

SPECIFICATIONS:

GRADING

ALL DOUGLAS FIR-LARCH TO BE GRADED PER WCLIB STANDARD GRADING RULES.

ALL SOUTHERN YELLOW PINE TO BE GRADED PER SPIB STANDARD GRADING RULES.

MATERIALS & TREATMENT

TIMBER PRESERVATIVE TREATMENT SHALL BE IN ACCORDANCE WITH CURRENT STATE AND/OR AASHTO SPECIFICATIONS. ALL TIMBER SHALL BE COPPER NAPHTHENATE TREATED PER AWPA UC4C, UNLESS NOTED OTHERWISE.

RAILPOST, RAILING, AND WEAR COURSE TO BE SOUTHERN YELLOW PINE, NO.1, S4S, MCA TREATED PER AWPA UC4A.

ALL PILING IS TO BE IN ACCORDANCE WITH CURRENT STATE SPECIFICATIONS.

GLU-LAM BEAMS AND DIAPHRAGMS TO BE 24F-V4, DF/DF GLU-LAM BEAMS TO BE SHOP FABRICATED WITH HORIZONTAL BEARING SEATS FOR LEVEL CONNECTION TO ABUTMENT CAPS.

DECK PLANKS TO BE DOUGLAS FIR-LARCH, NO.1, S1S1E.

PILE CAPS TO BE DOUGLAS FIR - LARCH, NO.1.

BALANCE OF TIMBER TO BE DOUGLAS FIR - LARCH, COPPER NAPHTHENATE TREATED IN ACCORDANCE WITH DESIGN REQUIREMENTS.

TIMBER REQUIREMENTS TO COMPLY WITH BEST MANAGEMENT PRACTICES FOR USE OF TREATED WOOD IN AQUATIC ENVIRONMENTS.

MISCELLANEOUS

ALL TIMBER IS ROUGH UNLESS OTHERWISE NOTED.

ALL TIMBER TO BE CUT TO EXACT LENGTH, DRESSED TO SIZE REQUIRED AND ALL PRACTICAL FRAMING TO BE DONE PRIOR TO TREATMENT.

ALL HARDWARE TO MEET ASTM A307-97 GALVANIZED TO A153. ALL HIGH STRENGTH HARDWARE TO MEET ASTM A325 OR A449 GALVANIZED TO A153. ALL STRUCTURAL STEEL TO MEET ASTM A36, GALVANIZED TO A123.

CONSTRUCTION NOTES:

REQUIREMENTS TO ADHERE TO LOCAL, STATE AND FEDERAL REGULATIONS.

ALL HOLES DRILLED IN FIELD WHERE SPIKES ARE USED ARE TO BE 1/16" SMALLER THAN SPIKE SIZE.

HOLES DRILLED FOR BOLTS ARE TO BE 1/16" LARGER THAN BOLT SIZE.

HOLES DRILLED FOR 3/4" LAG BOLTS ARE TO BE 9/16" IN DIAMETER FOR THE THREADED PORTION OF THE BOLT AND 13/16" FOR THE SHANK.

ANY NUT OR MACHINE BOLT HEAD IN DIRECT CONTACT WITH TIMBER TO HAVE ONE PLATE WASHER BETWEEN NUT & TIMBER, OR BOLT HEAD & TIMBER.

ANY NUT OR MACHINE BOLT HEAD IN DIRECT CONTACT WITH STEEL TO HAVE ONE CUT WASHER BETWEEN NUT & STEEL, OR BOLT HEAD & STEEL.

ANY HEX LAG IN DIRECT CONTACT WITH TIMBER TO HAVE ONE CUT WASHER BETWEEN HEAD & TIMBER.

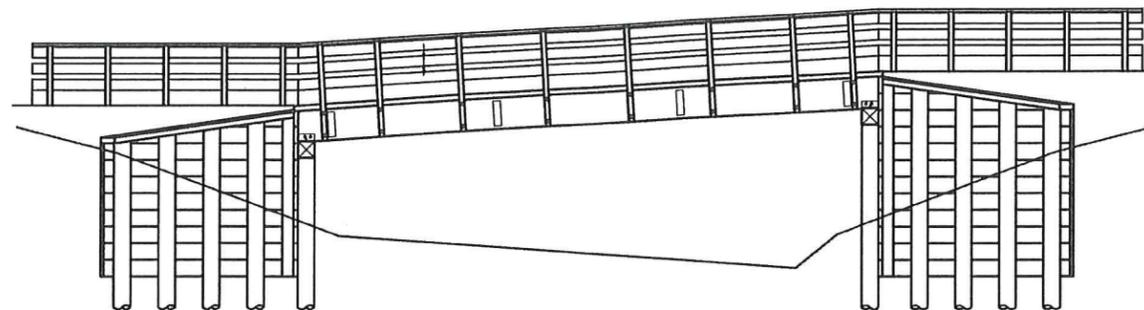
SET THREADS ON ALL BOLTS AT NUT WITH A CENTER PUNCH AFTER TIGHTENING.

ALL TIMBER CUT OR DRILLED IN THE FIELD SHALL BE TREATED WITH AN APPROVED PRESERVATIVE.

CONSTRUCTION REQUIREMENTS SHALL CONFORM TO: FHWA - STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-03, OR FP-14).

ALTHOUGH ALL PRACTICAL PRE-FRAMING WILL BE DONE PRIOR TO TREATING, SOME CUTTING & DRILLING WILL BE REQUIRED IN THE FIELD.

VILAS COUNTY FORESTRY, WISCONSIN TOWNSHIP OF LAND O' LAKES WISCONSIN RIVER SNOWMOBILE BRIDGE

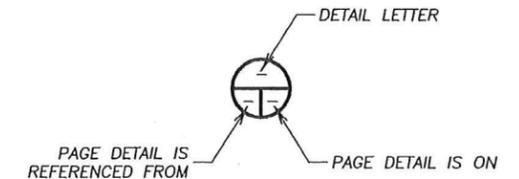


BRIDGE ELEVATION

DESIGN DATA:

BRIDGE HAS BEEN DESIGNED TO MEET THE GREATER OF THE FOLLOWING LOADING REQUIREMENTS:

- 1) A MINIMUM UNIFORM LIVE LOAD OF 85 PSF APPLIED TO THE ENTIRE DECK SURFACE.
A UNIFORM LIVE LOAD OF 30 PSF SNOW LOAD APPLIED TO THE ENTIRE DECK SURFACE, PLUS H10 VEHICULAR LIVE LOAD, AND THE FOLLOWING WIND LOADS:
- 2) A LATERAL WIND LOAD OF 35 PSF ON THE FULL HEIGHT OF THE RAILING AS IF FULLY ENCLOSED.
AN UPLIFT WIND LOAD OF 20 PSF APPLIED AT THE WINDWARD QUARTER OF THE TRANSVERSE BRIDGE WIDTH.
A LATERAL WIND LOAD OF 50 PSF ON ENTIRE STRINGER SURFACE.



