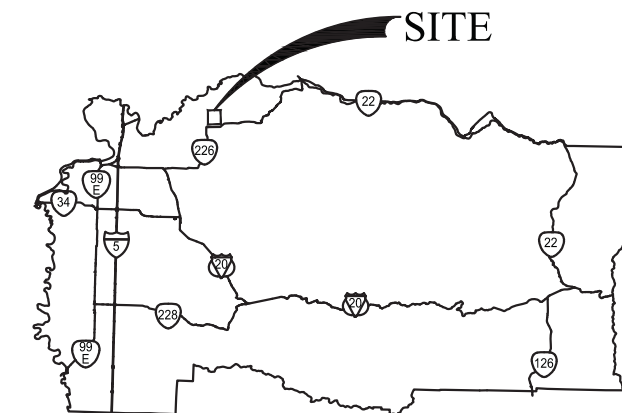


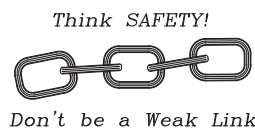
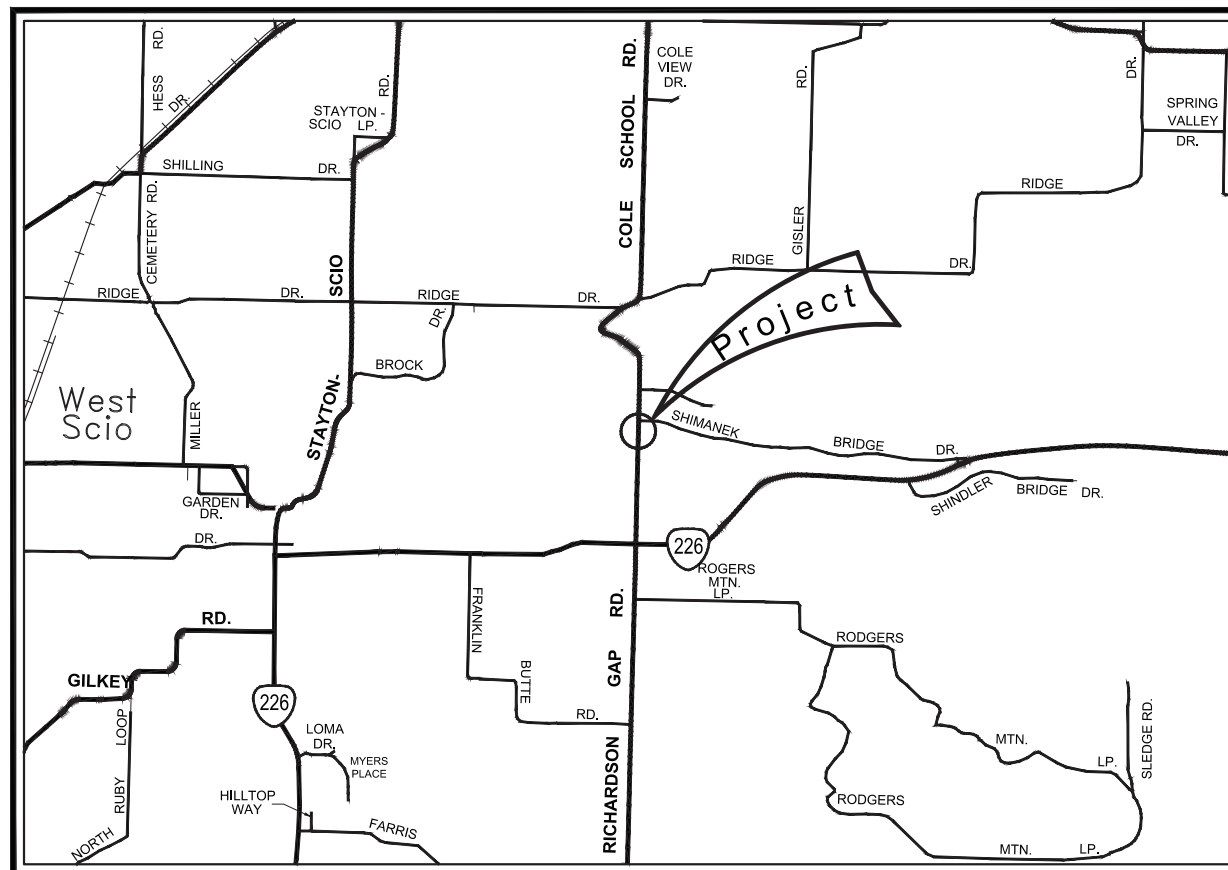
LINN COUNTY ROAD DEPARTMENT

OVERALL PROJECT LENGTH: 0.06 MILES

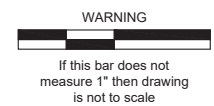
COVERED BRIDGE REHABILITATION
THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION
RICHARDSON GAP ROAD
 LINN COUNTY BRIDGE NO. BR0637-0070
 ODOT BRIDGE NO. 12965
 JANUARY 2022



PROJECT LOCATION



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. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987)



See Sht 2 FOR SHEET INDEX

REGISTERED PROFESSIONAL ENGINEER
 76365
 Daineal Malone, PE
Registered Professional Engineer, State of Oregon, License No. 76365, Exp. 12/31/2022
OREGON
 May 23, 2013
DAINEAL LEAH MALONE
 Expires: 12/31/2022



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

COUNTY COMMISSION
 ROGER NYQUIST
 CHAIRMAN
 SHERRIE SPRENGER
 WILLIAM TUCKER

| DATE: | REVISION: | BY: |
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|--------------|--------------------------------------|--------------|------------|
| BRIDGE NO: | 637-070 | DATE: | 12/14/2021 |
| PROJECT NO: | CB1803 | | |
| TRS: | T. 10 S., R. 01 W., SECTIONS. 9 & 10 | | |
| DESIGNED BY: | K. Groom | CHECKED BY: | A. Potts |
| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION
 LINN COUNTY
 2021

| |
|-----------------|
| TITLE SHEET |
| SCALE: no scale |
| SHEET 1 |

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| 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 & PROFILE |
| 6 | EROSION CONTROL PLAN |
| 7 | SIGNING & STRIPING PLAN |
| BR-01 | PLAN & ELEVATION |
| BR-02 | GENERAL NOTES |
| BR-03 | WORK TO BE DONE & TYPICAL SECTION |
| BR-04 | FOUNDATION DATA SHEET |
| BR-05 | FOUNDATION PLAN |
| BR-06 | DECK PLAN - SPAN 2 |
| BR-07 | DECK PLAN - SPANS 1, 3 & 4 |
| BR-08 | SLAB DETAILS |
| BR-09 | LOWER CHORD DETAILS - 1 |
| BR-10 | LOWER CHORD DETAILS - 2 |
| BR-11 | LOWER CHORD DETAILS - 3 |
| BR-12 | UPPER CHORD DETAILS |
| BR-13 | WRAP-AROUND DETAILS |
| BR-14 | PORTAL & FLARE FRAMING DETAILS |
| BR-15 | WINDOW DETAILS |
| BR-16 | BENT 1 PLAN & ELEVATION |
| BR-17 | WINGWALL DETAILS |
| BR-18 | BENT 2 PLAN & ELEVATION |
| BR-19 | BENT 2 DETAILS |
| BR-20 | BENT 4 PLAN & ELEVATION |
| BR-21 | BRIDGE RAIL DETAILS |
| BR-22 | BRIDGE APPROACH RAIL DETAILS |
| BR-23 | RAIL ELEMENT FABRICATION DETAILS |

| ABBREVIATION LEGEND | | | |
|---------------------|--|-------|---|
| AASHTO | AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS | LRFD | LOAD AND RESISTANCE FACTOR DESIGN |
| | | LS | LUMP SUM |
| AC | ASPHALT CONCRETE | M.I. | MALLEABLE IRON |
| ACP | ASPHALT CONCRETE PAVEMENT | MIN | MINIMUM |
| AD | ALGEBRAIC DIFFERENCE | MHMAC | MINOR HOT MIX ASPHALT CONCRETE |
| ASTM | AMERICAN SOCIETY OF TESTING MATERIALS | MUTCD | MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES |
| BP | BEGINNING OF PROJECT | NOM | NOMINAL |
| BVCE | BEGIN VERTICAL CURVE ELEVATION | OF | OUTSIDE FACE |
| BVCS | BEGIN VERTICAL CURVE STATION | ODOT | OREGON DEPARTMENT OF TRANSPORTATION |
| CL | CENTERLINE | PC | POINT OF CURVE |
| DWG | DRAWING | PI | POINT OF INTERSECTION |
| ELEV/EL | ELEVATION | P/S | PRESTRESSED |
| EOP | EDGE OF PAVEMENT | PL | PLATE |
| EP | END OF PROJECT | PT | POINT OF TANGENT and PRESSURE TREATED |
| EVCE | END VERTICAL CURVE ELEVATION | PVI | POINT OF VERTICAL INTERSECTION |
| EVCS | END VERTICAL CURVE STATION | R/RT | RIGHT |
| EXTG/EX | EXISTING | SHLD | SHOULDER |
| IE | INVERT ELEVATION | SL | SLOPE |
| IF | INSIDE FACE | STD | STANDARD |
| K | LENGTH OF CURVE/DIFFERENCE IN GRADE | TYP | TYPICAL |
| L/LT | LEFT | VC | VERTICAL CURVE |

| LEGEND | |
|--------|--|
| | 500 CONTOUR |
| | ROW RIGHT OF WAY |
| | Const Ease TEMPORARY CONSTRUCTION EASEMENT |
| | CENTERLINE |
| | EXISTING EDGE OF PAVEMENT |
| | EXISTING SHOULDER |
| | EXISTING DRIVEWAY |
| | EXISTING OVERHEAD POWER LINE |
| | EXISTING TELEPHONE LINE |
| | 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 |

ODOT STANDARD DRAWING NUMBERS:

BRIDGE
 BR405 15" Precast Prestressed Slab
 BR445 Precast Prestressed Box and Slab Details

EROSION CONTROL
 RD1032 Sediment Barrier Type 8

PERMANENT SIGNING
 TM200 Sign Installation Details
 TM201 Miscellaneous Sign Placement Details

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

SIGN, ILLUMINATION AND SIGNAL SUPPORT STRUCTURES
 TM676 Sign Attachments
 TM681 Perforated Steel Square Tube (PSST) Sign Support Installation

ODOT STANDARD DETAIL NUMBERS:

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

NOTES:

- TAXLOT LINES AND INFORMATION AND EXISTING STRUCTURES ARE SHOWN FOR REFERENCE PURPOSES ONLY.
- PROTECT ALL SURVEY MONUMENTS AND PROPERTY PINS
- UNLESS OTHERWISE NOTED OR ORDERED BY THE ENGINEER, CLEAR AND GRUB TO THE TOE OF THE CONSTRUCTION FILL.
- UNLESS OTHERWISE 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 DETERMINE THE EXACT SIZE AND QUANTITIES OF THE TREES AND OTHER MATERIALS THAT WILL NEED TO BE CLEARED AND GRUBBED.

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: 2021.12.14 15:20:45 -08'00'
 OREGON
 JULY 19, 1994
 KEVIN M. GROOM
 Expires: 6/30/2023



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 WILLIAM TUCKER

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

| DATE: | REVISION: | BY: |
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| BRIDGE NO: | 637-070 | DATE: | 12/14/2021 |
| PROJECT NO: | CB1803 | | |
| TRS: | T. 10 S., R. 01 W., SECTIONS 9 & 10 | | |
| DESIGNED BY: | K. Groom | CHECKED BY: | A. Potts |
| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

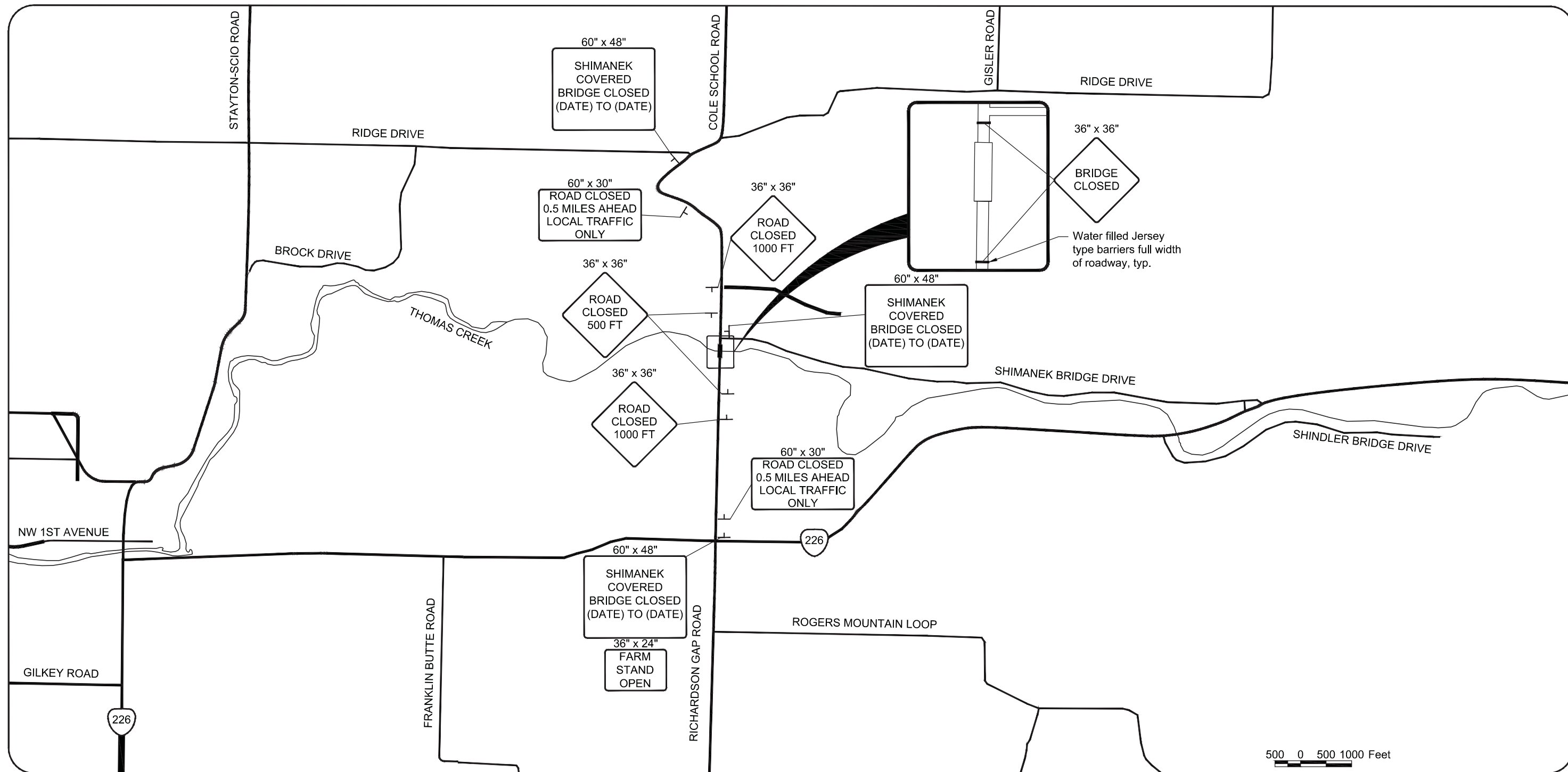
THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION
 LINN COUNTY
 2021

SHEET INDEX, LEGEND, NOTES, STANDARD DRAWINGS & ABBREVIATIONS
 SCALE: no scale SHEET 2

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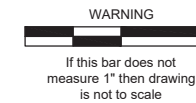


General Signing Notes:

Place water filled Jersey type barriers full width of the road. Barriers to be located approximately 50' from the north end of the bridge, and 120' from the south end of the bridge.

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 on both sides of road
- Barriers will be water filled YODOCK Type III kit in conjunction with model 2001 or 2001 MB barrier or approved equal
- Barriers shall meet the MUTCD



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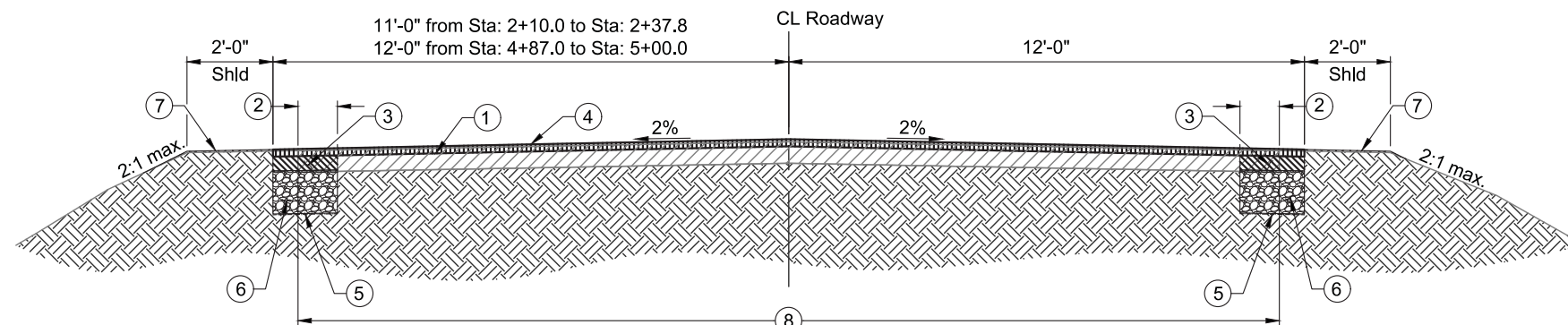
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| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

THOMAS CREEK -
 RICHARDSON GAP ROAD
 (SHIMANEK) COVERED
 BRIDGE REHABILITATION
 LINN COUNTY
 2021

TRAFFIC CONTROL PLAN
 SCALE: As Shown
 SHEET 3

REGISTERED PROFESSIONAL ENGINEER
 17206PE
 Digitally signed by Kevin M. Groom
 Date: 2021.12.16 10:48:01 -08'00'
 OREGON
 JULY 19, 1994
 KEVIN M. GROOM
 Expires: 6/30/2023

12/14/2021 3:02 PM



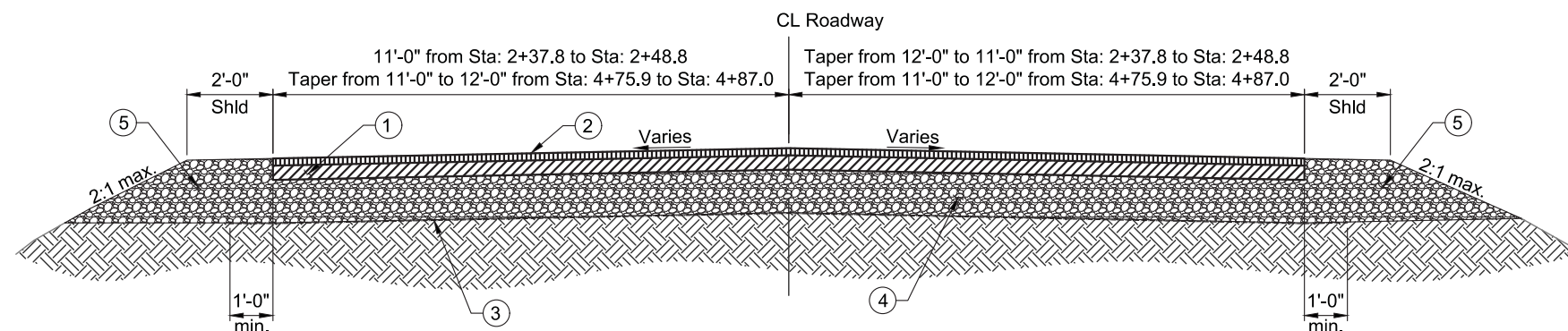
TYPICAL SECTION
NO SCALE

Sta: 2+10.0 to Sta: 2+37.8
Sta: 4+87.0 to Sta: 5+00.0

General Notes:

Construct embankment per ODOT Standard Detail DET2100 and DET2101

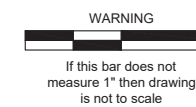
- ① Grind existing ACP as required to provide a 2" minimum overlay thickness
- ② Sawcut and remove existing asphalt 6" from edge of existing pavement
- ③ ACP base course level 3, 1/2" dense graded HMAC, 4" nominal thickness
- ④ ACP wearing course, level 3, 1/2" dense graded HMAC, 2" nominal thickness
- ⑤ Subgrade geotextile, level B
- ⑥ Aggregate base course, 3/4" - 0, 12" depth
- ⑦ Aggregate shoulder, 3/4" - 0, depth as required
- ⑧ Existing roadway, retain and protect



TYPICAL SECTION
NO SCALE

Sta: 2+37.8 to Sta: 2+48.8
Sta: 4+75.9 to Sta: 4+87.0

- ① ACP base course level 3, 1/2" dense graded HMAC, 4" nominal thickness
- ② ACP wearing course, level 3, 1/2" dense graded HMAC, 2" nominal thickness
- ③ Subgrade geotextile, level B. Extend 1'-0" minimum beyond limits of roadway.
- ④ Aggregate base course, 3/4" - 0, 12" depth
- ⑤ Aggregate shoulder, 3/4" - 0, depth as required



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CHAIRMAN
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WILLIAM TUCKER

ROADMASTER
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COUNTY ENGINEER
DAINEAL MALONE, P.E.

| DATE: | REVISION: | BY: |
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| DESIGNED BY: | K. Groom | CHECKED BY: | A. Potts |
| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

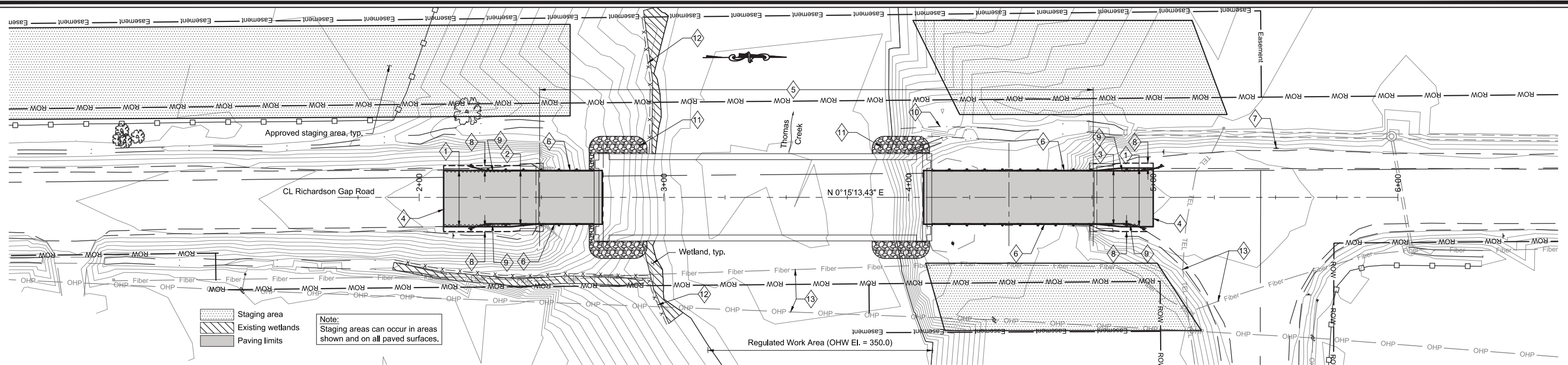
LINN COUNTY
2021

TYPICAL SECTIONS

SCALE: As Shown SHEET 4

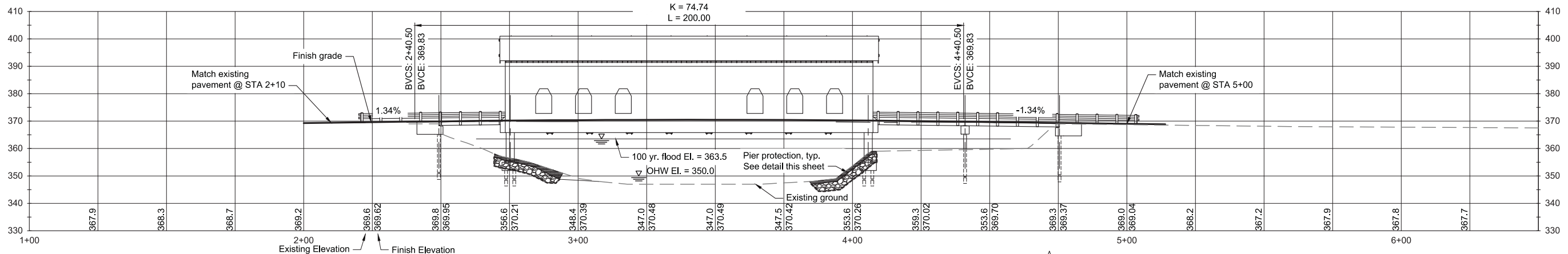
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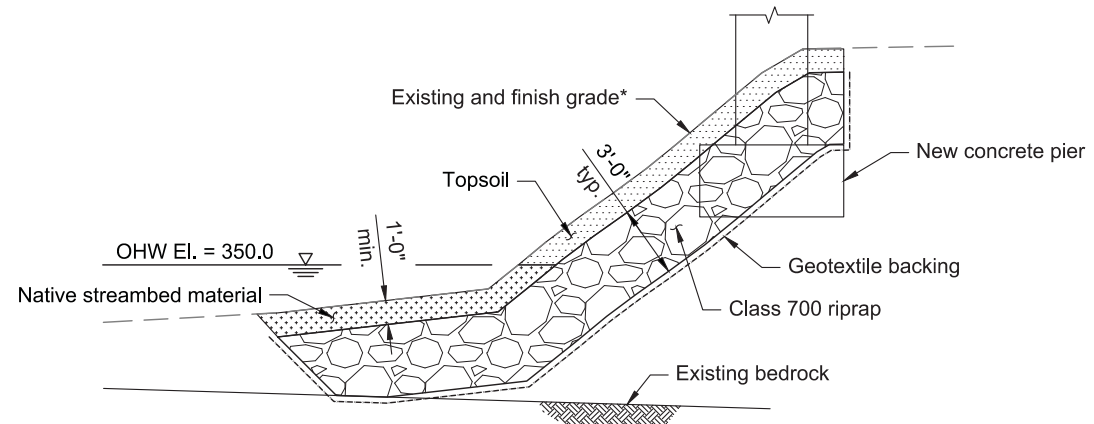


PVI STA = 3+40.50
 PVI ELEV = 371.17
 HIGH PT STA = 3+40.50
 HIGH PT ELEV = 370.50
 A.D. = 2.676%
 K = 74.74
 L = 200.00

RICHARDSON GAP ROAD PROFILE

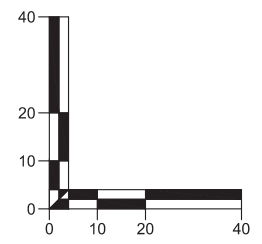


- 1 Install 23' wide asphalt pavement overlay from Sta: 2+10.0 to Sta: 2+37.8, and 24' wide asphalt pavement overlay from Sta: 4+87.0 to Sta: 5+00.0. Grind and remove existing asphalt pavement as required to provide a 2" minimum asphalt pavement overlay.
- 2 Install 23' wide to 22' wide tapered roadway section from Sta: 2+37.8 to Sta: 2+48.8. Remove existing asphalt and base material and construct new asphalt pavement roadway section. See Sht 4 for details.
- 3 Install 22' wide to 24' wide tapered roadway section from Sta: 4+75.9 to Sta: 4+87.0. Remove existing asphalt and base material and construct new asphalt pavement roadway section. See Sht 4 for details.
- 4 Sawcut a 2" minimum vertical face in existing pavement and match existing grade and slope at Sta: 2+10.0 and Sta: 5+00.0.
- 5 Construct new approach spans and bents, and rehabilitate existing covered bridge span from Sta: 2+48.8 to Sta: 4+75.9. See Bridge Plans for details.
- 6 Install steel-backed timber rail from Sta: 2+21 to Sta: 5+04 Lt, and from Sta: 2+21 to Sta: 4+97 Rt.
- 7 Retain and protect existing sign at Sta: 5+50 Lt.
- 8 Install 2' wide gravel shoulder from Sta: 2+10 to Sta: 2+48.8 Lt & Rt, and from Sta: 4+75.9 to Sta: 5+00 Lt & Rt.
- 9 Sawcut and remove existing asphalt 6" from the edge of pavement from Sta: 2+10.0 to Sta: 2+37.8 Lt & Rt and from Sta: 4+87.0 to Sta: 5+00.0 Lt & Rt
- 10 Relocate existing ditch to outside edge of new scour protection at Bent 3, Lt.
- 11 Install pier protection at Bents 2 & 3. See details on this sheet.
- 12 Install orange mesh work zone fencing to protect existing wetland.
- 13 Retain and protect existing utilities.



