6/10/2022 10:06 AM

LINN COUNTY ROAD DEPARTMENT

OVERALL PROJECT LENGTH: 0.08 MILES

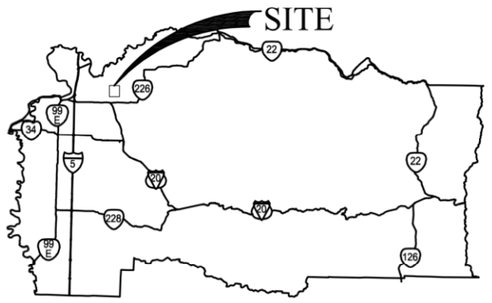
BRIDGES AND ROADWAYS

MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT

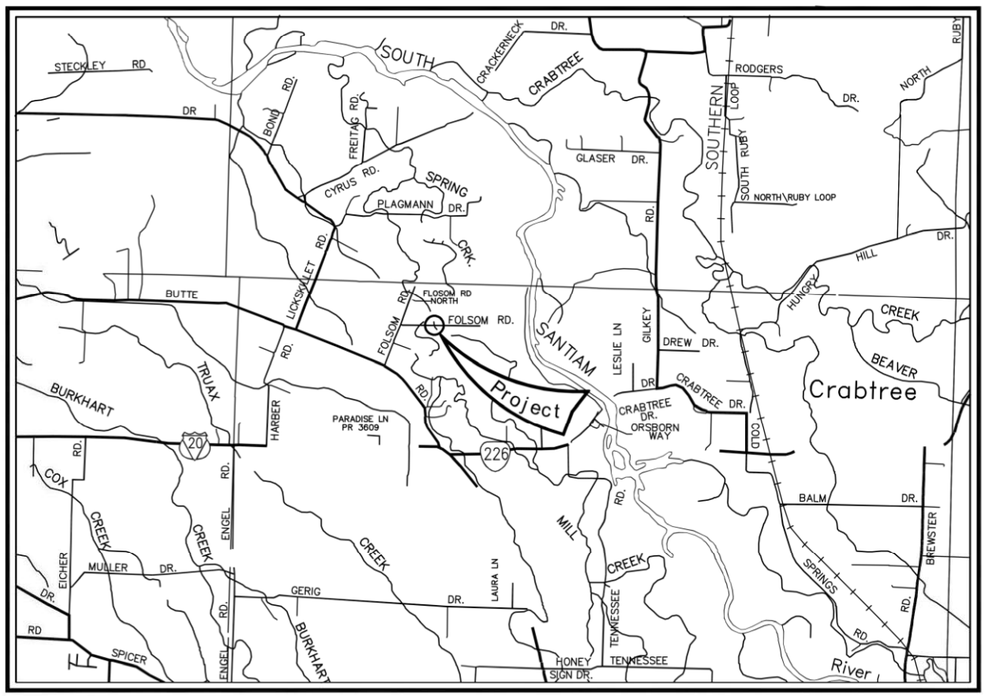
LINN COUNTY BRIDGE NO. BR0651-0065

ODOT BRIDGE NO. 23903

JULY 2022



PROJECT LOCATION



SEE SHEET 2 FOR SHEET INDEX

Think SAFETY!

Don't be a Weak Link

NOTICE NOTICE NOTICE NOTICE NOTICE NOTICE NOTICE NOTICE NOTICE NOTICE NOTICE NOTICE NOTICE

ATTENTION:
Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain a copy of the rules by calling the center. The telephone number for the Oregon Utility Notification Center is (503) 232-1987.

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065	DATE: 6/7/2022		
PROJECT NO: CB1801			
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.			
DESIGNED BY: K. Groom	CHECKED BY: A. Potts		
DRAFTED BY: K. Groom	REVIEWED BY: D. Malone		

MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT
LINN COUNTY
2022

TITLE SHEET

SCALE: none | SHEET 1

REGISTERED PROFESSIONAL ENGINEER
76365
Daineal Malone
OREGON
May 23, 2013
DAINEAL LEAH MALONE
Expires: 12/31/22

K:\Projects - Current\BR 0651-0065 Folsom Road Mill Creek Bridge\KMG\ACAD\Folsom Road - Mill Creek Bridge Design 2022.dwg

6/10/2022 9:58 AM

SHEET INDEX	
SHEET NO.	TITLE
1	TITLE SHEET
2	SHEET INDEX, LEGEND, NOTES, STANDARD DRAWINGS & ABBREVIATIONS
3	TRAFFIC CONTROL PLAN
4	TYPICAL SECTIONS
5	PLAN AND PROFILE
6	EROSION CONTROL PLAN
7	SIGNING AND STRIPING PLAN
8	STORMWATER DRAINAGE PLAN
9	UTILITIES
BR-01	PLAN AND ELEVATION
BR-02	GENERAL NOTES
BR-03	FOUNDATION DATA SHEET
BR-04	FOUNDATION PLAN AND DETAILS
BR-05	TYPICAL SECTION AND DECK PLAN
BR-06	SLAB AND DRAINAGE CURB DETAILS
BR-07	BENT 1 PLAN AND ELEVATION
BR-08	BENT DETAILS
BR-09	WINGWALL DETAILS

ABBREVIATION LEGEND			
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS	LT	LEFT
		LRFD	LOAD AND RESISTANCE FACTOR DESIGN
AC	ASPHALT CONCRETE	LS	LUMP SUM
ACP	ASPHALT CONCRETE WEARING SURFACE	M.I.	MALLEABLE IRON
AD	ALGEBRAIC DIFFERENCE	MIN	MINIMUM
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
BP	BEARING	NOM	NOMINAL
BRG	BEGINNING OF PROJECT	OD	OUTSIDE DIAMETER
BT	BENT	ODOT	OREGON DEPARTMENT OF TRANSPORTATION
BTM	BOTTOM	O.F.	OUTSIDE FACE
BVCE	BEGIN VERTICAL CURVE ELEVATION	PC	POINT OF CURVE
BVCS	BEGIN VERTICAL CURVE STATION	PI	POINT OF INTERSECTION
CJP	COMPLETE JOINT PENETRATION	PP	PIPE PILE
CL	CENTERLINE	PT	POINT OF TANGENT
CTR	CENTER	PVI	POINT OF VERTICAL INTERSECTION
DIA	DIAMETER	QPL	QUALIFIED PRODUCTS LIST
DWG	DRAWING	R	RADIUS
EA	EACH	RT	RIGHT
ELEV/EL	ELEVATION	SHLD	SHOULDER
EOP	EDGE OF PAVEMENT	SHT	SHEET
EP	END OF PROJECT	SL	SLOPE
EVCE	END VERTICAL CURVE ELEVATION	STA	STATION
EVCX	END VERTICAL CURVE STATION	STD	STANDARD
EXTG/EX	EXISTING	T	TANGENT DISTANCE
IE	INVERT ELEVATION	TYP	TYPICAL
I.F.	INSIDE FACE	VC	VERTICAL CURVE
K	LENGTH OF CURVE/DIFFERENCE IN GRADE	VERT	VERTICAL

LEGEND

- 500 — CONTOUR
- ROW — ROW — RIGHT OF WAY
- Easement — TEMPORARY CONSTRUCTION EASEMENT
- CENTERLINE
- EXISTING EDGE OF PAVEMENT
- EXISTING SHOULDER
- EXISTING DRIVEWAY
- OHP — OHP — EXISTING OVERHEAD POWER LINE
- TEL — TEL — EXISTING TELEPHONE LINE
- GAS — GAS — EXISTING GAS LINE
- EXISTING FENCE
- EXISTING GUARDRAIL
- EXISTING TOP OF BANK
- EXISTING STREAM
- CONSTRUCTION CENTERLINE
- EDGE OF PAVEMENT
- SHOULDER
- CURB
- DITCH
- SAWCUT LINE
- TOE OF CONSTRUCTION FILL
- SUBGRADE GEOTEXTILE
- EXISTING VEGETATION TO BE REMOVED
- EXISTING VEGETATION TO REMAIN
- EXISTING SURVEY MONUMENT
- EXISTING SURVEY CONTROL
- EXISTING SIGN AND POST
- EXISTING UTILITY POLE AND GUY
- EXISTING TELEPHONE PEDESTAL
- EXISTING STRUCTURE
- CONCRETE

NOTES:

1. TAXLOT LINES AND INFORMATION AND EXISTING STRUCTURES ARE SHOWN FOR REFERENCE PURPOSES ONLY.
2. PROTECT ALL SURVEY MONUMENTS AND PROPERTY PINS
3. UNLESS OTHERWISE NOTED OR ORDERED BY THE ENGINEER, CLEAR AND GRUB TO THE TOE OF THE CONSTRUCTION FILL.
4. UNLESS OTHERWSIE NOTED OR ORDERED BY THE ENGINEER, CUT, DECK AND PLACE ALL TREES 10 INCHES OR LARGER IN DIAMETER AT A LOCATION SELECTED BY THE RESPECTIVE PROPERTY OWNER. TREE SYMBOL SHOWN DOES NOT REPRESENT ACTUAL TREE OR QUANTITY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE PRIOR TO PLACING A BID IN ORDER TO DETERMIE THE EXACT SIZE AND QUANTITIES OF THE TREES AND OTHER MATERIALS THAT WILL NEED TO BE CLEARED AND GRUBBED.

ODOT STANDARD DRAWING NUMBERS:

BRIDGE
- BR140 Poured Joint Seal
- BR165 Bridge Approach Slab
- BR226 2-Tube Side Mount Rail
- BR230 2-Tube Side Mount Rail Transition
- BR420 26" Precast Prestressed Slab
- BR445 Precast Prestressed Boxes and Slabs Details

GUARDRAIL
- RD402 Midwest Guardrail System Types
- RD404 Midwest Guardrail System Steel Post and Block
- RD407 Midwest Guardrail System (W-Beam)
- RD409 Thrie Beam Guardrail
- RD410 Thrie Beam Guardrail Transition
- RD416 Midwest Guardrail System Standard Hardware (Nuts, Bolts, Washers and Misc.)
- RD417 Midwest Guardrail System End Sections
- RD420 Midwest Guardrail System Non-Flared Energy-Absorbing Terminal
- RD442 Midwest Guardrail System Typical Layout at Bridge Ends
- RD450 Guardrail Anchors (Steel)

FENCES
- RD810 Barbed and Woven Wire Fences

EROSION CONTROL
- RD1030 Sediment Barrier Type 2, 3 and 4

PAVEMENT MARKINGS
- TM500 Pavement Marking Standard Detail Blocks
- TM503 Pavement Marking Standard Detail Blocks

SIGN, ILLUMINATION AND SIGNAL SUPPORT STRUCTURES
- TM676 Sign Attachments
- TM677 Sign Mounts
- TM681 Perforated Steel Square Tube (PSST) Sign Support Installation
- TM687 Perforated Steel Square Tube (PSST) Anchor Foundation

TEMPORARY TRAFFIC CONTROL
- TM800 Tables, Abrupt Edge and PCMS Details
- TM821 Temporary Sign Supports
- TM822 Temporary Sign Supports
- TM870 Bridge Construction

ODOT STANDARD DETAIL NUMBERS:

EMBANKMENTS/CUTS
- DET2100 Standard Embankment Construction
- DET2101 Sliver Fill Benching Details

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:09:13-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

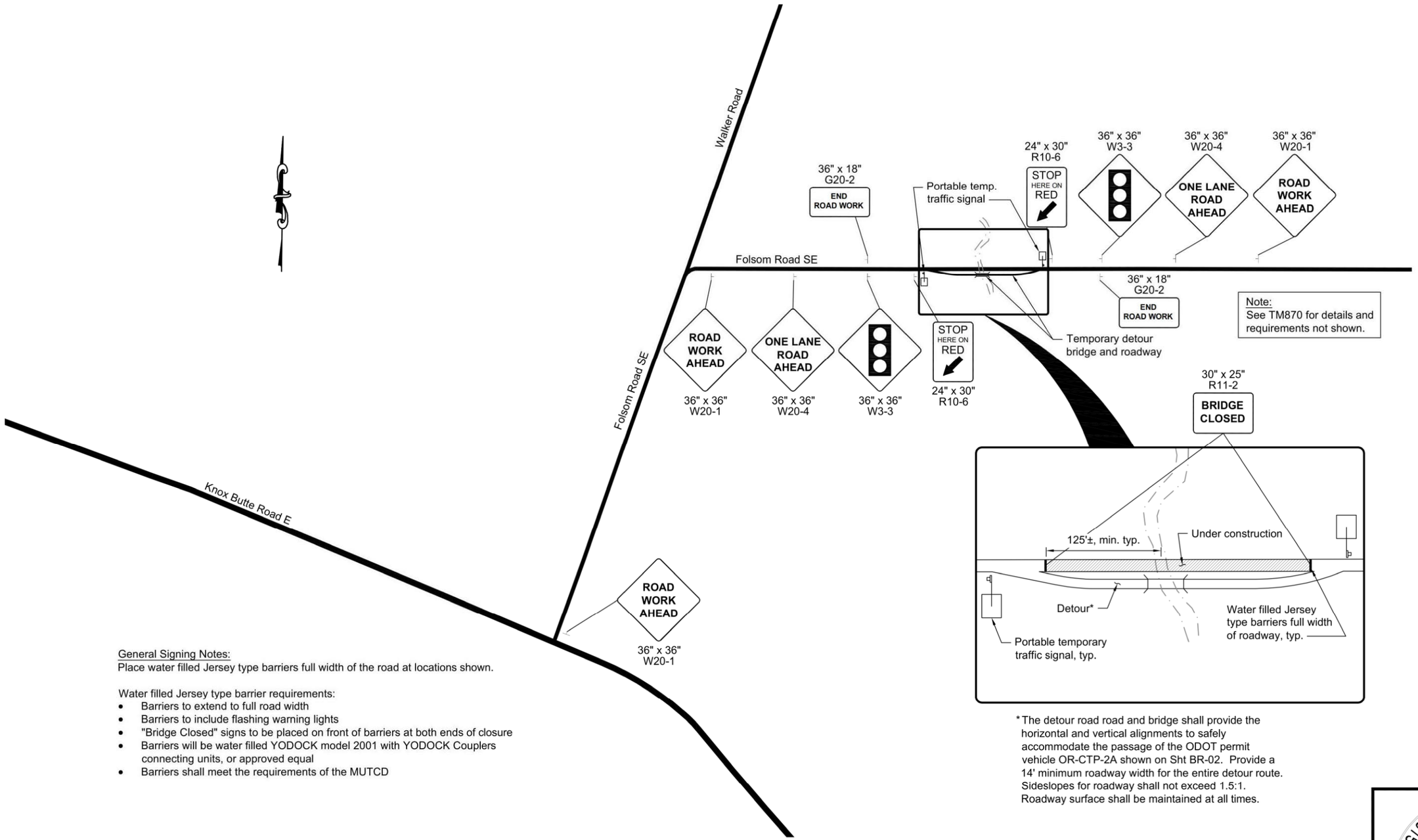
BRIDGE NO: 0651-0065 DATE: 6/7/2022
PROJECT NO: CB1801
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.
DESIGNED BY: K. Groom CHECKED BY: A. Potts
DRAFTED BY: K. Groom REVIEWED BY: D. Malone

MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT
LINN COUNTY
2022

SHEET INDEX, LEGEND, NOTES, STANDARD DRAWINGS & ABBRIVIATIONS

SCALE: none | SHEET 2

K:\Projects - Current\BR 0651-0065 Folsom Road Mill Creek Bridge\KMG\ACAD\Folsom Road - Mill Creek Bridge Design 2022.dwg



General Signing Notes:
Place water filled Jersey type barriers full width of the road at locations shown.

