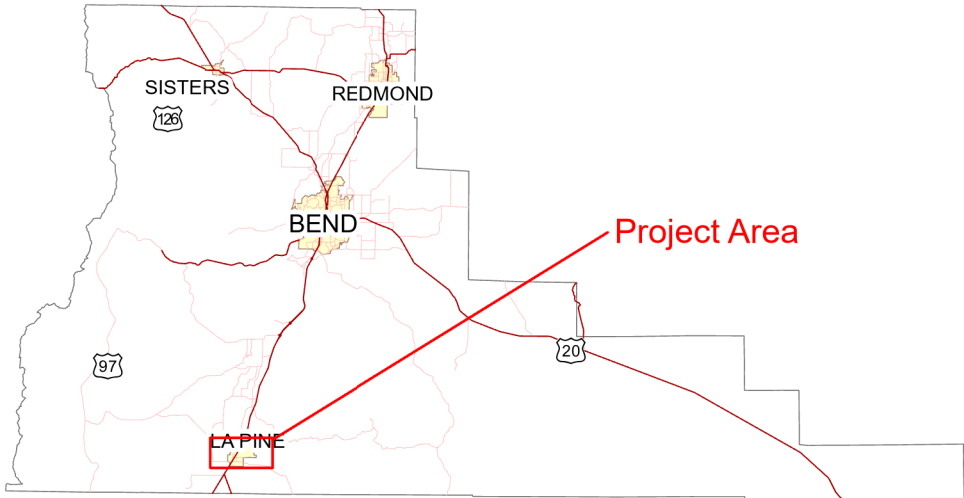
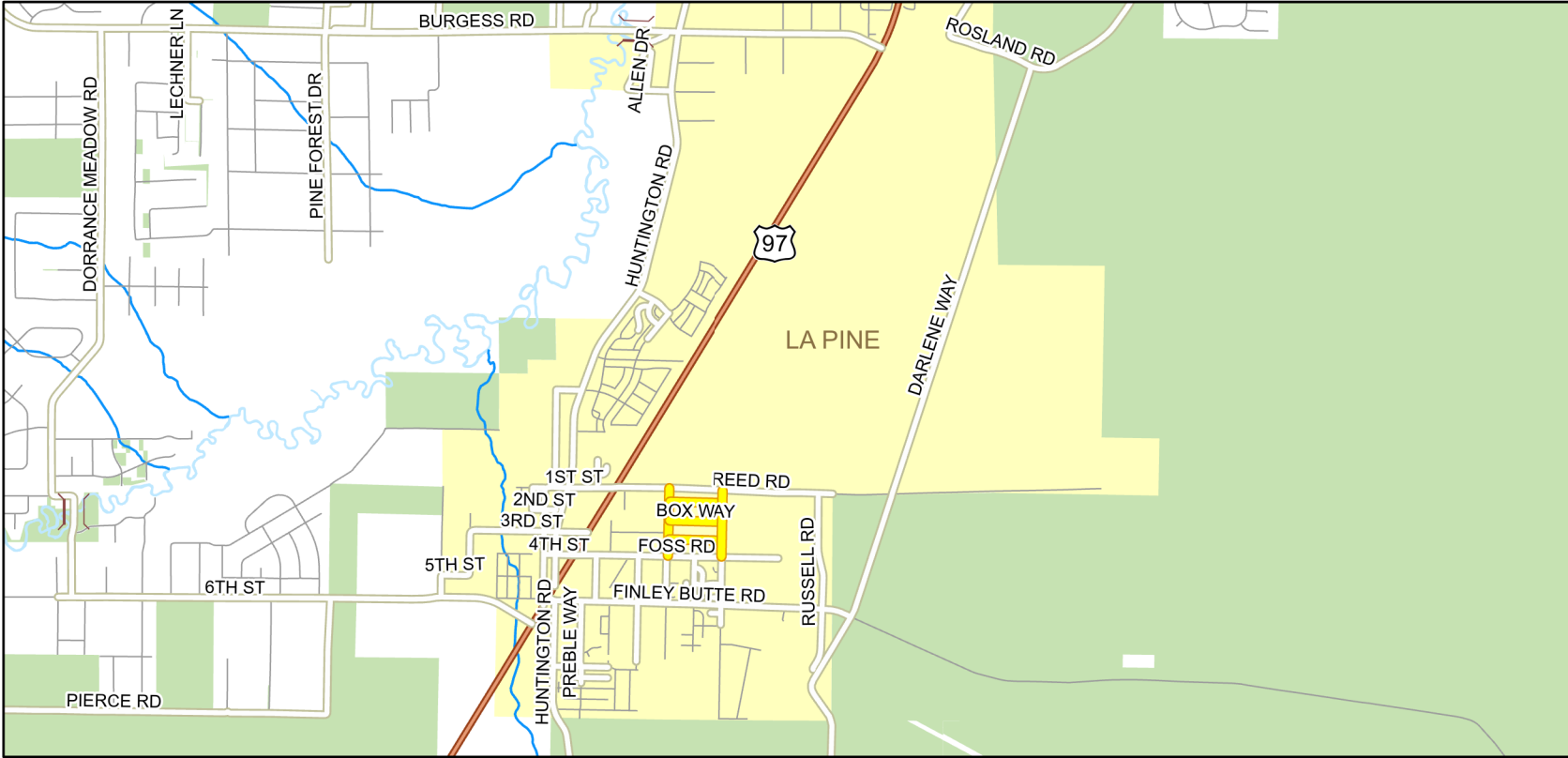


DESCHUTES COUNTY ROAD DEPARTMENT
PLANS FOR
LA PINE UIC STORMWATER IMPROVEMENTS
PHASE 1

JULY 2025



INDEX OF SHEETS	
Sheet #	Description
1	COVER SHEET
2	INFILTRATION DITCH & REMOVAL DETAILS
3	PIPED CROSSING - MITTS WAY & ACP PATCH DETAIL
4	CURB & ROAD CUT DETAILS
5	PLAN---Sta 0+00 To 10+00
6	PLAN---Sta 10+00 To 20+00
7	PLAN---Sta 20+00 To 30+00
8	PLAN---Sta 30+00 To 40+00
9	PLAN---Sta 40+00 To 50+00



OREGON STANDARD DRAWING NO.	
RD300	TRENCH BACKFILL, BEDDING, PIPE ZONE AND MULTIPLE INSTALLATIONS
RD339	PIPE TO STRUCTURE CONNECTIONS
RD700	CURBS
TM800	TABLES, ABRUPT EDGE AND PCMS DETAILS
TM840	CLOSURE DETAILS
TM855	2-LANE, 2-WAY ROADWAYS

LOCATION MAP
NOT TO SCALE

- Project Segment

Bridges

County Routes

State Highway
- Road Centerlines

Streams

Canals

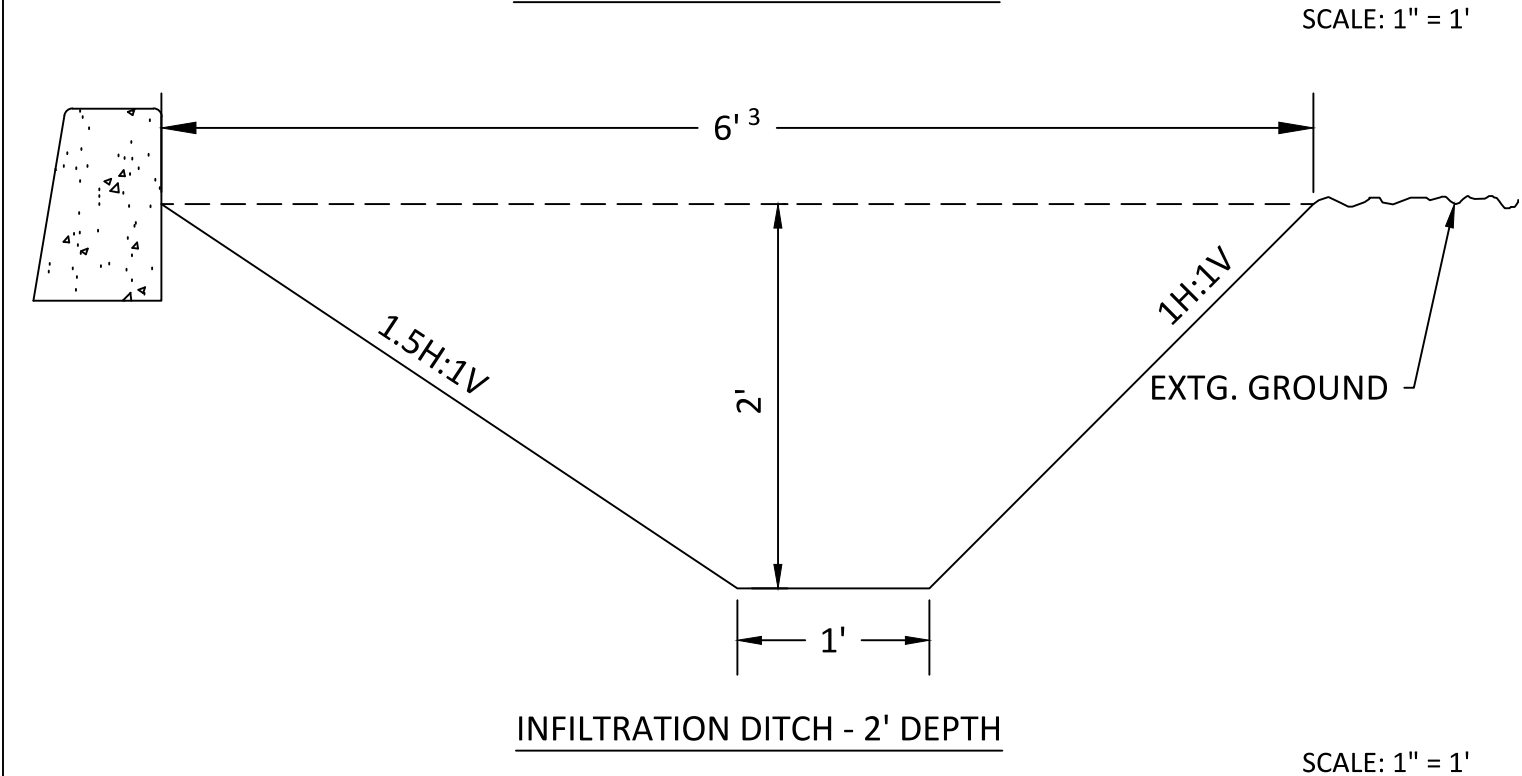
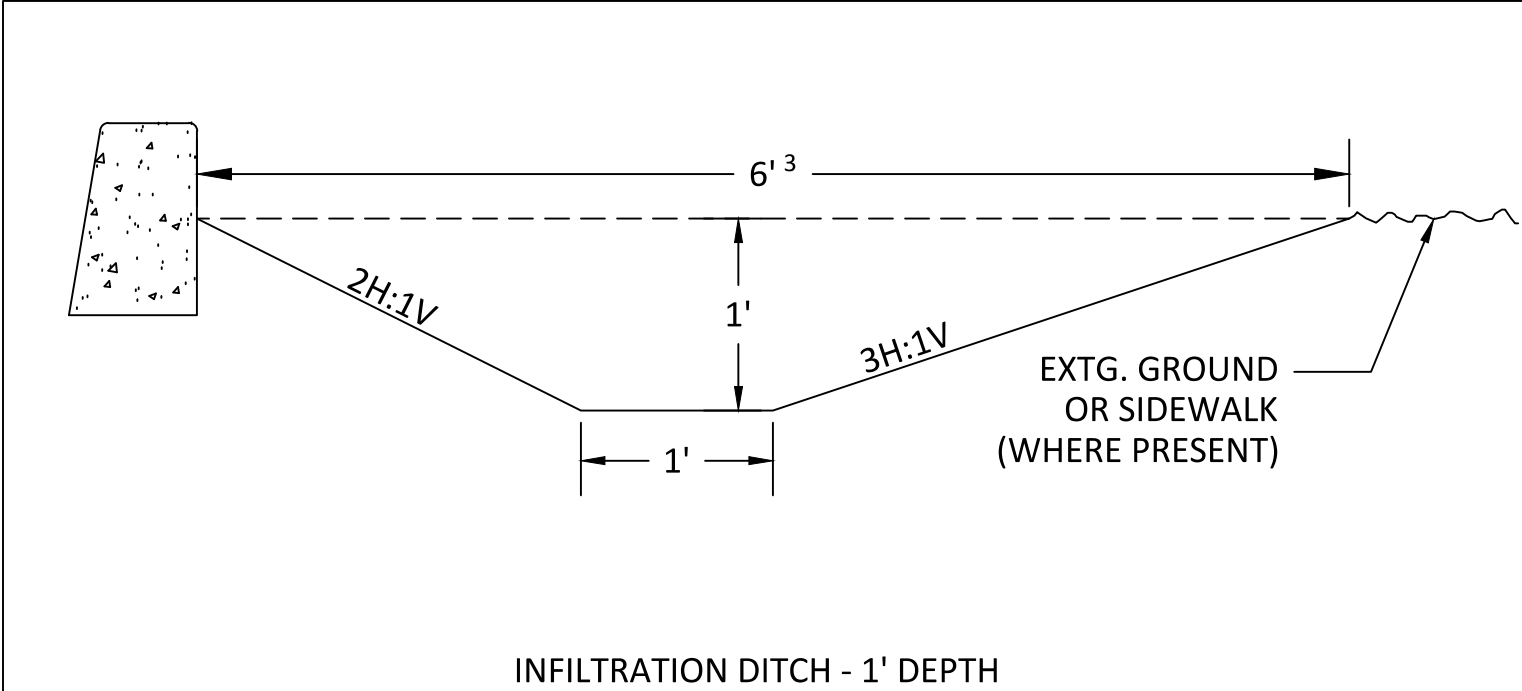
Rivers
- City Limits

