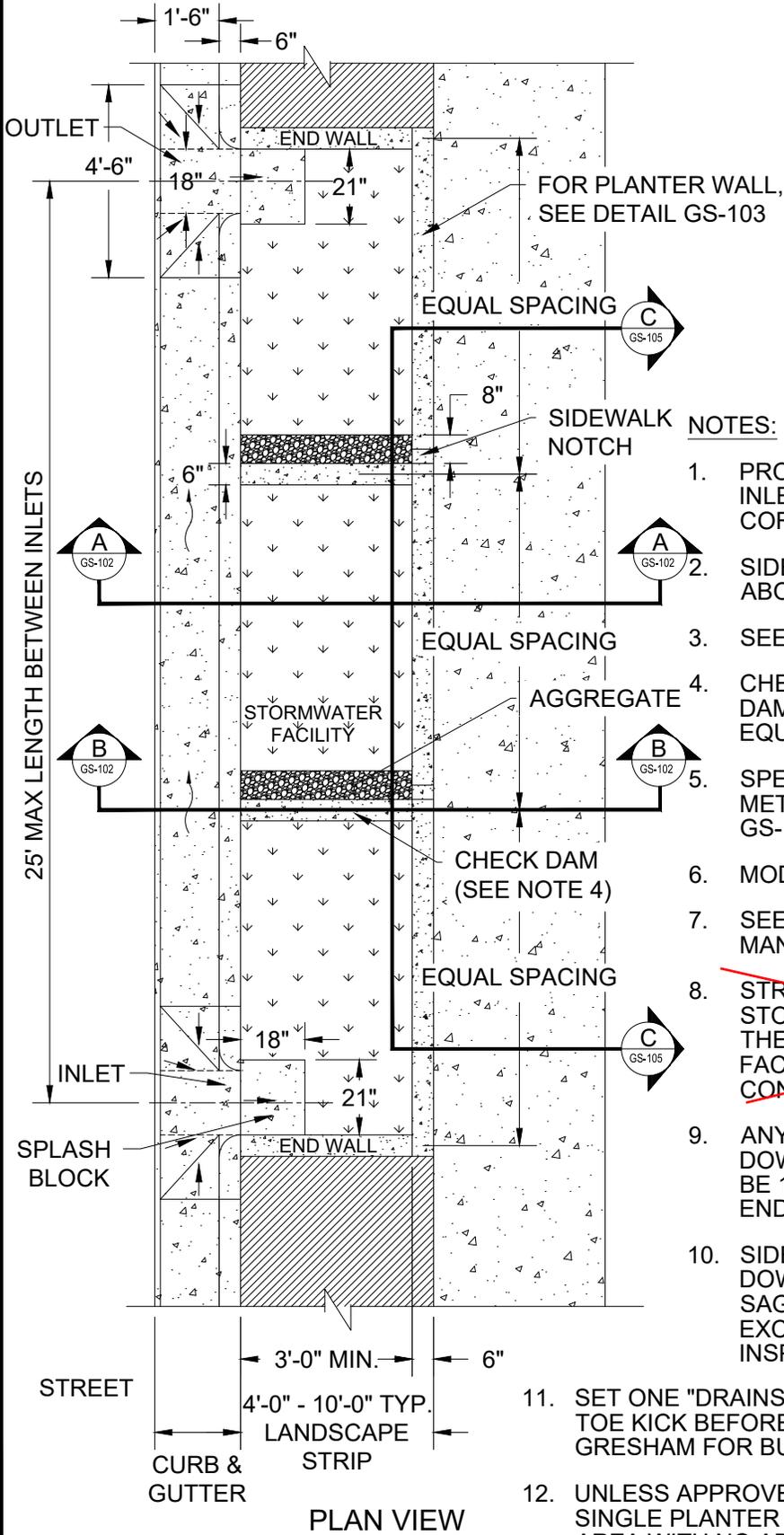
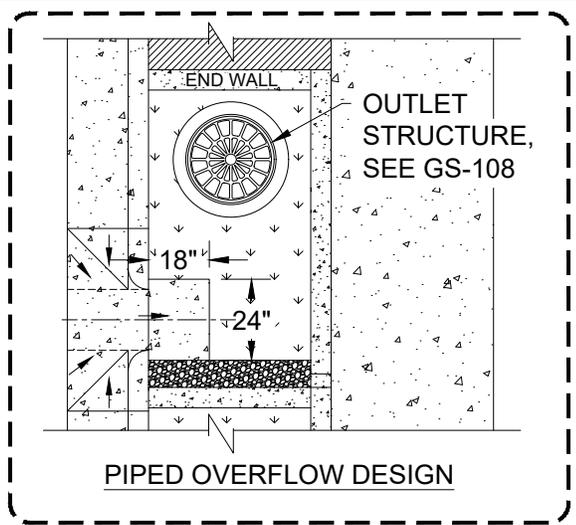


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PLAN VIEW



PIPED OVERFLOW DESIGN

NOTES:

1. PROVIDE STATIONS AND ELEVATIONS AT EVERY INLET, OUTLET, CHECK DAM, PLANTER WALL CORNER, AND SIDEWALK NOTCH.
2. SIDEWALK NOTCH ELEVATION MUST BE SET ABOVE INLET AND OUTLET ELEVATIONS.
3. SEE DETAIL GS-104 FOR INLET DETAILS.
4. CHECK DAMS REQUIRED PER GS-105. CHECK DAMS SHALL BE EQUALLY SPACED TO CREATE EQUALLY SIZED CELLS.
5. SPECIAL REQUIREMENTS FOR WATER LINES, METERS, AND FIRE HYDRANTS; SEE DETAIL GS-109.
6. MODIFIED CURB AND GUTTER: SEE DETAIL GS-103.
7. SEE GRESHAM STORMWATER MANAGEMENT MANUAL FOR PLANTING GUIDANCE.
8. ~~STREETLIGHTS SHALL BE PLACED OUTSIDE OF STORMWATER FACILITIES, UNLESS APPROVED BY THE CITY. IF STREETLIGHTS ARE PLACED IN A FACILITY, PGE APPROVED FOUNDATION WITH 1' CONCRETE SURROUND MUST BE USED.~~
9. ANY ADDITIONAL INLETS SHALL BE LOCATED ON DOWNSTREAM SIDE OF CHECK DAMS AND SHALL BE 18" X 24" IF NOT LOCATED ADJACENT TO AN END WALL.
10. SIDEWALK NOTCHES TO BE LOCATED AT DOWNSTREAM SIDE OF EACH CHECK DAM, AT ANY SAG OR LOW POINT, AND AT INTERVALS NOT EXCEEDING 15 FEET OR AS DIRECTED BY THE INSPECTOR.
11. SET ONE "DRAINS TO RIVER" BUTTON CENTERED ON SIDEWALK TOE KICK BEFORE CONCRETE HAS DRIED. CONTACT CITY OF GRESHAM FOR BUTTON SPECIFICATIONS (TYPICAL).
12. UNLESS APPROVED BY THE MANAGER, MAXIMUM LENGTH OF SINGLE PLANTER SHALL BE 100 FEET. A 4-FOOT STEP-OUT AREA WITH NO ABOVE GROUND INFRASTRUCTURE SHALL BE PROVIDED BETWEEN ADJACENT PLANTERS.

