



TOWN OF HUDSON

Conservation Commission



Carl Murphy, Chairman

David Morin, Selectmen Liaison

12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-594-1142

CONSERVATION COMMISSION MEETING AGENDA July 14, 2025

The Town of Hudson Conservation Commission will hold its next meeting on **Monday, July 14, 2025** at 7:00 p.m. in the Buxton Meeting Room, at Town Hall, 12 School Street, Hudson, NH.

- ✓ Call to Order
- ✓ Pledge of Allegiance
- ✓ Roll Call
- ✓ Alternates
- ✓ Public Input Related to Non-Agenda Items

I. New Business:

II. Old Business:

- a. Discussions for ZORC
- b. Hudson trail challenge – Mr. Cameron
- c. Proposed Bridges: Musquash-Gumpus connector; Tiger property- Mr. Dickinson, Mr. Walters

III. Other Business:

- a. Eric Radloff: July 11th – Musquash and Tiger site walk - Invasives
- b. Rem Roll of UNH: August 11th -Wild life monitoring program presentation
- c. Mike Gagnon Forester: September 13th 9:00AM Tiger property walk
- d. Kimball Hill Town Forest sign Update
- e. Robinson Bridge update
- f. Workday recap: Musquash and Colburn
- g. August Work Day
- h. Pelham Road Conversation Debut on HCTV: Ms. Griswold

IV. Financial Status:

Current Report

V. Correspondence

- a. Bill Collins / Department of Natural Resource and the Environment-Preliminary Wildlife monitoring report

VI. **Approval of Minutes:**

a. June 9, 2025 Meeting Minutes

VII. **Commissioner's Comments:**

VIII. **Non Public Session - RSA 91-A:3 II (d)** Consideration of the acquisition, sale, or lease of real or personal property which, if discussed in public, would likely benefit a party or parties whose interests are adverse to those of the general community.

Next Regular Meeting: Monday, August 11, 2025 at 7:00 p.m.

Carl Murphy

Carl Murphy
Conservation Commission Chairman

Exeter Ordinances with reference to CCs

In Site and Sub:

p. 27

6.5. Technical Review Committee (TRC) 6.5.1. A "Technical Review Committee" (TRC) is hereby established to assist the Board in reviewing Site Plan / Subdivision applications and plans. The TRC shall consist of representatives from: the Planning Department, Department of Public Works, Fire Department, and Conservation Commission. Representatives from other Town agencies may be requested to serve on the TRC as required on a case-by-case basis. The Chairman of the TRC shall be the Town Planner or his/her designated representative. The Chairman of the TRC is authorized to determine the scope of the review and whether a formal meeting of the TRC is necessary.

p. 72

9.6.2. Natural Features: The subdivision and development shall, whenever possible, preserve in their natural condition important natural features. Use Low Impact Development (LID) site planning and design strategies such as land conservation and maintaining natural flow paths to the maximum extent practicable to reduce discharge of stormwater. The Board may request an advisory opinion from the Conservation Commission in the determination of the value of natural features and the boundaries of such natural systems. Such areas include watercourses, water bodies, floodplains, wetland areas, steep slopes, aquifer recharge areas, wildlife habitats, large or unique trees, and scenic views. Natural features that provide buffers between lots, or sections, of a subdivision should be preserved to enhance privacy and aesthetic value.

p. 74

9.7.4. Tree Planting: At its discretion, the Board may require the developer to plant shade trees within the rights-of-way of a subdivision layout. The developer shall supply planting plans to the Board who will seek an advisory opinion on said plans from the Conservation Commission.

In zoning:

OPEN SPACE REGS (p. 94)

A. Bonus: A density bonus of ten-percent (10%) of the total allowable number of dwelling units may be granted by the Planning Board to an applicant if fifty-percent (50%) or more of the non-buildable, undeveloped, or common open space land is permanently conveyed to the Town or Conservation Commission for the benefit of the general public for recreational and/or conservation purposes. The density bonus will only be granted upon written notice by the Town or Conservation Commission of their intent to accept a deed or easement conveying an interest in fifty percent (50%) or more of said non-buildable, undeveloped, or common open space land to the Town of Exeter or Conservation Commission

Portsmouth Subdivision Rules and Regulations

Open Space

A. Natural Features The subdivision shall, whenever possible, preserve in their natural condition important natural features. The Planning Board may request an advisory opinion from the Portsmouth Conservation Commission in the determination of the value of natural features and the boundaries of such natural systems. Such areas include large or unique trees or groves, water courses or important wetland areas. Natural features that provide buffers between lots, or sections, of a subdivision should be preserved to enhance privacy, and esthetic value.

B. Buffer Strips The Planning Board may require the designation of buffer strips of at least fifty (50) feet width around surface water, wetlands, or other natural features which may be adversely affected by erosion or stormwater runoff. The Planning Board may require a vegetative buffer to provide screening where non residential developments abut a residential zone.

D. Tree Planting The planting of shade trees within all developed lots where residential, commercial, or industrial development is to take place, shall be required of the developer who shall supply planting plans in triplicate to the Planning Board and Public Works Department. The planting plans of shade trees within proposed or accepted rights-of-way must be submitted to the Public Works Department and the Chairman of the Portsmouth Conservation Commission and receive their approval before planting of street trees is begun.

Town of Wolfeboro Wetland Ordinance

§ 175-10.1 Special use permits.

A.

Application for a special use permit shall be made on forms supplied by the Planning Board and shall include a site plan containing the following information on one or more sheets at a scale of one inch equals 100 feet or larger, and a report demonstrating compliance with the requirements listed below in Subsection

B. In accordance with NH state law, the wetlands boundaries shall be delineated by a certified wetlands scientist, the plan shall be prepared by a licensed land surveyor or professional engineer if it contains property boundaries or topography and construction details for building or erosion control/stormwater management or proposed landscaping structures shall be designed by a professional engineer, licensed landscape architect or certified professional in erosion and sediment control.

D. Prior to making a decision, the Planning Board shall afford the Conservation Commission an opportunity to provide comment, and shall consider any such comments provided.

Hampton Subdivision Regulations

Review Standards 1. In reviewing subdivision plans, the Board shall take into consideration the public health, safety and general welfare, the comfort and convenience of the general public, and shall ensure that proposed development does not have a detrimental effect on the abutters, the neighborhood, and the environment of the Town.

2. In order to attain these goals, the Board shall determine that: a. ...

3. In acting upon any subdivision plan, the Board may take into consideration the recommendations of the Building Inspector, the Public Works Director, the Fire Department, the Police Department, the Highway Safety Committee, the Conservation Commission and any other Town agencies or outside specialists which it may consult.

Hampton Wetland Ordinance

7. By Wetlands Permit only, drainage ways as paths for normal runoff provided that they are constructed according to drainage plans, consistent with the purposes of the Wetlands Conservation District ordinance and approved by the Planning Board, in consultation with the Conservation Commission. (Amended 1998, March 2012, March 2015)

Exeter Wetland Ordinance

Boundary Appeals: In the event that the Building Inspector, the Planning Board, or the Conservation Commission questions the validity of the boundaries of a wetland area on a specific parcel of land, or upon written petition of the owner or any abutter of the said property to the Planning Board, the Board may call upon the services of a scientist qualified to delineate wetlands in accordance with the standards and criteria specified in 9.1.4.J Wetlands Delineation in order to examine said area and report the findings to the Planning Board for their determination of the boundary. Expenses incurred in retaining these services shall be paid by the landowner.

Prohibited Uses: In reviewing an application for a variance from the provisions of this subsection, the Zoning Board of Adjustment may request that the Conservation Commission and/or the Planning Board review the application and provide written comment as to the potential impacts the proposed use may have on wetlands and wetland buffers. The following uses are not permitted in the Wetlands Conservation Overlay District, notwithstanding that they may be permitted in the underlying

Bedford NH, Permitted uses.

A.

In those areas that have been identified as a wetland, permitted uses are those which are compatible with the specified purposes of this chapter.

The construction of fences, footbridges, catwalks, and wharves only, provided:

- (a) Said structures are constructed on posts or pilings;
- (b) The natural contour of the wetland is substantially preserved; and
- (c) The Conservation Commission has reviewed the proposed construction and presented its comments.

Construction of a roadway or other accessway, utility right-of-way, communication lines, power lines, and pipelines across a wetland may be permitted by the Planning Board if, after receiving comments from the Conservation Commission, the Planning Board determines that:

The Planning Board and/or Town Planner shall notify the Conservation Commission of all applications for proposed projects which may impact a wetland for the purpose of allowing the Commission to make recommendations prior to final action on such application.

Pelham, NH

Linking Open Space Parcels or Trail Corridors: Through the site with existing trails or open space networks. The beginning of such a network or trail may be considered as linking where reasonable opportunity is present for establishing 51 through corridors into neighboring parcels and provide that the Conservation Commission comment is in favor of this location.

Special permit for uses within the Wetlands Conservation District may be granted provided that the following conditions are met, the burden of proof for which shall be upon the applicant who shall furnish such engineering and hydrological data as is reasonably necessary; 1. that the proposed use, construction and/or alteration shall be constructed in such a way that does not unduly restrict the flow of water. 2. that written comment is provided from the Conservation Commission, and if deemed necessary by the Conservation Commission, written comment from the Hillsborough County Soil Conservation Service and/or the New Hampshire Wetlands Board. [Amended March 9, 2004 ATM]

Town of Londonderry has a wetlands ordinance that allow for CC review.

Dredge and Fill Permits

1. Prior to filing an application for a New Hampshire Department of Environmental Services (NH DES) dredge and fill permit, the applicant is strongly encouraged to meet with the Conservation Commission to ensure that the proposed dredge and fill is consistent with the intent of the ordinance

They also have a Conservation Overlay district that allows for CC review.

- CO District Mitigation: CO District mitigation shall be provided, if required by the Planning Board, at their discretion, with consideration of recommendations by the Conservation Commission.

Concord Conservation Commission

The Conservation Commission reviews Cluster Development plans since we require land to be set aside for conservation purposes as part of the subdivision. Although the applicant can choose to find another land trust to hold an easement on the property, the ongoing trend is that the easement is given to the City to be managed by the Conservation Commission. Since the Commission is obliged to manage the land, the application goes to the Commission for input on the subdivision layout.

The only language regarding their review is in the Appendices of the Site Plan (Appendix B) and Subdivision (Appendix C) Regulations "All conservation easements are subject to review and approval by the Planning Board, after consultation with the Conservation Commission and shall be accepted by the City Council." It's more of an advisory role.

Hudson

The purpose of open space developments is to preserve the rural and scenic character of Hudson by encouraging more efficient patterns of land development which conserve open and green spaces, farmland, wildlife habitats, water resources, scenic areas and other natural resources. It is also designed to provide for increased recreational opportunities and to promote greater neighborhood cohesion, without altering overall land use densities or land use patterns.

§ 334-48Definitions.

As used in this article, the following terms shall have the meanings indicated:

OPEN SPACE DEVELOPMENT (OSD)

A form of land subdivision where lot size and other dimensional requirements and minimum road widths may be reduced in exchange for the permanent preservation or provision of proportional areas of open space, farmland, recreational land and other lands. An "OSD" shall adhere to the permitted uses and density requirements otherwise applicable to the district in which the "OSD" is located.

§ 334-49Applicability.

OSDs may be located in any zoning district and may include any use or combination of uses permitted in the district in which the OSD is located.

§ 334-50Density.

[Amended 3-12-2002 by Amdt. No. 7

Minimum density requirements for all uses in an OSD correspond with the minimum lot size requirements established in Article **VII**, Dimensional Requirements. Total open space provided as a part of an OSD application must

be of sufficient land area, when added together with the total land area devoted to individual lots, to provide an overall density no greater than that which would be provided in a non-OSD development. To aid in evaluating the number of allowable lots, all OSD applications submitted to the Planning Board for review shall include both a preliminary, conventional subdivision plan and an OSD plan. The preliminary conventional plan shall, at a minimum, include the zoning district, proposed streets, driveways, lot lines, wetland delineation, wetland setbacks, and a table with calculations for each lot.

§ 334-51 Lot sizes.

The area of individual lots within an OSD may be reduced by up to 50% of the minimum lot size requirements established in Article VII, as provided herein.

A.

An area of land, equal to or greater than the difference between the size of each open space lot and the minimum lot size, shall be dedicated to permanent open space, conservation land or recreation land.

B.

No reduced area residential lots shall be arranged to front or abut preexisting streets, roads or highways.

C.

All subsurface sewage disposal and water supply requirements for individual or community systems shall be compiled with, or Town water and sewer shall be provided.

§ 334-52 Dimensional requirements.

[Amended 3-13-2001 by Amdt. No. 2]

Frontage and setback requirements for individual lots within an OSD may be reduced up to 50% of the minimum frontage and setback requirements established in Article VII, as provided herein, if approved by the Planning Board.

A.

No reduced frontage lots shall be allowed to front on preexisting streets, roads or highways.

B.

Setback reductions shall not be permitted along property lines that abut non-OSD residentially developed properties.

§ 334-53 Open space requirements.

The minimum open space requirement of § **334-50** may be provided through common land or individually owned land placed in permanent conservation or recreational easements or by other land use restrictions. The OSD shall comply with the following conditions:

A.

Only undeveloped land, landscaped green space or recreational areas may be included in the calculation of minimum open space requirement. Setback areas along the perimeter of the subdivision may not be included in the open space calculations.

B.

Roadways, driveways, rights-of-way, utility easements, parking areas and other developed areas, except for recreational paths, trails or facilities, may not be included as part of minimum open space requirements.

C.

Wetland(s), road rights-of-way, and slopes in excess of 25%, shall not be considered in the calculation of total lot area. The one-hundred-year floodplain areas shall not exceed 25% of the total land area of the OSD.

[Amended 3-9-1999; 3-12-2002 by Amdt. No. 8]

D.

Whenever possible, lots or dwelling units should be arranged to abut or have direct access to common open space or recreational land.

E.

Lots and open space should be arranged to preserve and protect prominent natural features, historic or archaeological resources, scenic vistas, surface water bodies and streams and other important natural and man-made landscape features.

F.

The deed for each building lot shall contain an undivided proportional share of all common open space, except as provided for in § **334-54**.

§ 334-54 **Compensatory open space.**

A.

Off-site compensatory open space may be permitted at the discretion of the Planning Board where the land meets the following conditions:

(1)

The land is either comprised of prime farmland soils or it has been used for active agricultural purposes within the five years prior to the date of application;

(2)

It encompasses important wildlife habitats as recognized or approved by the Conservation Commission;

(3)

It consists of land with strong potential for providing needed recreational areas for future residents of the proposed development as well as for the Town as a whole;

(4)

It would serve to provide access to important surface or to protect groundwater resources; or

(5)

It encompasses other areas of exceptional scenic or historic value.

B.

Where compensatory open space is provided in lieu of on-site open space, the Planning Board may require the developed portion of the OSD to be adequately screened from adjacent properties.

C.

Screening provided under Subsection **B** shall not be included within minimum open space or lot size calculations.

§ 334-55 Road standards.

[Amended 3-13-2001 by Amdt. No. 2]

Minimum road and right-of-way widths may be reduced at the discretion of the Planning Board, where such reductions would result in development patterns more harmonious to the natural or man-made features of the site without sacrificing public convenience or safety. All roads within the open space plat shall be public roads.

§ 334-56 Procedures.