CALLOUT LEGEND

DO NOT SCALE DRAWINGS

PLAN SHEET INDEX

SHEET	DESCRIPTION
1	COVER SHEET & SPECIFICATIONS
2	GENERAL NOTES
3	GENERAL BRIDGE PLAN & ELEVATION
4	ABUTMENT PLAN & ELEVATION/SECTION/DETAIL
5	SECTIONS THRU
6	APPROACH RAILING DETAILS
7	BRIDGE PROFILE

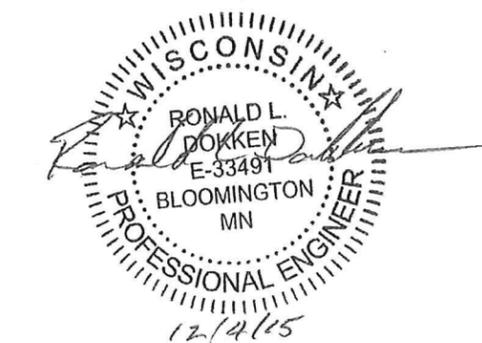
REVISION	DESCRIPTION	DATE	INITIALS
1			
2			
3			

<i>Israel H. Sigs</i>	12/8/15
DISTRICT RANGER - EAGLE RIVER RANGER DISTRICT	DATE
<i>Mark Beutney</i>	12/8/15
FOREST ENGINEER	DATE
<i>12/8/15</i>	12/8/15
FOREST SUPERVISOR	DATE
<i>J. P.</i>	12/10/15
REGIONAL BRIDGE PROGRAM MANAGER	DATE
<i>[Signature]</i>	12/11/15
REGIONAL ENGINEERING DIRECTOR	DATE

COVER SHEET & SPECIFICATIONS

**35' TREATED TIMBER SPAN
12' CLEAR ROADWAY
WISCONSIN RIVER SNOWMOBILE BRIDGE
VILAS COUNTY, WISCONSIN**

W Wheeler
Lumber, LLC
9330 JAMES AVE. S.
BLOOMINGTON, MN 55431



ENGINEER'S SIGNATURE AND SEAL ARE TO ASSUME DESIGN RESPONSIBILITY FOR THE
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AND DOES NOT INCLUDE ANY DESIGN RESPONSIBILITY PERTAINING TO, BUT NOT LIMITED
TO, ROADWAY GEOMETRICS, BRIDGE POSITIONING, HYDRAULIC DESIGN, SCOUR ANALYSIS,
PERMITTING PROCEDURES, ERECTION, UTILITY FACILITIES, SOIL CONDITIONS, SUBSURFACE
PILE DESIGN (INCLUDING PILE LENGTHS), ETC.

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GENERAL NOTES:

THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK SHOWN ON THE DRAWINGS, UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MATERIALS REQUIRED TO COMPLETE PLANS.

THE CONTRACTOR SHALL PERFORM ALL WORK IN COMPLIANCE WITH FEDERAL, STATE, AND LOCAL PERMIT APPROVALS. COPIES OF ALL PERMIT APPROVALS SHALL BE MAINTAINED AT THE PROJECT SITE.

DURING HIGH WATER EVENT, NO ABUTMENT CONSTRUCTION ACTIVITIES SHOULD OCCUR IF FLOOD LEVELS ARE ABOVE THE 2 YEAR HEAD WATER ELEVATION.

DURING CONSTRUCTION, THE CONTRACTOR SHALL EMPLOY BEST MANAGEMENT PRACTICES TO MINIMIZE ANY EROSION. THE CONTRACTOR SHALL SEED, MULCH AND MAINTAIN THE SITE TO RESTORE THE SITE TO A LIKE OR BETTER CONDITION. ALL EXISTING DRAINAGE PATTERNS SHALL BE RESTORED UPON COMPLETION OF CONSTRUCTION.

SITE SECURITY AND JOB SAFETY ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.

THE ENGINEER SHALL HAVE FULL ACCESS TO THE SITE WHEN THE WORK IS IN PREPARATION AND PROGRESS. THEY MAY OBSERVE THE WORK ON A PERIODIC OR FULL-TIME BASIS.

THE CONTRACTOR SHALL PROVIDE A DETAILED CONSTRUCTION SCHEDULE TO THE ENGINEER PRIOR TO CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR REPAIR TO ALL DAMAGES CAUSED DURING CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION TO ALL DISTURBED AREAS OUTSIDE THE LIMITS OF WORK TO PRE-CONSTRUCTION CONDITIONS.

FINAL RESOLUTION TO CONFLICTS WITHIN THE SPECIFICATIONS OR ANY SUBSTITUTIONS SHALL BE DETERMINED BY THE ENGINEER.

THE CONTRACTOR SHALL NOT DISTURB ANY EXISTING PROPERTY CORNER, MONUMENT, SURVEY MARKER, OR BENCHMARK WITHOUT FIRST MAKING PROVISIONS FOR ITS REPLACEMENT OR RELOCATION.

TRAIL AND BRIDGE LAYOUT ARE SUBSIDIARY AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.

INSPECT AND CLEAN ALL EQUIPMENT PRIOR TO ARRIVAL AT THE SITE TO PREVENT THE SPREAD OF INVASIVE SPECIES AND FOLLOW THE REQUIREMENTS OF THE NHDES WETLAND PERMIT.

CONSTRUCTION EQUIPMENT SHALL BE INSPECTED DAILY FOR LEAKING FUEL, OIL, AND HYDRAULIC FLUID PRIOR TO ENTERING SURFACE WATER OR WETLANDS. FAULTY EQUIPMENT SHALL BE REPAIRED PRIOR TO ENTERING JURISDICTIONAL AREAS. CONTRACTOR SHALL HAVE APPROPRIATE SPILL KITS ON SITE AND READILY ACCESSIBLE AT ALL TIMES DURING CONSTRUCTION AND EACH OPERATOR SHALL BE TRAINED IN ITS USE. ALL REFUELING OF EQUIPMENT SHALL OCCUR OUTSIDE OF SURFACE WATERS OR WETLANDS. FOLLOW ANY ADDITIONAL REQUIREMENTS OF THE WIDNR WETLAND PERMIT.

ABUTMENT AND WINGWALL NOTES:

FILLS SHALL BE PLACED BEHIND THE WINGWALLS ONLY AFTER THE FRONT OF WINGWALL IS WITHIN 2' OF PROPOSED FINISHED GRADE.

ABUTMENT BACKFILL MATERIAL SHALL CONSIST OF ON-SITE GRANULAR SOIL. IF SUPPLEMENTAL MATERIAL IS NEEDED, IT SHALL CONFORM TO "BACKFILL GRANULAR" PER WISDOT 209.

COMPACTION SHALL BE PER THE REQUIREMENTS OF WISDOT 207.3.6.3 SPECIAL COMPACTION. HAND PLACEMENT AND COMPACTION OF BACKFILL MAY BE REQUIRED WHEN WORKING IN THE VICINITY OF ABUTMENT TIE BACKS AND DEADMAN.

GENERAL EROSION-CONTROL REQUIREMENTS:

INSTALL ALL EROSION-CONTROL MEASURES PRIOR TO EARTHWORK OPERATION AND MAINTAIN ALL EROSION-CONTROL MEASURES AND SEEDED EMBANKMENTS DURING CONSTRUCTION. EROSION-CONTROL SHALL BE REMOVED ONLY UPON THE ESTABLISHMENT OF ALL VEGETATED AREAS.