NTS

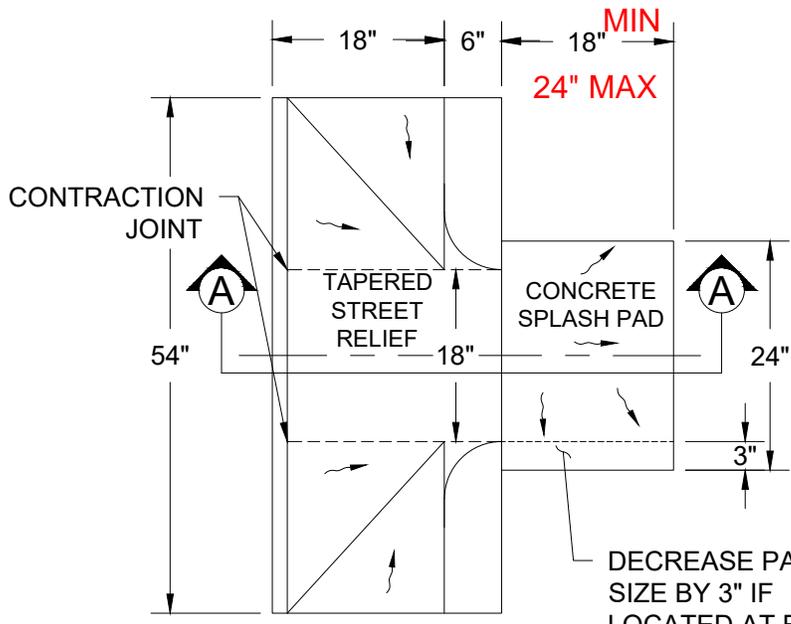
CITY OF GRESHAM

PLANTER PLAN VIEW

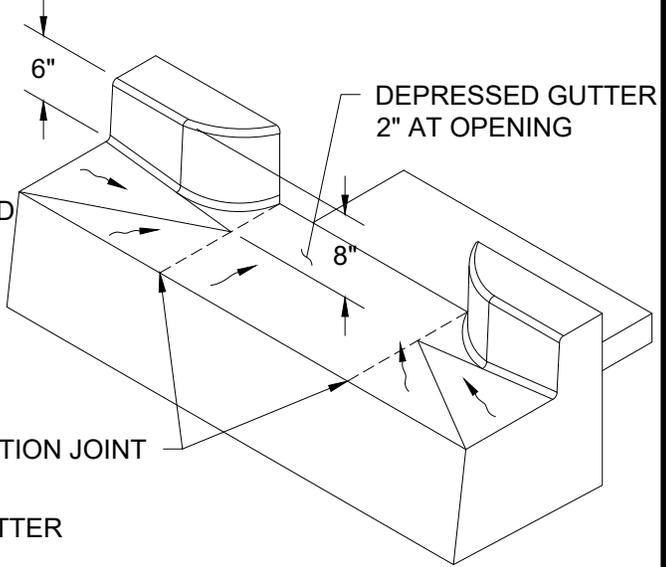
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REV. DATE	OCT 2025
APPR.	<i>[Signature]</i>
DETAIL NO.	GS-101

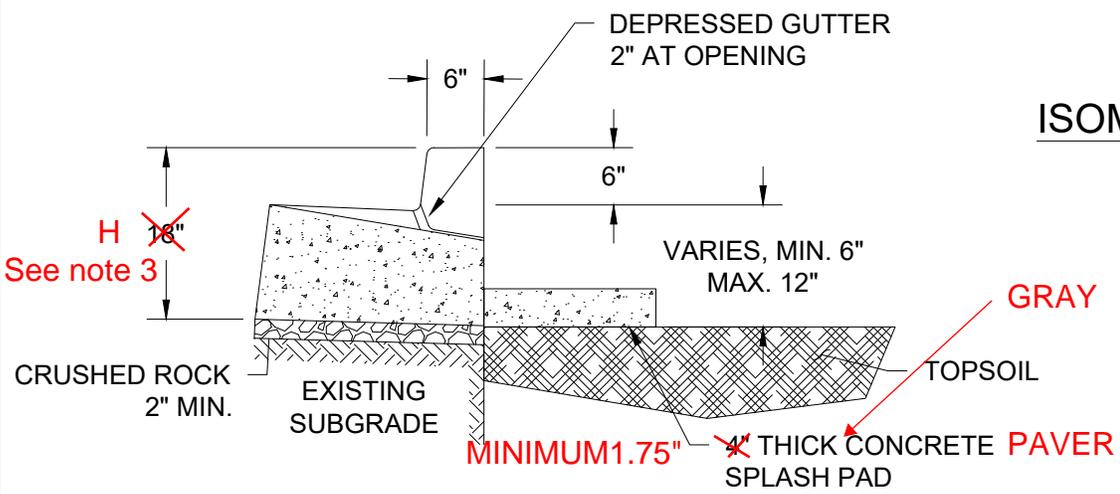
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PLAN



ISOMETRIC



SECTION A-A

NOTES:

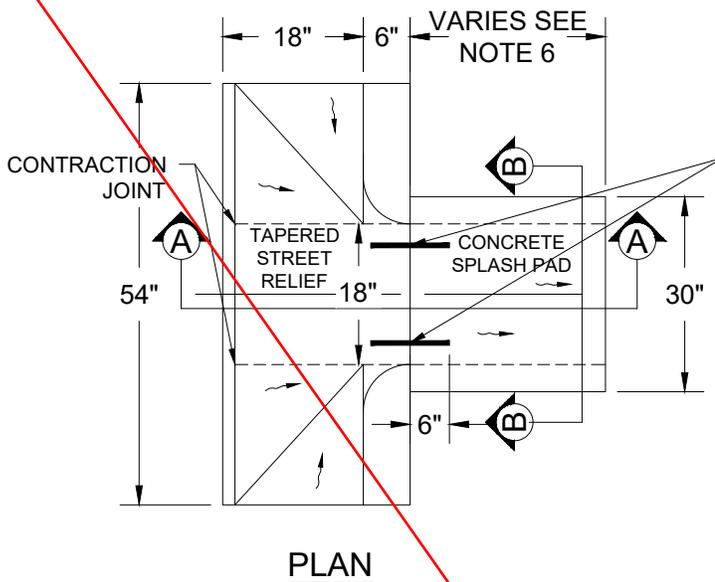
1. REFER TO GS-103 FOR THICKENED MONOLITHIC CURB AND GUTTER. IF PRESENT, MATCH GUTTER PAN WIDTH OF ADJACENT CURB AND GUTTER.
2. SEE CHECK DAM DETAIL GS-105 FOR DISTANCE TO TOP OF SPLASH PAD.
- ~~3. MAXIMUM DISTANCE BETWEEN INLETS SHALL BE 25 FEET.~~
3. Dimension 'H' is 12" for swales and 18" for planters.

NTS

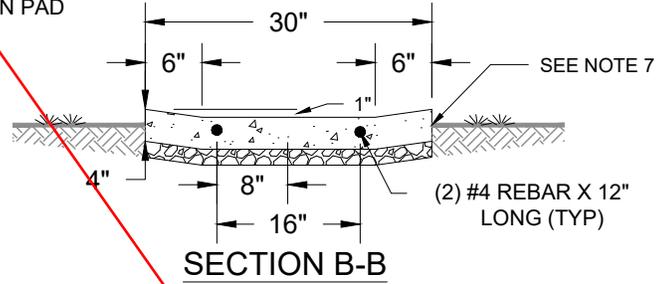
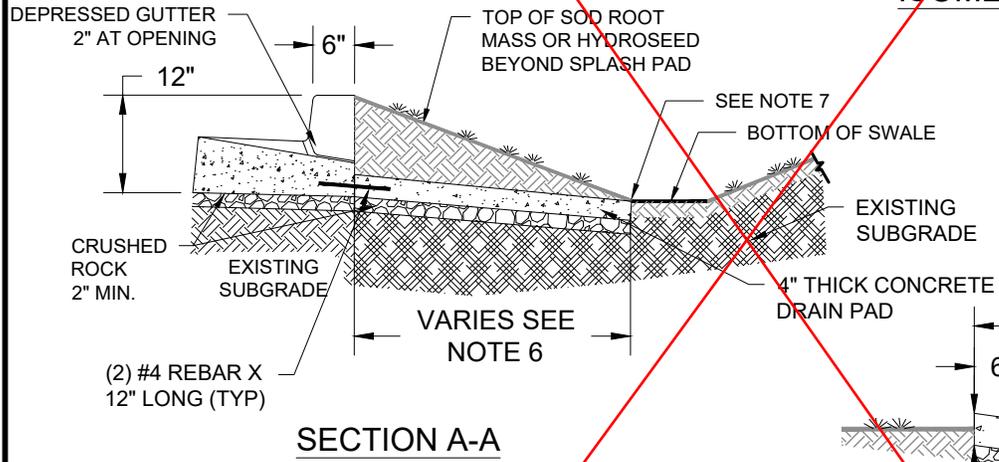
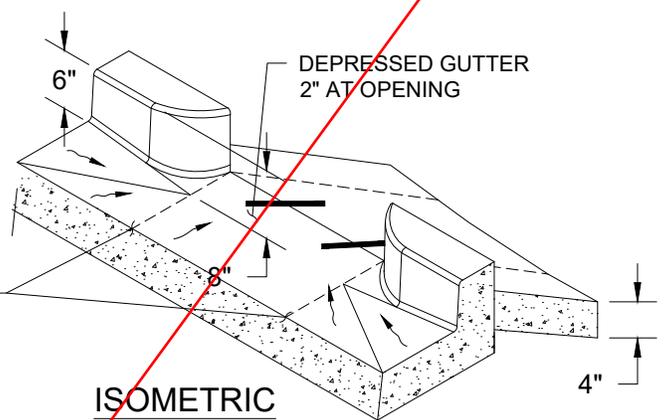
<p>CITY OF GRESHAM</p>	<p>CONCRETE CURB INLET AND SPLASH PAD</p>	<p>DRAWN KRB</p>
		<p>REV. DATE DEC 2024</p>
		<p>APPR. <i>[Signature]</i></p>
		<p>DETAIL NO. GS-104A</p>
<p>PWS VERSION: JAN 2026</p>		

