THE CITY OF WATERTOWN

SITE PLAN REVIEW COMMITTEE MEETING AGENDA

MONDAY, APRIL 10, 2023 AT 1:30 PM

COUNCIL CHAMBERS, SECOND FLOOR, MUNICIPAL BUILDING, 106 JONES STREET, WATERTOWN, WI

By Phone or GoToMeeting: Members of the media and the public may attend by calling (Toll Free): 1 866 899 4679 Access Code: 550-162-493 or https://meet.goto.com/550162493. All public participants' phones will be muted during the meeting except during the public comment period.

1. **CALL TO ORDER**
2. **APPROVAL OF MINUTES**
   - A. Review and take action: Site Plan Review minutes dated March 27, 2023
3. **BUSINESS**
   - A. Review and take action: 107 S. Fifth Street – request for light industry with retail
   - B. Review and make recommendation: Replacement Airport Perimeter Bridge
4. **ADJOURNMENT**

Persons requiring other reasonable accommodations for any of the above meetings, may contact the office of the City Clerk at mdunneisen@CityofWatertown.org, phone 920-262-4006

A quorum of any City of Watertown Council, Committee, Board, Commission, or other body, may be present at this meeting for observing and gathering of information only

SITE PLAN REVIEW COMMITTEE
March 27, 2023

The Site Plan Review Committee met on the above date at 1:30 P.M. in the Council Chambers on the second floor of City Hall. The following members were present: Brian Zirbes of Building, Safety & Zoning; Jeff Meloy of the Police Department; Tim Hayden of the Water Department; Maureen McBroom of Stormwater Utility and Engineering; Anthony Rauterberg of the Fire Department; and Stacy Winkelman of the Street Department. Mason Becker and Kristine Butteris joined via GotoMeeting. Also in attendance were: Rick and Sara Knutson of Marten Portable Buildings, Steven Anders of Secure Storage, Michael Rogers of KKR Properties, and Nate Peters of the Greater Watertown Community Health Foundation.

1. **Call to Order**
   The meeting was called to order by Chairperson Brian Zirbes.

2. **Review and take action: Site Plan Review Minutes Dated March 13, 2023**
   Motion was made by Anthony Rauterberg and seconded by Stacy Winkelman to approve the March 13, 2023 Site Plan Review minutes as submitted. Unanimously approved.

3. **Review and take action: 1400 W. Main Street – Proposed outside display/sales of portable sheds**
   Rick and Sara Knutson of Marten Portable Buildings were present to explain the proposal. Marten Portable Buildings currently has a display of portable sheds at 1400 W. Main Street with literature available and representatives meet with customers onsite. The area is roughly 200' x 100' with about 25 buildings of various size and style.

   No concerns were presented by city staff.

   With a consensus that there are no concerns on this item at this time, it will be heard before the Plan Commission later this afternoon.

4. **Review and take action: 701 S. Church Street – Proposed outside display/sales of portable sheds**
   Steve Anders representing Secure Storage was present to explain the proposal. The request is to sell prefabricated storage buildings with no more than 30 buildings onsite at a time.

   The following was presented by staff:

   Zoning: There is a requirement to have a 10-foot buffer between the buildings and the travel lanes and parking areas (on both sides of the "L" shaped location. The applicant had stated they would mark the pavement to ensure the buildings will not go into the 10-foot area. Mr. Anders confirmed pavement marking will be completed.

   Police: Asked about cameras due to the extra traffic. The applicant stated there's a camera on the old Pick & Save building and there is another on part of the old Shopko building. There are plans to add 2 additional lights on the building.

   With a consensus that there are no concerns on this item at this time, it will be heard before the Plan Commission later this afternoon.

5. **Review and take action: 760 N. Church Street – Proposed personal storage units**
   Michael Rogers of KKR Properties was present to explain the proposal. They are proposing an inside self-storage facility with 3 feet of Kura Stone brick and the remainder being premium siding on the road-facing side. They would like buildings 1 and 2 up in June or July 2023 with buildings 3 and 4 up in late 2023 or early 2024. The parking/driving area will be recycled asphalt.

   The following was presented by staff:

   Zoning: Sonja Kruesel of Vandewalle & Associates, Inc. sent an email suggesting a brick corner wrapping be completed, consider a gable roof instead of a flat roof, the landscaping on the street side provide a planter area and potentially put some plantings for screening. The photometric foot panel at the property line should be provided. Potentially remove the southern driveway near the railroad tracks and just utilize the northern driveway. There are inconsistencies between the site plan and the landscape plan for the lane widths. It should be 26' wide.

   Building: Permits won't be issued until the erosion control and stormwater permits have been issued.

   Fire: Requested the lengths of the buildings. The north building is 240 feet, then 210 feet, 200 feet, and 190 feet. Every 75 feet an extinguisher is required. The square feet of each building is as follows: north building – 240 x 30 feet = 7,200 square feet, 210 x 40 = 8,400 square feet, 200 x 40 = 8,000 square feet, and 190 x 40 = 7,600 square feet. Any buildings over 5,000 square feet will require sprinkler systems. Anthony Rauterberg will verify. Applicants also asked if cutting off the second driveway would cause issues for the Fire Department. Anthony Rauterberg stated a second driveway would make easier access.

   Streets: The city will not complete garbage pickup for businesses.

Stormwater/Eng: An Erosion Control & Storm Water Runoff Permit is required for 3,000 SF or more [illegible] control; management and disposal (?) of soils in the phase 2 report area of the site addressed through the Erosion Control & Storm Water Runoff Permit application. The consulting engineer should be able to include that with the permit application. A wetland delineation may be needed as well. Post-construction stormwater management required for ½ acre or more of impervious area; this project will require that. If any changes are made to the driveways such as widening them or relocating them, please circle back with the Engineering Division to discuss the driveway requirements.

Motion was made by Maureen McBroom and seconded by Tim Hayden to approve this item with the following conditions:

A) Erosion Control & Stormwater Permit approval
B) Sprinkler clarification

6. Review and take action: 672 Johnson Street – Group Daycare

Nate Peters of the Greater Watertown Community Health Foundation was present to explain the proposal. The request is to put a Group Daycare at this location for up to about 120 kids. A small commercial kitchen would be implemented for lunches. There will be 1 parking spot for every 5 children and 1 parking spot for every full-time staff member. The total parking spaces would be 80 stalls.

The following was presented by staff:

Stormwater/Eng: A permit has already been issued for this site. If there are any changed beyond the original plans, please send the updated plans for review.

7. Review and take action: 672 Johnson Street – YMCA

Nate Peters of the Greater Watertown Community Health Foundation was present to explain the proposal. The 24/7 YMCA Express would be a roughly 8,500 square foot area staffed from 5 a.m. – 9 p.m. The maximum capacity would be 126 people. There will be 1 parking stall for every 3 lockers.

8. **Adjournment**

Motion was made and seconded to adjourn. Unanimously approved.

Respectfully submitted,
Nikki Zimmerman, Recording Secretary

NOTE: These minutes are uncorrected, and any corrections made thereto will be noted in the proceedings at which these minutes are approved.

WATERTOWN PLANNING COMMISSION APPLICATION
MARCH 27, 2023

107 S. FIFTH STREET

WATERTOWN, WI 53094

920.248.2868

STEVEN H. HILL

Find us on Facebook - That Guy Fabrication

Site: 107 S. 5th Street Watertown, WI 53094

Proposed "That Guy Fabrication" Retail Space

Proposed Light Industrial Support for Retail Space

STORE FRONT DISPLAY

EXECUTIVE SUMMARY

That Guy Fabrication, LLC is a welding and fabrication business with expertise in the production of a variety of artistic products.

These include almost anything made of metal i.e. wall hangings to railings. This business relies heavily on innovation.

We've got loads of it and seek to even exceed our client's expectations.

PRODUCTS AND SERVICES

At That Guy Fabrication, LLC, our products consist of various metal works. We specialize in creativity.

Such products include household items to exterior needs. These are carefully fabricated to achieve durability in addition to providing aesthetic value.

Our fabrication and welding workshop is located in Watertown, Wisconsin. In recent years, there has been an increasing demand for the services of artistic retail welding businesses.

Our foray into this line of business was in response to the growing need for our services. We will bring our skill and depth in the welding and fabrication industry to bear on the type of products we churn out.

VISION STATEMENT

We are set to establish a well-equipped and safely run welding business.

This will compete favorably with bigger welding businesses. While producing quality products and services, we seek to break into Wisconsin's top tier of welding and fabrication businesses.

MISSION STATEMENT

We have a singular mission of building reputable and well-respected welding and fabrication brand. This will be achieved through attention to detail on every job we handle.

Our purpose is not only to provide satisfactory services but even exceed our client's expectations.

FINANCING

Self financed.

STRENGTH

As a new welding and fabrication business, our strength comes from our skilled work-force.

Our 1-man team of fabricators has worked with major companies where they have gained considerable experience. My experience and expertise will count in helping us achieve our goals.

WEAKNESS

Our weakness is that most welding and fabrication businesses have trouble with marketing.

Sharing retail space with the established Watertown business Budget Print will help us get the word out of our product offerings.

We will also create a strong presence on all social media platforms.

However, we are not letting down using our wide contacts to win patronage.

OPPORTUNITIES

Although it may be initially challenging to land a client, we are confident that a single job will draw attention to us. This is an opportunity we hope to exploit right from our first client. They say a good job advertises itself.

We are prepared to make this happen by providing exceptional welding and fabrication services.

SALES PROJECTION

Initially, getting patronage may be slow, but this is expected to pick up fast after satisfying a few clients.

- First Financial Year $30,000.00
- Second Financial Year $40,000.00
- Third Financial Year $45,000.00

COMPETITIVE ADVANTAGE

As a welding and fabrication business and being well-motivated, we are expected to become the preferred destination for clients. The qualities of our products speak volumes.

Our finishing will be second to none and the high point of our business appeal.

MARKETING STRATEGIES

Only marketing strategies that are result oriented will be applied.

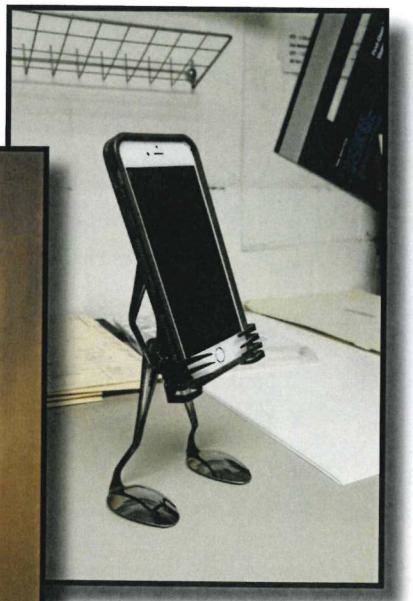
By coordinating all our activities, our marketing department will be very involved in its design and implementation. Our primary targets are home owners who crave one of a kind creativity.

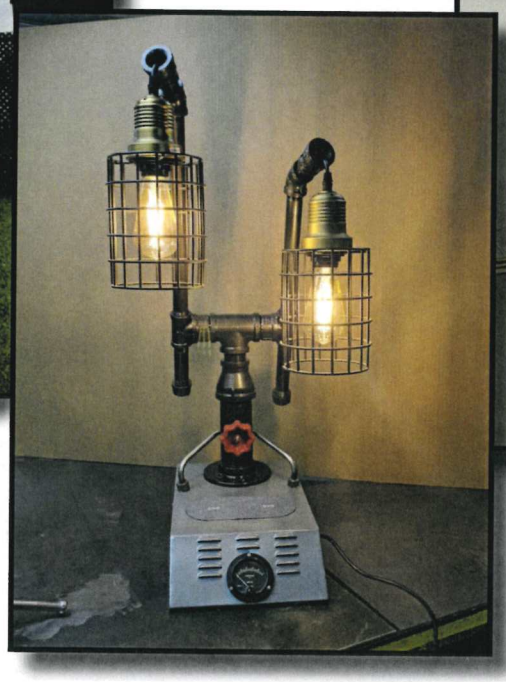
These would be persuaded to give us a try. To win their approval, we will offer some free services to them. The aim is to make them experience our quality and attention to detail.

PAYMENT OPTIONS

We will make use of multiple payment options.

We aim to allow our clients to use their most convenient payment platform. We will accept several options from cash, checks, credit cards, and electronic banking, among others.





AGREEMENT BETWEEN
JEFFERSON COUNTY
and
THE JEFFERSON COUNTY SNOWMOBILE ALLIANCE
and
THE WATERTOWN SNOWMOBILE ASSOCIATION
and
THE CITY OF WATERTOWN

This agreement is entered into by and between JEFFERSON COUNTY, a municipal corporation, through the Jefferson County Parks Department (hereinafter "the County"), the JEFFERSON COUNTY SNOWMOBILE ALLIANCE (hereinafter "the Alliance"), the WATERTOWN SNOWMOBILE ASSOCIATION (hereinafter "the Association"), and THE CITY OF WATERTOWN (hereinafter "Landowners" or "City").