DO NOT DISTURB AREAS OUTSIDE THE LIMITS OF PROPOSED WORK. AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. ALL AREAS DISTURBED DURING CONSTRUCTION NOT COVERED WITH BUILDINGS, STRUCTURES OR PAVEMENT SHALL RECEIVE 4" OF LOAM AND SEED.

THE DOWNHILL SIDE OF ALL STOCKPILES SHALL BE ENCIRCLED WITH SILT FENCE.

BEFORE WEEKENDS, AND IF A SIGNIFICANT RAINFALL EVENT IS ANTICIPATED DURING THE CONSTRUCTION OF THE CUT/FILL EMBANKMENTS, A TEMPORARY BERM SHALL BE CONSTRUCTED ALONG THE TOP OF THE CUT/FILL EMBANKMENTS, AND TEMPORARY SLOPE DRAINS (PIPES) WITH TEMPORARY STONE OUTLET APRONS SHALL BE INSTALLED AT THE BASE OF THE SLOPES.

THE MAXIMUM TIME THAT ANY DISTURBED AREAS SHALL BE LEFT UNSTABILIZED SHALL BE 14 DAYS.

THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED TO COMPLETE THE REQUIRED CONSTRUCTION, BUT NO MORE THAN 5 ACRES AT ANY ONE TIME.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURED:

- A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREA TO BE PAVED;
- B. A MINIMUM OF 85% VEGETATION GROWTH HAS BEEN ESTABLISHED;
- C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
- D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

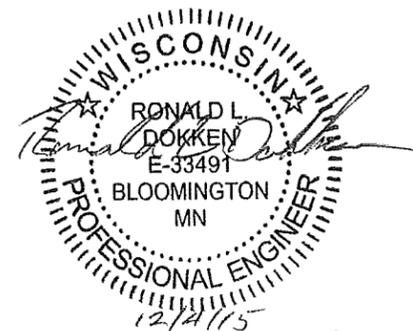
THROUGHOUT THE CONSTRUCTION PERIOD, ALL EROSION-CONTROL MEASURES SHALL BE INSPECTED AT THE END OF EACH WEEK AND BEFORE ANTICIPATED SIGNIFICANT RAINFALL EVENTS AND REPAIRED, IF DEFICIENT. EXTRA ATTENTION SHALL BE GIVEN TO THE CRITICAL AREAS LISTED SEPARATELY.

ALL EROSION-CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EVERY 1/2" OR GREATER RAINFALL WITHIN 24 HOUR PERIOD.

CRITICAL EROSION AREAS:

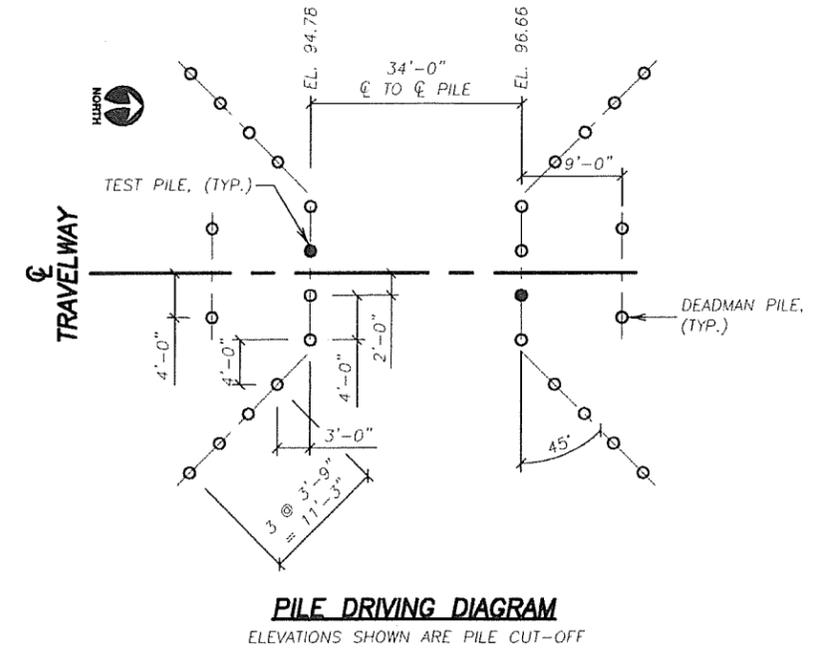
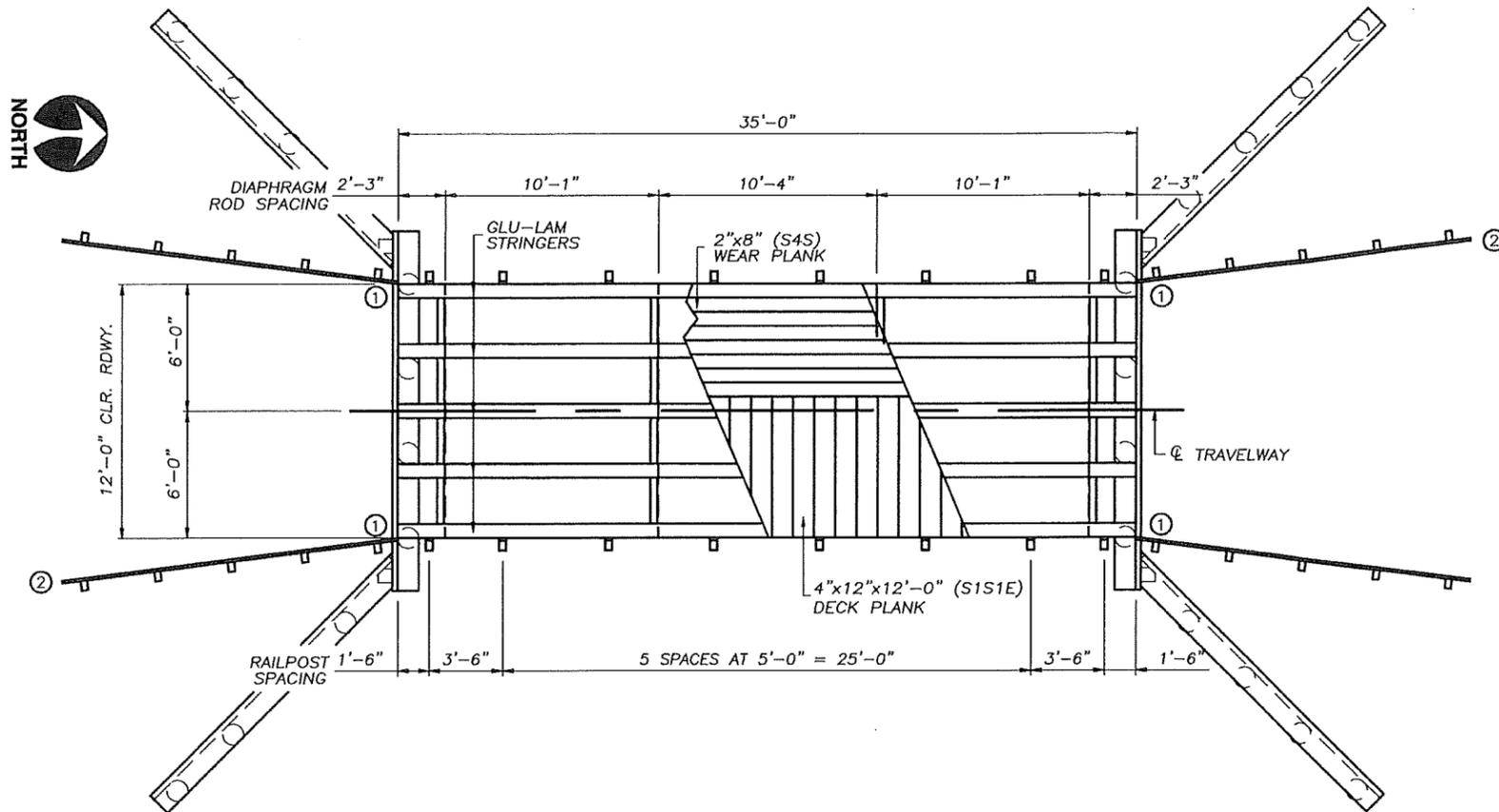
TEMPORARY SEEDING AND/OR MULCHING SHALL BE USED TO PROTECT EXPOSED CRITICAL AREAS DURING CONSTRUCTION. THE FOLLOWING AREAS ARE PARTICULARLY SUSCEPTIBLE TO EROSION AND SHALL RECEIVE EXTRA ATTENTION WHEN BEING INSPECTED AND MAINTAINED.