Water filled Jersey type barrier requirements:

- Barriers to extend to full road width
- Barriers to include flashing warning lights
- "Bridge Closed" signs to be placed on front of barriers at both ends of closure
- Barriers will be water filled YODOCK model 2001 with YODOCK Couplers connecting units, or approved equal
- Barriers shall meet the requirements of the MUTCD

*The detour road road and bridge shall provide the horizontal and vertical alignments to safely accommodate the passage of the ODOT permit vehicle OR-CTP-2A shown on Sht BR-02. Provide a 14' minimum roadway width for the entire detour route. Sideslopes for roadway shall not exceed 1.5:1. Roadway surface shall be maintained at all times.

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065	DATE: 6/7/2022		
PROJECT NO: CB1801			
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.			
DESIGNED BY: K. Groom	CHECKED BY: A. Potts		
DRAFTED BY: K. Groom	REVIEWED BY: D. Malone		

MILL CREEK - FOLSOM ROAD
BRIDGE REPLACEMENT

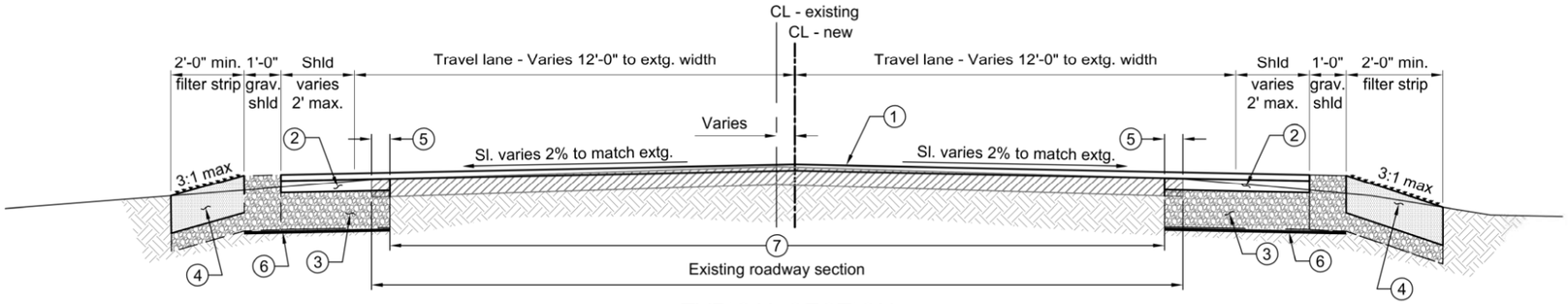
LINN COUNTY
2022

TRAFFIC CONTROL PLAN

SCALE: none | SHEET 3

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:10:15-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM

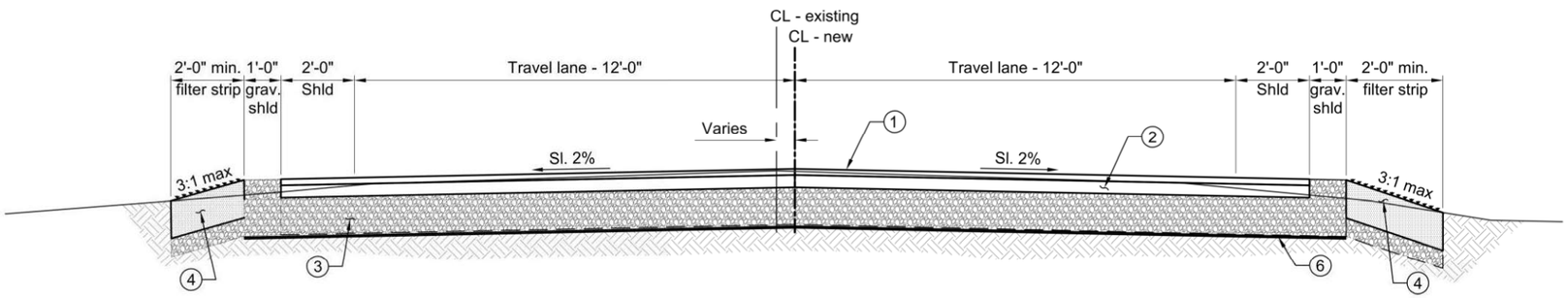
Expires: 6/30/2023



TYPICAL SECTION

NO SCALE

STA: 1+35.0 to STA: 2+60.0
STA: 3+95.0 to STA: 5+60.0



TYPICAL SECTION

NO SCALE

STA: 2+60.0 to STA: 2+76.0
STA: 2+76.0 to STA: 3+81.3 (Structure and bridge approach slabs)
STA: 3+81.3 to STA: 3+95.0

1. Asphalt wearing course, Level 3, $\frac{1}{2}$" dense graded ACP, 2" nominal thickness
2. Asphalt base course, Level 3, $\frac{1}{2}$" dense graded ACP, 4" nominal thickness. Place in 2" maximum lift thicknesses.
3. Aggregate base course, $\frac{3}{4}$" - 0, 12" depth
4. Construct filter strip. See Sht 8 for details
5. Sawcut and remove existing asphalt 6" from edge of existing pavement
6. Subgrade geotextile, extend 1'-0" minimum beyond edge of pavement
7. Retain and protect existing roadway section

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065 DATE: 6/7/2022
PROJECT NO: CB1801
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.
DESIGNED BY: K. Groom CHECKED BY: A. Potts
DRAFTED BY: K. Groom REVIEWED BY: D. Malone

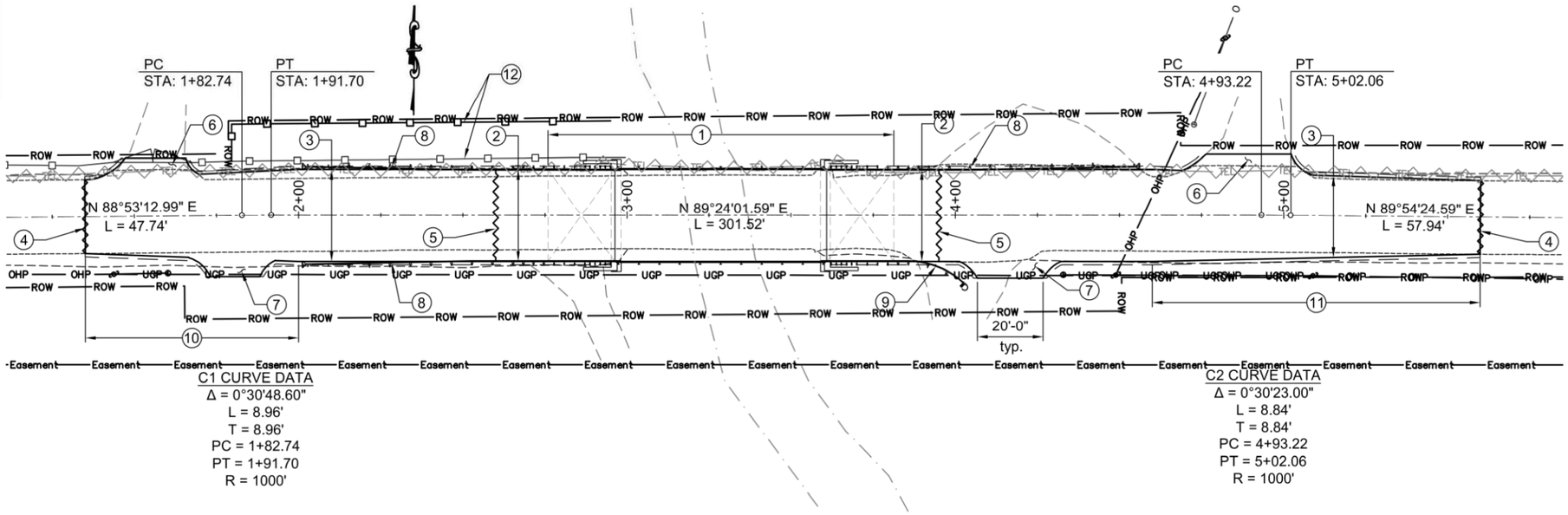
MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT
LINN COUNTY
2022

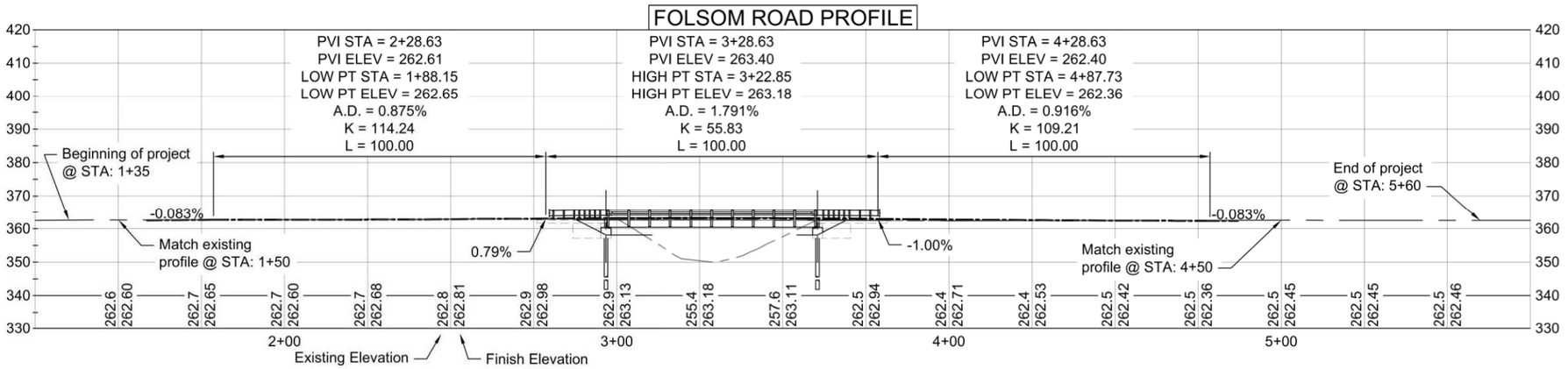
TYPICAL SECTIONS

SCALE: as shown

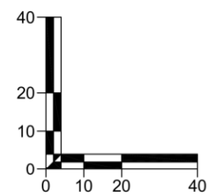
SHEET 4

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:14:06-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023





1. Remove existing bridge and construct County Bridge Number 0651-0065 on Folsom Road over Mill Creek. See sheets BR-01 to BR-09.
2. Rebuild roadway approach with 28' wide asphalt concrete pavement on a crushed aggregate base from STA: 2+60.0 to STA: 2+76.0 and STA: 3+81.3 to STA: 3+95.0. See Sheet 4 for Typical Section
3. Grind and construct asphalt concrete pavement overlay from STA: 1+35.0 to STA: 2+60.0, and from STA: 3+95.0 to STA: 5+60.0. Grind from 2" to 0" from STA: 1+35.0 to STA: 2+60.0, and from 0" to 2" from STA: 3+95.0 to STA: 5+60.0.
4. Provide a 2" deep vertical sawcut full width of existing pavement at STA: 1+35.0 and STA: 5+60.0.
5. Sawcut existing pavement full width perpendicular to traffic at STA: 2+60.0 and STA: 3+95.0 prior to existing bridge and approaches removal.
6. Construct 5' asphalt pavement overlays at existing driveways and field accesses. Raise grade as required to match into the new roadway elevation. STA 1+55 LT and STA: 4+90 LT.
7. Relocate field accesses and construct using 8-inches of aggregate base and 4-inches of ACP. Extend ACP limits 5' from edge of new pavement. STA 1+80 RT and 4+16 RT.
8. Install thrie-beam terminal connector, guardrail transition, 12.5' of Type 3 guardrail, 12.5' of Type 2A guardrail, and energy absorbing guardrail terminal (Test Level 3) with W = 1' from end of bridge rail, per standard drawings BR230, RD402, RD404, RD409, RD410, RD416, RD417, RD420 and RD442. All guardrail to be constructed with steel posts.
9. Install thrie-beam terminal connector, guardrail transition, 6.25' Type 4 tangent section, 18.75' Type 4 guardrail w/25' radius, and thrie beam end piece (Type B) with Type 1 modified anchor per DET1455, BR230,RD402, RD404, RD409, RD410, RD416, RD417, RD420 and RD442. All guardrail to be constructed with steel posts.
10. Taper ACP from existing roadway width to 28.0' from STA: 1+35.0 to STA: 2+00.0.
11. Taper ACP from 28.0' to existing roadway width from STA: 4+60 to STA: 5+60
12. Remove existing fence from STA: 1+80 LT to STA: 3+00 LT. Install new fence from STA: 1+80 LT to STA: 2+95 LT 1' inside Right of Way. Tie into existing fence at STA: 1+80. Install Type 2 fence with metal posts per RD810



LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065 DATE: 6/7/2022
PROJECT NO: CB1801
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.
DESIGNED BY: K. Groom CHECKED BY: A. Potts
DRAFTED BY: K. Groom REVIEWED BY: D. Malone

MILL CREEK - FOLSOM ROAD
BRIDGE REPLACEMENT
LINN COUNTY
2022

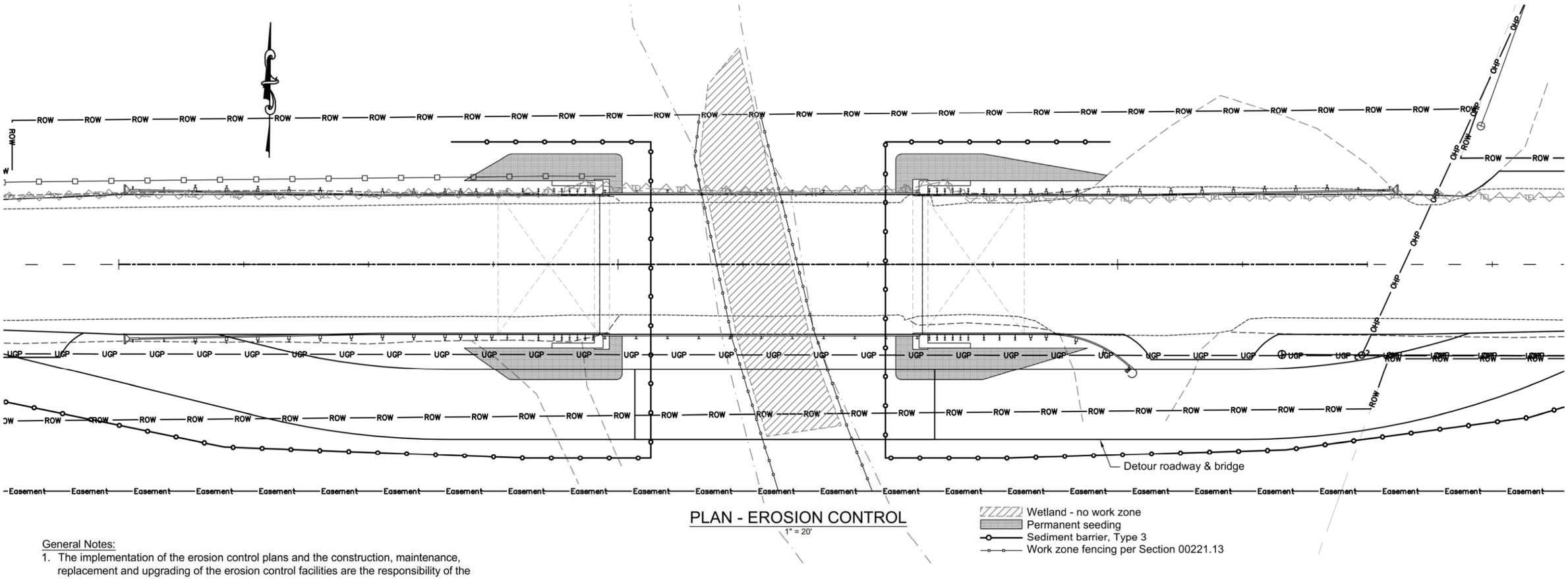
PLAN AND PROFILE

SCALE: as shown SHEET 5

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:14:35-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023

6/10/2022 9:58 AM

K:\Projects - Current\BR 0651-0065 Folsom Road Mill Creek Bridge\KMGVACAD\Folsom Road - Mill Creek Bridge Design 2022.dwg



PLAN - EROSION CONTROL

1" = 20'

- Wetland - no work zone
- Permanent seeding
- Sediment barrier, Type 3
- Work zone fencing per Section 00221.13

General Notes:

1. The implementation of the erosion control plans and the construction, maintenance, replacement and upgrading of the erosion control facilities are the responsibility of the Contractor until all construction is completed and approved.
2. Installation, construction, and maintenance of erosion control facilities shall begin prior to clearing, grading, or other earth altering activities.
3. The erosion control facilities shown on this plan are anticipated for site conditions. During the construction period, these facilities shall be upgraded for unexpected storm events to insure that sediment and sediment laden water does not leave the site.
4. If the contractor elects to use a work bridge or access beyond the limits shown, the erosion control details shown shall be extended past the limits of the work bridge and access.
5. Develop a revised plan of the erosion control facilities shown in accordance with the requirements of Section 00280 of the Oregon Standard Specifications for Construction. This plan must be constructed in conjunction with all clearing and grading activities. Construct in such a manner as to insure that sediment and sediment laden water does not enter the drainage system, roadway, or violate applicable water standards. Construct controls in segments applicable to each staging phase.
6. Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to insure that all paved areas are kept clean for the duration of the project.

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065	DATE: 6/7/2022	
PROJECT NO: CB1801		
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.		
DESIGNED BY: K. Groom	CHECKED BY: A. Potts	
DRAFTED BY: K. Groom	REVIEWED BY: D. Malone	

MILL CREEK - FOLSOM ROAD
BRIDGE REPLACEMENT

LINN COUNTY
2022

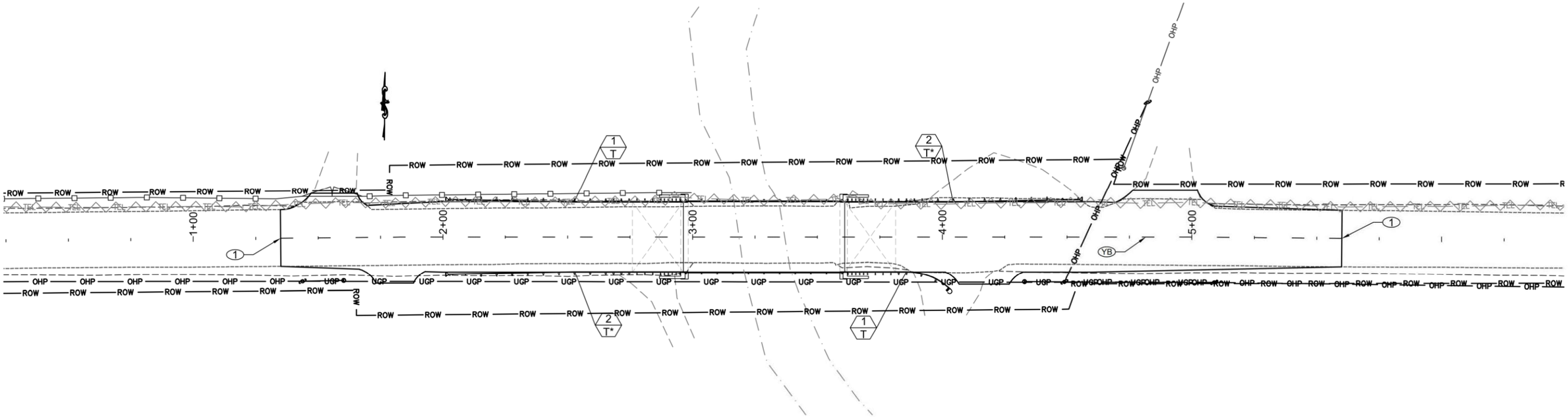
EROSION CONTROL PLAN

SCALE: as shown

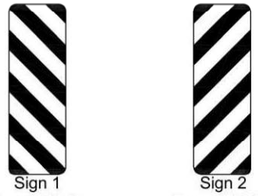
SHEET 6

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:15:48-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM

Expires: 6/30/2023



PLAN
1" = 40'



Sign 1
Type: OM-3L
(12" x 36")

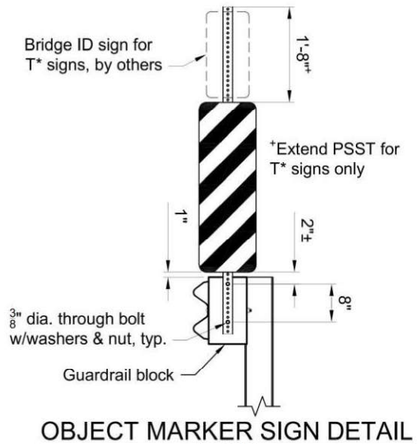
Sign 2
Type: OM-3R
(12" x 36")

Signing Notes:

1. The locations of sign installations shown are approximate with exact locations to be determined in the field.
2. Install signs per ODOT Standard Drawings TM200, TM201, TM676, TM681, TM687 and the PSST sign anchor detail shown on this sheet
3. All signs shall meet the requirements of the most current Manual on Uniform Traffic Control Devices (MUTCD).

N / T — Install Sign (N) and Support (T)

Legend:
N = Sign Number
T = Perforated Steel Square Tube (PSST)
T* = Perforated Steel Square Tube (PSST) w/1'-8" extending above sign (N)



OBJECT MARKER SIGN DETAIL
NO SCALE

(1) Match existing striping

(YB) 4" yellow broken line shown thus —— —— (See TM500)

Note:
The Contractor is to remove any existing striping or pavement markings that conflict with the new striping or markings.

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065 DATE: 6/7/2022
PROJECT NO: CB1801
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.
DESIGNED BY: K. Groom CHECKED BY: A. Potts
DRAFTED BY: K. Groom REVIEWED BY: D. Malone

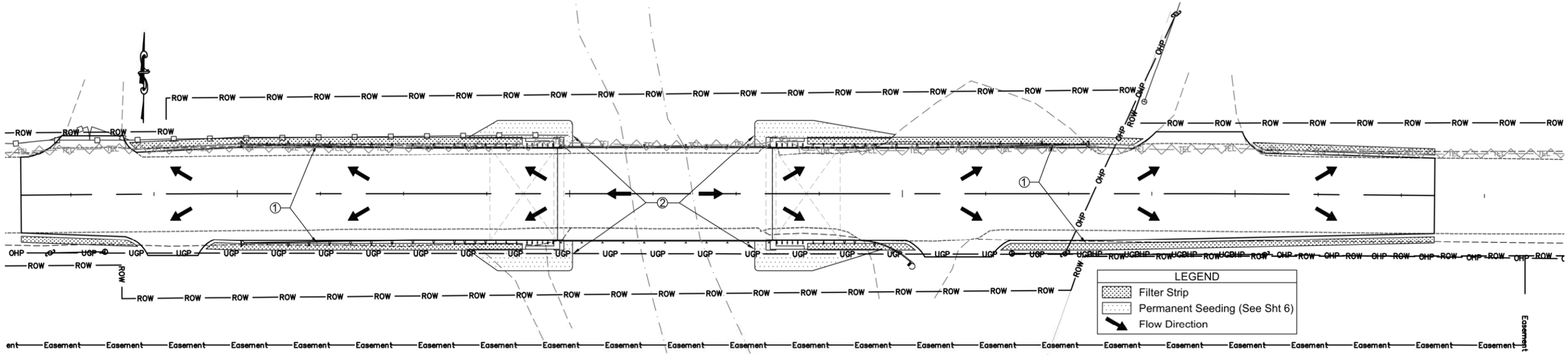
MILL CREEK - FOLSOM ROAD
BRIDGE REPLACEMENT
LINN COUNTY
2022

SIGNING AND STRIPING PLAN

SCALE: as shown SHEET 7

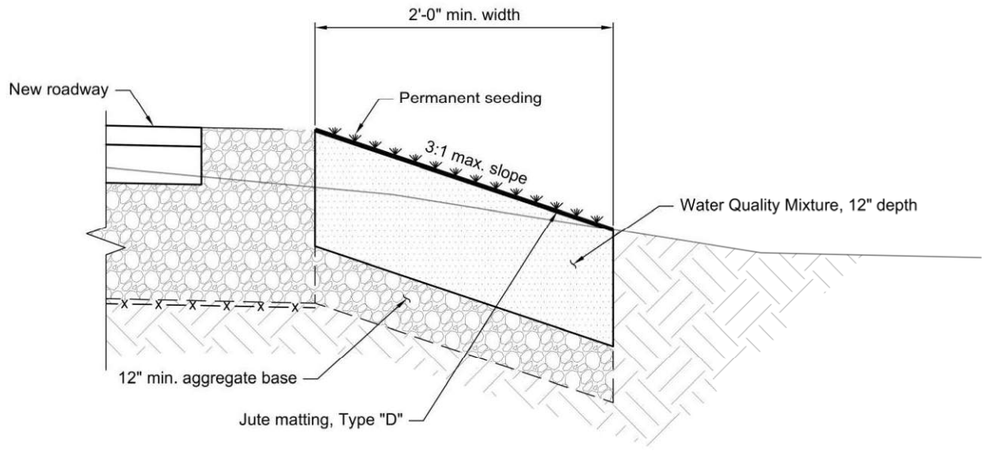
REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:16:35-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM

Expires: 6/30/2023



STORMWATER DRAINAGE PLAN

1" = 30'



FILTER STRIP DETAIL

NO SCALE

① Construct Filter Strip per detail this sheet. Water Quality Mixture per Section 01014.10 and permanent seeding per Section 01030. Construction per Section 01012. STA: 1+40 to STA: 2+85 LT, STA: 1+35 to STA: 2+85 RT, STA: 3+70 to STA: 5+60 LT & RT

② Construct permanent seeding erosion control per Sht 6

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065	DATE: 6/7/2022		
PROJECT NO: CB1801			
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.			
DESIGNED BY: K. Groom	CHECKED BY: A. Potts		
DRAFTED BY: K. Groom	REVIEWED BY: D. Malone		