Forest service Land



**ROAD
DEPARTMENT**

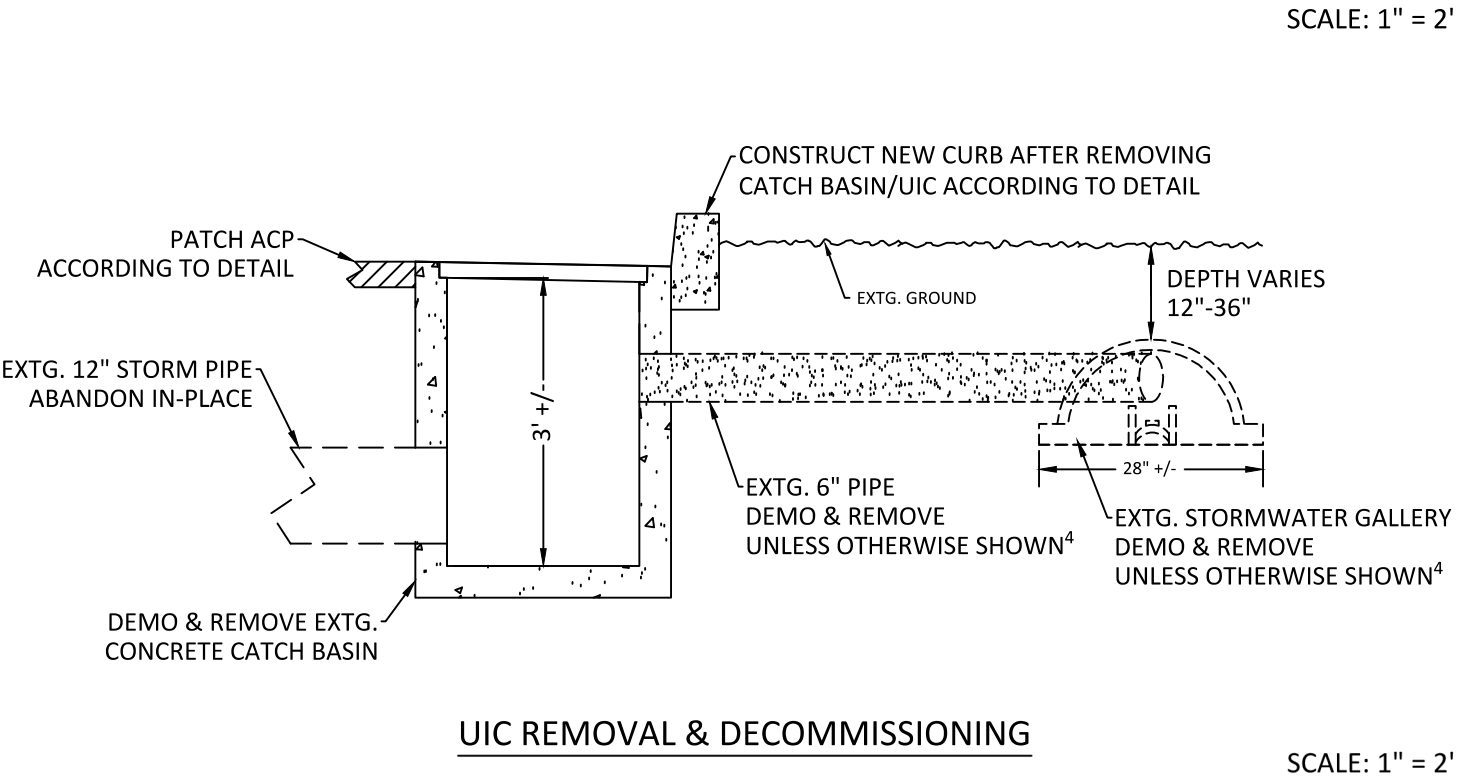
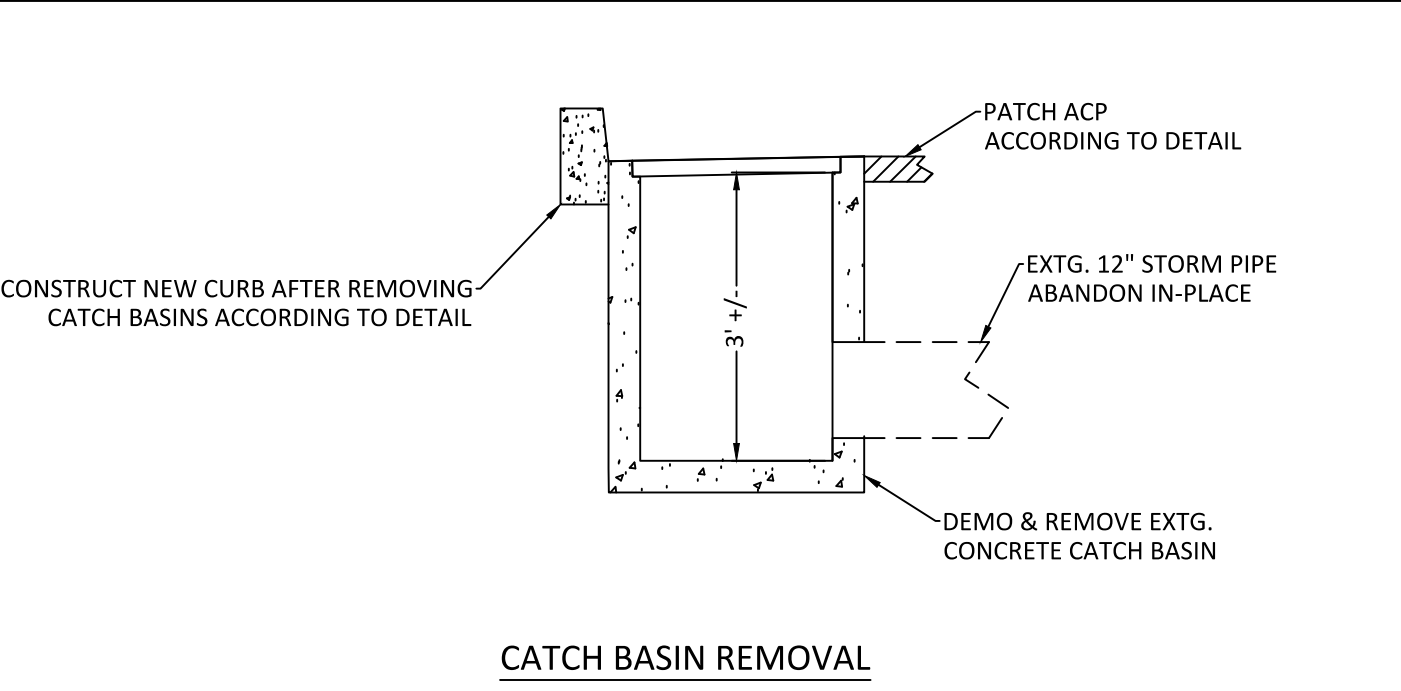
TITLE: COVER SHEET		SHEET NO: 1 OF 9
DATE: 07/21/25	SCALE: N.T.S.	DRAFTER: B.WRUCK REVIEWED BY: C. SMITH




NOTES

- 1) PROTECT EXISTING CURB IN PLACE UNLESS OTHERWISE NOTED.
- 2) PROTECT EXISTING SURFACINGS IN PLACE.
- 3) DITCH WIDTH MAY VARY WHERE SIDEWALK CURRENTLY EXISTS. SEE PLAN VIEW FOR DITCH LOCATIONS.
- 4) WHERE UIC FACILITIES ARE ABANDONED IN-PLACE, GROUT EXISTING 6" PIPE WITH CLSM OR APPROVED EQUIVALENT.