PIER PROTECTION DETAIL
NO SCALE

* Backfill with native streambed material below OHW (El. 350.0), and topsoil above OHW



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| BRIDGE NO: 637-070 | DATE: 12/14/2021 |
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| TRS: T. 10 S., R. 01 W., SECTIONS. 9 & 10 | |
| DESIGNED BY: K. Groom | CHECKED BY: A. Potts |
| DRAFTED BY: K. Groom | REVIEWED BY: C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

LINN COUNTY
2021

PLAN & PROFILE

SCALE: As Shown

SHEET 5

REGISTERED PROFESSIONAL ENGINEER
 17206PE

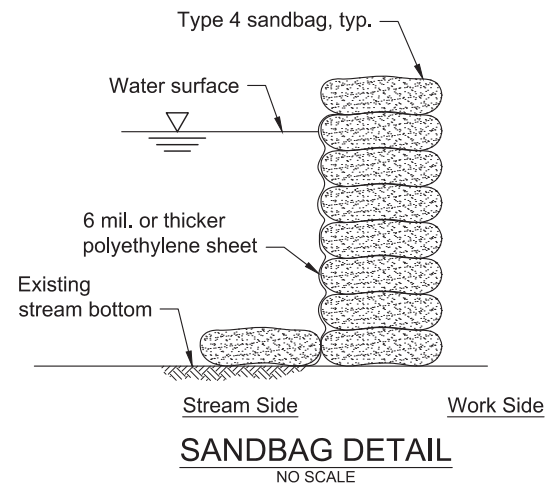
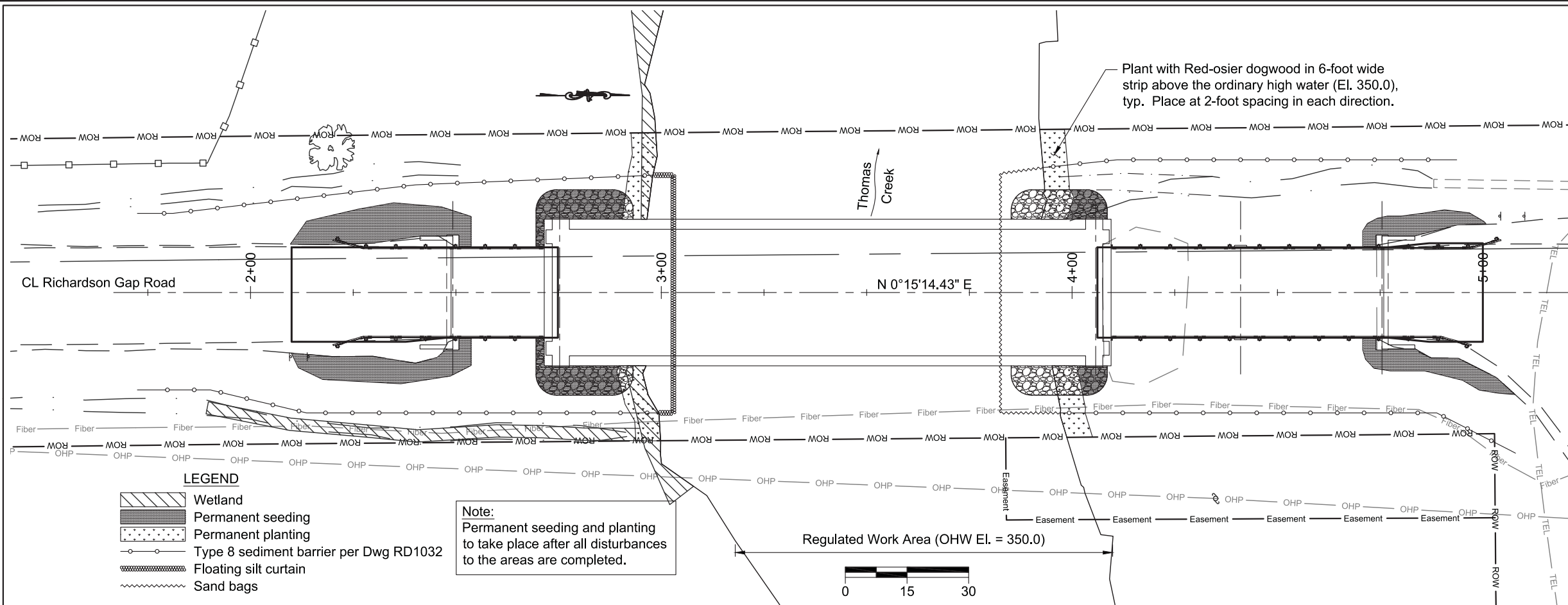
Digitally signed by Kevin M. Groom
 Date: 2021.12.14 15:22:57 -08'00'

OREGON
 JULY 19, 1994
KEVIN M. GROOM

Expires: 6/30/2023

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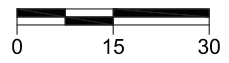


- Notes:**
- Sandbags shall meet the requirements of Section 00280.15 of the Specifications.
 - Stagger sandbag rows for stability.
 - Extend polyethylene sheet 6" minimum above water level.
 - One bag thickness shown, but multiple layers may be required for stability.
 - Add layers of sandbags and extend polyethylene sheet as required if water elevation increases.

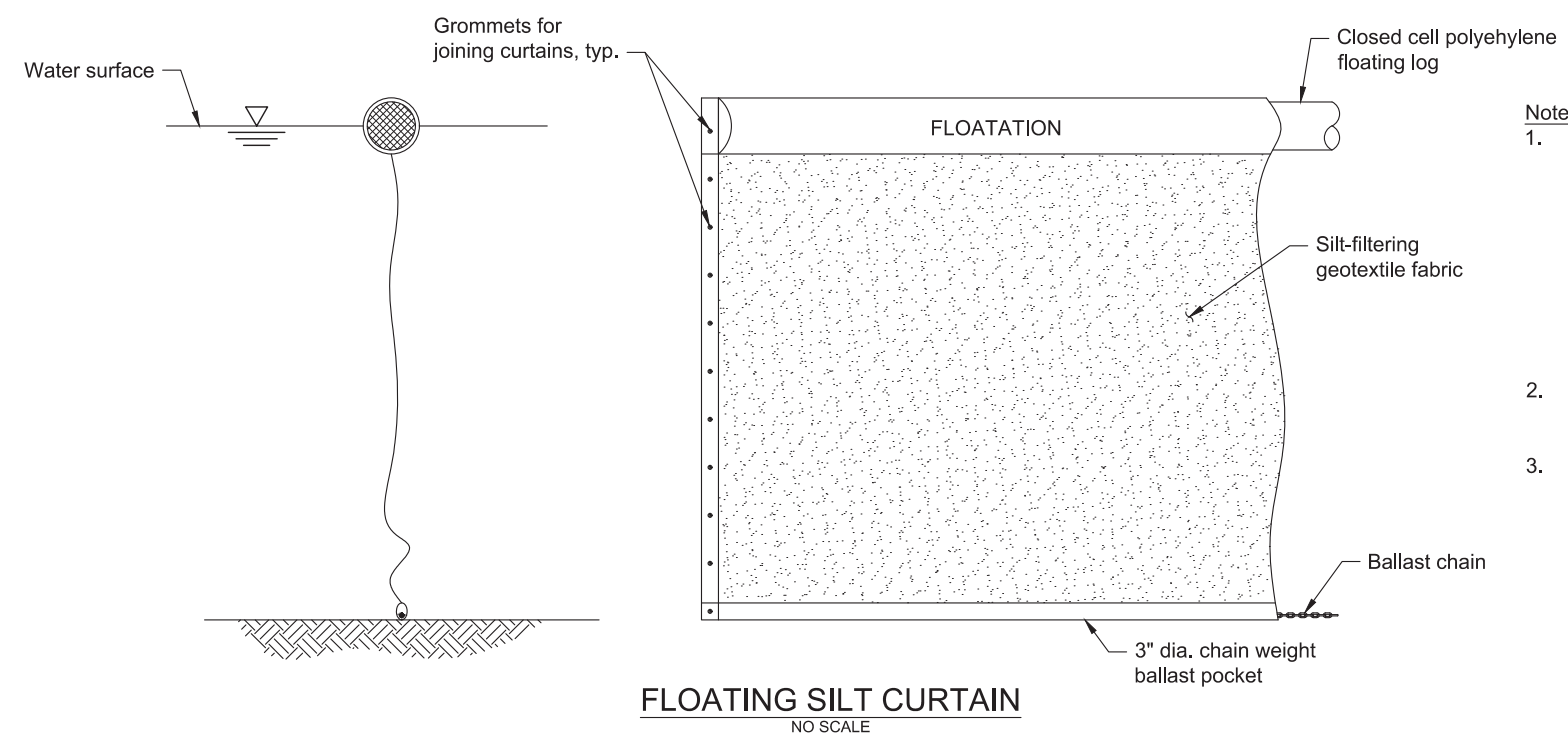
- LEGEND**
- Wetland
 - Permanent seeding
 - Permanent planting
 - Type 8 sediment barrier per Dwg RD1032
 - Floating silt curtain
 - Sand bags

Note:
Permanent seeding and planting to take place after all disturbances to the areas are completed.

Regulated Work Area (OHW El. = 350.0)



- General Notes:**
- 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.
 - Installation, construction, and maintenance of erosion control facilities shall begin prior to clearing, grading, or other earth altering activities.
 - 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 and to insure that sediment and sediment laden water does not leave the site.
 - 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.
 - 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 and the Special Provisions. 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.
 - 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.



- Notes:**
- Floating silt curtain shall be a "Layfield FSC7" or approved equal. The body of the floating silt curtain is made from a strong, high-filtration fabric that retains fine silts and sediments on-site. The float and bottom sleeve are constructed from a UV-stable, high-strength polyethylene (i.e. ripstop-typ material). The floating silt curtain is increased in length by joining additional sections of curtain, which typically come in 50-foot lengths.
 - Floating silt curtain shall be installed by placing at the water's edge, and moving the bottom along the bottom of the creek.
 - If water elevation is low enough, contractor may elect to use sandbag detail shown on this sheet.



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| TRS: T. 10 S., R. 01 W., SECTIONS. 9 & 10 | |
| DESIGNED BY: K. Groom | CHECKED BY: A. Potts |
| DRAFTED BY: K. Groom | REVIEWED BY: C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

LINN COUNTY
2021

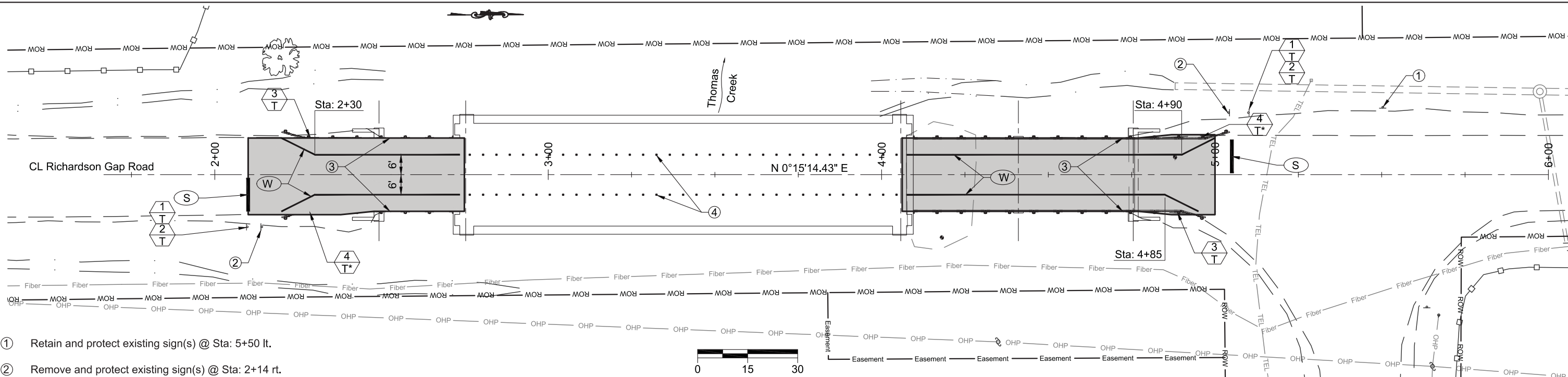
EROSION CONTROL PLAN

SCALE: As Shown
SHEET 6

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2021.12.14 15:23:37 -08'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023

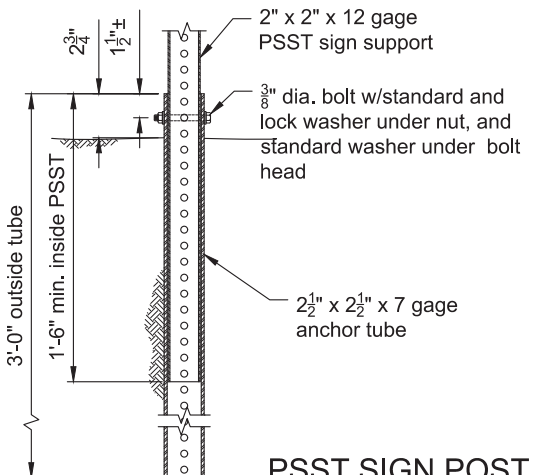
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K:\Projects - Current\BR 0637-0070 Shimanek Covered Bridge repair\KMG\ACAD\Shimanek Covered Bridge - Final Drawings.dwg



- ① Retain and protect existing sign(s) @ Sta: 5+50 lt.
- ② Remove and protect existing sign(s) @ Sta: 2+14 rt. and Sta: 5+04 lt.
- ③ Remove and protect existing Object Marker signs at Sta: 2+52 lt. & rt. and Sta: 4+72 lt. & rt.
- ④ Install raised, Type 1, bi-directional, reflectorized white pavement markers from ODOT QPL at 4'-0" spacing. See details, this sheet.
- (S) 1' wide Stop bar
Shown thus: (See TM503) at Sta: 2+10 Rt, and Sta: 5+05 Lt
- (W) 4" wide white Fog Line
Shown thus: (See TM500) from Sta: 2+20 to Sta: 2+74 Lt & Rt, from Sta: 4+08 to Sta: 5+00 Lt. and from Sta: 4+08 to Sta: 4+95 Rt. Taper length = 10'

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

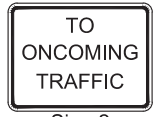


PSST SIGN POST ANCHOR DETAIL
NO SCALE

- General Notes:**
1. Material grade for base hardware connection shall be according to the manufacturer's recommendation and based on crash testing.
 2. Anchor steel shall be hot dipped galvanized or approved equal.
 3. Drive anchor sleeve into the ground per the manufacturer's recommendations.



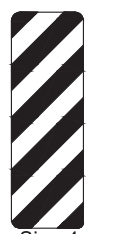
Sign 1
Type: R1-2
(36" x 36" x 36")



Sign 2
Type: R1-2a
(24" x 18")



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



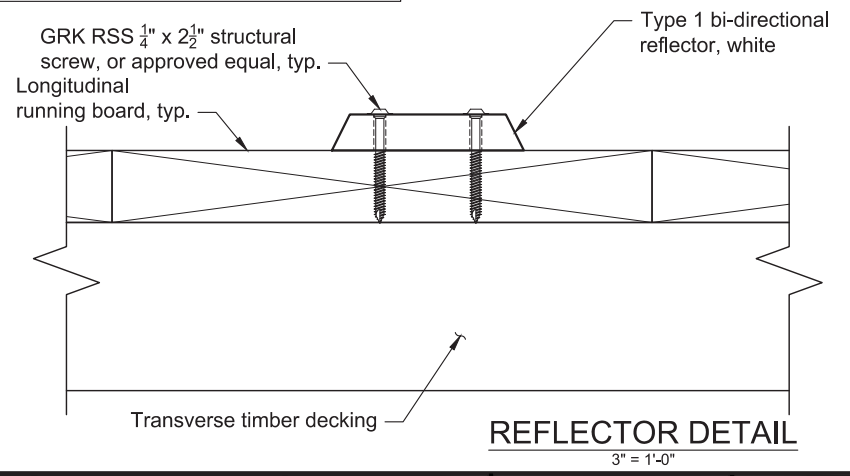
Sign 4
Type: OM-3R
(12" x 36")

Signing Notes:

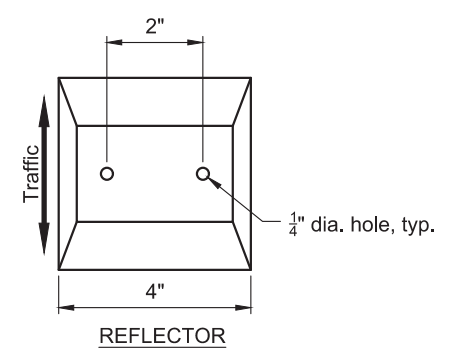
1. The locations of sign installations shown are approximate with exact locations to be determined in the field.
2. Install signs per ODOT Standard Drawings TM200, TM201, TM676, TM681. Install the PSST sign anchor detail and the object marker per details shown on this sheet.
3. All signs shall meet the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

Install Sign (N) and Support (T)

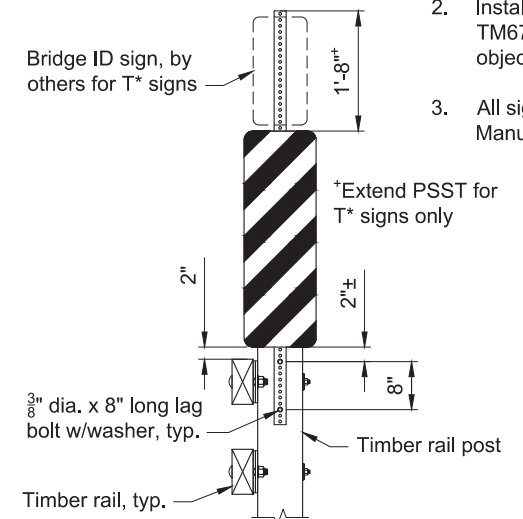
Legend:
N = Sign Number
T = Perforated Steel Square Tube (PSST)
T* = Perforated Steel Square Tube (PSST) w/1'-8" extending above sign (N)



REFLECTOR DETAIL
3" = 1'-0"



REFLECTOR



OBJECT MARKER SIGN DETAIL
NO SCALE



LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
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COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
SHERRIE SPRENGER
WILLIAM TUCKER

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

| DATE: | REVISION: | BY: |
|-------|-----------|-----|
| | | |
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|---|-----------------------|
| BRIDGE NO: 637-070 | DATE: 12/14/2021 |
| PROJECT NO: CB1803 | |
| TRS: T. 10 S., R. 01 W., SECTIONS. 9 & 10 | |
| DESIGNED BY: K. Groom | CHECKED BY: A. Potts |
| DRAFTED BY: K. Groom | REVIEWED BY: C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

LINN COUNTY
2021

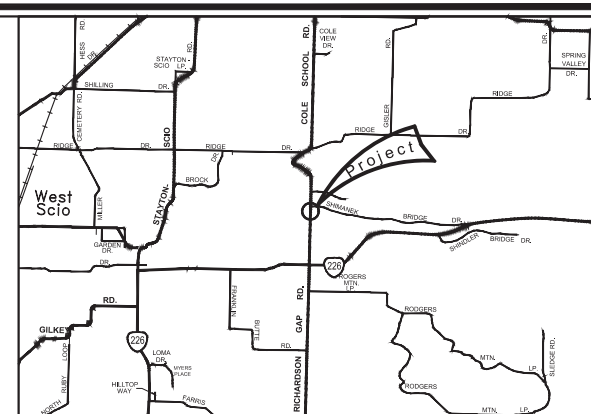
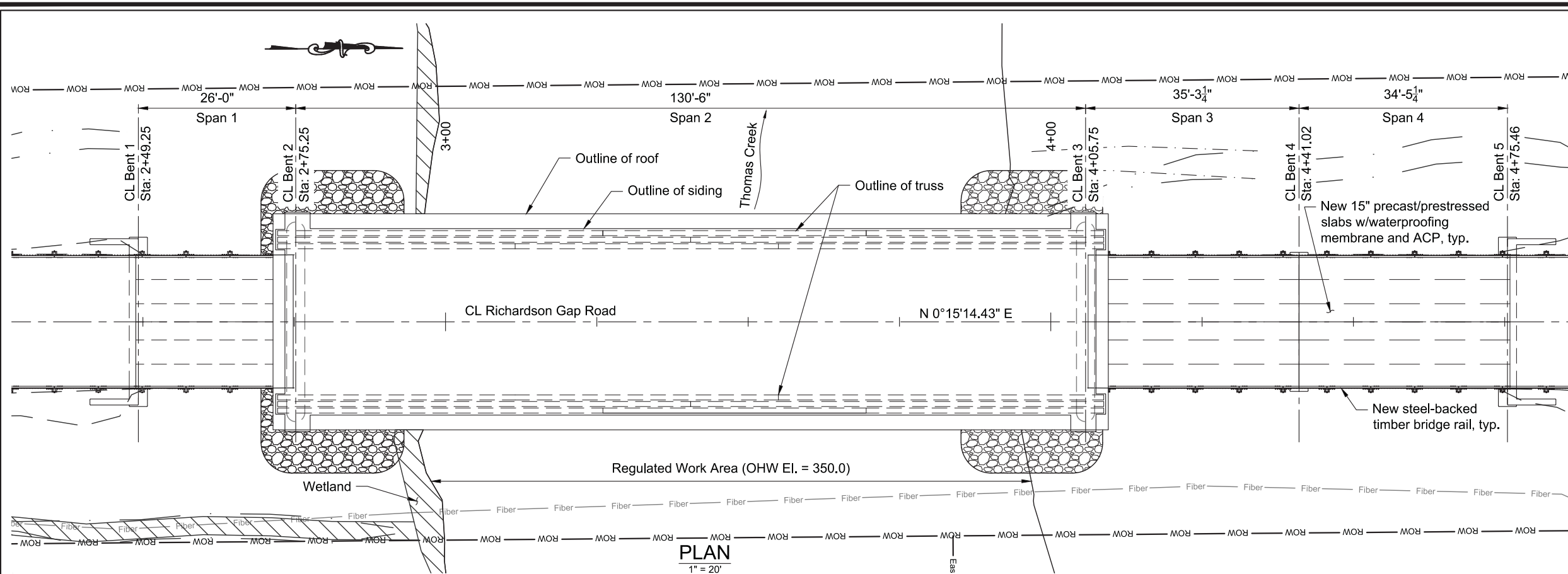
SIGNING & STRIPING PLAN

SCALE: As Shown
SHEET 7

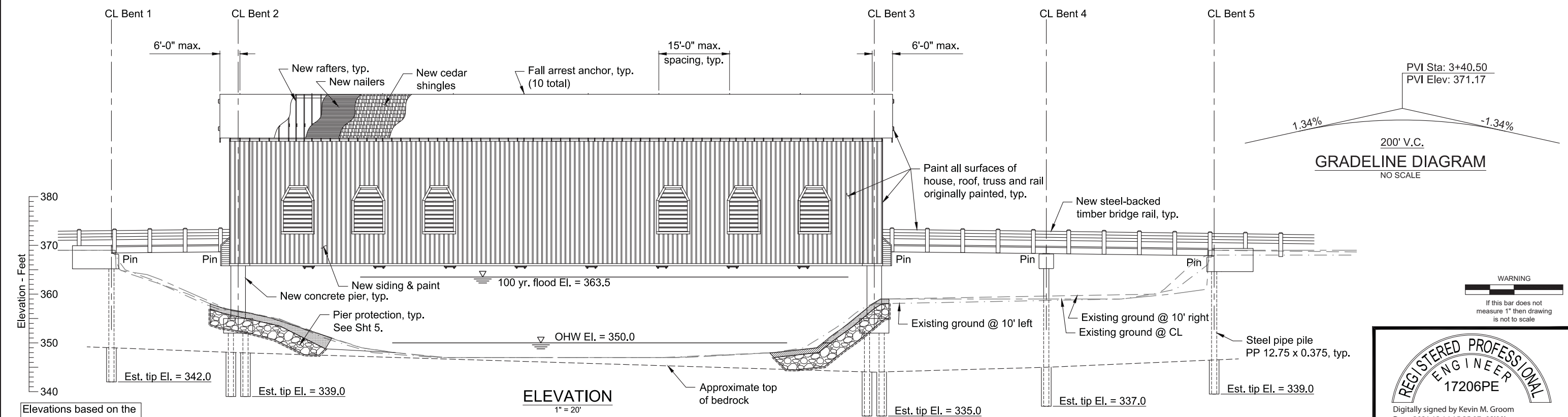


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T. 10 S., R. 01 W., SECTIONS 9 & 10
LOCATION MAP
NO SCALE



Elevations based on the NAVD 88 (MSL = 0.00)



LINN COUNTY ROAD DEPARTMENT
3010 FERRY STREET SW
ALBANY, OREGON 97322
PHONE: (541) 967-3919
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COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
SHERRIE SPRENGER
WILLIAM TUCKER

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

| DATE: | REVISION: | BY: |
|-------|-----------|-----|
| | | |
| | | |
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|--|-----------------------|
| BRIDGE NO: 637-070 | DATE: 12/14/2021 |
| PROJECT NO: CB1803 | |
| TRS: T. 10 S., R. 01 W., SECTIONS 9 & 10 | |
| DESIGNED BY: K. Groom | CHECKED BY: A. Potts |
| DRAFTED BY: K. Groom | REVIEWED BY: C. Knoll |

THOMAS CREEK -
RICHARDSON GAP ROAD
(SHIMANEK) COVERED
BRIDGE REHABILITATION

LINN COUNTY
2021

| |
|------------------|
| BRIDGE PLANS |
| PLAN & ELEVATION |
| SCALE: AS SHOWN |
| SHEET BR-01 |

REGISTERED PROFESSIONAL ENGINEER
17206PE

Digitally signed by Kevin M. Groom
Date: 2021.12.14 15:25:07 -08'00'

KEVIN M. GROOM
JULY 19, 1994
OREGON

Expires: 6/30/2023

12/14/2021 3:03 PM

General Notes:
 Bridge is designed in accordance with the 8th edition of the AASHTO LRFD Bridge Design Specifications, and the National Design Specifications (NDS) for Wood Construction.

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

Approach spans are designed 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

Main span is designed for dead load and the following live loads:

Strength-2 Limit State:
 Permit Vehicle Type 3
 Permit Vehicle Type 3S2
 Permit Vehicle Type 3-3

Timber members are designed by LRFD method. All timber and lumber shall be the grade, type, and pressure treated as specified in the Special Provisions. Unless otherwise noted, timber dimensions shown without inch symbol are nominal, and those shown with inch symbol are actual dimensions (eg. 4x6 = 3½" x 5½" actual dimensions, and 4"x6" = 4"x6" actual dimensions).

All lumber and timber shall be accurately cut and framed to a close fit in such a manner that the joints have even bearing over all the contact surfaces. Holes for bolts shall be bored with a bit 1/16" larger than the bolt. Lead holes for lag bolts shall be bored to the diameters specified in the table "Lead Hole Diameter for Lag Bolts" shown below. Any dimension not provided shall be equal to the existing dimension.

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.

Use the following splice lengths (unless shown otherwise):

| | | SPLICE LENGTH* | | | | | | | | | | |
|----------|-------|----------------|-------|-------|-------|-------|-------|-------|-------|---------------|-----|--|
| Bar Size | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 | #14 | #18 | |
| Uncoated | 1'-0" | 1'-4" | 1'-8" | 2'-0" | 2'-9" | 3'-7" | 4'-7" | 5'-9" | 7'-1" | 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.

Splice reinforcing bars at alternate bars, staggered at least one splice length, or as far as practical, unless shown otherwise.

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

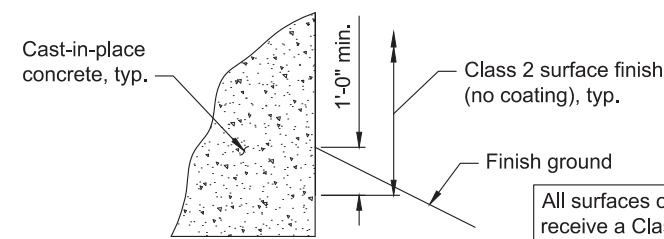
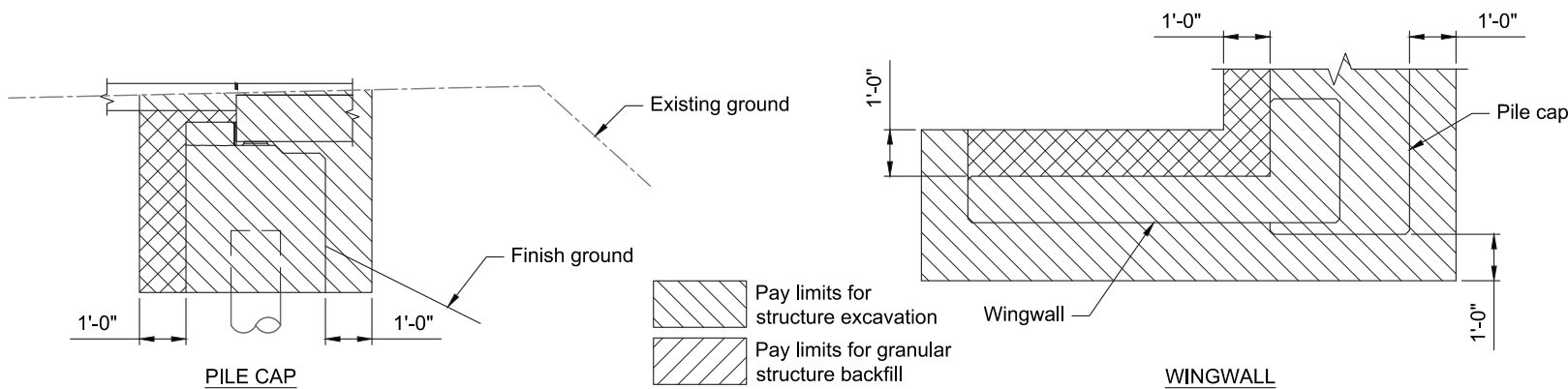
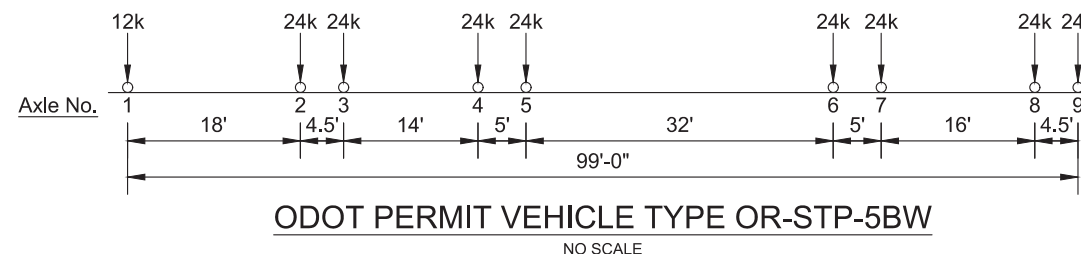
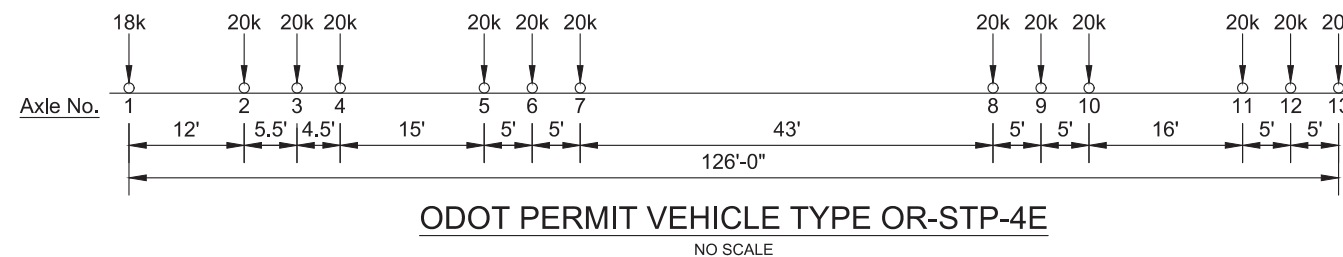
Provide Class 3300 - 1" or ¾" concrete for all concrete.

