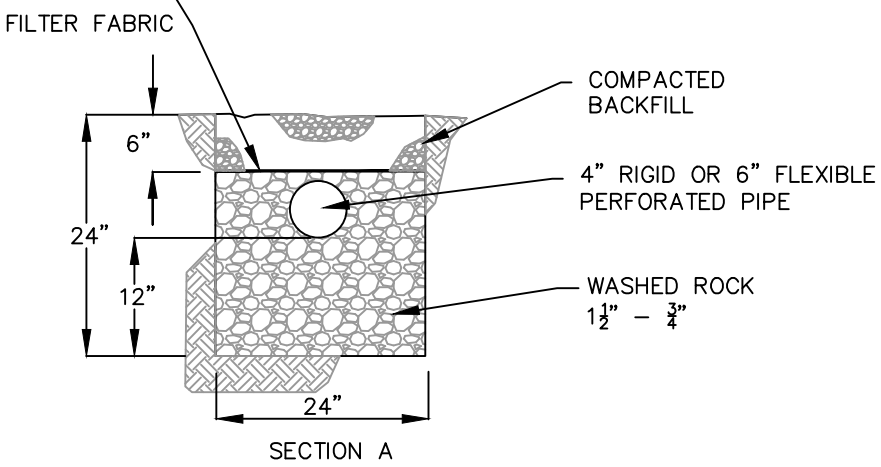
REV. 8/01/24 CPG

PLANTING BED CROSS-SECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-11.0







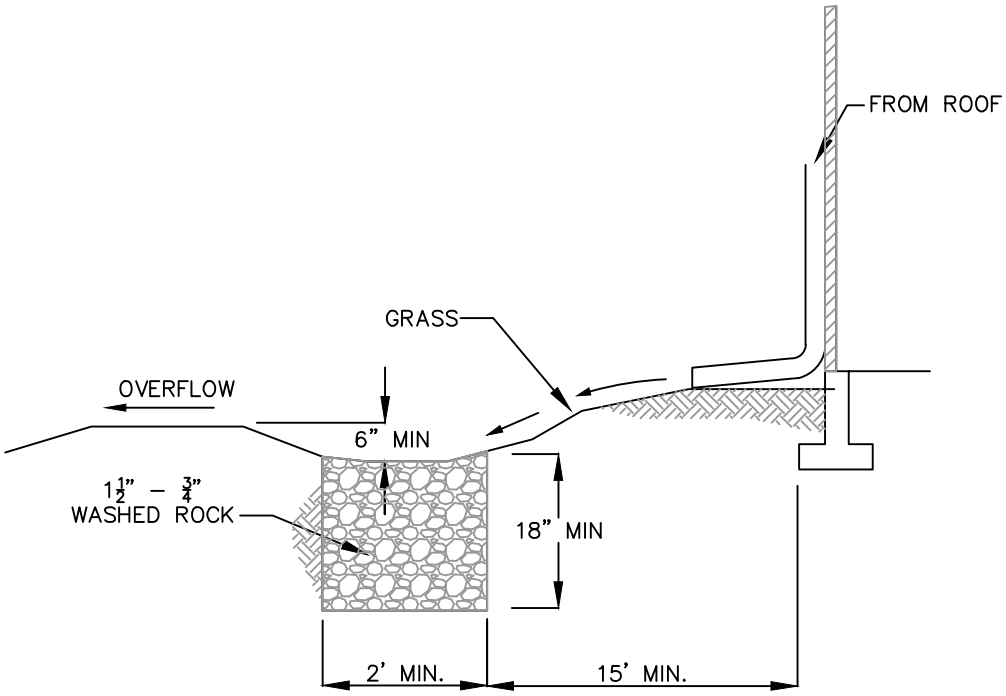
NOTE:

REFER TO BMP T5.10A IN VOLUME III OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

REV. 8/01/24 CPG

TYPICAL DOWNSPOUT INFILTRATION TRENCH

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-12.0



CROSS SECTION

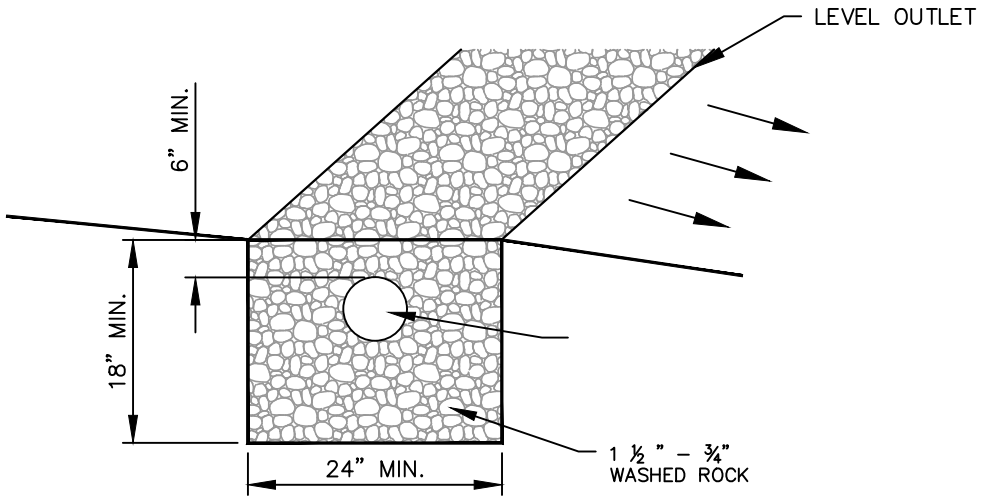
NOTES:

1. SAME LENGTH DIMENSIONS AND SITE LIMITATION AS TYPICAL SYSTEM.
2. REFER TO BMP T5.10A IN VOLUME III OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

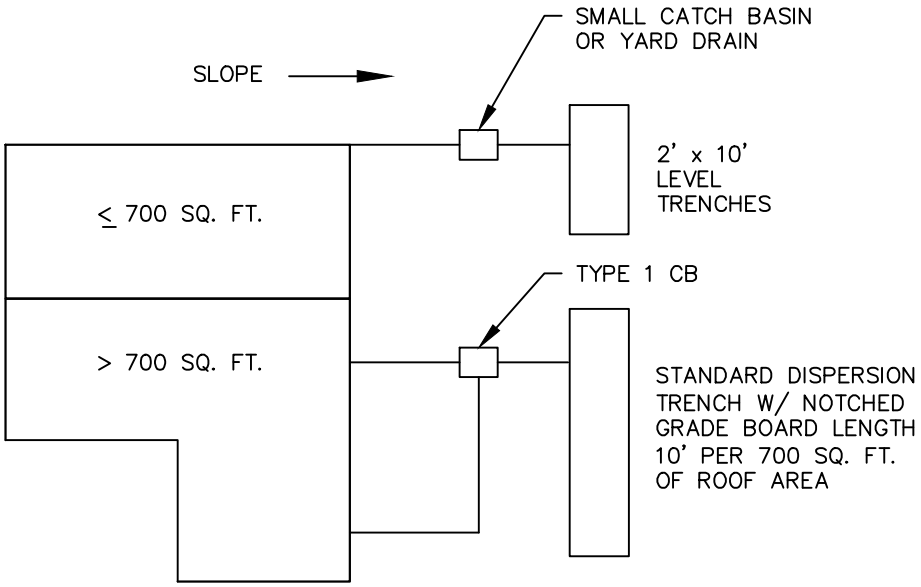
REV. 8/01/24 CPG

ALTERNATIVE DOWNSPOUT INFILTRATION TRENCH SYSTEM FOR COURSE SAND AND GRAVEL

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-12.1**



TRENCH CROSS–SECTION



PLAN VIEW OF ROOF

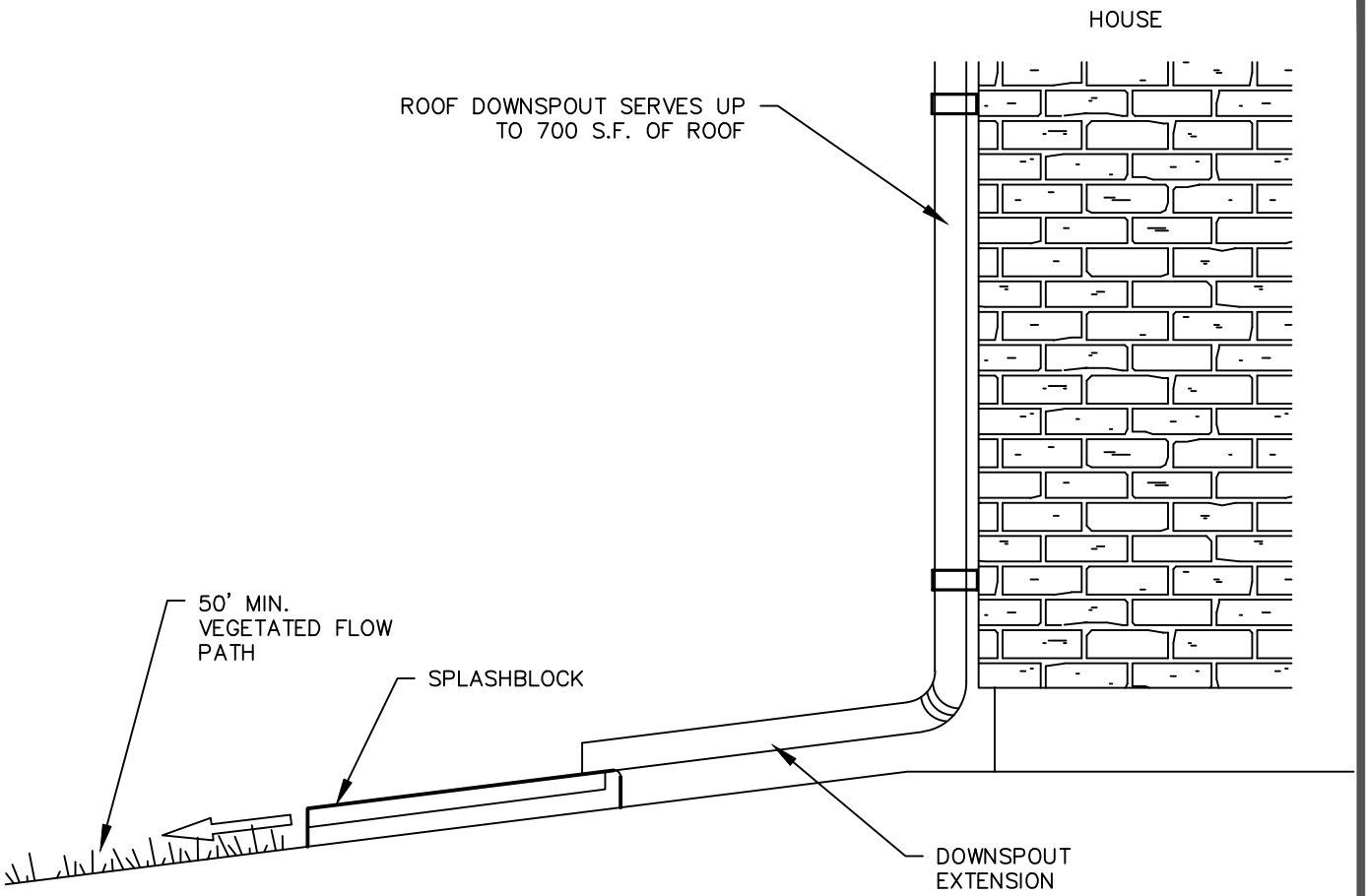
NOTE:

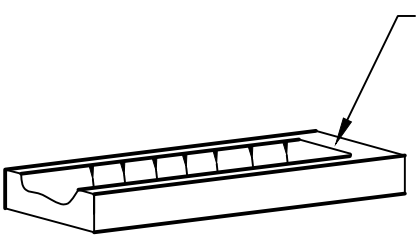
REFER TO BMP T5.10B IN VOLUME III OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

REV. 8/01/24 CPG

TYPICAL DOWNSPOUT DISPERSION TRENCH

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-12.2**





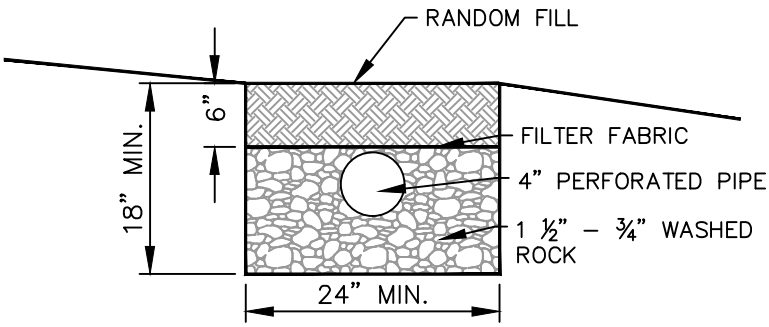
NOTE:

REFER TO BMP T5.10B IN VOLUME III OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

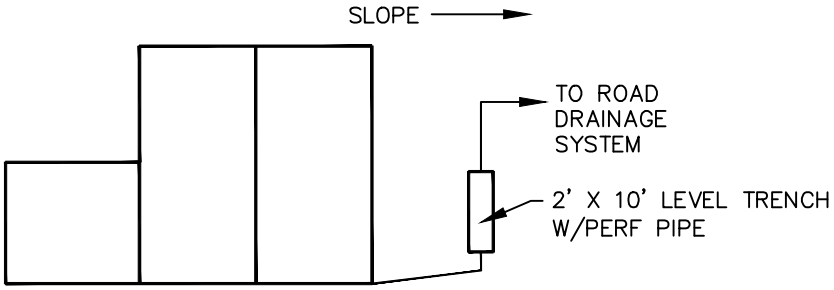
REV. 8/01/24 CPG

DOWNSPOUT SPLASHBLOCK DISPERSION

STANDARD DETAILS	**CITY OF RIDGEFIELD**	SHEET **ST-12.3**



TRENCH CROSS SECTION



PLAN VIEW OF ROOF

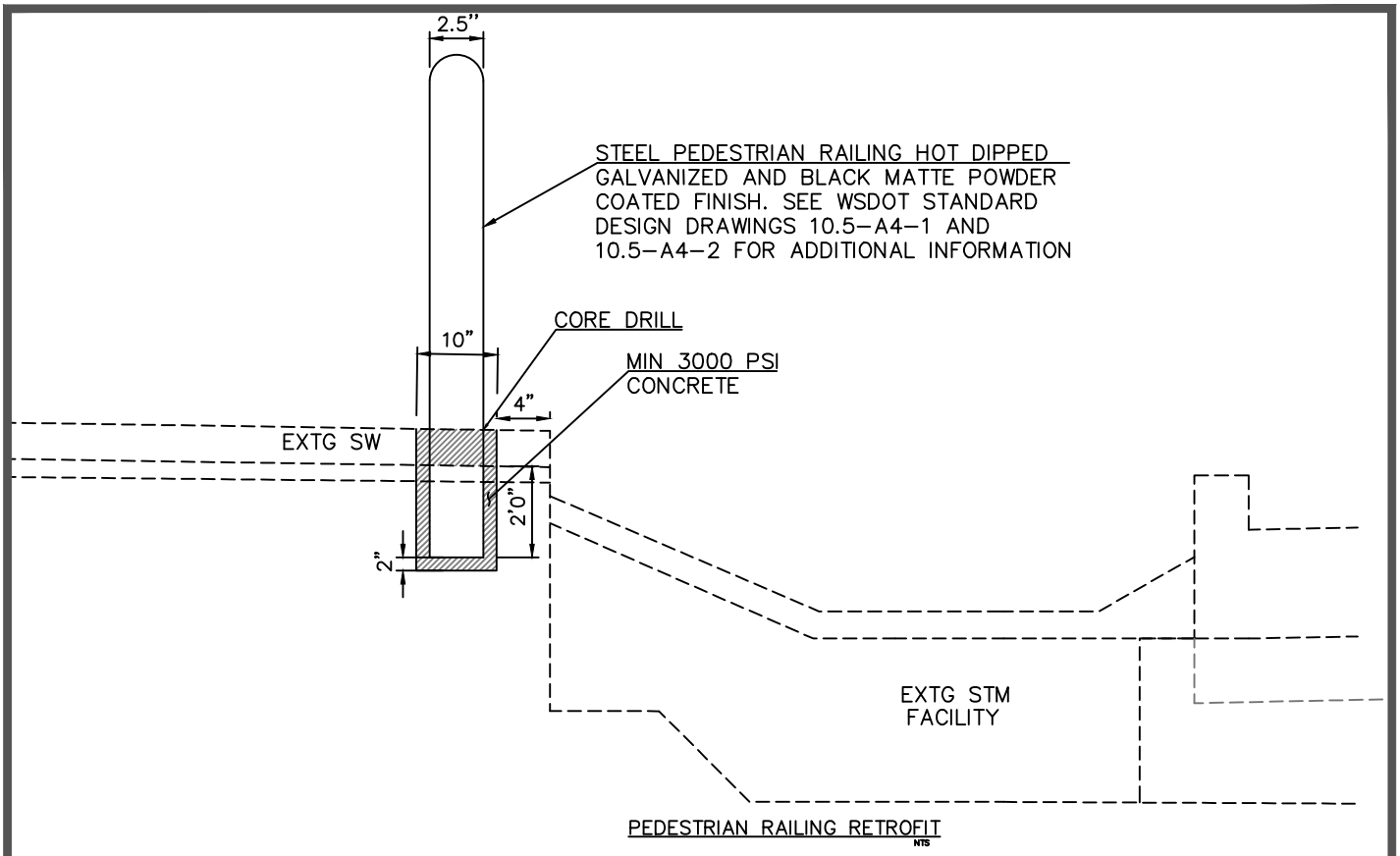
NOTE:

REFER TO BMP T5.10C IN VOLUME III OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION.

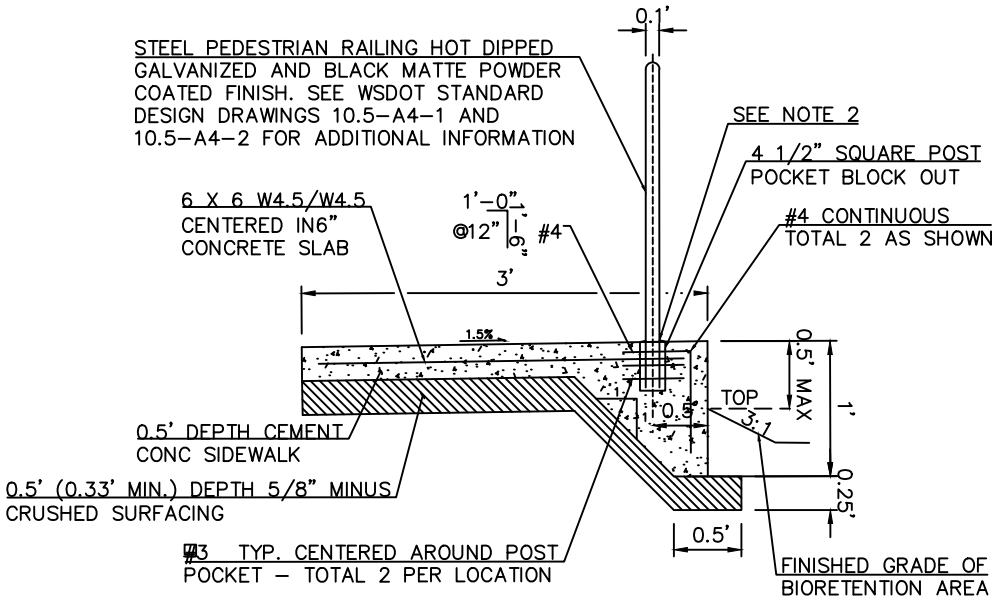
REV. 8/01/24 CPG

PERFORATED STUB–OUT CONNECTION

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST-12.4



PEDESTRIAN RAILING RETROFIT
NTS



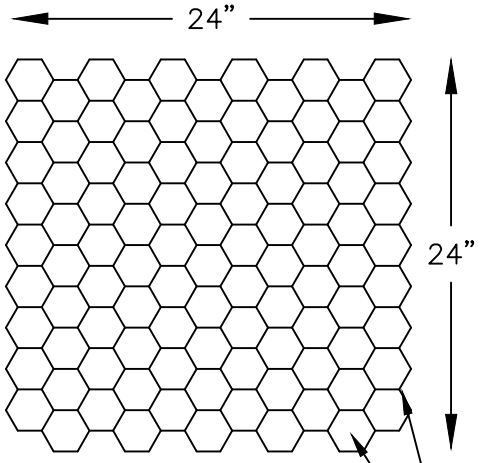
NOTES:
1. USE 2000 PSI MINIMUM STRENGTH LOW SHRINK GROUT TO FILL POST POCKETS. UNUSED POCKETS SHALL ALSO BE FILLED WITH THE SAME GROUT MATERIAL.
2. PROVIDE 1/4" CROWN ABOVE TOP OF SIDEWALK WITH GROUT SURROUNDING RAILING POST AS SHOWN TO PREVENT PONDING.