REVISIONS	DATE	BY	DESIGNED BW
			DRAWN BW
			CHECKED CS



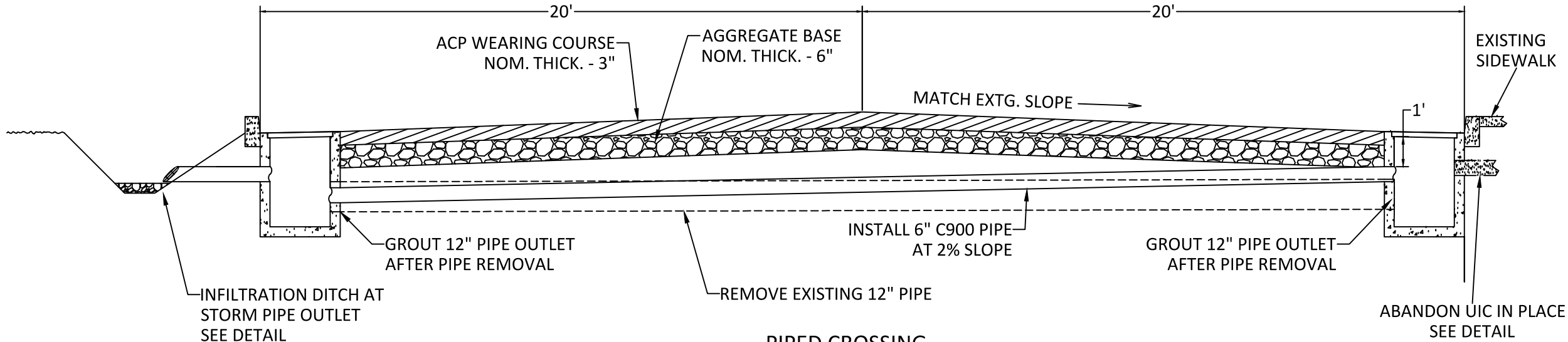


**ROAD
DEPARTMENT**

TITLE: INFILTRATION DITCH & REMOVAL DETAILS		DRAWING NO.: 2 OF 9
DATE: 7/21/25	SCALE: AS SHOWN	APPROVED BY: C. SMITH

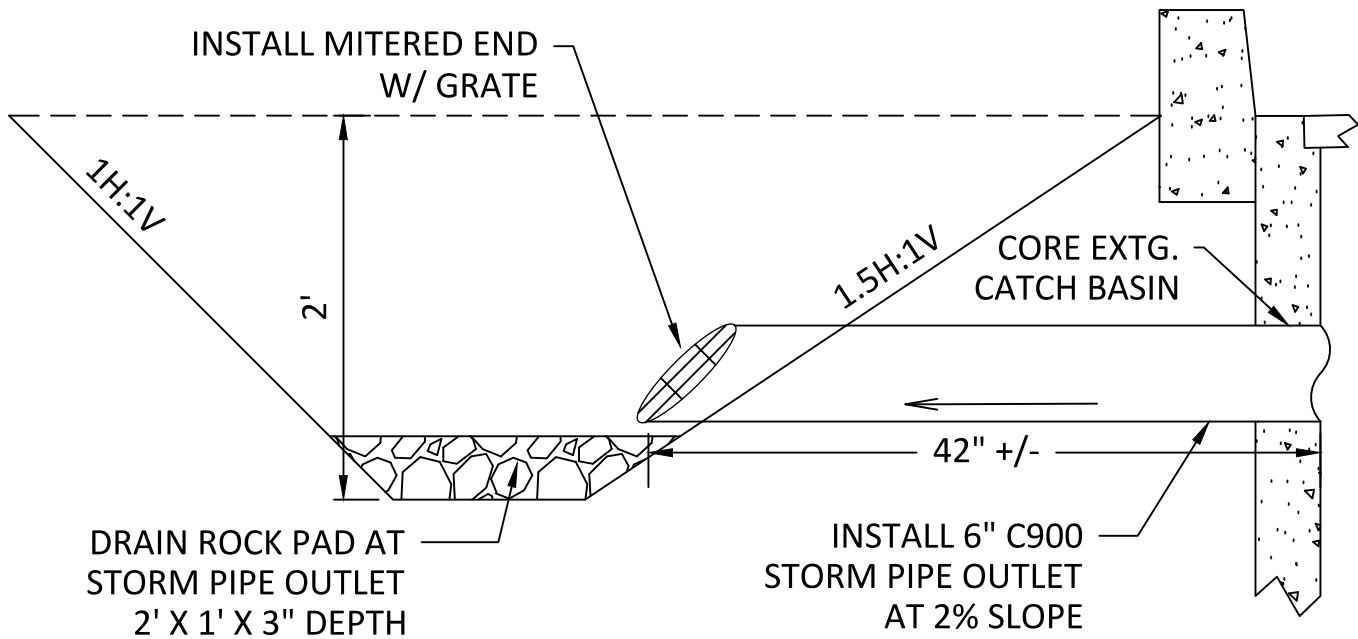


RENEWS: JUNE 30, 2026



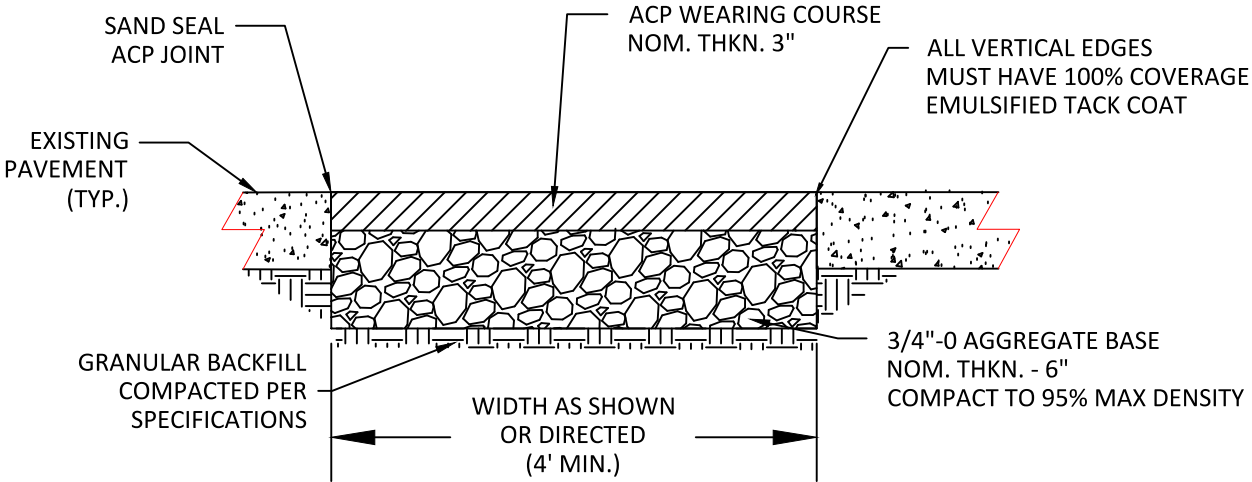
PIPED CROSSING
STA. "M" 4+15

SCALE:
H: 1" = 4'
V: NTS



INFILTRATION DITCH AT STORM PIPE OUTLET

SCALE: 1" = 1'




ACP PATCH DETAIL

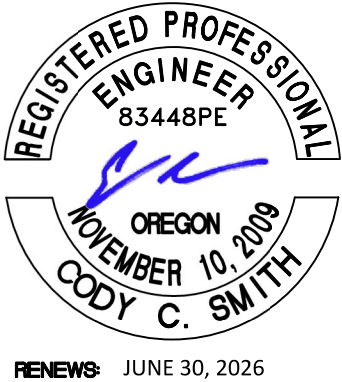
SCALE: NTS

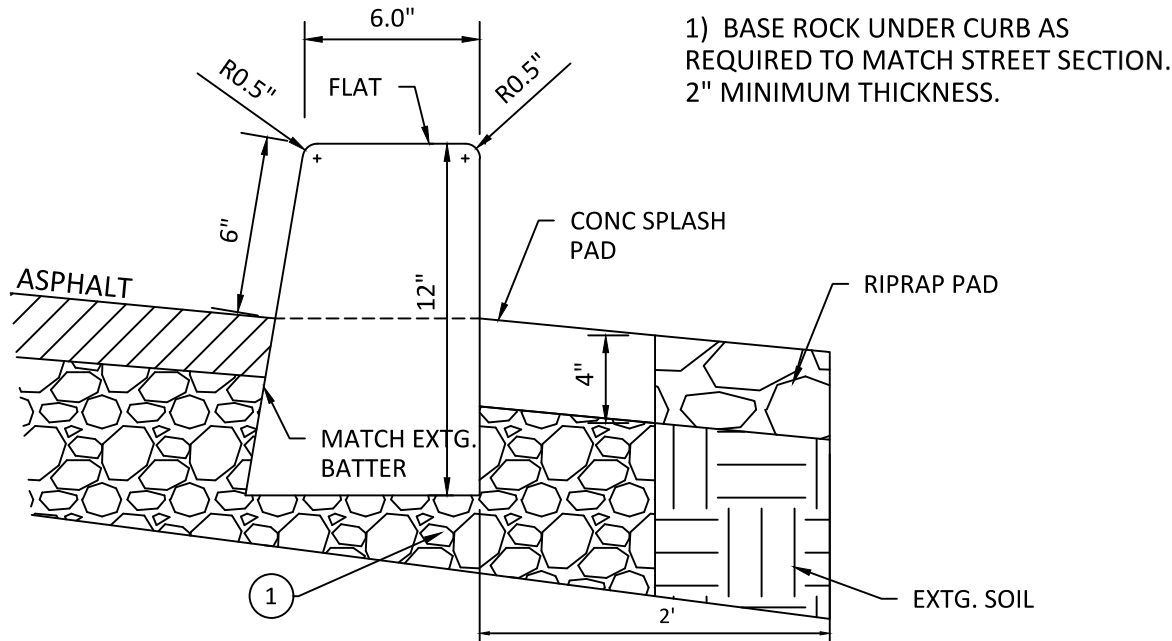
NOTES

- 1) PROTECT EXISTING CURB IN PLACE UNLESS OTHERWISE NOTED.
- 2) PROTECT EXISTING SURFACINGS IN PLACE.
- 3) SEE PLAN VIEW FOR DITCH LOCATIONS.
- 4) SEE RD339 FOR PIPE TO STRUCTURE CONNECTION DETAILS.

REVISIONS	DATE	BY	DESIGNED BW
			DRAWN BW
			CHECKED CS

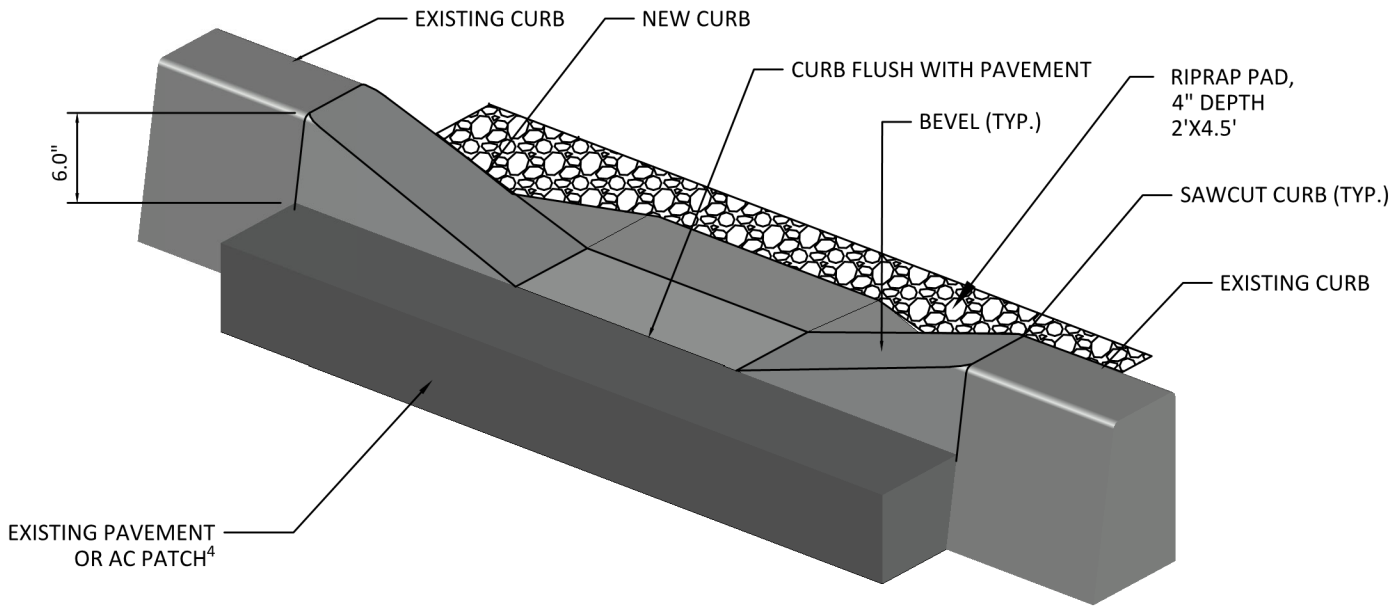
		ROAD DEPARTMENT	
TITLE: PIPED CROSSING - MITTS WAY & ACP PATCH DETAIL		DRAWING NO.: 3 OF 9	
DATE: 7/21/25	SCALE: AS SHOWN	APPROVED BY: C. SMITH	