WHEREAS, the County has applied for and received an Outdoor Recreation Aids Grant and entered into an agreement with the State of Wisconsin Department of Natural Resources to purchase and construct a replacement bridge on property owned by the CITY OF WATERTOWN located east of HWY 26, north of Airport Drive, south of Jefferson Road, and west of the Watertown Municipal Airport, in Jefferson County Wisconsin, and

WHEREAS, the replacement bridge will serve as and be maintained as part of the Jefferson County snowmobile trail system and be constructed on City property for use by the general public, and

WHEREAS, this bridge project has been designated as the Jefferson County Trail 16 Airport bridge replacement with an approximate location of 43.165963771 – 88.733557842, and

WHEREAS, the bridge will be a wood fabricated bridge with Jefferson County being the sole owner of the bridge.

NOW, THEREFORE, in consideration of the terms and conditions contained herein, the parties agree to the following:

1. That they have received, read, and understand the Outdoor Recreation Aids Grant Agreement, and agree to be bound by the conditions set forth therein, which is attached hereto and incorporated herein by reference.

2. That the Jefferson County Snowmobile Alliance and its agents, officers and employees, including, but not limited to, the WATERTOWN SNOWMOBILE ASSOCIATION shall be solely responsible for maintaining the bridge to ensure that it is in good working order at all times and will hold the Landowner and County harmless, defend and indemnify the Landowner and County and all of their employees, officers and agents, against any and all liability claims, costs of whatever kind and nature, for injury to or death of any person or persons, and for loss or damage to any property occurring in connection with or in any way incident to or arising out of the performance of this agreement due to the negligence or omissions of the Jefferson County Snowmobile Alliance or its agents, officers and employees, or the negligence of the WATERTOWN SNOWMOBILE ASSOCIATION's employees, agents, officers, elected officials, or representatives.

3. That the current Landowner, including any successor landowner, of the land upon which the bridge described herein is or will be located, hereby recognizes Jefferson County as the sole owner of such bridge. If Landowner, or its successors in interest, either withdraws permission for such bridge to remain on the property or the bridge is used in a manner inconsistent with the type of use for which the grant was awarded, Landowner hereby grants County permission to immediately enter upon the property and remove the bridge.

4. That all of the terms and conditions set forth in the existing Snowmobile Trail Maintenance and Grooming Services Contract which are attached to this Agreement and shall be incorporated into this Agreement by reference. If there are any terms and conditions that are inconsistent, the terms and conditions set forth in the Snowmobile Trail Maintenance and Grooming Services Contract shall control.

_____
JCSA President

_____
JCSA Trail Coordinator

_____
Watertown Snowmobile Association

_____
Watertown Snowmobile Association
Trail Representative

_____
Jefferson County

_____
City of Watertown
Landowner/Agent

SNOWMOBILE TRAIL MAINTENANCE AND GROOMING SERVICES CONTRACT

2022-2023 SNOWMOBILE YEAR

This Contract is entered into by Jefferson County, WI, (the County) a quasi-municipal corporation, and the Jefferson County Snowmobile Alliance, Inc., (the Contractor) a Wisconsin Non-Stock Corporation. In consideration of their mutual promises, the County grants to the Contractor the right to groom and maintain the trails shown on the attached map (the trails) for snowmobile purposes.

1. This Contract shall commence on the 1st day of December, 2022 and shall terminate on the 30th day of November, 2023.

2. The Contractor will provide all labor and equipment to groom and maintain the trails.

3. The Contractor shall be reimbursed for grooming and maintaining at the rates established in Exhibit A that is attached and made part of this contract. The total reimbursement to the Contractor shall not exceed $300.00 per mile. Time shall be estimated and prorated to the nearest ¼ hour. Payment will be conditioned on the determination by the County that the trails are being satisfactorily groomed and maintained. The Contractor may submit monthly bills to the County for payment. These bills should be directed to the attention of Mary Truman, Jefferson County Parks Department.

4. All disputes regarding quality and quantity arising from the operation of this contract shall be settled by arbitration in accordance with Chapter 788, Wisconsin Statutes.

5. Ideally, the trails will be groomed immediately after each snowfall. Assuming adequate snow conditions, trail grooming shall be done at least once a week or more on an as need basis to keep the trails in good snowmobiling condition unless otherwise specified by the County. The County may specify the times and frequency of grooming and manpower to be used in the grooming process. If directed to do so by the County, the Contractor shall groom the trails within twelve (12) hours of notification.

6. The County shall determine if the trails are open or closed to snowmobiling. This determination shall be made following consultation with Contractor. Any grooming by Contractor during trail closure shall be preapproved by County.

7. The Contractor will groom on the established portion of the trails. The minimum groomed width will be eight (8) feet for a two-way trail.

8. While grooming the trails, the Contractor will have grooming equipment clearly marked with "slow moving vehicle" signs to safeguard other trail users. The Contractor will attach a blinking light on the top of the tractor vehicle used during grooming and will have the headlights, taillights and blinking lights on and working at all times.

9. Equipment and Labor. Contractor agrees to furnish all equipment, tools and labor necessary to maintain and perform the work contracted for under this contract.

10. Signs, Posts and Blazers. Contractor agrees to ensure that all signs, posts and trailblazers are ordered; properly installed in fall and taken down, inventoried and stored in spring.

11. Fall Maintenance. Contractor agrees to perform all necessary trail grooming which includes, but is not limited to, brushing, dragging, mulching and litter removal necessary to prepare the trails for use.

12. Fences and Gates. Contractor agrees to properly cut fences in the fall and restring them in the spring. If gates are required, Contractor will ensure that they are installed.

13. Spring Maintenance. Contractor agrees to remove all signs as necessary, close all gates and fences, and remove all litter at the close of the season.

14. Necessary Structures. Contractor agrees to inform any landowner of any culvert, bridge or other structure to be installed and agrees to be present during the placement, installation and/or construction of any culvert, bridge or other structure.

15. The Contractor will indicate it is an independent contractor, and not an employee or agent of the County, by lettering the Contractor's name on both sides of the trail grooming equipment.

16. The Contractor will not erect any signs or other devices on the trails except those described herein unless authorized in writing by the County.

17. The Contractor will pick up any litter on the trails each time the trails are groomed.

18. The Contractor will comply with all applicable Wisconsin Statutes and the Wisconsin Administrative Code in fulfilling the requirements of this Contract.

19. The Contractor is an independent contractor and not an employee or agent of the County, and the Contractor assumes full responsibility for any liability that may arise out of its operation under this Contract.

20. The Contractor agrees to protect, indemnify and hold harmless the County and its employees from and against any and all claims, causes of action, damages, demands,

costs, expenses and liability due to any loss or damage to any property or bodily injury to any person, including death, as a result of any act or omission of the Contractor, its officers, members, employees, agents, representatives, directors or servants in connection with the operation of this contract.

In case any action or proceeding is brought against the County by reason of any such cause of action or claim, the Contractor upon notice from the County will defend the County by retaining legal counsel reasonably satisfactory to the County.

21. The Contractor shall provide the County with a certificate of insurance indicating that Workers Compensation Insurance coverage is provided for its officers, members, employees, agents, representatives, directors or servants in connection with performing services under or related to this contract, in compliance with Chapter 102, Wisconsin Statutes. The policy shall require that notice of cancellation be sent immediately to the County.

    This Contract is conditioned upon the County's approval of the workers compensation insurance certificate.

22. The Contractor shall provide general liability insurance including blanket contractual liability insurance for bodily injury including death and property damage in the amount of $1,000,000 per occurrence with a $3,000,000 annual aggregate, to be effective as of the date of this Contract. The Contractor shall furnish the County with a certificate of insurance showing that the insurance is provided during the period of this Contract and that notice of any cancellation is sent immediately to the County. This Contract is conditioned upon the County's approval of the general liability insurance policy. The insurance policy shall name Jefferson County, its agents, officials and employees, as additional named insureds.

23. The Contractor will not assign, subcontract or transfer this Contract to any other person or organization without the prior written approval of the County.

24. In connection with the performance of work under this Contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in 51.01 (5) Wisconsin Statutes, national origin or because of membership in any other class protected under Federal, State or Local law. This provision shall include, but not be limited to the following: employment, promotion, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation and selection for training including apprenticeship. The Contractor further agrees to take affirmative action to ensure equal employment

opportunities. The Contractor agrees to post in conspicuous places available for employees and applicants for employment notices that set forth the provisions of this nondiscrimination clause.

25. The County reserves the right to terminate this Contract upon seven (7) days' notice to the Contractor if the County determines that the Contractor's operation is unsatisfactory in any respect or if the County determines that the Contractor has failed, neglected or refused to comply with this contract.

26. Upon discovery, the Contractor shall immediately notify the County of any and all unsafe conditions existing on the trail.

27. For all property used as part of the Jefferson County snowmobile trail system, Contractor shall submit an affidavit to Jefferson County, sworn and notarized, that Contractor has received permission from all landowners to use their property as part of the Jefferson County trail system and that a Certification of Snowmobile Trail Verbal Easements, Leases, or Permits Form 8700-094 has been provided to the county for all such landowners. Failure to obtain the permission of all landowners as required under this paragraph will result in the closure of all sections of trail for which permission has not been granted for use as part of the Jefferson County snowmobile trail system.

28. Upon termination of this Contract at the end of the contract term, the County may grant to the Contractor the first right to renew this Contract for an additional one (1) year.

In witness whereof, the County of Jefferson has caused this Contract to be signed at Jefferson, Wisconsin.

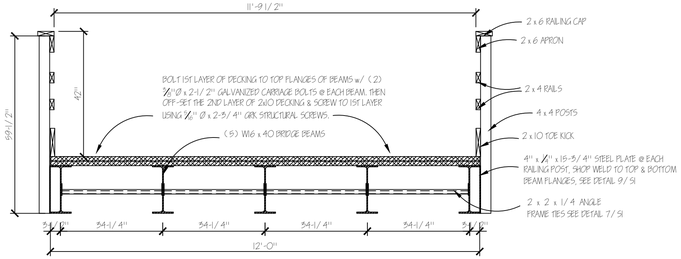
Date: 12-7-22 By: _____

Benjamin Wehmeier
Jefferson County Administrator

In witness whereof, Jefferson County Snowmobile Alliance, Inc. has caused this Contract to be signed at Jefferson County, Wisconsin.

Date: 10-24-22 By Authorized Agent: _____

(print name): Larry Chvala
Jefferson County Snowmobile Alliance, Inc.
President

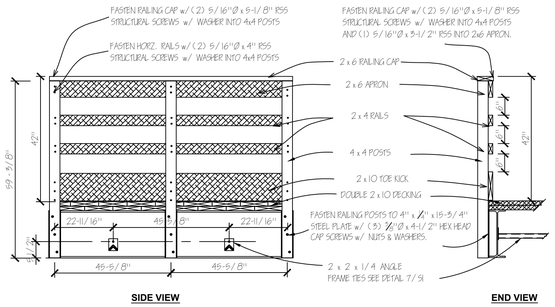


3 S1 **BRIDGE CROSS SECTION**

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

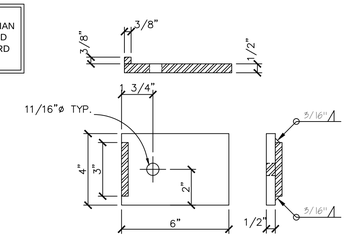
NOTE:
RAILING DESIGNED FOR PEDESTRIAN TRAFFIC ONLY, IT IS NOT INTENDED OR DESIGNED AS A VEHICLE GUARD RAILING.

NOTES:
1. FINAL BRIDGE CENTERLINE LOCATION & FOUNDATION ELEVATIONS ARE TO BE LOCATED BY OTHERS AND VERIFIED IN THE FIELD WITH JEFFERSON COUNTY PRIOR TO STARTING BRIDGE ERECTION.
2. THE CONTRACTOR SHALL PROVIDE 10' WIDE FILTER FABRIC & STONE RIP-RAP BANK PROTECTION @ SIDES & FRONT OF ABUTMENTS PER WIS. DOT SPECIFICATIONS SECTION 606 OR AS APPROVED BY JEFFERSON COUNTY.
3. ALL ASPECTS OF CONSTRUCTION FOR THIS BRIDGE SHALL MEET THE WISCONSIN DNR REQUIREMENTS FOR STRUCTURES IN A FLOOD WAY. THE BRIDGE ELEVATION SHALL BE SET FOR A MINIMUM CLEARANCE OF 5'-0" ABOVE THE ORDINARY HIGH WATER MARK, OR 1'-0" ABOVE THE 100 YEAR FLOOD ELEVATION, OR AS DIRECTED BY JEFFERSON COUNTY TO COMPLY WITH WISCONSIN DNR REQUIREMENTS.