[Amended 3-12-2002 by Amdt. No. 9]

Except as otherwise provided for in this chapter, all single- or two-family OSD subdivisions must comply with the submission, review and approval requirements of Hudson's Land Subdivision Regulations.^[1] Nonresidential or multifamily residential OSD shall comply with the submission, review and approval requirements of Hudson's Site Plan Regulations.^[2] The Planning Board may adopt additional OSD subdivision or site plan review regulations to govern the review of common lands, private covenants, homeowners' association agreements and other pertinent issues.

[1]

Editor's Note: See Ch. 289, Subdivision of Land, Part 1.

[2]

Editor's Note: See Ch. 275, Site Plan Review.

Hudson NH Trails Challenge

| Trail | Distance (miles) | | | Date | Notes |
|--|------------------|------|--------|------|--|
| | Length | Done | Remain | | |
| Musquash Conservation Area | | | | | |
| Hamblett-Nash Trail | 2.50 | 2.50 | 0.00 | | Yellow |
| Colburn Trail | 0.30 | 0.30 | 0.00 | | Light Green |
| Deacon Merrill Trail | 0.70 | 0.70 | 0.00 | | Teal |
| Gumpus Pond Loop | 0.90 | 0.90 | 0.00 | | Light Blue. *Incorrectly labeled on map as "Gumpas..." |
| Gumpus Pond Connector | 0.15 | 0.15 | 0.00 | | Gold. *Incorrectly labeled on map as "Gumpas..." |
| Hidden Ridge Trail | 0.50 | 0.50 | 0.00 | | Blue |
| Kingfisher Trail | 0.10 | 0.10 | 0.00 | | Orange |
| Meetinghouse Trail | 0.50 | 0.50 | 0.00 | | Aqua |
| Musquash Brook Trail | 0.80 | 0.80 | 0.00 | | Red |
| Nacook Loop | 0.50 | 0.50 | 0.00 | | Green |
| Turkey Trot Trail | 0.40 | 0.40 | 0.00 | | Maroon |
| Whispering Pine Trail | 0.15 | 0.15 | 0.00 | | Purple |
| Wilkinson View Trail | 0.30 | 0.30 | 0.00 | | Magenta. *Incorrectly labeled on map as "Wilkson..." |
| Musquash-Gumpus Connector | | | 0.00 | | TBD |
| Colburn Town Forest | | | | | |
| Monadnock Vista Trail | 0.70 | 0.70 | 0.00 | | Red |
| Abenaki Way Trail | 0.60 | 0.60 | 0.00 | | Yellow |
| To-A-View Trail | 0.20 | 0.20 | 0.00 | | Blue |
| Pelham Road Conservation Area | | | | | |
| Blue Trail | 0.80 | 0.80 | 0.00 | | Blue |
| Magenta Trail | 0.15 | 0.15 | 0.00 | | Magenta |
| Yellow Trail | 0.15 | 0.15 | 0.00 | | Yellow |
| Benson Park | | | | | |
| Haselton Farm Trail | 2.50 | 2.50 | 0.00 | | Blue |
| Moose Pond Trail | 0.30 | 0.30 | 0.00 | | Maroon |
| Acorn Trail | 0.30 | 0.30 | 0.00 | | Dark Yellow |
| Beaver Path | 0.10 | 0.10 | 0.00 | | Pink |
| Otter Way | 0.20 | 0.20 | 0.00 | | Orange |
| Oak Ridge Trail | 0.30 | 0.30 | 0.00 | | Green |
| Deer Run | 0.10 | 0.10 | 0.00 | | Purple |
| Meadow View Trail | 0.10 | 0.10 | 0.00 | | Yellow |
| Wildlife View Spurs (2) | 0.20 | 0.20 | 0.00 | | Gray. Off Haselton & Otter. |
| Kimball Hill Town Forest *(Need to rename from "Hudson Town Forest") | | | | | |
| Perimeter Trail | 2.80 | 2.80 | 0.00 | | Orange |
| White Tail Way | 0.60 | 0.60 | 0.00 | | Blue |
| Ravine Trail | 0.15 | 0.15 | 0.00 | | Red |
| Squirrel Run | 0.15 | 0.15 | 0.00 | | Yellow |
| Swamp Loop | 0.25 | 0.25 | 0.00 | | Yellow |
| Rangers Drive Town Forest | | | | | |
| Rangers Dr-Barretts Hill Rd Trail (unnamed) | 0.30 | 0.30 | 0.00 | | |
| Loop Trail (unnamed) | 0.60 | 0.60 | 0.00 | | *Distance approximate |
| Northern spur trail | | | 0.00 | | |

Hudson NH Trails Challenge

[illegible]

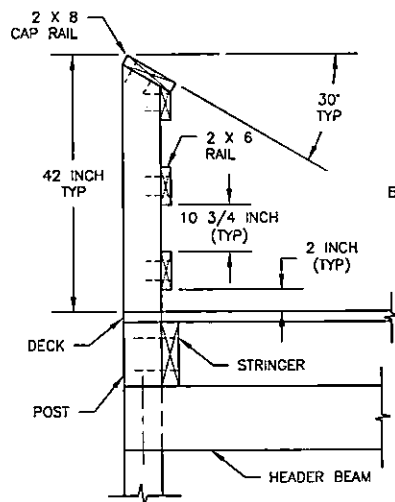
ELEVATED BOARDWALK

| TYPICAL ID | SECTION TYPE | OVERALL WIDTH | SURFACE WIDTH | FOOTING MATERIAL | | | POST/SILLS/BACKWALLS | | | | HEADER BEAM/STRINGERS/DECK/CURB/RAILING SYSTEM | | | COMMENTS |
|------------|--------------|---------------|---------------|------------------|-------|-------|----------------------|----------------------|---------|---------------|--|---------|---------------|----------|
| | | | | TYPE | DEPTH | WIDTH | POST HEIGHT | POST EMBEDMENT DEPTH | SPECIES | PRESERV. TYPE | DECK SIZE | SPECIES | PRESERV. TYPE | |
| SBW-1 | | | | F | | | | | | P | | | P | |
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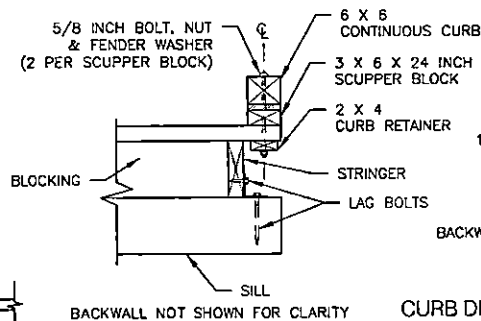
N/A WHEN NOT APPLICABLE

NOTES:

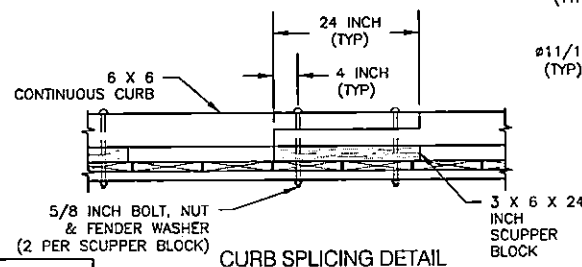
- DESIGN LOAD: 100 PSF PEDESTRIAN LOAD.
- ALL MATERIAL TYPE SHALL BE DOUGLAS FIR OR SOUTHERN PINE NO. 2 OR BETTER AS SPECIFIED IN THE ABOVE TABLE.
- ALL FASTENERS SHALL BE GALVANIZED.
- FASTENERS:
DECKING: 60d 6 INCH RING SHANK NAILS OR DECK SCREWS 2 PER DECK STRINGER CONNECTION.
RAILING: NO. 10 X 4 INCH LONG WOOD SCREWS 2 PER RAIL POST CONNECTION.
STRINGERS & BACKWALLS: 40d 5 INCH LONG RING SHANK NAILS.
- ALTERNATIVE FOR 7/8 BOLTS FOR HEADER BEAM IS BRACKET WITH AN ALLOWABLE LOAD OF 1100 LBS EACH SIDE.



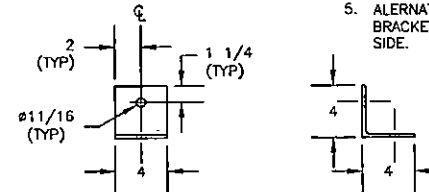
RAIL SYSTEM DETAIL



CURB DETAILS



CURB SPlicing DETAIL



BRACKET DETAIL

| PRESERVATIVE TREATMENT - (REFER TO AWPA USE CATEGORY SYSTEM) | | | |
|--|----------------|--------------|----------|
| PRESERVATIVE TYPE | TREATMENT TYPE | USE CATEGORY | COMMENTS |
| P1 | WB | UC4A | |
| P2 | WB | UC3B | |
| P3 | | | |

TREATMENT TYPE
WB = WATERBORNE
OT = OIL-BORNE

USE CATEGORY
UC3B = ABOVE GROUND - EXPOSED
UC4A = GROUND CONTACT - GENERAL USE
UC4B = GROUND CONTACT - HEAVY DUTY

SHEET 1 OF 4

FOOTING MATERIAL

| TYPE | MATERIAL | GRADATION | COMMENTS |
|------|-----------|-----------|----------|
| FT1 | CONCRETE | | |
| FT2 | AGGREGATE | | |
| FT3 | | | |

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
STANDARD TRAIL PLAN

PROJECT NAME & LOCATION

DRAWING NAME

ELEVATED BOARDWALK

SECTION

938 - BOARDWALKS

TYPICAL ID
EB1

REVISION DATE

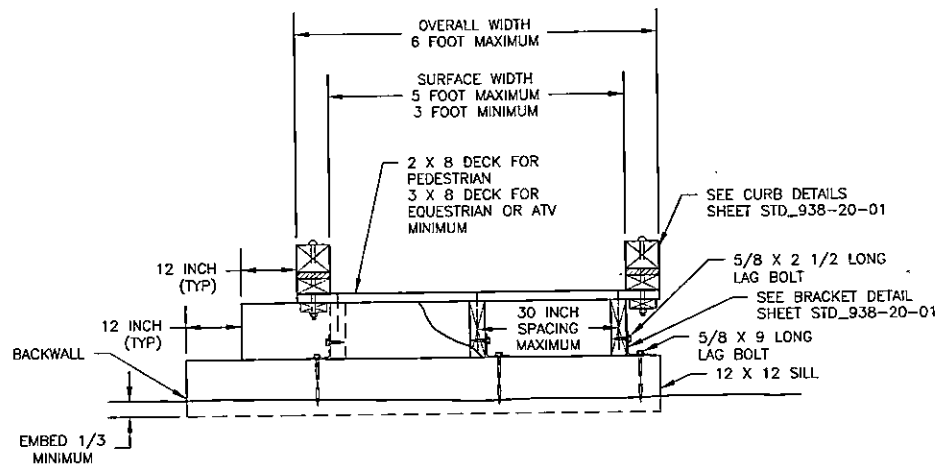
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NO SCALE

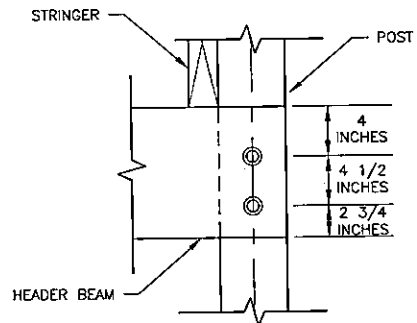
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STD 938-20-01

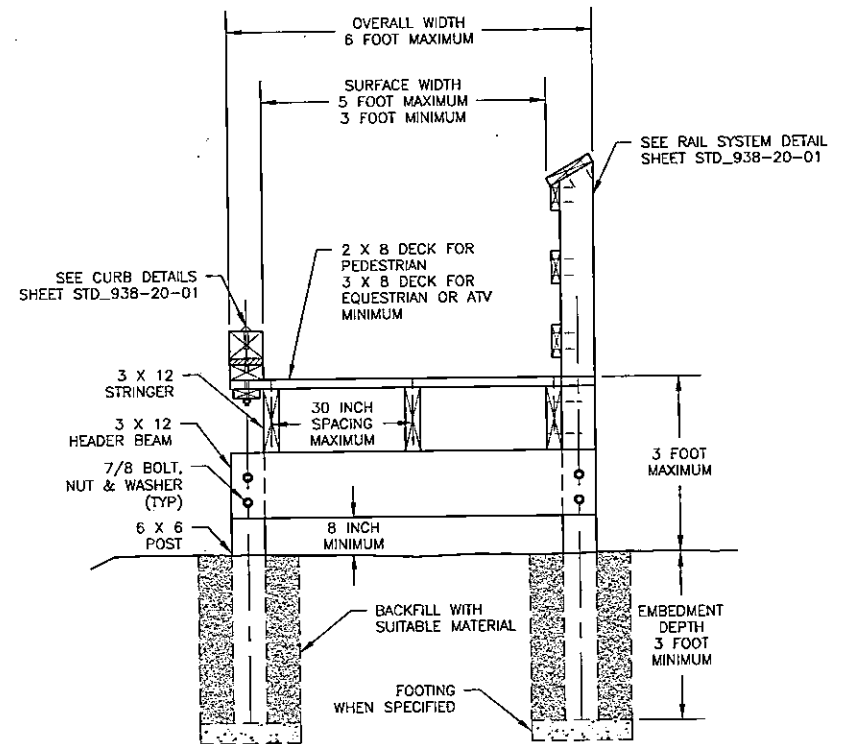
SHEET
OF



A TYPICAL GROUND SECTION
BLOCKING REQUIRED AT EVERY
SUPPORT NOT SHOWN FOR CLARITY



BOLT DETAIL



B TYPICAL ELEVATED
SECTION

LESS THAN 3 FEET WITH CURB
BLOCKING REQUIRED AT EVERY SUPPORT
NOT SHOWN FOR CLARITY

C TYPICAL ELEVATED
SECTION

LESS THAN 3 FEET WITH CURB
BLOCKING REQUIRED AT EVERY SUPPORT
NOT SHOWN FOR CLARITY

SHEET 2 OF 4

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
STANDARD TRAIL PLAN

PROJECT NAME & LOCATION

DRAWING NAME

ELEVATED BOARDWALK

SECTION

938 - BOARDWALKS

TYPICAL ID

EB2

REVISION DATE

XX/XX/XX

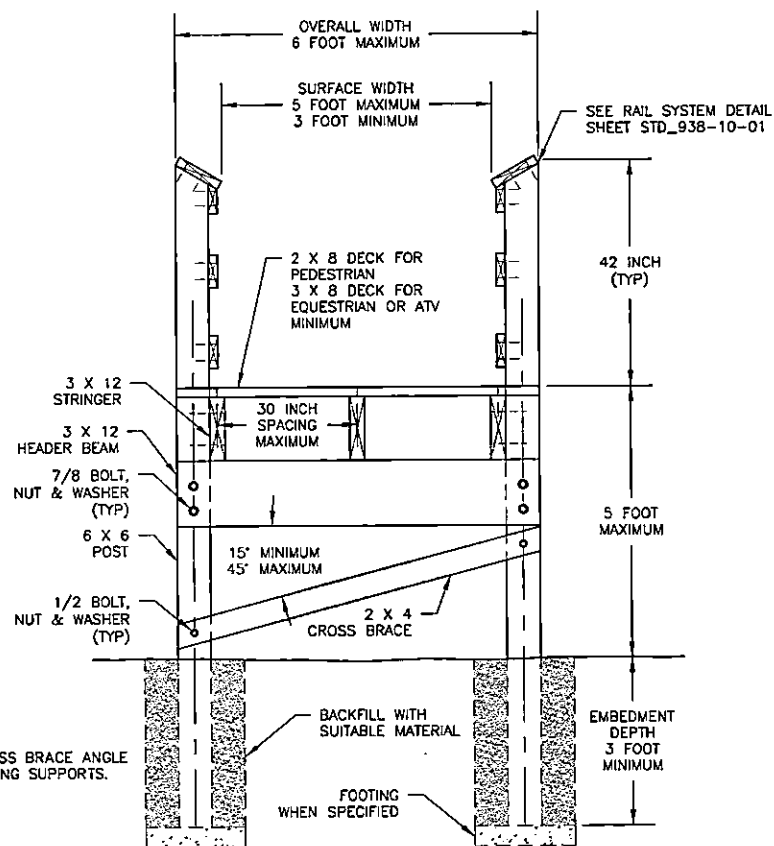
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DRAWING NO.