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

Bolts shall be ASTM A307 unless noted or shown otherwise. Resin bonded anchor bolts shall be ASTM F1554, Grade 55. All bolt heads and nuts shall bear against a washer unless noted otherwise. Washers shall be malleable iron when in contact with wood, unless noted otherwise. All nuts and bolts shall be effectively locked after they have been finally tightened. All hardware, including angles, nuts, bolts, threaded rods, lag bolts, washers, shear plates, spikes and nails shall be hot-dip galvanized according to ASTM A123 or ASTM A153 as appropriate to the product, unless noted or shown otherwise. All threads shall be chased after galvanizing. Bolt lengths shall be determined by the Contractor and shall be of sufficient length to fully engage all threads on the nut. Bolts shall not extend more than 1" past the nut. All nail and bolt spacings shall be in accordance with the current IBC unless shown otherwise.

All welds shall conform to AWS D1.1 using E70XX electrodes.

All structural steel shall conform to the requirements of ASTM A36, unless noted otherwise. All holes and slotted holes shall be drilled, punched, or machined to the dimensions shown. No torch or plasma cutting will be allowed. Other numerically controlled cutting methods may be allowed based on approval of the Engineer.



All surfaces of cast-in-place concrete shall receive a Class 2 surface finish without coating to a minimum of 1'-0" below finish grade. Finish concrete prior to any backfilling to provide a clean surface for finishing work.

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

| Lead Hole Diameter For Lag Bolts | | |
|----------------------------------|----------------------------------|---|
| Nominal dia. of lag bolt (in.) | Shank (unthreaded portion) (in.) | Lead hole dia. (threaded portion) (in.) |
| 3/8 | 3/8 | 15/64 |
| 7/16 | 7/16 | 9/32 |
| 1/2 | 1/2 | 5/16 |
| 9/16 | 9/16 | 23/64 |
| 5/8 | 5/8 | 13/32 |
| 3/4 | 3/4 | 1/2 |
| 7/8 | 7/8 | 39/64 |
| 1 | 1 | 23/32 |
| 1-1/8 | 1-1/8 | 53/64 |
| 1-1/4 | 1-1/4 | 15/16 |

K:\Projects - Current\BR 0637-0070 Shimanek COVERED Bridge repair\KM\G\CAD\Shimanek Covered Bridge - Final Drawings.dwg



LINN COUNTY ROAD DEPARTMENT
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 E-MAIL: Roads@co.linn.or.us

COUNTY COMMISSION
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 CHAIRMAN
 SHERRIE SPRENGER
 WILLIAM TUCKER

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

| DATE: | REVISION: | BY: |
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|--------------|--------------------------------------|--------------|------------|
| BRIDGE NO: | 637-070 | DATE: | 12/14/2021 |
| PROJECT NO: | CB1803 | | |
| TRS: | T. 10 S., R. 01 W., SECTIONS. 9 & 10 | | |
| DESIGNED BY: | K. Groom | CHECKED BY: | A. Potts |
| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION
 LINN COUNTY
 2021

BRIDGE PLANS
 GENERAL NOTES
 SCALE: AS SHOWN
 SHEET BR-02

REGISTERED PROFESSIONAL ENGINEER
 17206PE
 Digitally signed by Kevin M. Groom
 Date: 2021.12.14 15:25:46 -08'00'
KEVIN M. GROOM
 OREGON
 JULY 19, 1994
 Expires: 6/30/2023

12/14/2021 3:04 PM

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PROPOSED WORK TO BE DONE

Main Span

-Roof-

- Remove existing roof, rafters and rafter support beam system.
- Retain and protect tarp covering roof. Deliver to the LCRD in Albany, Oregon.
- Install new rafter support beam system.
- Install new 2x8 rafters and rafter ties at 2'-0" maximum centers. Attach rafter to rafter support beams with Simpson VPA2 connectors, or approved equal.
- Install new pressure treated outlookers at each portal.
- Install 1x6 roofing nailers at 7½" centers.
- Install fall arrest anchors per the manufacturer's recommendations.
- Install new cedar shingles per the Special Provisions.

-Siding-

Replace all siding, wrap arounds and framing as shown on the project plans. Match existing portal openings and clearances. See the Special Provisions for timber grades and species.

-Truss-

All repair work on the truss shall be performed after the truss has been lifted off the existing piers, and is resting on temporary supports. The timber trusses shall be kept dry at all times and protected from rain and other moisture after the roof and siding are removed.

- Replace bottom chord of truss with pressure treated glulam members.
- Install new pressure treated glulam corbels at all 4 corners.
- Epoxy repair decay or damage in upper chords & diagonals.
- Chemically fumigate truss members to minimize future decay.
- Tune truss to desired camber. See Camber Table on this sheet.

-Deck System-

- Remove existing timber railing, decking and exterior deck stringers. Take care not to damage existing stringers.
- Install new pressure treated glulam exterior deck stringers and solid sawn blocking at rail post locations.
- Install new transverse and longitudinal pressure treated timber deck per the project plans and the Special Provisions.
- Install new steel-backed timber bridge rails.

-Painting-

Paint all surfaces of the covered bridge that were painted prior to construction per the Special Provisions.

Approaches

-Approach Spans-

- Remove existing approach spans, bents and piling.
- Install new cast-in-place concrete caps at Bents 1, 4 & 5 on drilled and grouted-in steel piling.
- Install new cast-in-place piers at Bents 2 & 3. Found piers on cast-in-place footing supported by drilled and grouted-in steel piling.
- Install riprap at Bents 2 & 3.
- Install new precast/prestress slabs for Spans 1, 3 & 4.
- Install new steel-backed timber bridge rails.
- Install waterproofing membrane and pave approach spans.

-Approach Work-

- Extend steel backed timber rail into approaches.
- Tie existing roadway to new work performed on bridge.
- Install permanent traffic control - signing, striping, etc...

"SS" Super Anchor ARS2x8 Part #2805 "Fall Arrest Anchor" as manufactured by American Roof, Inc., or approved equal. Install per the manufacturer's instructions.

Seal/flash roofing around fall arrest anchor, typ.

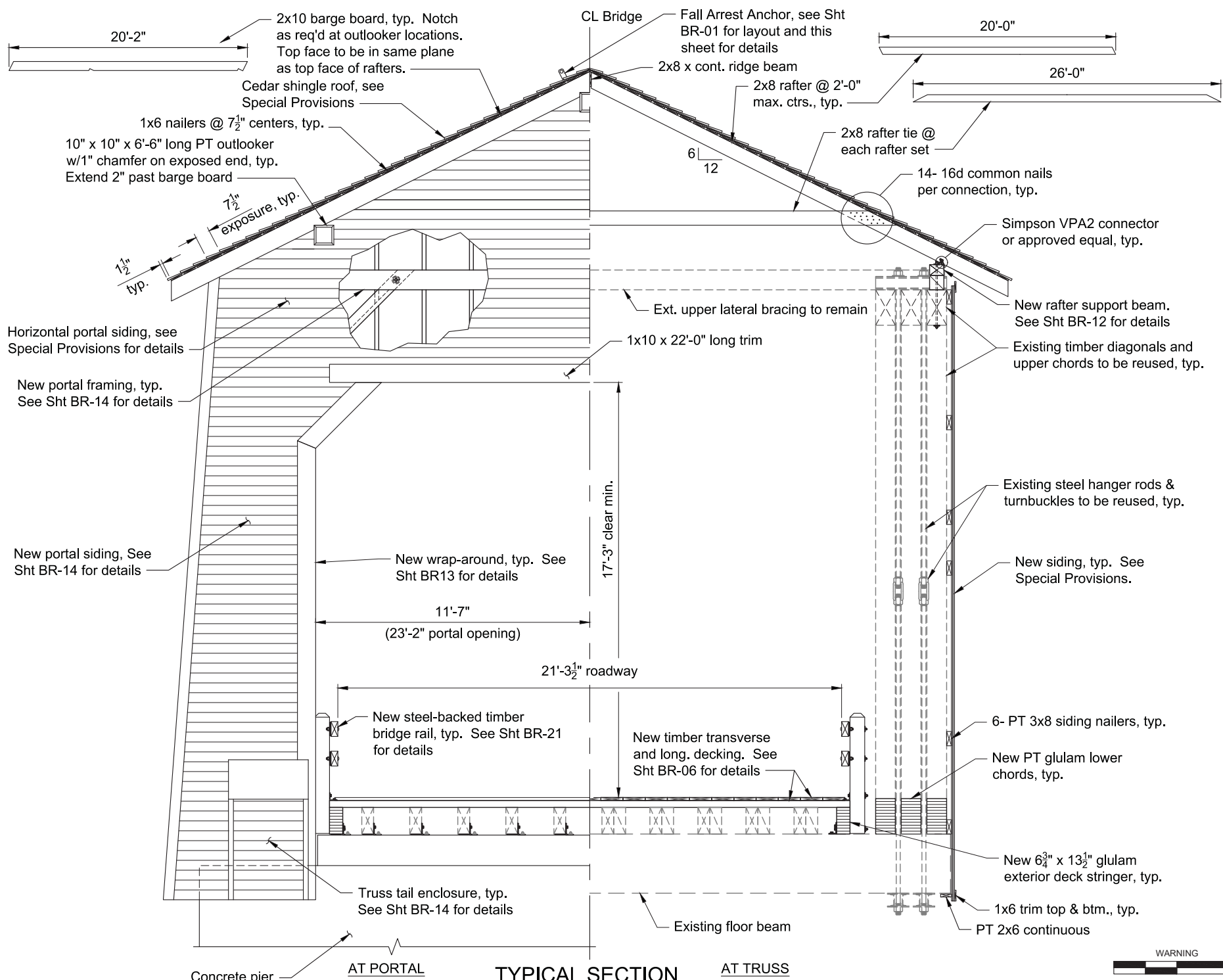
Rafter, typ.

2x6 bridging. Extend past adjacent rafters on each side

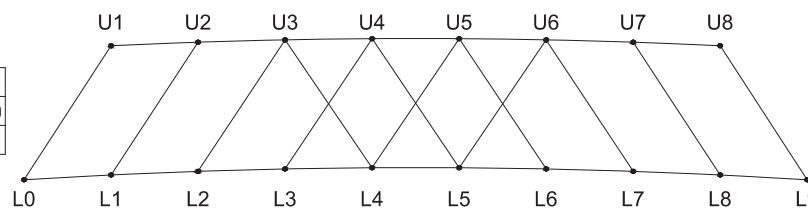
FALL ARREST ANCHOR

3/4" = 1'-0"

Install fall arrest anchor on west side of roof.



| Camber Table | | | | | |
|--------------|--------|--------|--------|--------|---------|
| Location | L1, L8 | L2, L7 | L3, L6 | L4, L5 | Midspan |
| Camber (in) | 2 3/8 | 4 1/8 | 5 3/8 | 5 7/8 | 6 |



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



LINN COUNTY ROAD DEPARTMENT
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ALBANY, OREGON 97322
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FAX: (541) 924-0202
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COUNTY COMMISSION
ROGER NYQUIST
CHAIRMAN
SHERRIE SPRENGER
WILLIAM TUCKER

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

| DATE: | REVISION: | BY: |
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|--------------|--------------------------------------|--------------|------------|
| BRIDGE NO: | 637-070 | DATE: | 12/14/2021 |
| PROJECT NO: | CB1803 | | |
| TRS: | T. 10 S., R. 01 W., SECTIONS. 9 & 10 | | |
| DESIGNED BY: | K. Groom | CHECKED BY: | A. Potts |
| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

LINN COUNTY
2021

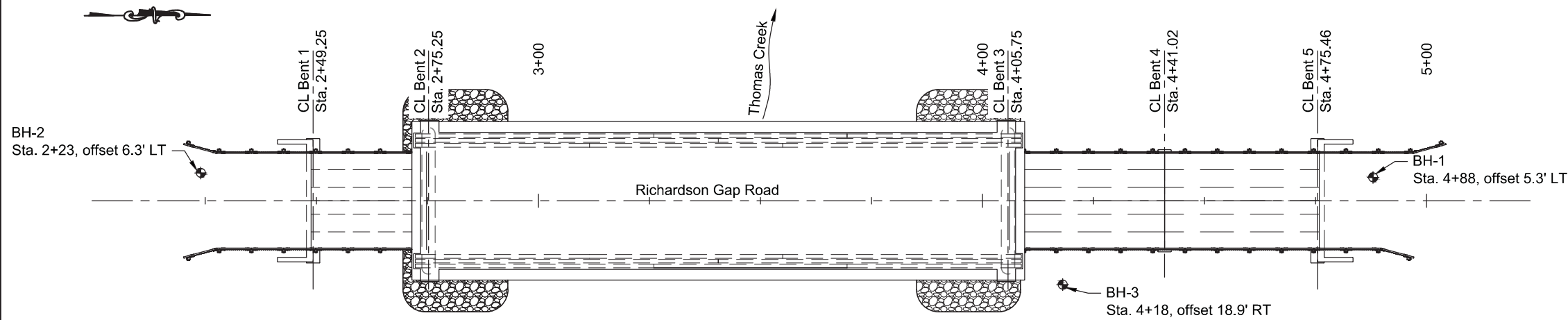
BRIDGE PLANS

WORK TO BE DONE & TYPICAL SECTION

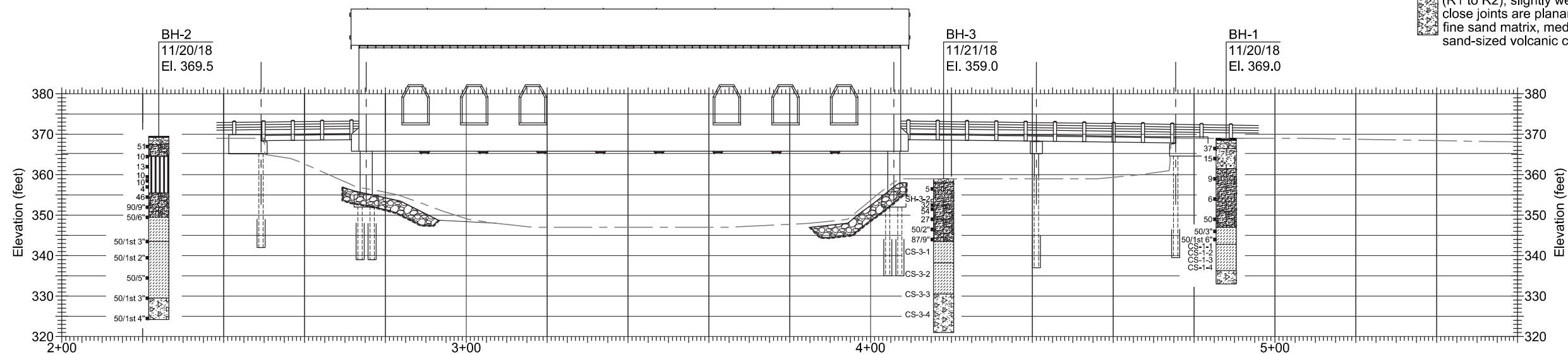
SCALE: AS SHOWN SHEET BR-03

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2021.12.14 15:26:37 -08'00'
OREGON
JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023

10/14/2021 8:01 AM



PLAN
Scale: 1" = 30'



PROFILE
Scale: 1" = 30'

| Geotechnical Boring | Core Run | % Rec | Hardness | RQD | q _u (psi) |
|---------------------|----------|-------|----------|-----|----------------------|
| BH-1 | CS-1-1 | 0 | R0 | 0 | - |
| | CS-1-2 | 90 | R1 to R2 | 80 | 1,800 |
| | CS-1-3 | 100 | R1 to R2 | 93 | - |
| | CS-1-4 | 100 | R1 to R2 | 74 | 854 |
| BH-3 | CS-3-1 | 45 | R0 to R1 | 42 | 986 |
| | CS-3-2 | 94 | R1 | 75 | 968 |
| | CS-3-3 | 100 | R1 to R2 | 41 | - |
| | CS-3-4 | 100 | R1 to R2 | 82 | - |

CS = Core Sample
 % Rec = Percent Recovery
 RQD = Rock Quality Designation
 q_u = Unconfined Compressive Strength

- UNIT DESCRIPTIONS**
- ASPHALTIC CONCRETE
 - CRUSHED ROCK (GP); grey to dark grey, damp to moist, medium dense to dense, ±1 to 1½-inch minus angular rock, (fill or base rock).
 - Silty GRAVEL, some sand (GM) and sandy GRAVEL, some silt (GP-GM); brown to dark grey, low plasticity silt, damp to wet, medium dense to very dense, fine to coarse sand, fine to coarse angular to rounded gravel, (alluvium or fill).
 - Silty gravelly SAND (SM); dark grey, low plasticity silt, damp, dense, fine to coarse sand, fine to coarse angular gravel, (fill).
 - Clayey SILT (MH); brown, medium to high plasticity, damp to moist, soft to stiff, (alluvium).
 - Silty SAND (SM); brown, low plasticity silt, damp, loose, fine sand, (alluvium).
 - Silty SANDSTONE; grey, extremely soft to soft (R0 to R2), highly weathered to fresh, close to moderately close joints are planar, smooth, and open, very thin bedding, silt and sand laminations, fine sand, some mica, (Continental Sedimentary Rocks).
 - VOLCANICLASTIC SANDSTONE; dark grey, very soft to soft (R1 to R2), slightly weathered to fresh, very close to moderately close joints are planar to irregular, smooth to rough, and open, fine sand matrix, medium to coarse angular to subangular sand-sized volcanic clasts, (Oligocene Sedimentary Rocks).

- LEGEND**
- ◆ = Geotechnical Boring (BH)
 - 24 □ = Standard Penetration Test N value
 - SH-3-2 □ = Shelby Tube Sample
 - CS-1-1 = Core Sample Interval

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.

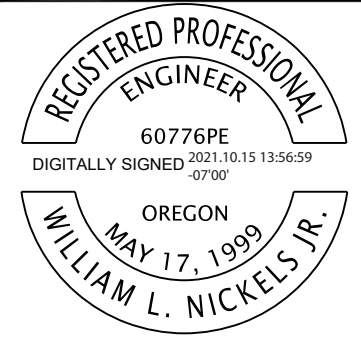
Elevations based on the NAVD 88 (MSL = 0.00)

SCALE WARNING

If scale bar does not measure 1-inch 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



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 3010 FERRY STREET SW
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 PHONE: (541) 967-3919
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COUNTY COMMISSION
 ROGER NYQUIST
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 WILLIAM TUCKER

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

| DATE: | REVISION: | BY: |
|-------|-----------|-----|
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| | |
|---|-------------------------|
| BRIDGE NO: 637-070 | DATE: 10/14/2021 |
| PROJECT NO: CB1803 | |
| TRS: T. 10 S., R. 01 W., SECTIONS. 9 & 10 | |
| DESIGNED BY: M. Mason | CHECKED BY: B. Running |
| DRAFTED BY: K. Groom | REVIEWED BY: B. Nickels |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

LINN COUNTY
 2021

BRIDGE PLANS
 FOUNDATION DATA SHEET

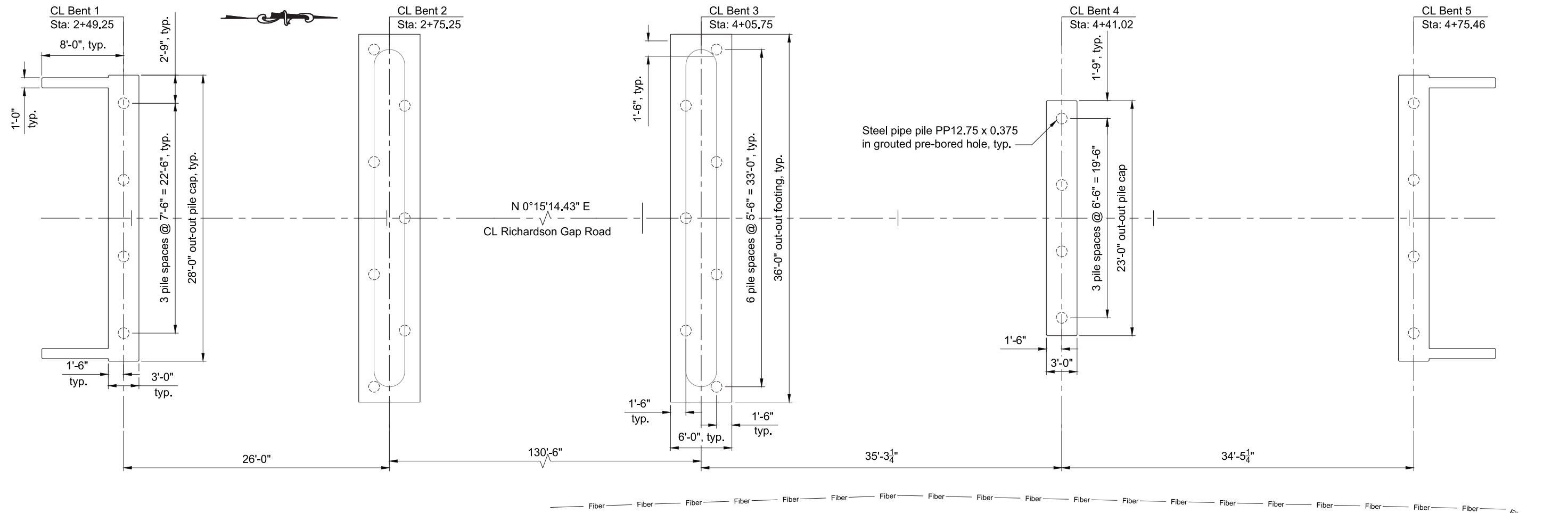
SCALE: AS SHOWN
 SHEET BR-04

RENEWS: 12-31-2022

K:\Projects - Current\BR 0637-0070 Shimaneck Covered Bridge repair\KMG\ACAD\Shimaneck Covered Bridge - Final Drawings.dwg

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FOUNDATION PLAN

1" = 10'-0"

Foundation General Notes:

All piling shall be PP12.75 x 0.375 steel pipe pile conforming to ASTM Specification A252, Grade 3. Piling shall be installed in 2'-0" minimum diameter predrilled holes into bedrock. The minimum embedment into bedrock shall be no less than that shown in the "Embedment Table" shown on this sheet. All bedrock holes are to be filled with 3,000 psi grout consistent with Section 02080.40 of the Specifications. The grouted in place piles will have nominal resistances as follows:

- 7'-0" embedment = 111 kips
- 8'-0" embedment = 159 kips
- 9'-0" embedment = 206 kips

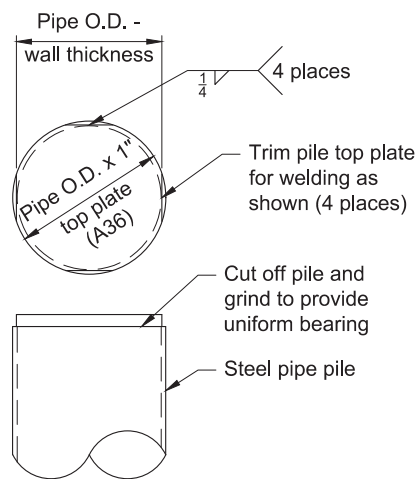
Capacities are based primarily on side friction between grout and bedrock.

Estimated pile tip elevations are shown on Sheet BR-01, and are based on bedrock elevations encountered during exploratory borings. Pile tip elevations shall be adjusted as necessary to meet the minimum embedment requirements shown in the "Embedment Table".

Temporary casing may be required to assure that the hole drilled into the bedrock remains free of debris.

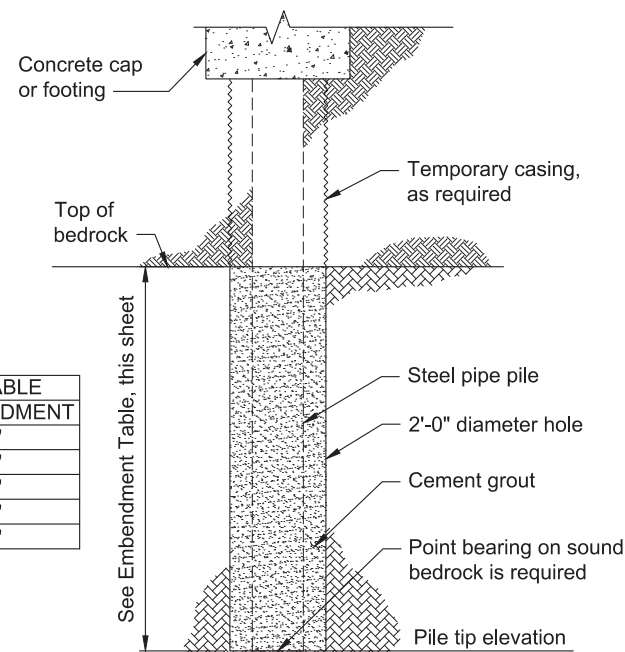
All bents are parallel with a bearing of N 89° 44' 45.57" W.

See Sht BR-04 for Foundation Data Sheet.



TOP OF PIPE PILE
NO SCALE

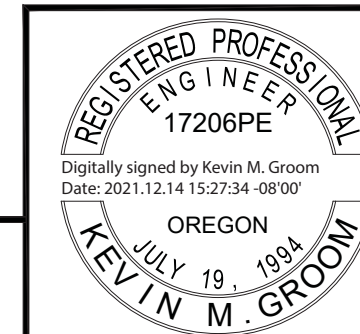
| EMBEDMENT TABLE | |
|-----------------|----------------|
| BENT | MIN. EMBEDMENT |
| 1 | 7'-0" |
| 2 | 9'-0" |
| 3 | 9'-0" |
| 4 | 8'-0" |
| 5 | 7'-0" |



DRILLED PILE DETAIL

1/4" = 1'-0"

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



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| | | |
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| | | |

| | | | |
|--------------|--------------------------------------|--------------|------------|
| BRIDGE NO: | 637-070 | DATE: | 12/14/2021 |
| PROJECT NO: | CB1803 | | |
| TRS: | T. 10 S., R. 01 W., SECTIONS. 9 & 10 | | |
| DESIGNED BY: | K. Groom | CHECKED BY: | A. Potts |
| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

THOMAS CREEK -
RICHARDSON GAP ROAD
(SHIMANEK) COVERED
BRIDGE REHABILITATION

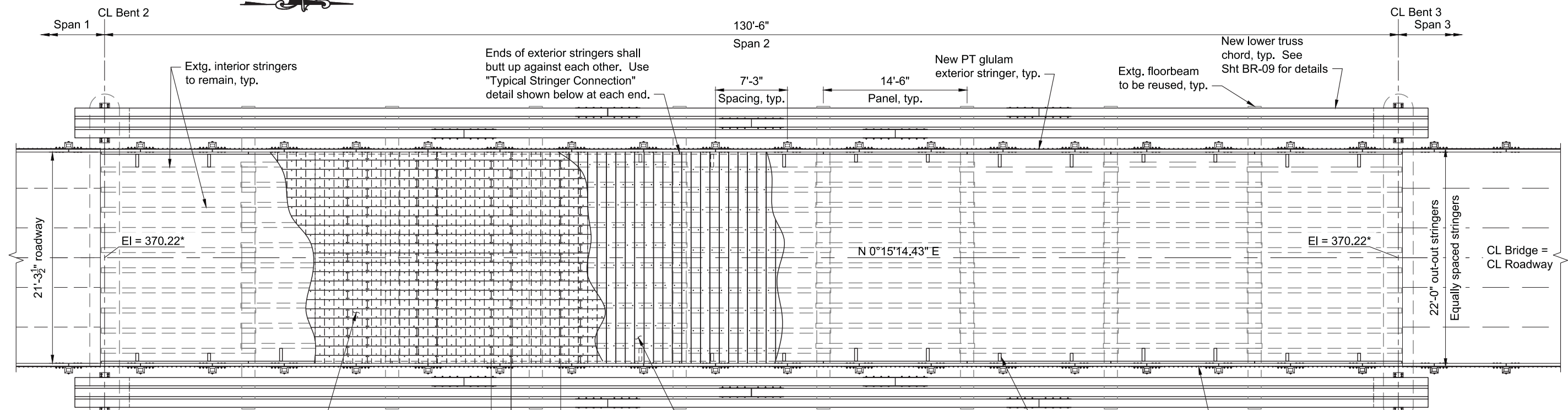
LINN COUNTY
2021

BRIDGE PLANS
FOUNDATION PLAN

SCALE: AS SHOWN
SHEET BR-05

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*Elevations shown are at top of running boards.

2'-0"± joint stagger
5'-0"± Centered over floor beam, typ.

2x12 running boards full width of roadway. Attach running boards to decking with GRK RSS 5/16"x4" structural screws, or approved equal. Use one deck screw per transverse deck board at alternate edges, and two deck screws at each running board end. Place 1 1/2" from edge. Head of screw shall be flush with deck plank when installed. Stagger joints in running boards as shown. Notch and field treat as required for rail post connections.