MILL CREEK - FOLSOM ROAD
BRIDGE REPLACEMENT

LINN COUNTY
2022

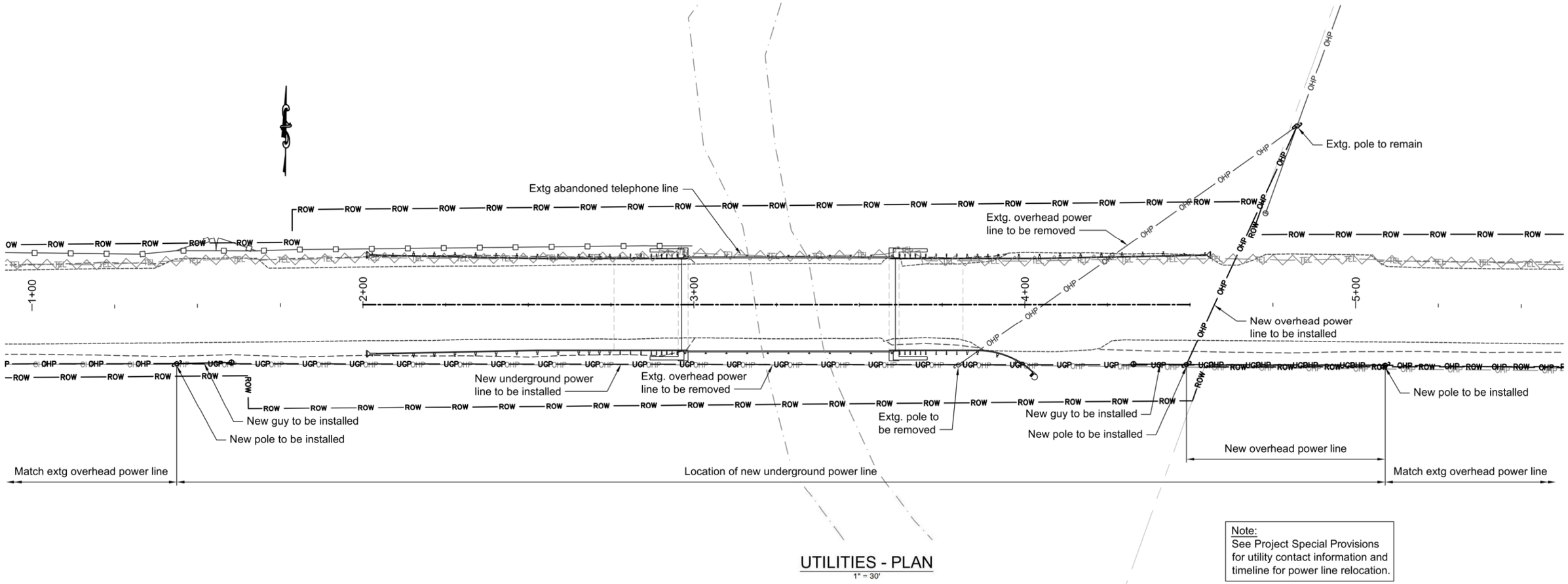
STORMWATER DRAINAGE PLAN

SCALE: as shown | SHEET 8

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:17:16-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM

Expires: 6/30/2023

6/10/2022 9:59 AM



UTILITIES - PLAN
1" = 30'

Note:
See Project Special Provisions for utility contact information and timeline for power line relocation.

LINN COUNTY ROAD DEPARTMENT	3010 FERRY STREET SW ALBANY, OREGON 97322 PHONE: (541) 967-3919 FAX: (541) 924-0202 E-MAIL: Roads@co.linn.or.us
COUNTY COMMISSION	ROGER NYQUIST, CHAIRMAN WILLIAM TUCKER SHERRIE SPRENGER
ROADMASTER	WAYNE E. MINK, P.E.
COUNTY ENGINEER	DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065	DATE: 6/7/2022	
PROJECT NO: CB1801		
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.		
DESIGNED BY: K. Groom	CHECKED BY: A. Potts	
DRAFTED BY: K. Groom	REVIEWED BY: D. Malone	

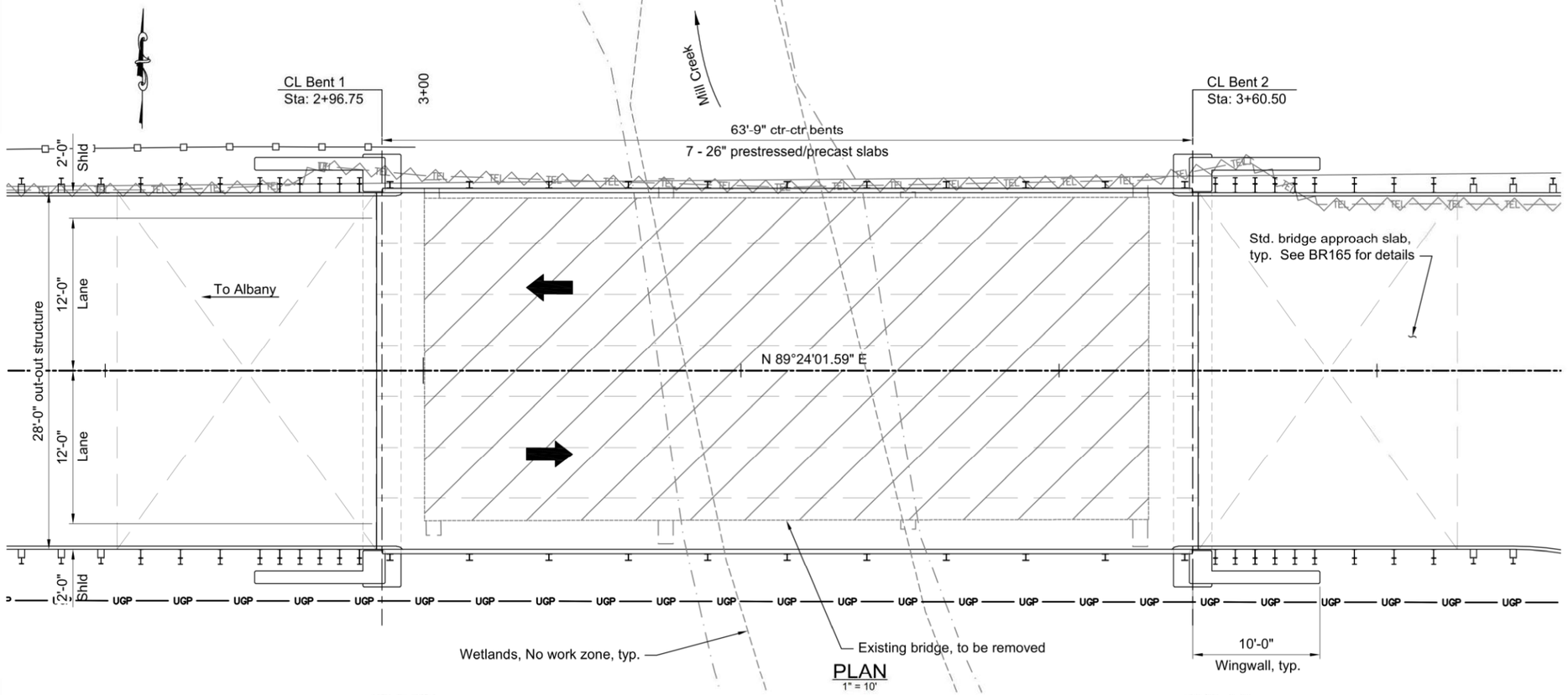
MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT
LINN COUNTY
2022

UTILITIES

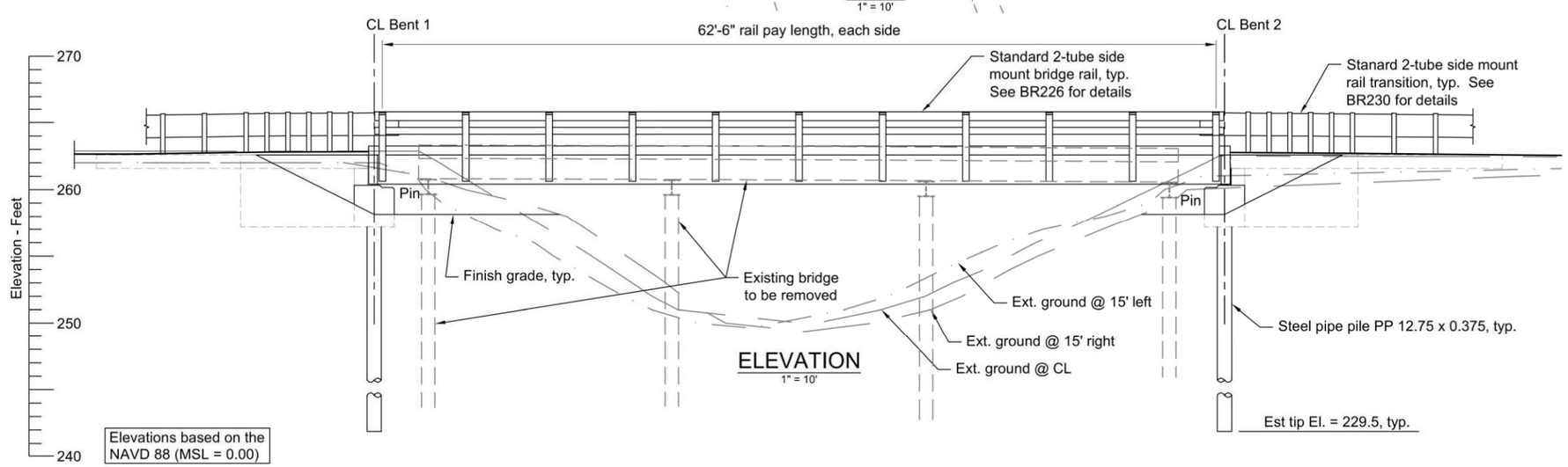
SCALE: as shown | SHEET 9

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:17:44-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023

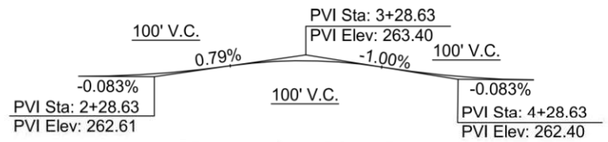
K:\Projects - Current\BR 0651-0065 Folsom Road Mill Creek Bridge\KMG\ACAD\Folsom Road - Mill Creek Bridge Design 2022.dwg



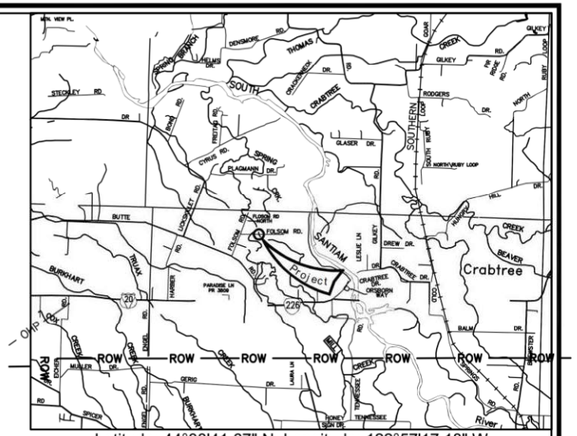
PLAN
1" = 10'



ELEVATION
1" = 10'



GRADELINE DIAGRAM
NO SCALE



LOCATION MAP
NO SCALE

WARNING
If this bar does not measure 1" then drawing is not to scale

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:18:23-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065	DATE: 6/7/2022		
PROJECT NO: CB1801			
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.			
DESIGNED BY: K. Groom	CHECKED BY: A. Potts		
DRAFTED BY: K. Groom	REVIEWED BY: D. Malone		

MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT
LINN COUNTY
2022

PLAN AND ELEVATION

SCALE: as shown

SHEET BR-01

General Notes:
All materials and workmanship shall conform to the 2021 Oregon Standard Specifications for Construction and the Project Special Provisions, and the current edition of The General Conditions for Construction for the Linn County Road Department.

Bridge is designed in accordance with the 8th edition of the AASHTO LRFD Bridge Design Specifications with an allowance for the wearing surface shown on the plans, 25 psf for future wearing surface, and all the following live loads:

Service and Strength-1 Limit States:
HL-93: Design truck (or trucks per LRFD 3.6.1.3) or the design tandem, and the design lane load

Strength-2 Limit State:
ODOT Permit Vehicle Type OR-STP-4E
ODOT Permit Vehicle Type OR-STP-5BW

In addition to the requirements of the AASHTO LRFD Bridge Design Specifications, the detour bridge shall be designed to accommodate an ODOT Type OR-CTP-2A truck.

Seismic design is performed in accordance with the "AASHTO LRFD Bridge Design Specifications" ("AASHTO Guide Specifications for LRFD Seismic Bridge Design") as modified by the "ODOT Bridge Design Manual". The Horizontal Peak Ground Acceleration Coefficient (PGA) for the 1000 year (Life Safety) and Cascadia Subduction Zone Earthquake (Operational) return periods are 0.24g and 0.20g, respectively, based on the 2014 USGS Seismic Hazard Maps and the PSU Acceleration Response Spectra web application, respectively. The bridge site is defined as a Site Class D with a site factor (F_{pga}) of 1.36, and V_{s30} = 885 fps.