STD_938-20-02

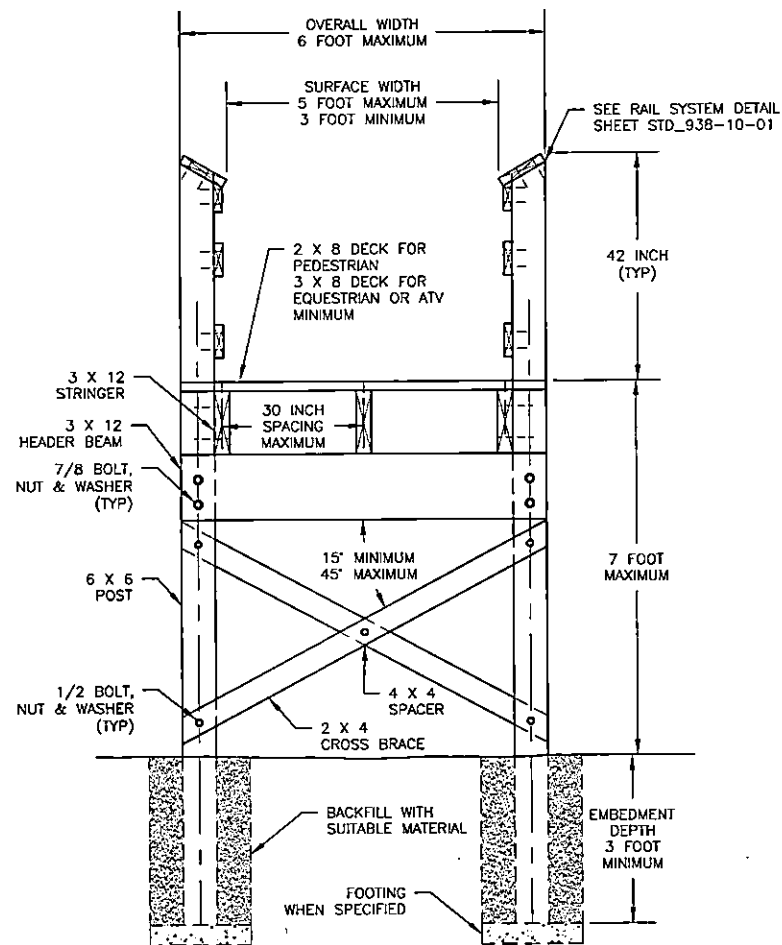
SHEET

OF



D TYPICAL ELEVATED
SECTION

GREATER THAN 3 FEET LESS THAN
5 FEET BLOCKING REQUIRED AT EVERY
SUPPORT NOT SHOWN FOR CLARITY



E TYPICAL ELEVATED
SECTION

GREATER THAN 5 FEET LESS THAN
7 FEET BLOCKING REQUIRED AT EVERY
SUPPORT NOT SHOWN FOR CLARITY

SHEET 3 OF 4

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
STANDARD TRAIL PLAN

PROJECT NAME & LOCATION

DRAWING NAME

ELEVATED BOARDWALK

SECTION

938 - BOARDWALKS

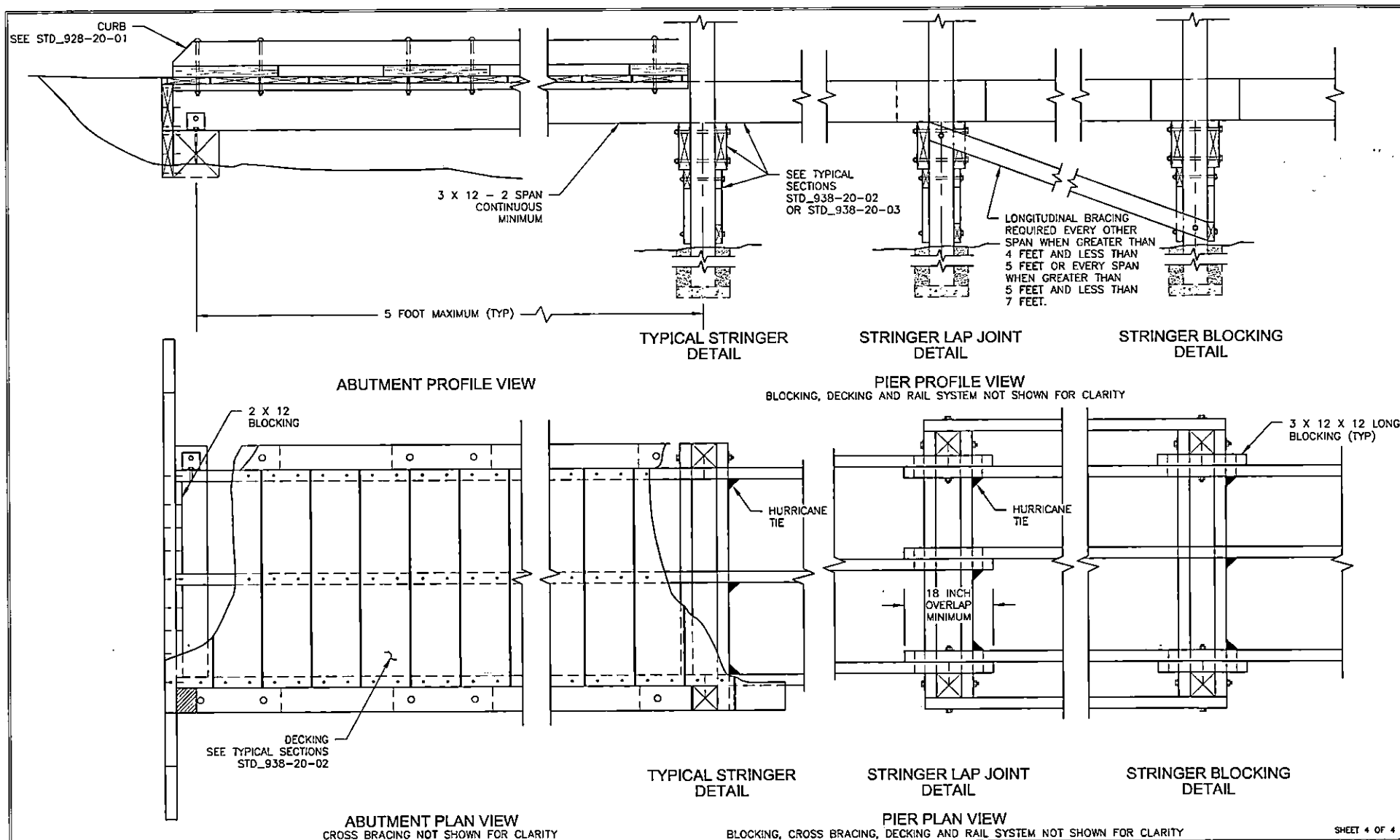
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REVISION DATE
XX/XX/XX

NO SCALE

DRAWING NO.
STD_938-20-03

SHEET
OF
1

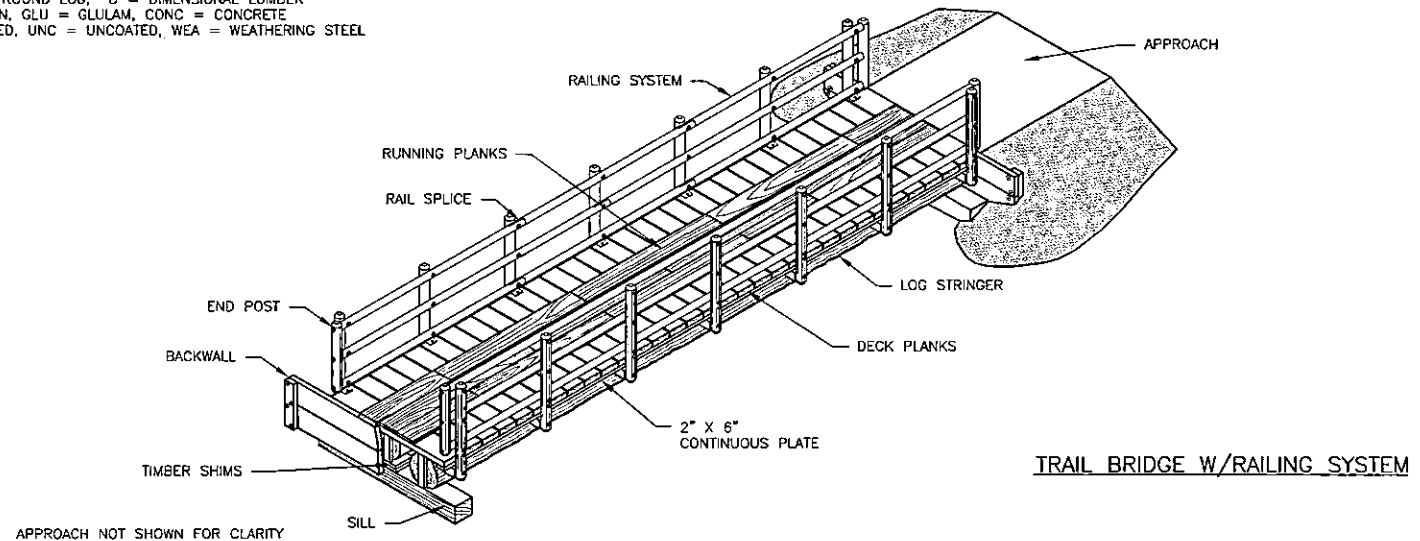


| | | | | | | | | STRINGERS | | | | DECK | | | BACKWALL | | | | | | |
|---------------------|-----------|--------------------|--------------------------------|------------------------------|--------------------------|--------------------|------------------------|-----------|--------|--------------------------------|-----------|------|---------|------|-----------|------|---------|------|-------|-------|-----------|
| STRUCTURE NUMBER | TRAIL NO. | BRIDGE LOCATION | BRIDGE LENGTH OUT-TO-OUT | STRINGER SPAN C-C BRNG | BRIDGE CLEAR WIDTH | PEDESTRIAN LOAD | GROUND SNOW LOAD | SPECIES | NUMBER | MATERIAL SIZE (DIAMETER) | TREATMENT | | SPECIES | SIZE | TREATMENT | TYPE | SPECIES | SIZE | WIDTH | DEPTH | TREATMENT |
| | | | | | | | | | | | YES | NO | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
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NA = NOT APPLICABLE, BACKWALL TYPE: ST= STONE, W= WOOD

| STRUCTURE NUMBER | RAILING SYSTEM/CURB | | | | | RUNNING PLANK | | | | SILL | | | APPROACHES | | | | | HARDWARE | COMMENTS |
|------------------|---------------------|------|--------|---------------|---------------------|---------------|------|-------|---------------------|------|------|-----------|--------------------|-------|---------------|----------------|--------------------|----------|----------|
| | SPECIES | TYPE | HEIGHT | MATERIAL TYPE | TREATMENT YES NO | SPECIES | SIZE | WIDTH | TREATMENT YES NO | TYPE | SIZE | TREATMENT | LENGTH NEAR FAR | WIDTH | MATERIAL TYPE | MATERIAL DEPTH | GEO-SYNTHETIC TYPE | COATING | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
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RAILING SYSTEM/CURB MATERIAL TYPE: R = ROUND LOG, D = DIMENSIONAL LUMBER
 ABUTMENT MATERIAL TYPE: SS = SOLID SAWN, GLU = GLULAM, CONC = CONCRETE
 HARDWARE COATING TYPE: GALV = GALVANIZED, UNC = UNCOATED, WEA = WEATHERING STEEL



APPROACH NOT SHOWN FOR CLARITY

SHEET 1 OF 6

GENERAL NOTES:

SPECIFICATIONS: MATERIALS AND CONSTRUCTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-03) AND STANDARD SPECIFICATIONS FOR CONSTRUCTION OF TRAILS AND TRAIL BRIDGES ON FEDERAL PROJECTS.

LOG MEMBERS: LOGS USED FOR STRINGERS SHALL BE DOUGLAS FIR OR WESTERN LARCH WITH MINIMUM, PEELED, MID-SPAN LOG DIAMETER AS NOTED FOR THE VARIOUS SPANS AND DESIGN LOADING. NATIVE TREES TO BE USED FOR BRIDGE STRINGERS SHALL BE STRAIGHT, SOUND, AND FREE OF DEFECTS AND ROT. STRINGERS SHALL BE CHOSEN FROM TREES WITH RELATIVELY FEW LIMBS, AND HAVE NO KNOT GREATER THAN 3-INCH IN DIAMETER. LOGS SHALL BE DAPPED AT ENDS TO CREATE A LEVEL BEARING SURFACE AT SUPPORTS TAKING CARE TO AVOID OVER CUTTING. HEWN UPPER SURFACE OF LOGS TO PROVIDE A LEVEL TREAD SURFACE REFER TO PLANS FOR HEWN DETAILS.

TIMBER & LUMBER: SOLID SAWN TIMBER MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF THE GRADING RULES AGENCY FOR THE SPECIES, TYPE, AND GRADE SPECIFIED BELOW.

DECK PLANKS, SILLS, AND BACKING PLANKS

- COASTAL REGION DOUGLAS FIR - LARCH ROUGH SAWN NO.1 GRADE, GRADING RULES AGENCY - WWPA, WCLIB

RUNNING PLANKS

- COASTAL REGION DOUGLAS FIR-LARCH ROUGH SAWN NO.2 GRADE, GRADING RULES AGENCY - WWPA, WCLIB

RAILS & POSTS (SEE PROJECT CRITERIA)

SAWN - UNTREATED

- REDWOOD, S4S, NO.1 GRADE GRADING RULES AGENCY - RIS
- WESTERN RED CEDAR, S4S, SELECT STRUCTURAL GRADE GRADING RULES AGENCY - WWPA, WCLIB

SAWN - TREATED

- HEM - FIR/DOUGLAS FIR, S4S, NO.1 GRADE GRADING RULES AGENCY - WWPA, WCLIB
- POLES**
- LODGE POLE PINE, PEELED AND DRIED, GRADING RULES AGENCY - NLGA

TREATMENT: SEE PROJECT CRITERIA FOR MEMBERS IDENTIFIED TO BE TREATED AND FOR TREATMENT TYPE. PRESERVATIVE TREATMENT SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) SPECIFICATIONS USING THE TREATMENT MATERIALS LISTED BELOW. TREATMENT WILL COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF WESTERN WOOD PRESERVERS INSTITUTE (WWPI) "BEST MANAGEMENT PRACTICES FOR THE USE OF TREATED WOOD IN AQUATIC ENVIRONMENTS".