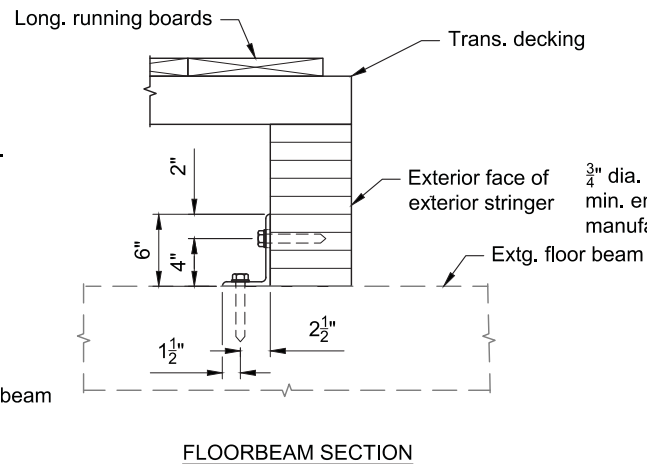
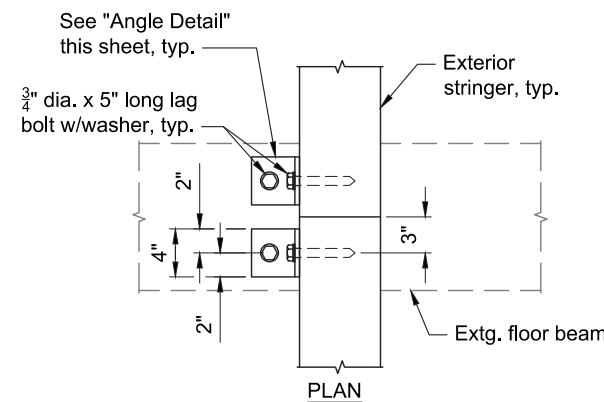
4x12 x 22'-0" transverse decking. Spike decking to stringers with 3/8"x8 1/2" spikes. Use two spikes at each end and one spike per interior stringer, alternate sides. Place spikes 2 1/2" from edges. Provide 1/8"± gap between planks, typ. Decking over floorbeams that match locations of removable longitudinal running boards shall be installed with 1/2" dia. x 8" long galv. lag bolts & washers to allow removal for future inspections or maintenance. Install lag bolts in 1 1/4" dia. x 1/2" deep counterbores and field treat per the Special Provisions. Use the same pattern as that used for spikes to install the lag bolts.

4x12 PT bridging at ea. rail post, see this sheet for details.

New steel-backed timber rail, typ. See Sht BR-21 for details.

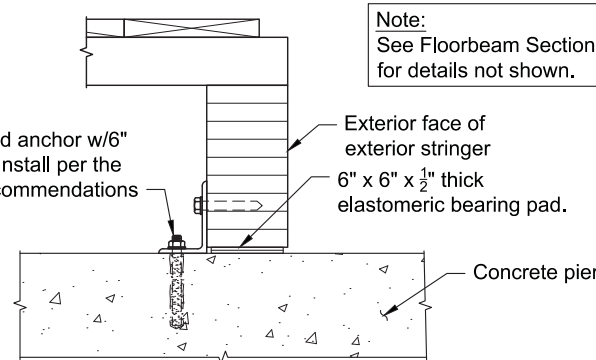
DECK PLAN - SPAN 2

3/32" = 1'-0"

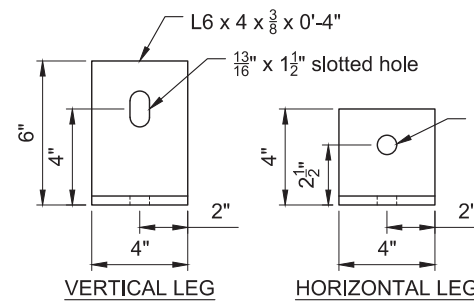


TYPICAL STRINGER CONNECTION

3/4" = 1'-0"

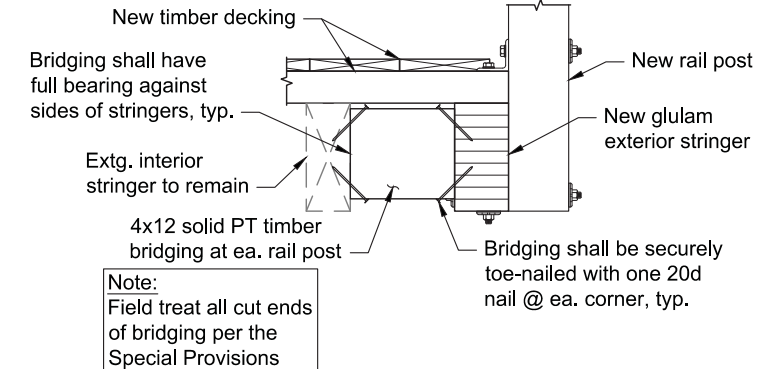


CONCRETE BENT SECTION



ANGLE DETAIL

1 1/2" = 1'-0"

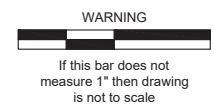


STRINGER BRIDGING DETAIL

No Scale

Note: Field treat all cut ends of bridging per the Special Provisions

Note: See General Notes on Sht BR-02 for steel grade and notes on holes.



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|-------|-----------|-----|---|-----------------------|
| | | | 637-070 | 12/14/2021 |
| | | | PROJECT NO: CB1803 | |
| | | | TRS: T. 10 S., R. 01 W., SECTIONS. 9 & 10 | |
| | | | DESIGNED BY: K. Groom | CHECKED BY: A. Potts |
| | | | DRAFTED BY: K. Groom | REVIEWED BY: C. Knoll |

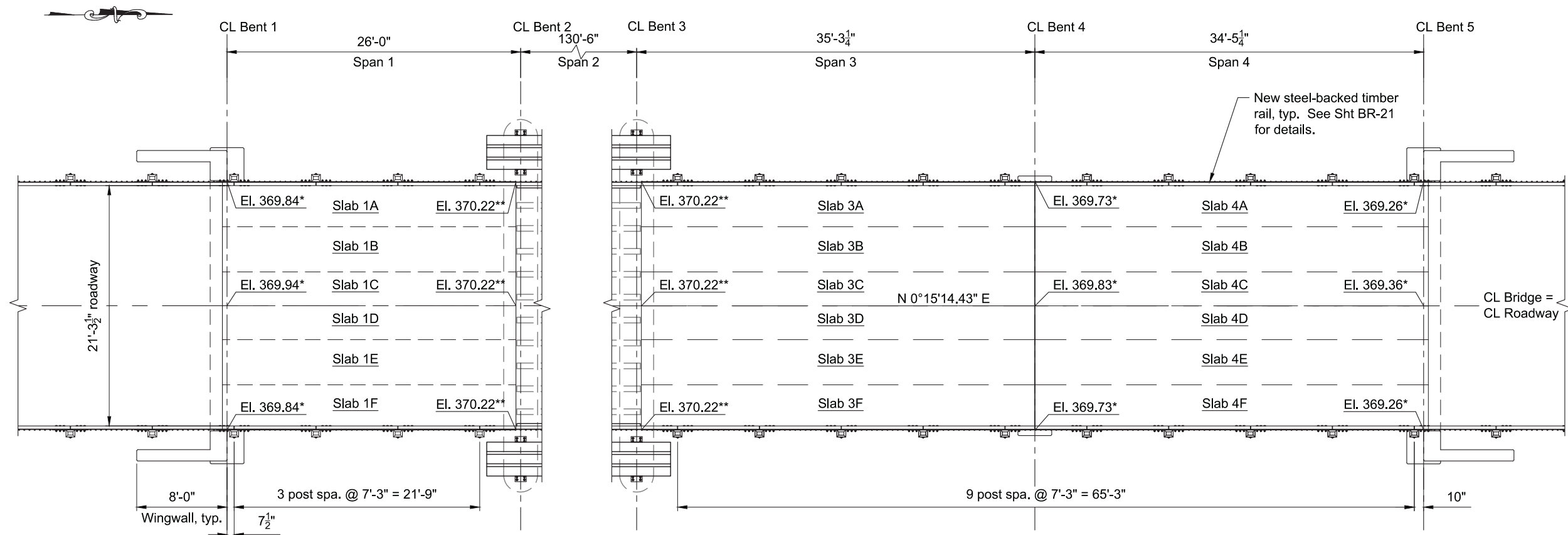
THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION
LINN COUNTY
2021

BRIDGE PLANS
DECK PLAN - SPAN 2
SCALE: AS SHOWN
SHEET BR-06

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17206PE
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Date: 2021.12.14 15:28:18 -08'00'
KEVIN M. GROOM
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Expires: 6/30/2023

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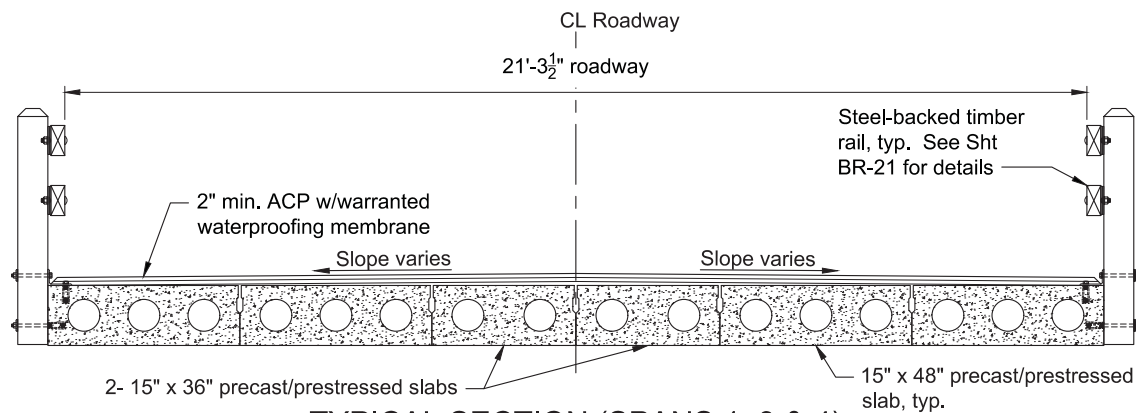


* Elevations are finish grade at the intersection of the Bent CL and the roadway CL, and the Bent CL and the edge of the exterior slab.

** Elevations are finish grade at the intersection of the slab end and the roadway CL, and the slab end and the edge of the exterior slab.

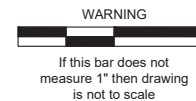
DECK PLAN - SPANS 1, 3 & 4

3/32" = 1'-0"



TYPICAL SECTION (SPANS 1, 3 & 4)

1/4" = 1'-0"



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JULY 19, 1994
KEVIN M. GROOM
Expires: 6/30/2023



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| BRIDGE NO: | 637-070 | DATE: | 12/14/2021 |
| PROJECT NO: | CB1803 | | |
| TRS: | T. 10 S., R. 01 W., SECTIONS. 9 & 10 | | |
| DESIGNED BY: | K. Groom | CHECKED BY: | A. Potts |
| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

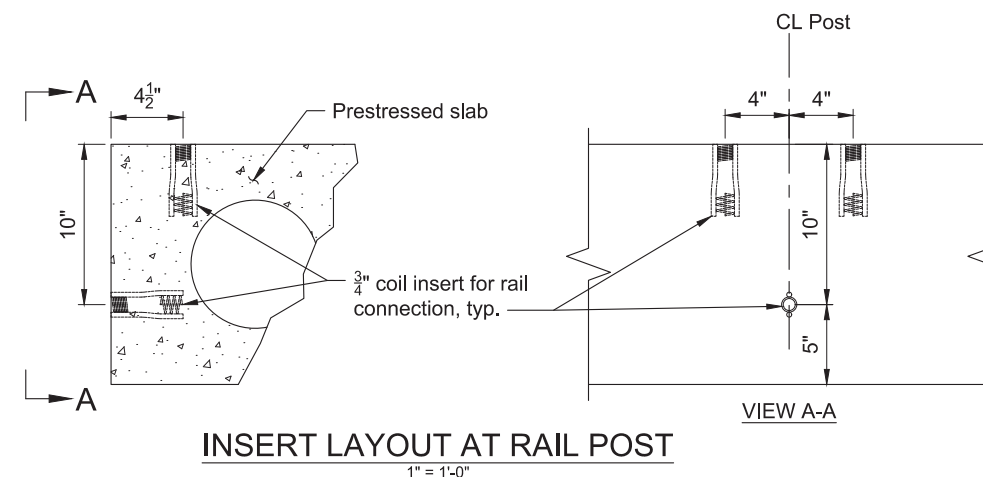
THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION
LINN COUNTY 2021

BRIDGE PLANS
DECK PLAN - SPANS 1, 3 & 4
SCALE: AS SHOWN SHEET BR-07

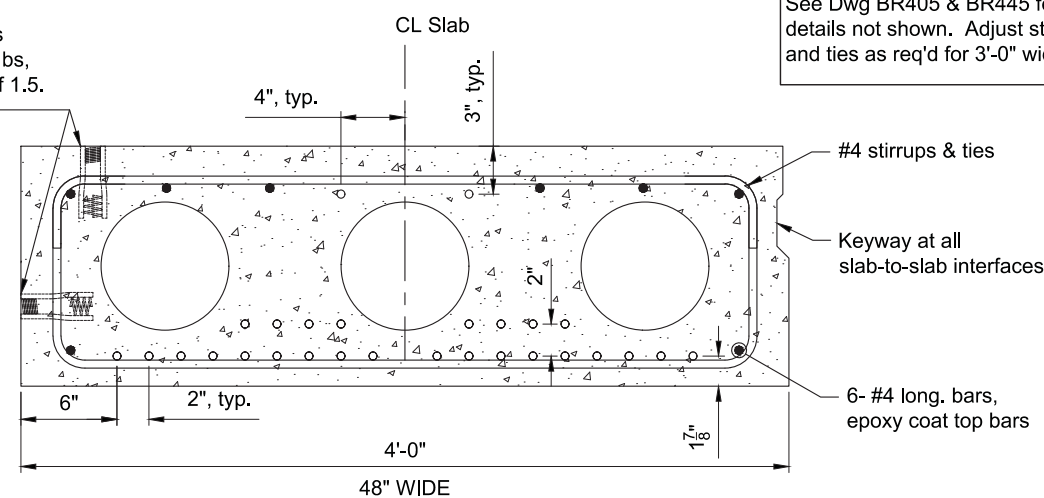
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| 15 - INCH STANDARD PRECAST PRESTRESSED SLAB SCHEDULE | | | | | | | | | | | | | | | | | | | | |
|--|----------|---|--------------------------------------|---------------|------------------|-------|----------------------------------|---------------|----------------------|---|---|--------------------------------------|---|---|--------------------------------------|---|--|------------------------------------|--|--|
| 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 2 strands, inches | Concrete Class, psi A = 3/4 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 | |
| 4 | 1 | 26'-0" | 25'-2" | 48.0 | 0 | 0 | 31.0 | 16 | 0 | 4.14 | 3.02 | 5,000 | 4,000 | 7.5 | 0.25 | 0.44 | 0.59 | 0.03 | 0.10 | 0.13 |
| 4 | 3 | 34'-10" | 34'-0" | 48.0 | 0 | 0 | 31.0 | 24 | 0 | 3.39 | 2.60 | 6,000 | 4,600 | 11.7 | 0.86 | 1.54 | 2.04 | 0.10 | 0.32 | 0.19 |
| 4 | 4 | 34'-10" | 34'-0" | 48.0 | 0 | 0 | 31.0 | 24 | 0 | 3.39 | 2.60 | 6,000 | 4,600 | 11.7 | 0.86 | 1.54 | 2.04 | 0.10 | 0.32 | 0.19 |
| 2 | 1 | 26'-0" | 25'-2" | 36.0 | 0 | 0 | 31.0 | 12 | 0 | 4.23 | 2.68 | 5,000 | 4,000 | 7.16 | 0.24 | 0.42 | 0.55 | 0.03 | 0.10 | 0.13 |
| 2 | 3 | 34'-10" | 34'-0" | 36.0 | 0 | 0 | 31.0 | 18 | 0 | 3.67 | 2.63 | 6,000 | 4,600 | 11.0 | 0.69 | 1.23 | 1.62 | 0.10 | 0.31 | 0.19 |
| 2 | 4 | 34'-10" | 34'-0" | 36.0 | 0 | 0 | 31.0 | 18 | 0 | 3.67 | 2.63 | 6,000 | 4,600 | 11.0 | 0.69 | 1.23 | 1.62 | 0.10 | 0.31 | 0.19 |

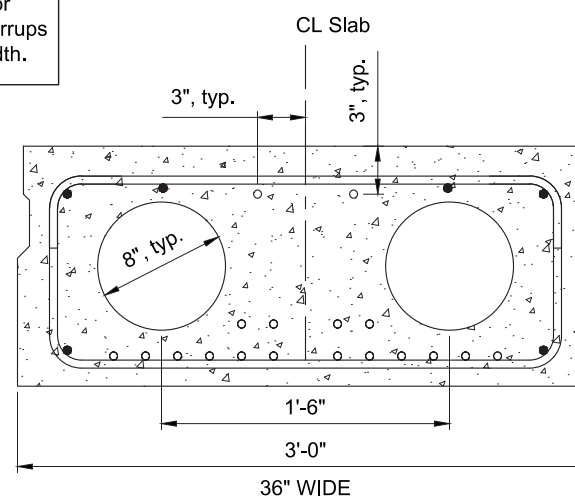
The superimposed dead load (SIDL) is 43.3 psf, which includes the initial wearing surface and bridge rails. The slabs are designed for an allowance for 2" of future wearing surface.



3/4" dia. expanded coil insert for bridge rail posts. Minimum tensile capacity of 12,600 lbs and shear capacity of 7,400 lbs, based on a factor of safety of 1.5. See this sheet for locations.

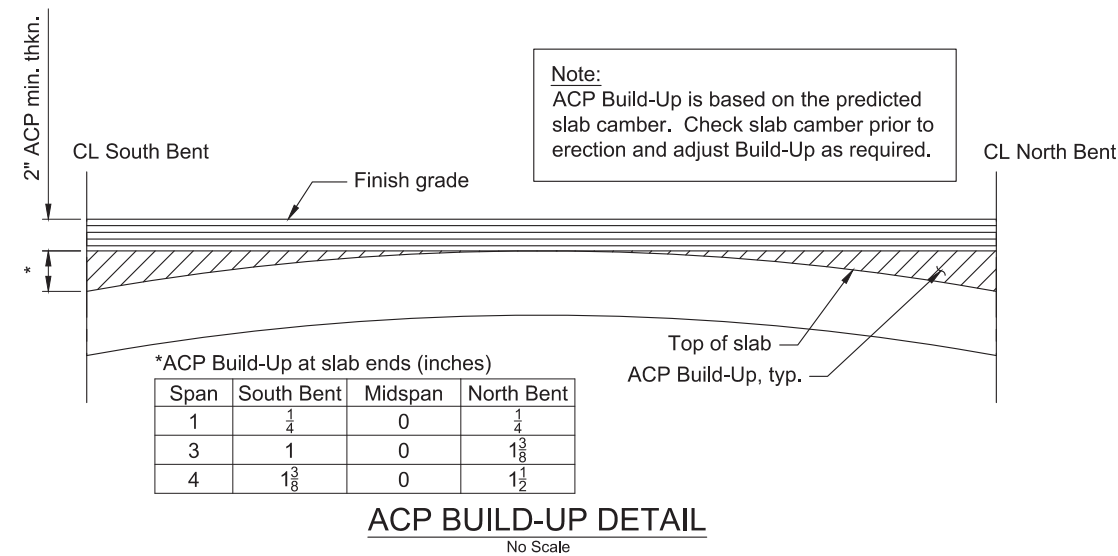


Note:
See Dwg BR405 & BR445 for details not shown. Adjust stirrups and ties as req'd for 3'-0" width.



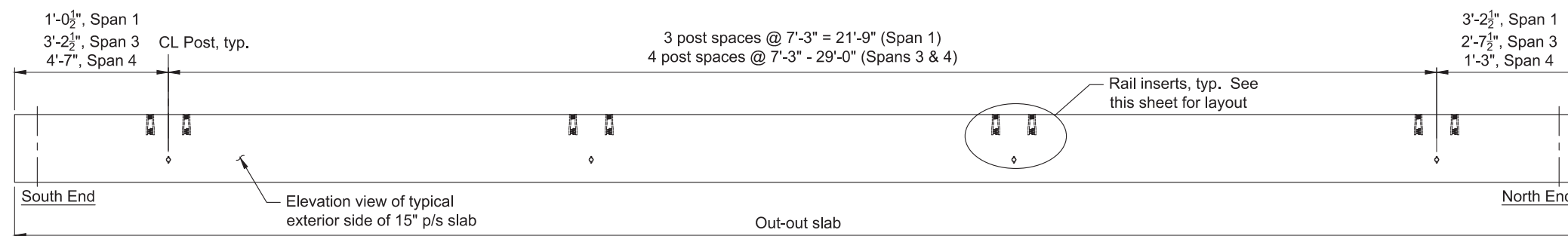
15" PRESTRESSED CONCRETE SLAB DETAIL

1" = 1'-0"



ACP BUILD-UP DETAIL

No Scale



RAIL POST LOCATIONS

NO SCALE

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



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| 637-070 | 12/14/2021 |
| PROJECT NO: | CB1803 |
| TRS: | T. 10 S., R. 01 W., SECTIONS. 9 & 10 |
| DESIGNED BY: | K. Groom |
| CHECKED BY: | A. Potts |
| DRAFTED BY: | K. Groom |
| REVIEWED BY: | C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

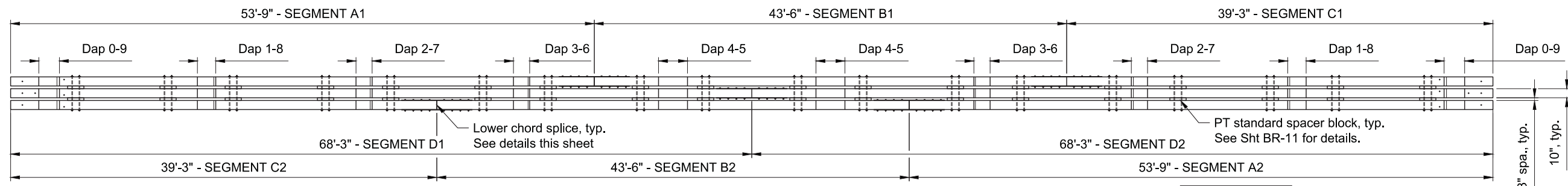
LINN COUNTY
2021

| BRIDGE PLANS |
|-----------------|
| SLAB DETAILS |
| SCALE: AS SHOWN |
| SHEET BR-08 |

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17206PE
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Date: 2021.12.14 15:29:54 -08'00'
OREGON
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Expires: 6/30/2023

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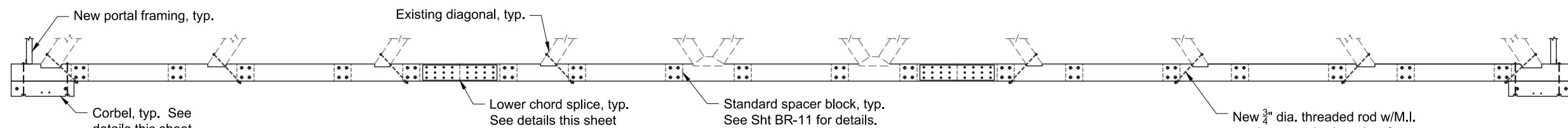
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PLAN - LOWER TRUSS CHORD

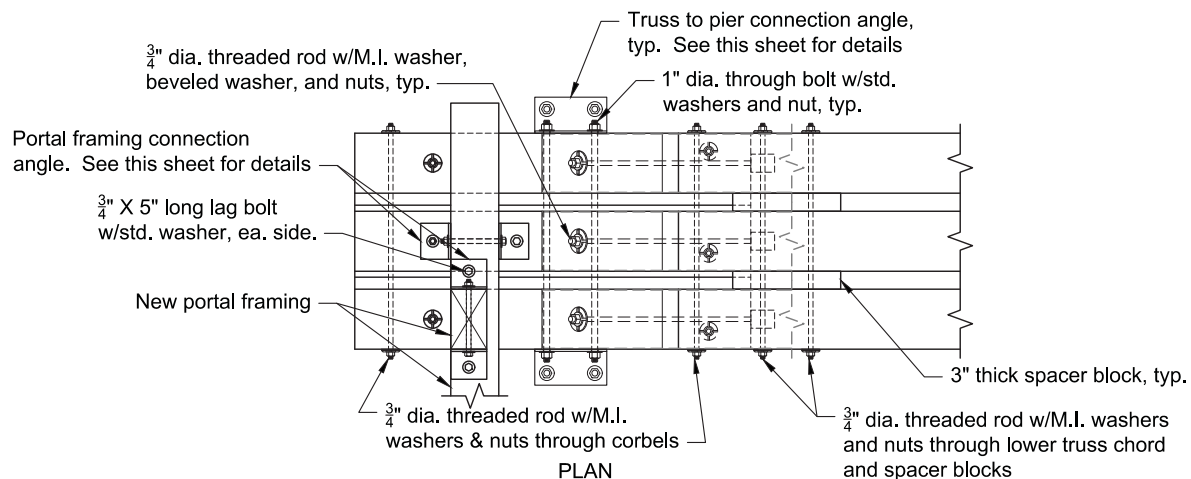
3/32" = 1'-0"

Note:
Right truss shown.
Left truss similar.



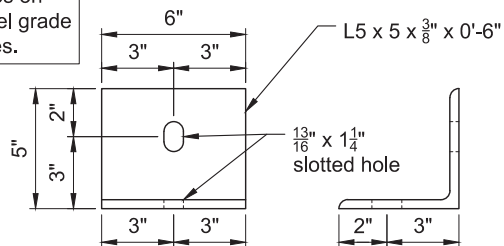
ELEVATION - LOWER TRUSS CHORD

3/32" = 1'-0"



PLAN

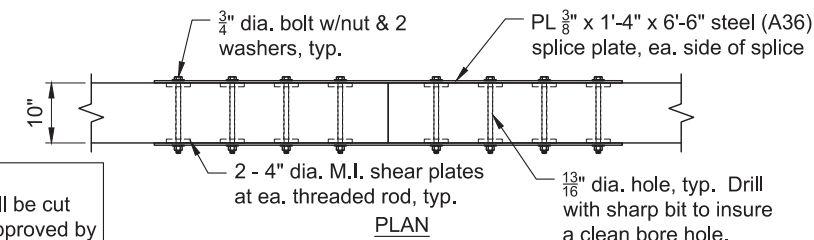
See General Notes on Sht BR-02 for steel grade and notes on holes.



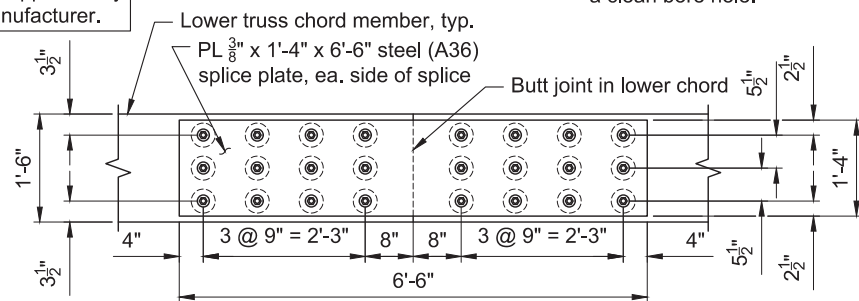
PORTAL FRAMING CONNECTION ANGLE

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

Note:
Shear plate daps shall be cut with a dapping tool approved by the shear plate manufacturer.