4 S1 **RAILING ELEVATION & SECTION**

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



8 S1 **BEAM CLAMP**

SCALE: 3" = 1'-0"

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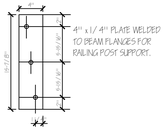

9 S1 **HANDRAIL POST PLATES**

SCALE: 1" = 1'-0"

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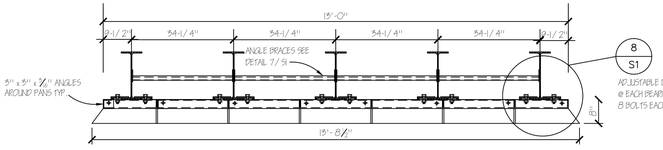
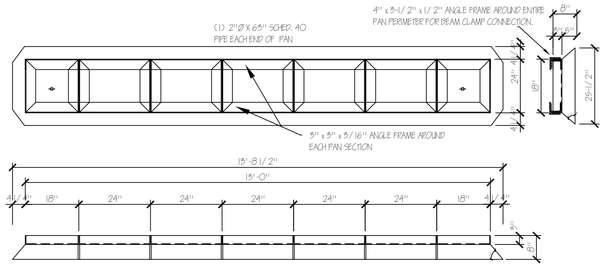


5 S1 **24" BEARING PAN END VIEW**

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

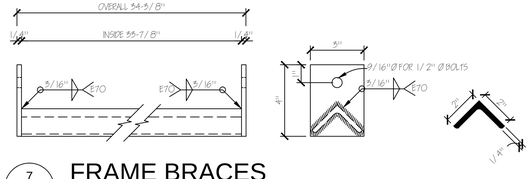
GALVANIZED METAL BEARING PANS COVERED BY U.S. PATENT #6,421,863



6 S1 **24" BEARING PAN**

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

GALVANIZED METAL BEARING PANS COVERED BY U.S. PATENT #6,421,863



7 S1 **FRAME BRACES**

SCALE: 3"=1'-0"

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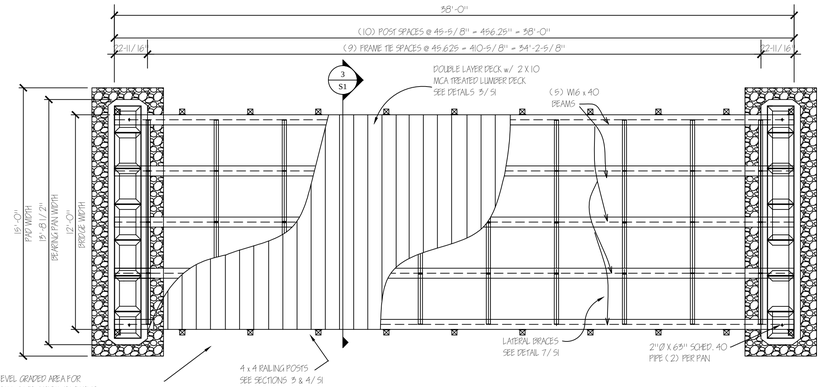
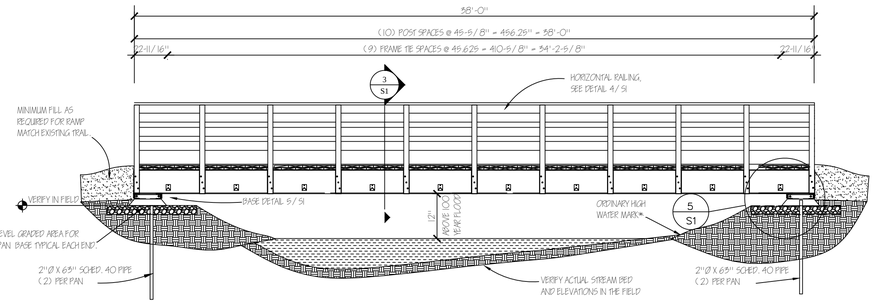


1 S1 **PLAN VIEW**

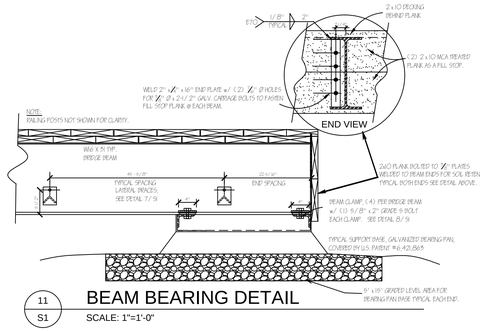
SCALE: 1/4" = 1'-0"



2 S1 **ELEVATION**

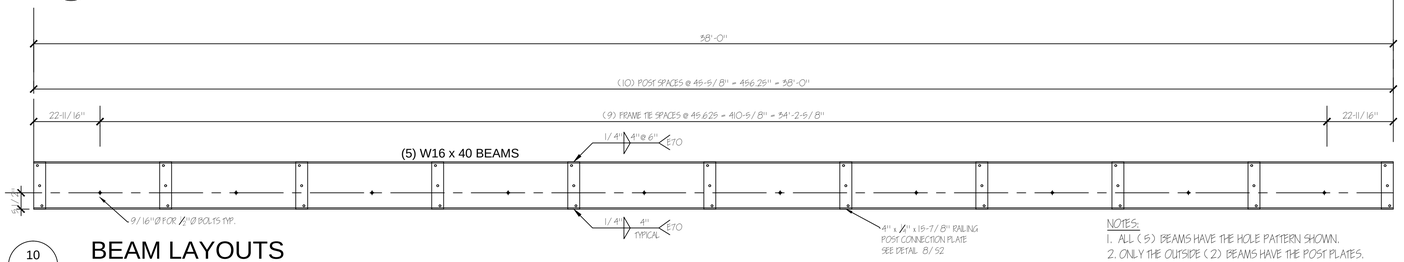
SCALE: 1/4" = 1'-0"

*ORDINARY HIGH-WATER MARK:-
THE ORDINARY HIGH-WATER MARK IS THE POINT ON THE BANK OR SHORE UP TO WHICH THE PRESENCE AND ACTION OF THE WATER IS SO CONTINUOUS AS TO LEAVE A DISTINCT MARK EITHER BY EROSION, DESTRUCTION OF TERRESTRIAL (LAND) VEGETATION, OR OTHER EASILY RECOGNIZED CHARACTERISTIC.



11 S1 **BEAM BEARING DETAIL**

SCALE: 1"=1'-0"



10 S1 **BEAM LAYOUTS**

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

NOTES:
1. ALL (5) BEAMS HAVE THE HOLE PATTERN SHOWN.
2. ONLY THE OUTSIDE (2) BEAMS HAVE THE POST PLATES. (1) AS SHOWN AND (1) OPPOSITE HAND.
3. END POST PLATES FLUSH w/ END OF BEAM.

NO.	DESCRIPTION	DATE	BY
01	FOR FABRICATORS REVIEW OF RAILING & FRAME TIE LAYOUT.	12/02/22	JFH
02	FOR FABRICATION & CONSTRUCTION	12/02/22	JFH

NOTES

GENERAL NOTES:

1. THIS BRIDGE IS DESIGNED ON THE BASIS OF THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES' *BRIDGE GUIDELINES FOR NEW AND REPLACEMENT SNOWMOBILE AND ALL-TERRAIN VEHICLE BRIDGES*, PUBLICATION PUB-CF-005 DATED 2014, WITH THE FOLLOWING:

DESIGN LOADS:

DEAD LOAD ON DECKING	=	8.9 PSF
DEAD LOAD SUPPORTED BY BRIDGE	=	24.2 PSF
LIVE LOAD #1 ON ENTIRE DECK	=	60.0 PSF
LIVE LOAD #2 ON ENTIRE DECK	=	30.0 PSF
SNOW LOAD	=	50.0 PSF
WIND LOAD	=	90.0 MPH
VEHICLE LOAD	=	25,000.0 LBS

LOAD COMBINATIONS:
LC#1 = DL + .80 (LL#1 + SL)
LC#2 = DL + .75 (LL#2 + SL + VL)

2. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCION MEANS OR METHODS OR FOR SUPERVISION OF CONSTRUCTION.

3. ALL DIMENSIONS ARE TO BE CROSS CHECKED WITH EXISTING FIELD DIMENSIONS AND APPROVED SHOP DRAWINGS FOR THE VARIOUS MATERIALS AND BUILDING COMPONENTS. ALL DIMENSIONAL DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

4. ALL WORK IS TO BE PERFORMED IN A SAFE AND WORKMAN LIKE MANNER IN COMPLIANCE WITH THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND ALL STATE OF WISCONSIN AND JEFFERSON COUNTY, WI BUILDING CODES AND ZONING ORDINANCES AS THEY MAY PERTAIN TO THIS PROJECT.

SITE WORK:

1. THE CONTRACTOR IS TO VERIFY ALL CONDITIONS AT THE SITE, PARTICULARLY THE LOCATION OF ANY UNDERGROUND UTILITIES BEFORE EXCAVATION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

2. THE FOUNDATION DESIGN IS BASED UPON AN ASSUMED NET SOIL BEARING CAPACITY OF 1,800 PSF.

3. THE BEARING ELEVATION OF THE BRIDGE SHALL BE SET BY THE BRIDGE OWNER AT AN ELEVATION SUCH THAT THE MINIMUM BOTTOM CHORD ELEVATION OF THE BRIDGE SHALL BE AT LEAST 5.0' ABOVE ORDINARY HIGH WATER MARK, OR AS DETERMINED BY JEFFERSON COUNTY DEPARTMENT OF PUBLIC WORKS OR THE WISCONSIN DNR.

STRUCTURAL STEEL:

1. ALL STRUCTURAL STEEL USED IN THE FABRICATION AND ERECTION OF THIS BRIDGE SHALL MEET ASTM A572/A992 GRADE 50 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 PSI.

2. FASTENERS USED IN THE FABRICATION AND ERECTION OF THIS BRIDGE SHALL MEET THE REQUIREMENTS OF THE FOLLOWING SPECIFICATIONS: SAE J429 GRADE 5, SAE J429-GRADE 8 AND ASTM A307-A FOR THEIR RESPECTIVE USES. FASTENERS AND CONNECTORS IN CONTACT WITH TREATED LUMBER SHALL BE HOT-DIP GALVANIZED. DECK SCREWS SHALL BE EVERCOTE #8 x 3" DECK MATE SQUARE DRIVE BY PHILLIPS FASTENER PRODUCTS CO.

3. WELDING, WHEN REQUIRED, SHALL MEET THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE.

4. ALL STRUCTURAL STEEL SHALL BE PRIME PAINTED AFTER FABRICATION WITH A MINIMUM THICKNESS OF 1.4 MIL. OF SHERWIN WILLIAMS TT-P-664 RUST INHIBITING AND LACQUER RESISTANT PRIMER.

5. ALL STRUCTURAL STEEL SHALL BE FINISHED PAINTED AFTER FABRICATION, BUT PRIOR TO ASSEMBLY, WITH TWO (2) COATS OF SHERWIN WILLIAMS INDUSTRIAL ENAMEL VOC-COMPLYING OIL BASED ENAMEL PAINT IN A GLOSS FINISH. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR SURFACE PREPARATION, PRIME PAINTING AND FINISH PAINTING. COLOR TO BE SELECTED BY THE OWNER FROM MANUFACTURER'S STANDARD COLOR CHARTS.

DIMENSION LUMBER:

1. ALL STRUCTURAL DIMENSION LUMBER INSTALLED IN THIS PROJECT SHALL MEET THE REQUIREMENTS OF THE *2001 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (2001 NDS)* AND SHALL BE STAMPED WITH A MINIMUM EQUIVALENT GRADE OF 2400 MSR 2.0E06, SOUTHERN PINE OR SPRUCE-PINE-FIR SPECIES.

2. ALL WOOD USED IN THIS BRIDGE SHALL BE MICRONIZED COPPER AZOLE (MCA) PRESERVATIVE TREATED TO A MINIMUM RETENTION OF 0.06 POUNDS PER CUBIC FOOT FOR ABOVE GROUND LUMBER AND 0.16 POUNDS PER CUBIC FOOT FOR LUMBER IN GROUND CONTACT, PER THE CHEMICAL MANUFACTURER'S INSTRUCTIONS.

3. THE MOISTURE CONTENT OF ALL STRUCTURAL FRAMING LUMBER, PLYWOOD AND FABRICATED WOOD PRODUCTS SHALL NOT EXCEED 19% AT THE TIME OF INSTALLATION. JOBSITE STORAGE OF ALL WOOD PRODUCTS SHALL PROTECT WOOD MATERIALS FROM DAMAGE DUE TO THE ELEMENTS. NO WARPED LUMBER SHALL BE USED IN THE CONSTRUCTION OF THE BRIDGE.

4. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING DURING HANDLING AND ERECTION OF THE BRIDGE.

5. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ALL FINAL BRACING, AS SHOWN ON THE SHOP DRAWINGS.

Trail Bridges
Steel Fabricating & Finishing
606 Deco Drive
P.O. Box 279
Clinton, Wisconsin 53525
Phone= 608-676-2282
Fax= 608-676-2283

PROJECT:
38' x 12' SNOWMOBILE BRIDGE #857
JEFFERSON COUNTY, WI

CLIENT:
CUSTOM MANUFACTURING INC.