STRINGERS, DECKING, RUNNING PLANKS, & RAILING SYSTEM, IF TREATED

- AWPA USE CATEGORY SYSTEM (U1) FOR USE CATEGORY 3B ABOVE GROUND-EXPOSED (UC3B)
- PENTACHLOROPHENOL IN LIGHT OIL (TYPE C SOLVENT)
- COPPER NAPHTHENATE (CuN) IN LIGHT OIL (TYPE C SOLVENT)

SILLS, BACKING PLANKS, CRIBS, & TIMBER WALLS, IF TREATED

- AWPA USE CATEGORY SYSTEM (U1) FOR USE CATEGORY 4B GROUND CONTACT-HEAVY DUTY (UC4B)
- PENTACHLOROPHENOL IN HEAVY OIL (TYPE A SOLVENT)
- COPPER NAPHTHENATE (CuN) IN HEAVY OIL (TYPE A SOLVENT)

FIELD TREATMENT: COPPER NAPHTHENATE (2% SOLUTION) SHALL BE FURNISHED FOR FIELD TREATING OF WOOD. ALL ABRASIONS AND FIELD CUTS - APPROVED BY THE C.O.R. - SHALL BE CAREFULLY TRIMMED AND GIVEN THREE BRUSH COATS OF THE FIELD TREATMENT SOLUTION. WHERE APPROVED, FIELD DRILLING OF BOLT, SCREW OR NAIL HOLES IS REQUIRED, THE HOLES SHALL BE FILLED WITH PRESERVATIVE PRIOR TO INSERTING THE FASTENERS.

THE ENDS OF UNTREATED LOG STRINGERS (REFER TO THE PROJECT DESIGN CRITERIA), SHALL ALSO RECEIVE THREE BRUSH COATS OF THE FIELD TREATMENT PRIOR TO INSTALLATION OF THE BACKING PLANKS.

HARDWARE AND STRUCTURAL STEEL: SEE PROJECT DESIGN CRITERIA FOR STEEL HARDWARE FINISH. GALVANIZED OR UNFINISHED HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M270, GRADE 36, WITH NUTS AND BOLTS CONFORMING TO ASTM A307, GRADE A. WEATHERING STEEL AND HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M270, GRADE 50W, WITH BOLTS AND NUTS CONFORMING TO ASTM A325, TYPE 3. USE MALLEABLE IRON WASHERS AGAINST WOOD UNLESS OTHERWISE NOTED.

WHEN STRUCTURAL STEEL IS TO BE WELDED, THE WELDING PROCEDURE SHALL BE IN ACCORDANCE WITH AWS D1.1 AND SHALL BE SUITABLE FOR THE GRADE OF STEEL AND INTENDED USE OR SERVICE.

FABRICATION: SUBMIT SHOP DRAWINGS FOR ALL MANUFACTURED BRIDGE COMPONENTS (EXCEPT TIMBER RUNNING PLANKS). SHOW ALL DIMENSIONS AND FABRICATION DETAILS FOR ALL CUT OR BORED TIMBER. FIELD DRILLING OF HOLES SHALL NOT BE ALLOWED UNLESS OTHERWISE NOTED ON THE PLANS.

TREES TO BE USED FOR STRINGERS SHALL BE PEELED AND THEN HAVE AN ADDITIONAL 1/2-INCH OF THE OUTER SAPWOOD REMOVED PRIOR TO BEING USED FOR STRINGERS.

SHEET 2 OF 6

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
STANDARD TRAIL PLAN

PROJECT NAME & LOCATION

DRAWING NAME

**MULTIPLE LOG
STRINGER TRAIL BRIDGE**

REVISION DATE

DRAWING NO.

STD_961-20-02a

SECTION

961 - LOG STRINGER TRAIL BRIDGE

TYPICAL ID

MLS

NOT TO SCALE

SHEET

OF

GENERAL NOTES:

SPECIFICATIONS: MATERIALS AND CONSTRUCTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-03) AND STANDARD SPECIFICATIONS FOR CONSTRUCTION OF TRAILS AND TRAIL BRIDGES ON FEDERAL PROJECTS.

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TIMBER & LUMBER: SOLID SAWN TIMBER MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF THE GRADING RULES AGENCY FOR THE SPECIES, TYPE, AND GRADE SPECIFIED BELOW.

DECK PLANKS, SILLS, AND BACKING PLANKS

— SOUTHERN PINE NO.2 GRADE, GRADING RULES AGENCY — SPIB

RUNNING PLANKS

— SOUTHERN PINE NO.2 GRADE, GRADING RULES AGENCY — SPIB

RAILS & POSTS (SEE PROJECT CRITERIA)

SAWN — UNTREATED

— BALDOCYPRESS, S4S, NO.1 GRADE GRADING RULES AGENCY — SPIB

— WHITE OAK, S4S, SELECT STRUCTURAL GRADE GRADING RULES AGENCY — NELMA

SAWN — TREATED

— SOUTHERN PINE, S4S, NO. 2 GRADE GRADING RULES AGENCY — SPIB

POLES

— SOUTHERN PINE, PEELED AND DRIED, GRADING RULES AGENCY — SPIB

TREATMENT: SEE PROJECT CRITERIA FOR MEMBERS IDENTIFIED TO BE TREATED AND FOR TREATMENT TYPE. PRESERVATIVE TREATMENT SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) SPECIFICATIONS USING THE TREATMENT MATERIALS LISTED BELOW. TREATMENT WILL COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF WESTERN WOOD PRESERVERS INSTITUTE (WWPI) "BEST MANAGEMENT PRACTICES FOR THE USE OF TREATED WOOD IN AQUATIC ENVIRONMENTS".

STRINGERS, DECKING, RUNNING PLANKS, & RAILING SYSTEM, IF TREATED

— AWPA USE CATEGORY SYSTEM (U1) FOR USE CATEGORY 3B ABOVE GROUND-EXPOSED (UC3B)

— PENTACHLOROPHENOL IN LIGHT OIL (TYPE C SOLVENT)

— COPPER NAPHTHENATE (CuN) IN LIGHT OIL (TYPE C SOLVENT)

SILLS, BACKING PLANKS, CRIBS, & TIMBER WALLS, IF TREATED

— AWPA USE CATEGORY SYSTEM (U1) FOR USE CATEGORY 4B GROUND CONTACT-HEAVY DUTY (UC4B)

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THE ENDS OF UNTREATED LOG STRINGERS (REFER TO THE PROJECT DESIGN CRITERIA), SHALL ALSO RECEIVE THREE BRUSH COATS OF THE FIELD TREATMENT PRIOR TO INSTALLATION OF THE BACKING PLANKS.

HARDWARE AND STRUCTURAL STEEL: SEE PROJECT DESIGN CRITERIA FOR STEEL HARDWARE FINISH. GALVANIZED OR UNFINISHED HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M270, GRADE 36, WITH NUTS AND BOLTS CONFORMING TO ASTM A307, GRADE A. WEATHERING STEEL AND HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M270, GRADE 50W, WITH BOLTS AND NUTS CONFORMING TO ASTM A325, TYPE 3. USE MALLEABLE IRON WASHERS AGAINST WOOD UNLESS OTHERWISE NOTED.

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FABRICATION: SUBMIT SHOP DRAWINGS FOR ALL MANUFACTURED BRIDGE COMPONENTS (EXCEPT TIMBER RUNNING PLANKS). SHOW ALL DIMENSIONS AND FABRICATION DETAILS FOR ALL CUT OR BORED TIMBER. FIELD DRILLING OF HOLES SHALL NOT BE ALLOWED UNLESS OTHERWISE NOTED ON THE PLANS.

TREES TO BE USED FOR STRINGERS SHALL BE PEELED AND THEN HAVE AN ADDITIONAL 1/2-INCH OF THE OUTER SAPWOOD REMOVED PRIOR TO BEING USED FOR STRINGERS.

SHEET 2 OF 6



PROJECT NAME & LOCATION

DRAWING NAME

**MULTIPLE LOG
STRINGER TRAIL BRIDGE**

REVISION DATE

DRAWING NO.

STD_961-20-02b

SECTION

961 - LOG STRINGER TRAIL BRIDGE

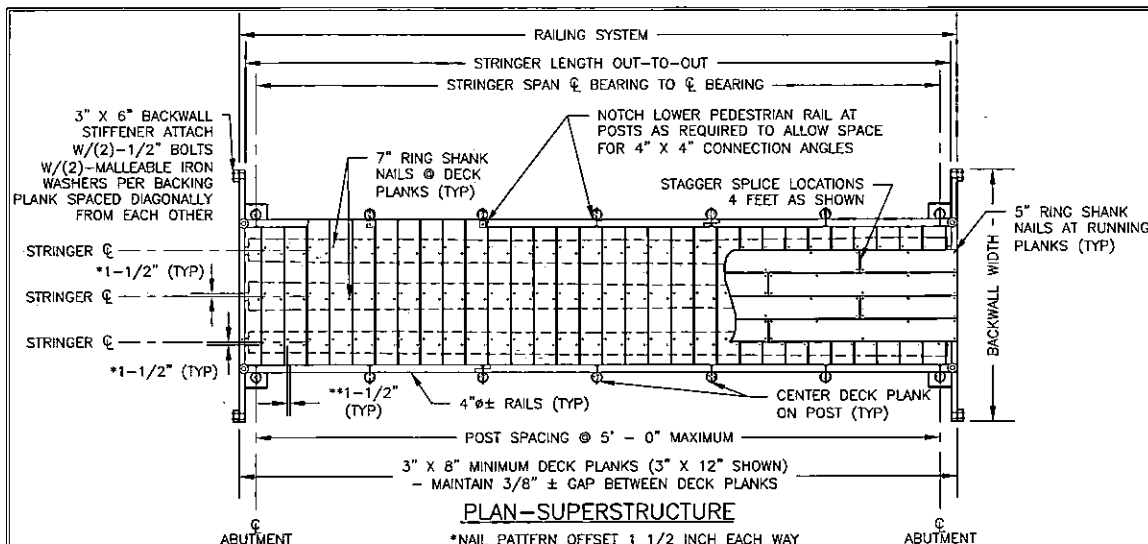
TYPICAL ID

MLS

NOT TO SCALE

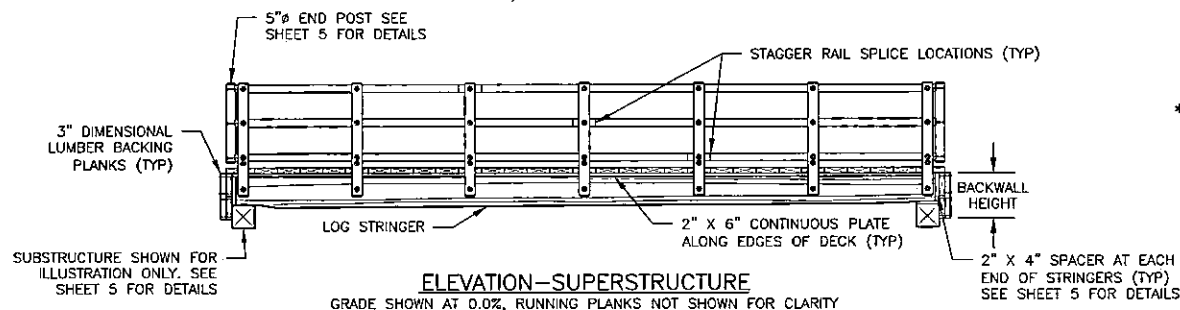
SHEET

OF



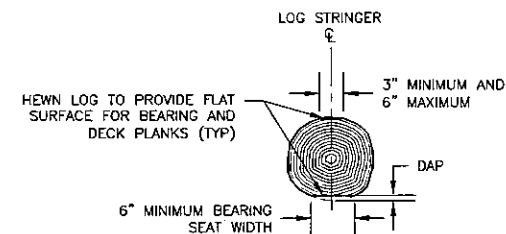
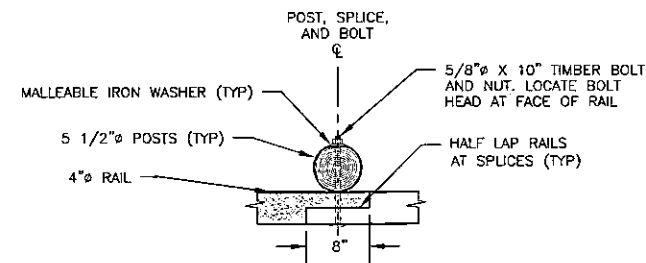
*NAIL PATTERN OFFSET 1 1/2 INCH EACH WAY FROM THE ϕ OF THE STRINGER

**NAIL 1 1/2-INCHES FROM EDGES OF BOARD



NOTES:

1. SPLICE RAILS AT POSTS. RAILS SHALL BE CONTINUOUS FOR A MINIMUM OF TWO POST SPACES. ALTERNATE RAIL SPLICES AT POSTS.
2. FASTEN RUNNING PLANKS TO DECK WITH 4d 5-INCH LONG RING SHANK NAILS AT 24-INCH SPACING. ALTERNATE SIDES WITH TWO AT EACH END. SEE PLAN-SUPERSTRUCTURE FOR LAYOUT TYPICAL.
3. THE MINIMUM STRINGER DIAMETER FOR BRIDGES WITH PEDESTRIAN RAILINGS SHALL BE 11-INCHES. BRIDGES WITH STRINGER DIAMETERS LESS THAN 11-INCHES SHALL HAVE CURBS ONLY. SEE SHEET 4 FOR DETAILS.
4. FASTEN DECK PLANKS TO STRINGERS WITH TWO ROWS 5/16-INCH DIAMETER X 7-INCH RING SHANK NAILS PER PLANK AT EACH STRINGER. ALTERNATE SIDES.