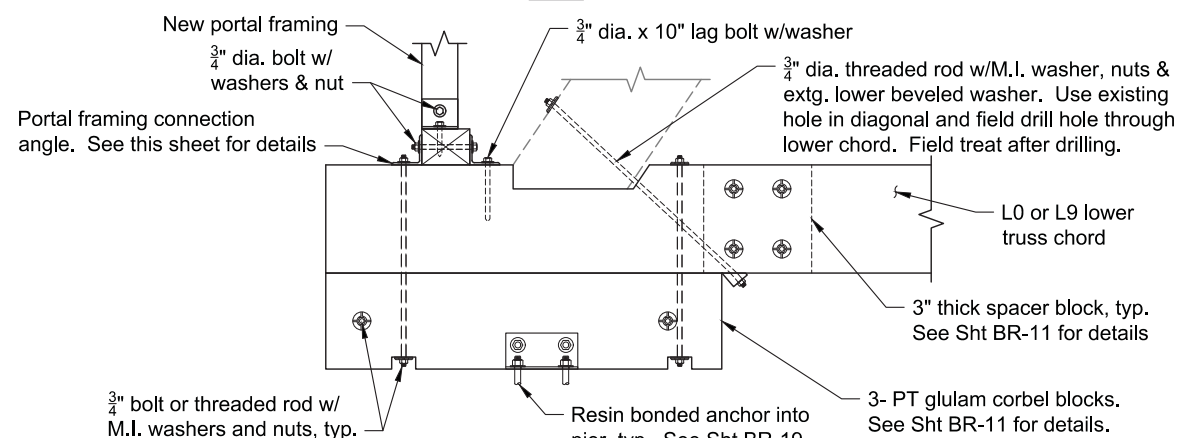
PLAN



ELEVATION

LOWER CHORD SPlice DETAIL

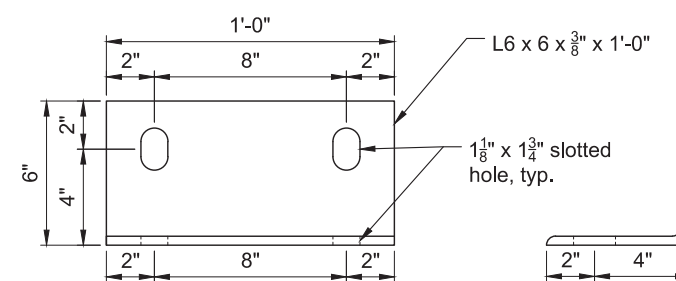
3/8" = 1'-0"



ELEVATION

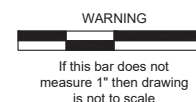
CORBEL DETAIL

3/8" = 1'-0"



TRUSS TO PIER CONNECTION ANGLE

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



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| | | | 637-070 | 12/14/2021 |
| | | | PROJECT NO: CB1803 | |
| | | | TRS: T. 10 S., R. 01 W., SECTIONS. 9 & 10 | |
| | | | DESIGNED BY: K. Groom | CHECKED BY: A. Potts |
| | | | DRAFTED BY: K. Groom | REVIEWED BY: C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

LINN COUNTY
2021

BRIDGE PLANS

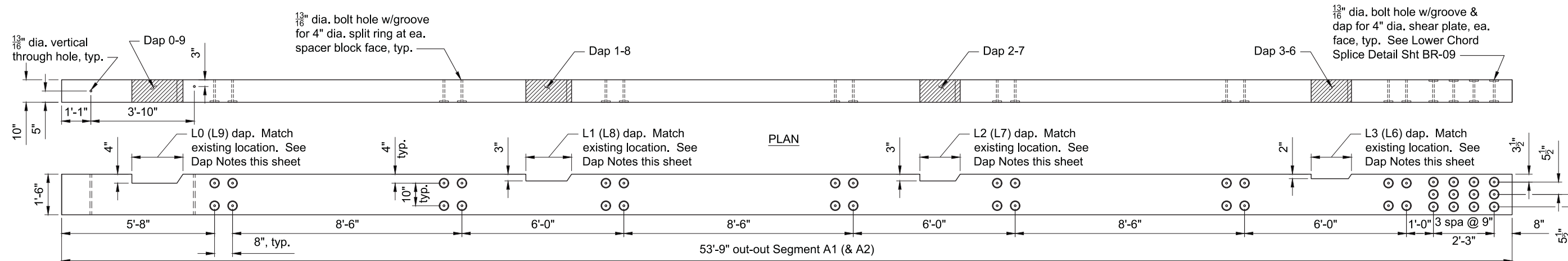
LOWER CHORD DETAILS - 1

SCALE: AS SHOWN

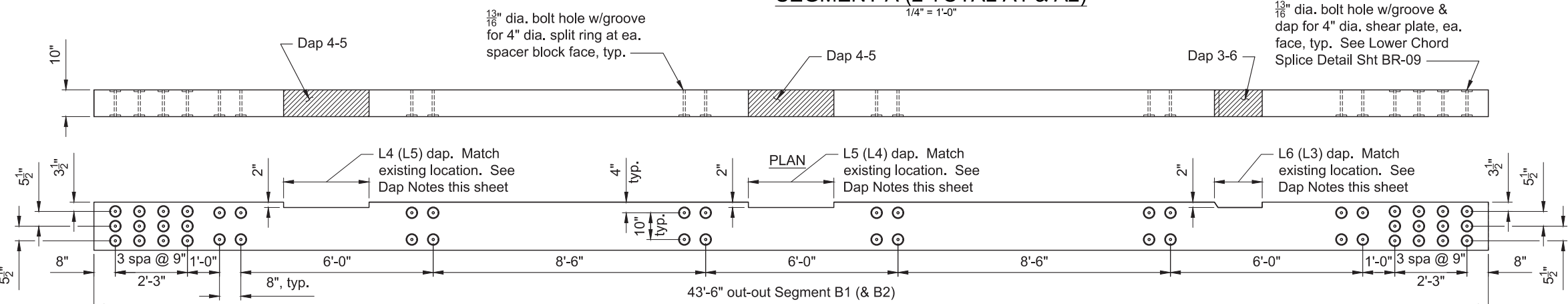
SHEET BR-09

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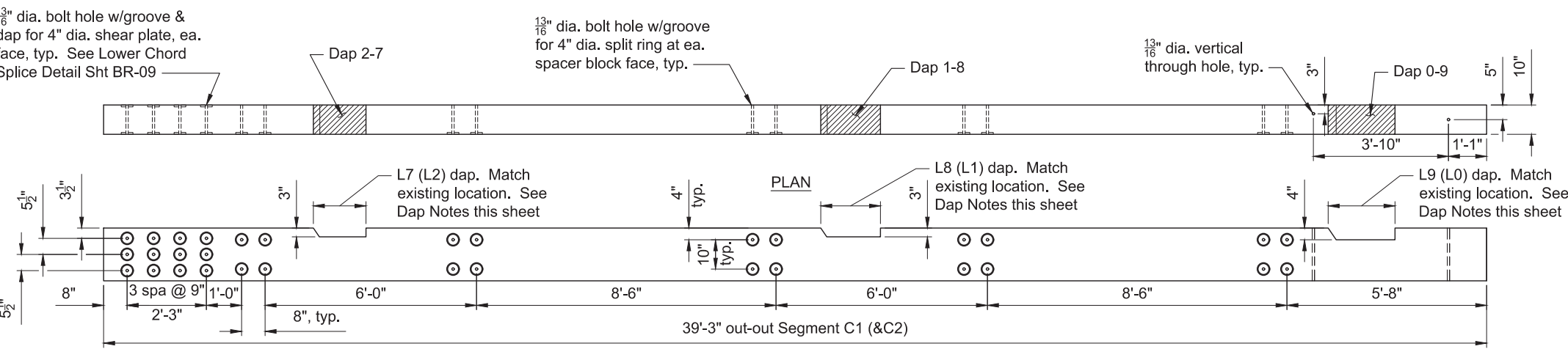
K:\Projects - Current\BR 0637-0070 Shimanek Covered Bridge repair\KMG\ACAD\Shimanek Covered Bridge - Final Drawings.dwg



ELEVATION
SEGMENT A (2 TOTAL A1 & A2)
 1/4" = 1'-0"

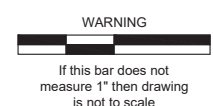


ELEVATION
SEGMENT B (2 TOTAL B1 & B2)
 1/4" = 1'-0"



ELEVATION
SEGMENT C (2 TOTAL C1 & C2)
 1/4" = 1'-0"

- Dap Notes:**
1. Match location of existing dap.
 2. New dap depths shall be the dimensions shown.
 3. Dap bottoms shall be flat and parallel to the top face.
 4. Provide full bearing across diagonal end.
 5. Once dap is cut and tested for fit, field treat the new dap using the Dap Field Treatment Procedure outlined on Sheet BR-11.



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 DAINEAL MALONE, P.E.

| DATE: | REVISION: | BY: |
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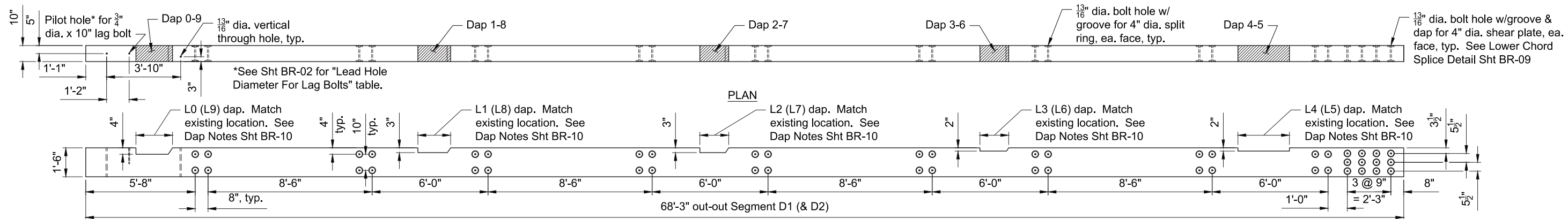
| | | | |
|--------------|--------------------------------------|--------------|------------|
| BRIDGE NO: | 637-070 | DATE: | 12/14/2021 |
| PROJECT NO: | CB1803 | | |
| TRS: | T. 10 S., R. 01 W., SECTIONS. 9 & 10 | | |
| DESIGNED BY: | K. Groom | CHECKED BY: | A. Potts |
| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION
 LINN COUNTY
 2021

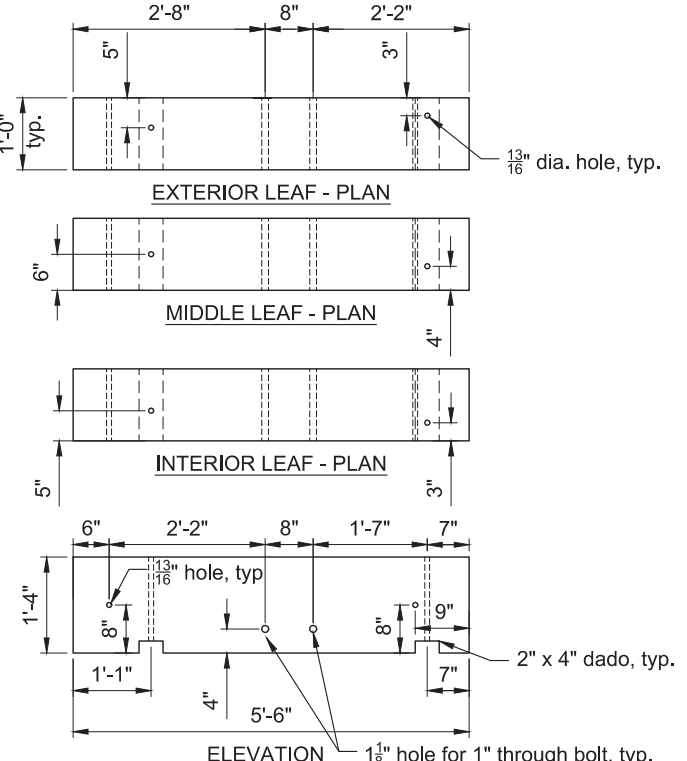
BRIDGE PLANS
 LOWER CHORD DETAILS - 2
 SCALE: AS SHOWN
 SHEET BR-10

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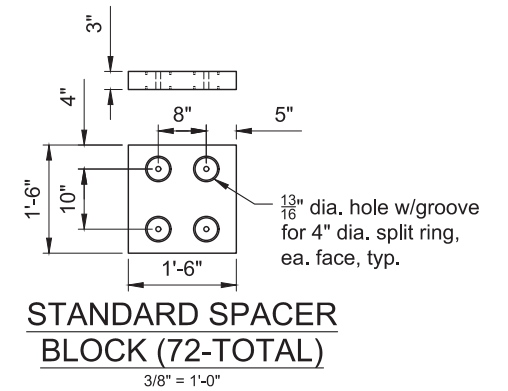
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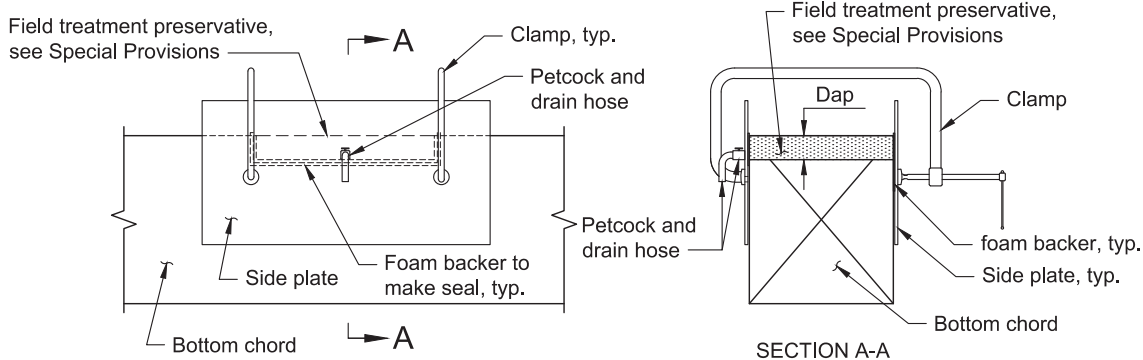
SEGMENT D (2 TOTAL D1 & D2)
3/16" = 1'-0"



CORBEL (4 EACH, 12 TOTAL)
3/8" = 1'-0"

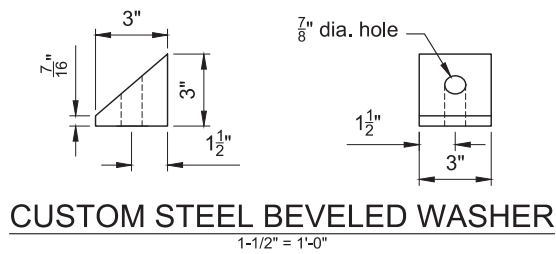


STANDARD SPACER BLOCK (72-TOTAL)
3/8" = 1'-0"

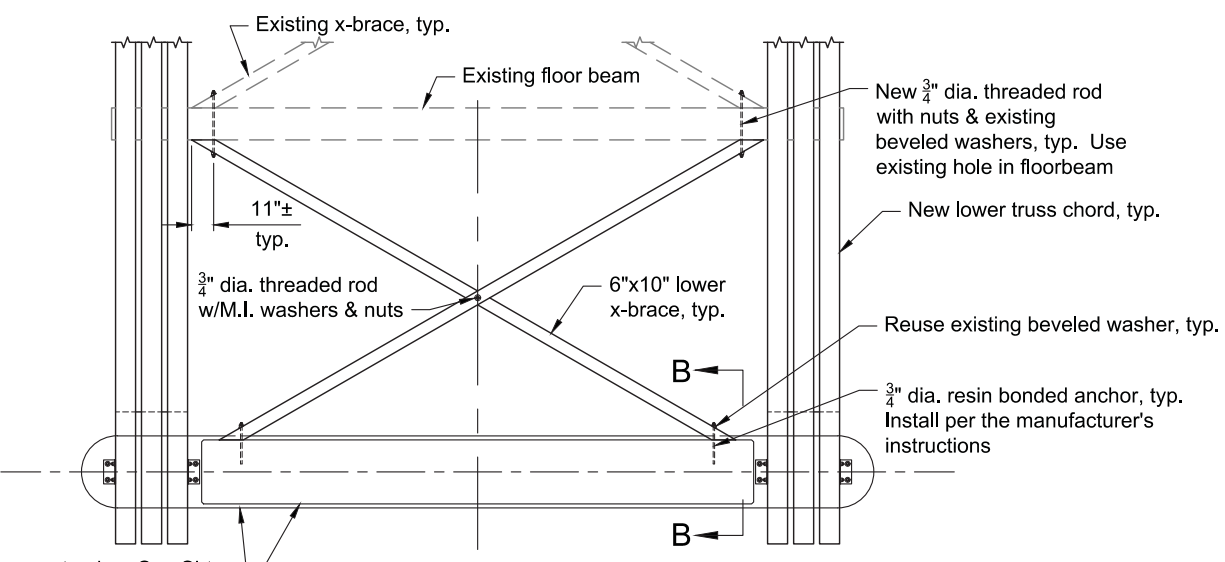


DAP FIELD TREATMENT PROCEDURE
NO SCALE

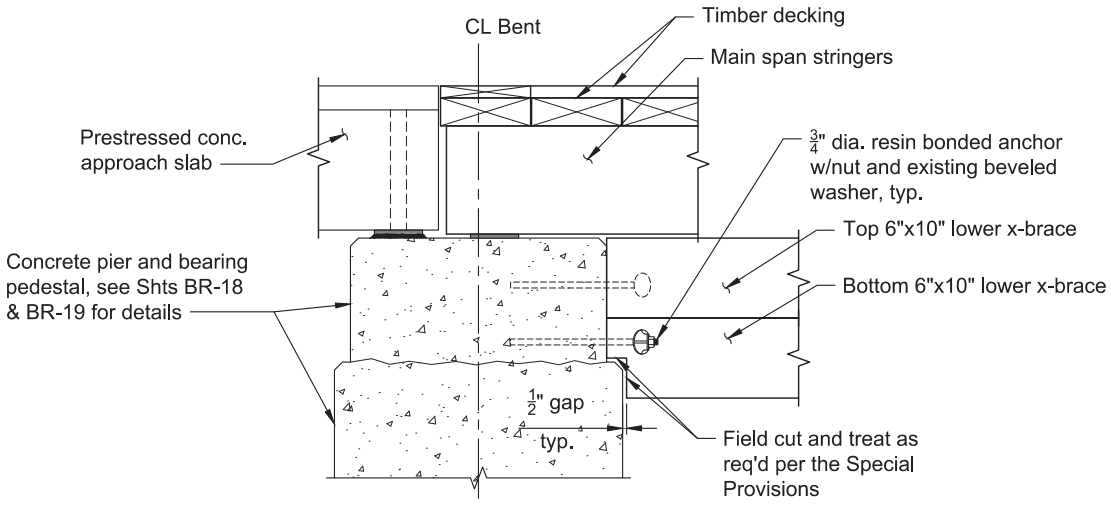
- Field Treatment Procedure:**
1. After dap is cut to final dimensions, install foam backer and side plates to form a sealed unit. Secure in place with clamps as required.
 2. Place empty container under dap to catch any potential leakage or spillage.
 3. Fill dap volume with preservative from the Special Provisions. Maintain a level within 1/4" from the top of the lower chord at all times. Top off as required.
 4. Leave preservative in place a minimum of 4 hours. Longer or over night is preferred.
 5. Use petcock and drain hose to collect unused preservative. Unused preservative can be reused on other daps. Avoid any spills.
 6. Remove clamps, side plates and foam backer.



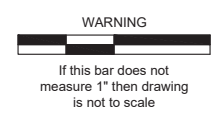
CUSTOM STEEL BEVELED WASHER
1-1/2" = 1'-0"



END BAY LOWER X-BRACING
1/8" = 10'-0"



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



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17206PE
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KEVIN M. GROOM
OREGON
JULY 19, 1994
Expires: 6/30/2023



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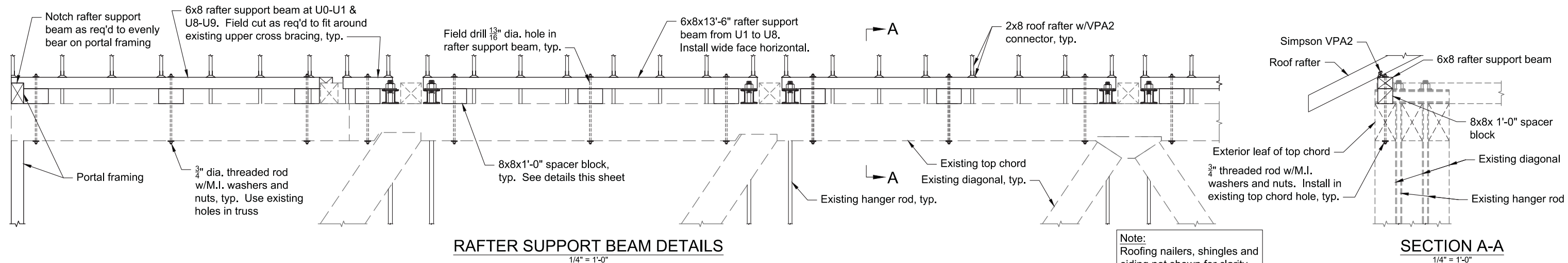
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| BRIDGE NO: | 637-070 | DATE: | 12/14/2021 |
| PROJECT NO: | CB1803 | | |
| TRS: | T. 10 S., R. 01 W., SECTIONS 9 & 10 | | |
| DESIGNED BY: | K. Groom | CHECKED BY: | A. Potts |
| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

LINN COUNTY
2021

| | |
|-------------------------|-------------|
| BRIDGE PLANS | |
| LOWER CHORD DETAILS - 3 | |
| SCALE: AS SHOWN | SHEET BR-11 |

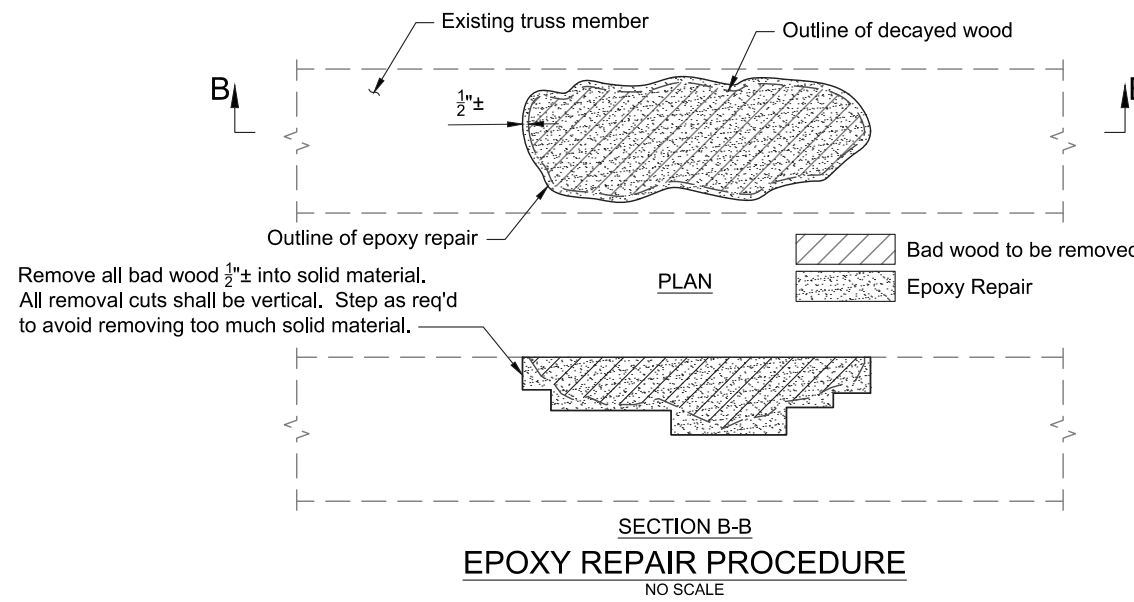
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RAFTER SUPPORT BEAM DETAILS
1/4" = 1'-0"

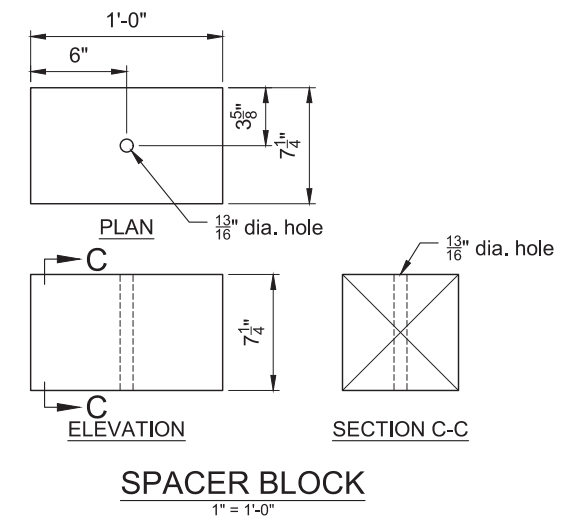
SECTION A-A
1/4" = 1'-0"

Note:
Roofing nailers, shingles and siding not shown for clarity.



- Epoxy Repair Procedure:**
1. Remove as much load from the element as possible. This shall involve waiting until the deck, stringers, roof and siding have been removed, or by installing temporary supports as required and approved by the engineer.
 2. Remove as much of the bad wood as possible by hand.
 3. Use hand tools or power tools as required to remove an additional 1/2"± of solid wood beyond existing decayed wood. Avoid cutting out sides of member if possible. All removed edges shall be vertical to provide adequate bearing of the epoxy.
 4. Assure that all exposed wood surfaces are dry. Let air dry as long as necessary to achieve dry surfaces.
 5. Using compressed air or a vacuum cleaner, remove all debris, dust and fine particles immediately prior to installing epoxy.
 6. Install epoxy described in the Special Provisions following the manufacturer's instructions.
 7. Keep member isolated from work, vibrations, movement, and loading until fully cured.

| KNOWN EPOXY REPAIR SCHEDULE | | |
|-----------------------------|--------------|------------------|
| Location | Side (Lt/Rt) | Volume (Gallons) |
| U2U3 | Rt | 1.77 |
| U2 | Lt | 0.57 |
| U6 | Lt | 0.52 |
| U6U7 | Lt | 1.87 |



SPACER BLOCK
1" = 1'-0"

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

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| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

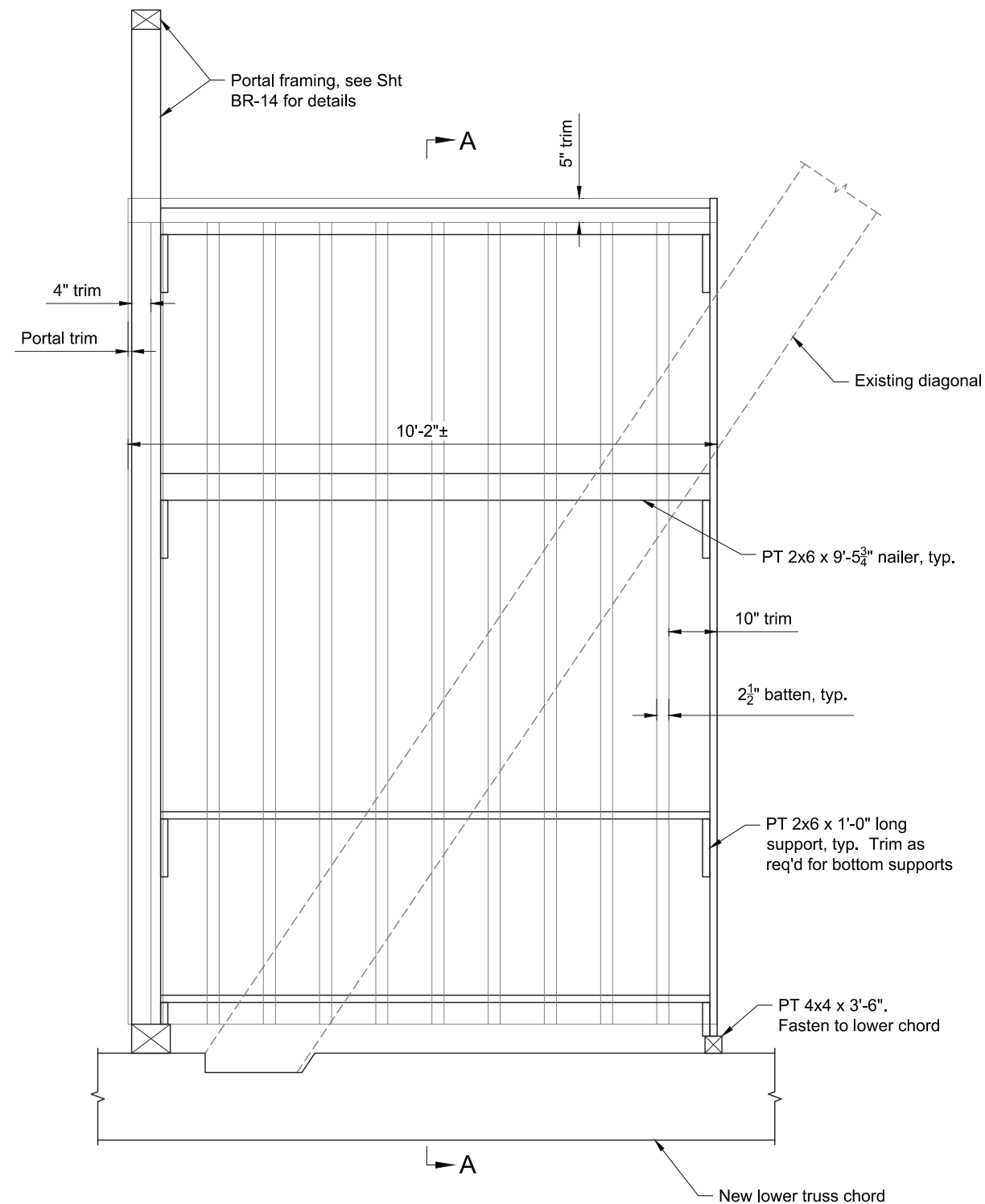
LINN COUNTY
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BRIDGE PLANS
UPPER CHORD DETAILS

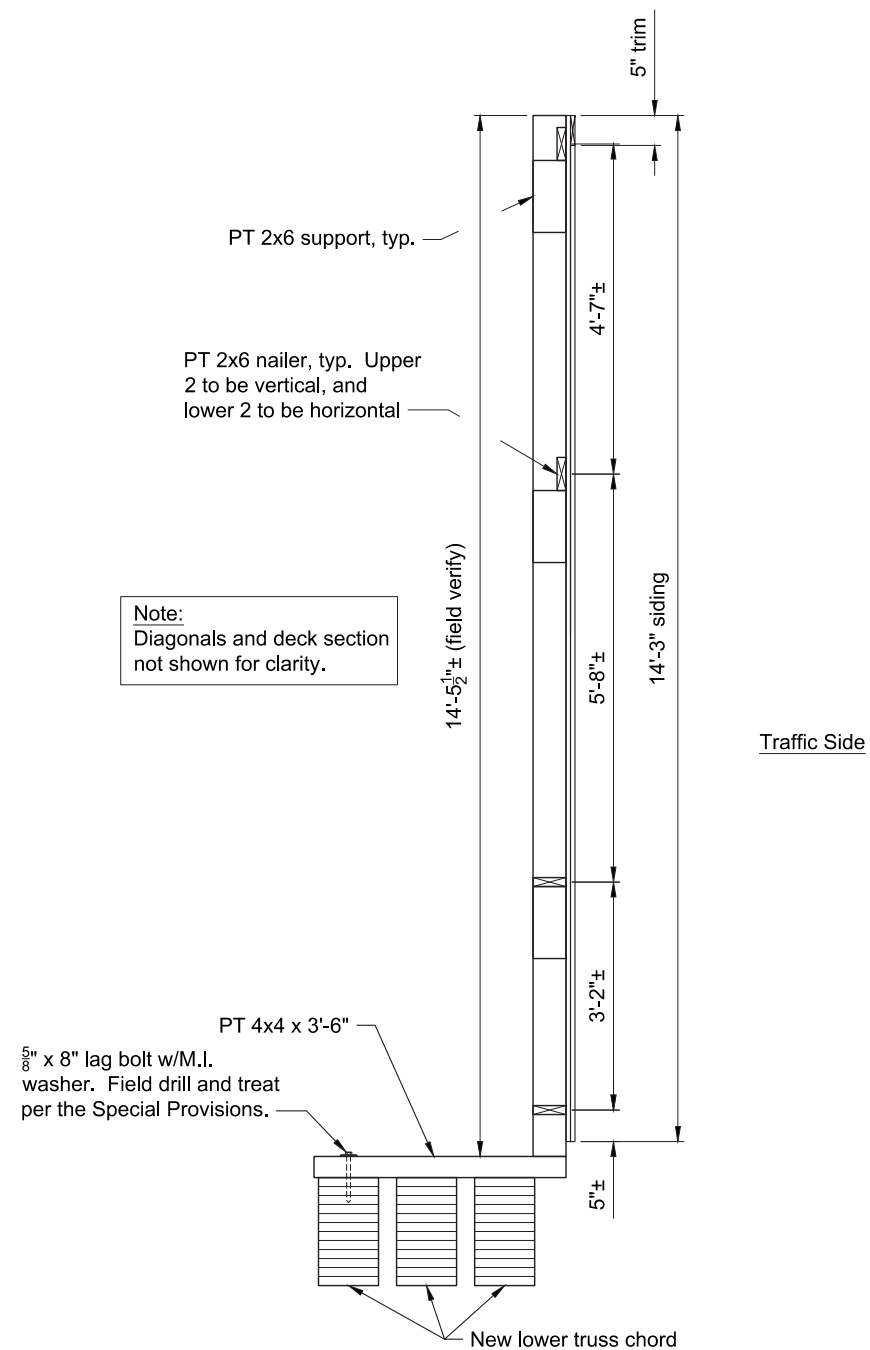
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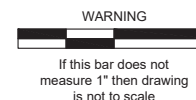
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WRAP-AROUND FRAMING
3/8" = 1'-0"