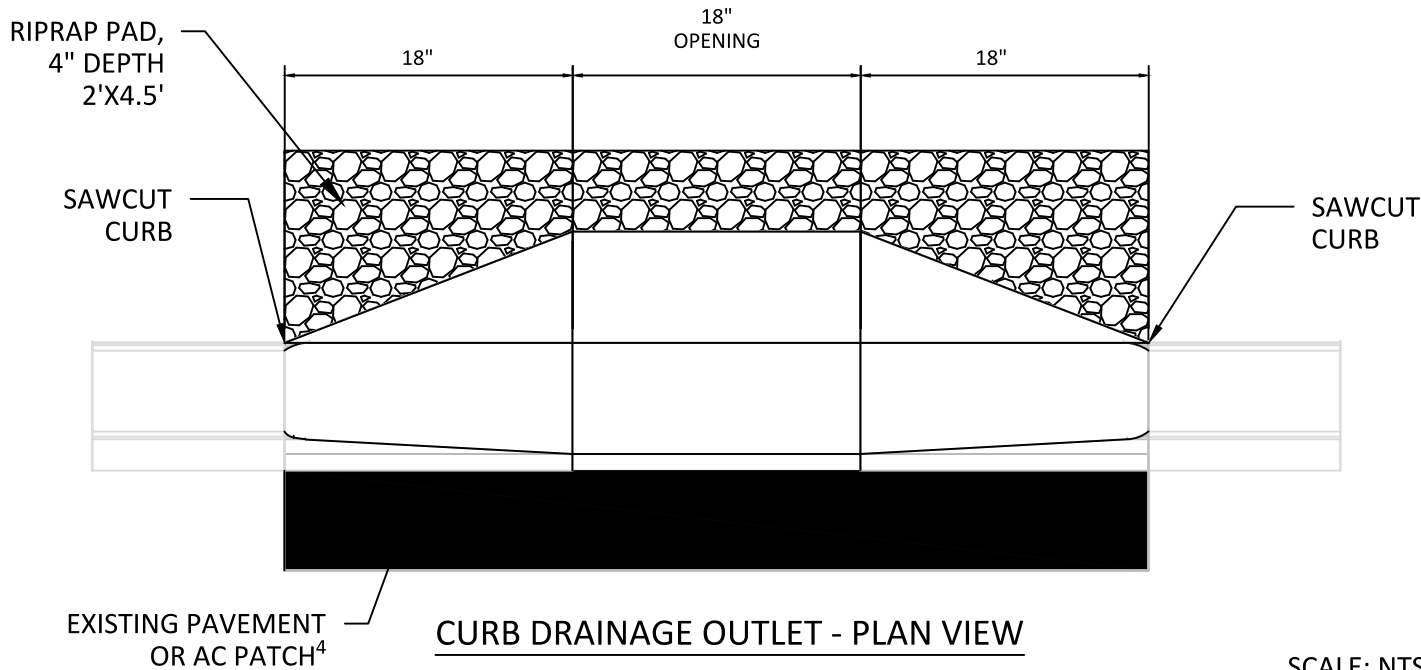
CURB DRAINAGE OUTLET - PROFILE VIEW

SCALE: NTS



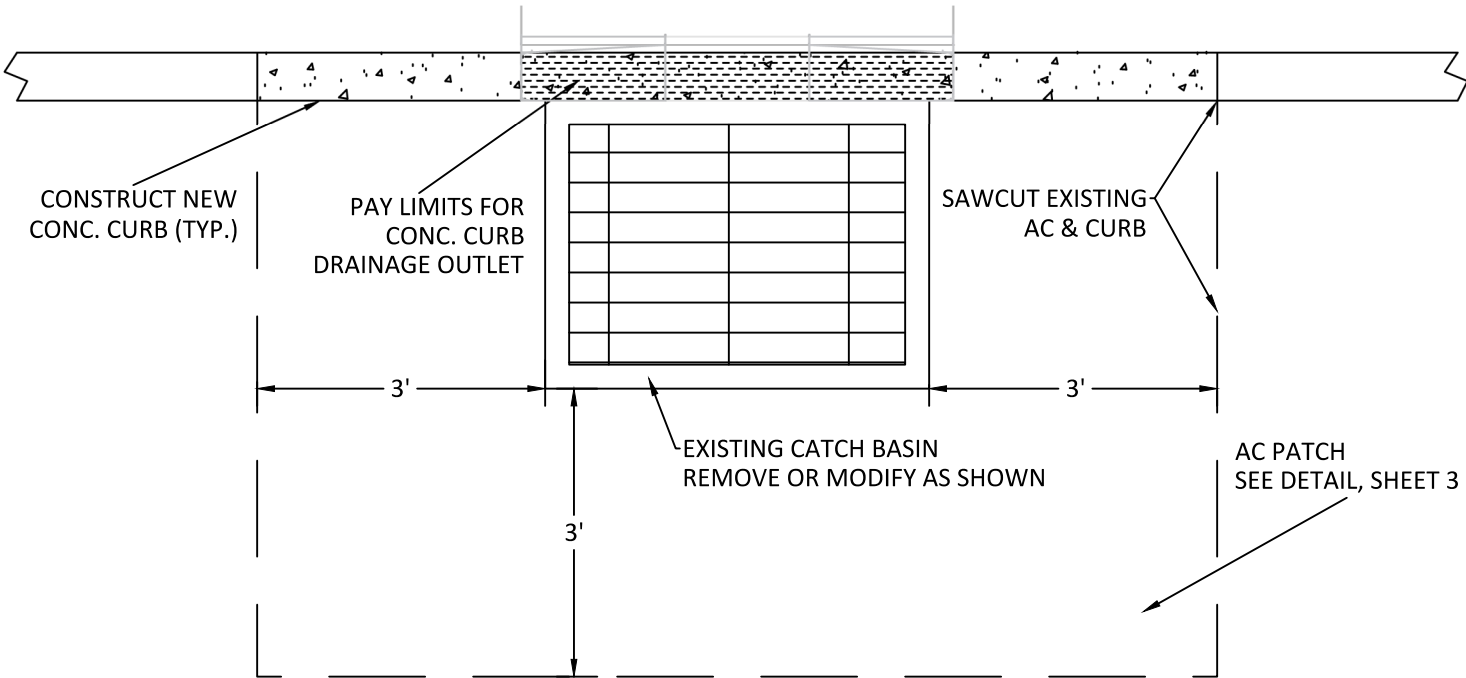
CURB DRAINAGE OUTLET - ORTHOGRAPHIC VIEW

SCALE: NTS



CURB DRAINAGE OUTLET - PLAN VIEW

SCALE: NTS




ROAD CUT DETAIL

SCALE: 1" = 2'

NOTES

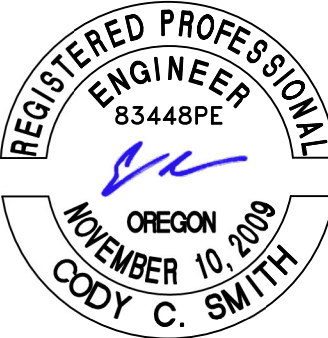
- 1) PROTECT EXISTING CURB IN PLACE UNLESS OTHERWISE NOTED.
- 2) PROTECT EXISTING SURFACINGS IN PLACE.
- 3) FOR DETAILS NOT SHOWN, SEE OREGON STANDARD DRAWING RD700.
- 4) PROTECT EXISTING PAVEMENT IN PLACE ADJACENT TO CURB DRAINAGE OUTLET INSTALLATIONS. AC PATCH ONLY AT CATCH BASIN/UIC REMOVAL LOCATIONS.

REVISIONS	DATE	BY	DESIGNED TW
			DRAWN TW
			CHECKED CS



**ROAD
DEPARTMENT**

TITLE: CURB & ROAD CUT DETAILS		DRAWING NO.: 4 OF 9
DATE: 7/21/25	SCALE: AS SHOWN	APPROVED BY: C. SMITH



RENEWS: JUNE 30, 2026



HIGH-RESOLUTION AERIAL IMAGERY CAPTURED BY DESCHUTES COUNTY, OCT. 2024

LEGEND

- CATCH BASIN REMOVAL
- UIC REMOVAL
- CURB DRAINAGE OUTLET
- INFILTRATION DITCH, 1FT DEPTH
- EXISTING STORM PIPE
- STATION
- TAXLOT

NOTES:

INSTALL CURB DRAINAGE OUTLETS
WHERE CATCH BASINS ARE REMOVED
ACCORDING TO DETAIL.

N



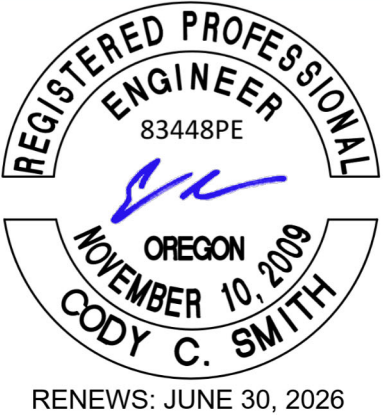
ROAD
DEPARTMENT

PROJECT
LA PINE UIC STORMWATER
IMPROVEMENTS - PHASE 1

DRAWING NO.
5 OF 9

TITLE
ASSEMBLY WAY
STA "A" 0+00 TO END








DATE
7/21/25





HIGH-RESOLUTION AERIAL IMAGERY CAPTURED BY DESCHUTES COUNTY, OCT. 2024

LEGEND

-  CATCH BASIN REMOVAL
-  UIC REMOVAL
-  CURB DRAINAGE OUTLET
-  INFILTRATION DITCH, 1FT DEPTH
-  EXISTING STORM PIPE
-  STATION
-  TAXLOT

NOTES:

INSTALL CURB DRAINAGE OUTLETS
WHERE CATCH BASINS ARE REMOVED
ACCORDING TO DETAIL.

N



ROAD
DEPARTMENT

PROJECT
LA PINE UIC STORMWATER
IMPROVEMENTS - PHASE 1

TITLE
BOX WAY
STA "B" 0+00 TO END

DRAWING NO.
6 OF 9

DATE
7/21/25



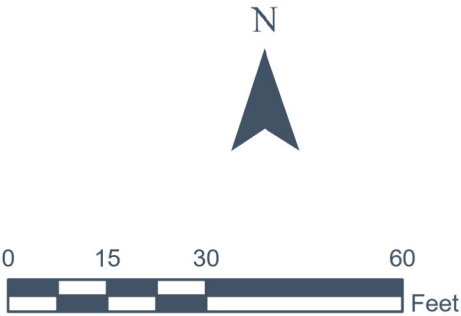


HIGH-RESOLUTION AERIAL IMAGERY CAPTURED BY DESCHUTES COUNTY, OCT. 2024

LEGEND

- CATCH BASIN REMOVAL
- UIC REMOVAL
- CURB DRAINAGE OUTLET
- INFILTRATION DITCH, 1FT DEPTH
- EXISTING STORM PIPE
- STATION
- TAXLOT

NOTES:
INSTALL CURB DRAINAGE OUTLETS
WHERE CATCH BASINS ARE REMOVED
ACCORDING TO DETAIL.