THICKENED SIDEWALK AT BIORETENTION
NTS

REV. 8/01/24 CPG

BIORETENTION RAILING DETAIL

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST - 13.0

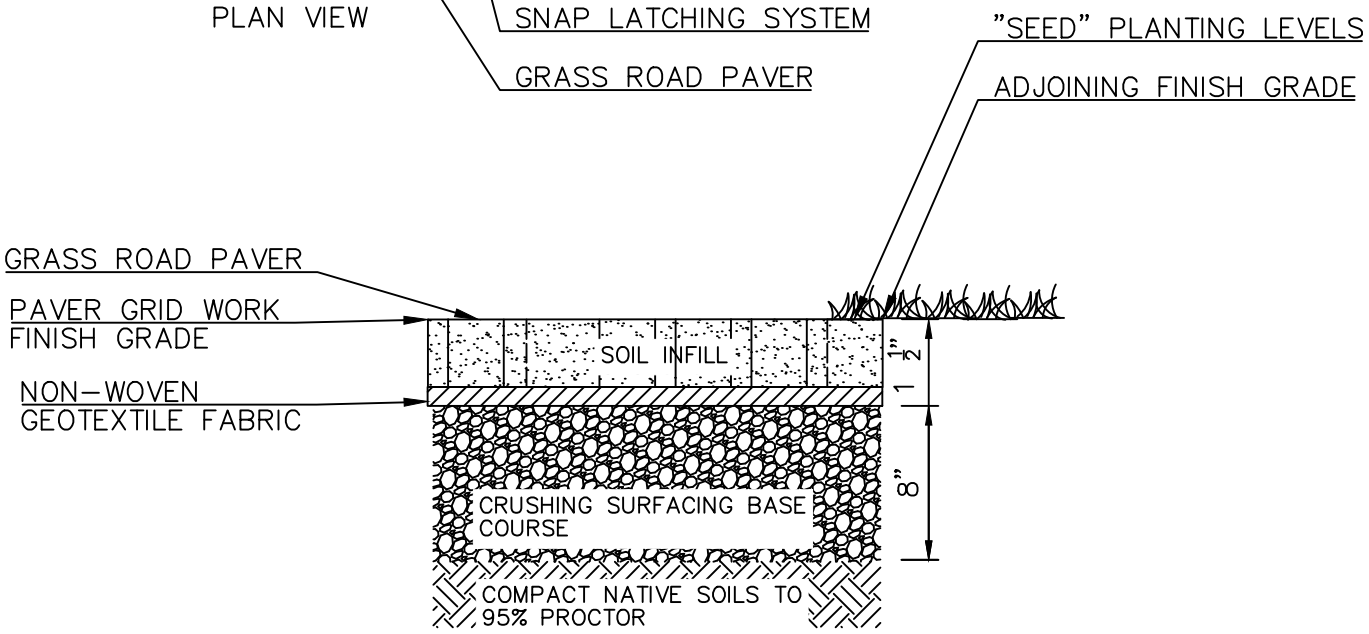


PLAN VIEW

PRODUCT DESCRIPTION
PANEL SIZE: 24" X 24" X 1 ½"
CELLS PER PANEL: (120) 2–1/2"
HEXAGONAL CELLS

NESTED HONEYCOMB CELL: 81,744 PSF
LAYOUT COMPRESSIVE: 568 PSI
STRENGTH: EXCEEDS H20 LOADING

SOIL SEPARATOR MAY BE REQUIRED ABOVE STONE BASE MATERIAL IF USING AGGREGATE WITH A HIGH VOID RATIO.



NOT TO SCALE

REV. 8/01/24 CPG

GRASS PAVER MAINTENANCE PULLOFF

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET ST - 14.0

Modified by Chuck Green, PE
Public Works Director
10/6/23

City of Ridgefield
Street Tree Selection

Minimum 4' Planting Strip Width

Call (360) 887-8251 for a site inspection before planting a street tree.
Updated 2015