MAXIMUM DEPTH OF DAP SHALL NOT EXCEED 10% OF LOG DIAMETER OR 2-INCH

*TABLE-1: ROUND LOG STRINGER PEELED SIZE MID SPAN DIAMETER REQUIREMENTS - LRFD

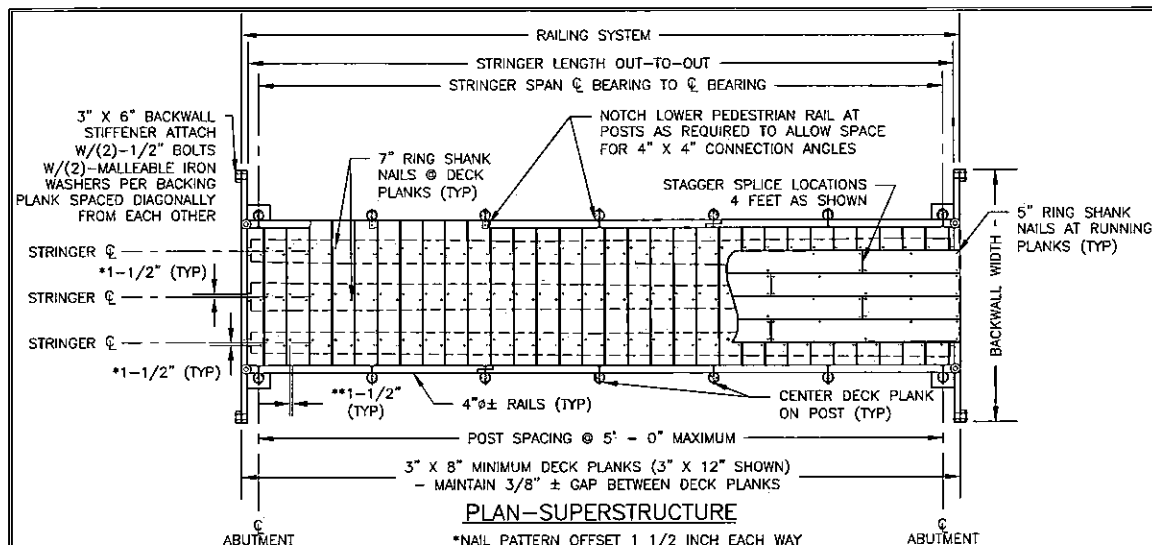
| **STRINGER SPAN (FEET) | TIMBER SPECIES - DOUGLAS FIR (COASTAL OR INTERIOR NORTH) AND WESTERN LARCH | | | | |
|------------------------|--|-----|------------------|-----|-----|
| | DESIGN LOADING IN POUNDS PER SQUARE FOOT | | | | |
| | PEDESTRIAN LOAD | | GROUND SNOW LOAD | | |
| | ***65 | 90 | 120 | 150 | 200 |
| 10 | 8" | 8" | 8" | 8" | 8" |
| 15 | 9" | 9" | 9" | 9" | 10" |
| 20 | 11" | 11" | 11" | 11" | 12" |
| 25 | 13" | 13" | 13" | 13" | 14" |
| 30 | 15" | 15" | 15" | 15" | 16" |
| 35 | 17" | 17" | 17" | 17" | 18" |
| 40 | 19" | 19" | 19" | 19" | 21" |
| 45 | 21" | 21" | 21" | 21" | 23" |

*STRINGER SIZE SHALL BE THE LARGER OF THE PEDESTRIAN OR GROUND SNOW LOAD SIZE REQUIRED FOR THE SITE CONDITIONS

**STRINGER LENGTH EQUAL TO STRINGER SPAN PLUS ONE FOOT

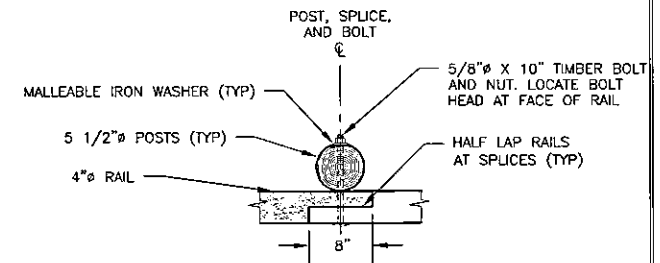
***REQUIRES REGIONAL BRIDGE ENGINEER APPROVAL

SHEET 3 OF 6

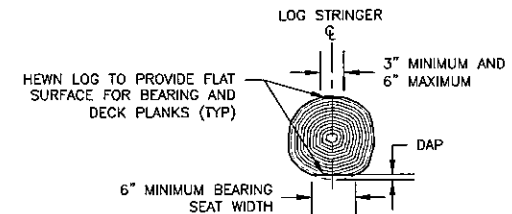


*NAIL PATTERN OFFSET 1 1/2 INCH EACH WAY FROM THE ϕ OF THE STRINGER

**NAIL 1 1/2-INCHES FROM EDGES OF BOARD



PLAN - POLE RAIL SPLICE DETAIL



LOG STRINGER DAPPING

MAXIMUM DEPTH OF DAP SHALL NOT EXCEED 10% OF LOG DIAMETER OR 2-INCH

*TABLE-1: ROUND LOG STRINGER PEELED SIZE MID SPAN DIAMETER REQUIREMENTS - LRFD

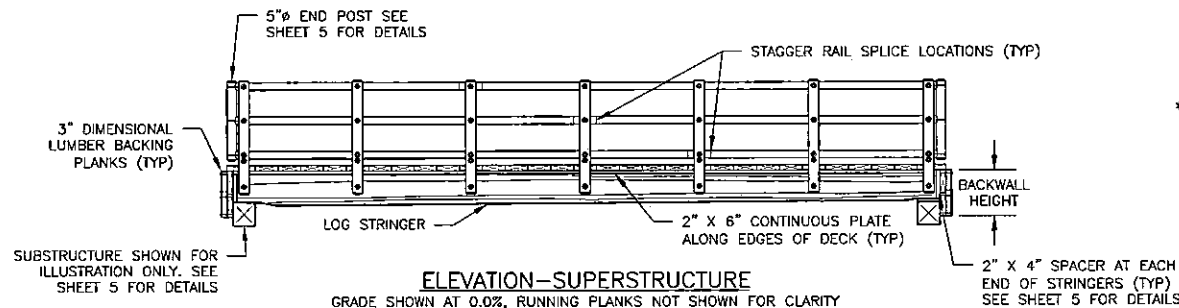
| **STRINGER SPAN (FEET) | TIMBER SPECIES - SOUTHERN PINE | | | | |
|------------------------|--|--------|------|------|-----|
| | DESIGN LOADING IN POUNDS PER SQUARE FOOT | | | | |
| | PEDESTRIAN LOAD | GROUND | SNOW | LOAD | |
| | ***65 | 90 | 120 | 150 | 200 |
| 10 | 8" | 8" | 8" | 8" | 8" |
| 15 | 9" | 9" | 9" | 9" | 10" |
| 20 | 11" | 11" | 11" | 12" | 12" |
| 25 | 13" | 13" | 13" | 14" | 15" |
| 30 | 15" | 16" | 15" | 16" | 17" |
| 35 | 17" | 18" | 17" | 18" | 19" |
| 40 | 19" | 20" | 19" | 20" | 21" |
| 45 | 21" | 22" | 21" | 22" | 23" |

*STRINGER SIZE SHALL BE THE LARGER OF THE PEDESTRIAN OR GROUND SNOW LOAD SIZE REQUIRED FOR THE SITE CONDITIONS

**STRINGER LENGTH EQUAL TO STRINGER SPAN PLUS ONE FOOT

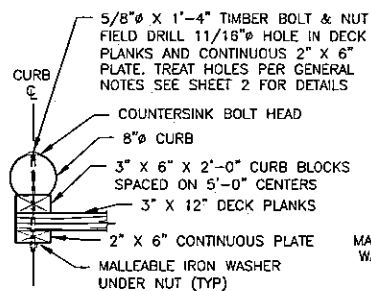
***REQUIRES REGIONAL BRIDGE ENGINEER APPROVAL

SHEET 3 OF 5

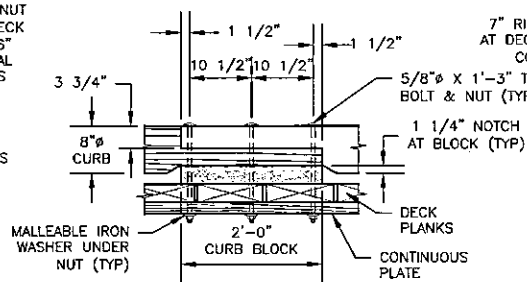


NOTES:

- SPLICE RAILS AT POSTS. RAILS SHALL BE CONTINUOUS FOR A MINIMUM OF TWO POST SPACES. ALTERNATE RAIL SPLICES AT POSTS.
- FASTEN RUNNING PLANKS TO DECK WITH 40d 5-INCH LONG RING SHANK NAILS AT 24-INCH SPACING. ALTERNATE SIDES WITH TWO AT EACH END. SEE PLAN-SUPERSTRUCTURE FOR LAYOUT TYPICAL.
- THE MINIMUM STRINGER DIAMETER FOR BRIDGES WITH PEDESTRIAN RAILINGS SHALL BE 11-INCHES. BRIDGES WITH STRINGER DIAMETERS LESS THAN 11-INCHES SHALL HAVE CURBS ONLY. SEE SHEET 4 FOR DETAILS.
- FASTEN DECK PLANKS TO STRINGERS WITH TWO ROWS 5/16-INCH DIAMETER X 7-INCH RING SHANK NAILS PER PLANK AT EACH STRINGER. ALTERNATE SIDES.

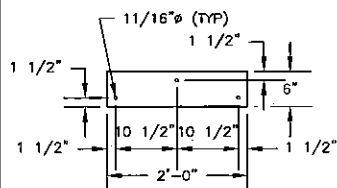


TYPICAL SECTION LOG CURB

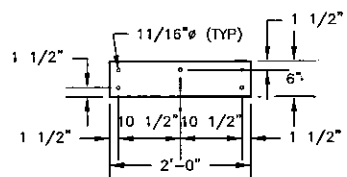


ELEVATION CONNECTION AT CURB SPLICE
CONNECTION SIMILAR AT TYPICAL CURB BLOCK

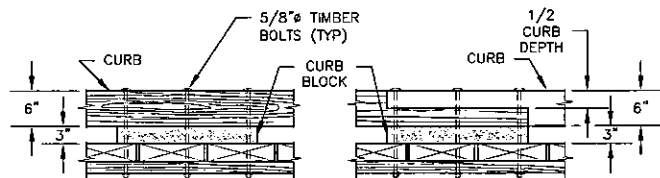
LOG CURB CONNECTION DETAILS



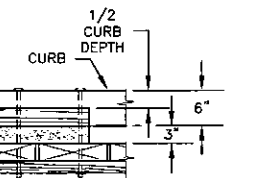
CURB BLOCK PLAN



CURB BLOCK PLAN AT SPLICE

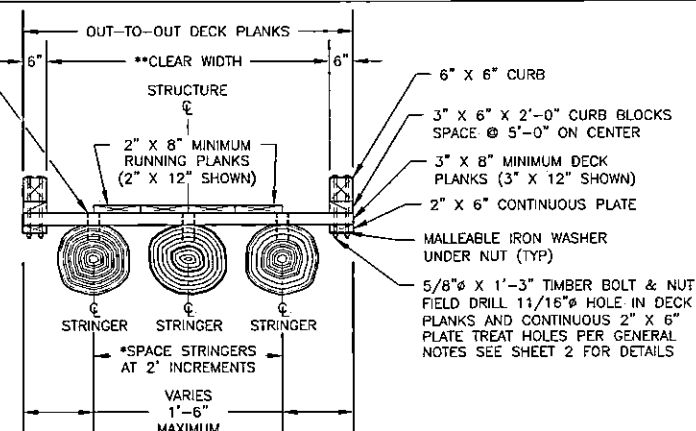


ELEVATION
TYPICAL CONNECTION



ELEVATION
CONNECTION AT SPLICE

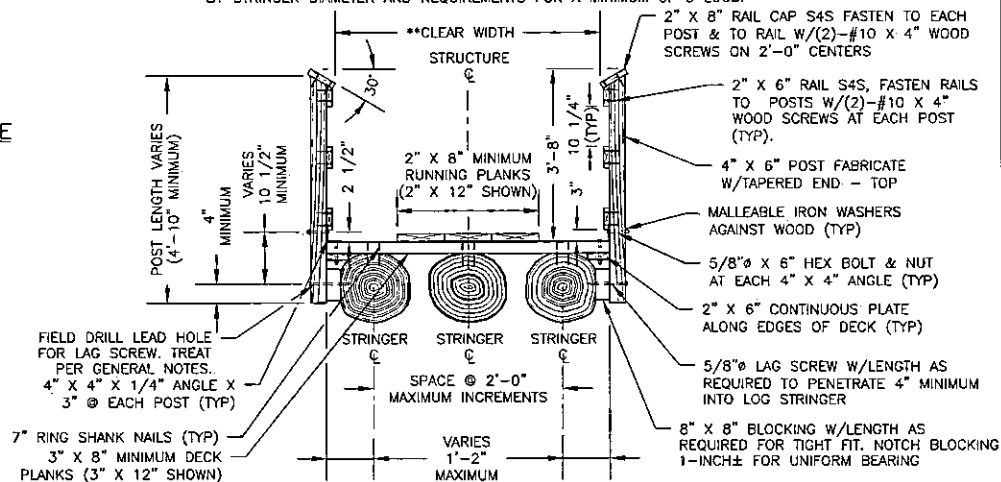
SOLID SAWN CURB CONNECTION DETAILS



DECK SECTION W/CURBS

*MINIMUM NUMBER OF STRINGERS IS 3.

**MINIMUM CLEAR WIDTH (INSIDE FACE TO INSIDE FACE) MAY BE CONTROLLED BY STRINGER DIAMETER AND REQUIREMENTS FOR A MINIMUM OF 3 LOGS.



DECK SECTION W/SAWN RAILING SYSTEM

NOTCH LOWER 2" X 6" PEDESTRIAN RAILING SYSTEMS AT POST TO ALLOW SPACE FOR 4-INCH X 4-INCH CONNECTION ANGLES

SHEET 4 OF 6

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

STANDARD TRAIL PLAN

PROJECT NAME & LOCATION

DRAWING NAME

**MULTIPLE LOG
STRINGER TRAIL BRIDGE**

SECTION

961 - LOG STRINGER TRAIL BRIDGE

TYPICAL ID

MLS

REVISION DATE

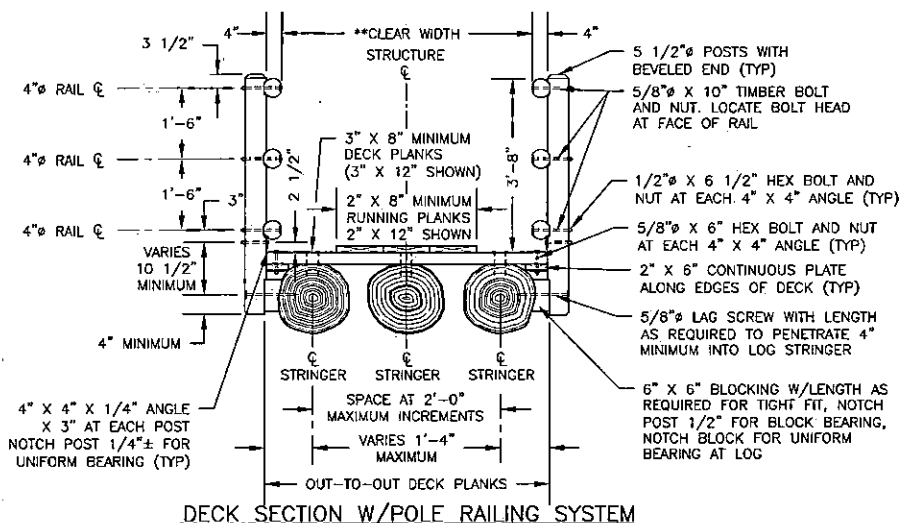
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DRAWING NO.

STD_961-20-04

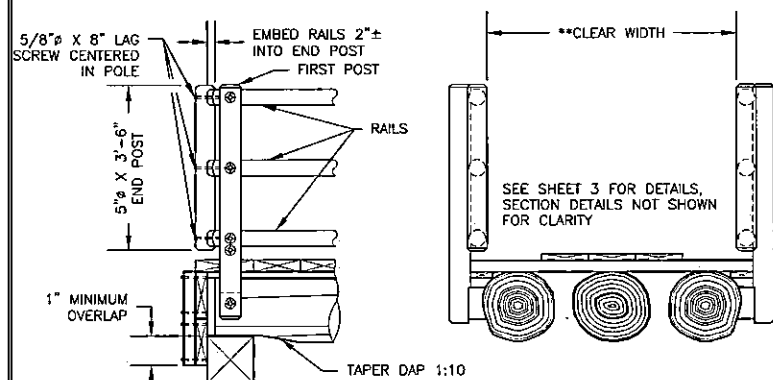
SHEET

OF



DECK SECTION W/POLE RAILING SYSTEM

**MINIMUM CLEAR WIDTH (INSIDE FACE TO INSIDE FACE) IS CONTROLLED BY END POSTS REFER TO TYPICAL END POST CONNECTION DETAILS ON THIS SHEET.