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Delete detail



(2) #4 REBAR X 12\"/>



NOTES:

1. IF PRESENT, MATCH GUTTER PAN WIDTH OF ADJACENT CURB AND GUTTER.
2. GUTTER AND DRAIN PAD SHALL TIED TOGETHER WITH #4 REBAR, 8" ON CENTER.
3. SEE CHECK DAM DETAIL GS-105 FOR DISTANCE TO TOP OF SPLASH PAD.
4. MAX SPACING BETWEEN INLETS SHALL BE 50' WHEN ROAD GRADE IS LESS THEN 2%. MAX 25' WHEN ROAD GRADE IS GREATER THEN 2%.
5. INTENDED FOR USE WITH STORMWATER SWALES. SEE GS-114.
6. SWALE DRAIN PAD TO EXTEND TO BOTTOM OF SWALE.
7. MAINTAIN 2" EXPOSURE BETWEEN TOP OF SOD ROOT MASS OR HYDROSEED & TOP OF SWALE DRAIN PAD.

NTS

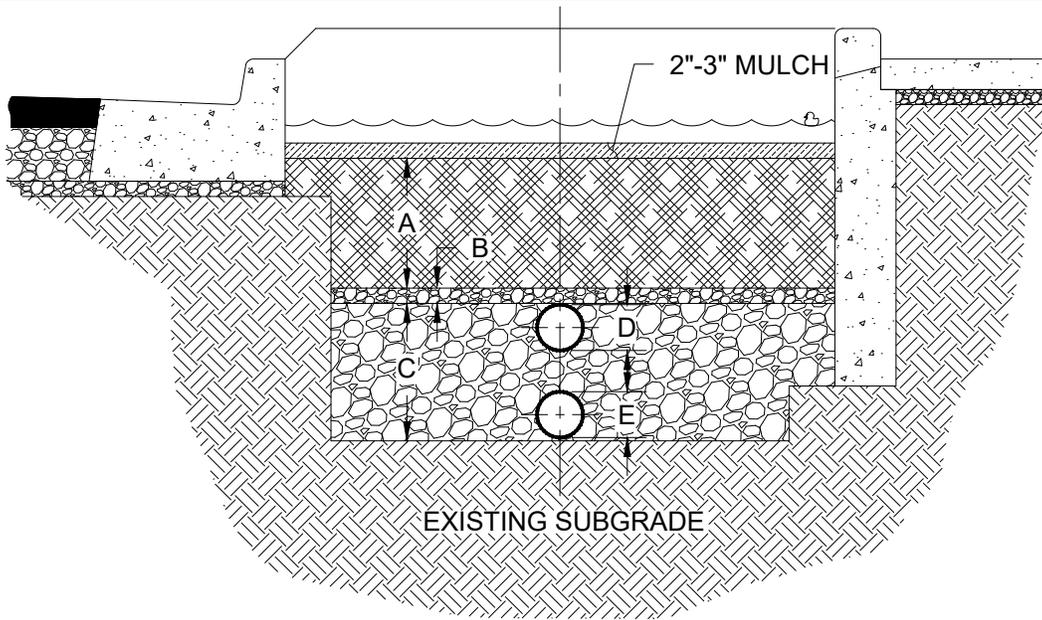
CITY OF GRESHAM

SWALE CONCRETE DRAIN PAD

PWS VERSION: JAN 2026

DRAWN	AAD
REV. DATE	NOV 2025
APPR.	<i>[Signature]</i>
DETAIL NO.	GS-104B

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CONDITION	A	B	C	D	E
GOOD INFILTRATING SOILS (>2"/hr) Group A and B soils	12" (MIN) TOPSOIL	0"	0"	NA	NA
LOW INFILTRATING SOILS (0.5 to 2"/hr) Group C Soil	18" (MIN) TOPSOIL	0"	0"	NA	NA
POOR INFILTRATING SOILS (<0.5"/hr) Group D Soil	24" (MIN) TOPSOIL 18"	3" OF 1/4"-NO. 10 OPEN GRADED AGGREGATE	18" MIN. 1 1/2"-3/4" OPEN GRADED AGGREGATE	6" PERF PIPE	NA
LINED FACILITIES	24" (MIN) TOPSOIL	3" OF 1/4"-NO. 10 OPEN GRADED AGGREGATE	18" MIN. 1 1/2"-3/4" OPEN GRADED AGGREGATE	NA	6" PERF PIPE

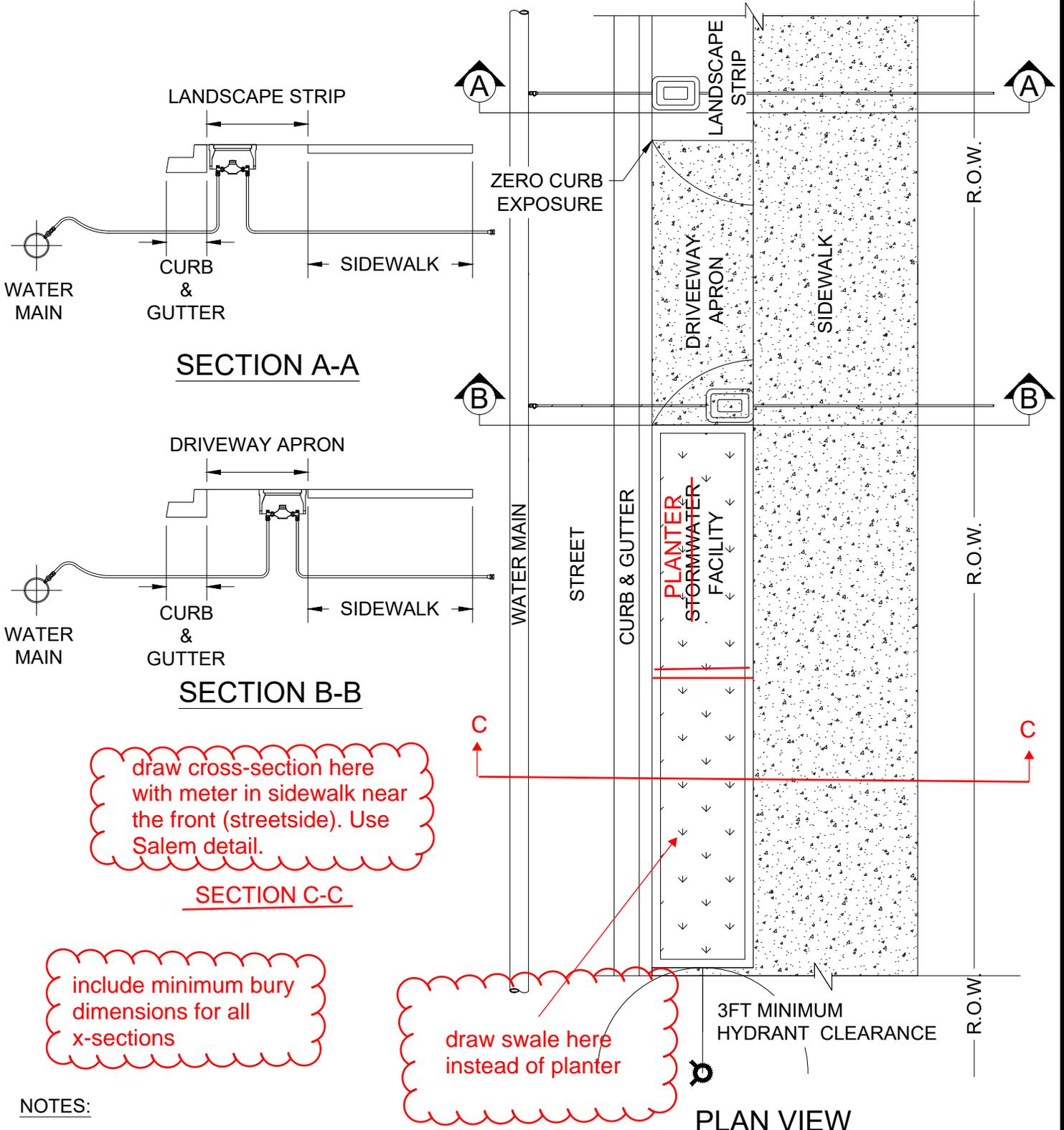
NOTES:

- SEE STORMWATER MANAGEMENT MANUAL FOR DETAILS ON STORMWATER FACILITY TOPSOIL SPECIFICATIONS.
- ~~MINIMUM DEPTH FOR A IS 12 INCHES. SEE GS-105 TO DETERMINE DEPTHS FOR SLOPED FACILITIES.~~
- LINED FACILITIES ONLY ALLOWED FOR STEEP SLOPES (>20%), UNCONSOLIDATED FILL (WITH SLOPES OR LOW INFILTRATION SOILS) OR IN CONTAMINATED SOILS, SEE GS-106 FOR DETAILS ON LINED FACILITIES.
- TREES INCLUDED IN PLANTERS MUST FOLLOW GS-112. TREES ARE NOT ALLOWED IN LINED FACILITIES OR TO HAVE ROCK OR UNDERDRAIN UNDER PORTIONS OF THE FACILITY WHERE TREES WILL BE PLANTED.
- MAXIMUM LENGTH OF PERFORATED PIPE IS 36 INCHES.

NTS

	<p align="center">UNDERDRAIN AND ROCK REQUIREMENTS</p> <p>PWS VERSION: JAN 2026</p>	DRAWN DRO
		REV. DATE NOV 2024
		APPR.
		DETAIL NO. GS-107

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draw cross-section here with meter in sidewalk near the front (streetside). Use Salem detail.

include minimum bury dimensions for all x-sections

draw swale here instead of planter

NOTES:

1. REFER TO FIRE HYDRANT ASSEMBLY STANDARD DETAIL 501A. HYDRANTS MUST HAVE MIN 3FT CLEARANCE FROM THE EDGE OF STORMWATER FACILITY.
2. REFER TO 1" SERVICE ASSEMBLY, STANDARD DETAIL 502.

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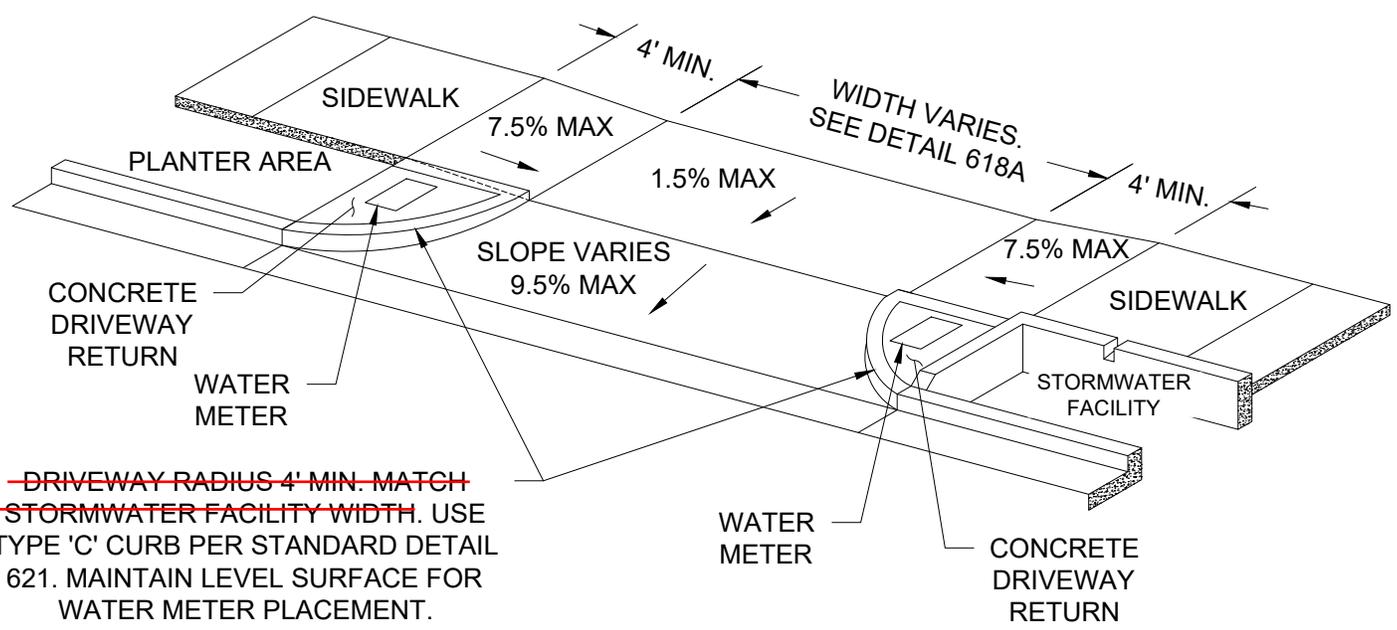
CITY OF GRESHAM

STORMWATER FACILITY, METER AND HYDRANT LOCATIONS

PWS VERSION: JAN 2026

DRAWN	KRB
REV. DATE	JAN 2019
APPR.	<i>[Signature]</i>
DETAIL NO.	GS-109

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~~DRIVEWAY RADIUS 4' MIN. MATCH STORMWATER FACILITY WIDTH. USE TYPE 'C' CURB PER STANDARD DETAIL 621. MAINTAIN LEVEL SURFACE FOR WATER METER PLACEMENT.~~

NOTES:

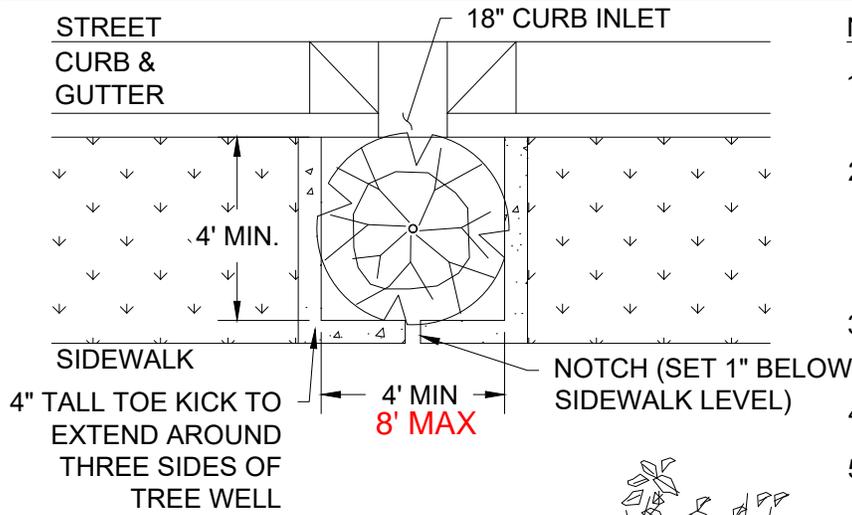
1. See also Detail 618A.