	Common Name	Scientific Name	Cultivar	Height (in FT)	Width (in FT)	Shape	Features/Considerations	Drought Tolerant	Overhead Utilities OK	Soil Type
	Trident Maple	*Acer buergeranum*		25	20	round	red in fall	✔	✔	all
	Hedge Maple	*Acer campestre*	Queen Elizabeth	30	30	rounded	low maintenance; yellow in fall	✔	✔	all
	Rocky Mountain Glow Maple	*Acer grandidentatum*	Schmidt	25	15	oval	orange/red in fall	✔	✔	well drained
	Paperbark Maple	*Acer griseum*		25	20	upright/round	peeling brown bark; red in fall	✔	✔	all
	Henry Maple	*Acer henryi*		25	25	Broadly oval/round	Trifoilate, green with a bronze tint in spring; red in fall		✔	all
	Pacific Sunset Maple	*Acer tuncatum x platanoides*	Warrenred	30	25	upright spreading	vigorous grower; yellow-orange to bright red in fall	✔		all
	Spring Flurry Serviceberry	*Amelanchier laevis*	JFS-Arb	35	20	Upright oval	white flowers, edible fruit; strong central leader	✔		all
	Autumn Brilliance Serviceberry	*Amelanchier x grandiflora*	Autumn Brilliance	20	15	upright, spreading	white flowers, edible fruit; red in fall		✔	all
	Princess Diana Serviceberry	*Amelanchier x grandiflora*	Princess Diana	25	15	gracefully spreading	white flowers, edible fruit		✔	all
*	American Hornbeam	*Carpinus caroliniana*		25	20	oval	smooth gray trunk; yellow to orange in fall		✔	all
	Eastern Redbud	*Cercis canadensis*		25	35	horizontal	purple-pink flowers; yellow in fall		✔	all
	Glorybower	*Clerodendrum trichotomum*		20	20	rounded	fragrant flowers in summer; blue berries in fall	✔	✔	all
	June Snow Dogwood	*Cornus contoroversa*	June Snow	30	40	layered/spreading	large white flowers; red fall color, fast growing			well drained
	Eddie's White Wonder Dogwood	*Cornus*	Eddie's Wh. Wond.	25	20	upright/pyramidal	White flowers; red in fall; transplants readily		✔	all
	Heart Throb Dogwood	*Cornus kousa*	Schmred	20	20	rounded	long lasting pink flowers; deep red fall color		✔	well drained
	Celestial Dogwood	*Cornus kousa x florida*	Rutdan	20	20	upright spreading	disease resistant; white flowers		✔	all
	Stellar Pink Dogwood	*Cornus kousa x florida*	Rutgan	20	20	upright spreading	disease resistant; pink flowers		✔	all
	Venus Dogwood	*Cornus kousa x nutalli*	KN 30-8	25	20	Upright oval	very large white flowers; vigorous growth		✔	well drained
	Thornless Cockspur Hawthorn	*Crataegus crus-galli*	Inermis	25	25	rounded	no thorns; orange fall color	✔	✔	all
	Black Hawthorn	*Crataegus douglasii*		20	15	oval	native/wildlife, shade tolerant	✔	✔	all
	Crimson Cloud Hawthorn	*Crataegus laevigata*	Crimson Cloud	25	18	shrubby/round	red flowers; fruit with star-shaped area in center	✔	✔	all
	Washington Hawthorn	*Crataegus phaenopyrum*		25	20	oval/rounded	white flowers; red fruit; orange/red in fall	✔	✔	all
	Lavalle Hawthorn	*Crataegus x lavallei*		28	20	irregular/vase	white flowers; orange fruit	✔	✔	all
	Golden Desert Ash	*Fraxinus excelsior*	Aureafolia	20	20	rounded	golden twigs	✔	✔	all
	Flowering Ash	*Fraxinus ornus*		30	15	pyramidal/round	yellow in fall	✔		all
*	Goldenrain Tree	*Koelreuteria paniculata*		30	30	rounded	yellow floral clusters; summer flowering	✔	✔	all
*	Amur Maackia	*Maackia amurensis*		25	20	vase	white flower clusters	✔	✔	all
	Butterflies Magnolia	*Magnolia acuminata x denudada*	Butterflies	20	20	upright/pyramidal	showy yellow flowers		✔	well-drained
	Edith Bogue Magnolia	*Magnolia grandiflora*	Edith Bogue	30	15	tightly pyramidal	broadleaf evergreen tree; large creamy white flowers			well drained
	Galaxy Magnolia	*Magnolia liliflora x sprengeri*	Galaxy	30	15	pyramidal to oval	deciduous; strong central leader	✔		well drained
	Merrill Magnolia	*Magnolia x loebneri*	Merrill	25	25	oval/rounded	white/pink flowers at early age			all
	Golden Raindrops	*Malus spp.*	Golden Raindrops	20	15	vase	deep cut leaves; golden fruit	✔	✔	all
	Prairiefire Crabapple	*Malus spp.*	Prairiefire	20	20	upright/rounded	disease resistant; pink flowers; red foliage	✔	✔	all
	Robinson Crabapple	*Malus spp.*	Robinson	25	25	upright rounded	fast growing; pink flowers; red fruit	✔	✔	all
	Sugar Tyme Crabapple	*Malus spp.*	Sutyzam	18	15	oval	pink buds; white flower	✔	✔	all
	Zumi Calocarpa Crabapple	*Malus x zumi*	Calocarpa	20	25	Rounded/spreading	disease resistant; white flowers; red fruit	✔	✔	all
*	Tschonoskii Crabapple	*Malus tschonoskii*		28	14	narrowly oval	white flowers; greenish fruit	✔	✔	all
	American Hophornbeam	*Ostrya virginiana*		35	25	upright oval	hop-like fruit; yellow in fall	✔		all
	Persian Parrotia	*Parrotia persica*		30	20	rounded	early flowers; mix of fall color			well drained
	Thundercloud Plum	*Prunus cerasifera*	Thundercloud	20	20	upright/rounded	light pink flowers; purple leaves	✔	✔	all
	Cascade Snow Cherry	*Prunus*	Berry	25	20	upright spreading	disease resistant; white flowers		✔	all
	Snow Goose Cherry	*Prunus*	Snow Goose	20	20	upright/wide	disease resistant; white flowers; widens w/ age		✔	all
	Capital Pear	*Pyrus calleryana*	Capital	35	12	columnar	white flowers; red in fall	✔		all
	Redspire Pear	*Pyrus calleryana*	Redspire	35	25	pyramidal	white flowers; red in fall	✔		all
	Cascara	*Rhamnus purshiana*		25	28	oval	native/wildlife; shade tolerant; yellow-purple in fall		✔	all
	Japanese Stewartia	*Stewartia pseudocamellia*		30	20	pyramidal/oval	white flowers; peeling bark; avoid high heat/drought	✔	✔	moist acidic
*	Japanese Snowbell	*Styrax japonicus*		25	25	rounded	bell shaped flowers; yellow in fall	✔	✔	well drained
*	Ivory Silk Japanese Tree Lilac	*Syringa reticulata*	Ivory Silk	20	15	upright/rounded	creamy panicles; heavy flowering			all
	Emerald Sunshine Elm	*Ulmus propinqua*	JFS-Bieberich	35	25	vase	fast growing; urban tolerant; yellow in fall	✔		all
*	City Sprite Zelkova	*Zelkova serrata*	JFS-KW1	24	18	compact oval/vase	bright green foliage; low maintenance	✔	✔	all

* Also approved for planting strips 3.0-3.9' in width (based on City of Portland approved tree list)

City of Ridgefield
Street Tree Selection

Minimum 6' Planting Strip Width **Call (360) 887-8251 for a site inspection before planting a street tree.**