JAMES F. HEIDT, PE, LLC
CIVIL & STRUCTURAL ENGINEERING
2543 LAUNDALE DR., BELOIT, WISCONSIN 53511
PHONE: 608-365-9757 CELL: 608-931-7184 FAX: 608-365-9761 E-MAIL: JHEIDT2543@AOL.COM

DRAWN: JFH
DATE: 12/01/22
SCALE: AS SHOWN
JOB NO. 22-129
SHEET NO. S1

SEAL: JAMES F. HEIDT, PE
WI. REG.: 15489
EXP. DATE: 07/31/2024

Custom Manufacturing, Inc.
606 Delco Drive, P.O. Box 279
Clinton, WI 53525
608-676-2282 Fax: 608-676-2283
tinat@custommfginc.com

Quotation

6099

Please Indicate The Above Number When Ordering

Date: June 6, 2022	Salesperson: Tina Forrest
Inquiry Date:	Inquiry Number

To: Jefferson County Parks Department
311 S. Center Avenue, Room 204
Jefferson, WI 53549

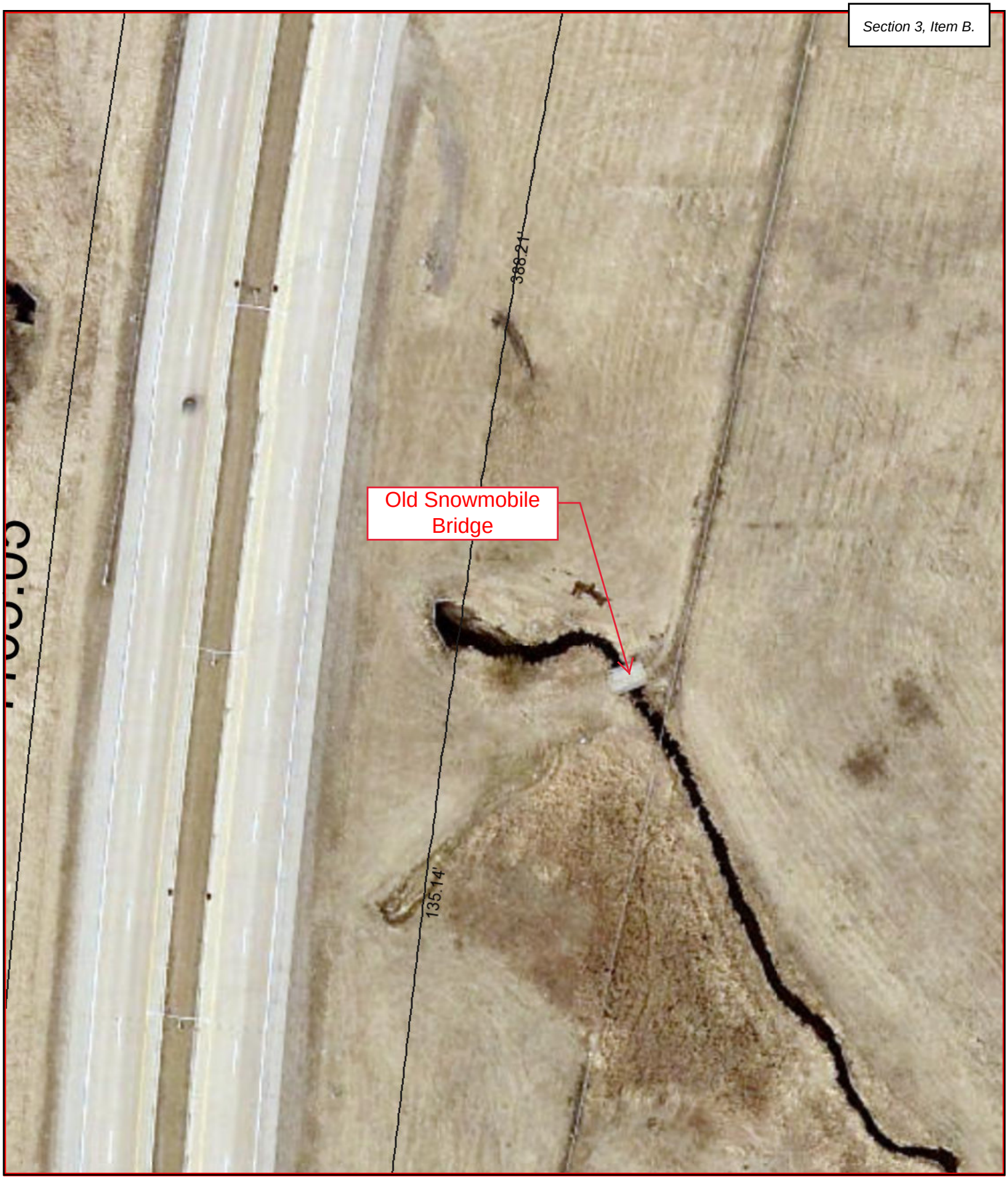
Estimated Ship Date	Shipped VIA	F.O.B	Terms
8 - 12 weeks	Best way	Clinton, WI	Net 30

	Description	Price	Total
	Watertown Bridge		
1	38’ Flat Bridge x 12’ Wide - 25,000# Load Double Decked - 42” Horizontal Railing Hardware - On 2 sets of Galvanized Sill Pans Stamped Engineered Drawings	$37,500.00	
	Installation – Equipment Rental	5,400.00	
	Delivery Charges	600.00	
	Total		$43,500.00
	Above prices do not include utility markings, sales tax, or any necessary permits		
	Bridge kit includes all Steel I-Beams and Crossmembers, which are predrilled and have a red oxide primer finish, MCA Southern Yellow Pine treated lumber and all hardware. All lumber is Pre Stained.		
	Bridge Kit Meets - WI DNR Guidelines – 25,000# Load		

We are pleased to submit the above quotation for your consideration. Should you place an order, be assured it will receive our prompt attention. This quotation is valid for __30_ days. Thereafter it is subject to change without notice.

BY: Tina Forrest ACCEPTED: _____ DATE: _____

Old Snowmobile Bridge Location



Parcels

N

THE CITY OF WATERTOWN
Opportunity runs through it.

City of Watertown Geographic Information System

Scale: 1 inch = 55 feet

Printed on: March 29

Author: Private Use

SCALE BAR = 1"

DISCLAIMER: This map is not a substitute for an actual field survey or onsite investigation. The accuracy of this map is limited to the quality of the records from which it was assembled. Other inherent inaccuracies occur during the compilation process. City of Watertown makes no warranty whatsoever concerning this information.

JAMES F. HEIDT, PE, LLC
CIVIL & STRUCTURAL ENGINEERING
2543 LAUNDALE DR., BELOIT, WISCONSIN 53511
PHONE 608-365-9750 CELL 608-931-7184 FAX 608-365-0751 E-MAIL JHEIDT2543@AOL.COM

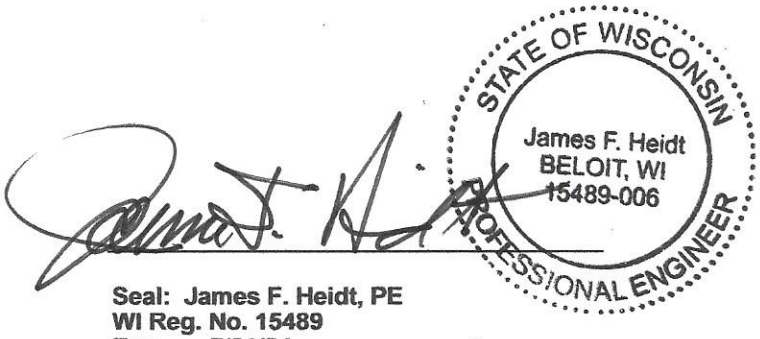
STRUCTURAL CALCULATIONS

38' x 12' Flat Snowmobile Bridge #857

Watertown, Jefferson County, Wisconsin

Fabricator

Custom Manufacturing, Inc.
606 Delco Drive, P.O. Box 279
Clinton, Wisconsin 53525



Seal: James F. Heidt, PE
WI Reg. No. 15489
Exp. 7/31/24

Project No. **22-129**

Pages: 11

JAMES F. HEIDT, PE, LLC
CIVIL & STRUCTURAL ENGINEERING
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PHONE 608-365-9750 CELL 608-931-7184 FAX 608-365-0751 E-MAIL JHEIDT2543@AOL.COM

TRAIL BRIDGE - Dead Loading C[illegible]

Project: 38' x 12' Flat Snowmobile Bridge #857
Watertown
Jefferson County, Wisconsin
Client: Custom Manufacturing, Inc.
606 Delco Drive, Clinton, WI

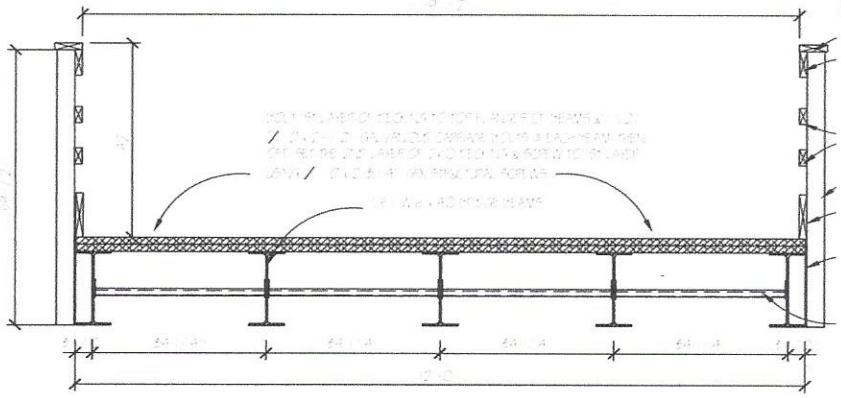
By: JFH
Date: 12/1/22
REV.
Job No. 22-129
Page: 2

Main Span Length (ft) 38 ✓ Width (ft) 12

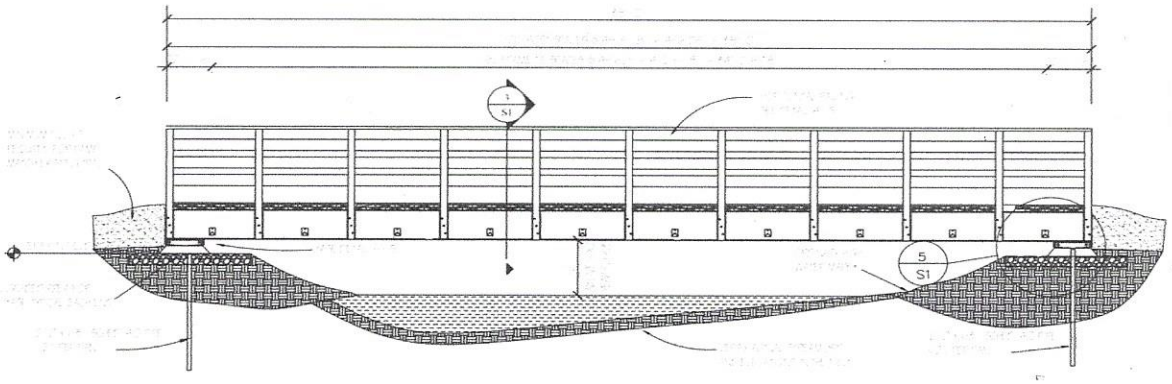
Member		(in)	Length (ft)	Width (ft)	Area (sf)	Number (ea)	Unit Wt. (plf)	Length (ft)	Total Wt. (lbs)
Railing - Posts 4x4		59.50	4.96			22	3.40	109.08	371
Railing - Posts 6x6			5.00			0	8.40	0.00	0
Railing - Toe Kick 2x8			38.00			0	3.02	0.00	0
Railing - Toe Kick 2x10			38.00			2	3.85	76.00	293
Railing - Horz. Rails 2x4			38.00			4	1.46	152.00	222
Railing - Horz. Rails 2x6			38.00			2	2.29	76.00	174
Railing - Horz. Rails 2x8			38.00			0	3.85	0.00	0
Railing - Cap Plate 2x6			38.00			2	2.29	76.00	174
Railing - Spindals 1-1/2 x 1-1/2			38.00			0	0.73	3.38	0
Railing - Cross Bucks 2x6			38.00			0	2.29	0.00	0
Wood Deck - 2x10 Plank		(2) Layers	38.00	12	456	2	3.85	1.00	3,511
Wd Wearing Deck 1x3 RS Oak			38.00	12	456	0	2.93	1.00	0
Wd Wearing Deck 2x6 RS Oak			38.00	12	456	0	4.17	1.00	0
2 x 2 x 1/4 Angle		34.25	2.85			40	3.19	114.17	364
Subtotal Bridge Dead Load									5,109
Bridge Beams	**W16 x 40** ✓		38			5	40.00 ✓	190.00	7,600

Bridge Arched Section Dead Weight **12,709 lbs**

Dead load of bridge (psf)	**27.9 psf**



3/S1 BRIDGE CROSS SECTION
SCALE: 1/2"=1'-0"



2/S1 ELEVATION
SCALE: 1/4" = 1'-0"

JAMES F. HEIDT, PE, LLC
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2543 LAUNDALE DR. BELOIT, WISCONSIN 53511
PHONE 608-365-9750 CELL 608-931-7184 FAX 608-365-0751 E-MAIL JHEIDT2543@AOL.COM

TRAIL BRIDGE - Bridge Deck

Project: 38' x 12' Flat Snowmobile Bridge #857
Watertown
Jefferson County, Wisconsin
Client: Custom Manufacturing, Inc.
606 Delco Drive, Clinton, WI