- ~~1. SIDEWALK WIDTH VARIES WITH STREET CLASSIFICATION. SEE STANDARD STREET CROSS SECTIONS. (5' MINIMUM)~~
- 2. STORMWATER FACILITY WIDTH VARIES. SEE STANDARD STREET CROSS SECTIONS. (4' MINIMUM)
- ~~3. CURB RADIUS SHALL MATCH STORMWATER FACILITY WIDTH. SEE STANDARD STREET CROSS SECTIONS.~~
- ~~4. SLOPES SHOWN ARE RELATIVE TO HORIZONTAL. TRANSITION RAMP SHALL BE 7.5% MAX SLOPE OR 15' IN LENGTH.~~
- ~~5. ALL CONCRETE SURFACES SHALL BE LIGHTLY BROOMED AND EDGED IN A WORKMANLIKE MANNER.~~
- ~~6. SAW CUT EXISTING CURBS WHERE THEY ARE TO BE REMOVED - IF LESS THAN 3' TO EXISTING JOINT, REMOVE TO JOINT. EXISTING ASPHALT IN FRONT OF THE APPROACH SHALL BE SAW CUT AND REPLACED WITH HOT MIX.~~
- ~~7. CONCRETE SHALL BE 4,000 PSI AT 28 DAYS.~~
- 8. WATER METER LIDS IN CONCRETE DRIVEWAY RETURN SHALL BE TRAFFIC RATED.
- ~~9. CONCRETE DEPTH AND ROCK SECTION SHALL BE PER STANDARD DETAIL 618A.~~

NTS

<p>CITY OF GRESHAM</p>	<p>STORMWATER FACILITY RESIDENTIAL DRIVEWAY APPROACH</p>	<p>DRAWN KRB</p>
		<p>REV. DATE JAN 2024</p>
		<p>APPR. <i>[Signature]</i></p>
		<p>DETAIL NO. GS-110</p>
<p>PWS VERSION: JAN 2026</p>		

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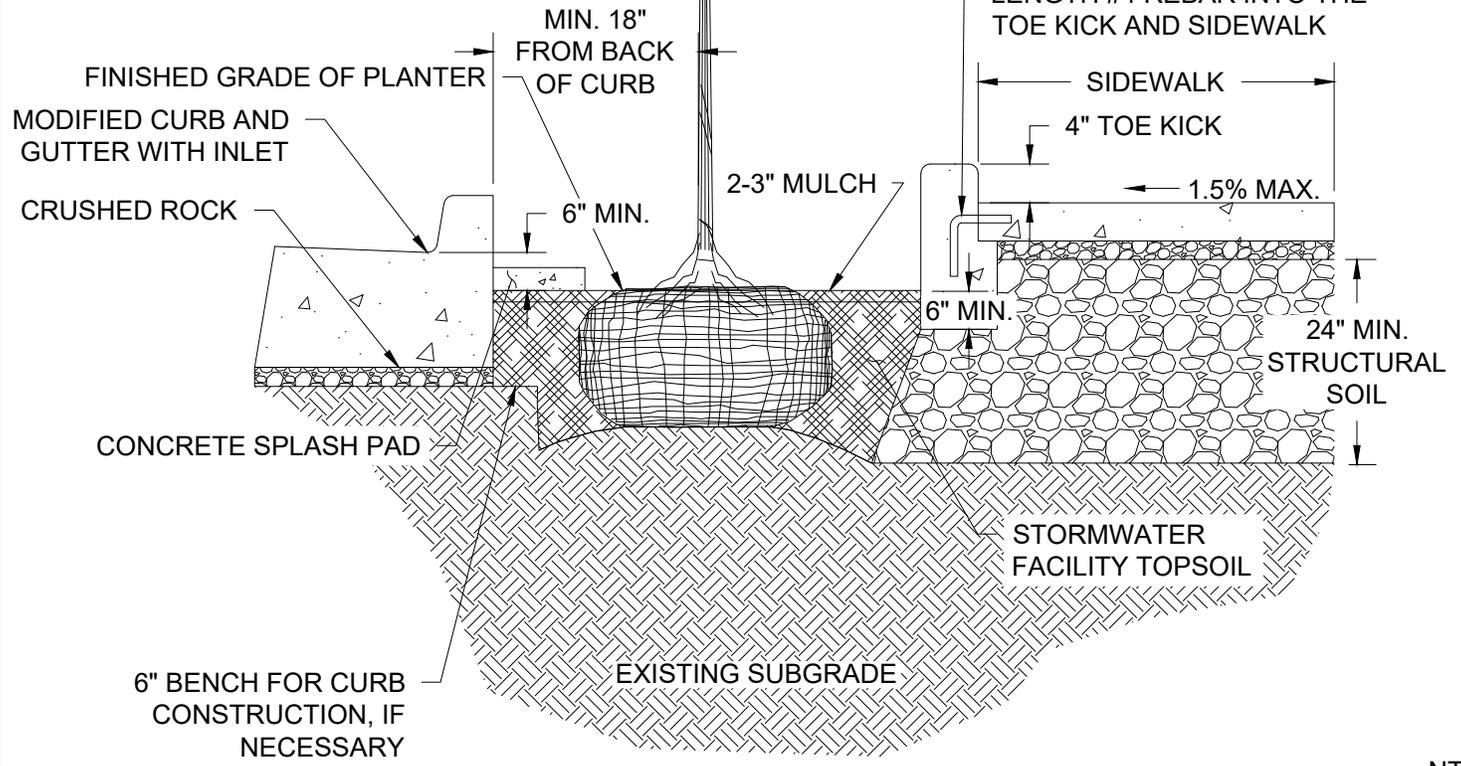


TREE WELL PLAN VIEW

NOTES:

1. REMOVE WIRE AND BURLAP FROM ROOT BALL PRIOR TO BACKFILLING.
2. PLANT TREE ON PEDESTAL OF NATIVE SOIL. ADJUST HEIGHT AS NEEDED TO SET TOP OF ROOT BALL A MINIMUM OF 1"-2" ABOVE TOPSOIL SURFACE.
3. SET ONE "DRAINS TO RIVER" BUTTON INTO CURB BEFORE CONCRETE HAS DRIED.
4. SEE GS-104 FOR CURB INLET DETAILS.
5. USE MODIFIED CURB AND GUTTER PER GS-103.
6. STORMWATER FACILITY TOPSOIL AND STRUCTURAL SOIL SHALL BE PER GRESHAM STORMWATER MANAGEMENT MANUAL.
7. STREET TREES SHALL FOLLOW GUIDANCE, INCLUDING STAKING, SPECIFIED IN PWS 6.02.18

When sidewalk exists prior to tree well construction or will be installed concurrently, EMBED 12" X 12" MIN. LENGTH #4 REBAR INTO THE TOE KICK AND SIDEWALK



NTS

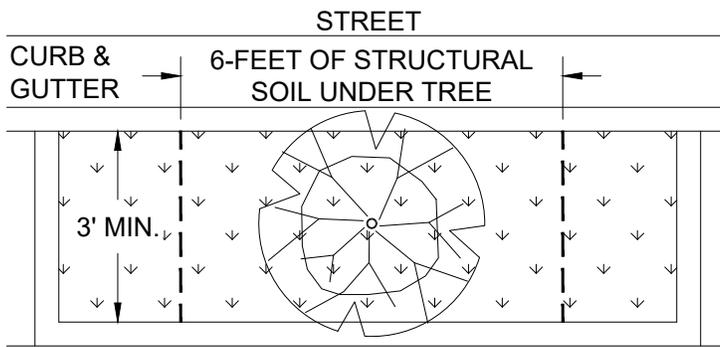


STORMWATER TREE WELL WITH STRUCTURAL SOIL

PWS VERSION: JAN 2026

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REV. DATE	NOV 2025
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DETAIL NO.	GS-111