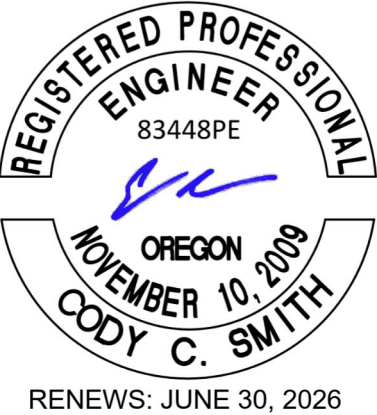
ROAD
DEPARTMENT

PROJECT
LA PINE UIC STORMWATER
IMPROVEMENTS - PHASE 1

DRAWING NO.
7 OF 9

TITLE
DILLON WAY
STA "D" 0+00 TO END

DATE
7/21/25



BIDDING PLANS

REED RD H 0+00 H 1+00 H 2+00 H 3+00 H 4+00 H 5+00

ASSEMBLY WAY A 0+00

HINKLE WAY

BOX WAY B 0+00

H 5+00 H 6+00 H 7+00 H 8+00 H 9+00 H 10+00

HINKLE WAY

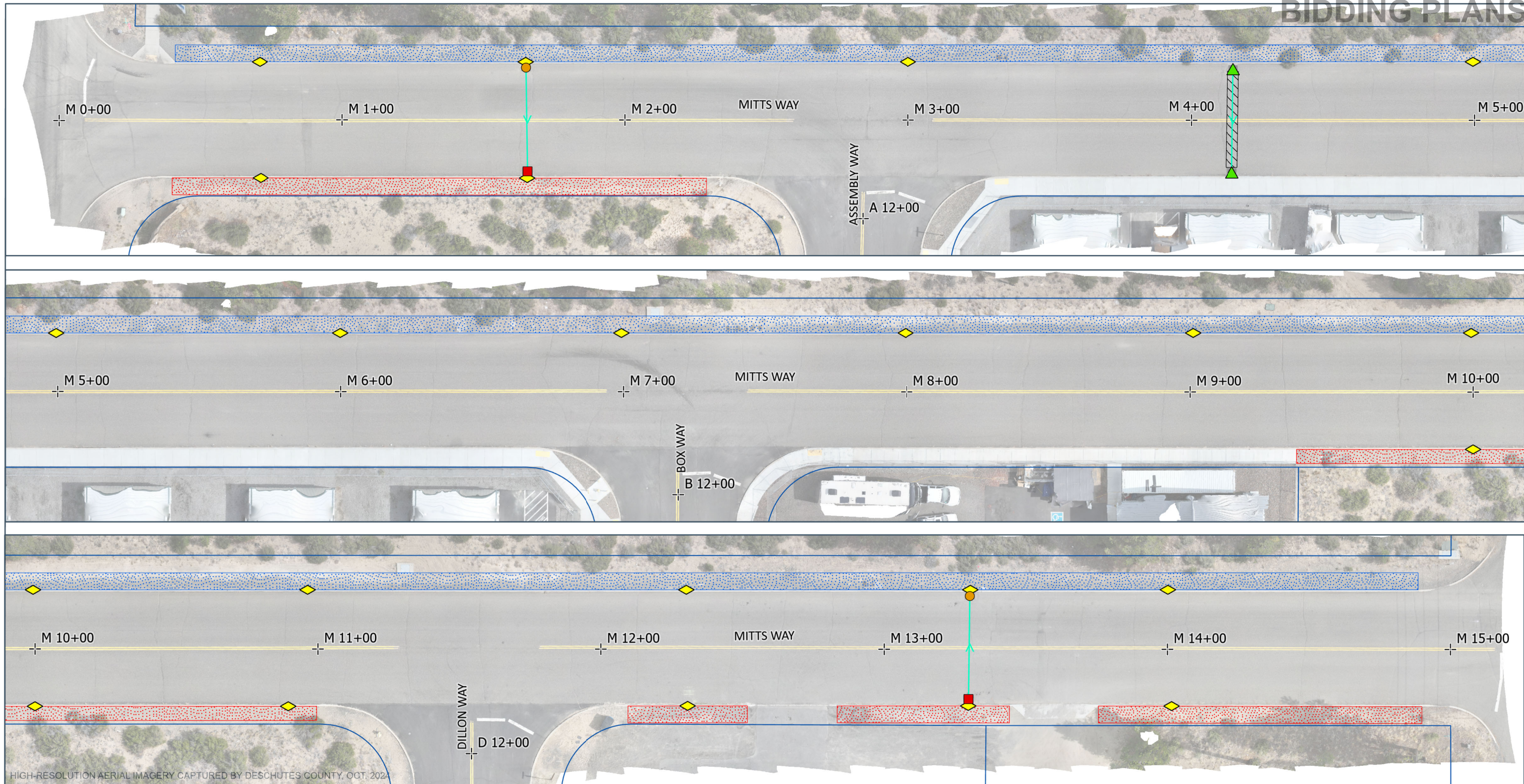
DILLON WAY D 0+00

H 10+00 H 11+00 H 12+00 H 13+00 H 14+00 H 15+00

HINKLE WAY

HIGH-RESOLUTION AERIAL IMAGERY CAPTURED BY DESCHUTES COUNTY, OCT. 2024

REGISTERED PROFESSIONAL
ENGINEER
83448PE
OREGON
NOVEMBER 10, 2009
CODY C. SMITH
RENEWES: JUNE 30, 2026



HIGH-RESOLUTION AERIAL IMAGERY CAPTURED BY DESCHUTES COUNTY, OCT. 2024

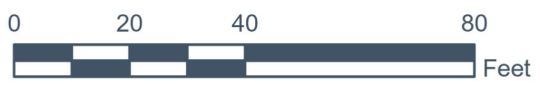
LEGEND

- | | |
|-------------------------------|-------------------------------|
| CATCH BASIN REMOVAL | INFILTRATION DITCH, 2FT DEPTH |
| MODIFY EXTG. CATCH BASIN | EXISTING STORM PIPE |
| UIC REMOVAL | PATCH |
| CURB DRAINAGE OUTLET | STATION |
| INFILTRATION DITCH, 1FT DEPTH | TAXLOT |

NOTES:

INSTALL CURB DRAINAGE OUTLETS WHERE CATCH BASINS ARE REMOVED ACCORDING TO DETAIL.

ABANDON UIC IN-PLACE WHERE OBSTRUCTED BY EXISTING SIDEWALK. SEE DETAIL, SHEET 2.



ROAD
DEPARTMENT

PROJECT
LA PINE UIC STORMWATER
IMPROVEMENTS - PHASE 1

DRAWING NO.
9 OF 9

TITLE
MITTS WAY
STA "M" 0+00 TO 15+00

DATE
7/21/25



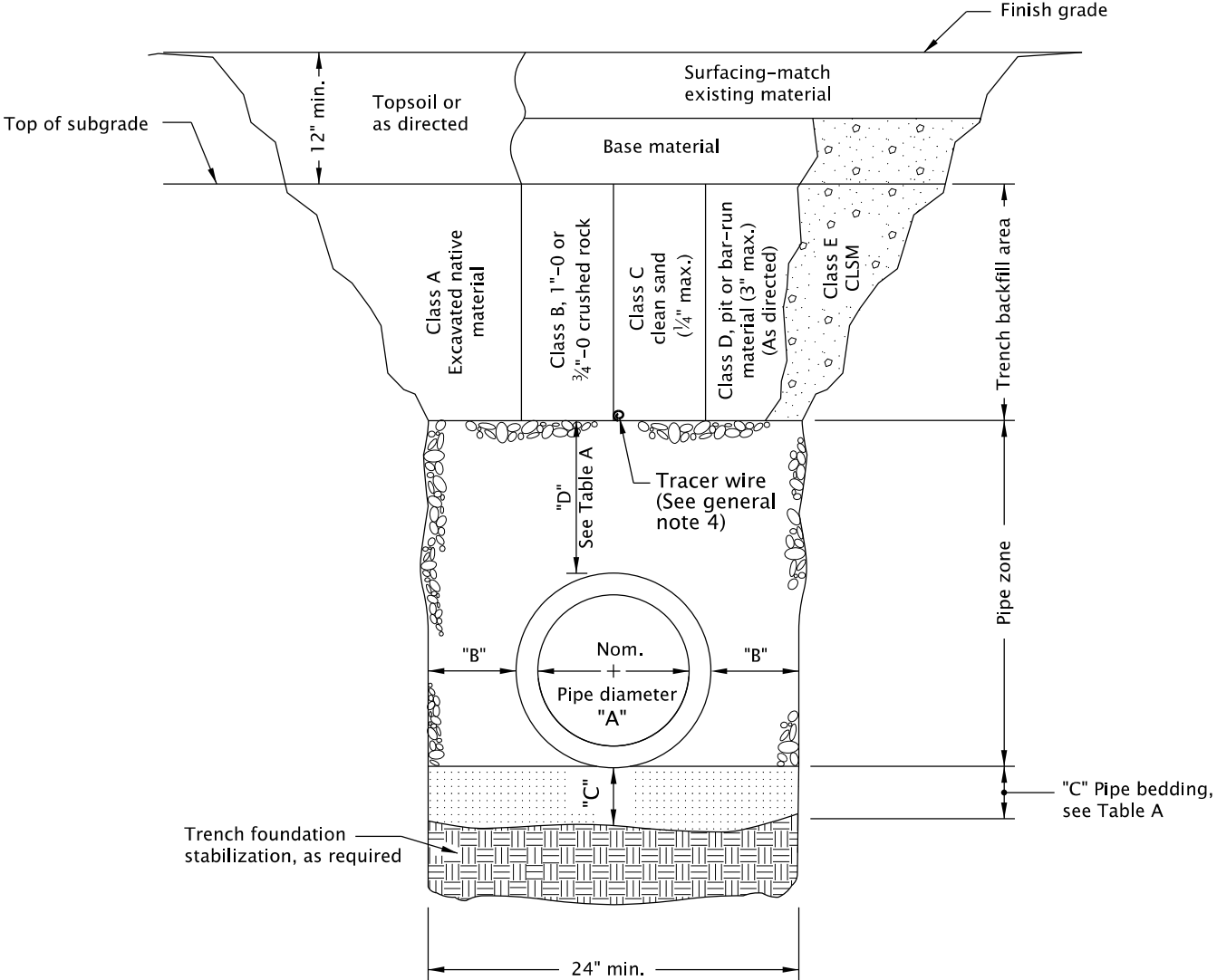
20-JUL-2020

RD300.dgn

TABLE A

"A" (in)	"B" (in)	"C" (in)	"D" (in)
4	10	4	8
6	10	4	8
8	10	6	10
10	10	6	10
12	12	6	10
15	12	6	10
18	16	6	12
21	16	6	12
24	18	6	12
30	18	6	12
36	24	6	14
42	24	6	14
48	24	6	14
54	24	6	14
60	24	6	14
66	24	6	14
72	24	6	14

For pipes over 72" diameter,
see general note 3.



MULTIPLE INSTALLATIONS	
DIAMETER	MIN. SPACE BETWEEN PIPES
Up to 48"	24"
48" to 72"	One half (1/2) dia. of pipe

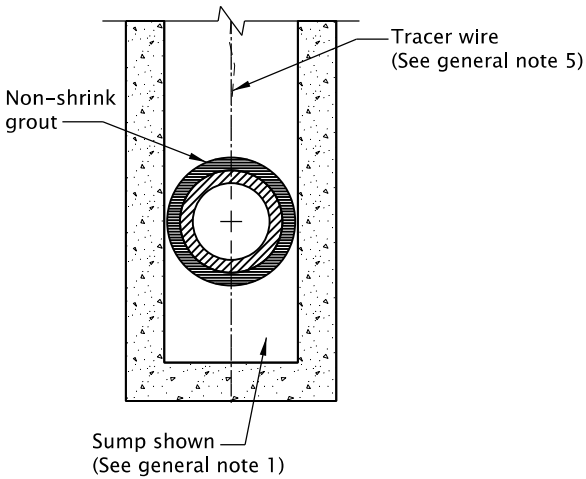
GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. Surfacing of paved areas shall comply with street cut Std. Dwg. RD302.
2. For pipe installation in embankment areas where the trench method will not be used and the pipe is ≥ 36 " diameter, increase dimension "B" to nominal pipe diameter.
3. Pipes over 72" diameter are structures, and are not applicable to this drawing.
4. See Std. Dwg. RD336 for tracer wire details (When required).

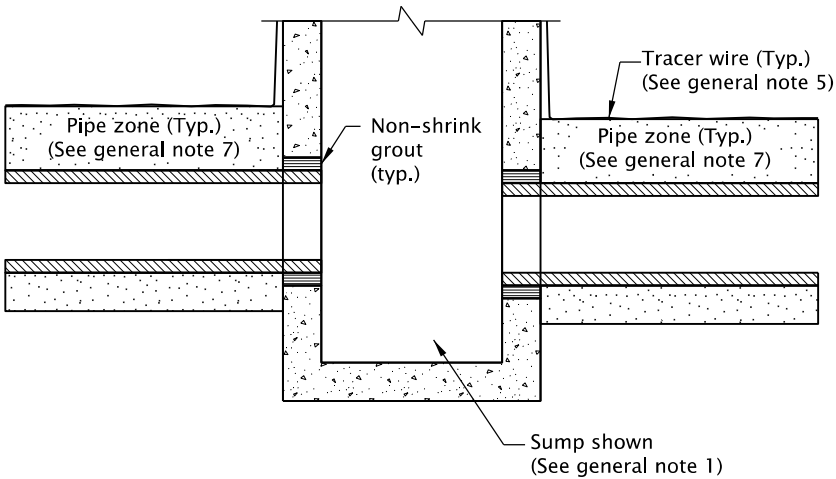
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.			
OREGON STANDARD DRAWINGS			
TRENCH BACKFILL, BEDDING, PIPE ZONE AND MULTIPLE INSTALLATIONS			
2024			
DATE	REVISION DESCRIPTION		
CALC. BOOK NO.	N/A	SDR DATE	14-JUL-2014
RD300			