***Refer to 4' tree list for additional trees for use under power lines** **Updated 2015**

Common Name	Scientific Name	Cultivar	Height (in FT)	Width (in FT)	Shape	Features/Considerations	Drought Tolerant	Overhead Utilities OK*	Soil Type
Armstrong Maple	*Acer rubrum*	Armstrong	45	15	narrow	fast growing; yellow-orange in fall			all
Bowhall Maple	*Acer rubrum*	Bowhall	40	15	narrow	great fall color	✔		all
Redpointe Maple	*Acer rubrum*	Frank Jr.	45	30	broadly pyramidal	strong central leader; urban tolerant; bright red in fall	✔		all
October Glory Maple	*Acer rubrum*	October Glory	40	35	broadly oval	outstanding fall color; bright red	✔		all
Green Mountain Maple	*Acer saccharum*	Green Mountain	45	35	broadly oval	heat tolerant; reddish-orange fall color	✔		all
Norweigian Sunset Maple	*Acer truncatum x platanoides*	Keithsform	35	25	upright/oval	uniform canopy; orange/red in fall	✔		well drained
Red Horse Chestnut	*Aesculus x carnea*	Briotti	30	35	rounded	long rosy cluster; small variety; spiky nuts	✔		all
European Hornbeam	*Carpinus betulus*	Fastigiata	35	25	upright/oval	catkins turn brown in November; yellow in fall	✔		all
Japanese Hornbeam	*Carpinus japonicus*		30	25	rounded vase	white/yellow flowers; red in fall	✔	✔	all
Hackberry	*Celtis occidentalis*		45	35	broadly arching	very urban tolerant; rarely lifts sidewalks	✔		all
Katsura Tree	*Cercidiphyllum japonicum*		40	40	pyramidal/rounded	heart shaped leaves; red-orange in fall			all
Yellowwood	*Cladrastis kentukea*		30	40	round	fragrant summer flowers; yellow in fall	✔		all
Autumn Applause Ash	*Fraxinus americana*	Autumn Applause	40	25	oval	maroon fall color; colors early			all
Autumn Purple Ash	*Fraxinus americana*	Junginger	45	40	rounded	fall color varies from yellow orange to deep purple			all
Cimmaron Ash	*Fraxinus pennsylvanica*	Cimmzam	45	30	upright oval	excellent summer foilage; rusty red in fall	✔		all
Marshall Ash	*Fraxinus pennsylvanica*	Marshall	50	40	broadly oval	tough/adaptable; yellow in fall	✔		all
Summit Ash	*Fraxinus pennsylvanica*	Summit	45	25	narrowly oval	yellow in fall	✔		all
Autumn Gold Ginkgo	*Ginkgo biloba*	Autumn Gold	35	30	columnar	seedless male; yellow in fall	✔		all
Princeton Sentry Ginkgo	*Ginkgo biloba*	Princeton Sentry	40	15	columnar	seedless male; yellow in fall	✔		all
Skyline Honeylocust	*Gleditsia triacanthos*	Skycole	45	35	broadly pyramidal	tolerant of pollution; golden in fall	✔		all
Shademaster Honeylocust	*Gleditsia triacanthos*	Shademaster	45	35	vase	upright branching; yellow in fall	✔		all
Mountain Silverbells	*Halesia monticola*		40	25	conical/rounded	white bell shaped flowers; yellow fall color			all
Yulan Magnolia	*Magnolia denudata*		35	30	pyramidal	creamy flowers; use on non-windy site			all
Fruitless Mulberry	*Morus alba*	Kingens	35	40	rounded	fruitless	✔		all
Sour Gum / Black Tupelo	*Nyssa sylvatica*		35	20	pyramidal	red yellow in fall			all
Red Range Tupelo	*Nyssa sylvatica*	Haymanred	35	20	broadly pyramidal	glossy foliage resistant to leaf spot; bright red in fall	✔		all
European Hophornbeam	*Ostrya carpinifolia*		40	25	rounded	nutlets in hop-like bunches	✔		all
Macho Cork Tree	*Phellodendron amurense*	Macho	40	30	vase shaped	seedless; yellow in fall			all
Kwanzan Flowering Cherry	*Prunus serrulata*	Kwanzan	30	20	vase/rounded	pink, double flowers; hardiest *P. serrulata* ; orange in fall			all
Aristocrat Pear	*Pyrus calleryana*	Aristocrat	40	28	pyramidal	open formal appearance; red fall			all
Sawtooth Oak	*Quercus acutissima*		40	40	rounded	clean foliage; yellow/brown in fall			well drained
Forest Green Oak	*Quercus frainetto*	Schmidt	50	30	oval	strong central leader	✔		all
Crimean Linden	*Tilia x euchlora*		40	35	broadly pyramidal	glossy foliage; yellow in fall	✔		all
Redmond Linden	*Tilia americana x euchlora*	Redmond	35	25	densely pyramidal	rapid grower; develops caliper at a young age			all
Legend Linden	*Tilia americana*	DTR 123	40	30	broadly pyramidal	strong central leader; glossy leaves	✔		all
Greenspire Linden	*Tilia cordata*	Greenspire	40	30	pyramidal	strong/uniform; yellow in fall	✔		all
Sterling Silver Linden	*Tilia tomentosa*	Sterling	45	35	pyramidal	dark green/silver underside; fewer aphids	✔		all
Frontier Elm	*Ulmus*	Frontier	40	30	arching vase	disease resistant; fast grower; reddish-purple in fall	✔		all
Prospector Elm	*Ulmus wilsoniana*	Prospector	40	30	vase shaped	disease resistant; urban tolerant; yellow in fall	✔		all
Wireless Zelkova	*Zelkova serrata*	Schmidtlow	25	35	spreading vase	ideal for use under power lines	✔	✔	all
Village Green Zelkova	*Zelkova serrata*	Village Green	40	38	vase shaped	clean appearance; red in fall			all