By:
Date: 12/1/22
REV.
Job No. 22-129
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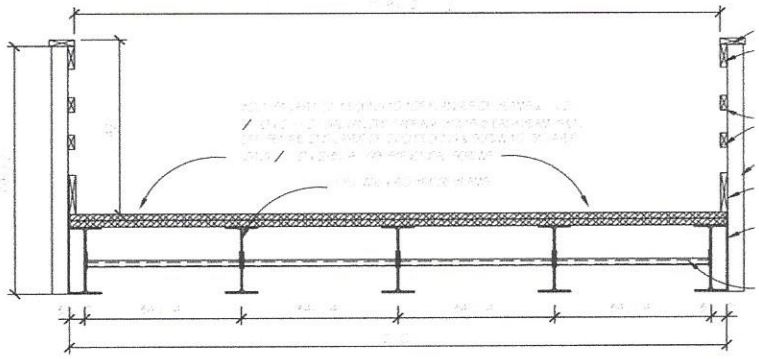
Bridge Deck Design Data:	Units	38' x 12' Bridge
Bridge Width	ft	12.00
Decking Span C to C	in	34.25
Decking Clear Span	in	27.25
DL on Deck	psf	10.0
LL #1 on Deck	psf	60
LL #2 on Deck	psf	30
Vehical Weight	lbs	25,000
VL on Deck	psf	312.5



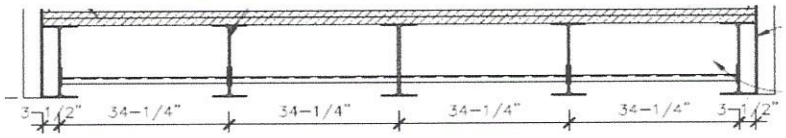
3 / S1 BRIDGE CROSS SECTION
SCALE: 1/2"=1'-0"

Decking Physical Properties:		Pine 2x10 S4S
Deck material		
Width (d)		9.250
Thickness (b)	(2) Layers	3.000
End Area (A)	in^2	27.750
Moment of Inertia Ixx	in^4	197.863
Moment of Inertia Iyy	in^4	20.813
Section Modulus Sxx	in^3	42.781
Section Modulus Syy	in^3	13.875

Wood Stress Adjustment Factors (NDS Table 4A)

Decking Structural Properties: Deck material		MSR Pine 2x10 S4S Allowable	Load Duration CD	Repetitive Member Cr	Wet Service CM	Size Factor CF	Flat Use Factor Cfu	Net Factor	Adjusted Allowable Stresses
Bending (Fb)	psi	2,760	1.15	1.15	0.85	1.00	1.00	1.12	3,103
Tension (Ft)	psi	1,925	1.15	1.00	1.00	1.00	1.00	1.15	2,214
Horiz. Shear (Fv)	psi	190	1.60	1.00	0.97	1.00	1.20	1.86	354
Compression (Fcp)	psi	805	1.15	1.00	0.67	1.00	1.00	0.77	620
Compression (Fcll)	psi	1,975	1.15	1.00	0.80	1.00	1.00	0.92	1,817
Modulus of Elasticity	psi	2.00E+06	1.00	1.00	0.90	1.00	1.00	0.90	1,800,000

Loading on one plank:



w = (d/12)*(DL+LL#1)	plf	53.96
w = (d/12)*(DL+LL#2)	plf	30.83
w = (d/12)*(DL+LL#2+VL)	plf	271.72
Maximum loading on deck plank =	plf	271.72

Rearrange deflection equation and solve for maximum deck span based on l/360 deflection:

Lmax = [(Δ*384*EI)/5*w]^.25 in 72.49 **OK** Based upon double deck.

Check decking shear stress:

	Max. Load		Stress		
Uniform	271.72 plf	fv = 1.5*V/A = ((w*l)/2)/A =	41.92 psi	**OK**	Based upon double deck.
Point	7,500 lbs	fv = 1.5*V/A =	270.27 psi	**OK**	Based upon double deck.

Notes: 1. If the VL is from a tracked vehicle, then point load is uniformly distributed over a number of plank.
2. If the VL is from vehicle tires, then the point load is assumbed to be from a large tractor type wheel and distributed over 1-1/2 double plank widths.

Check compressive stress from tire imprint:		Truck Tire		Ag. Tire 152 L.I.		Sno-Cat Track	
Assumed Tire Imprint Area A =	in^2	88.5		283		2,080	
Tire load P = (.6*VL)/2	lbs	7,500		7,500		7,500	
Compressive stress = P/A =	psi	84.75	**OK**	26.50	**OK**	3.61	**OK**

Notes: 1. Tire area data from Goodyear Tire & Rubber Co.
2. Track data from Tucker Snow-Cat Corp.

JAMES F. HEIDT, PE, LLC
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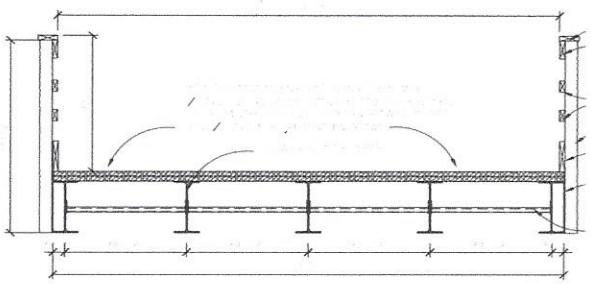
TRAIL BRIDGE - Beam Loading C

Project: 38' x 12' Flat Snowmobile Bridge #857
Watertown
Jefferson County, Wisconsin
Client: Custom Manufacturing, Inc.
606 Delco Drive, Clinton, WI

By: JFH
Date: 12/1/22
REV.
Job No. 22-129
Page: 4

	Bridge Design Data:	(in)	Units	38' x 12' Bridge Beams	
	Beam Nominal Span		ft	38.00	✓
	Beam Clear Span		ft	35.00	
	Beam Spacing	34.25	ft	2.85	
	Number of Beams		ea	5	
	Bearing Pan Width	25.5	ft	2.13	✓
	Bearing Pan Length		ft	13.71	
	Assumed Soil Bearing Capacity		psf	1,500	✓
	Bridge Beam Loading:				
	Dead Load		psf	27.90	
	Live Load #1		psf	60.00	
	Live Load #2		psf	30.00	
	Vehicle Load on 8'x10'		lbs	25,000	✓
	Snow Load		psf	30.00	
	Allowable Deflection L/360		in	1.17	
	Dead Loading on Beams:				
	DL on Inside Beams		plf	79.63	
	DL on Outside Beams		plf	39.82	
	Live Loading on Beams:				
	LL #1 on Inside		plf	171.25	
	LL #2 on Inside		plf	85.63	
	VL on Inside		plf	817.83	
	LL #1 on Outside		plf	85.63	
	LL #2 on Outside		plf	42.81	
	VL on Outside		plf	408.92	
	Snow Load on Beams:				
	SL on Inside Beams		plf	85.63	
	SL on Outside Beams		plf	42.81	

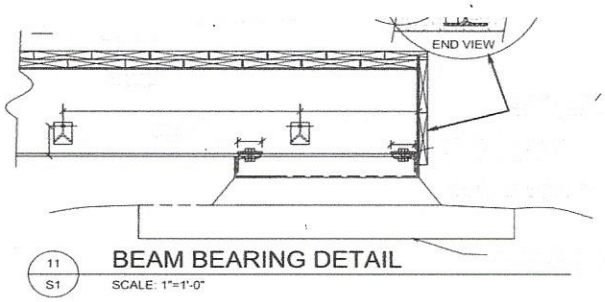


3/S1 BRIDGE CROSS SECTION
SCALE: 1/2"=1'-0"

Zone	Snow Zone	Loading	
Zone 4	Marathon Co. to Bayfield Co.	60	psf
Zone 3	Waushara Co. to Marathon Co.	50	psf
Zone 2	Columbia Co. to Waushara Co.	40	psf
Zone 1	WI/IL Border to Columbia Co.	30	psf

Compute Beam Reactions:

Inside Beams:			
Load condition #1 = DL + .80*(LL#1+ SL)	lbs	5,417	
Load condition #2 = DL +.75*(LL#2+SL+CL)	lbs	8,860	
Outside Beams:			
Load condition #1 = DL + .80*(LL#1+ SL)	lbs	2,709	
Load condition #2 = DL +.75*(LL#2+SL+CL)	lbs	5,040	



11/S1 BEAM BEARING DETAIL
SCALE: 1"=1'-0"

			Load on Pan	
Compute Bridge Support Loading:				
Loading Condition #1		lbs	21,670	
Loading Condition #2		lbs	36,661	
Loading Condition #3 w/ C.L. over pan		lbs	38,182	
Compute Maximum Soil Bearing Load:				
From Maximum Loading on Bearing Pan		psf	1,311	
			OK	✓

JAMES F. HEIDT, PE. LLC
CIVIL & STRUCTURAL ENGINEERING
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PHONE: 608-365-9750 CELL: 608-931-7154 FAX: 608-365-0751 E-MAIL: JHEIDT2543@AOL.COM

TRAIL BRIDGE - Bearing Pan Loadi

Project: 38' x 12' Flat Snowmobile Bridge #857 Watertown Jefferson County, Wisconsin
Client: Custom Manufacturing, Inc. 606 Delco Drive, Clinton, WI

By:
Date: 12/1/22
REV.
Job No. 22-129
Page: 5

A B C D E F G H I J K L M N

Note: This analysis is based upon the theory of a beam on a continuous elastic support, for this the following references were used:

1. Advanced Mechanics of Materials, Seely & Smith, 2nd Ed., John Wiley & Sons, 1952, Chapter 7, pages 188 - 219
2. Foundation Analysis and Design, Joseph E. Bowles, 3rd Ed., McGraw-Hill Co., 1982, Section 9-7, pages 326 - 329

36" Bearing Pan

Pan Properties:		Soil Properties:		
Fy = (psi)	30,000	Soil Bearing	(psf)	1,500
Fall = (psi)	20,100	Subgrade Modulus	k (pci)	350
E = (psi)	29,000,000	Subgrade Modulus	ko (psi)	8,925
Ixx =(in^4)	59.82	No. Bridge Beams =	5	>>>>>
Sxx =(in^3)	11.09	Beam Spacing (in) =	34.25	
c = (in)	5.395			

38' ✓

Bearing Pan Loading: Single End

Loading Condition #1	lbs	21,670 ✓	From page 4, line 60
Loading Condition #2	lbs	36,661	From page 4, line 62
Loading Condition #3	lbs	38,182	From page 4, line 64

Bearing Pan Sizes

Width (in)	Ixx (in^4)	Iyy (in^4)	Sxx (in^3)	Syy (in^3)	c (in)	
18	58.10	878.24	10.586	22.242	5.488	
24	59.82	1,645.31	11.087	22.115	5.395	<<<<<
30	61.31	2,703.65	11.535	22.013	5.315	
36	62.61	4,058.81	11.938	21.928	5.245	
42	63.76	5,912.05	12.301	21.857	5.183	
48	64.78	7,955.81	12.632	21.796	5.128	

Note: Bearing pan steel plate is 3/16" A1011 CS-B with a minimum Fy = 30,000 psi.