SECTION A-A
3/8" = 1'-0"



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| | | | 637-070 | 12/14/2021 |
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| | | | DRAFTED BY: K. Groom | REVIEWED BY: C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

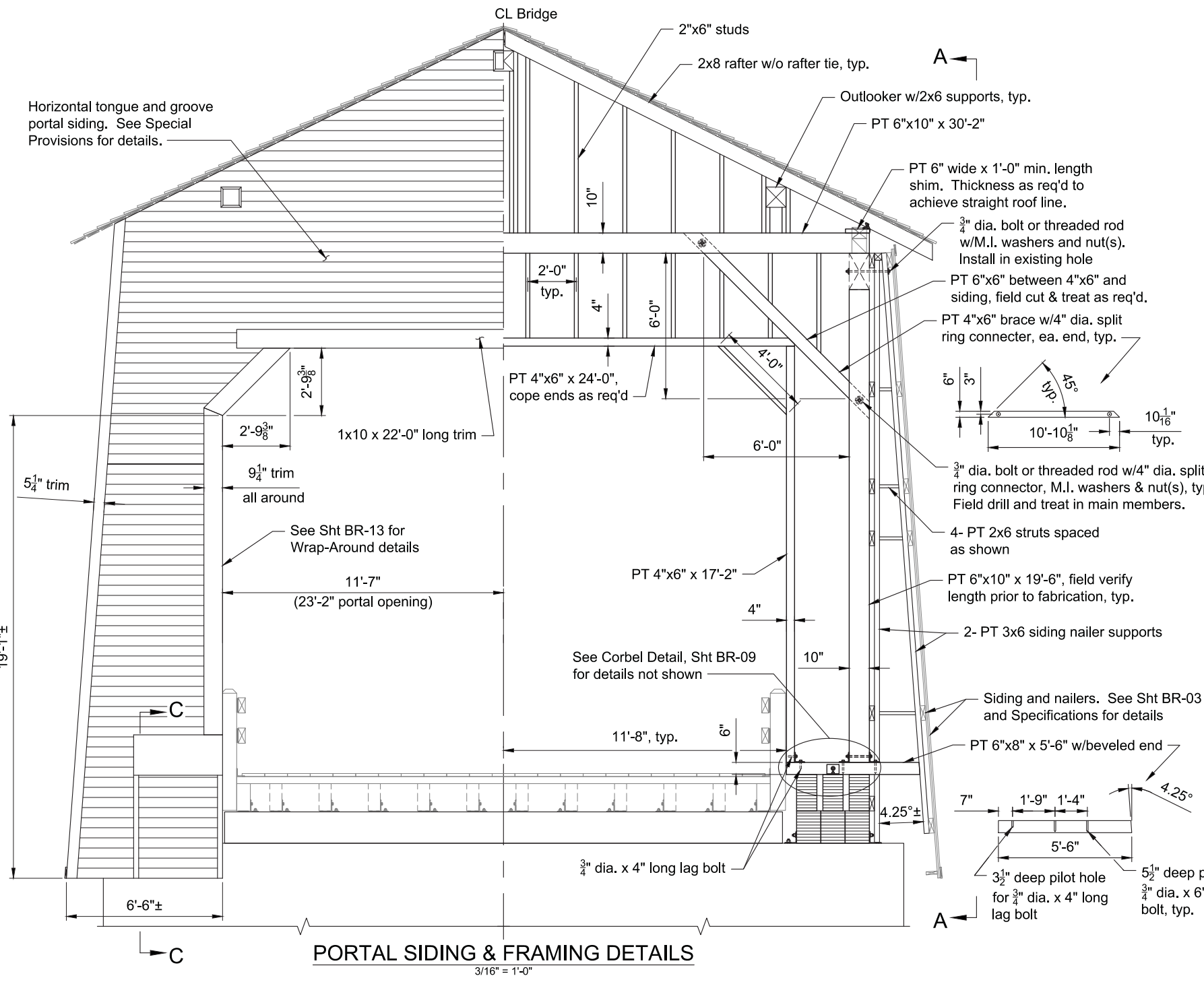
LINN COUNTY 2021

BRIDGE PLANS
WRAP-AROUND DETAILS

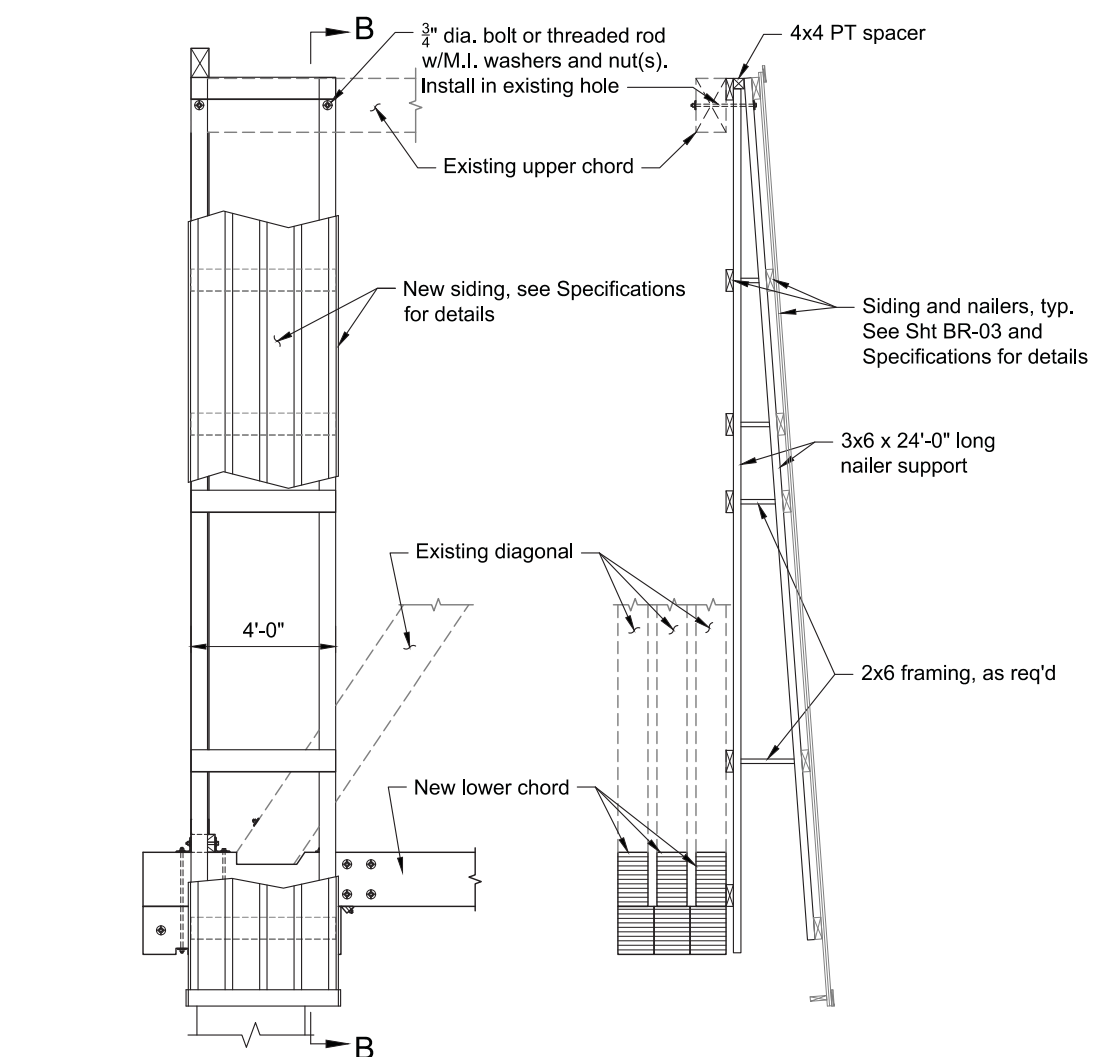
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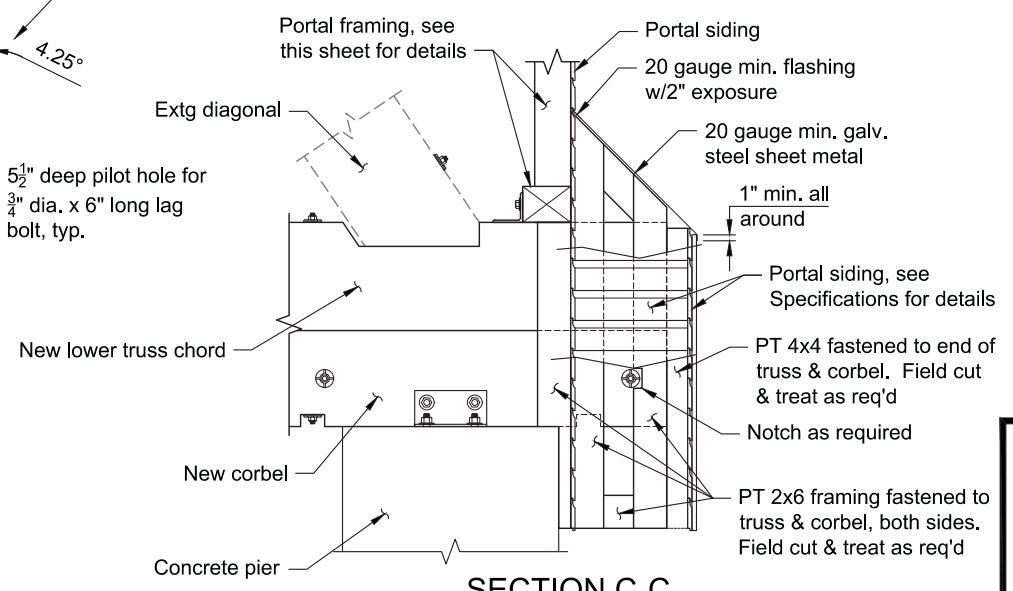


PORTAL SIDING & FRAMING DETAILS
3/16" = 1'-0"



SECTION A-A, FLARED FRAMING
3/16" = 1'-0"

SECTION B-B
3/16" = 1'-0"



SECTION C-C
3/8" = 1'-0"

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

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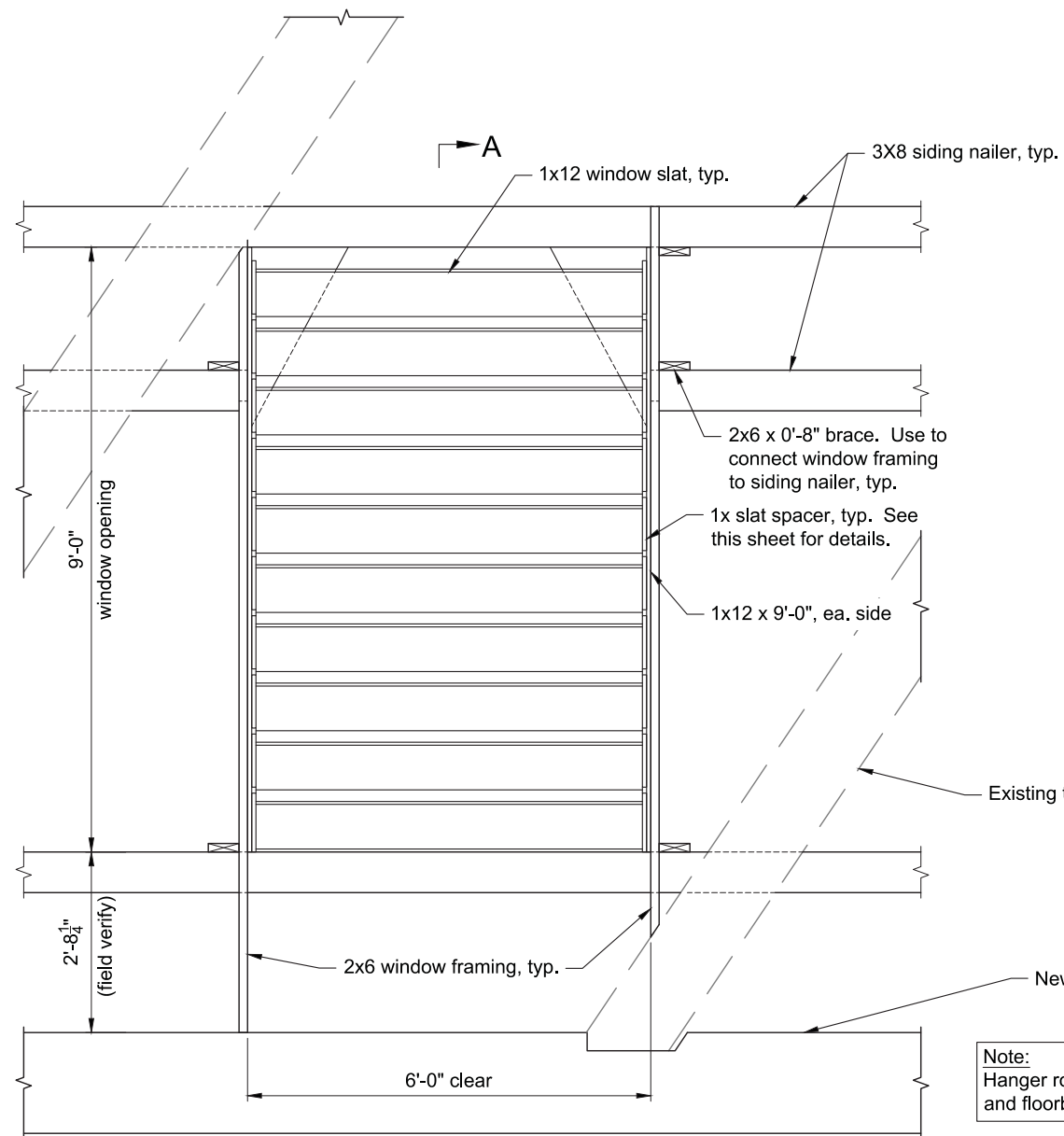
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| BRIDGE NO: | 637-070 | DATE: | 12/14/2021 |
| PROJECT NO: | CB1803 | | |
| TRS: | T. 10 S., R. 01 W., SECTIONS 9 & 10 | | |
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| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION
LINN COUNTY
2021

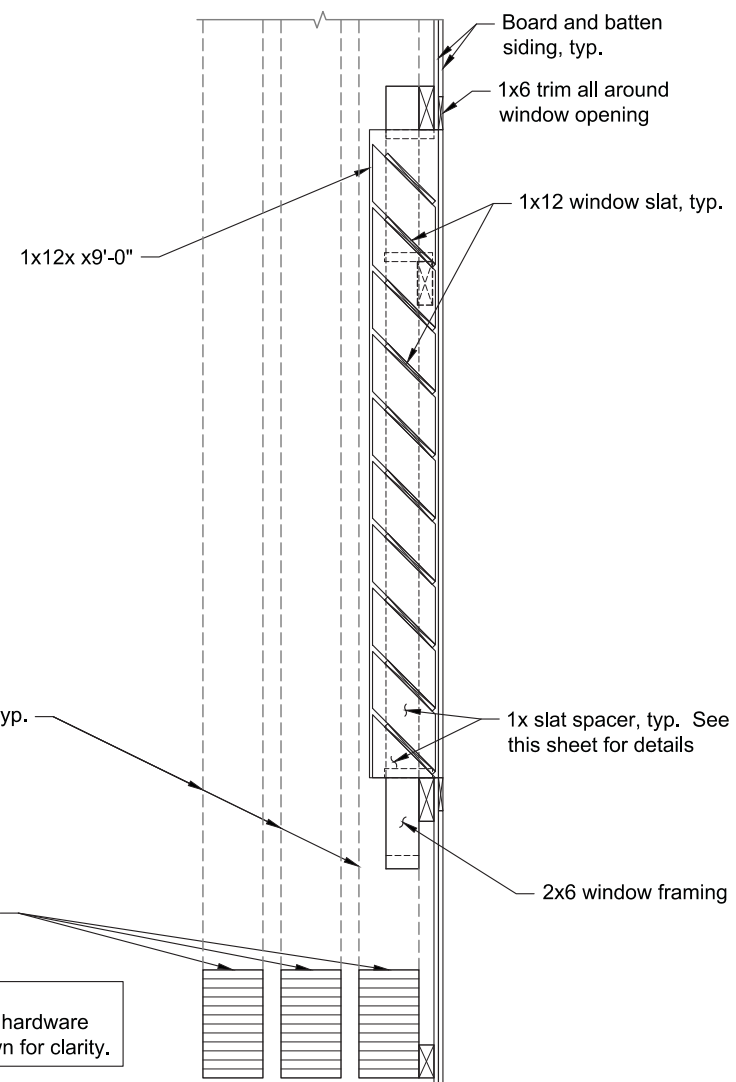
BRIDGE PLANS
PORTAL & FLARE FRAMING DETAILS
SCALE: AS SHOWN
SHEET BR-14

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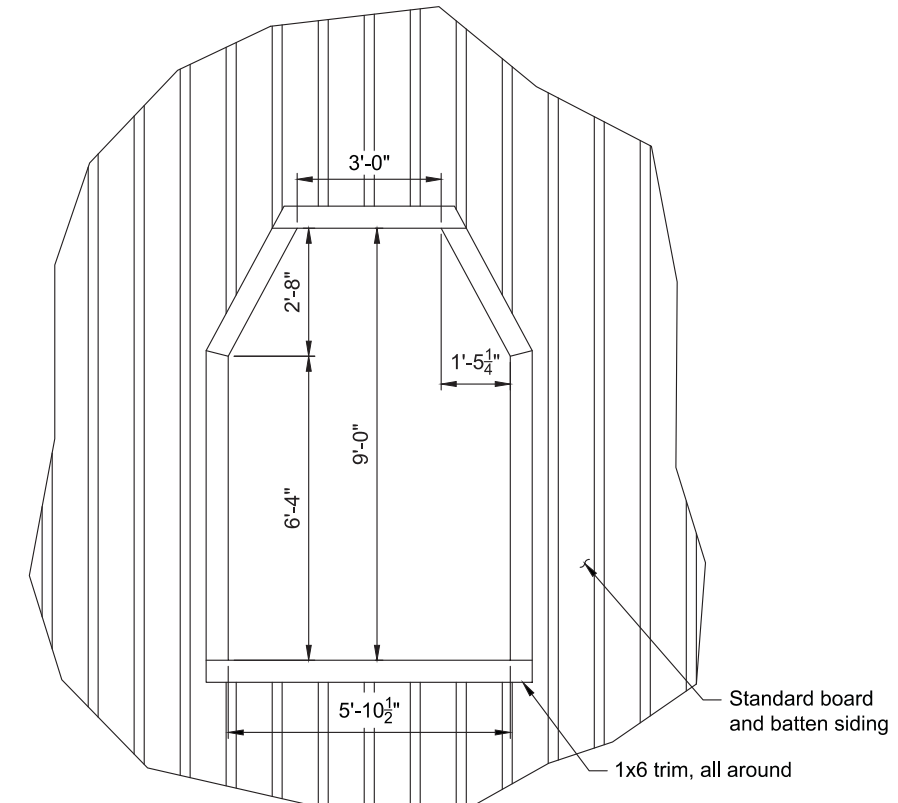
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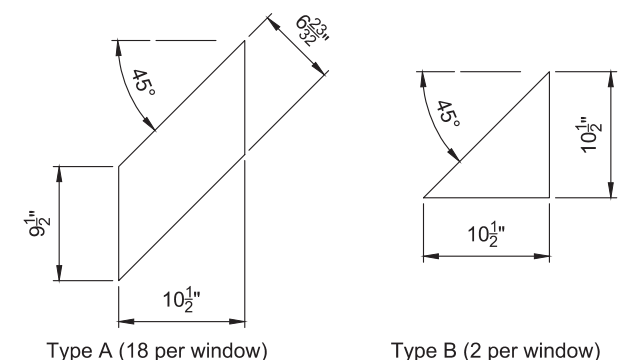
WINDOW FRAMING (LOOKING OUT)
3/8" = 1'-0"



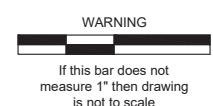
SECTION A-A
3/8" = 1'-0"



WINDOW DIMENSIONS
1/4" = 1'-0"



SLAT SPACER DETAILS
3/4" = 1'-0"



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| BRIDGE NO: | 637-070 | DATE: | 12/14/2021 |
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THOMAS CREEK -
RICHARDSON GAP ROAD
(SHIMANEK) COVERED
BRIDGE REHABILITATION

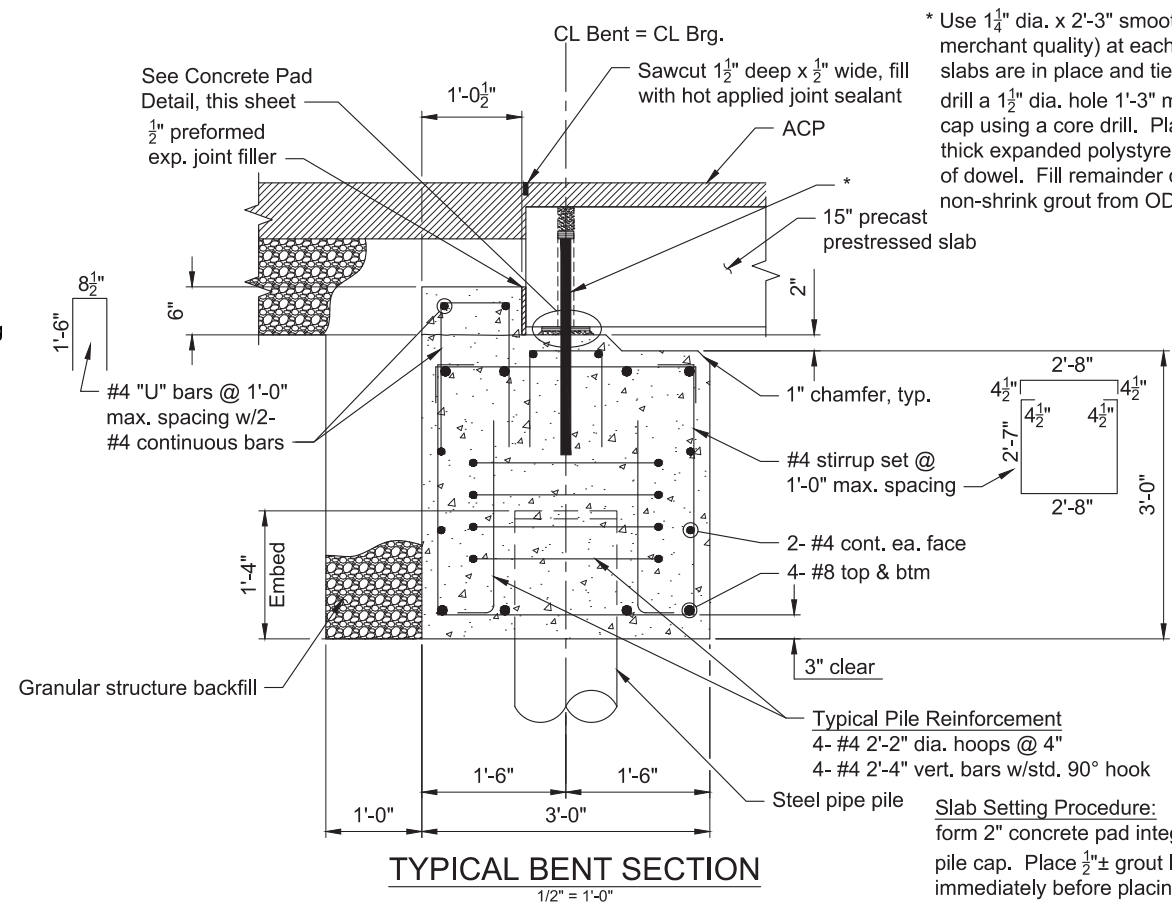
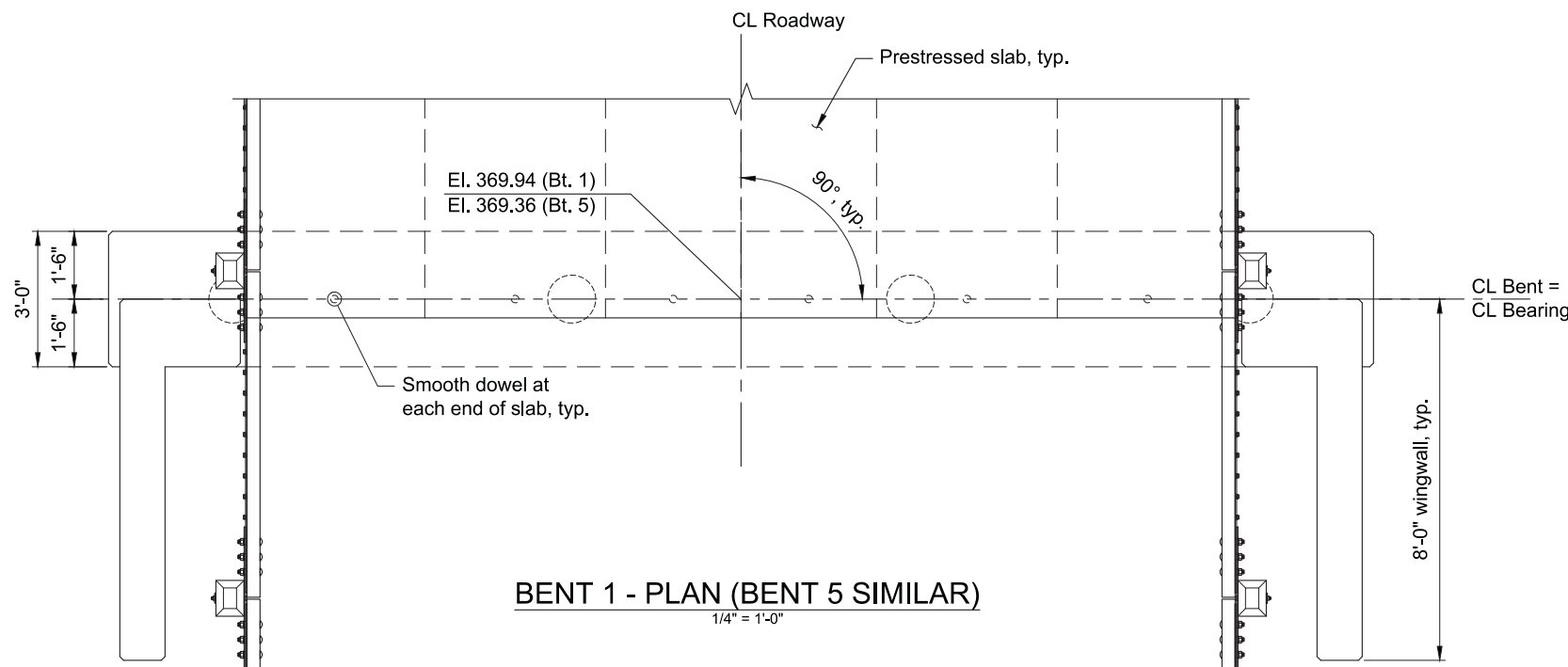
LINN COUNTY
2021

BRIDGE PLANS
WINDOW DETAILS

SCALE: AS SHOWN SHEET BR-15

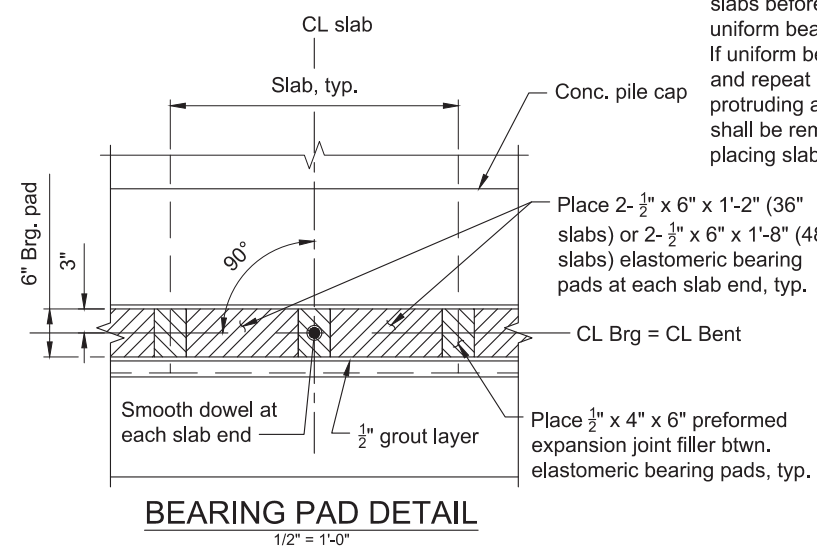
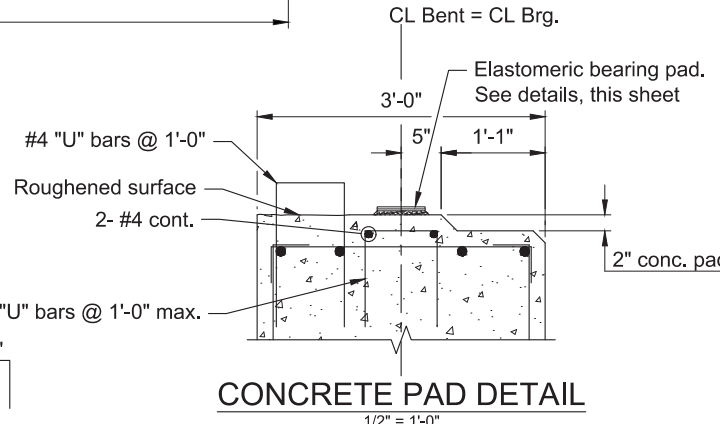
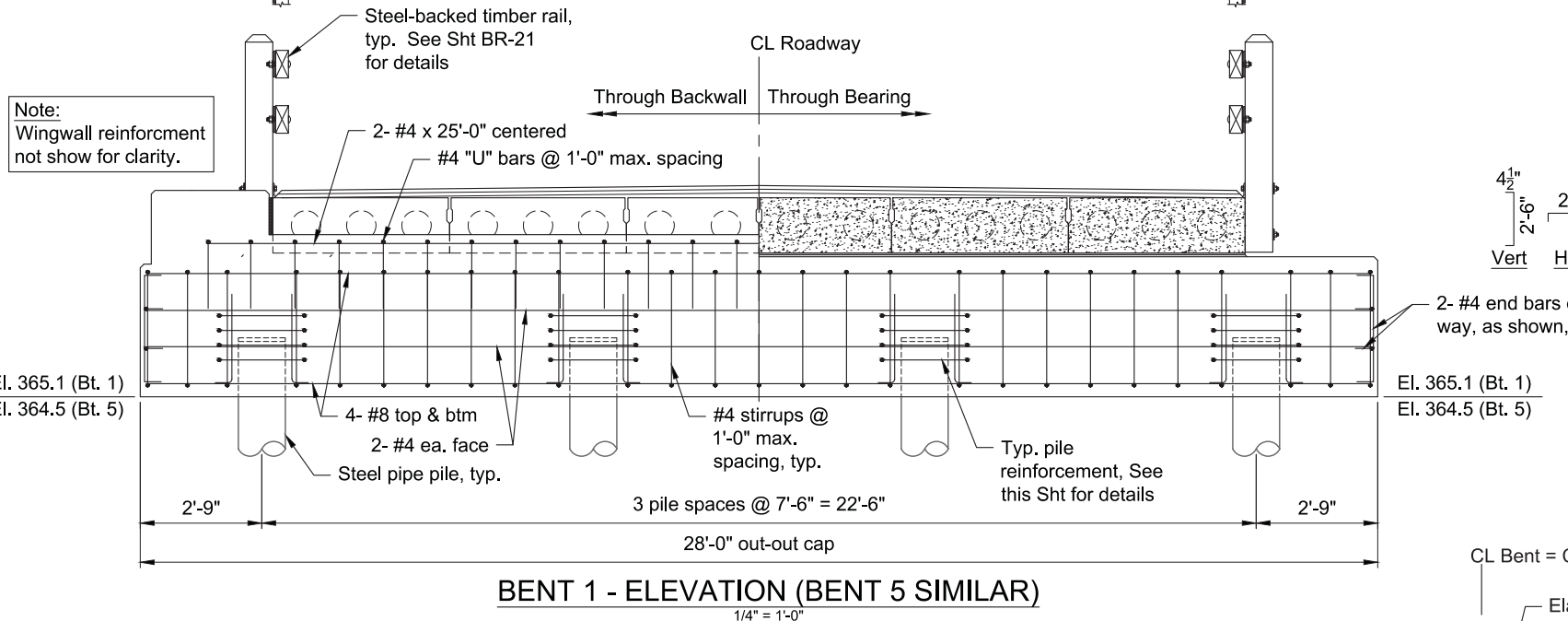
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* Use 1 1/4" dia. x 2'-3" smooth dowel (A36 or merchant quality) at each slab end. After slabs are in place and tie rods tensioned, drill a 1 1/2" dia. hole 1'-3" min. into the pile cap using a core drill. Place a 2" dia. x 1" thick expanded polystyrene 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 1/2" ± grout layer immediately before placing slabs. Place elastomeric 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.