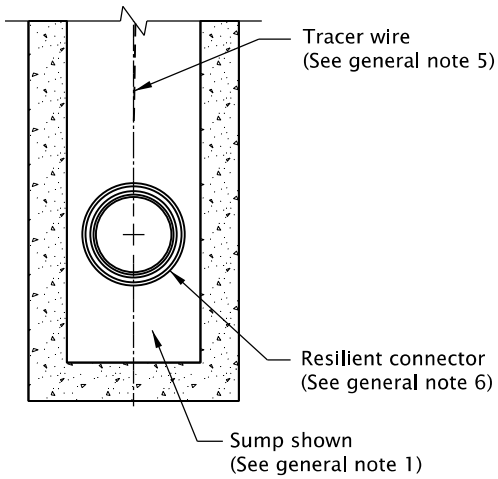
20-JAN-2023
RD339.dgn



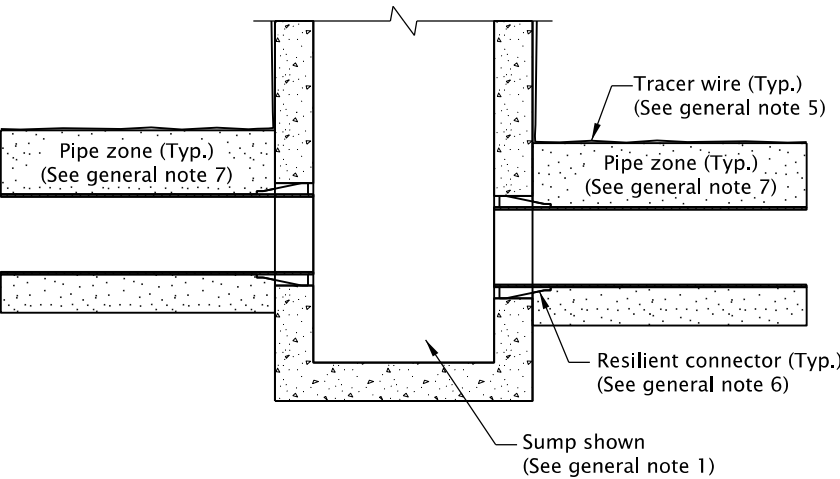
SECTION B-B



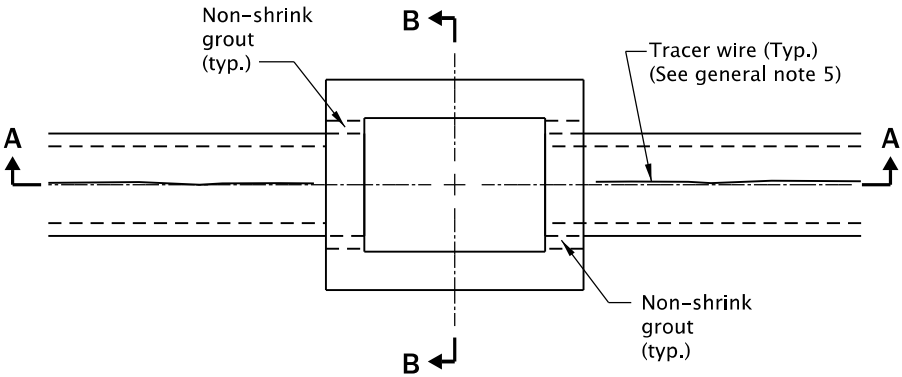
SECTION A-A



SECTION D-D

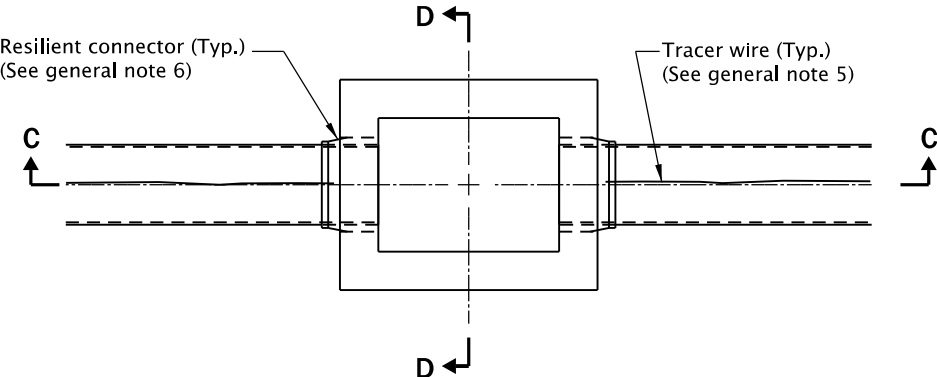


SECTION C-C



PLAN

CONNECTION OF RIGID PIPE TO STRUCTURE



PLAN

CONNECTION OF FLEXIBLE PIPE TO STRUCTURE

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. See Std. Dwgs. RD364, RD365, and RD366 for inlet details not shown.
2. See appropriate standard drawings or special project details for other similar structures.
3. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
4. Maximum pipe diameter varies with pipe material.
5. All connecting pipes shall have a tracer wire, or approved alternate. See Std. Dwg. RD336 for tracer wire details.
6. When flexible pipe is used, install resilient connectors conforming to requirements of ASTM C923.
7. Pipe zone varies, see Std. Dwg. RD300.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.			
OREGON STANDARD DRAWINGS			
PIPE TO STRUCTURE CONNECTIONS			
2024			
DATE	REVISION DESCRIPTION		
07-2021	REVISED NOTES		
04-2022	REVISED NOTES		
01-2023	REVISED DETAILS AND NOTES		
CALC. BOOK NO.	N/A	SDR DATE	20-JAN-2023
			RD339



Slope 5.0% normal.
Slope 4.0% max. at curb ramps.
Vary slope as reqd. for drainage
Vary where shown on plans, and
allowed by jurisdiction.



5. Tops of all curbs shall slope toward the roadway at 1.5% max. (Max. 2.0% finished surface slope), unless otherwise shown, or as directed.
6. Dimensions are nominal, vary to conform with curb machine approved by the engineer.
7. Dimensions adjacent to radii are measured to the point of intersection of curb surfaces.
8. For sidewalk details, and monolithic curb & sidewalk, see Std. Dwgs. RD720 & RD721.
9. For drainage curbs, see Std. Dwg. RD701.
10. For curb ramp details, see Std. Dwgs. RD900 series.
11. On or along state highways, curb and gutter is required at curb ramp.

DATE	REVISION DESCRIPTION	
CALC. BOOK NO. - - - - N/A - - - -	SDR DATE 20-JUL-2020 - -	RD700

12-JUL-2022

TM800.dgn

TAPER TYPES & FORMULAS	
TAPER	FORMULA
Merging (Lane Closure)	"L"
Shifting	"L"/2 or ½"L"
Shoulder Closure	"L"/3 or ⅓"L"
Flagging (See Drg. TM850)	50' – 100'
Downstream (Termination)	Varies (See Drawings)

★ Use Pre-Construction Posted Speed to select the Speed from the Tables below:

★ SPEED (mph)	MINIMUM FLARE RATE
≤ 30	8:1
35	9:1
40	10:1
45	12:1
50	14:1
55	16:1
60	18:1
65	19:1
70	20:1

MINIMUM LENGTHS TABLE					
"L" VALUE FOR TAPERS (ft)					BUFFER "B" (ft)
★ SPEED (mph)	W = Lane or Shoulder Width being closed or shifted				
	W ≤ 10	W = 12	W = 14	W = 16	
25	105	125	145	165	75
30	150	180	210	240	100
35	205	245	285	325	125
40	265	320	375	430	150
45	450	540	630	720	180
50	500	600	700	800	210
55	550	660	770	880	250
60	600	720	840	960	285
65	650	780	910	1000	325
70	700	840	980	1000	365
FREEWAYS					
55	1000	1000	1000	1000	250
60	1000	1000	1000	1000	285
65	1000	1000	1000	1000	325
70	1000	1000	1000	1000	365

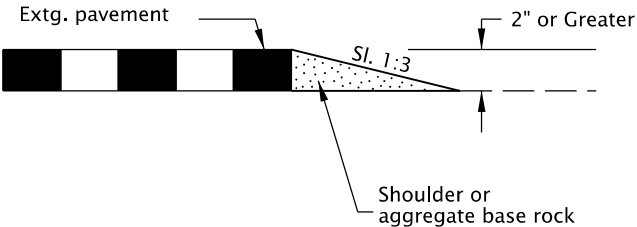
- NOTES:
- For Lane closures where W < 10', use "L" value for W = 10'.
 - For Shoulder closures where W < 10', use "L" value for W = 10' or calculate "L" using formula, for Speeds ≥ 45: L = WS, Speeds < 45: L = S²W/60, S = Speed, W=Width

TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE				
★ SPEED (mph)	Sign Spacing (ft)			Max. Channelizing Device Spacing (ft)
	A	B	C	
20 – 30	100	100	100	20
35 – 40	350	350	350	20
45 – 55	500	500	500	40
60 – 70	700	700	700	40
Freeway	1000	1500	2640	40

- NOTES:
- Place traffic control devices on 10 ft. spacing for intersection and access radii.
 - When necessary, sign spacing may be adjusted to fit site conditions. Limit spacing adjustments to 30% of the "A" dimension for all speeds.

NOTES:

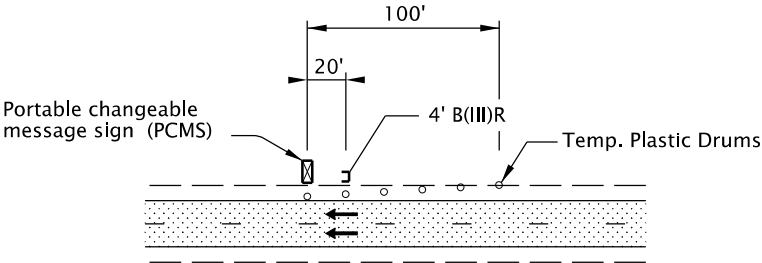
- When paved shoulders adjacent to excavations are less than four feet wide protect longitudinal abrupt edge as shown.
- Use aggregate wedge when abrupt edge is 2 inches or greater.



EXCAVATION ABRUPT EDGE

NOTES:

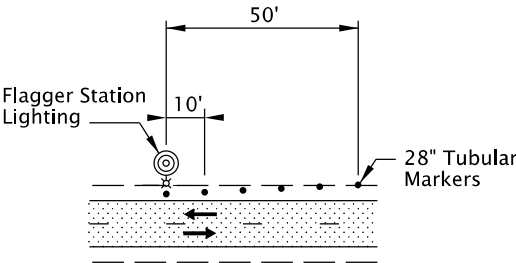
- Install PCMS beyond the outside shoulder, when possible.
- Use the appropriate type of barricade panels for PCMS location. Right shoulder, use Type B(III)R Left shoulder, use Type B(III)L
- Use six drums in shoulder taper on 20' spacing. The drums and barricade may be omitted when PCMS is placed behind a roadside barrier.
- Detail as shown is used for trailered and non-crashworthy components of:
 - Portable Traffic Signals
 - Smart Work Zone Systems



PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) INSTALLATION

NOTES:

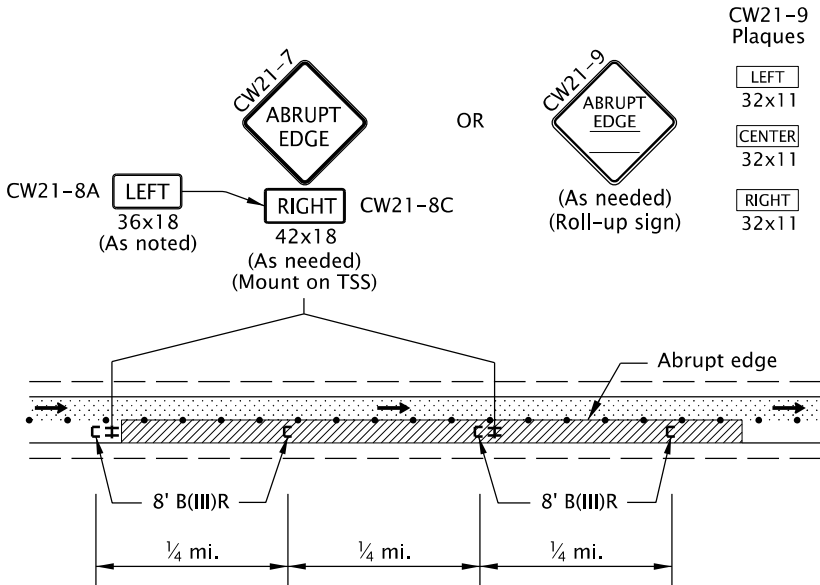
- Install Flagger Station Lighting beyond the outside shoulder, where practical.
- Use six tubular markers in shoulder taper on 10' spacing.
- Place cart / generator / power supply off of the shoulder, as far as practical.



FLAGGER STATION LIGHTING DELINEATION

NOTES:

- Abrupt edges may be created by paving, operations, excavations or other roadway work. Use abrupt edge signing for longitudinal abrupt edges of 1 inch or greater.
- If the excavation is located on left side of traffic, replace the 8' B(III)R barricades with 8' B(III)L barricades and replace the "RIGHT" (CW21-8C) riders with "LEFT" (CW21-8A) riders.
- Continue signing and other traffic control devices throughout excavation area at spacings shown.
- If roll-up signs are used, attach the correct (CW21-9) plaques to the sign face using hook and loop fasteners. Place roll-up signs in advance of barricades.