ELEVATION-END POST END VIEW-DECK SECTION W/END POSTS
TYPICAL END POST CONNECTION DETAILS

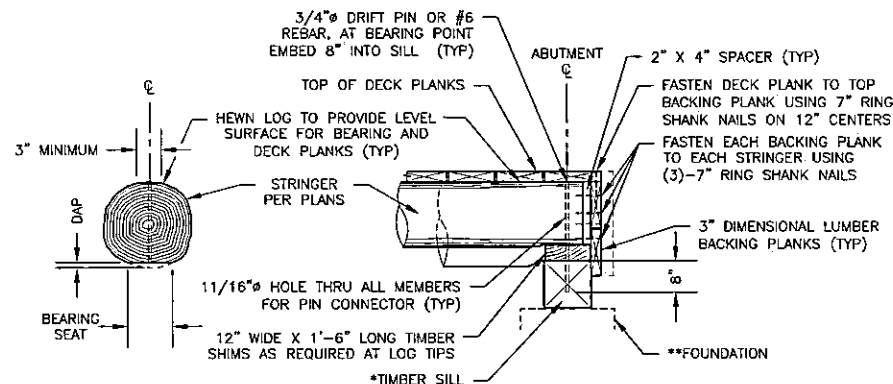
NOTES:

SPECIFICATIONS: MATERIALS AND CONSTRUCTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-03) AND STANDARD SPECIFICATIONS FOR CONSTRUCTION OF TRAILS AND TRAIL BRIDGES ON FEDERAL PROJECTS.

HARDWARE AND STRUCTURAL STEEL: SEE SUPERSTRUCTURE DRAWINGS FOR PROJECT DESIGN CRITERIA AND GENERAL NOTES.

TREATED TIMBER & LUMBER: REFER TO THE GENERAL NOTES ON THE SUBSTRUCTURE DRAWINGS FOR TREATED TIMBER & LUMBER SPECIFICATIONS AND FIELD TREATING OF WOOD.

LAG SCREW INSTALLATION: PRE-BORE LAG SCREW HOLES USING TWO DIAMETERS, ONE FOR THE SHANK AND ONE FOR THE THREADS. THE LEAD HOLE FOR THE SHANK IS TO BE 1/16-INCH LARGER THAN THE SHANK DIAMETER AND IS TO BE BORED TO THE DEPTH OF PENETRATION OF THE SHANK. THE LEAD HOLE FOR THE THREADED PORTION IS TO BE 70% OF THE BOLT DIAMETER AS SHOWN ON THE PLANS AND IS TO BE BORED AT LEAST TO THE LENGTH OF THE THREADS. DO NOT DRIVE LAG SCREWS WITH A HAMMER.



LOG STRINGER DAPPING

MAXIMUM DEPTH OF DAP SHALL NOT EXCEED 10 PERCENT OF LOG DIAMETER OR 2-INCHES

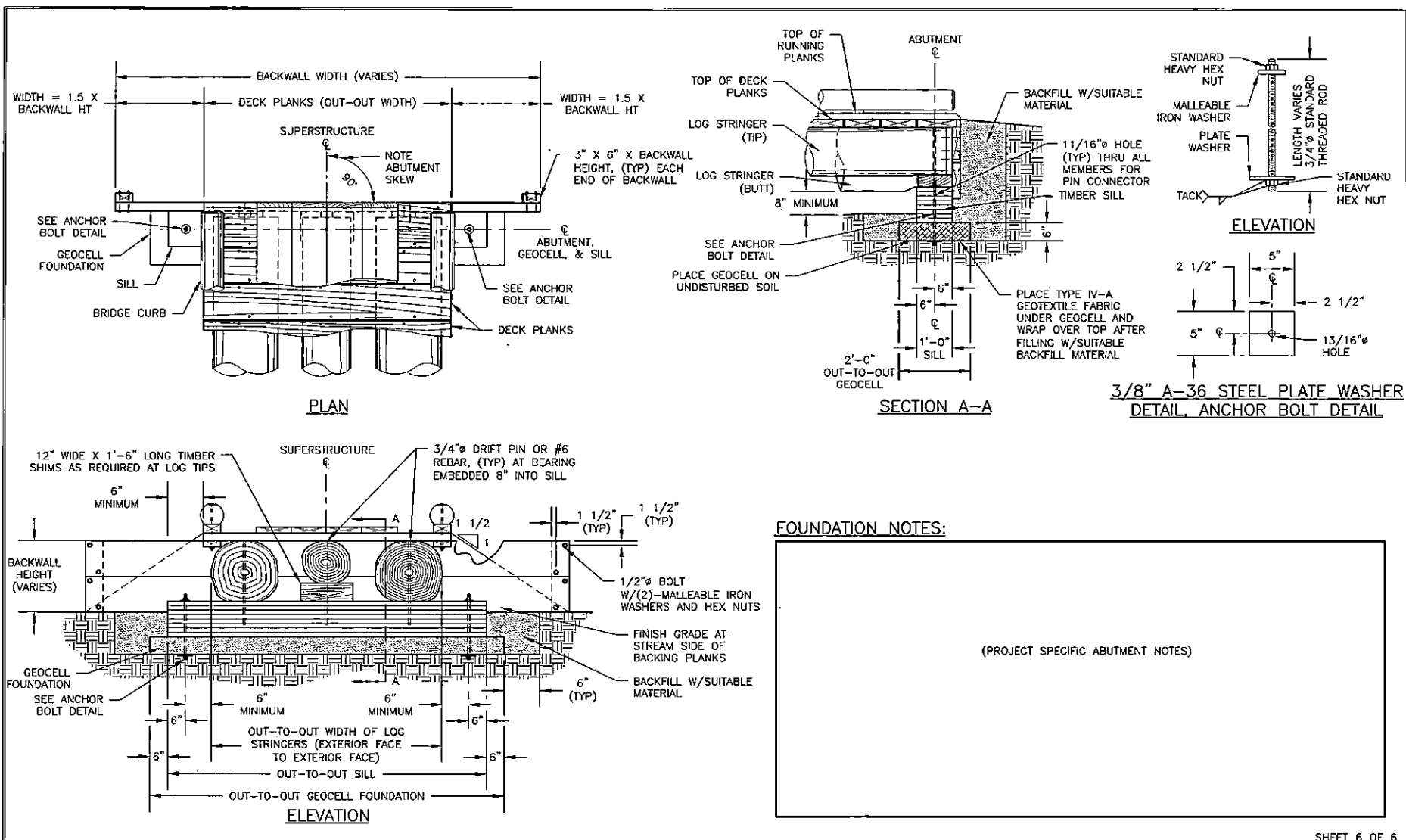
ELEVATION

*TIMBER SILL CAN BE EITHER 12" X 12" SOLID SAWN 10 3/4" X 12" GLUE-LAMINATED, BUILT-UP 3" X 12", 4" X 12", & 6" X 12" TREATED MEMBERS.

**SEE STANDARD DRAWINGS 965-10, 965-20, 965-30, & 965-40 FOR FOUNDATION ALTERNATIVES

LOG STRINGER BRIDGE ABUTMENT CONNECTION DETAILS

SHEET 5 OF 6



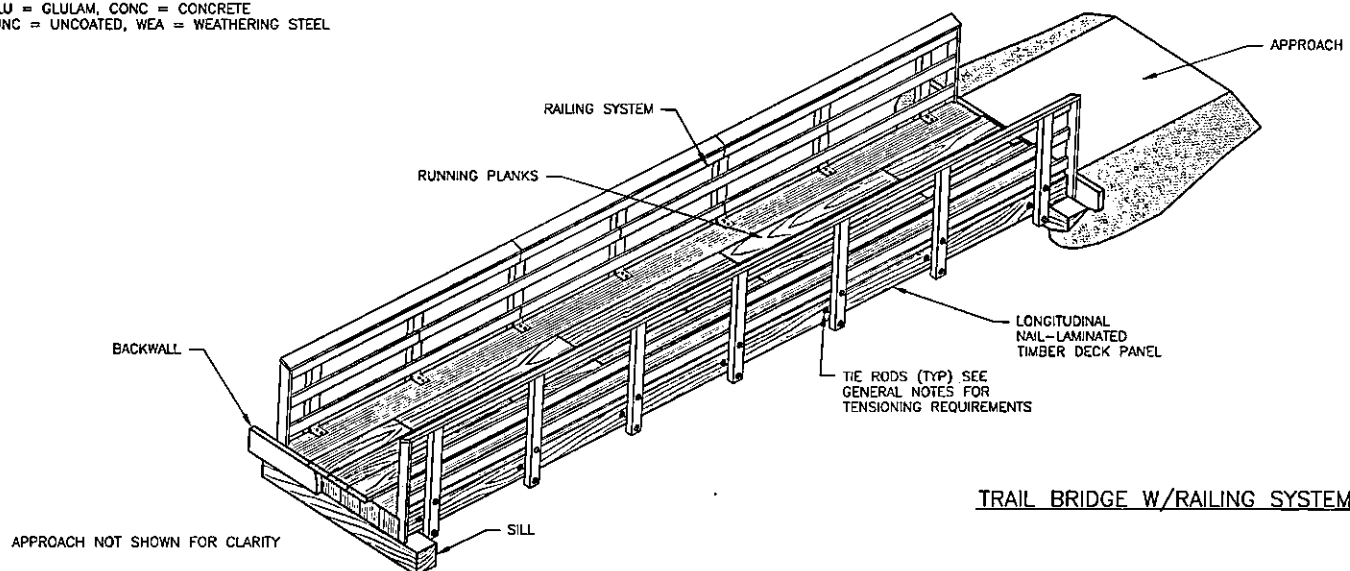
SHEET 6 OF 6

| STRUCTURE NUMBER | TRAIL NO. | BRIDGE LOCATION | BRIDGE LENGTH OUT-TO-OUT | DECK PANEL SPAN C-C BRNG | BRIDGE CLEAR WIDTH | PEDESTRIAN LOAD | GROUND SNOW LOAD | DECK PANELS | | | | BACKWALL | | | | | | COMMENTS |
|------------------|-----------|-----------------|-----------------------------|--------------------------------|-----------------------|--------------------|------------------------|-------------|--------|------------------|-----------|----------|---------|------|-------|--------|-----------|----------|
| | | | | | | | | SPECIES | NUMBER | MATERIAL SIZE | TREATMENT | TYPE | SPECIES | SIZE | WIDTH | HEIGHT | TREATMENT | |
| | | | | | | | | | | | | | | | | | | |
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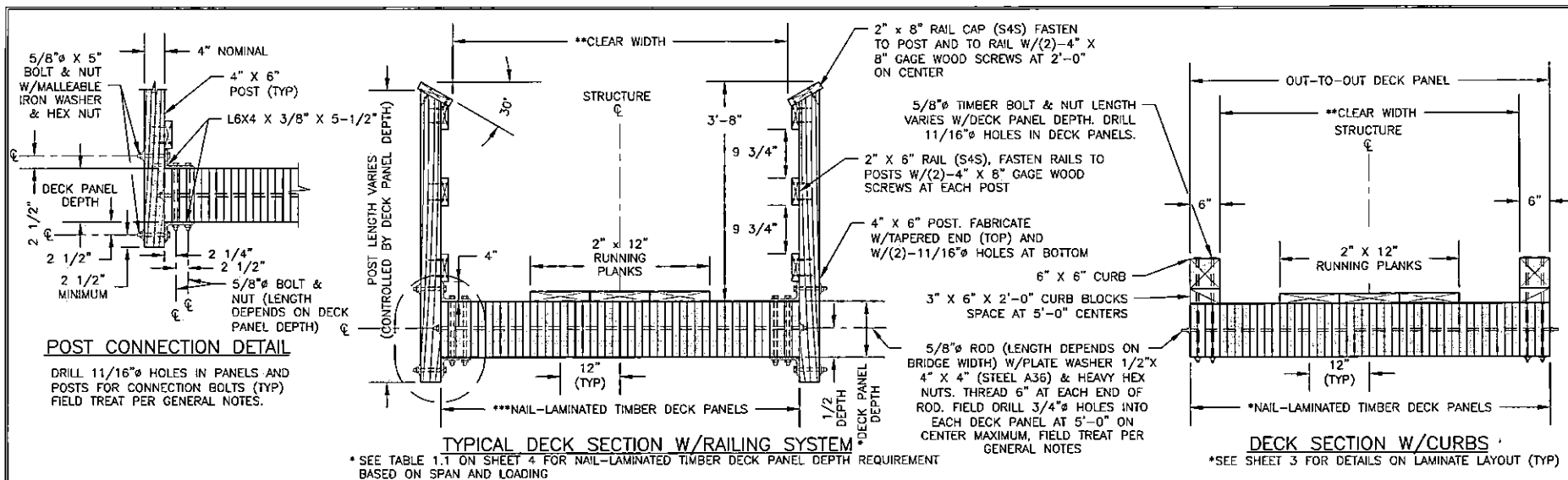
NA = NOT APPLICABLE

| STRUCTURE NUMBER | RAILING SYSTEM/CURB | | | | | | RUNNING PLANK | | | | | SILL | | | APPROACHES | | | | | | HARDWARE |
|---------------------|---------------------|------|--------|------------------|-----------|----|---------------|------|-------|-----------|----|------|------|-----------|------------|-----|-------|------------------|-------------------|---------------------------|----------|
| | SPECIES | TYPE | HEIGHT | MATERIAL TYPE | TREATMENT | | SPECIES | SIZE | WIDTH | TREATMENT | | TYPE | SIZE | TREATMENT | LENGTH | | WIDTH | MATERIAL TYPE | MATERIAL DEPTH | GEO— SYNTHETIC TYPE | COATING |
| | | | | | YES | NO | | | | YES | NO | | | | NEAR | FAR | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
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ABUTMENT MATERIAL TYPE: SS = SOLID SAWN, GLU = GLULAM, CONC = CONCRETE
HARDWARE COATING TYPE: GALV = GALVANIZED, UNC = UNCOATED, WEA = WEATHERING STEEL



SHEET 1 OF 5



GENERAL NOTES:

SPECIFICATIONS: MATERIALS AND CONSTRUCTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-03) AND STANDARD SPECIFICATIONS FOR CONSTRUCTION OF TRAILS AND TRAIL BRIDGES ON FEDERAL PROJECTS.

TIMBER & LUMBER: SOLID SAWN TIMBER MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF THE GRADING RULES AGENCY FOR THE SPECIES, TYPE, AND GRADE SPECIFIED BELOW.