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

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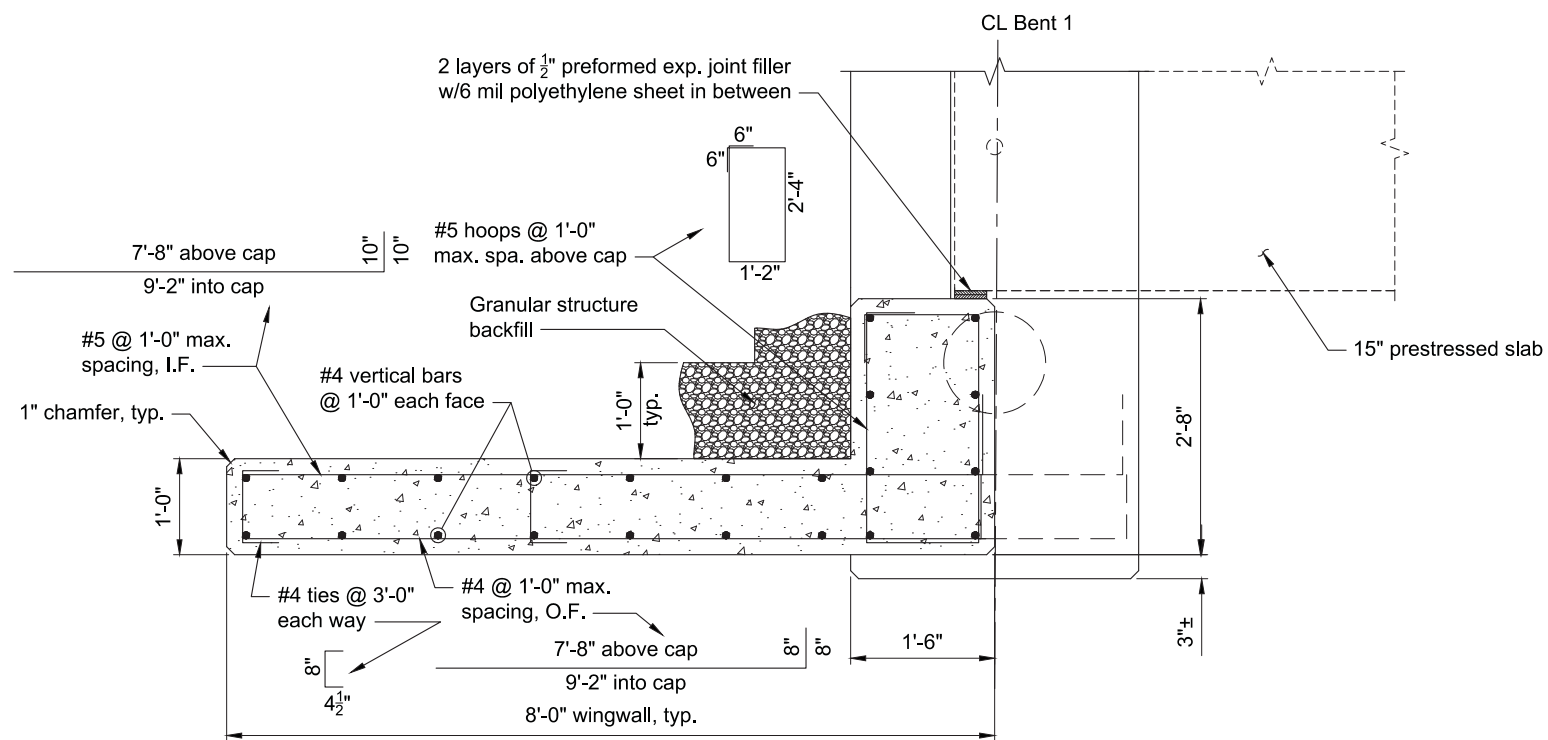
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THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION
LINN COUNTY 2021

BRIDGE PLANS
BENT 1 PLAN & ELEVATION
SCALE: AS SHOWN
SHEET BR-16

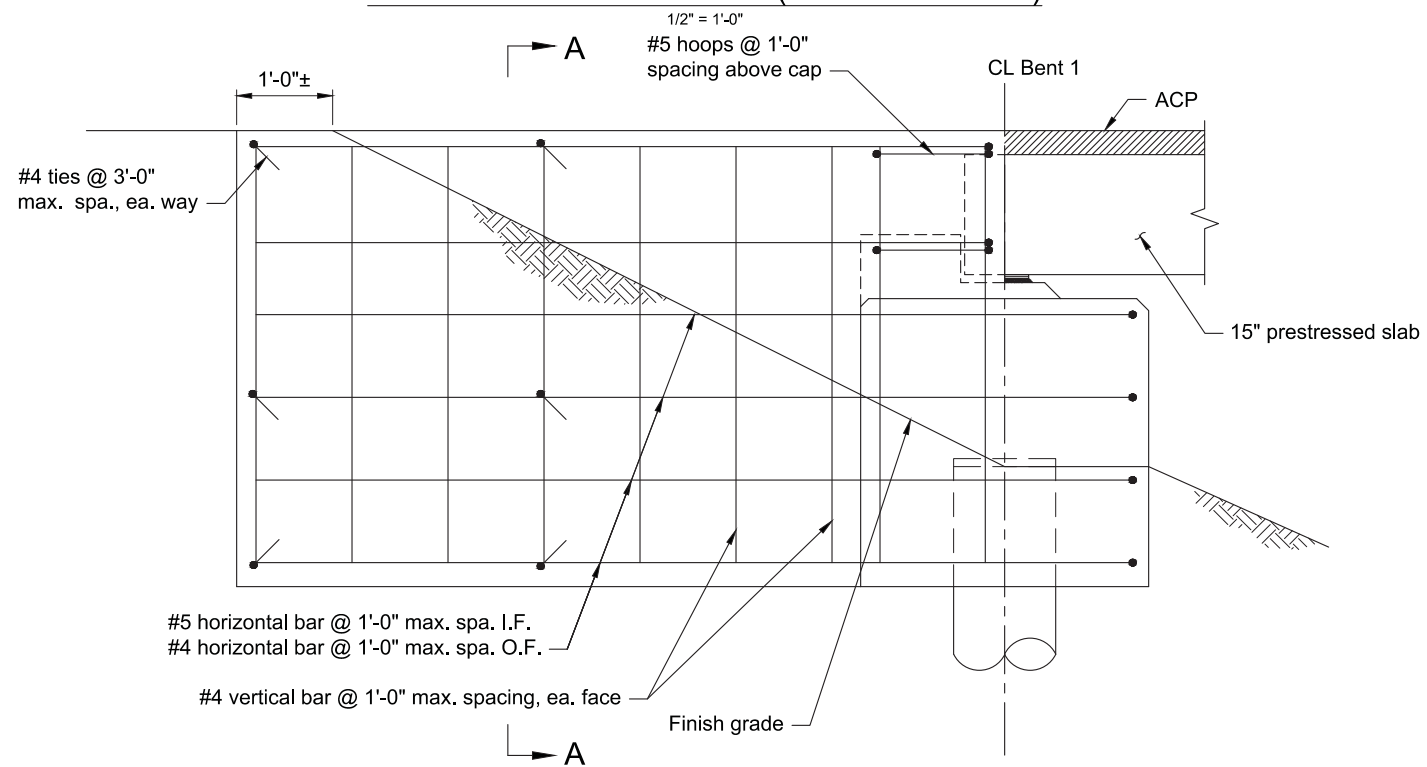
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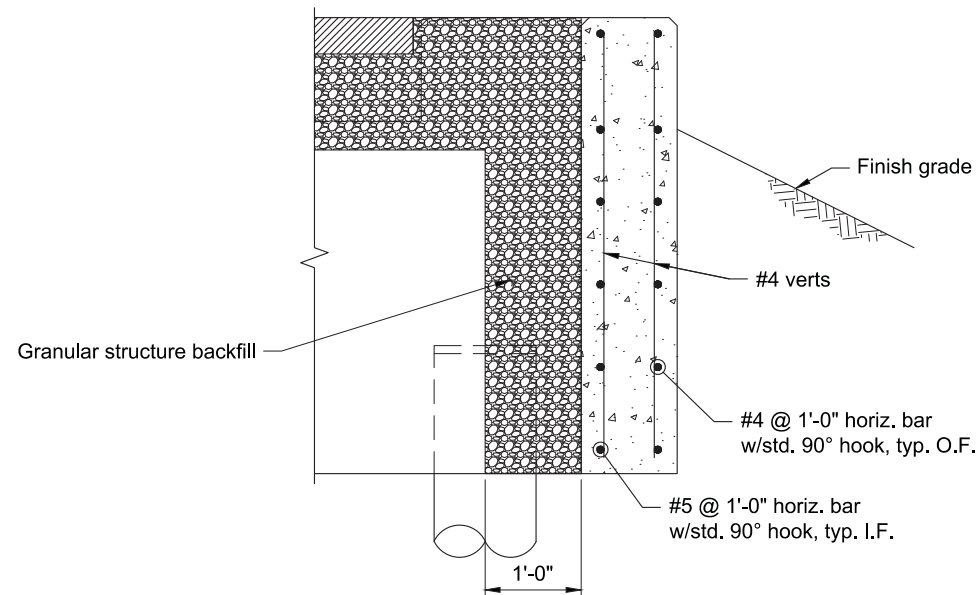


PLAN - BENT 1 WINGWALL (BENT 5 SIMILAR)

Wingwall Notes:
 Top of wingwall shall be flush with finish grade.
 Pour wingwalls on top of undisturbed or well-compacted material.
 See Sht BR-02 for concrete finish details. Do not fill outside face until after concrete finish is applied.



ELEVATION - BENT 1 WINGWALL (BENT 5 SIMILAR)



WARNING

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

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THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

LINN COUNTY 2021

BRIDGE PLANS

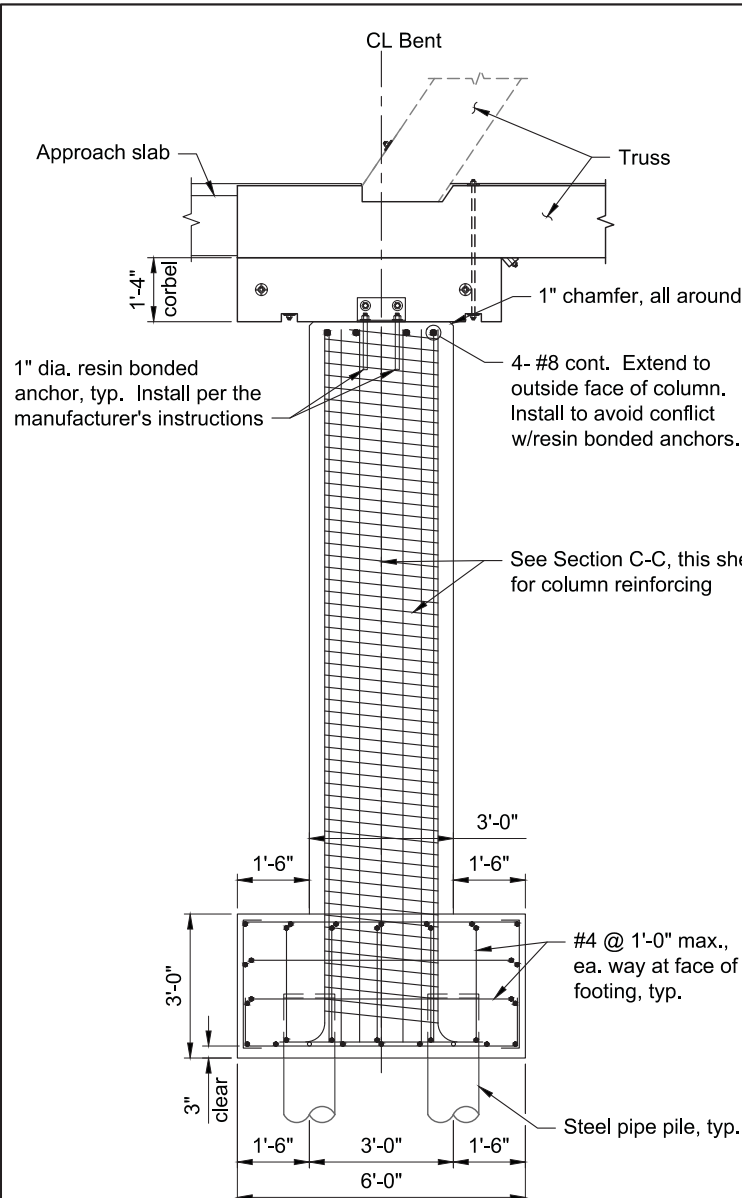
WINGWALL DETAILS

SCALE: AS SHOWN

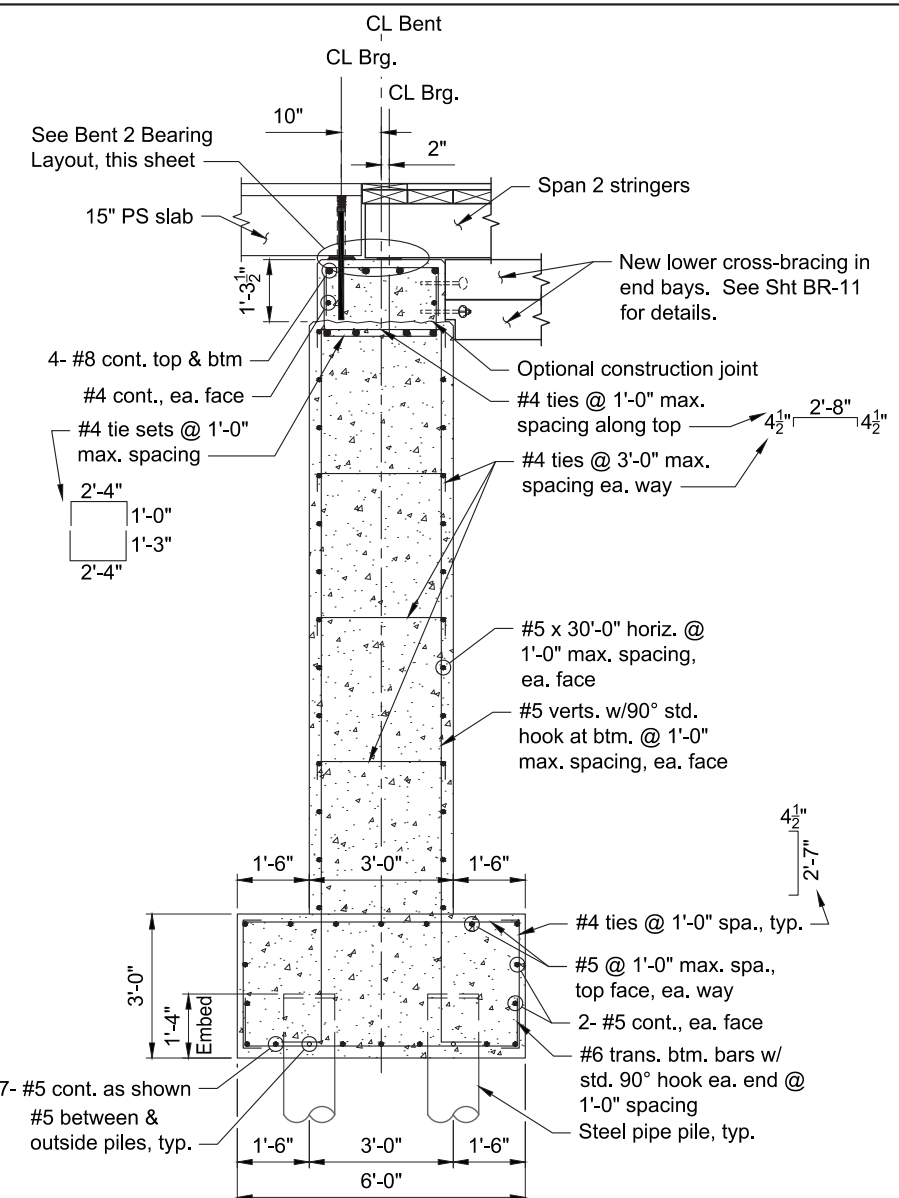
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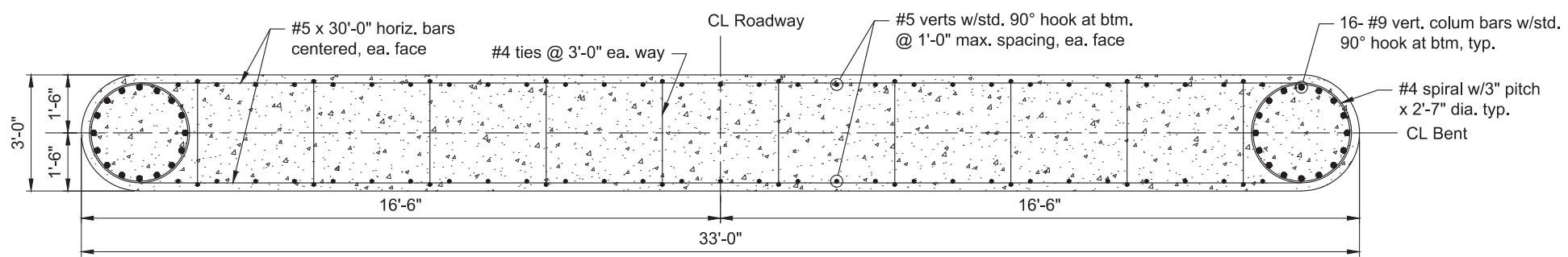
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SECTION A-A
1/4" = 1'-0"

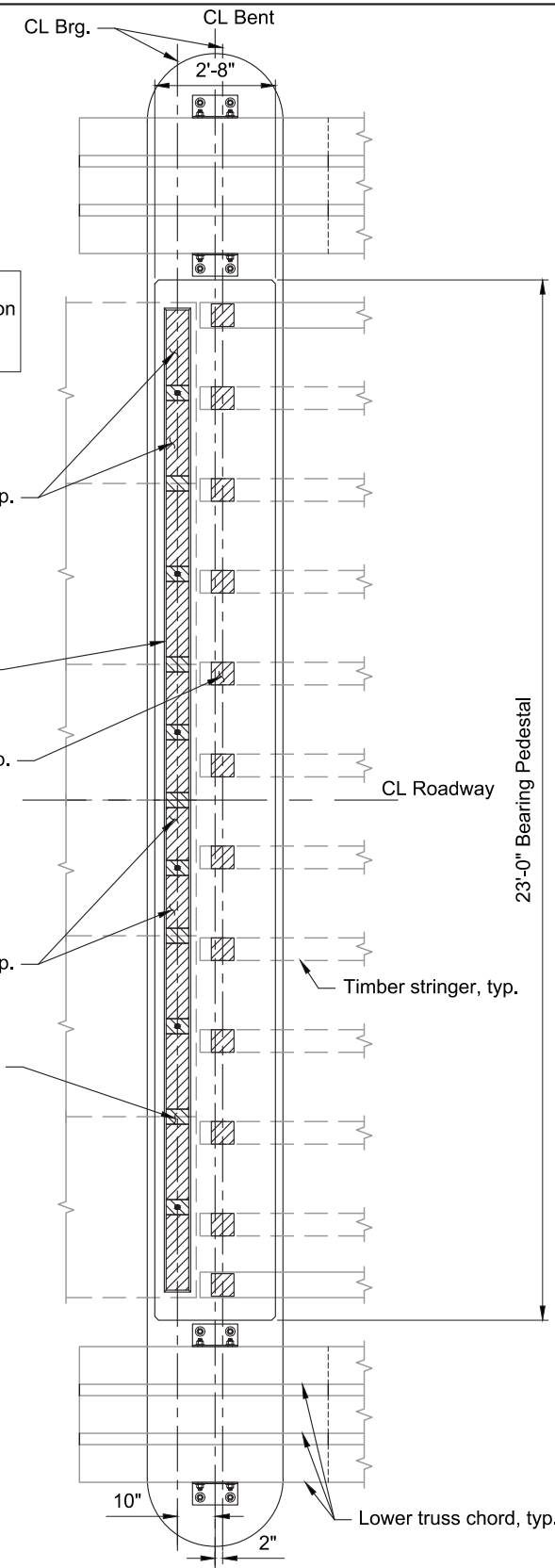


SECTION B-B
1/4" = 1'-0"



SECTION C-C
1/4" = 1'-0"

Note:
See Sht BR-16 for installation of slab dowels and slab setting procedures.



BENT 2 BEARING LAYOUT (BENT 3 SIMILAR)
1/4" = 1'-0"

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COUNTY ENGINEER
DAINEAL MALONE, P.E.

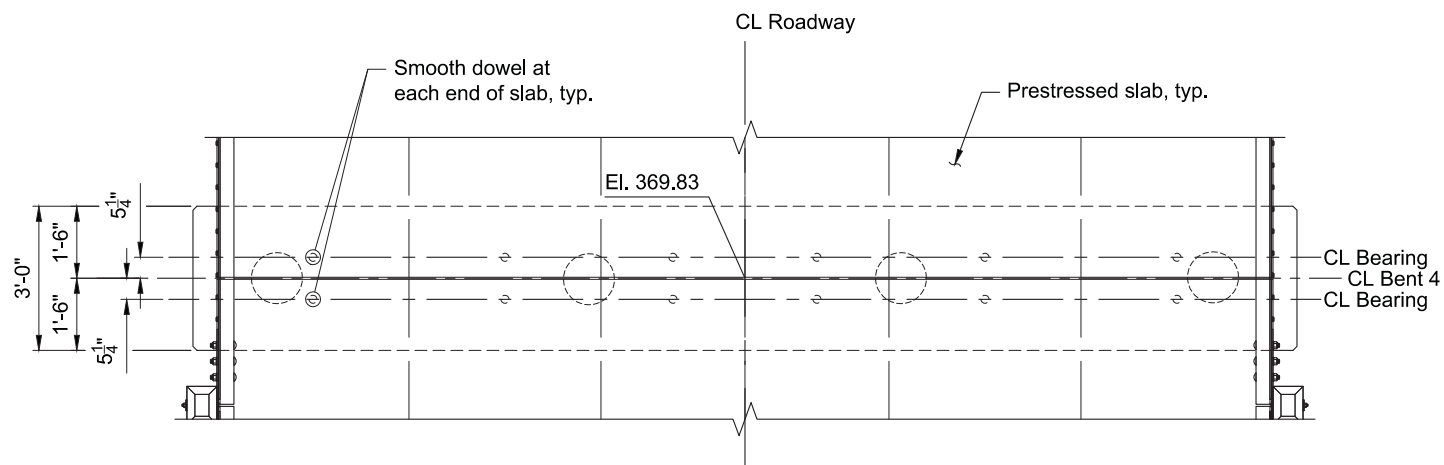
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| BRIDGE NO: | 637-070 | DATE: | 12/14/2021 |
| PROJECT NO: | CB1803 | | |
| TRS: | T. 10 S., R. 01 W., SECTIONS 9 & 10 | | |
| DESIGNED BY: | K. Groom | CHECKED BY: | A. Potts |
| DRAFTED BY: | K. Groom | REVIEWED BY: | C. Knoll |

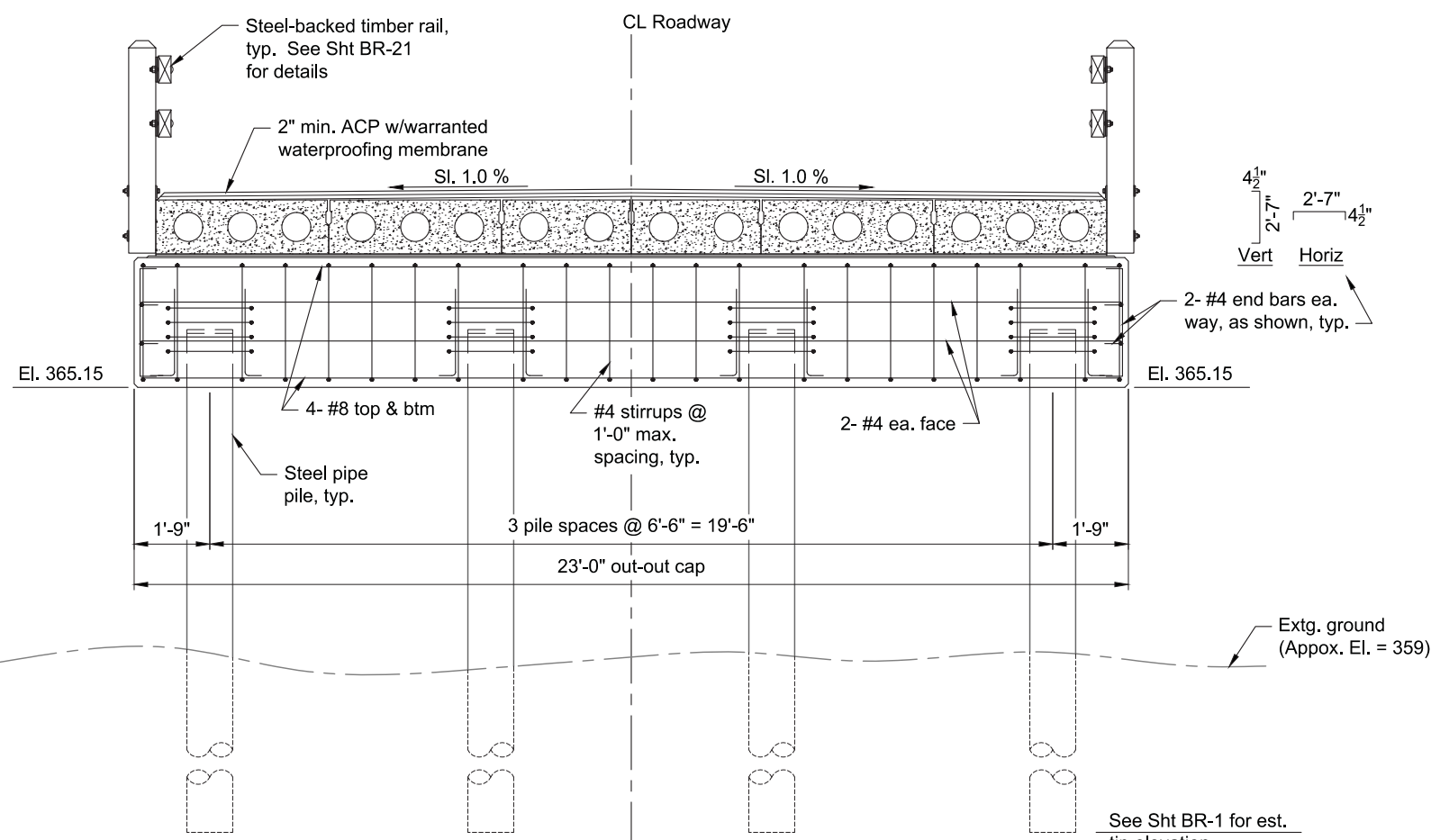
THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION
LINN COUNTY 2021