- 1. THE LARGER CUT AND FILL AREAS ALONG THE TRAIL.
- 2. AREAS NOT WORKED OR NOT TO BE WORKED FOR 3 WEEKS.
- 3. AREAS OF CONCENTRATED FLOW SUCH AS THE DITCHES, SWALES, AND TOE OF UPHILL FACING SLOPES.



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GENERAL NOTES WISCONSIN RIVER SNOWMOBILE BRIDGE - VILAS CO., WI			
 Wheeler Lumber, LLC 9330 JAMES AVE. S. BLOOMINGTON, MN 55431			
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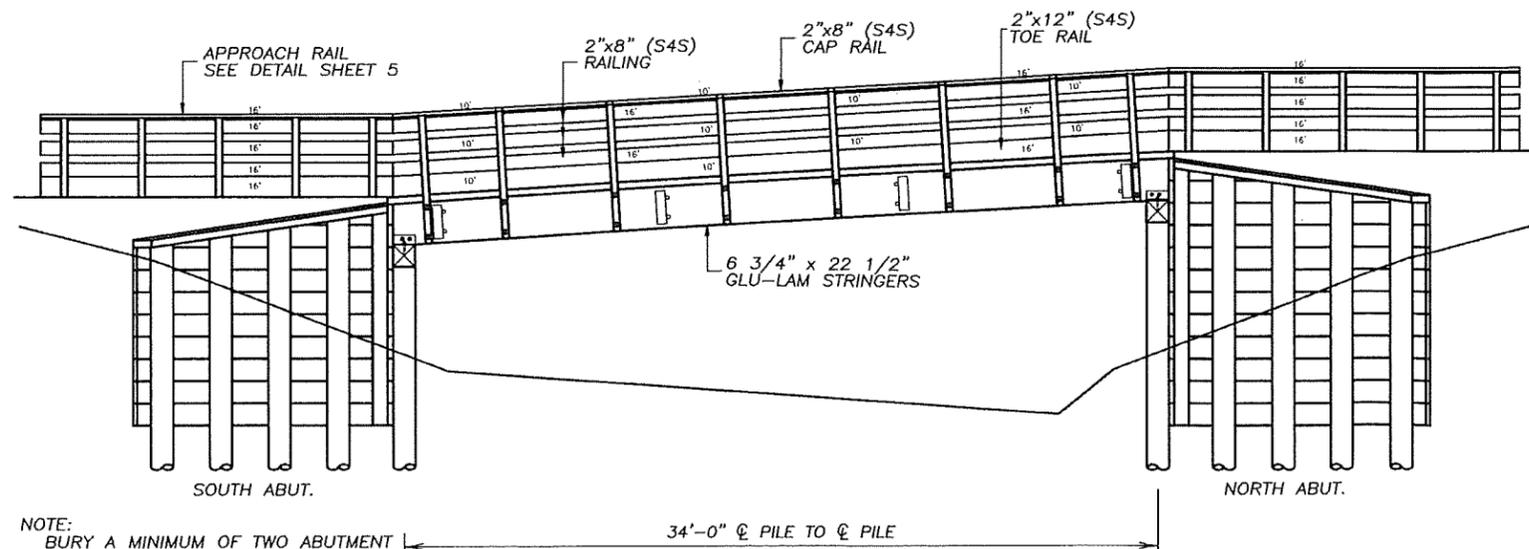
NOTES:

BURY A MINIMUM OF TWO BACKING PLANK AS SHOWN.

RAILING NOT SHOWN ON PLAN VIEW FOR CLARITY.

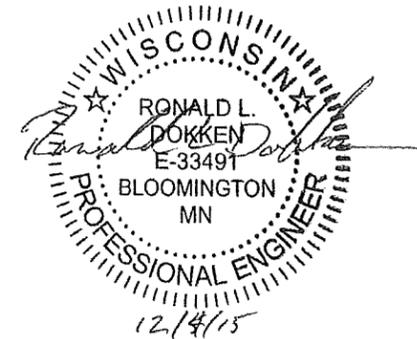
① FIELD PLACE OBJECT MARKERS AT EACH CORNER OF BRIDGE. SUPPLIED BY COUNTY.

② FIELD PLACE BRIDGE NAME PLATE/LOAD LIMIT PLATE @ EACH END OF BRIDGE. PLATE SHALL STATE "10 TON VEHICLE LOAD LIMIT. SUPPLIED BY BRIDGE MANUFACTURER.