Pan Size:

Width	(in)	25.50	2.13	(ft)
Length	(in)	164.52	13.71	(ft)

Compute Soil fs = 1,311 ✓

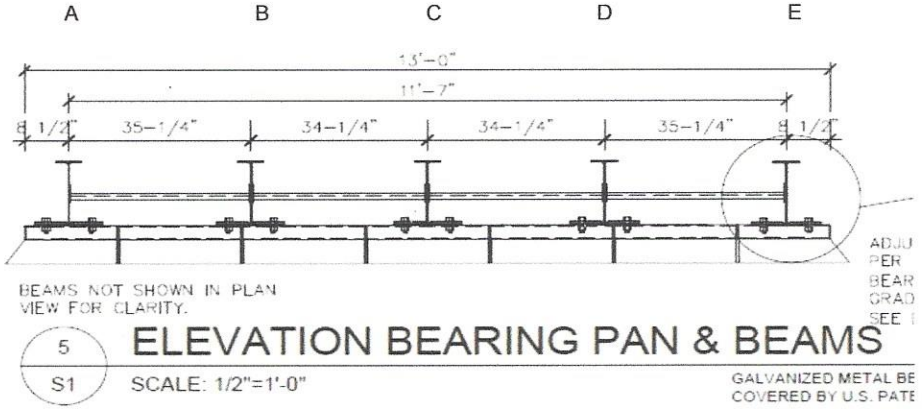
OK

Compute Bearing Pan Stresses:

Compute β = ^4√k/(4EI) = 0.034

Compute βL = 5.54

Maximum beam end reaction P = 9,546 lbs



Single Load on Pan

Bearing Pan Stresses:		
Loading on base = P =	(lbs)	9,546
Compute y_{max} = β*P/(2*k) =	(in)	0.018
Compute M_{max} = P/(4*β) =	(lb-in)	70,862
Compute σ_{max} = Moc/I =	(psi)	6,391

OK

Multiple Loads on Pan

Beam Mk	A	B	C	D	E	Units
Load P	4,773	9,546	9,546	9,546	4,773	lbs
Dist. C	-68.5	-34.25	1	34.25	68.5	in
βx =	-2.307	-1.153	0.034	1.153	2.307	
Ax of C	0.008	0.217	1.000	0.217	0.008	Table 7
Cx of C	-0.142	-0.208	1.000	-0.208	-0.142	p.194-196

ymax = β*P/(2*k)*(Axa + Axb + Axc + Axd + Axe) = 0.026 in

Mmax = P/(4*β)*(Cxa + Cxb + Cxc + Cxd + Axe) = 21,344 lb-in

σmax = (Mmax*c)/I = 1,925 psi **OK**

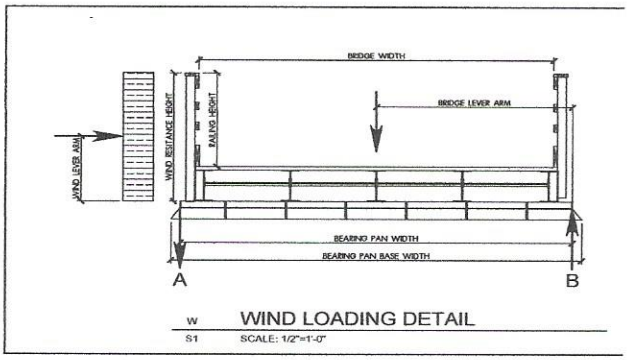
JAMES F. HEIDT, PE, LLC
CIVIL & STRUCTURAL ENGINEERING
2543 LAUNDALE DR., BELOIT, WISCONSIN 53511
PHONE 608-365-9750 CELL 608-931-7164 FAX 608-365-0751 E-MAIL JHEIDT2543@AOL.COM

TRAIL BRIDGE - Wind Load Calcul

Project: 38' x 12' Flat Snowmobile Bridge #857
Watertown
Jefferson County, Wisconsin
Client: Custom Manufacturing, Inc.
606 Delco Drive, Clinton, WI

By: JFH
Date: 12/1/22
REV.
Job No. 22-129
Page: 6 11

	A	B	C	D	E	F	G
10							**38' x 12'**
					Sym	**Units**	
		Bridge Width			B	ft	12.00
		Bridge Length			L	ft	38.00
		Wind Load Calculations:					
		Basic Wind Speed			V	mph	90
		Wind Directionality			Kd	n/d	1.00
		Importance Factor			I	n/d	0.87
		Exposure Factor			Kh	n/d	0.85
		Topographic Factor			Kzt	n/d	1.00
20		Gust Factor			Gf	n/d	0.85
		Enclosure Classification					N.A.
		Internal Pressure Coeff.			GCpi	n/d	N.A.
		External Pressure Coeff.			GCp	n/d	N.A.
							N.A.
		Compute Velocity Pressure:			qz	psf	**15.33**
		Compute Wind Exposure:					
		Beam Depth			d1	in	16.00
		Deck Thickness			d2	in	1.50
30		Railing Height			h1	in	42.00
		Wind Resistance Total Ht.			h2	in	59.50
		Compute Wind Loading:			w	plf	**76.03**
		Bridge Dead Load = Total Wt. =			Wdl	lbs	12,709
		Bridge Bearing Pan Width =			B	ft	2.13
		Bridge Bearing Pan Length =			L	ft	13.71
		Bridge Bearing Pan Weight =			Wp	lbs	832.3
40		**Check Base Overturning:**					
		Bridge Dead Load			.90*Wdl	lbs	12,936
		Bridge DL Lever arm			a	ft	6.86
		Wind Load Lever arm			h3	ft	2.48
		Wind Load Moment (+)				ft-lbs	7,163
		Dead Load Moment (-)				ft-lbs	-88,678
50		Net Moment				ft-lbs	-81,515
		Does bridge base resist overturning?					**YES**
60							
70							



The railing is assumed to be solid for wind resistance.

From calc. page 2 line 31.

Bearing pans weight about 28.5 psf

10% reduction in dead load for this calculation

Compute overturning equilibrium about the outter bearing pan edge using
a 10% reduction in the bridge dead load per ASCE-7, Section 2.4 Load Combinations.

JAMES F. HEIDT, PE, LLC
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PHONE: 608-365-6750 CELL: 608-931-7184 FAX: 608-365-0751 E-MAIL: JHEIDT2543@AOL.COM

TRAIL BRIDGE - Railing Calculat

Project: 38' x 12' Flat Snowmobile Bridge #857
Watertown
Jefferson County, Wisconsin
Client: Custom Manufacturing, Inc.
606 Delco Drive, Clinton, WI

Date: 12/1/22
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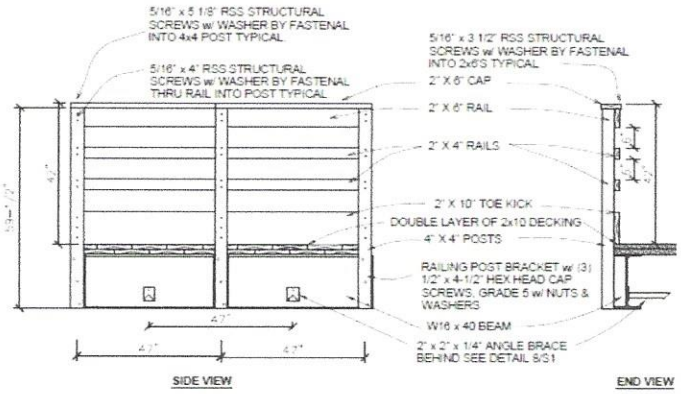
Per the ADA Code, railings must support a 50 plf loading along the railing or 200 lb load at any point. So, the two load conditions for the post are for uniform loading on railing M = wsl or for point load at the post top of M = Pl where l = the post length from bridge deck to top of rail.
The two load conditions for the railing are uniform loading M = wl^2/8 or a point load at mid-span railing M = Pl/4.

Post Length (in)	Post Spacing (in)	Uniform Loading (plf)	Concentrated Loading (lbs)
42.000	45.625	50	200



4 / S1 RAILING ELEVATION & SECTION
SCALE: 1/2"=1'-0"

Rail & Post Material Properties:		MSR Pine 2x4	MSR Pine 4x4
Bending (Fb)	psi	2,760	2,760
Tension (Ft)	psi	1,925	1,925
Horiz. Shear (Fv)	psi	190	190
Compression (Fcp)	psi	805	805
Compression (Fcll)	psi	1,975	1,975
Modulus of Elasticity	psi	2.00E+06	2.00E+06

Decking Physical Properties:		2x4	4x4
Width (d)	in	3.500	3.500
Thickness (b)	in	1.500	3.500
End Area (A)	in^2	5.250	12.250
Moment of Inertia Ixx	in^4	5.359	12.505
Moment of Inertia Iyy	in^4	0.984	12.505
Section Modulus Sxx	in^3	3.063	7.146
Section Modulus Syy	in^3	1.313	7.146

For the post:	Uniform Load 4x4 Post		Point Load 4x4 Post		
M = wsl =	7,984	M = Pl =	8,400		in-lbs
Sreq=M/Fb=	2.893	**OK**	3.043	**OK**	in^3

For the rail:	2x4		2x4		
M = wl^2/8 =	924	M = Pl/4 =	2,106		in-lbs
Sreq = M/Fb =	0.335	**OK**	0.763	**OK**	in^3

Clear span dimension of rail.

Computed in the weak direction.

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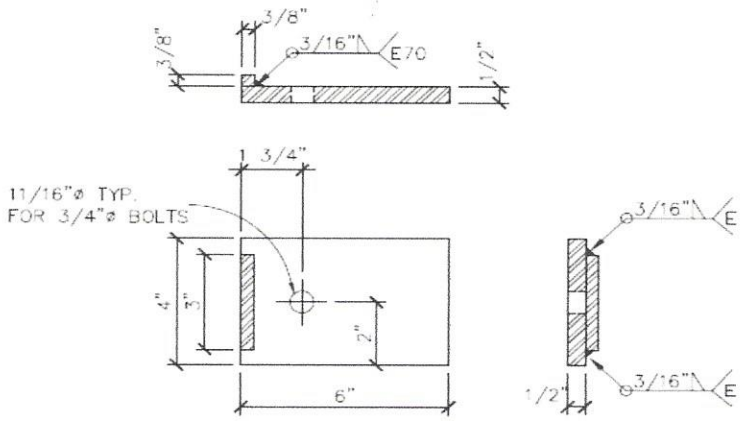
	A	B	C	D	E	F	G
10		Plate Material & Size:				A36	
				Fy	ksi	36	
				Fu	ksi	58	
			Width	wp	in	4.000	
			Depth	dp	in	6.000	
			Thickness	tp	in	0.500	1/2
			No. Bolts	n	ea	1.000	
			Bolt Size		in	0.625	5/8
			Dia. Hole	dh	in	0.688	11/16
			Shear Line	a-b	in	1.75	
20			Tension Line	b-c	in	2.00	
		Number of Beam Clamps used			ea	4	
		Max. Beam Reaction Vx =			kips	8.04	Pg 4 L 50
		Connection Shear Vx =			kips	6.41	
		Connection Shear Vz =			kips	1.29	Wind Load
		Connection Tension Vy =			kips	0.00	
		Connection Moment			ft-kips	0.00	
		Compute Net Plate Area:					
30		An = (wp - n*dh*)dp =			in^2	1.656	
		An = .85Ag =			in^2	1.700	
		Design An = Min. =			in^2	1.656	
		Compute Plate Design Strength:					
		ΦTn = Φ*Fy*Ag =			kips	64.80	
		ΦTn = Φ*Fu*Ae =			kips	72.05	
		Allowable plate strength =			kips	64.80	
40		Is the plate strength > Plate Shear?				OK	
		Check Bolt Strength:				SAE J429	
		Bolt Material & Size:				Grade 8	
		Tensile Strength of Bolt (Fu)			ksi	150	
		Min. Yield Strength (Fy)			ksi	130	
				db	in	0.625	5/8
				Ab	in^2	0.307	
		Design Single Shear Strength =			kips	13.46	Based on threads in the shear plane
50		Design Double Shear Strength =			kips	26.92	
		Design Tension Strength =			kips	25.89	
		Check Bolts for Shear:					
		Shear Load per Bolt			kips	1.60	No. of Clamps = No. Bolts
		Shear Stress in Bolt			ksi	5.22	
						OK	
		Check Combined Shear and Tension on Bolt:					
60		Allowable Stresses:					
		AISC Table J3.2	Fnt		ksi	113.0	
		AISC Table J3.2	Fnv		ksi	60.0	
		Interaction Eq. per AISC (J3-3b)					
		F'nt = 1.3*Fnt - (Ω*Fnt/Fnv)*fv <= Fnt				127.23	
		Check Combined Shear & Tension Interaction:					
		1.0 > fx/Fv+fy/Fv+fz/Fv =				0.05	
						OK	
70							



8 / S1 BEAM CLAMP
SCALE: 3"=1'-0" (24 THUS)

AISC Table J3.2					SAE J429
Bolt Material		A307	A325	A490	Grade 8
Tensile Strength (Fu)	ksi	60	120	150	150
Min. Yield (Fy)	ksi	N/A	92	130	130
Nominal Tensile (Fnt)	ksi	45	90	113	113
Nominal Shear (Fnv)	ksi	24	60	60	60

Find Rupture Shear Strength:

Check Shear Yielding:
Tn = .60*Fy*Avg+Fu*Ant = kips 66.93

Check Shear Fracture:
Tn = .60*Fu*Ans+Fy*Atg = kips 93.64

Design Tn = kips 93.64

Compute Plate Design Strength:
ΦTn = .75*Tn = kips 70.23
OK

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2543 Laundale Drive
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E-mail: jheidt2543@aol.com

Project Title: New Snowmobile Bridge #857, Watertown, Jefferso
Engineer:
Project ID: 22-129
Project Descr: 38' x 12' Flat Bridge w/ Vehicle

9/11

Printed: 2 DEC 2022, 12:05PM

Steel Beam

File = C:\Users\Jim\DOCUME~1\ENERCA~1\22-129 38' x 12' Flat Bridge #857, Jefferson Co, WI.ec6 .