LAMINATIONS

- COASTAL REGION DOUGLAS FIR - LARCH OR HEM - FIR SURFACED S4S, NO. 1 GRADE GRADING RULES AGENCY - WWPA, WCLIB

CURB MEMBERS, SILLS, AND BACKING PLANKS RUNNING PLANKS

- COASTAL REGION DOUGLAS FIR-LARCH ROUGH SAWN NO.1 GRADE, GRADING RULES AGENCY - WWPA, WCLIB
- COASTAL REGION DOUGLAS FIR-LARCH ROUGH SAWN NO.2 GRADE, GRADING RULES AGENCY - WWPA, WCLIB

RAILS & POSTS (SEE PROJECT CRITERIA)

UNTREATED

- REDWOOD, S4S, NO.1 GRADE GRADING RULES AGENCY - RIS
- WESTERN RED CEDAR, S4S, SELECT STRUCTURAL GRADE GRADING RULES AGENCY - WWPA, WCLIB

TREATED

- HEM-FIR/DOUGLAS FIR, S4S, NO.1 GRADE GRADING RULES AGENCY - WWPA, WCLIB

TREATMENT: SEE PROJECT CRITERIA FOR MEMBERS IDENTIFIED TO BE TREATED AND FOR TREATMENT TYPE. PRESERVATIVE TREATMENT SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) SPECIFICATIONS USING THE TREATMENT MATERIALS LISTED BELOW. TREATMENT WILL COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF WESTERN WOOD PRESERVERS INSTITUTE (WWPI) "BEST MANAGEMENT PRACTICES FOR THE USE OF TREATED WOOD IN AQUATIC ENVIRONMENTS".

LAMINATIONS, RUNNING PLANKS, & RAILING SYSTEM, IF TREATED

- AWPA USE CATEGORY SYSTEM (U1) FOR USE CATEGORY 3B ABOVE GROUND-EXPOSED (UC3B)
- PENTACHLOROPHENOL IN LIGHT OIL (TYPE C SOLVENT)
- COPPER NAPHTHENATE (CuN) IN LIGHT OIL (TYPE C SOLVENT)

SILLS, BACKING PLANKS, CRIBS, TIMBER WALLS, IF TREATED

- AWPA USE CATEGORY SYSTEM (U1) FOR USE CATEGORY 4B GROUND CONTACT-HEAVY DUTY (UC4B)
- PENTACHLOROPHENOL IN HEAVY OIL (TYPE A SOLVENT)
- COPPER NAPHTHENATE (CuN) IN HEAVY OIL (TYPE A SOLVENT)

FIELD TREATMENT: COPPER NAPHTHENATE (2% SOLUTION) SHALL BE FURNISHED FOR FIELD TREATING OF WOOD. ALL ABRASIONS AND FIELD CUTS -APPROVED BY THE C.O.- SHALL BE CAREFULLY TRIMMED AND GIVEN THREE BRUSH COATS OF THE FIELD TREATMENT SOLUTION. WHERE APPROVED FIELD DRILLING OF BOLT OR NAIL HOLES IS REQUIRED, THE HOLES SHALL BE FILLED WITH PRESERVATIVE PRIOR TO INSERTING THE FASTENERS.

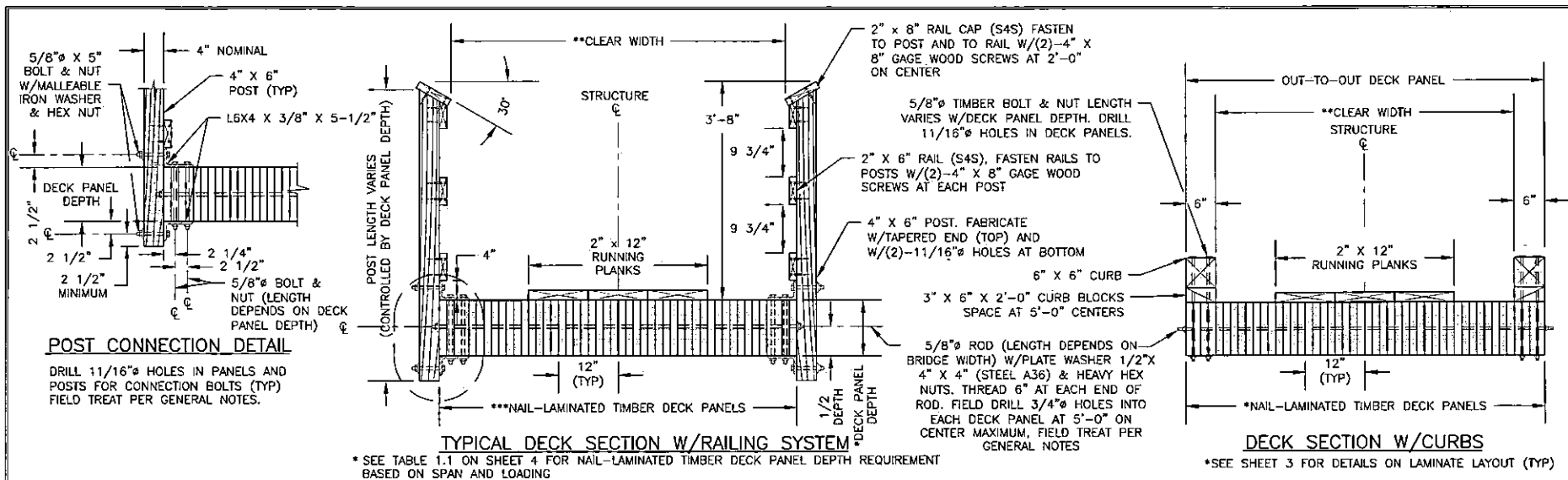
HARDWARE AND STRUCTURAL STEEL: SEE PROJECT CRITERIA FOR STEEL HARDWARE FINISH. GALVANIZED OR UNFINISHED HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M270, GRADE 36, WITH NUTS AND BOLTS CONFORMING TO ASTM A307, GRADE A. WEATHERING STEEL AND HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M270, GRADE 50W, WITH BOLTS AND NUTS CONFORMING TO ASTM A325, TYPE 3. USE MALLEABLE IRON WASHERS AGAINST WOOD UNLESS OTHERWISE NOTED.

WHEN STRUCTURAL STEEL IS TO BE WELDED, THE WELDING PROCEDURE SHALL BE IN ACCORDANCE WITH AWS D1.1 AND SHALL BE SUITABLE FOR THE GRADE OF STEEL AND INTENDED USE OR SERVICE.

FABRICATION: SUBMIT SHOP DRAWINGS FOR ALL BRIDGE COMPONENTS (EXCEPT TIMBER RUNNING PLANKS). SHOW ALL DIMENSIONS AND FABRICATION DETAILS FOR ALL CUT OR BORED TIMBER. FIELD DRILLING OF HOLES SHALL NOT BE ALLOWED UNLESS OTHERWISE NOTED ON THESE PLANS.

TIE ROD TENSIONING: TIE RODS SHALL BE TORQUED TO 200 FT-LBS UPON INITIAL INSTALLATION OF THE DECK PANELS. TIE RODS SHALL BE CHECKED FOR PROPER TENSION EACH YEAR FOR THE FOLLOWING 4 YEARS AFTER INSTALLATION. SUBSEQUENT TENSION CHECKS SHALL OCCUR DURING ROUTINE INSPECTIONS UNLESS OTHERWISE NOTED IN THE INSPECTION REPORT.

SHEET 2 OF 5



GENERAL NOTES:

SPECIFICATIONS: MATERIALS AND CONSTRUCTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-03) AND STANDARD SPECIFICATIONS FOR CONSTRUCTION OF TRAILS AND TRAIL BRIDGES ON FEDERAL PROJECTS.

TIMBER & LUMBER: SOLID SAWN TIMBER MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF THE GRADING RULES AGENCY FOR THE SPECIES, TYPE, AND GRADE SPECIFIED BELOW.

LAMINATIONS

- SOUTHERN PINE, SURFACED S4S, NO.1 GRADE GRADING RULES AGENCY - SPIB

CURB MEMBERS, SILLS, AND BACKING PLANKS

- SOUTHERN PINE ROUGH SAWN NO.2 GRADE, GRADING RULES AGENCY - SPIB

RAILS & POSTS (SEE PROJECT CRITERIA)

UNTREATED

- BALDCYPRESS, S4S, NO.1 GRADE GRADING RULES AGENCY - SPIB

- WHITE OAK, S4S, SELECT STRUCTURAL GRADE GRADING RULES AGENCY - NELMA

TREATED

- SOUTHERN PINE, S4S, NO.1 GRADE GRADING RULES AGENCY - SPIB

TREATMENT: SEE PROJECT CRITERIA FOR MEMBERS IDENTIFIED TO BE TREATED AND FOR TREATMENT TYPE. PRESERVATIVE TREATMENT SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) SPECIFICATIONS USING THE TREATMENT MATERIALS LISTED BELOW. TREATMENT WILL COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF WESTERN WOOD PRESERVERS INSTITUTE (WWPI) "BEST MANAGEMENT PRACTICES FOR THE USE OF TREATED WOOD IN AQUATIC ENVIRONMENTS".

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- COPPER NAPHTHENATE (CuN) IN LIGHT OIL (TYPE C SOLVENT)

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- AWPA USE CATEGORY SYSTEM (U1) FOR USE CATEGORY 4B GROUND CONTACT-HEAVY DUTY (UC4B)

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SHEET 2 OF 5

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
STANDARD TRAIL PLAN

PROJECT NAME & LOCATION

DRAWING NAME

**LONGITUDINAL
 NAIL-LAMINATED TIMBER TRAIL BRIDGE**

SECTION

962 - SAWN TIMBER TRAIL BRIDGE

TYPICAL ID

LNL

REVISION DATE

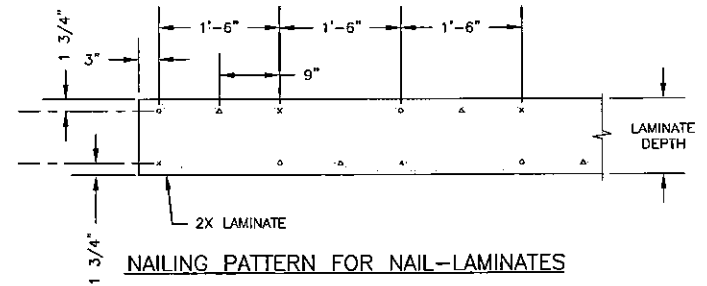
NOT TO SCALE

DRAWING NO.

STD_962-20-02b

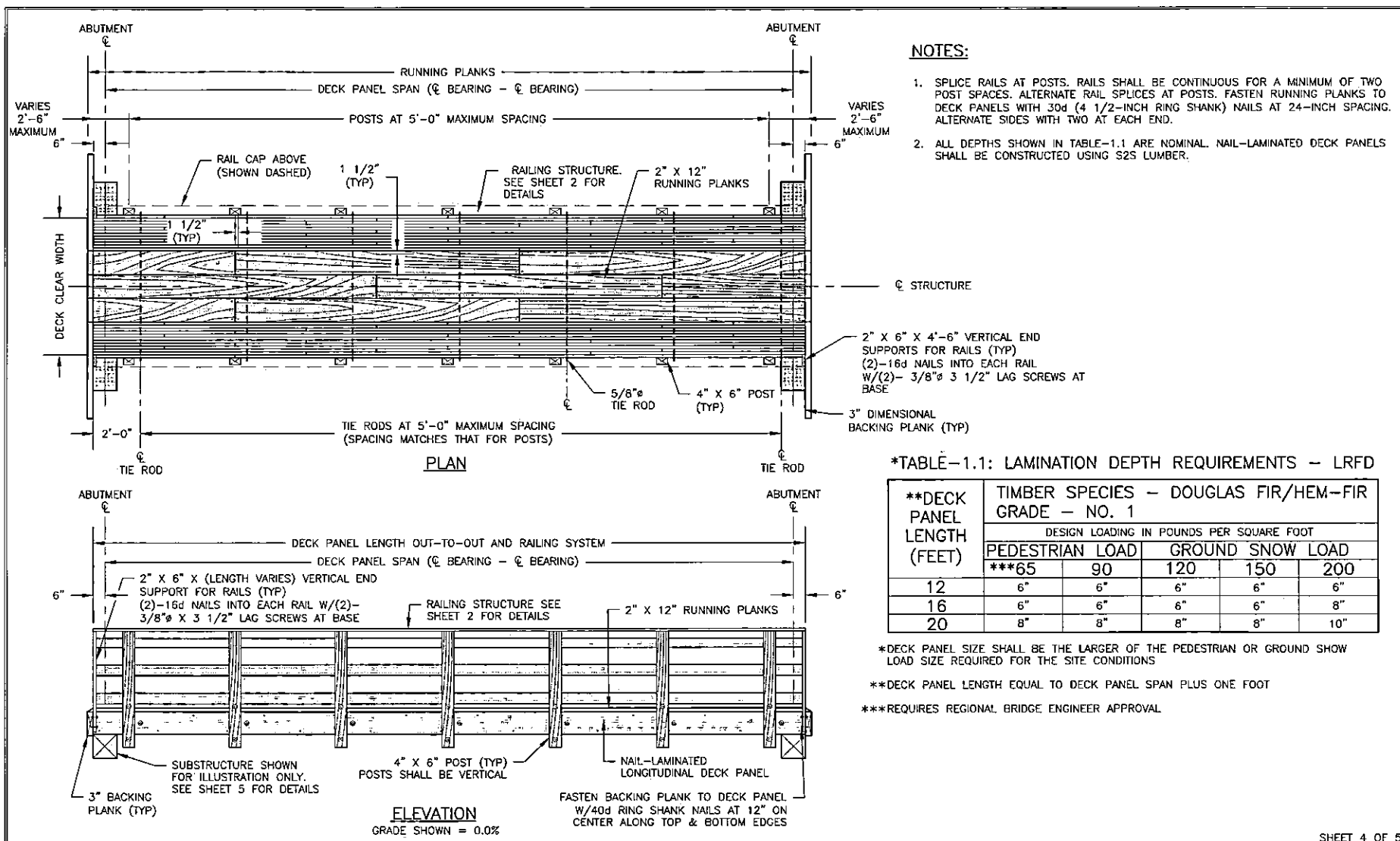
SHEET

X OF



- o INDICATES NAILS IN FIRST LAMINATION
- x INDICATES NAILS IN SECOND LAMINATION
- △ INDICATES NAILS IN THIRD LAMINATION

BUTT JOINTS NOT ALLOWED



NOTES:

1. SPLICE RAILS AT POSTS. RAILS SHALL BE CONTINUOUS FOR A MINIMUM OF TWO POST SPACES. ALTERNATE RAIL SPLICES AT POSTS. FASTEN RUNNING PLANKS TO DECK PANELS WITH 30d (4 1/2-INCH RING SHANK) NAILS AT 24-INCH SPACING. ALTERNATE SIDES WITH TWO AT EACH END.
2. ALL DEPTHS SHOWN IN TABLE-1.1 ARE NOMINAL. NAIL-LAMINATED DECK PANELS SHALL BE CONSTRUCTED USING S2S LUMBER.