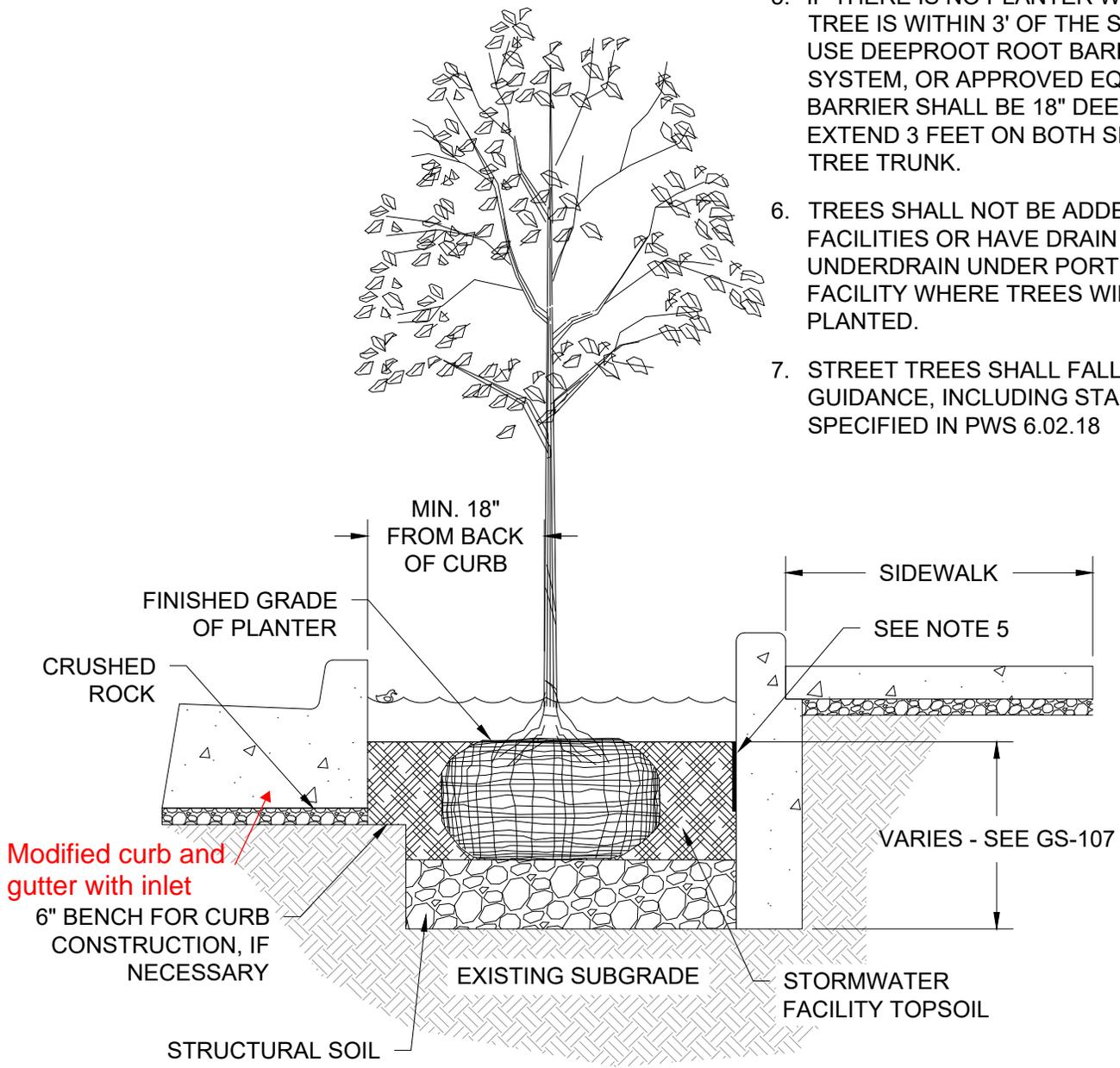
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SIDEWALK
STORMWATER PLANTER PLAN VIEW

NOTES:

1. TREES MUST BE SELECTED FROM LIST OF APPROVED STORMWATER TREES, UNLESS APPROVED BY THE CITY.
2. REMOVE WIRE AND BURLAP FROM ROOT BALL PRIOR TO BACKFILLING.
3. SET TOP OF ROOT BALL A MINIMUM OF 1"-2" ABOVE TOPSOIL SURFACE.
4. 3FT MINIMUM WIDTH FOR PLANTERS WITH TREES.
5. IF THERE IS NO PLANTER WALL AND THE TREE IS WITHIN 3' OF THE SIDEWALK, USE DEEPROOT ROOT BARRIER SYSTEM, OR APPROVED EQUAL. ROOT BARRIER SHALL BE 18" DEEP AND EXTEND 3 FEET ON BOTH SIDES OF THE TREE TRUNK.
6. TREES SHALL NOT BE ADDED TO LINED FACILITIES OR HAVE DRAIN ROCK OR UNDERDRAIN UNDER PORTIONS OF THE FACILITY WHERE TREES WILL BE PLANTED.
7. STREET TREES SHALL FOLLOW GUIDANCE, INCLUDING STAKING, SPECIFIED IN PWS 6.02.18



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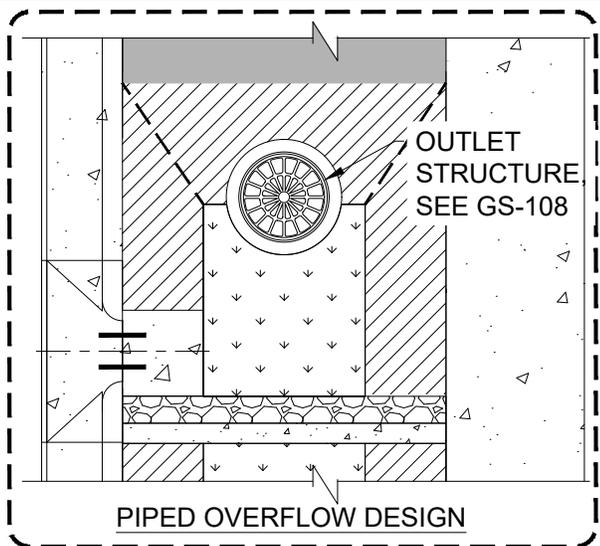
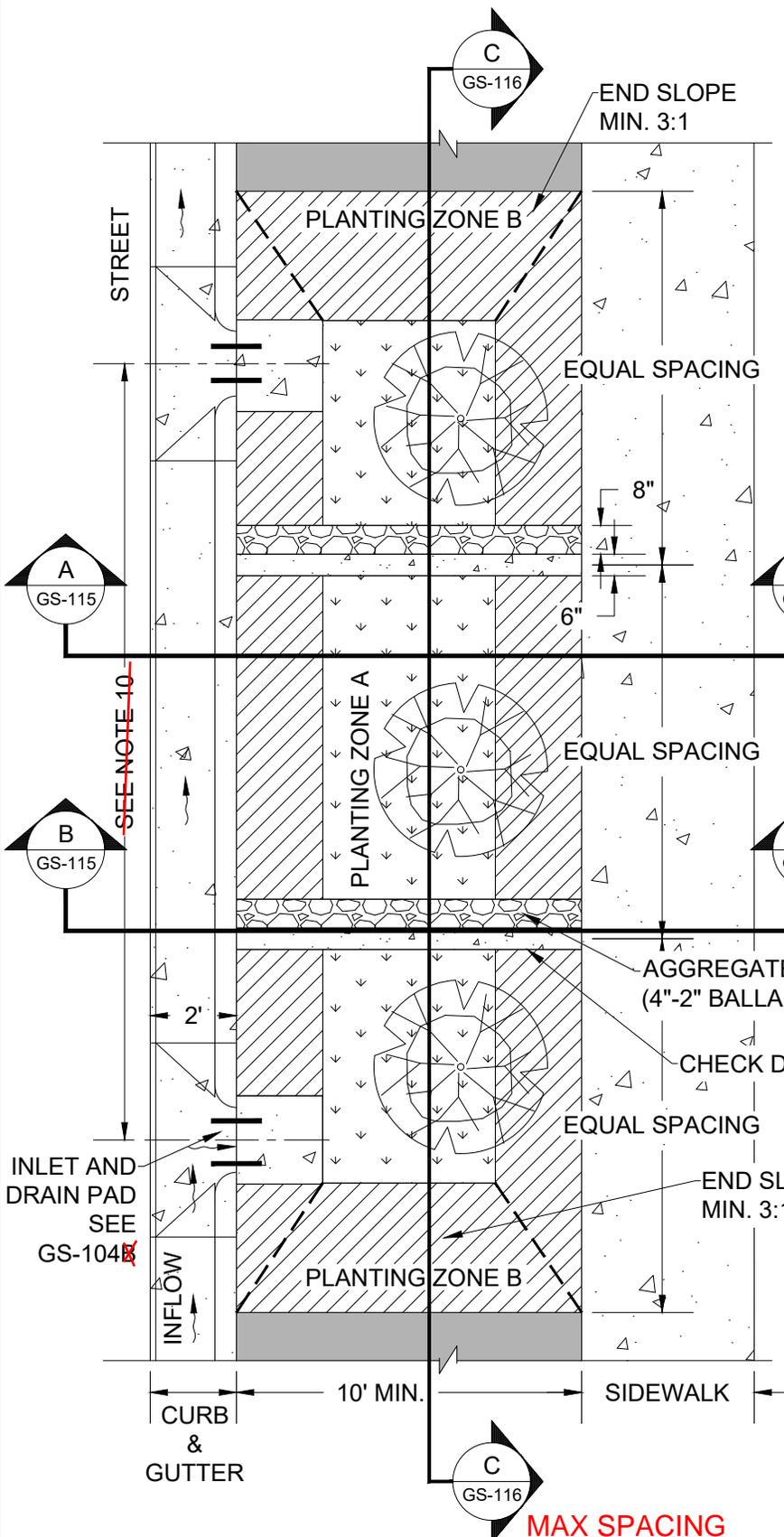
CITY OF GRESHAM

STREET TREE PLANTING WITHIN STORMWATER PLANTER

PWS VERSION: JAN 2026

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REV. DATE	NOV 2025
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DETAIL NO.	GS-112