Provide all reinforcing steel according to ASTM Specification A706 or ASTM A615, Grade 60. Provide welded or field bent bars according to ASTM Specification A706. Splice reinforcing steel at alternate bars, staggered at lease one splice length or as far as possible, unless shown otherwise. Use the following splice lengths, unless shown otherwise:

SPLICE LENGTH (CLASS B)*										
Bar Size	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18
Uncoated	1'-4"	1'-9"	2'-2"	2'-7"	3'-0"	3'-5"	3'-10"	4'-4"	4'-11"	Not Permitted	

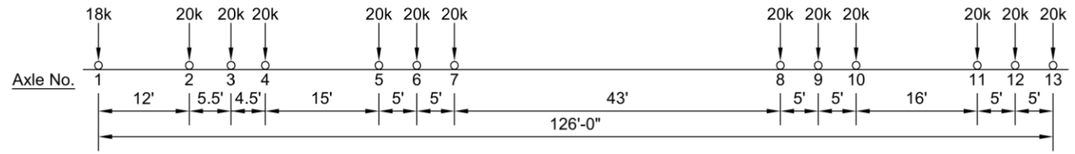
*Increase the splice lengths by ALL the applicable percentages:
40% for locations with 12 inches or more of fresh concrete placed below.
30% for areas with more than 50% of bars spliced in one region.

Place reinforcing bars a minimum of 2-inches clear of the nearest face of concrete, unless shown otherwise.

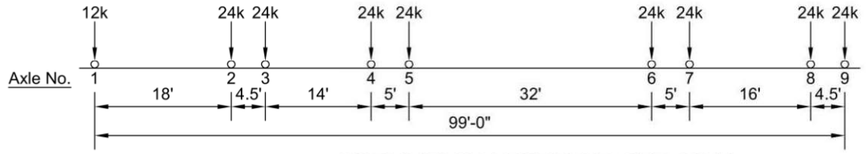
Provide Class 3300 - 1" or $\frac{3}{4}$" concrete for all concrete not otherwise specified.

Provide concrete and prestressing steel in precast prestressed slabs in accordance with detail plans.

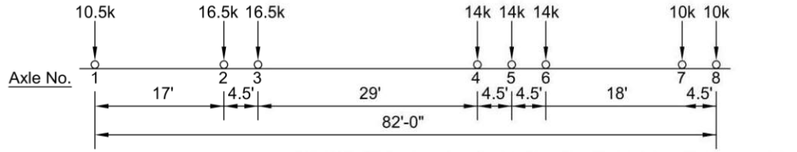
Provide bridge rail materials according to the ODOT Standard Drawings referenced.



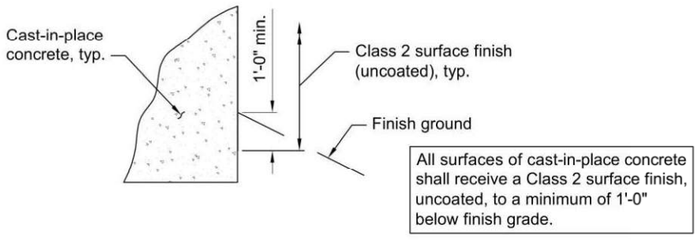
ODOT PERMIT VEHICLE TYPE OR-STP-4E
NO SCALE



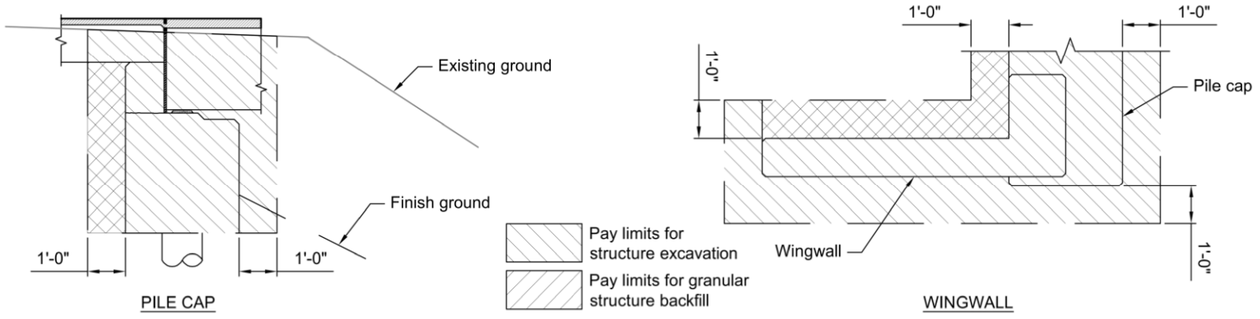
ODOT PERMIT VEHICLE TYPE OR-STP-5BW
NO SCALE



ODOT PERMIT VEHICLE TYPE OR-CTP-2A (DETOUR BRIDGE ONLY)
NO SCALE



CONCRETE FINISH DIAGRAM
NO SCALE



STRUCTURE EXCAVATION AND BACKFILL PAY LIMITS
NO SCALE

WARNING
If this bar does not measure 1" then drawing is not to scale

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

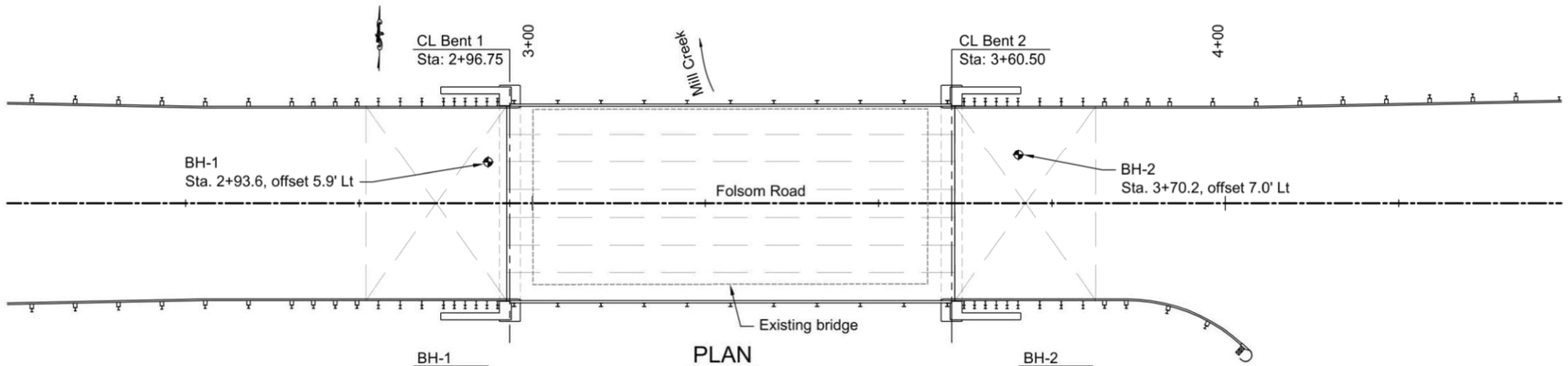
BRIDGE NO: 0651-0065 DATE: 6/7/2022
PROJECT NO: CB1801
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.
DESIGNED BY: K. Groom CHECKED BY: A. Potts
DRAFTED BY: K. Groom REVIEWED BY: D. Malone

MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT
LINN COUNTY
2022

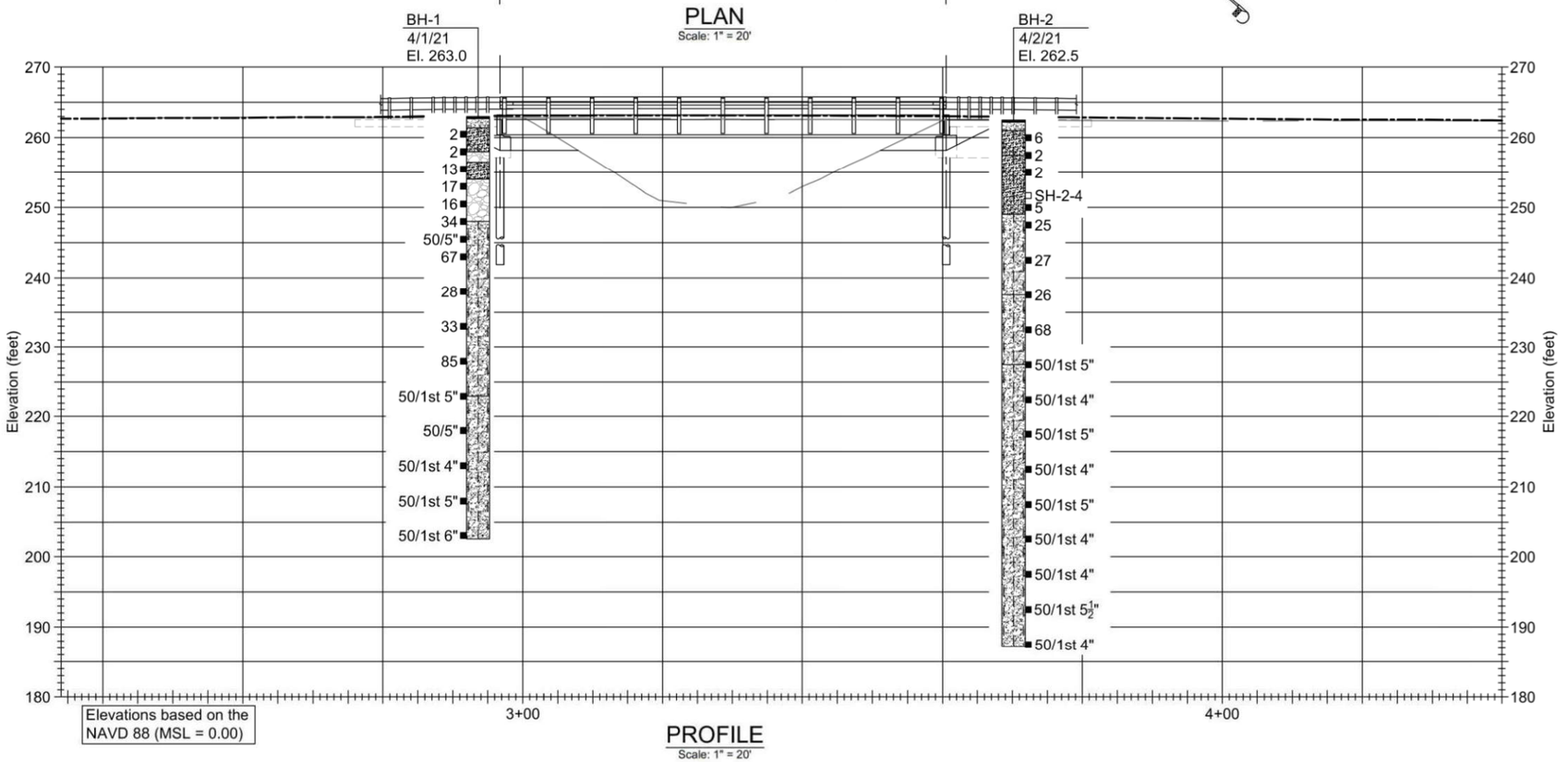
GENERAL NOTES

SCALE: none SHEET BR-02

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:18:55-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023



PLAN
Scale: 1" = 20'



PROFILE
Scale: 1" = 20'

UNIT DESCRIPTIONS

ASPHALTIC CONCRETE

CRUSHED ROCK (GW); grey, dry to damp, medium dense, ±1-inch minus angular rock, (base rock).

Silty SAND (SM) and silty SAND, trace gravel (SM); grey to brown and iron-stained, low plasticity silt, damp to wet, very loose to medium dense, fine sand, fine to coarse subangular gravel, (fill or alluvium).

GRAVEL, trace silt and sand (GP to GW); grey, low plasticity silt, moist to wet, very loose to medium dense, fine sand, fine to coarse subangular to subrounded gravel, (fill or alluvium).

GRAVEL, some silt and sand (GW-GM); GRAVEL, trace to some silt and some sand (GW-GM); sandy GRAVEL, some silt (GW-GM); grey, brown, blue-grey, and dark grey to black, low plasticity silt, moist to wet, medium dense to very dense, fine sand, fine to coarse subrounded gravel, (alluvium)

LEGEND

= Geotechnical Boring (BH)
24 = Standard Penetration Test (N value)
SH-3-2 = Shelby Tube Sample

Geotechnical data shown on this drawing are a consolidation of information and/or revision in terminology from the Geotechnical Boring logs. Boring logs used in compiling this drawing are available upon request for review at the office of the Linn County Road Department. Contractor shall refer to the geotechnical report and boring logs and information therein.