BRIDGE PLANS
BENT 2 DETAILS
SCALE: AS SHOWN
SHEET BR-19

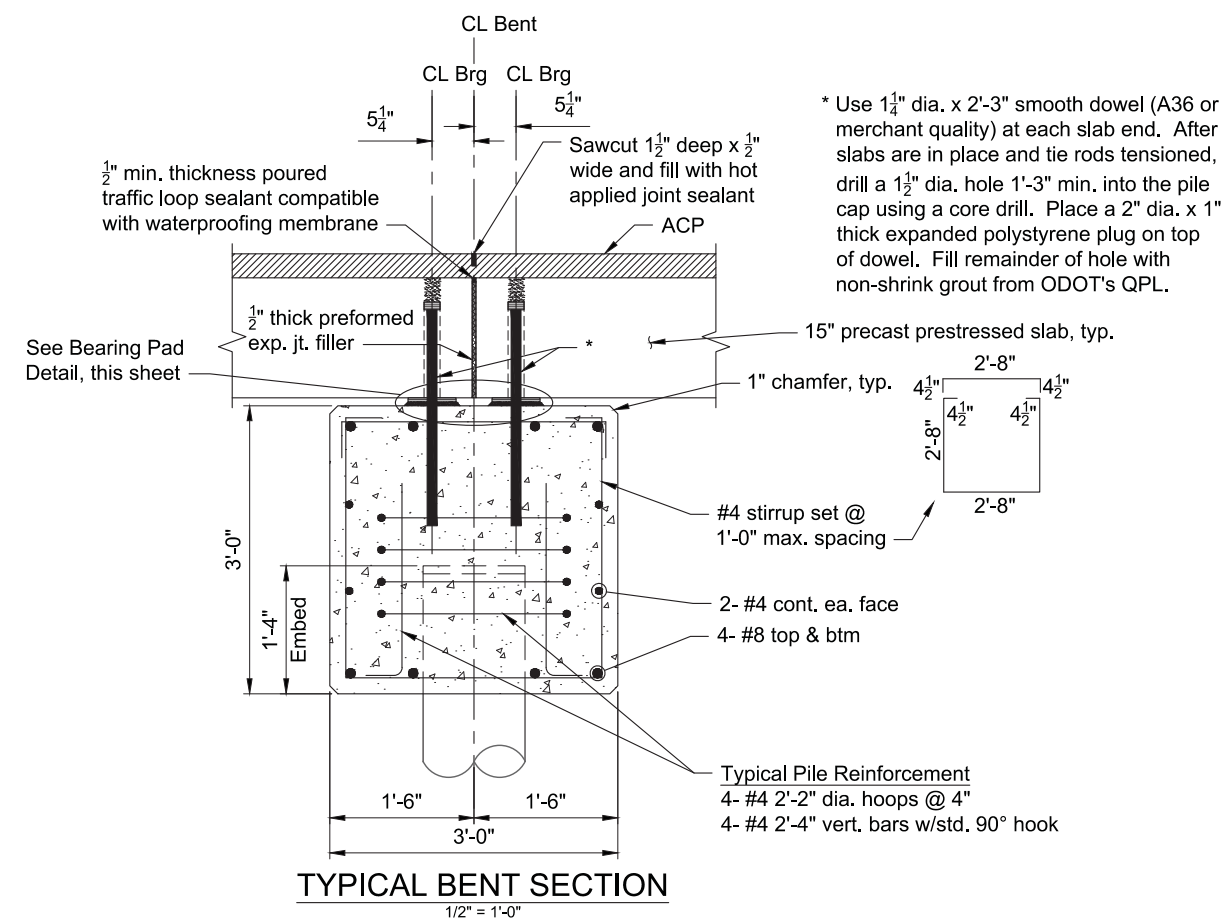
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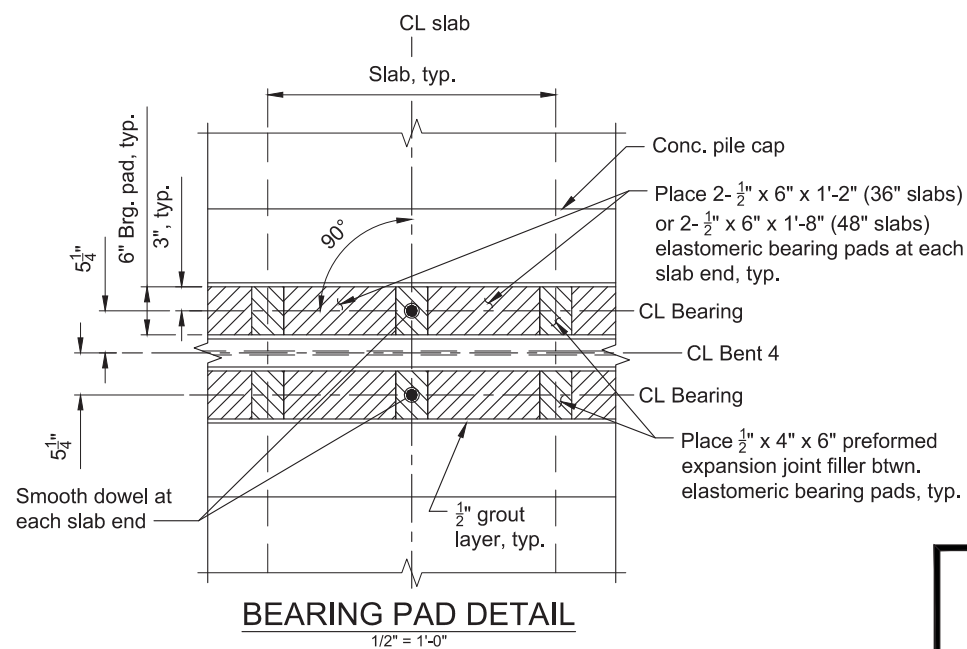
BENT 4 - PLAN
1/4" = 1'-0"



BENT 4 - ELEVATION
1/4" = 1'-0"



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



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

* Use 1 1/4" dia. x 2'-3" smooth dowel (A36 or merchant quality) at each slab end. After slabs are in place and tie rods tensioned, drill a 1 1/2" dia. hole 1'-3" min. 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.

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



K:\Projects - Current\BR 0637-0070 Shimane Covered Bridge repair\KM\G\ACAD\Shimane Covered Bridge - Final Drawings.dwg



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3010 FERRY STREET SW
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CHAIRMAN
SHERRIE SPRENGER
WILLIAM TUCKER

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THOMAS CREEK -
RICHARDSON GAP ROAD
(SHIMANEK) COVERED
BRIDGE REHABILITATION

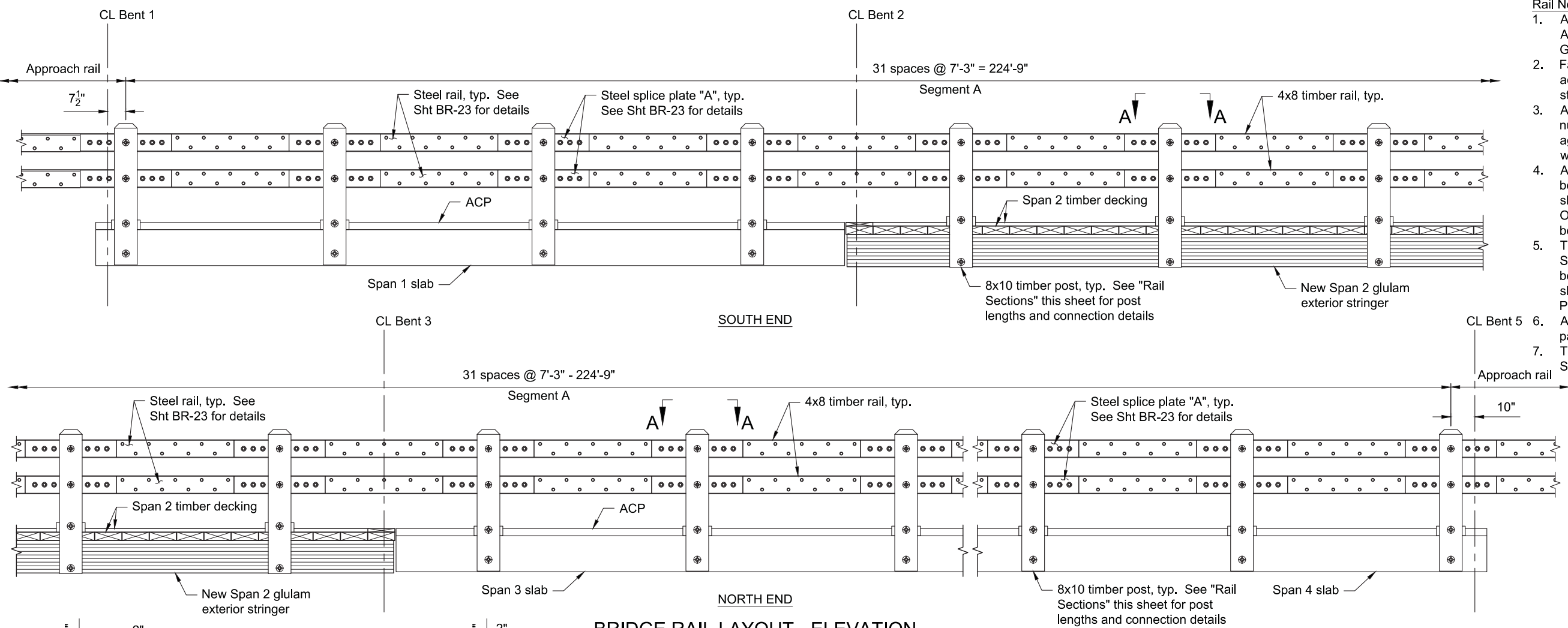
LINN COUNTY
2021

BRIDGE PLANS
BENT 4 PLAN & ELEVATION

SCALE: AS SHOWN
SHEET BR-20

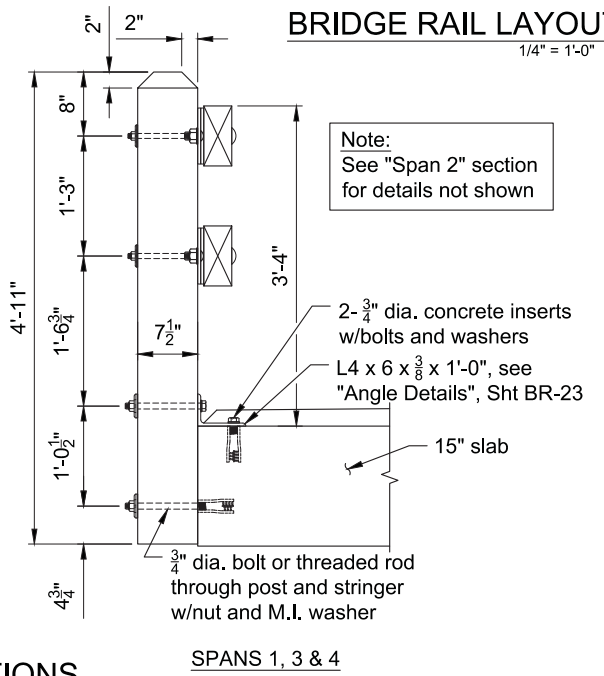
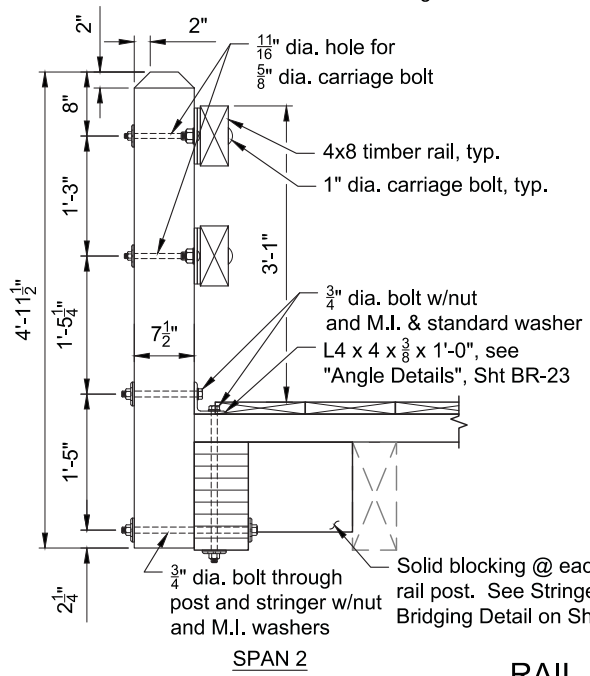
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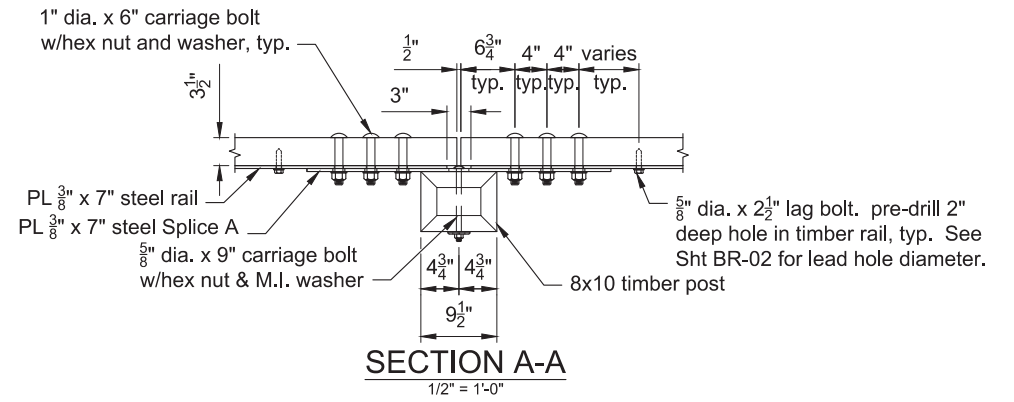


- Rail Notes:**
1. All structural steel shall be galvanized according to ASTM A123, and shall conform to ASTM A572, Grade 50.
 2. Fasteners and hardware shall be galvanized according to ASTM A153, and manufactured from steel conforming to ASTM A325
 3. All bolt heads (except carriage bolts heads) and nuts shall use a standard washer when bearing against steel, and a malleable iron (M.I.) washer when bearing against wood.
 4. All holes and slotted holes in steel members shall be drilled, punched or machined to the dimensions shown. No torch or plasma cutting will be accepted. Other numerically controlled cutting methods may be allowed based on approval of the engineer.
 5. Timber rails and posts shall be treated per the Special Provisions. All through holes and cuts shall be made prior to pressure treatment. Pilot holes shall be field drilled and field treated per the Special Provisions.
 6. All surfaces of the rail, including steel, shall be painted per the Special Provisions.
 7. Timber species and grade shall be as shown in the Special Provisions.

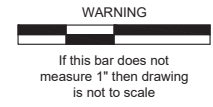
BRIDGE RAIL LAYOUT - ELEVATION
1/4" = 1'-0"



RAIL SECTIONS
1/2" = 1'-0"



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



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THOMAS CREEK - RICHARDSON GAP ROAD (SHIMANEK) COVERED BRIDGE REHABILITATION

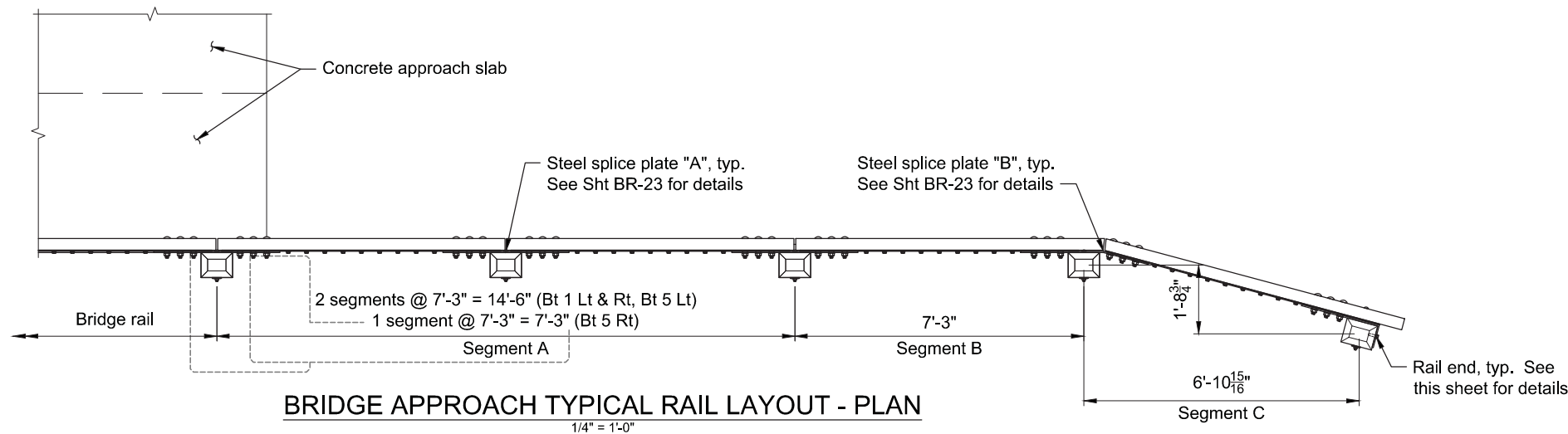
LINN COUNTY
2021

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| BRIDGE PLANS |
| BRIDGE RAIL DETAILS |
| SCALE: AS SHOWN |
| SHEET BR-21 |

REGISTERED PROFESSIONAL ENGINEER
17206PE
Digitally signed by Kevin M. Groom
Date: 2021.12.14 15:44:59 -08'00'
KEVIN M. GROOM
OREGON
JULY 19, 1994
Expires: 6/30/2023

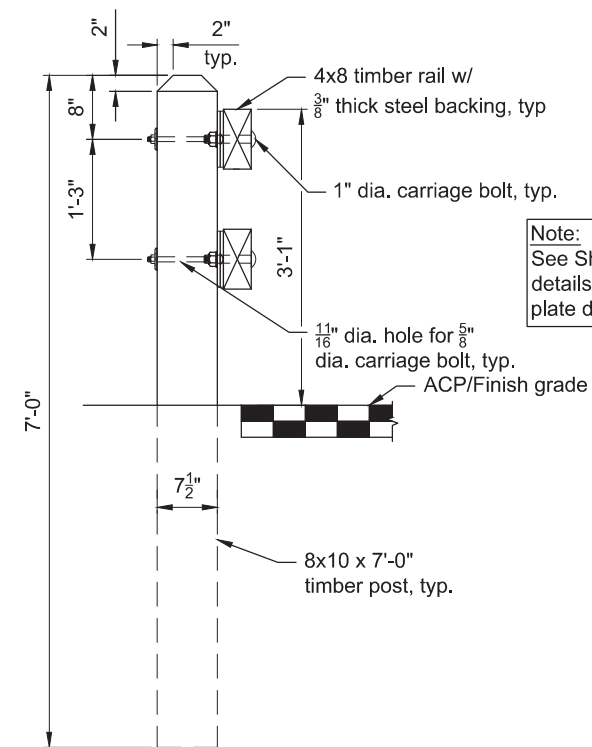
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BRIDGE APPROACH TYPICAL RAIL LAYOUT - PLAN

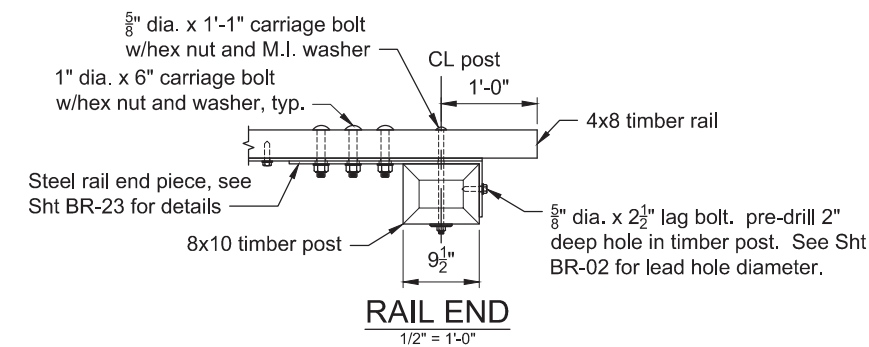
1/4" = 1'-0"



Note:
See Sht BR-23 for timber rail details and steel backing plate details.

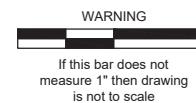
BRIDGE APPROACH RAIL SECTION

1/2" = 1'-0"



RAIL END

1/2" = 1'-0"



Digitally signed by Kevin M. Groom
Date: 2021.12.14 16:00:20 -08'00'

Expires: 6/30/2023



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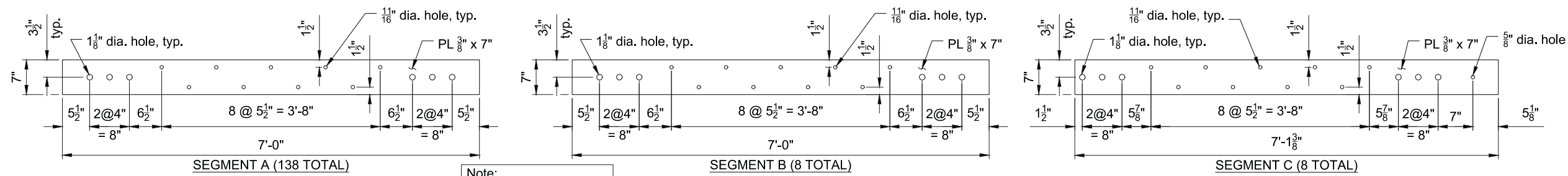
THOMAS CREEK -
RICHARDSON GAP ROAD
(SHIMANEK) COVERED
BRIDGE REHABILITATION

LINN COUNTY
2021

BRIDGE PLANS
BRIDGE APPROACH RAIL DETAILS

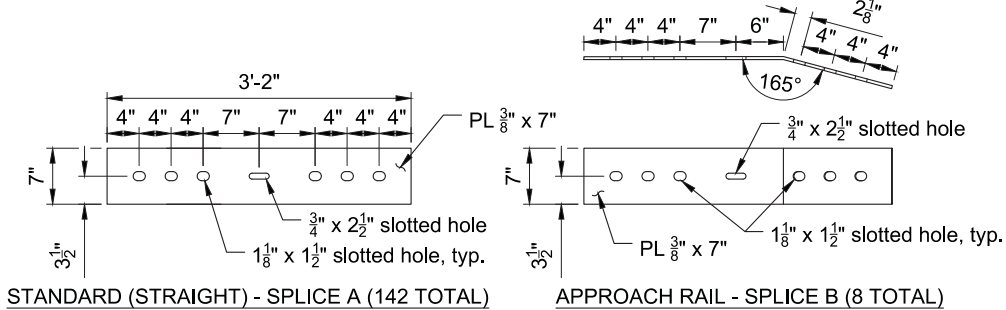
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SHEET BR-22

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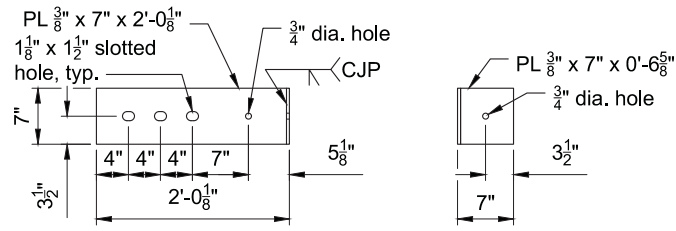


Note:
Steel Segment A and
Segment B are identical.

STEEL RAIL DETAILS
1/2" = 1'-0"

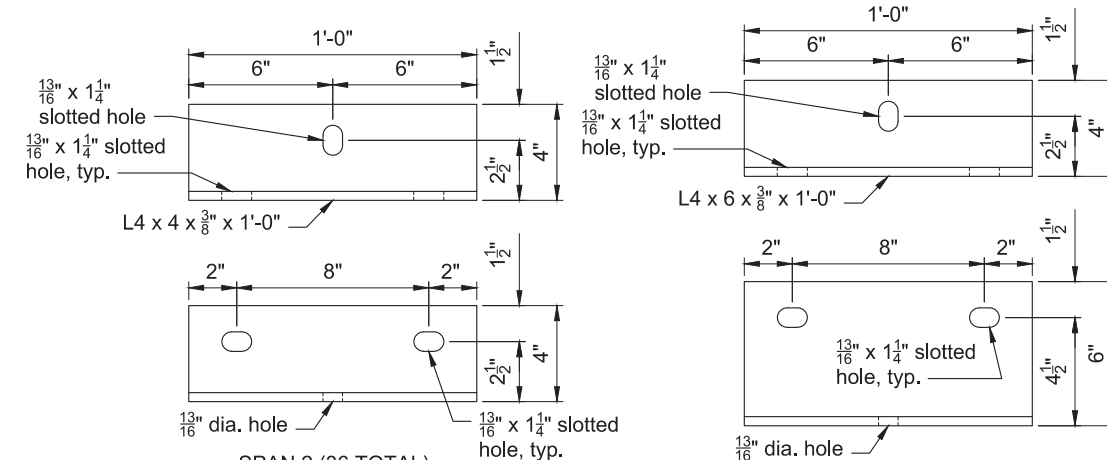


STEEL SPLICE PLATES
1/2" = 1'-0"

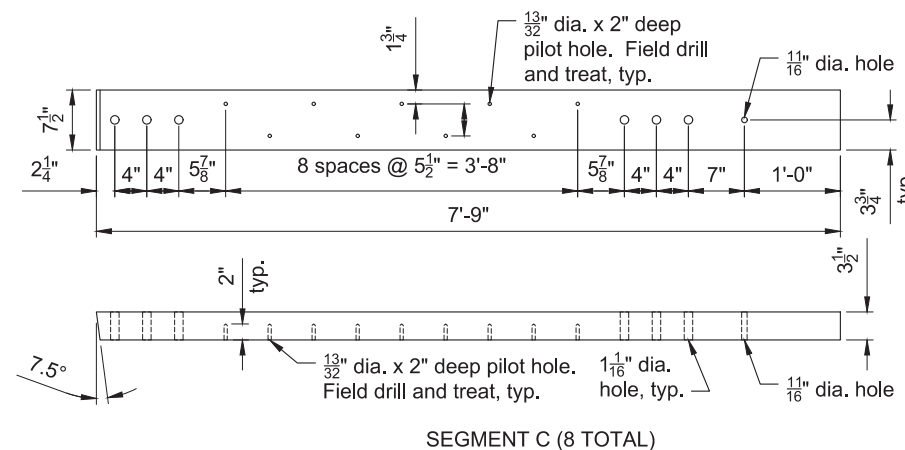
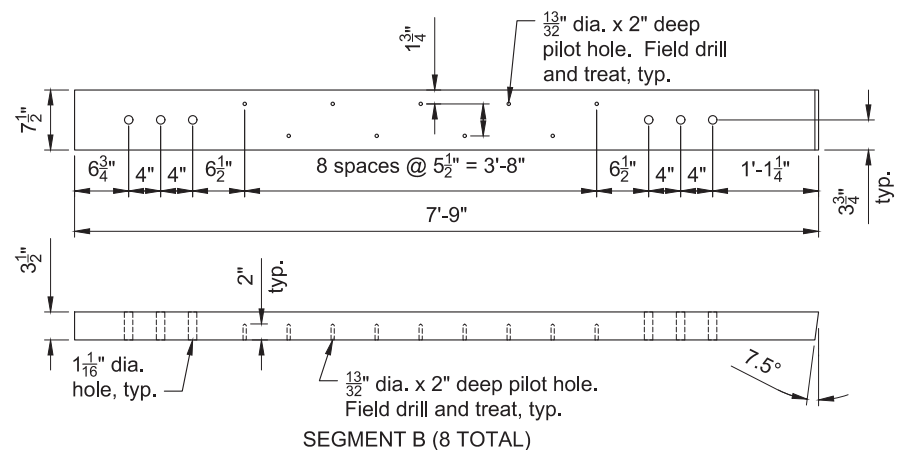
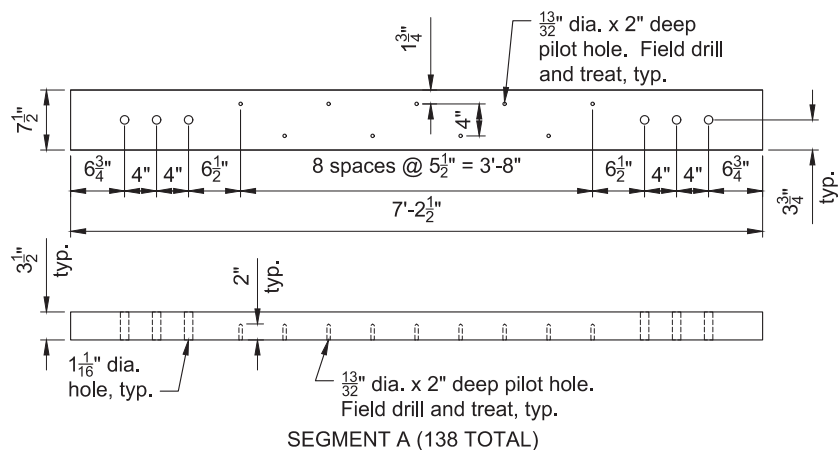


STEEL RAIL END PIECE (8 TOTAL)
1/2" = 1'-0"

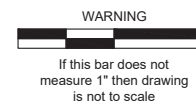
See Rail Notes on Sht BR-02 for
steel grades and notes on holes.



ANGLE DETAILS
1 1/2" = 1'-0"



TIMBER RAIL DETAILS
1/2" = 1'-0"



Expires: 6/30/2023

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2021

BRIDGE PLANS
RAIL ELEMENT FABRICATION DETAILS

SCALE: AS SHOWN
SHEET BR-23