NOTE:
BURY A MINIMUM OF TWO ABUTMENT BACKING PLANKS AS SHOWN

GENERAL BRIDGE PLAN & ELEVATION



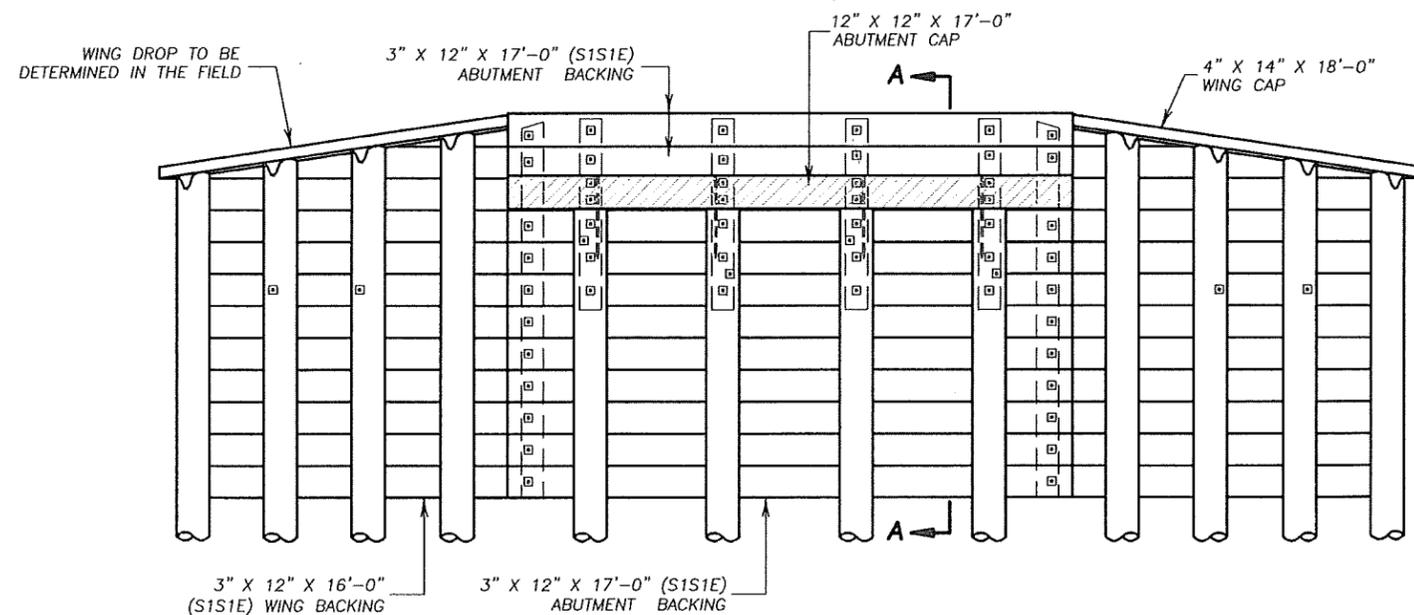
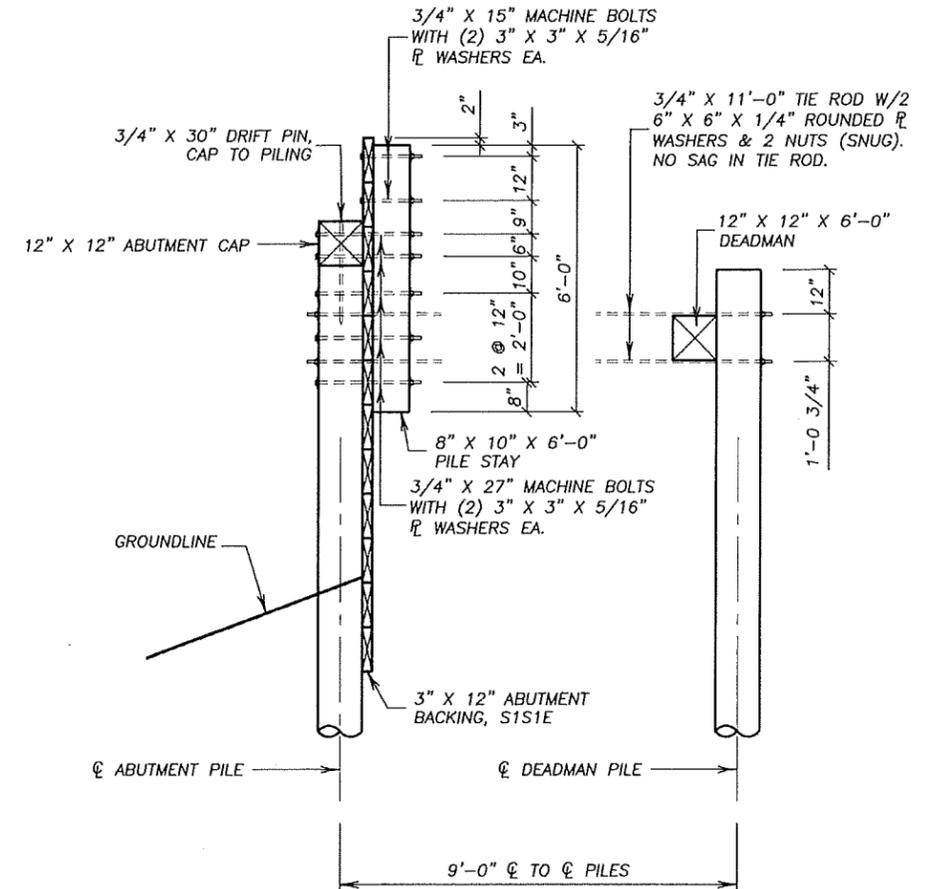
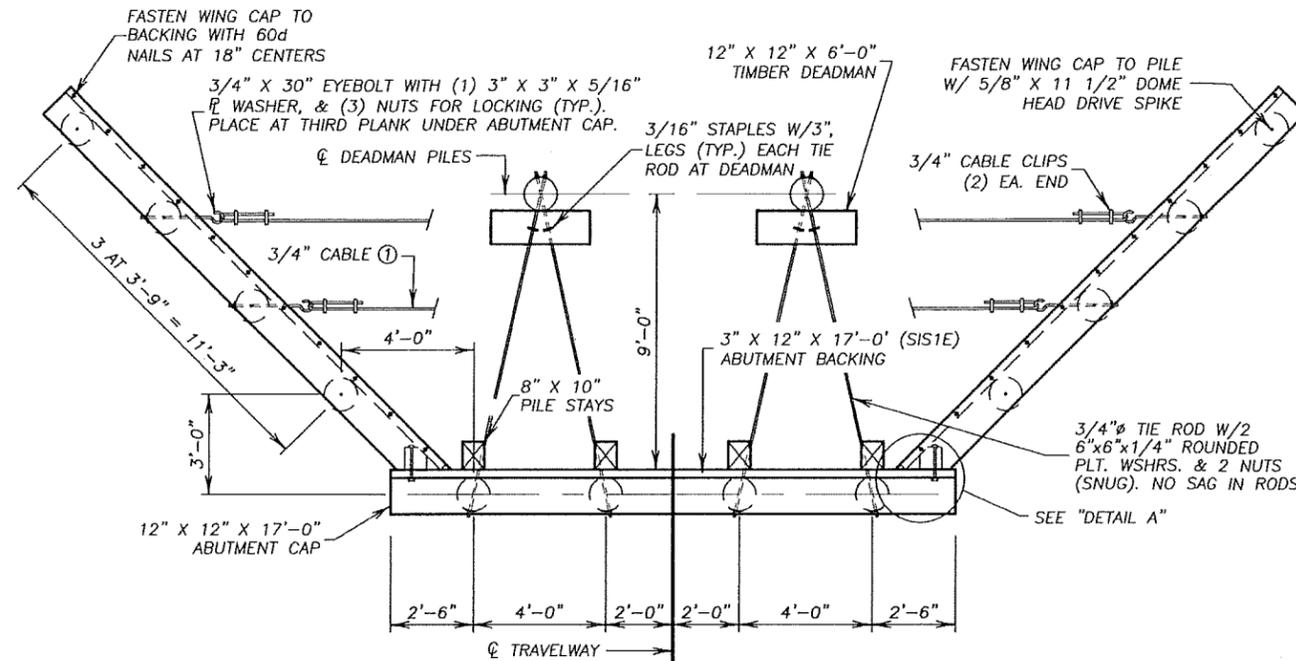
GENERAL BRIDGE PLAN & ELEVATION
WISCONSIN RIVER SNOWMOBILE BRIDGE - VILAS CO., WI