TYPICAL ABRUPT EDGE DELINEATION

GENERAL NOTES FOR ALL TCP DRAWINGS:

- Signs and other Traffic Control Devices (TCD) shown are the minimum required.
- Place a barricade approx. 20' ahead of all sequential arrow boards.
- Arrows shown in roadway are directional arrows to indicate traffic movements.
- All signs are 48" x 48" unless otherwise shown. Use fluorescent orange sheeting for the background of all temporary warning signs.
- All diamond shaped warning signs mounted on barrier sign supports shall be 36" by 36". All other signs mounted on barrier sign supports shall not exceed 12 sq. ft. in total sign area.
- Low speed highways have a pre-construction posted speed of 40 mph or less. High speed highways have a pre-construction posted speed of 45 mph or higher.
- Do not locate sign supports in locations designated for bicycle or pedestrian traffic.
- Combine drawing details to complete temporary traffic control for each work activity.
- Coordinate and control pedestrian movements through a Temporary Accessible Route using Flaggers, Traffic Control Measures, or as directed.
- Provide a truck mounted attenuator (TMA) to protect the active work area on high speed divided highways or freeways when positive protection is not available, or as directed.
- To be accompanied by Dwg. Nos. TM820 & TM821.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

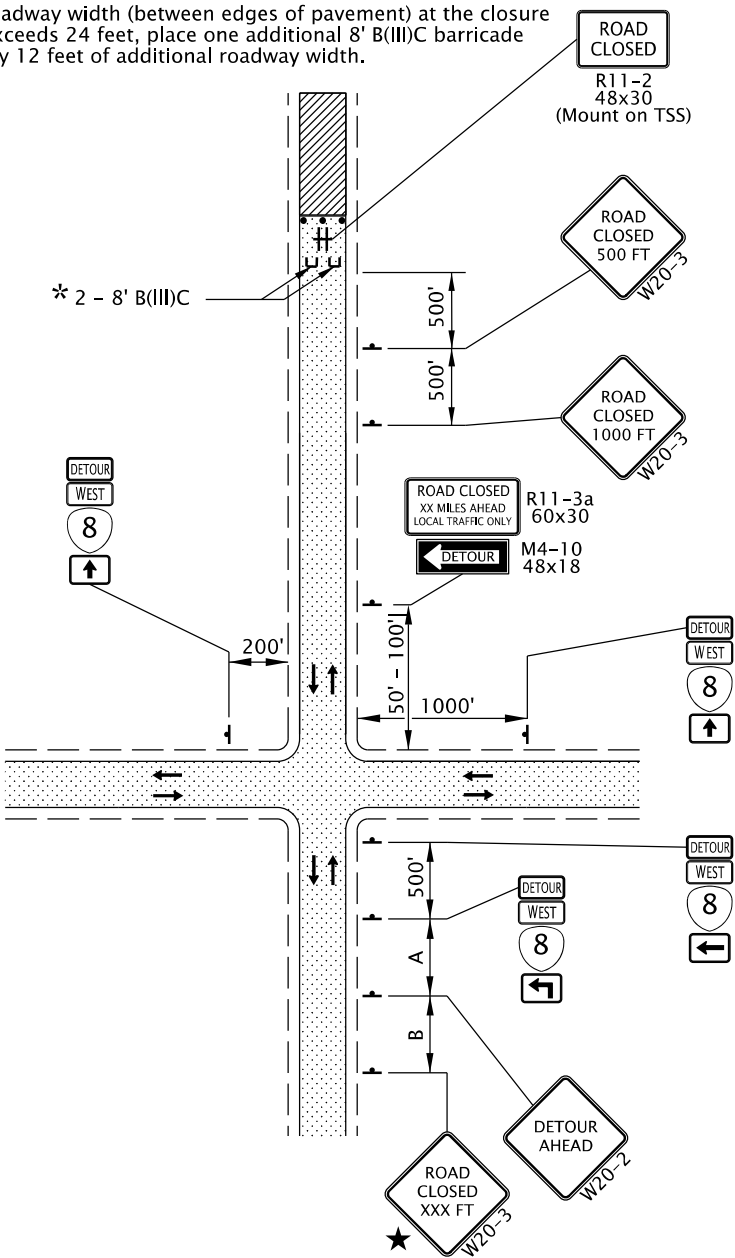
All materials shall be in accordance with the current Oregon Standard Specifications.			
OREGON STANDARD DRAWINGS			
TABLES, ABRUPT EDGE AND PCMS DETAILS			
2024			
DATE	REVISION DESCRIPTION		
07-2022	Added a note for TPAs		
07-2024	Added a note for TMAs		
CALC. BOOK NO.	N/A	SDR DATE	12-JUL-2024
TM800			

01-JUL-2020

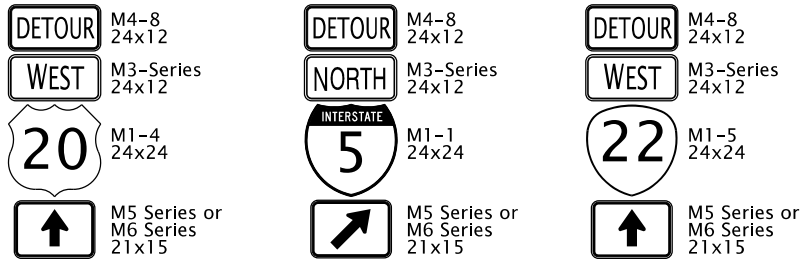
TM840.dgn

NOTES:
If closure point is less than 1500 ft. from nearest intersection, use a "ROAD CLOSED TO THRU TRAFFIC" (R11-4) sign in place of the "ROAD CLOSED XX MILES AHEAD" sign.

* If the roadway width (between edges of pavement) at the closure point exceeds 24 feet, place one additional 8' B(III)C barricade for every 12 feet of additional roadway width.

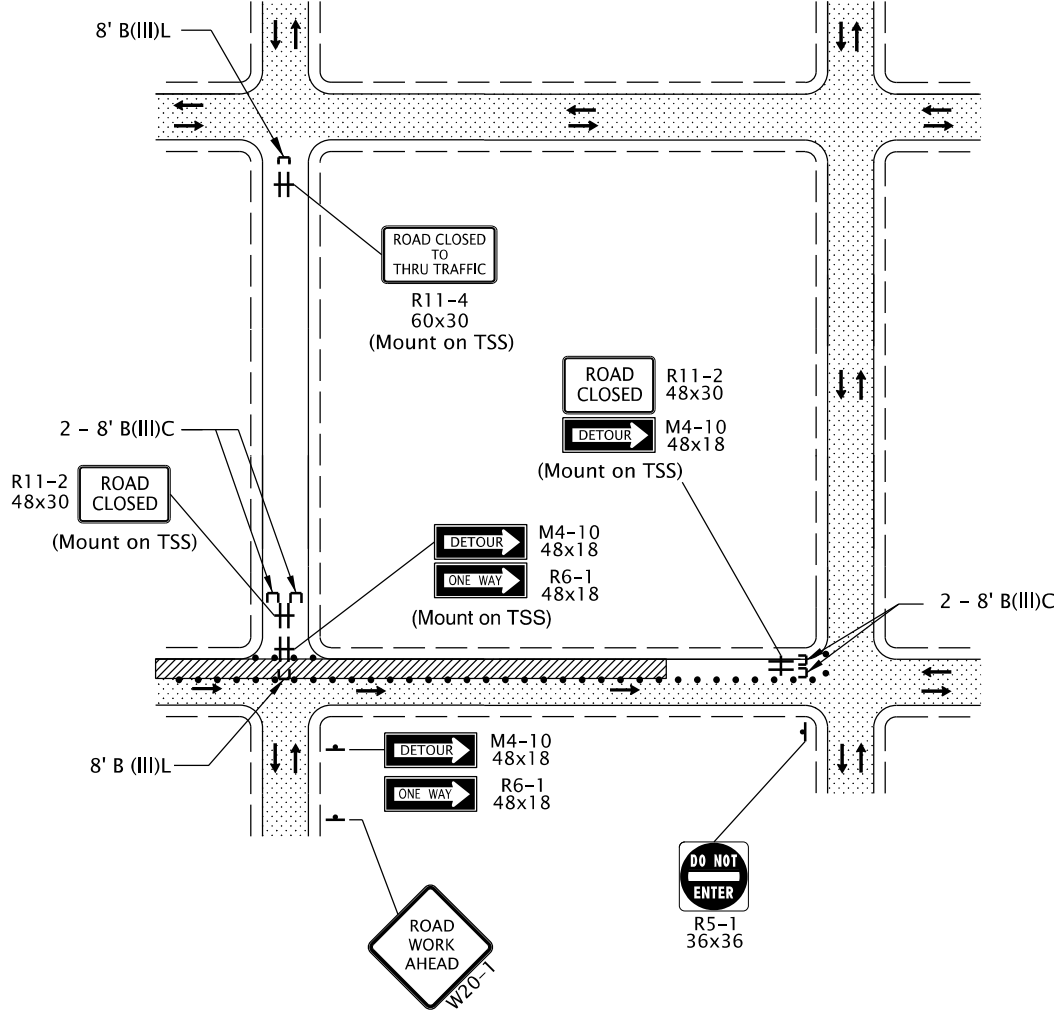


TYPICAL ROAD CLOSURE WITH DETOUR



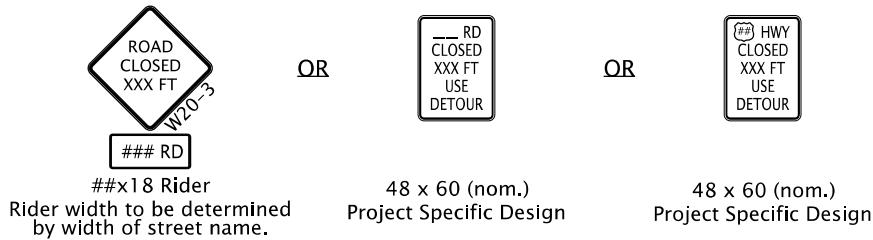
NOTE:
• When detour routes overlap, each Route Shield will include a separate cardinal direction, detour, and directional arrow auxiliary sign assembly.

TYPICAL TRAILBLAZER ASSEMBLY



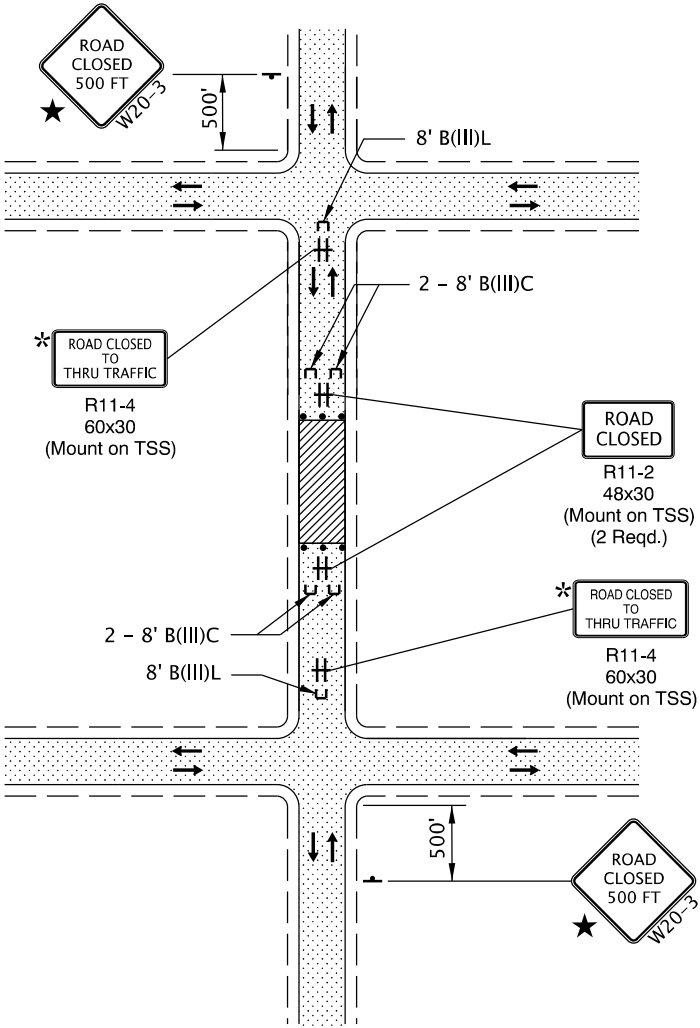
TYPICAL PARTIAL ROAD CLOSURE

GENERAL NOTES FOR ALL DETAILS:
★ A "Street Name" rider may be used to enhance Road Closure signing; or provide a project specific design; or, as shown in the traffic control plan.