City of Ridgefield
Street Tree Selection

Minimum 8' Planting Strip Width **Call (360) 887-8251 for a site inspection before planting a street tree.**

***Refer to 4' tree list for additional trees for use under power lines** **Updated 2015**

Common Name	Scientific Name	Cultivar	Height (in FT)	Width (in FT)	Shape	Features/Considerations	Drought Tolerant	Overhead Utilities OK*	Soil Type
Autumn Blaze Maple	*Acer x freemani*	Jeffersred	50	40	broadly oval	fast growing; brilliant long-lasting fall color	✔		all
State Street Maple	*Acer miyabei*	Morton	50	35	rounded	red in fall	✔		all
Crimson King Maple	*Acer platanoides*	Crimson King	40	35	oval/rounded	purple leaves; reddish bronze in fall			all
Emerald Queen Maple	*Acer platanoides*	Emerald Queen	50	40	oval/upright	tolerant of pollution			all
Summershade Maple	*Acer platanoides*	Summershade	42	40	broad/rounded	fast growing; yellow in fall			all
Spaethii Maple	*Acer pseudoplatanus*	Atropurpureum	40	30	oval/upright	green/purple leaves			all
Red Sunset Maple	*Acer rubrum*	Franksred	45	35	upright/oval	vigorous/symmetrical; orange/red in fall	✔		all
Schlesinger Maple	*Acer rubrum*	Schlesingeri	45	35	vase shaped	orange/red in fall	✔		all
Bonfire Maple	*Acer saccharum*	Bonfire	50	40	broadly oval	fast growing; orange-red in fall	✔		all
Commemoration Maple	*Acer saccharum*	Commemoration	50	35	oval/rounded	fast growing; develops good caliper as a young tree			all
Legacy Maple	*Acer saccharum*	Legacy	50	35	oval	glossy leaves; orange-red in fall	✔		all
Heritage River Birch	*Betula nigra*	Cully	40	30	broadly pyramidal	pinkish tan exfoliating bark; yellow in fall			all
Magnifica Hackberry	*Celtis*	Magnifica	50	40	broadly oval/vase	fast grower; good insect resistance; yellow in fall	✔		all
Hardy Rubber Tree	*Eucommia ulmoides*		55	45	conical/globose	yellowish in fall	✔		all
American Beech	*Fagus americana*		50	40	broadly oval	slow growing; striking grey bark	✔		all
European Beech	*Fagus sylvatica*		50	35	slightly rounded	leaves persistent through winter; striking bark			well drained
Fernleaf Beech	*Fagus sylvatica*	Asplenifolia	50	40	Broadly oval	dark green cutleaf foliage; golden brown in fall			well drained
Rivers Purple Beech	*Fagus sylvatica*	Riversii	50	40	broadly oval	deep purple foliage; striking grey bark			well drained
Oregon Ash	*Fraxinus latifolia*		50	30	upright oval	native tree; drought and flood tolerant	✔		all
Kentucky Coffeetree	*Gymnocladus dioicius*		65	50	ovate	bluish green leaflets; yellow in fall	✔		all
Rotundiloba Sweetgum	*Liquidambar styraciflua*	Rotundiloba	45	25	pyramidal	fruitless; unique rounded lobes; orange to purple in fall	✔		all
Tulip Tree	*Liriodendron tulipifera*		60	30	oval	yellow flowers; yellow in fall			all
Dawn Redwood	*Metasequoia glyptostoboides*		60	25	conical	fast growing; deciduous conifer; urban tolerant	✔		all
Bloodgood London Planetree	*Platanus x acerifolia*	Bloodgood	50	40	broadly pyramidal	exfoliating bark; somewhat disease resistant	✔		all
Swamp White Oak	*Quercus bicolor*		45	45	rounded	adapted to wet soils	✔		well drained
Scarlet Oak	*Quercus coccinea*		50	40	upright/oval	red in fall	✔		all
Oregon White Oak	*Quercus garryana*		65	50	oval	native; slow grower; yellow in fall	✔		all
Pin Oak	*Quercus palustris*		55	40	pyramidal	strong leader; retains leaves in winter; orange/red in fall	✔		well drained
Willow Oak	*Quercus phellos*		60	40	rounded/oval	very urban tolerant; transplants easily	✔		all
Shingle Oak	*Quercus imbricaria*		50	40	broadly oval	transplants readily; beautiful summer foliage	✔		well drained
Red Oak	*Quercus rubra*		50	45	rounded	fast growing/large; red in fall			well drained
Shumard Oak / Texas Red Oak	*Quercus shumardii*		50	40	upright/oval	red in fall	✔		well drained
Bald Cypress	*Taxodium distichum*		55	30	pyramidal/oval	deciduous conifer; wet/dry sites; urban tolerant	✔		all
Accolade Elm	*Ulmus*	Morton	70	60	arching vase	disease resistant; fast grower; graceful arching habit	✔		all
Homestead Elm	*Ulmus*	Homestead	50	35	arching vase	tolerant to urban conditions; fast grower; yellow in fall			all
Pioneer Elm	*Ulmus*	Pioneer	50	50	rounded	disease resistant; vigorous grower	✔		all
Triumph Elm	*Ulmus*	Morton Glossy	55	45	upright oval/vase	disease resistant; glossy green foliage	✔		all
Valley Forge Elm	*Ulmus americana*	Valley Forge	70	70	broad vase	disease resistant; traditional American Elm form	✔		all
Green Vase Zelkova	*Zelkova serrata*	Green Vase	50	40	vase shaped	clean appearance; red in fall	✔		all