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9330 JAMES AVE. S.
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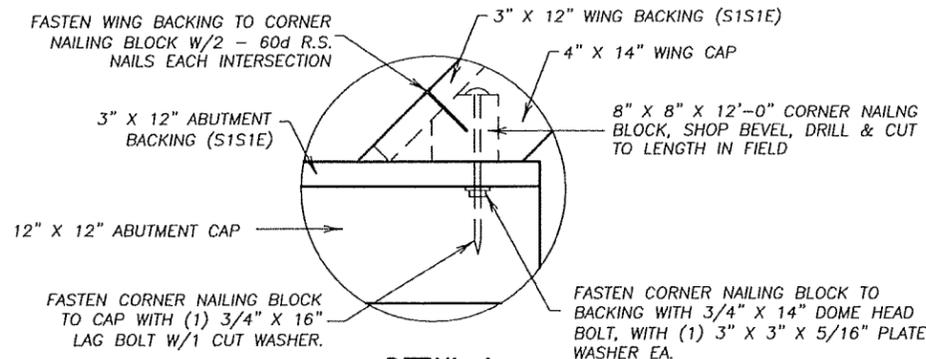
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ABUTMENT PLAN & ELEVATION

NORTH ABUTMENT SHOWN, SOUTH ABUTMENT SIMILAR
DEDUCT (2) BACKING PLANK AT SOUTH ABUTMENT



DETAIL A

ABUTMENT NOTES:

FASTEN BACKING TO PILES WITH (2) 60d NAILS @ EACH INTERSECTION.

GEOTEXTILE FABRIC TO BE STAPLED TO BACKSIDE OF ABUTMENTS & WINGS. STAPLES BY CONTRACTOR.

PILE CUT-OFFS TO BE FIELD TREATED WITH AN APPROVED PRESERVATIVE AND ONE COAT ASPHALT PAINT SUPPLIED BY BRIDGE MANUFACTURER.

① 3/4" GALVANIZED CABLE, FIELD CUT TO FIT. TIGHTEN CABLE SO THERE IS NO VISIBLE SAGGING.

ABUTMENT PILE NOTES:

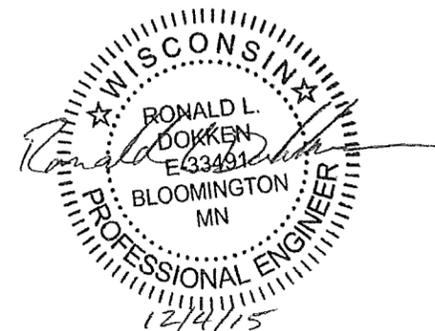
- (16) Q-NAP WING PILES 30 FT. LONG
- (4) Q-NAP DEADMAN PILES 30 FT. LONG
- (6) Q-NAP ABUTMENT PILES 30 FT. LONG
- (2) Q-NAP TEST PILES 40 FT. LONG

COMPUTED UNFACTORED DESIGN LOAD FOR THE ABUTMENT BEARING PILES IS 17 TONS EACH.

PILE LENGTHS SHOWN ARE ESTIMATED. ACTUAL LENGTHS ARE TO BE BASED ON TEST PILE DATA.

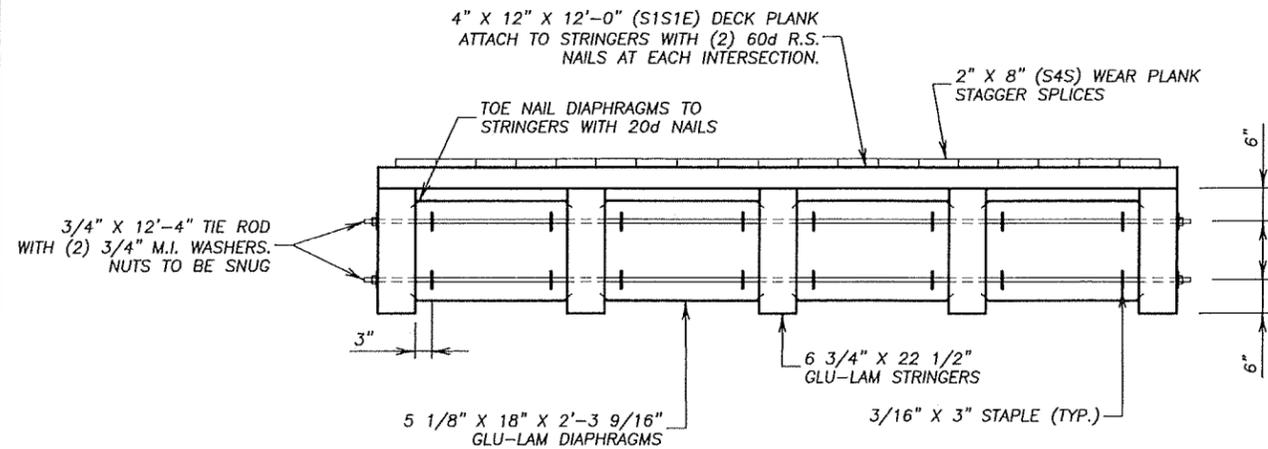
MINIMUM PILE PENETRATION TO BE 12 FT. BELOW GROUND LINE.

BEVELED CAPS ARE NOT REQUIRED. GLU-LAM BEAMS TO BE SHOP FABRICATED FOR A LEVEL BEARING SEAT.