- Use a minimum of two Type III barricades for a road closure. For roads $\geq 36'$ wide between curbs or edge of pavement, use a minimum of three Type III barricades for the closure point.
- For full road closures, the C or LR barricade may be used.
- Place additional signing as directed.
- To determine sign spacing A, B, & C, use the "TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE" on Dwg. TM800.
- To be accompanied by Dwg. Nos. TM820 & TM821.

- 28" Tubular Markers See TCD Spacing Table on TM800 for max. spacing.
- UNDER TRAFFIC
- UNDER CONSTRUCTION



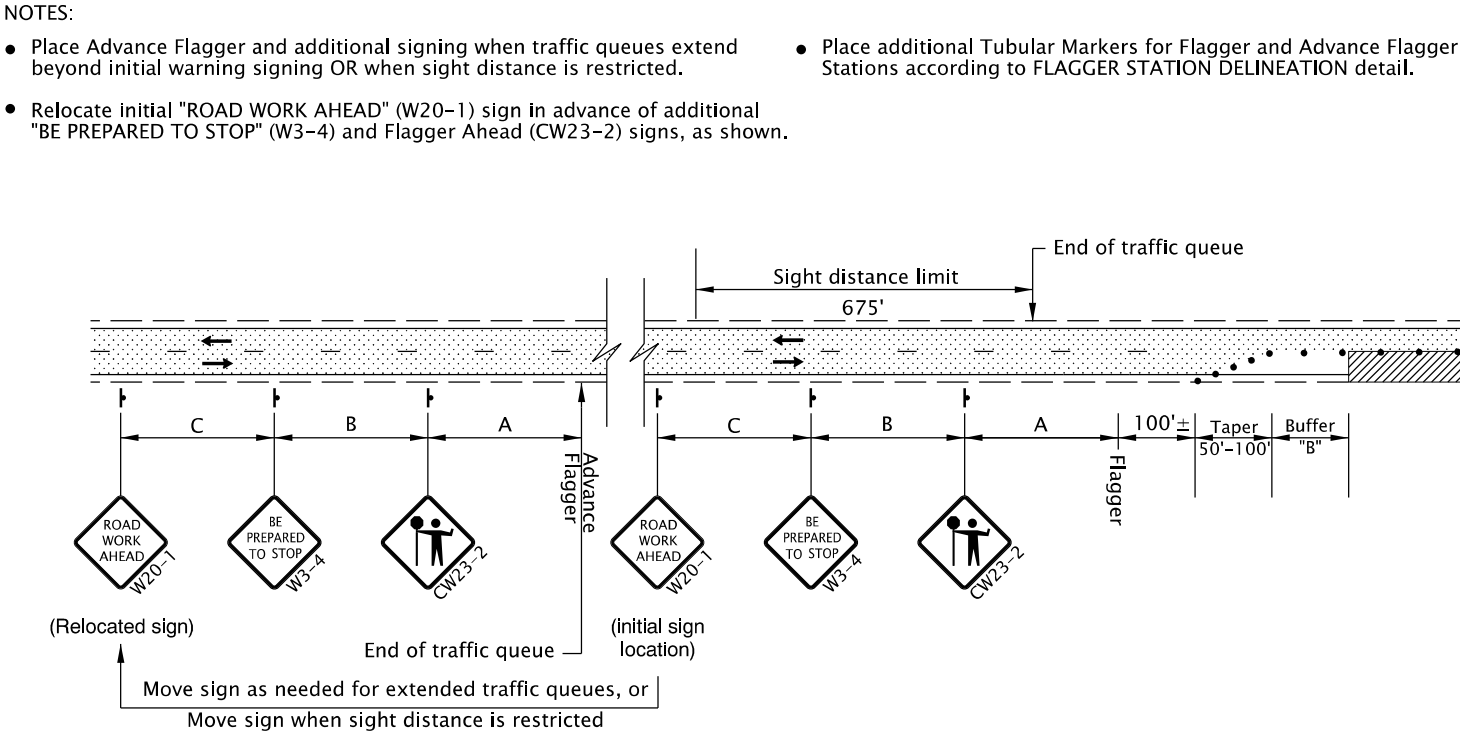
NOTE:
* If accesses exist between intersection and point of closure, install "ROAD CLOSED TO THRU TRAFFIC" sign as shown.

TYPICAL ROAD CLOSURE

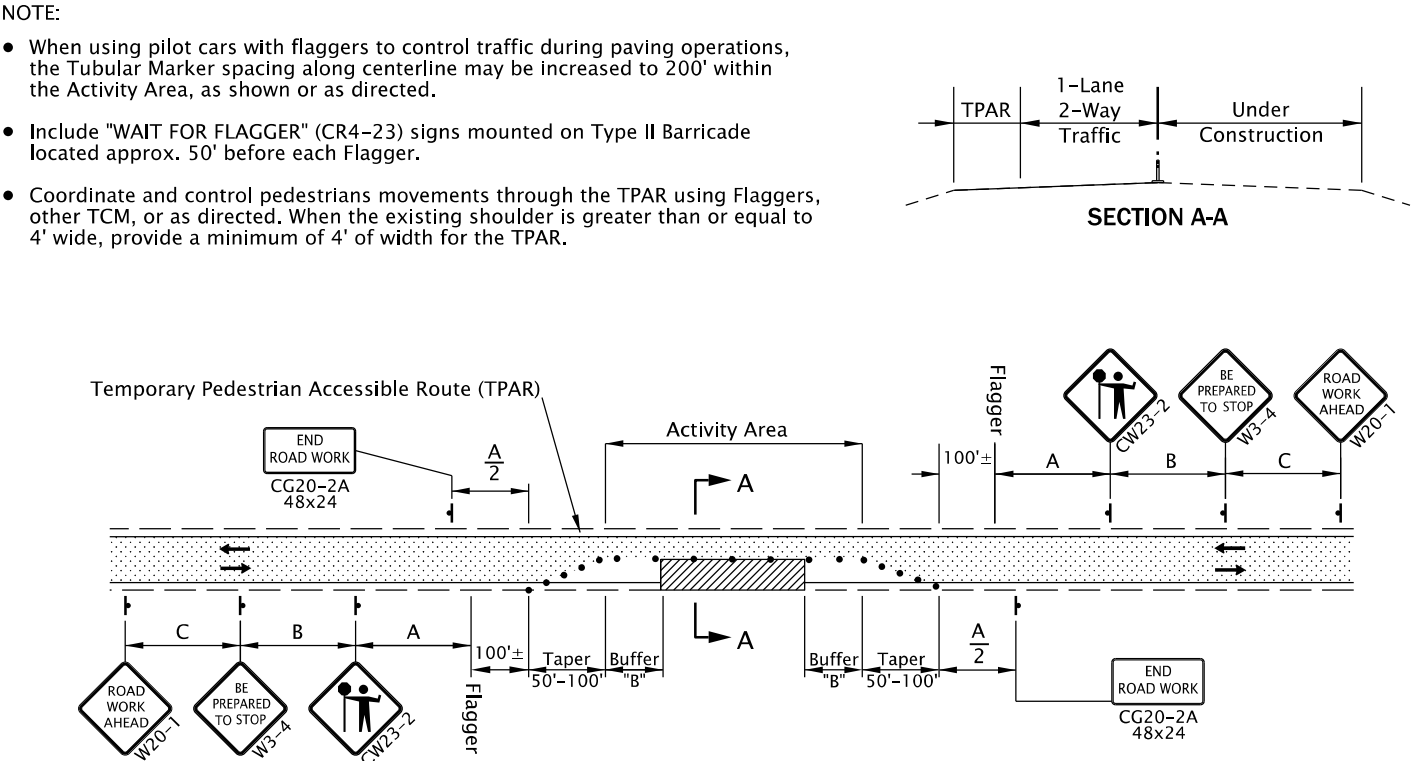
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.			
OREGON STANDARD DRAWINGS			
CLOSURE DETAILS			
2024			
DATE	REVISION DESCRIPTION		
CALC. BOOK NO.	N/A	SDR DATE	01-JUL-2020
			TM840

13-JAN-2023
TM855.dgn



ADVANCE FLAGGER FOR EXTENDED TRAFFIC QUEUES



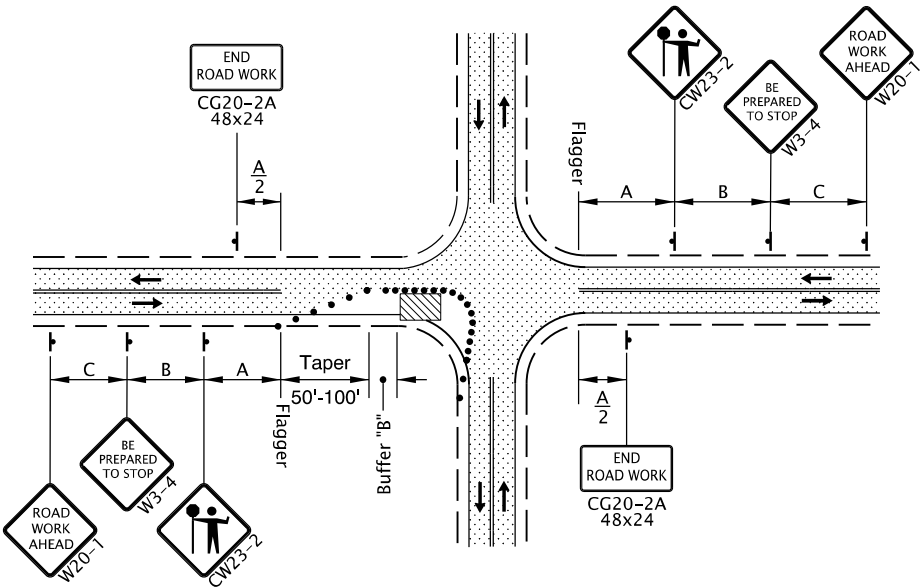
2-Lane, 2-Way Roadway
ONE LANE CLOSURE

- GENERAL NOTES FOR ALL DETAILS:
- This drawing is only intended to be used where an Automated Flagger Assistance Device (AFAD) cannot be utilized.
 - The "FLAGGER" (CW23-2) symbol sign shall be used only in conjunction with the "BE PREPARED TO STOP" (W3-4) sign.
 - Cover existing passing zone signing, as directed.
 - Install temporary striping as required.
 - To determine Taper Length ("L") and Buffer Length ("B"), use the "MINIMUM LENGTHS TABLE" shown on Dwg. No. TM800.
 - To determine sign spacing A, B, and C, use "TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE" on Dwg. No. TM800.
 - Install a "BICYCLES ON ROADWAY" (CW11-1) sign in advance of the closure when a bike lane is closed, or when the shoulder is closed and bikes are expected.
 - At night, flagger stations shall be illuminated according to the FLAGGER STATION LIGHTING DELINEATION detail on Dwg No. TM800.
 - To be accompanied by Dwg. Nos. TM820 & TM821.

- 28" Tubular Markers on 10' max. spacing around intersection radii.
- 28" Tubular Markers on 20' max. spacing for flagger tapers and stations
- 28" Tubular Markers See TCD Spacing Table on TM800 for max. spacing.

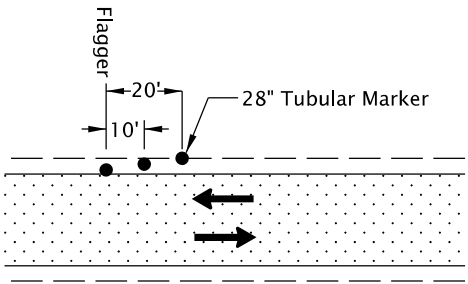
- UNDER TRAFFIC
- UNDER CONSTRUCTION

- NOTE:
- Additional Traffic Control Measures (TCM) may be required for all legs of the intersection



2-Lane, 2-Way Roadway
ONE LANE CLOSURE, INTERSECTION

- NOTE:
- Use a minimum of 3 tubular markers in shoulder taper on 10' spacing for flagger station delineation.



FLAGGER STATION DELINEATION

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.			
OREGON STANDARD DRAWINGS			
2-LANE, 2-WAY ROADWAYS			
2024			
DATE	REVISION DESCRIPTION		
CALC. BOOK NO.	N/A	SDR DATE	13-JAN-2023
TM855			