WARNING
If this bar does not measure 1" then drawing is not to scale

FOUNDATION ENGINEERING, INC.
PROFESSIONAL GEOTECHNICAL SERVICES
820 N.W. CORNELL AVENUE
CORVALLIS, OREGON 97330
BUS. (541) 757-7645 FAX (541) 757-7650

REGISTERED PROFESSIONAL ENGINEER
60776PE
DIGITALLY SIGNED 2022.06.08 06:59:48 -07'00'
OREGON
MAY 17, 1999
WILLIAM L. NICKELS JR.
RENEWS: 12-31-2022

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

DATE:	REVISION:	BY:

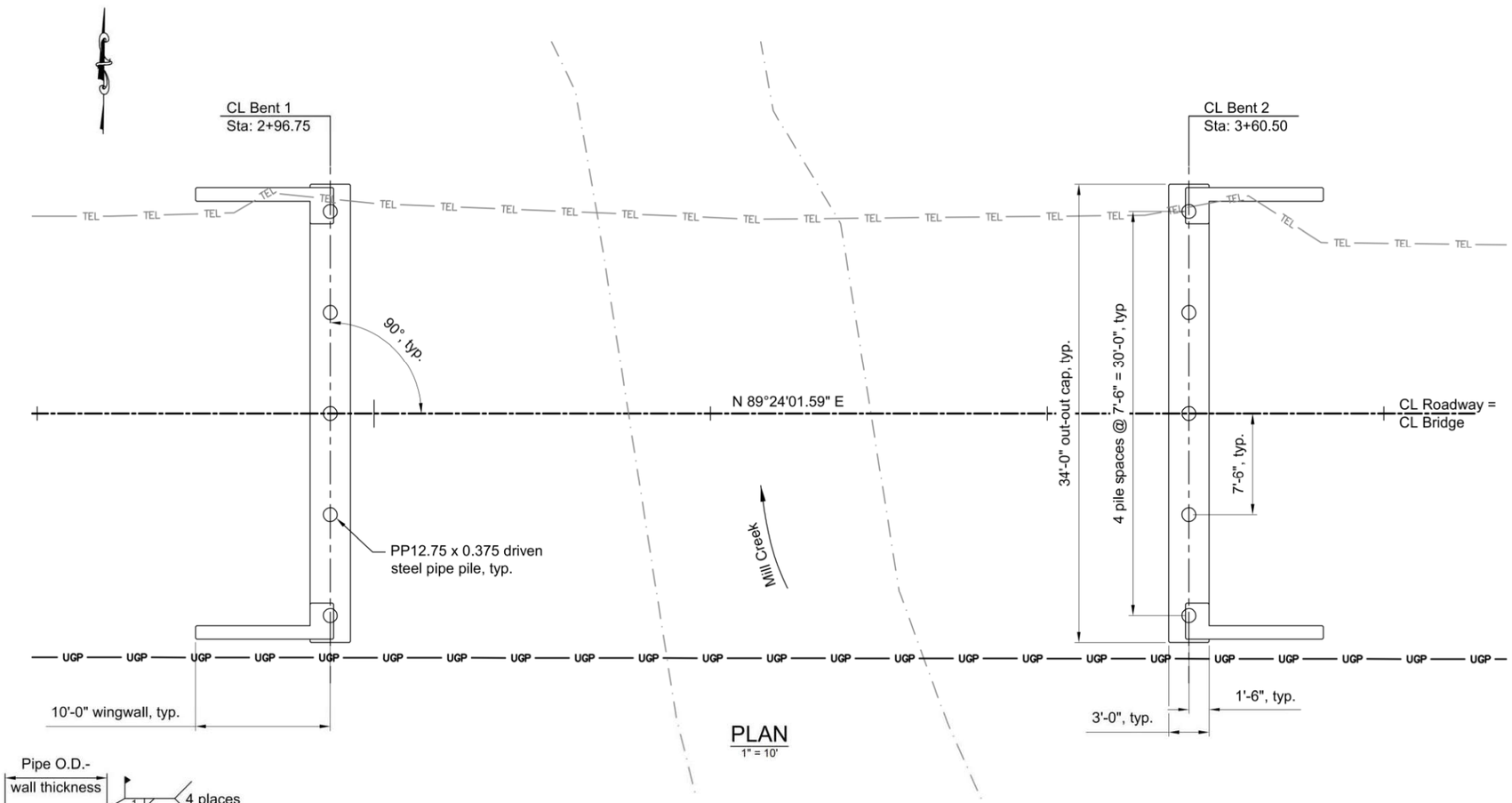
BRIDGE NO: 0651-0065	DATE: 6/7/2022		
PROJECT NO: CB1801			
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.			
DESIGNED BY: B. Nickels	CHECKED BY: B. Running		
DRAFTED BY: K. Groom	REVIEWED BY: M. Mason		

MILL CREEK - FOLSOM ROAD
BRIDGE REPLACEMENT
LINN COUNTY
2022

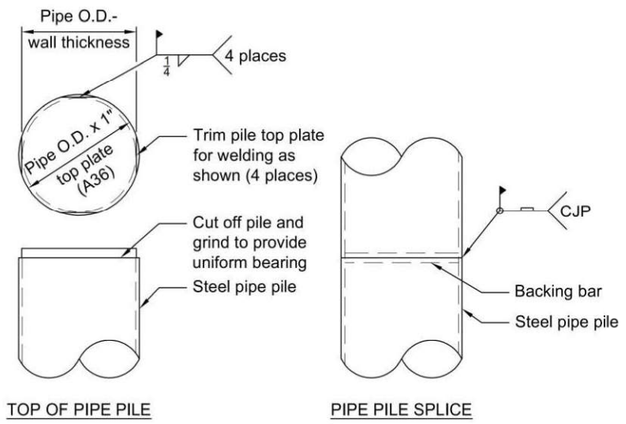
FOUNDATION DATA SHEET

SCALE: as shown | SHEET BR-03

K:\Projects - Current\BR 0651-0065 Folsom Road Mill Creek Bridge\KMG\ACAD\Folsom Road - Mill Creek Bridge Design 2022.dwg



PLAN
1" = 10'



TOP OF PIPE PILE

PIPE PILE SPLICE

STEEL PIPE PILE DETAILS
NO SCALE

Foundation General Notes:

All piling shall be PP 12.75 x 0.375 conforming to ASTM Specification A252, Grade 3 and driven open ended with inside-fitting cutting shoes to a nominal resistance of 475 kips per pile. Minimum pile tip elevation is 235.0 feet for Bents 1 & 2. The estimated pile tip elevation is 229.5 feet for both bents. Drive piling to the specified nominal resistance using driving criteria developed from the FHWA Gates Equation.

All bents are parallel with a bearing of N0°35'58.41"W.

WARNING
If this bar does not measure 1" then drawing is not to scale

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065	DATE: 6/7/2022	
PROJECT NO: CB1801		
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.		
DESIGNED BY: K. Groom	CHECKED BY: A. Potts	
DRAFTED BY: K. Groom	REVIEWED BY: D. Malone	

MILL CREEK - FOLSOM ROAD
BRIDGE REPLACEMENT

LINN COUNTY
2022

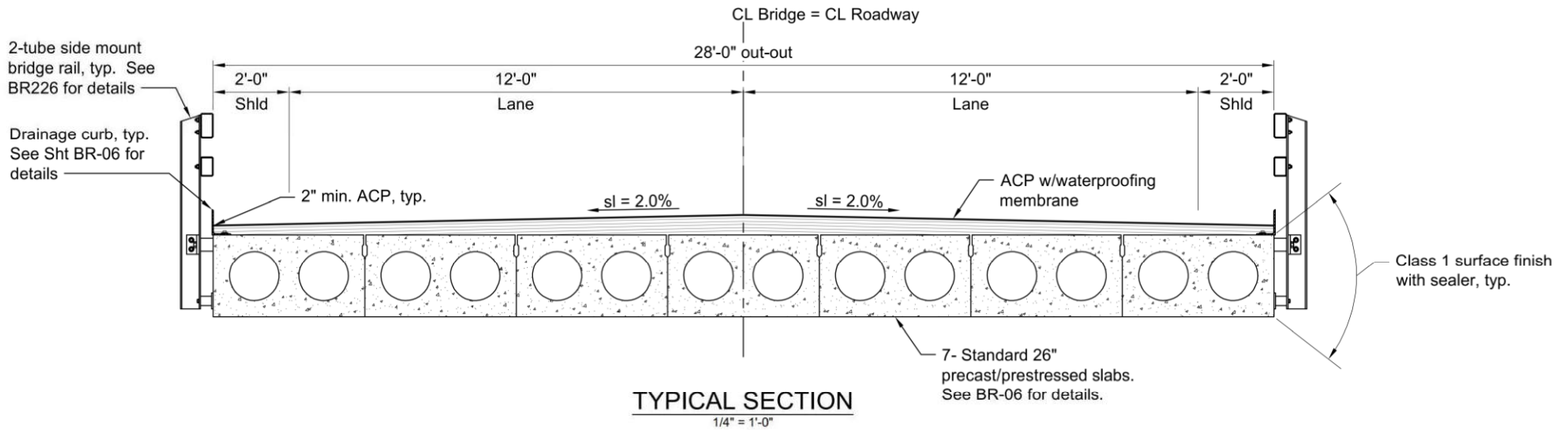
FOUNDATION PLAN AND DETAILS

SCALE: as shown

SHEET BR-04

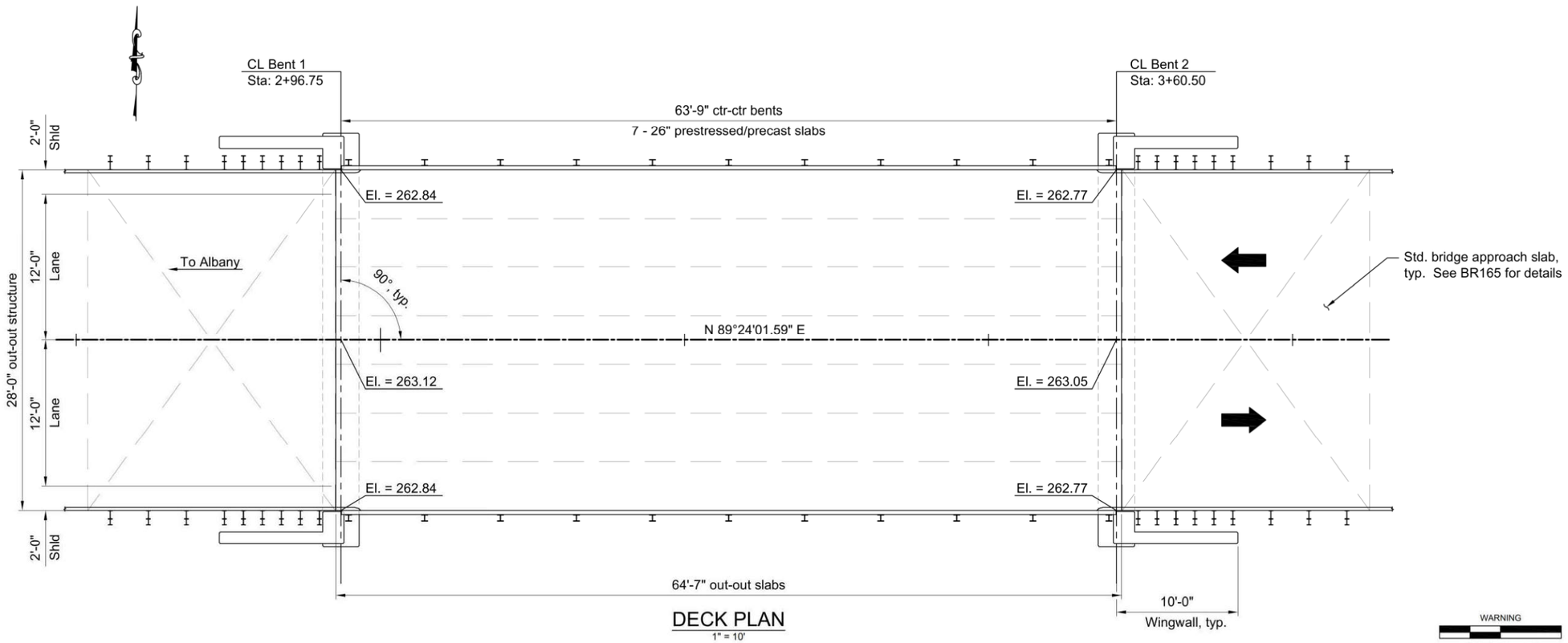
REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:19:33-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM

Expires: 6/30/2023



TYPICAL SECTION

1/4" = 1'-0"



DECK PLAN

1" = 10'

WARNING

If this bar does not measure 1" then drawing is not to scale

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065 DATE: 6/7/2022
PROJECT NO: CB1801
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.
DESIGNED BY: K. Groom CHECKED BY: A. Potts
DRAFTED BY: K. Groom REVIEWED BY: D. Malone

MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT
LINN COUNTY
2022

TYPICAL SECTION AND DECK PLAN

SCALE: as shown | SHEET BR-05

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:20:01-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM

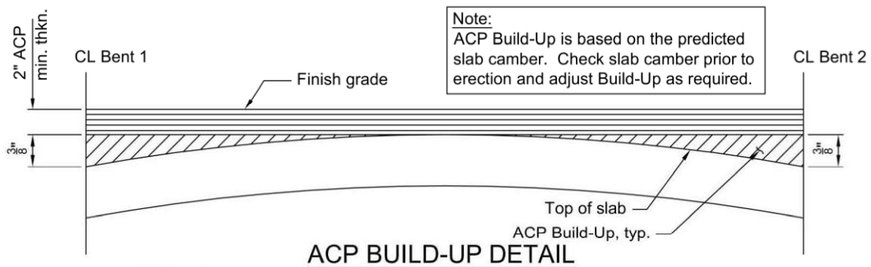
Expires: 6/30/2023

6/10/2022 10:00 AM

26 - INCH STANDARD PRECAST PRESTRESSED SLAB SCHEDULE

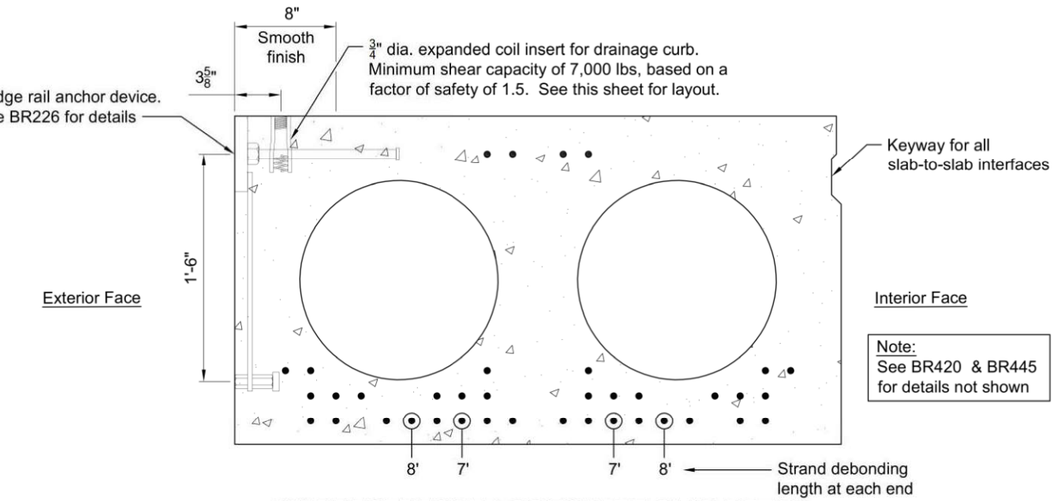
No. of slabs required	Span No.	Horizontal length o-o at slab CL (after shortening)	Span ctr.-ctr. bearing along slab CL	Width, inches	Skew Angle, Deg.		Initial tension per strand, kips	Total strands	No. debonded strands	Distance "Yc" to strand c.g. at midspan, inches	Distance "Yu" to strand c.g. at midspan subtracting top 4 strands, inches	Concrete Class, psi A = ¾" or 1"	Minimum concrete strength at transfer of prestress, psi	Estimated initial strand stress loss, ksi	Estimated midspan deflection, inches					Estimated shortening 2 weeks after transfer of prestress, inches
					Back	Ahead									Upward at transfer of prestress	Upward 3 months after transfer of prestress (No SIDL)	Upward 5 years after transfer of prestress (No SIDL)	Instantaneous downward due to SIDL	Downward due to SIDL 5 years after loading	
7	1	64'-7"	63'-9"	48.0	0	0	31.0	38	4	5.36	3.29	5,500	4,200	10.3	1.00	1.65	2.05	0.31	0.94	0.38

The superimposed dead load (SIDL) is 63.7 psf, which includes the initial wearing surface and bridge rails. The slabs are designed for an allowance for 2" of future wearing surface.