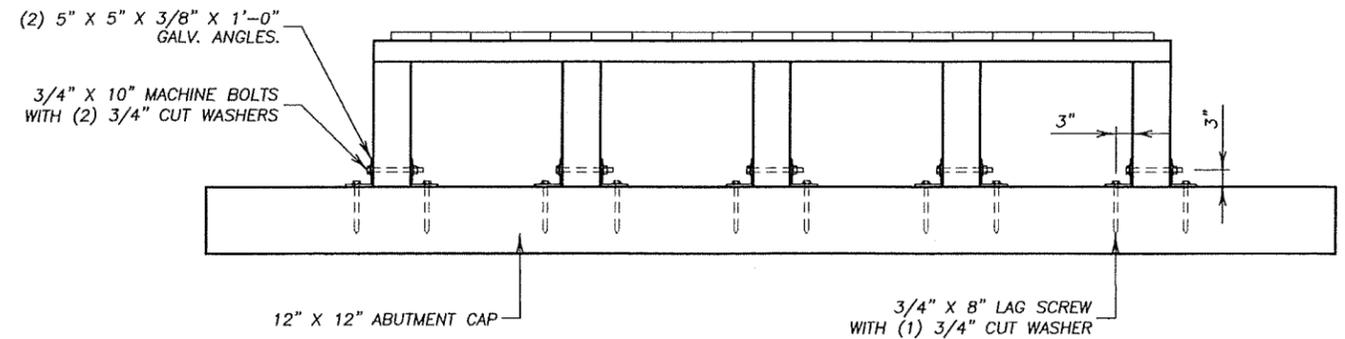


ABUTMENT PLAN & ELEVATION WISCONSIN RIVER SNOWMOBILE BRIDGE - VILAS CO., WI		
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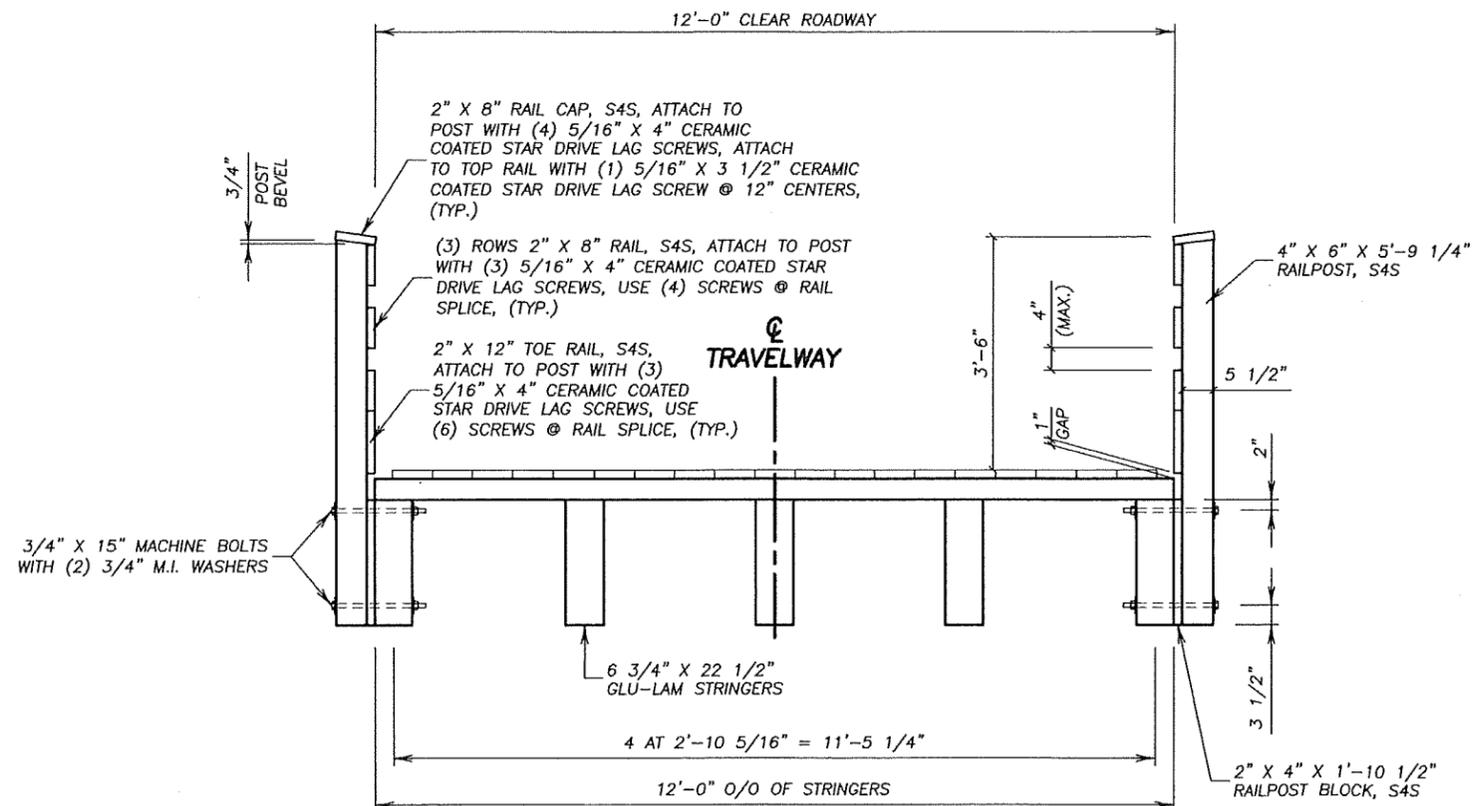
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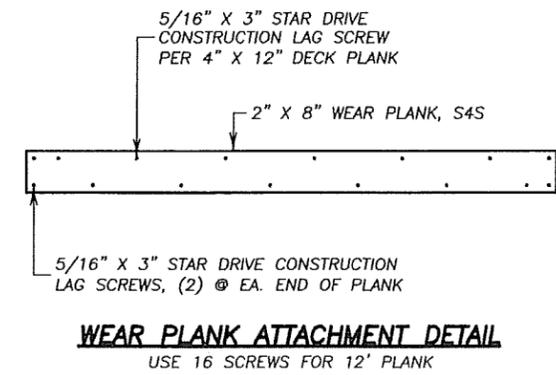
DIAPHRAGM DETAIL