Lic. # : KW-06005984
Licensee :

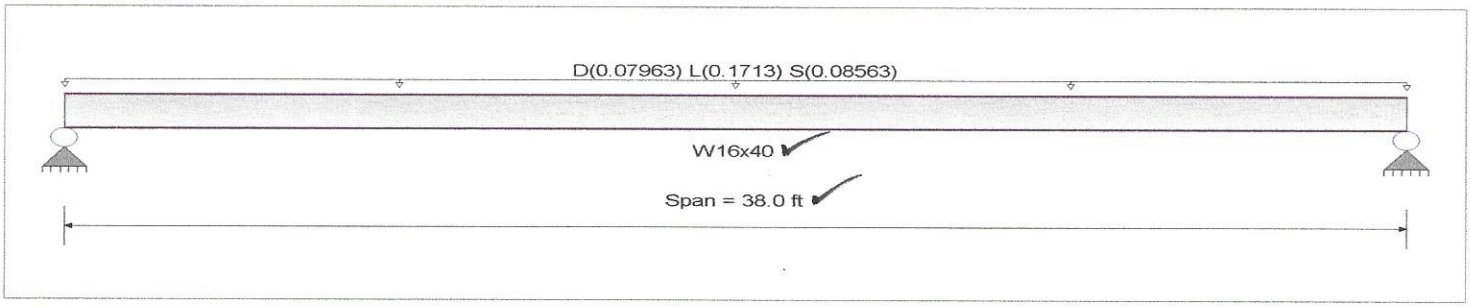
DESCRIPTION: Main 38' Span (35' Clear Span) - LC#1 DL = 27.9 psf, LL = 60 psf, SL = 30 psf

CODE REFERENCES

Calculations per AISC 360-05, IBC 2009, CBC 2010, ASCE 7-05
Load Combination Set : IBC 2009

Material Properties

Analysis Method :	Allowable Strength Design	Fy : Steel Yield :	50.0 ksi
Beam Bracing :	Beam is Fully Braced against lateral-torsional buckling	E: Modulus :	29,000.0 ksi
Bending Axis :	Major Axis Bending		



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight NOT internally calculated and added
Uniform Load : D = 0.07963, L = 0.1713, S = 0.08563 k/ft, Tributary Width = 1.0 ft, (Load Condition #1)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	0.270 : 1	Maximum Shear Stress Ratio =	0.053 : 1
Section used for this span	W16x40	Section used for this span	W16x40
Ma : Applied	49.155 k-ft	Va : Applied	5.174 k
Mn / Omega : Allowable	182.136 k-ft	Vn/Omega : Allowable	97.60 k
Load Combination	+D+0.750L+0.750S	Load Combination	+D+0.750L+0.750S
Location of maximum on span	19.000 ft	Location of maximum on span	0.000 ft
Span # where maximum occurs	Span # 1	Span # where maximum occurs	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.537 in	Ratio =	848 >=360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	0.854 in	Ratio =	534 >=300
Max Upward Total Deflection	0.000 in	Ratio =	0 <300

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750L+0.750S	1	0.8544	19.109		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Overall MAXimum	5.174	5.174
Overall MINimum	1.513	1.513
D Only	1.513	1.513
+D+L	4.768	4.768
+D+S	3.140	3.140
+D+0.750L+0.750S	5.174	5.174
L Only	3.255	3.255
S Only	1.627	1.627

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Printed: 2 DEC 2022, 11:44AM

Steel Beam

File = C:\Users\Jim\DOCUME~1\ENERCA~1\22-129 38' x 12' Flat Bridge #857, Jefferson Co, WI.ec6 .

Lic. # : KW-06005984
Licensee :

DESCRIPTION: Main 38' Span (35' Clear Span) - LC#2 DL = 27.9 psf, LL=30 psf, SL = 30 psf, VL = 25,000 lb.

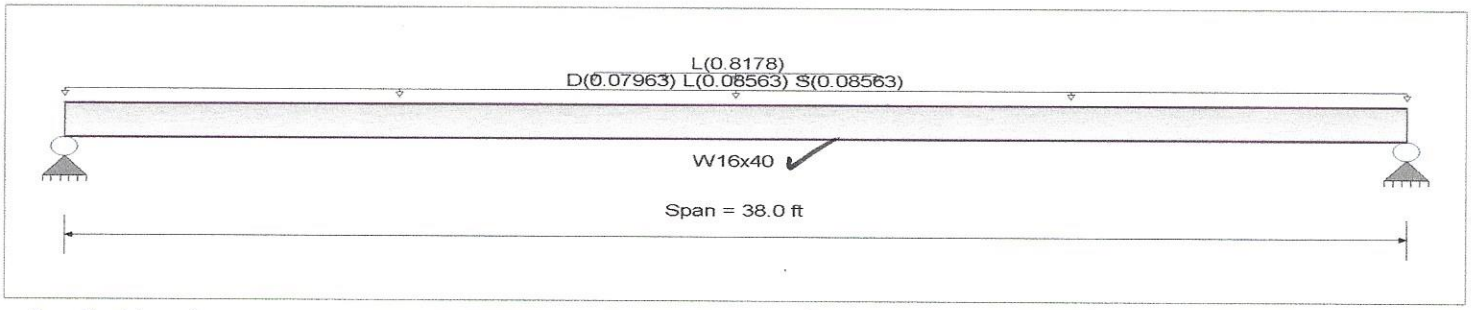
CODE REFERENCES

Calculations per AISC 360-05, IBC 2009, CBC 2010, ASCE 7-05
Load Combination Set : IBC 2009

Material Properties

Analysis Method : Allowable Strength Design
Beam Bracing : Beam is Fully Braced against lateral-torsional buckling
Bending Axis : Major Axis Bending

Fy : Steel Yield : 50.0 ksi
E: Modulus : 29,000.0 ksi



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight NOT internally calculated and added
Uniform Load : D = 0.07963, L = 0.08563, S = 0.08563 k/ft, Tributary Width = 1.0 ft, (Load Condition #2)

Uniform Load : L = 0.8178 k/ft, Extent = 15.0 -->> 23.0 ft, Tributary Width = 1.0 ft, (Vehical Load = 25,000 lbs)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio =	0.469 : 1	Maximum Shear Stress Ratio =	0.066 : 1
Section used for this span	W16x40	Section used for this span	W16x40
Ma : Applied	85.440 k-ft	Va : Applied	6.411 k
Mn / Omega : Allowable	182.136 k-ft	Vn/Omega : Allowable	97.60 k
Load Combination	+D+L	Load Combination	+D+L
Location of maximum on span	19.000 ft	Location of maximum on span	0.000 ft
Span # where maximum occurs	Span # 1	Span # where maximum occurs	Span # 1

Maximum Deflection

Max Downward Transient Deflection	1.113 in	Ratio =	409 >=360
Max Upward Transient Deflection	0.000 in	Ratio =	0 <360
Max Downward Total Deflection	1.364 in	Ratio =	334 >=300
Max Upward Total Deflection	0.000 in	Ratio =	0 <300

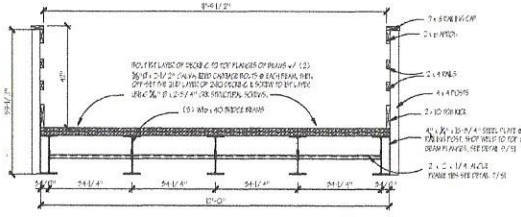
Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	1.3644	19.109		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

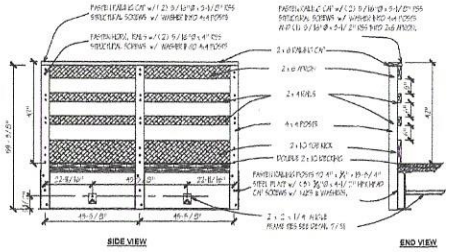
Load Combination	Support 1	Support 2
Overall MAXimum	6.411	6.411
Overall MINimum	1.513	1.513
+D+L	6.411	6.411
+D+S	3.140	3.140
+D+0.750L+0.750S	6.407	6.407
D Only	1.513	1.513
L Only	4.898	4.898
S Only	1.627	1.627



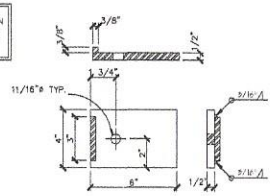
3 S1 BRIDGE CROSS SECTION
SCALE: 1/2"=1'-0"

NOTE:
RAILING DESIGNED FOR PEDESTRIAN TRAFFIC ONLY. IT IS NOT INTENDED OR DESIGNED AS A VEHICLE GUARD RAILING.

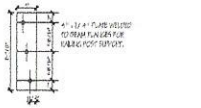
NOTES:
1. FINAL BRIDGE CENTERLINE LOCATION & FOUNDATION ELEVATIONS ARE TO BE LOCATED BY OTHERS AND VERIFIED IN THE FIELD WITH JEFFERSON COUNTY PRIOR TO STARTING BRIDGE ERECTION.
2. THE CONTRACTOR SHALL PROVIDE 10' WIDE FILTER FABRIC & STONE RIP-RAP BANK PROTECTION @ SIDES & FRONT OF ABUTMENTS PER WI DOT SPECIFICATIONS SECTION 606 OR AS APPROVED BY JEFFERSON COUNTY.
3. ALL ASPECTS OF CONSTRUCTION FOR THIS BRIDGE SHALL MEET THE WISCONSIN DNR REQUIREMENTS FOR STRUCTURES IN A FLOOD WAY. THE BRIDGE ELEVATION SHALL BE SET FOR A MINIMUM CLEARANCE OF 2'-0" ABOVE THE ORDINARY HIGH WATER MARK, OR 1'-0" ABOVE THE 100 YEAR FLOOD ELEVATION, OR AS DIRECTED BY JEFFERSON COUNTY TO COMPLY WITH WISCONSIN DNR REQUIREMENTS.



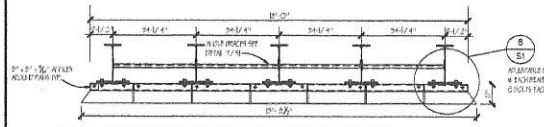
4 S1 RAILING ELEVATION & SECTION
SCALE: 1/2"=1'-0"



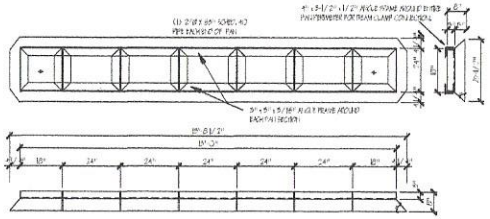
8 S1 BEAM CLAMP
SCALE: 3" = 1'-0"
(2X) REQ'D



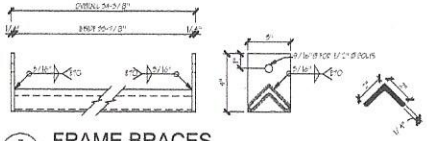
9 S1 HANDRAIL POST PLATES
SCALE: 1" = 1'-0"
(2X) REQ'D



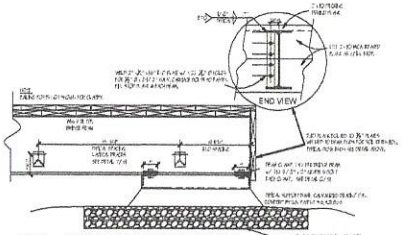
5 S1 24" BEARING PAN END VIEW
SCALE: 1/2"=1'-0"
GALVANIZED METAL BEARING PANS COVERED BY U.S. PATENT #6,421,863



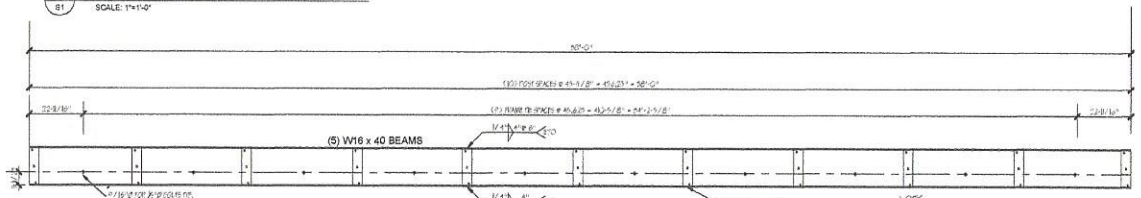
6 S1 24" BEARING PAN
SCALE: 1/2"=1'-0"
GALVANIZED METAL BEARING PANS COVERED BY U.S. PATENT #6,421,863



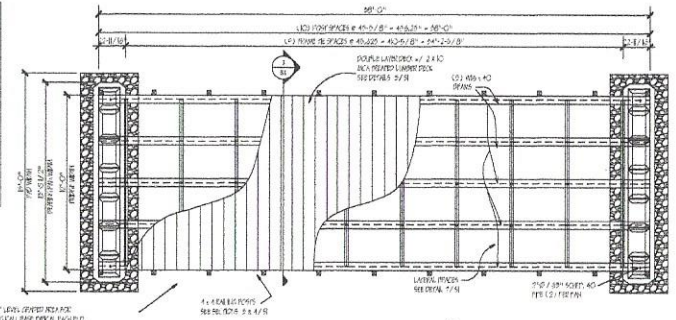
7 S1 FRAME BRACES
SCALE: 3"=1'-0"
(4X) REQ'D



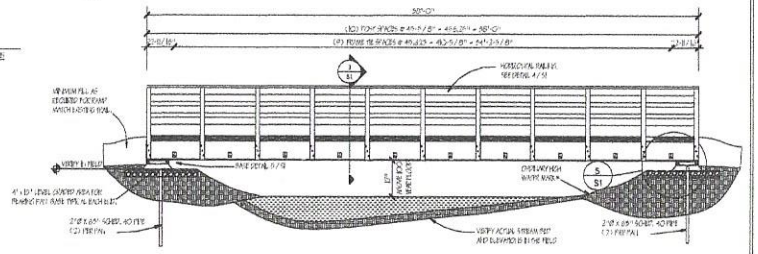
11 S1 BEAM BEARING DETAIL
SCALE: 1"=1'-0"



10 S1 BEAM LAYOUTS
SCALE: 1/2" = 1'-0"



1 S1 PLAN VIEW
SCALE: 1/4" = 1'-0"



2 S1 ELEVATION
SCALE: 1/4" = 1'-0"

NOTES:
1. ALL (5) BEAMS HAVE SHE HOLE PATTERN SHOWN.
2. ONLY THE OUTSIDE (2) BEAMS HAVE THE POST PLATES.
(1) AS SHOWN AND (1) OPPOSITE HAND.
3. END POST PLATES FLUSH w/ END OF BEAM.