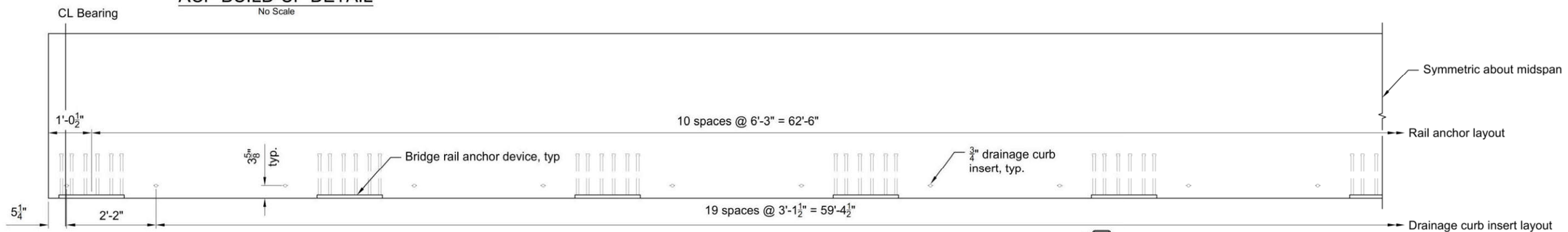
Note:
ACP Build-Up is based on the predicted slab camber. Check slab camber prior to erection and adjust Build-Up as required.

ACP BUILD-UP DETAIL
No Scale

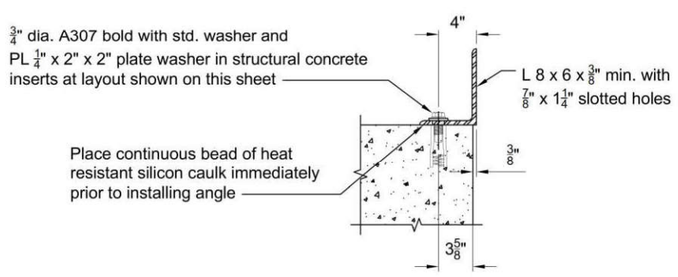


Note:
See BR420 & BR445 for details not shown

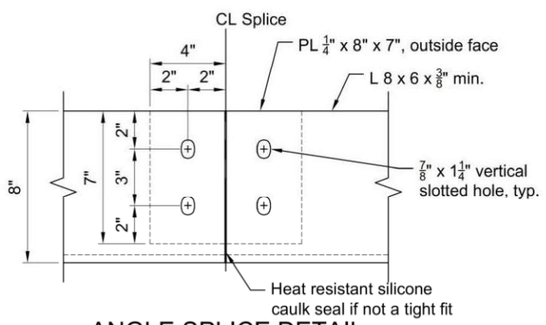
26" PRESTRESSED CONCRETE SLAB DETAIL
1" = 1'-0"



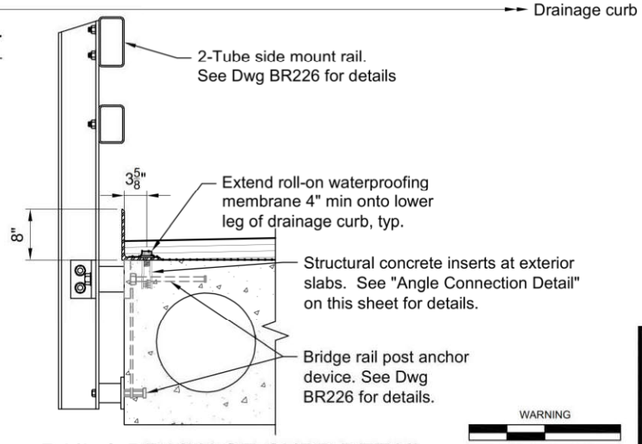
EXTERIOR SLAB - RAIL ANCHOR AND INSERT LAYOUT
3/8" = 1'-0"



ANGLE CONNECTION DETAIL
3/4" = 1'-0"



ANGLE SPLICE DETAIL
1-1/2" = 1'-0"



RAIL & DRAINAGE CURB DETAIL
1/2" = 1'-0"

WARNING
If this bar does not measure 1" then drawing is not to scale

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065	DATE: 6/7/2022		
PROJECT NO: CB1801			
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.			
DESIGNED BY: K. Groom	CHECKED BY: A. Potts		
DRAFTED BY: K. Groom	REVIEWED BY: D. Malone		

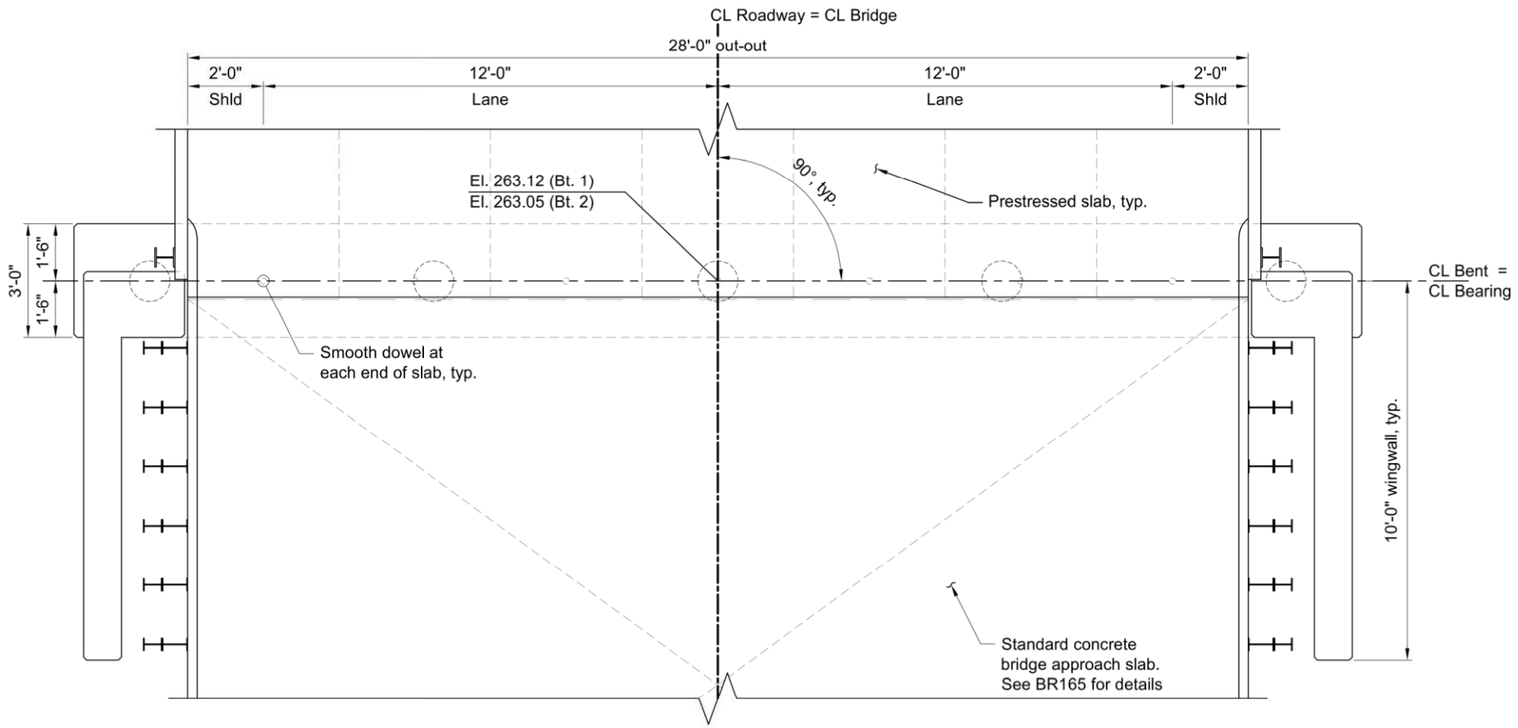
MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT
LINN COUNTY
2022

SLAB AND DRAINAGE CURB DETAILS

SCALE: as shown | SHEET BR-06

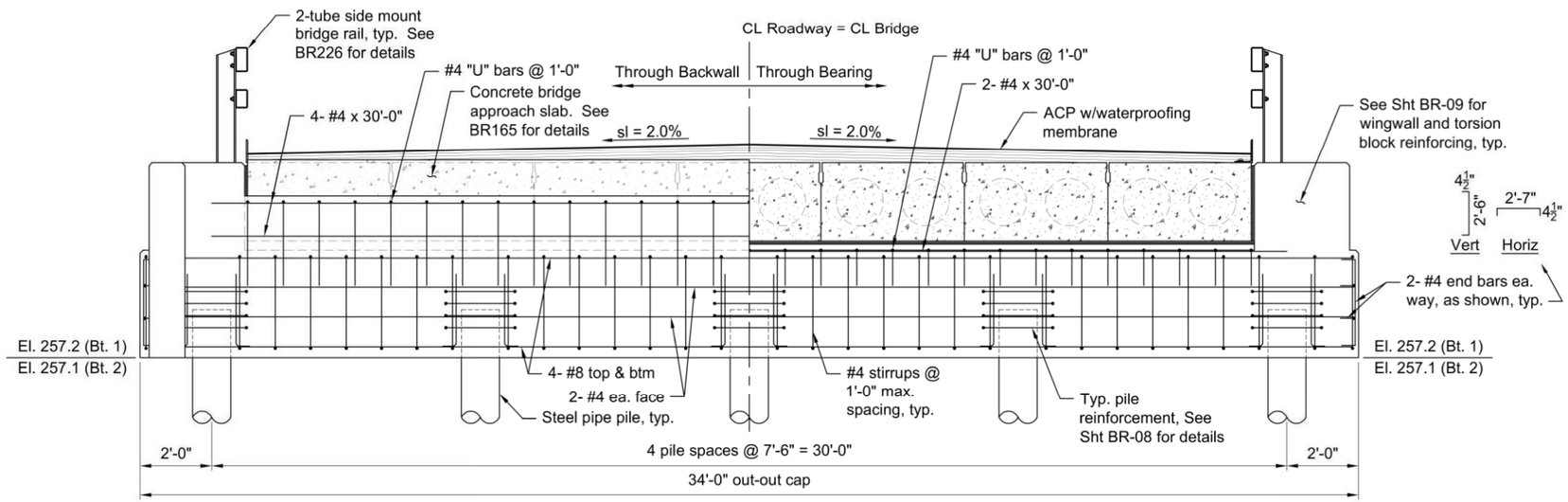
REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:20:50-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023

K:\Projects - Current\BR 0651-0065 Folsom Road Mill Creek Bridge\KMG\ACAD\Folsom Road - Mill Creek Bridge Design 2022.dwg



BENT 1 - PLAN (BENT 2 SIMILAR)

1/4" = 1'-0"



BENT 1 - ELEVATION (BENT 2 SIMILAR)

1/4" = 1'-0"

WARNING

If this bar does not measure 1" then drawing is not to scale

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

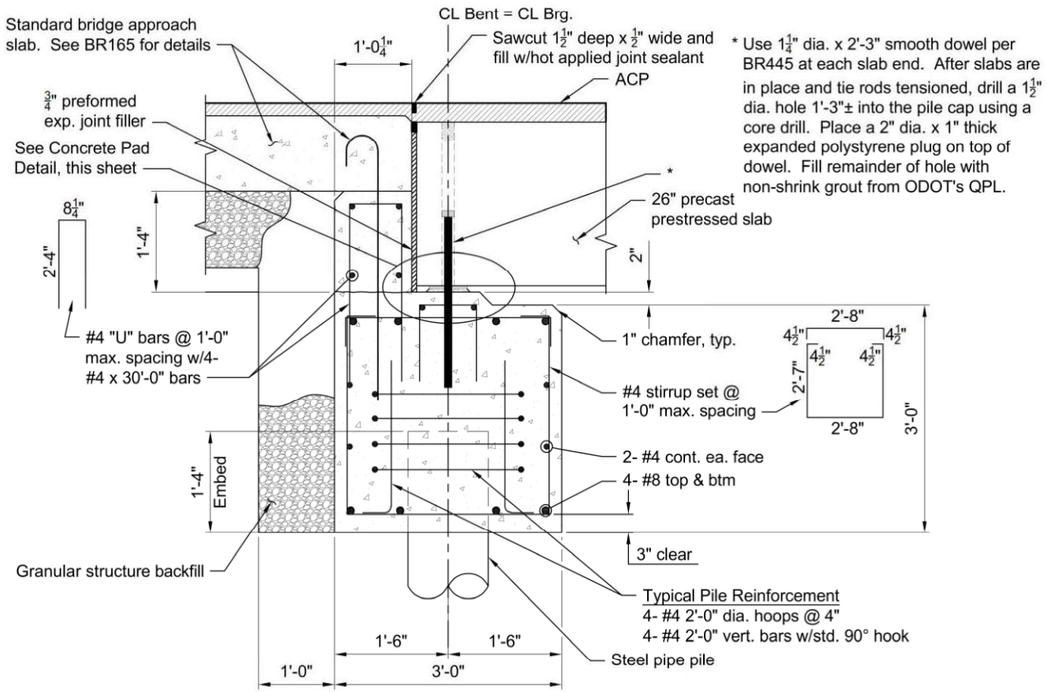
BRIDGE NO: 0651-0065 DATE: 6/7/2022
PROJECT NO: CB1801
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.
DESIGNED BY: K. Groom CHECKED BY: A. Potts
DRAFTED BY: K. Groom REVIEWED BY: D. Malone

MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT
LINN COUNTY
2022

BENT 1 PLAN AND ELEVATION

SCALE: as shown SHEET BR-07

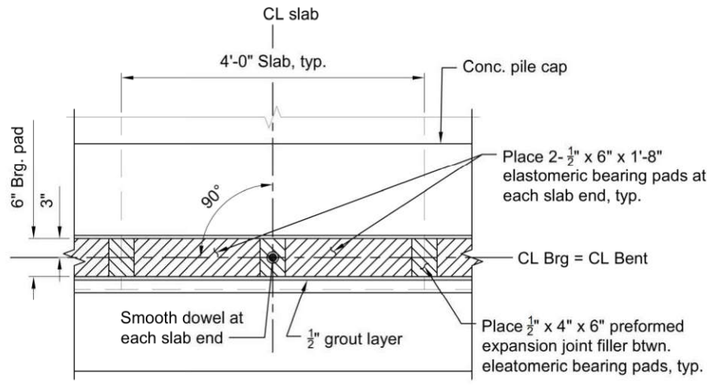
REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:21:23-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023



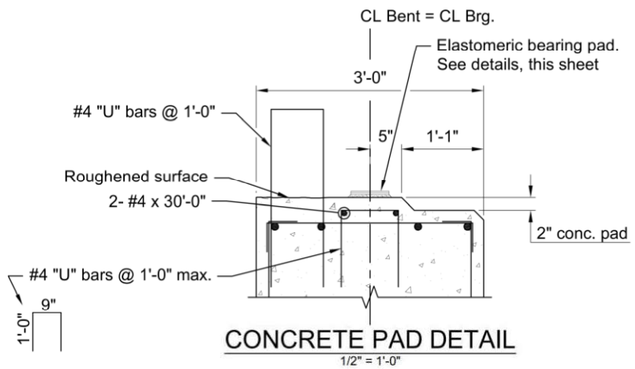
TYPICAL BENT SECTION
1/2" = 1'-0"

* Use 1¼" dia. x 2'-3" smooth dowel per BR445 at each slab end. After slabs are in place and tie rods tensioned, drill a 1½" dia. hole 1'-3"± into the pile cap using a core drill. Place a 2" dia. x 1" thick expanded polystyrene plug on top of dowel. Fill remainder of hole with non-shrink grout from ODOT's QPL.

Slab Setting Procedure:
Form 2" concrete pad integrally with the pile cap. Place ½"± grout layer immediately before placing slabs. Place elastomeric bearing pads, preformed expansion joint filler and prestressed slabs before the grout is fully set to insure uniform bearing across full width of slab. If uniform bearing is not achieved, lift slab and repeat procedure. Any excess grout protruding above bottom of bearing pads shall be removed immediately after placing slabs.



BEARING PAD DETAIL
1/2" = 1'-0"



CONCRETE PAD DETAIL
1/2" = 1'-0"

WARNING
If this bar does not measure 1" then drawing is not to scale

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:21:53-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

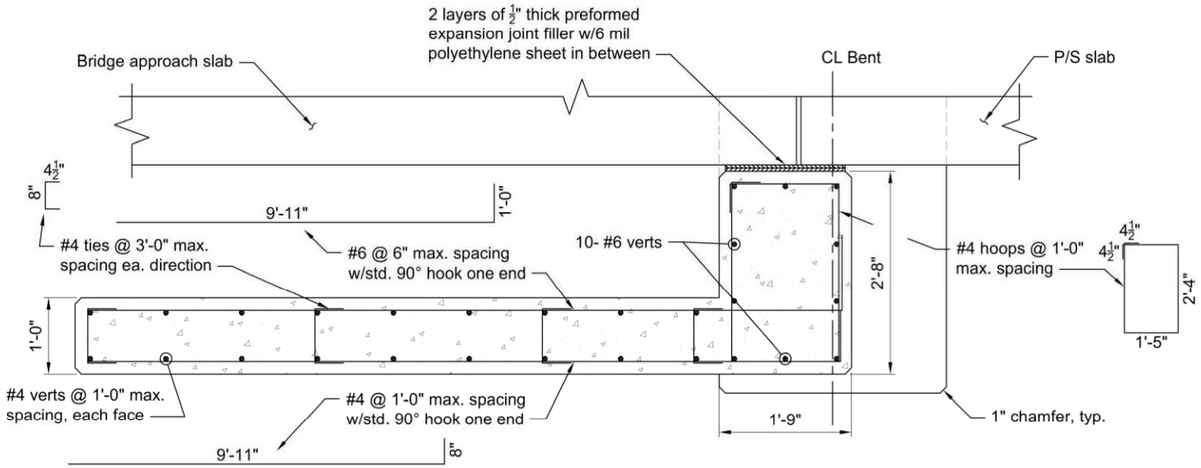
BRIDGE NO: 0651-0065 DATE: 6/7/2022
PROJECT NO: CB1801
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.
DESIGNED BY: K. Groom CHECKED BY: A. Potts
DRAFTED BY: K. Groom REVIEWED BY: D. Malone

MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT
LINN COUNTY
2022

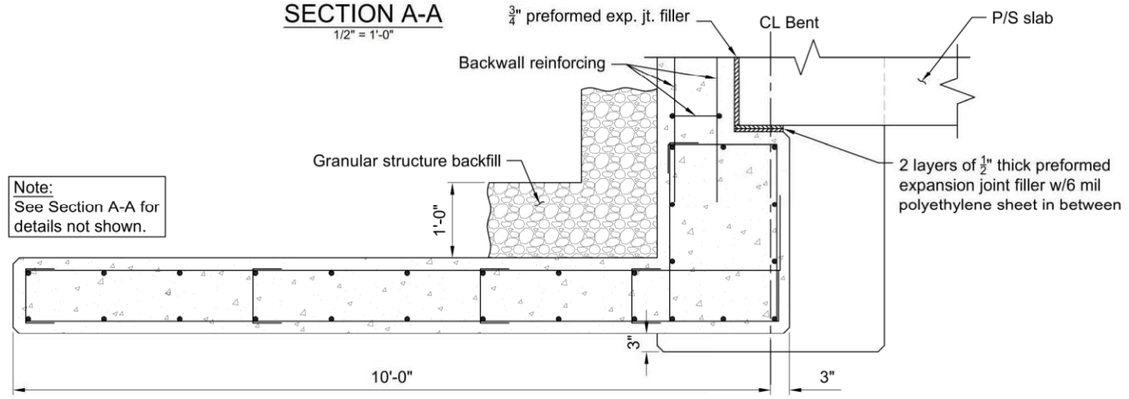
BENT DETAILS

SCALE: as shown

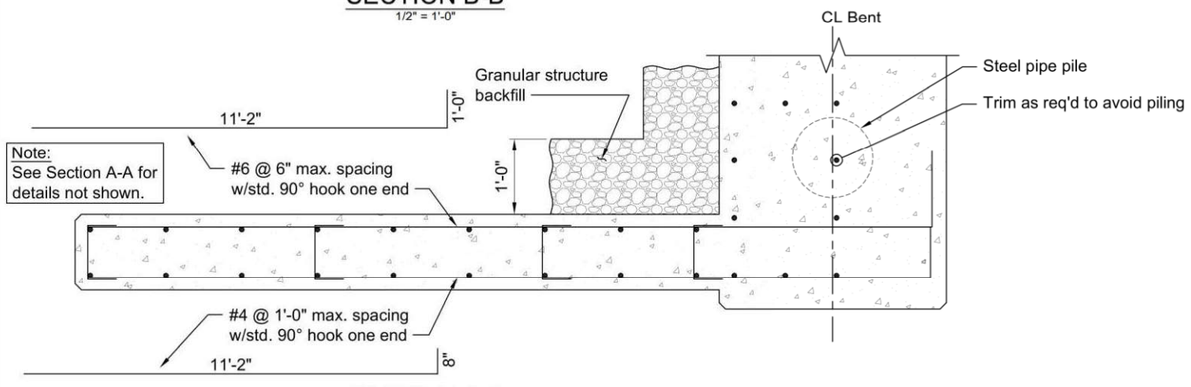
SHEET BR-08



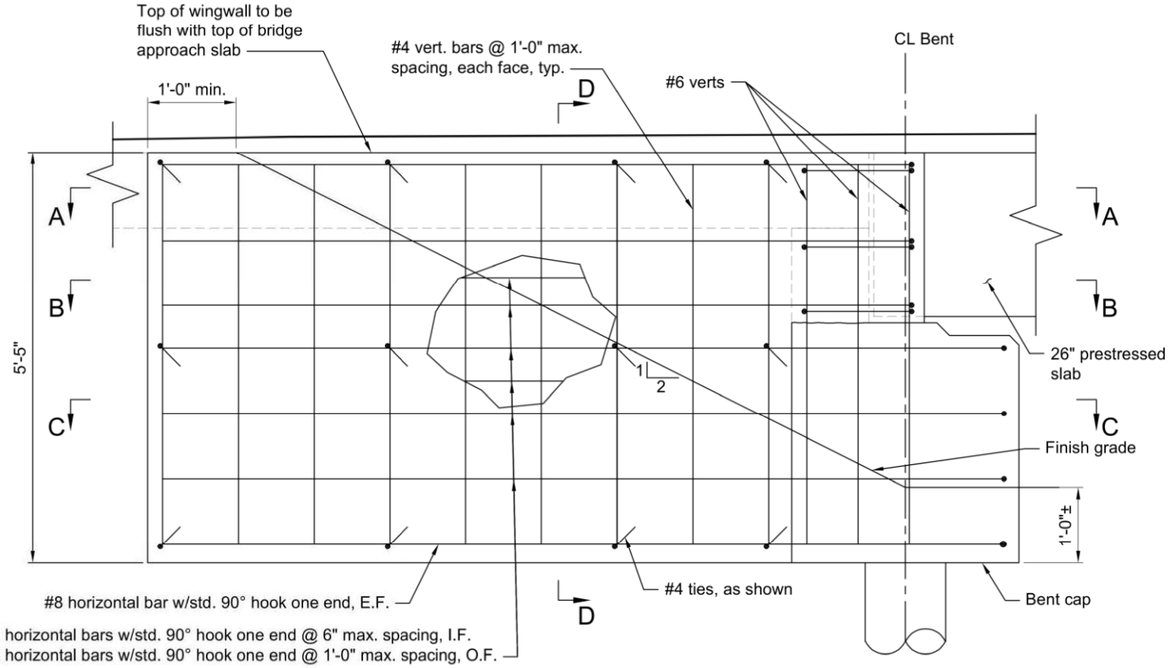
SECTION A-A
1/2" = 1'-0"



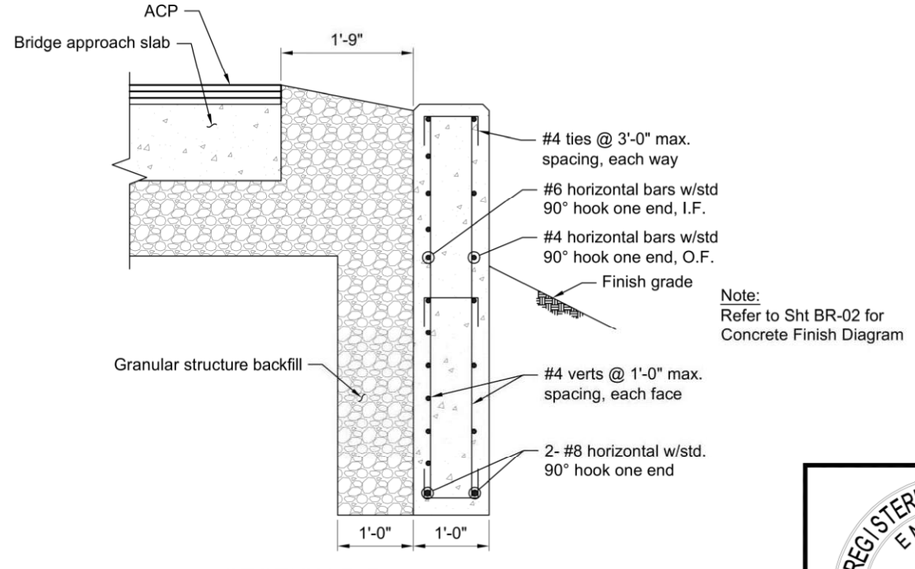
SECTION B-B
1/2" = 1'-0"



SECTION C-C
1/2" = 1'-0"



ELEVATION - BENT 1 WINGWALL (BENT 2 SIMILAR)
1/2" = 1'-0"



SECTION D-D
1/2" = 1'-0"

WARNING
If this bar does not measure 1" then drawing is not to scale

LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
FAX: (541) 924-0202
E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
WILLIAM TUCKER
SHERRIE SPRENGER

ROADMASTER
WAYNE E. MINK, P.E.
COUNTY ENGINEER
DAINEAL MALONE, P.E.

DATE:	REVISION:	BY:

BRIDGE NO: 0651-0065 DATE: 6/7/2022
PROJECT NO: CB1801
TRS: T. 11 S., R. 02 W., SECTION 5, W.M.
DESIGNED BY: K. Groom CHECKED BY: A. Potts
DRAFTED BY: K. Groom REVIEWED BY: D. Malone

MILL CREEK - FOLSOM ROAD BRIDGE REPLACEMENT
LINN COUNTY
2022

WINGWALL DETAILS

SCALE: as shown SHEET BR-09

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2022.06.10 10:22:29-07'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM

Expires: 6/30/2023