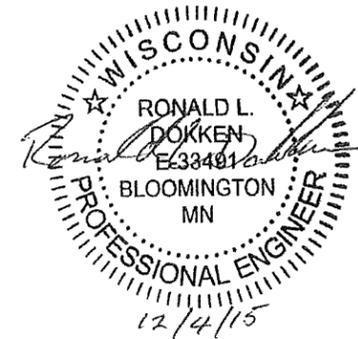
SECTION THRU AT ABUTMENT



SECTION THRU DECK

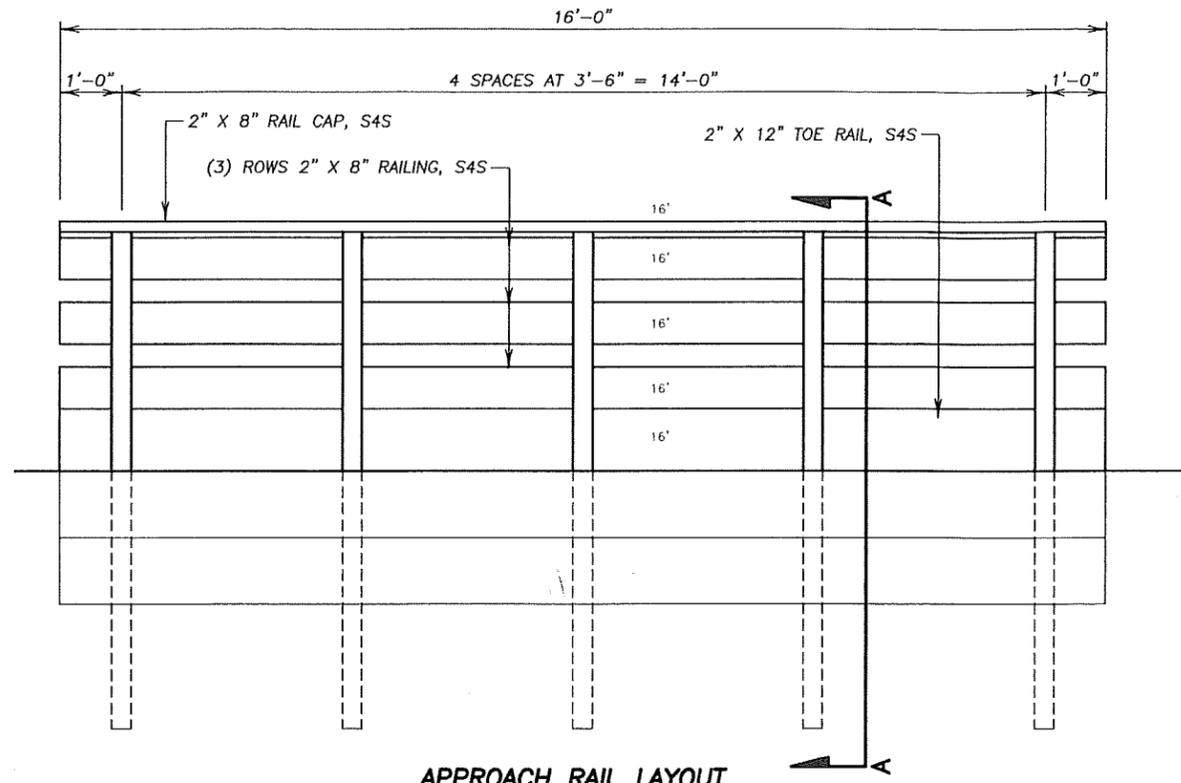


WEAR PLANK ATTACHMENT DETAIL
USE 16 SCREWS FOR 12' PLANK

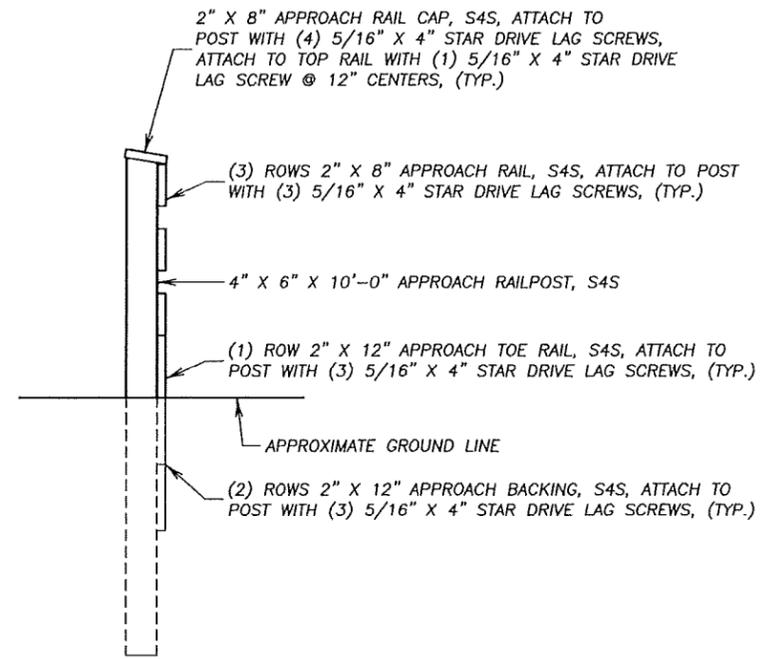


SECTIONS THRU WISCONSIN RIVER SNOWMOBILE BRIDGE - VILAS CO., WI		
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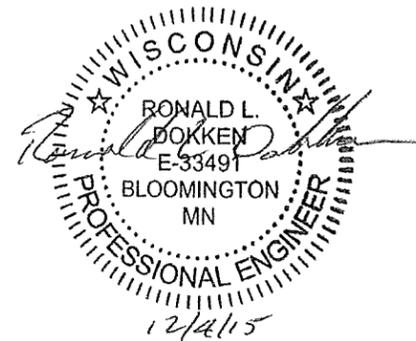
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APPROACH RAIL LAYOUT

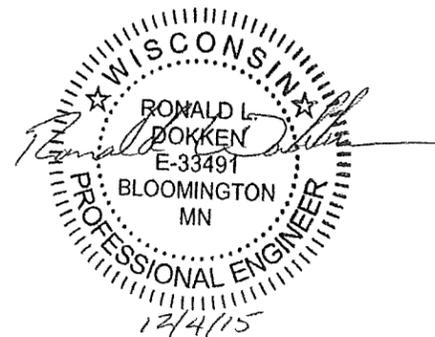
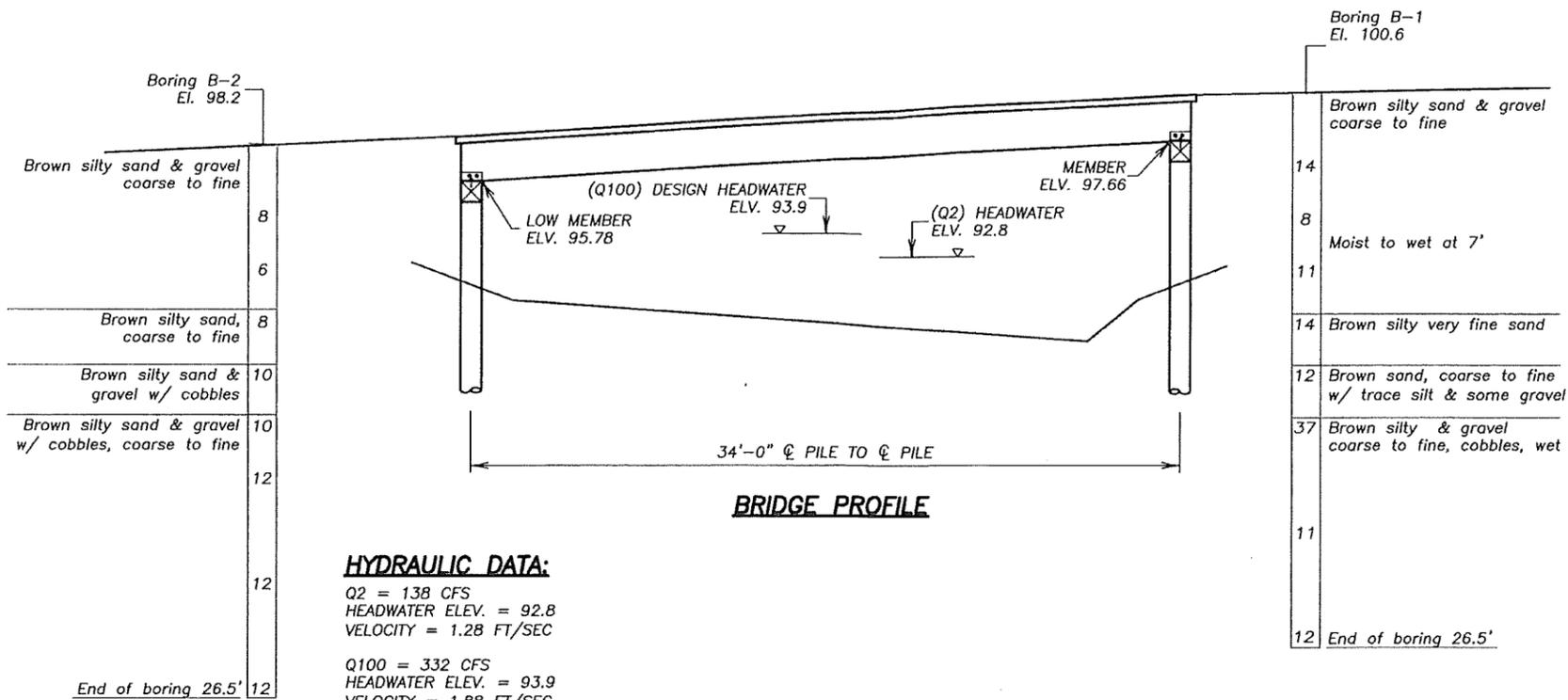


SECTION A-A



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APPROACH RAILING DETAILS WISCONSIN RIVER SNOWMOBILE BRIDGE - VILAS CO., WI		
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BRIDGE PROFILE WISCONSIN RIVER SNOWMOBILE BRIDGE - VILAS CO., WI		
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