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NOTES:

1. SPECIFIC FACILITY DIMENSIONS MUST BE SHOWN ON STORMWATER UTILITY PLAN.
2. LONGITUDINAL SLOPE OF SWALE SHALL MATCH ROAD, ~~UNLESS CHECK DAMS ARE USED~~, SEE GS-116 FOR CHECK DAM REQUIREMENTS.
3. PROVIDE STATIONS AND ELEVATIONS AT EVERY INLET, OUTLET, AND CHECK DAM.
4. SIDEWALK ELEVATION MUST BE SET ABOVE INLET AND OUTLET ELEVATIONS TO ALLOW OVERFLOW TO DRAIN TO STREET BEFORE SIDEWALK.
- ~~5. SEE SHEET GS-104B FOR INLET DETAILS.~~
- ~~6. ANY ADDITIONAL INLETS SHALL BE LOCATED ON DOWNSTREAM SIDE OF CHECK DAMS.~~
7. SPECIAL REQUIREMENTS FOR WATER LINES, METERS, AND FIRE HYDRANTS, SEE SHEET GS-109 FOR DETAILS.
- ~~8. SEE GRESHAM STORMWATER MANAGEMENT MANUAL FOR STORMWATER FACILITY TOPSOIL REQUIREMENTS.~~
9. SEE GRESHAM STORMWATER MANAGEMENT MANUAL FOR PLANTING GUIDANCE.
- ~~10. MAX SPACING BETWEEN INLETS SHALL BE 50' WHEN ROAD GRADE IS LESS THEN 2%. MAX 25' WHEN ROAD GRADE IS GREATER THEN 2%~~

GRADE	CHECK DAM	INLET
0% - 3%	N/A	50'
>3% - 8%	15'	30'
>8% - 15%	10'	30'

MAX SPACING

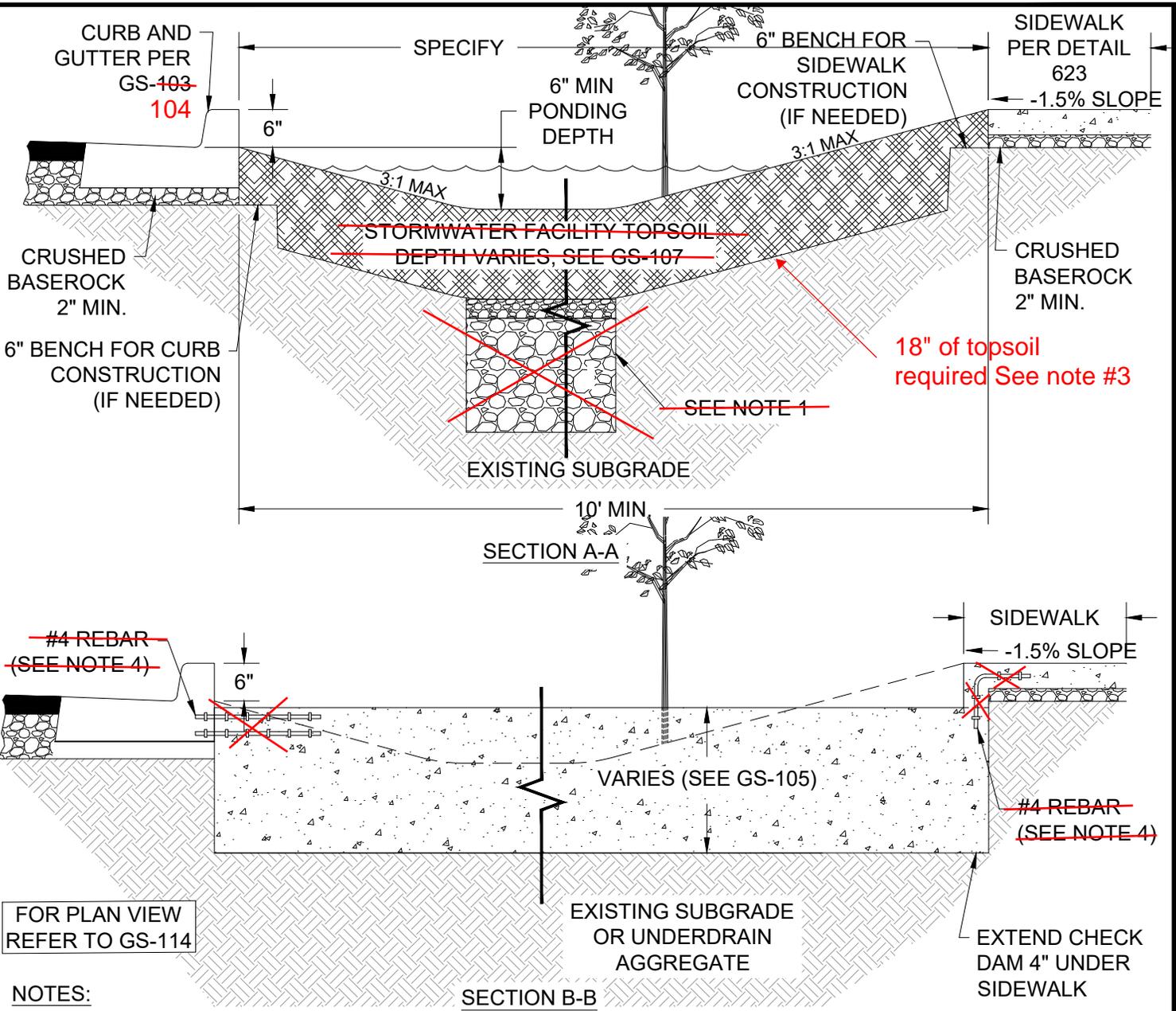
SWALE PLAN VIEW

CITY OF GRESHAM

PWS VERSION: JAN 2026

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 DETAIL NO. GS-114

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FOR PLAN VIEW
REFER TO GS-114

NOTES:

- ~~1. SEE GS 107 TO DETERMINE WHEN AGGREGATE AND UNDERDRAINS ARE REQUIRED. WHEN REQUIRED, AGGREGATE ONLY NEEDS TO BE IN THE MIDDLE PORTION OF THE SWALE.~~
2. FRACTURE AND LOOSEN THE NATIVE SOIL FOLLOWING INITIAL EXCAVATION AND BEFORE INSTALLING TOPSOIL OR ROCK.
3. STORMWATER FACILITY TOPSOIL SHALL BE PER THE CITY'S STORMWATER MANAGEMENT MANUAL.
- ~~4. EMBED OR EPOXY SET A 12" MIN. LENGTH #4 REBAR BETWEEN CHECK DAM AND CURB AND SIDEWALK.~~
5. TREES PLANTED IN SWALE SHALL BE ~~CENTERED BETWEEN CURB AND SIDEWALK~~, OR SHIFTED BACK TOWARDS SIDEWALK SLIGHTLY. PLACE ROOT BALL ON NATIVE SOIL AND ENSURE TOP OF ROOT BALL IS 1-2" ABOVE FINAL TOPSOIL ELEVATION.
6. SIDEWALK ELEVATION MUST BE EQUAL TO OR HIGHER THAN TOP OF CURB TO ENSURE WATER OVERFLOWS TO GUTTER.
7. STREET TREES SHALL FOLLOW GUIDANCE, INCLUDING STAKING, SPECIFIED IN PWS 6.02.18.