NOTES

GENERAL NOTES:

1. THIS BRIDGE IS DESIGNED ON THE BASIS OF THE WISCONSIN DEPARTMENT OF NATURAL RESOURCE'S ARDUCE GUIDELINES FOR NEW AND REPLACEMENT SNOWMOBILE AND ALL-TERRAIN VEHICLE BRIDGES PUBLICATION PUB-SS-958 DATED 2014, WITH THE FOLLOWING:

DESIGN LOADS:

DEAD LOAD OVERDECK	=	8.0 PSF
DEAD LOAD SUPPORTED BY BRIDGE	=	24.2 PSF
LIVE LOAD #1 ON ENTIRE DECK	=	65.0 PSF
LIVE LOAD #2 ON ENTIRE DECK	=	10.0 PSF
SNOW LOAD	=	60.0 PSF
WIND LOAD	=	90.0 MPH
VEHICLE LOAD	=	28,000.0 LBS

LOAD COMBINATIONS:
LCM1 = DL + 65 (LL#1 + EL)
LCM2 = DL + 1.75 (LL#2 + EL + VL)

2. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION MEANS OR METHODS OR FOR SUPERVISION OF CONSTRUCTION.

3. ALL DIMENSIONS ARE TO BE CROSS CHECKED WITH EXISTING FIELD DIMENSIONS AND APPROVED SHOP DRAWINGS FOR THE VARIOUS MATERIALS AND BUILDING COMPONENTS. ALL DIMENSIONAL DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

4. ALL WORK IS TO BE PERFORMED IN A SAFE AND WORKMAN LIKE MANNER IN COMPLIANCE WITH THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND ALL STATE OF WISCONSIN AND JEFFERSON COUNTY, WI BUILDING CODES AND ZONING ORDINANCES AS THEY MAY PERTAIN TO THIS PROJECT.

SITE WORK:

1. THE CONTRACTOR IS TO VERIFY ALL CONDITIONS AT THE SITE, PARTICULARLY THE LOCATION OF ANY UNDERGROUND UTILITIES BEFORE EXCAVATION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

2. THE FOUNDATION DESIGN IS BASED UPON AN ASSUMED NET SOIL BEARING CAPACITY OF 1,500 PSF.

3. THE BEARING ELEVATION OF THE BRIDGE SHALL BE SET BY THE BRIDGE OWNER AT AN ELEVATION SUCH THAT THE MINIMUM BOTTOM CHORD ELEVATION OF THE BRIDGE SHALL BE AT LEAST 3.0' ABOVE ORDINARY HIGH WATER MARK, OR AS DETERMINED BY JEFFERSON COUNTY DEPARTMENT OF PUBLIC WORKS OR THE WISCONSIN DNR.

STRUCTURAL STEEL:

1. ALL STRUCTURAL STEEL USED IN THE FABRICATION AND ERECTION OF THIS BRIDGE SHALL MEET ASTM A572/A992 GRADE 50 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 PSI.

2. FASTENERS USED IN THE FABRICATION AND ERECTION OF THIS BRIDGE SHALL MEET THE REQUIREMENTS OF THE FOLLOWING SPECIFICATIONS: SAE J429 GRADE 5, SAE J429 GRADE 8 AND ASTM A325 F. FOR THESE RESPECTIVE USES. FASTENERS AND CONNECTORS IN CONTACT WITH TREATED LUMBER SHALL BE HOT-DIP GALVANIZED. DECK SCREWS SHALL BE SIMPSON #8 x 3" DECK MATE SQUARE DRIVE BY PHILLIPS FASTENER PRODUCTS CO.

3. WELDING, WHEN REQUIRED, SHALL MEET THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE.

4. ALL STRUCTURAL STEEL SHALL BE PRIME PAINTED AFTER FABRICATION WITH A MINIMUM THICKNESS OF 1.4 MIL OF SHERWIN WILLIAMS T7-H-94 RUST-INHIBITING AND LACQUER-RESISTANT PRIMER.

5. ALL STRUCTURAL STEEL SHALL BE FINISHED PAINTED AFTER FABRICATION, BUT PRIOR TO ASSEMBLY, WITH TWO (2) COATS OF SHERWIN WILLIAMS INDUSTRIAL ENAMEL VOC-COMPLYING OIL BASED ENAMEL PAINT IN A GLOSS FINISH. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR SURFACE PREPARATION, PRIME PAINTING AND FINISH PAINTING. COLOR TO BE SELECTED BY THE OWNER FROM MANUFACTURER'S STANDARD COLOR CHARTS.

DIMENSION LUMBER:

1. ALL STRUCTURAL DIMENSION LUMBER INSTALLED IN THIS PROJECT SHALL MEET THE REQUIREMENTS OF THE 2021 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) NDS AND SHALL BE STAMPED WITH A MINIMUM EQUIVALENT GRADE OF 2400 M&R 1.6EM. SOUTHERN PINE OR SPRUCE-PINE-FIR SPECIES.

2. ALL WOOD USED IN THIS BRIDGE SHALL BE MICRONIZED COPPER AZOLE (MCA) PRESERVATIVE TREATED TO A MINIMUM RETENTION OF 0.06 POUNDS PER CUBIC FOOT FOR ABOVE GROUND LUMBER AND 0.10 POUNDS PER CUBIC FOOT FOR LUMBER IN GROUND CONTACT. PER THE CHEMICAL MANUFACTURER'S INSTRUCTIONS.

3. THE MOISTURE CONTENT OF ALL STRUCTURAL FRAMING LUMBER, PLYWOOD AND FABRICATED WOOD PRODUCTS SHALL NOT EXCEED 19% AT THE TIME OF INSTALLATION. JOBSITE STORAGE OF ALL WOOD PRODUCTS SHALL PROTECT WOOD MATERIALS FROM DAMAGE DUE TO THE ELEMENTS. NO WARPED LUMBER SHALL BE USED IN THE CONSTRUCTION OF THIS BRIDGE.

4. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING DURING HANDLING AND ERECTION OF THE BRIDGE.

5. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ALL FINAL BRACING, AS SHOWN ON THE SHOP DRAWINGS.

NO.	DESCRIPTION	DATE	BY
01	FOR FABRICATORS REVIEW OF RAILING & FRAME TIE LAYOUT.	12/02/22	JFH
02	FOR FABRICATION & CONSTRUCTION.	12/03/22	JFH

PROJECT:
38' x 12' SNOWMOBILE BRIDGE #857
JEFFERSON COUNTY, WI

CLIENT:
CUSTOM MANUFACTURING INC

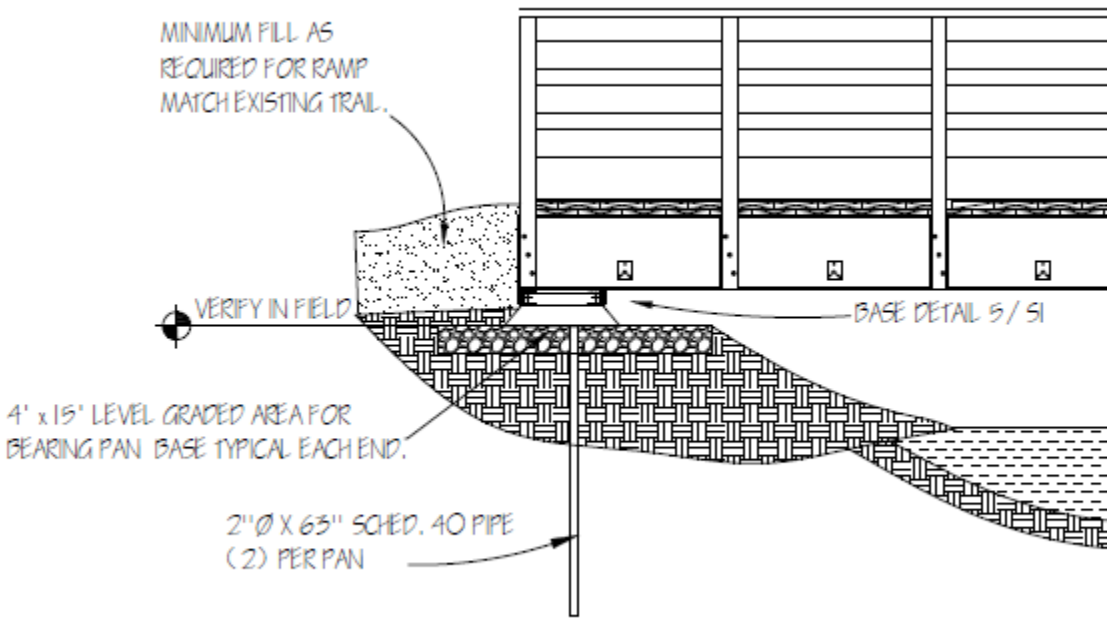
Trail Bridges
Steel Fabricating & Finishing
606 Dolce Drive
P.O. Box 270
Clinton, Wisconsin 53525
Phone: 608-676-2202
Fax: 608-676-2203

JAMES F. HEIDT, PE, LLC
CIVIL & STRUCTURAL ENGINEERING
2345 LAKEMASTER, BELOIT, WISCONSIN 53511

SEAL: JAMES F. HEIDT, PE
W. REG.: 15489
EXP. DATE: 07/31/2024

DRAWN: JFH
DATE: 12/01/22
SCALE: AS SHOWN
JOB #:
SHEET #: S1

Bridge Base



Sanitary Main

Shapes on map represent general recommendations for future land use. Actual boundaries between different land use types and associated zoning districts may vary somewhat from representations on this map. Not all lands shown in a future developed land use category are immediately appropriate for development, rezoning, or subdivision.
Environmental Corridors depicted on this map use generalized boundaries of environmental features identified by the DNR. Actual Environmental Corridor boundaries are to be refined through detailed on-site investigation.

City of Watertown Growth Area*

City of Watertown And Town of Emmet Intergovernmental Agreement**

Town of Shields

Town of Emmet

Town of Watertown

Dodge County

Jefferson County

Proposed Snowmobile Bridge

Rock River

Silver Creek

Q M R K T A Y X D E CW

16 26 19

Provimi Rd

Welsh Rd

N Water St

2nd Street Rd

Hancock Rd

Church St

W Main St

S Water St

Hall St

N 4th St

Jumeau St

West St

Western Ave

Milford St

River Dr

S 3rd St

S 12th St

Summit Ave

Clark St

Horseshoe Rd

Gypsy Rd

Hilltop Rd

Jefferson Rd

South Rd

Air Park Dr

River Rd

Beryl Dr

High Rd

Turf Dr

Gophe

1 2 3 4 5 6 7 8 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 35 36

Future Land Use Urban Area

Map 6b

City of Watertown Comprehensive Plan

City/Town IGA**
- City Growth Area
- City Periphery Areas

*Each "Planned Mixed Use Area" may include mix of:
1. Office
2. Multi-Family Residential
3. Mixed Industrial
4. Commerical Services/Retail
5. Institutional
6. Parks & Recreation

**"Planned Neighborhoods" should include a mix of the following:
1. Single-Family - Sewered (predominant land use)
2. Two-family Residential
3. Multi-Family Residential
4. Institutional
5. Neighborhood Mixed Use
6. Parks & Recreation

***Each "Riverside Mixed Use Area" may include mix of:
1. Office
2. Single-Family - Sewered
3. Two-Family Residential
4. Multi-Family Residential
5. Commerical Services/Retail
6. Institutional
7. Parks & Recreation

- City of Watertown
- Town Boundary
- Parcel
- Railroad
- Watertown Urban Service Area
- Watertown Long Range Growth Area

Land Use Categories

- Agricultural
- Single-Family Residential - Unsewered
- Single-Family Residential - Sewered
- Two-Family Residential
- Multi-Family Residential
- Planned Neighborhood**
- Institutional
- Airport
- Rights-of-Way
- Neighborhood Mixed Use
- Planned Mixed Use*
- Central Mixed Use
- Riverside Mixed Use***
- Mixed Industrial
- Parks & Recreation
- Environmental Corridor
- Surface Water

Airport Height Limitations

- Maximum Building Elevation b/t 865 and 968 ft
- Maximum Building Elevation b/t 968 and 1005 ft

Miles
0 0.25 0.5 1

Draft: August 7, 2019
Source: WisDNR, FEMA, City of Watertown, Dodge Co. LIO & Jefferson Co. LIO, V&A

THE CITY OF WATERTOWN
Opportunity runs through it.

VANDEWALLE & ASSOCIATES INC.
Shaping places, shaping change

N W E S