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**CITY OF
GRESHAM**

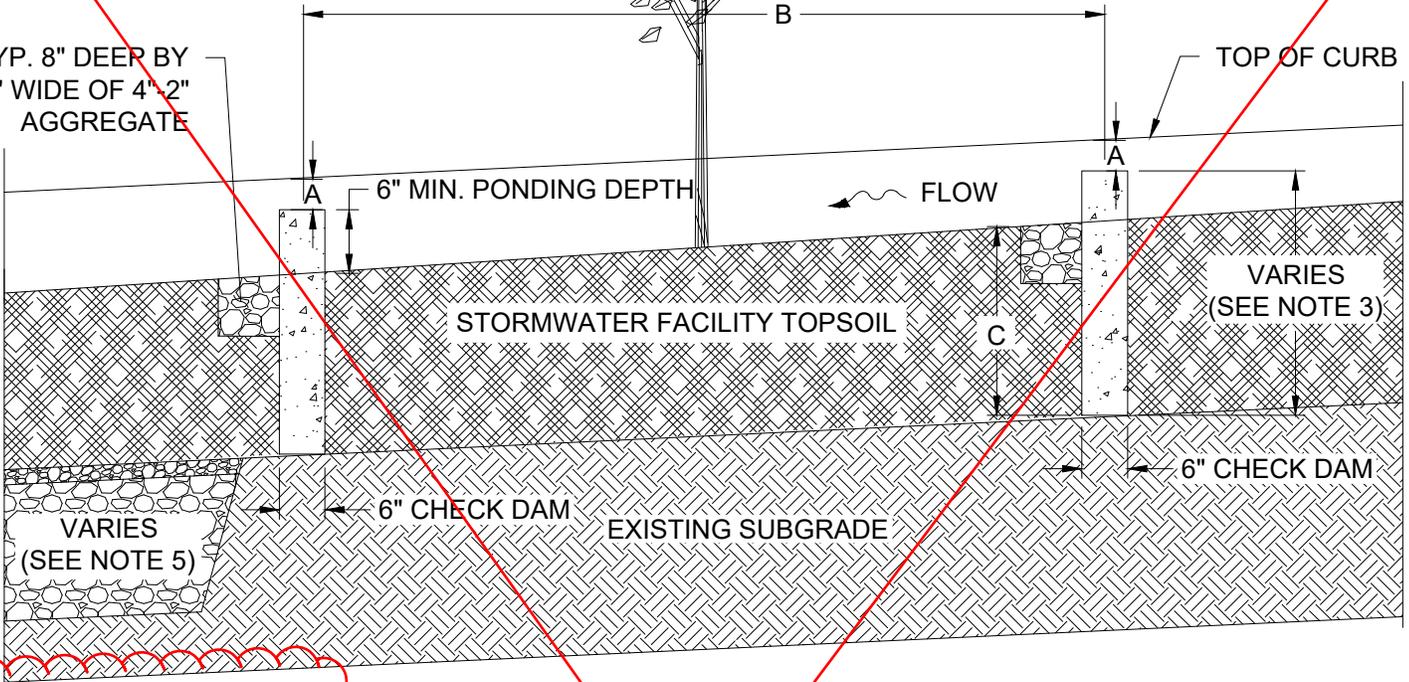
SWALE SECTION VIEW

PWS VERSION: JAN 2026

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REV. DATE	NOV 2025
APPR.	<i>[Signature]</i>
DETAIL NO.	GS-115

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TYP. 8" DEEP BY 8" WIDE OF 4"x2" AGGREGATE



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SECTION C-C

ROAD * GRADE	A (SEE NOTE 2)	MIN B	MAX B	C
>8%-10%	4"	5'	10'	SEE GS-107 FOR DIMENSIONS
>4%-8%	5"	7.5'	15'	
2%-4%	6"	12.5'	25'	

* ROADS 0-2% DO NOT REQUIRE CHECK DAMS

** DIMENSION B VARIES BASED ON EQUAL SPACING REQUIREMENT ON GS-114

NOTES:

1. CHECK DAM TO BE PLACED ON UNDISTURBED NATIVE SOIL, OR ON UNDERDRAIN AGGREGATE IF REQUIRED.
2. TOP OF CHECK DAM SHALL BE A MINIMUM OF 1" BELOW THE UPSTREAM INLET GUTTERLINE ELEVATION.
3. CHECK DAM WIDTH IS 6". HEIGHT VARIES DEPENDING ON ROAD GRADE.
4. SEE GS-107 TO DETERMINE WHEN AGGREGATE AND UNDERDRAIN ARE REQUIRED.

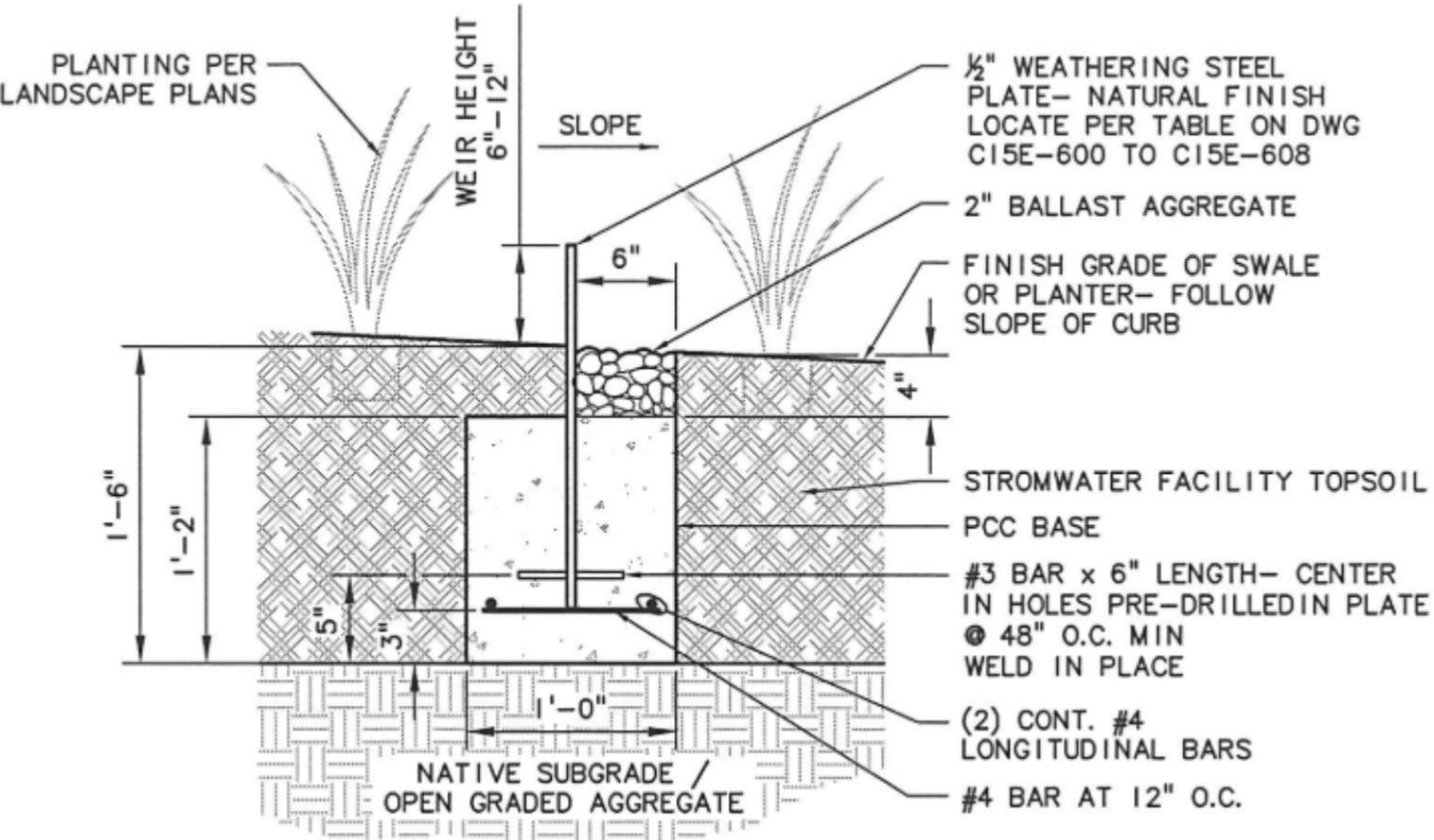
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CITY OF GRESHAM

CONCRETE CHECK DAM FOR SWALE

PWS VERSION: JAN 2026

DRAWN	AAD
REV. DATE	NOV 2025
APPR.	<i>[Signature]</i>
DETAIL NO.	GS-116



PLANTING PER LANDSCAPE PLANS

WEIR HEIGHT 6"-12"

SLOPE

1/2" WEATHERING STEEL PLATE- NATURAL FINISH LOCATE PER TABLE ON DWG C15E-600 TO C15E-608

2" BALLAST AGGREGATE

FINISH GRADE OF SWALE OR PLANTER- FOLLOW SLOPE OF CURB

STORMWATER FACILITY TOPSOIL

PCC BASE

#3 BAR x 6" LENGTH- CENTER IN HOLES PRE-DRILLED IN PLATE @ 48" O.C. MIN WELD IN PLACE

(2) CONT. #4 LONGITUDINAL BARS

#4 BAR AT 12" O.C.

NATIVE SUBGRADE / OPEN GRADED AGGREGATE

WEATHERING STEEL CHECK DAM