*TABLE-1.1: LAMINATION DEPTH REQUIREMENTS - LRFD

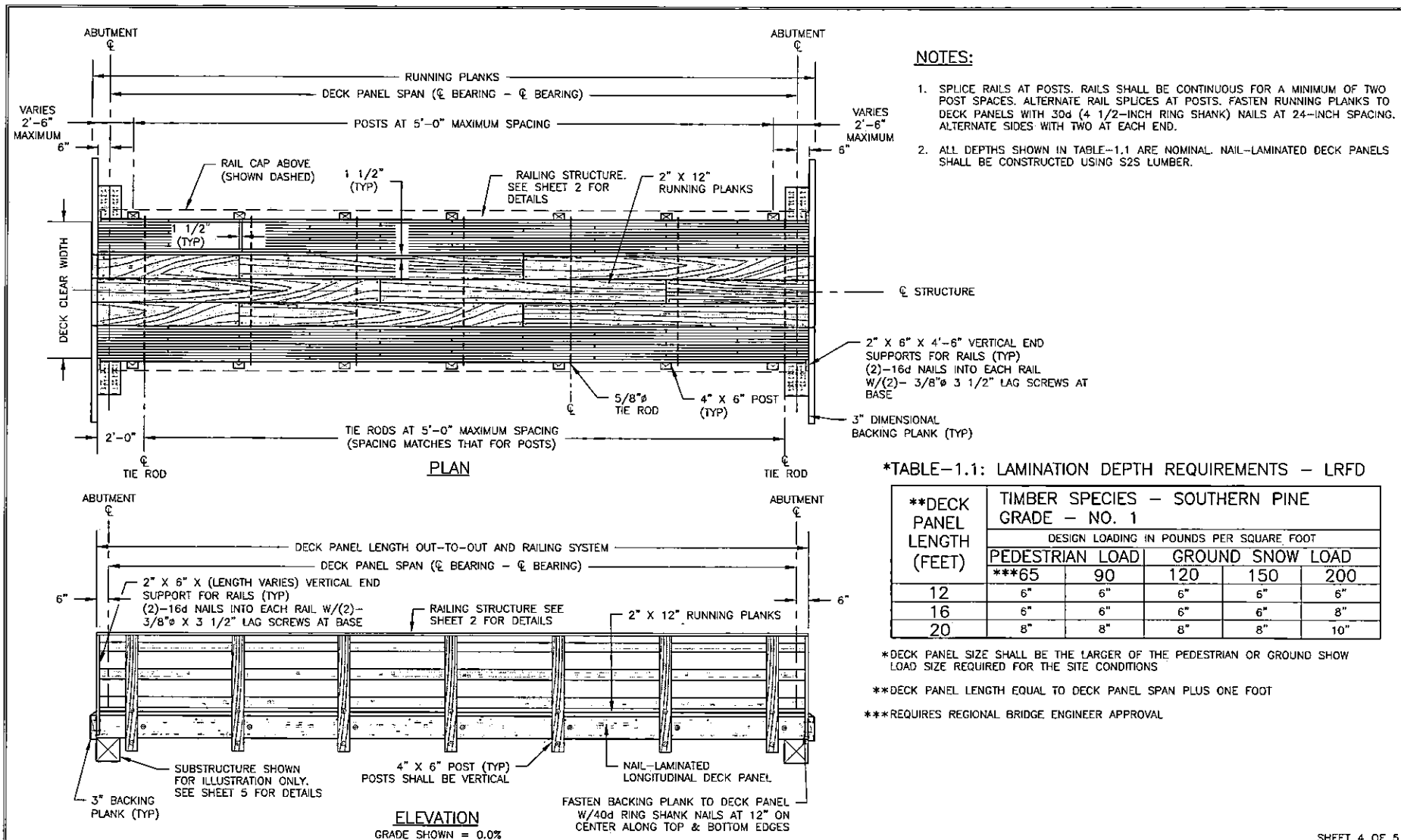
| **DECK PANEL LENGTH (FEET) | TIMBER SPECIES - DOUGLAS FIR/HEM-FIR GRADE - NO. 1 | | | | |
|----------------------------|--|------------------|-----|-----|-----|
| | DESIGN LOADING IN POUNDS PER SQUARE FOOT | | | | |
| | PEDESTRIAN LOAD | GROUND SNOW LOAD | | | |
| ***65 | 90 | 120 | 150 | 200 | |
| 12 | 6" | 6" | 6" | 6" | 6" |
| 16 | 6" | 6" | 6" | 6" | 8" |
| 20 | 8" | 8" | 8" | 8" | 10" |

*DECK PANEL SIZE SHALL BE THE LARGER OF THE PEDESTRIAN OR GROUND SNOW LOAD SIZE REQUIRED FOR THE SITE CONDITIONS

**DECK PANEL LENGTH EQUAL TO DECK PANEL SPAN PLUS ONE FOOT

***REQUIRES REGIONAL BRIDGE ENGINEER APPROVAL

SHEET 4 OF 5



NOTES:

1. SPLICE RAILS AT POSTS. RAILS SHALL BE CONTINUOUS FOR A MINIMUM OF TWO POST SPACES. ALTERNATE RAIL SPLICES AT POSTS. FASTEN RUNNING PLANKS TO DECK PANELS WITH 30d (4 1/2-INCH RING SHANK) NAILS AT 24-INCH SPACING. ALTERNATE SIDES WITH TWO AT EACH END.
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*TABLE-1.1: LAMINATION DEPTH REQUIREMENTS - LRFD

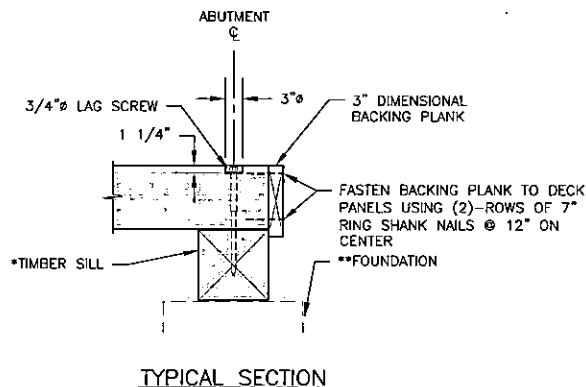
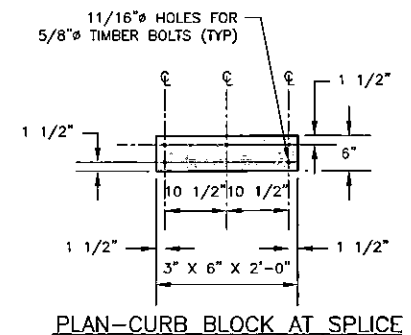
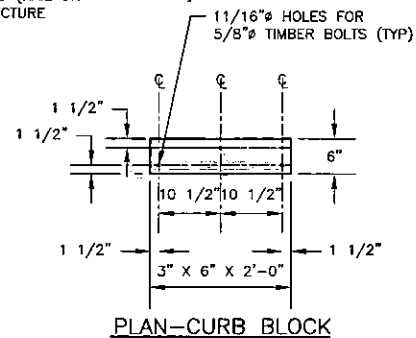
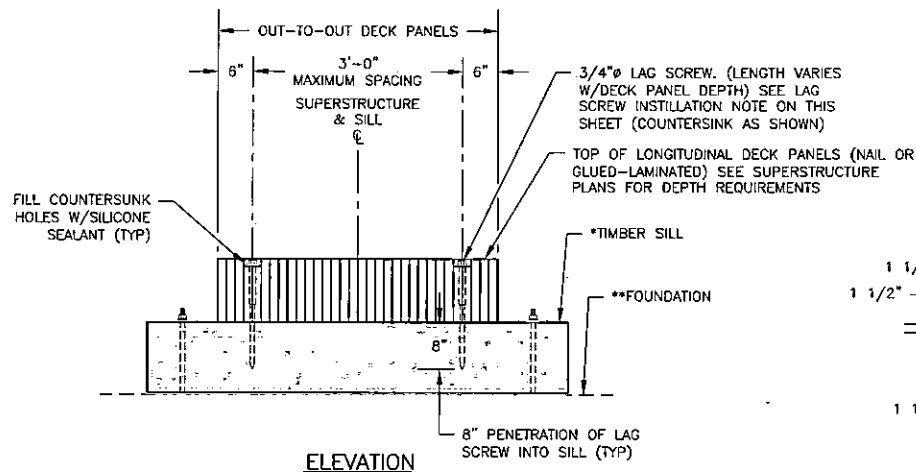
| **DECK PANEL LENGTH (FEET) | TIMBER SPECIES - SOUTHERN PINE GRADE - NO. 1 | | | | |
|----------------------------|---|------------------|-----|-----|-----|
| | DESIGN LOADING IN POUNDS PER SQUARE FOOT | | | | |
| | PEDESTRIAN LOAD | GROUND SNOW LOAD | | | |
| ***65 | 90 | 120 | 150 | 200 | |
| 12 | 6" | 6" | 6" | 6" | 6" |
| 16 | 6" | 6" | 6" | 6" | 8" |
| 20 | 8" | 8" | 8" | 8" | 10" |

*DECK PANEL SIZE SHALL BE THE LARGER OF THE PEDESTRIAN OR GROUND SNOW LOAD SIZE REQUIRED FOR THE SITE CONDITIONS

**DECK PANEL LENGTH EQUAL TO DECK PANEL SPAN PLUS ONE FOOT

***REQUIRES REGIONAL BRIDGE ENGINEER APPROVAL

SHEET 4 OF 5

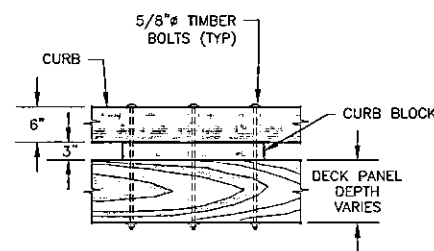


ABUTMENT CONNECTION DETAILS

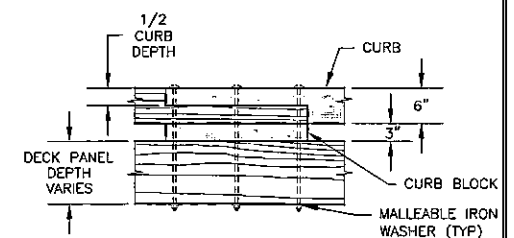
BACKING PLANKS NOT SHOWN FOR CLARITY

* TIMBER SILL CAN BE EITHER 12" X 12" SOLID SAWN 10 3/4" X 12" GLUE-LAMINATED, BUILT-UP 3" X 12", 4" X 12", & 6" X 12" TREATED MEMBERS.

** SEE STANDARD DRAWINGS 965-10, 965-20, 965-30, & 965-40 FOR FOUNDATION ALTERNATIVES



TYPICAL CONNECTION



CONNECTION AT SPLICE

SOLID SAWN CURB CONNECTION DETAILS

SHEET 5 OF 5

Bridge Construction: Cost vs Need Analysis

Proposals to construct a pedestrian footbridge in two locations of Hudson Conservation locations require some thoughtful considerations relative to the need: the number of people who are using the structure.

Conditions the bridge will cross marsh, shallow water, water flow, water height, winter icing.

Safety of crossing: planking, rails.

Materials to build pressure-treated lumber, screws, steel connectors.

Associated cost: purchase, delivery, transport to site, time and construction limitations.

1. Do we have a defined need and desire for a bridge?
2. How many pedestrians, hikers, walkers would make use of the bridge?
3. What are the complications for bridge design, transportation of materials, staging and construction?
4. What are the limiting conditions of the area to implement the construction of the bridge?
5. What is the projected cost in money, time, and investment in labor for such a project?

The Musquash Conservation Area was the first bridge construction site to be considered as part of an ongoing effort to connect to the Gumpas Pond Conservation Area (GPA). The project would connect part of the Wilkerson Trail which continues easterly across an existing bridge over Musquash Brook between two beaver ponds onto the Cottontail Trail of the GPCA. The bridge would cross 75-100 feet of marsh to a new trail connector. People have expressed a desire to work with Pelham Conservation to make this a possibility. Many hikers now cross this area over other footpaths, dam crossings, and ice to connect hikes. A new connector trail of 75ft or so to be cut on the Hudson Town side of the trails. I rough cut a proposed trail site which goes right at the "swamp overlook" from the Cottontail Trail.

The complications include transportation to the site for delivery, staging and construction being Gowling Road Gate, trailer by 4-wheeler/ATV, negotiating a marsh to lay out the bridge support beams, legs, etc., time to construct, the number of people for labor and support.

The Tiger Road Conservation property proposed bridge site would cross the Robinson Pond in the area above the primary beaver dam for the pond. The water is shallow during the summer months but freezes over most winters and has varying water flows during other seasons dependent on rain and runoff. Several inches of rain could increase the water level by many inches to a foot with higher velocity. This stable bridge would need to be two (2) or more feet above the projected water level and be able to withstand changing water and weather conditions. Also, other factors include log or debris jams, ice jams, foot traffic, icing, falls into shallow water would be limiting factors.

A. Complications for construction would include transportation to the site for delivery from Robinson Pond Drive, working in wet waters with uneven bottom surface, having enough labor to support construction and time to complete the project.

B. General thoughts are that the use and need would not be such that the cost should be above the local construction -grade pressure treated lumber as it could be too costly for the people.

C. A steel pedestrian bridge with concrete abutments and suspension systems would exceed the limits of the associated costs, not be accessible to large pieces of equipment, very difficult to stage and transport to the site. \$100,000-\$1.200,000

D. The Tiger Road bridge project should be something that the Town of Hudson Engineering Department should preview and approve. This bridge proposal would also need to be previewed at a hearing by members of the Robinson Pond Residents. That should be followed up with plans to be reviewed by the Hudson Planning Board for consideration.

Run: 7/08/25
9:59AM

Expenditure Report - Including Carry Forward Activity
Conservation Committee
 Town of Hudson, NH
 As Of: June 2025, GL Year 2025

Page: 1
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 Report Sorted Expenditure
 Conservation

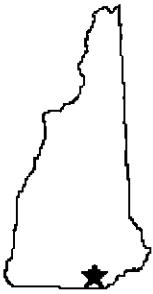
| Account Number | Budget | Prior Year Encumbered | Budget & PY Adjustments | Net Budget | MTD Exp | YTD Exp | Encumbered | Balance Available | %Used |
|--------------------------------|----------------------------------|--------------------------|----------------------------|------------|----------|------------|------------|----------------------|---------|
| Conservation Fund | | | | | | | | | |
| 06-4619-5586-202-000 | Conserv Comm, Sm. Equipment Mtce | | | | | | | | |
| | 2,300.00 | 0.00 | 0.00 | 2,300.00 | 0.00 | 1,231.59 | 0.00 | 1,068.41 | 53.547 |
| 06-4619-5586-217-000 | Conserv Comm, Assoc Dues/Fees | | | | | | | | |
| | 1,327.00 | 0.00 | 0.00 | 1,327.00 | 100.00 | 1,225.00 | 0.00 | 102.00 | 92.313 |
| 06-4619-5586-235-000 | Conserv Comm, Registration Fees | | | | | | | | |
| | 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 500.00 | 0.000 |
| 06-4619-5586-252-000 | Conserv Comm, Prof Services | | | | | | | | |
| | 48,626.00 | 162,328.98 | -11,127.00 | 199,827.98 | 2,311.23 | 146,319.61 | 46,659.37 | 6,849.00 | 96.573 |
| Total Conservation Fund | | | | | | | | | |
| Selected Year | 52,753.00 | 0.00 | 14,408.00 | 67,161.00 | 280.00 | 29,420.59 | 29,221.00 | 8,519.41 | 87.315 |
| Prior Year | 0.00 | 162,328.98 | -25,535.00 | 136,793.98 | 2,131.23 | 119,355.61 | 17,438.37 | 0.00 | 100.000 |
| Sort Total | 52,753.00 | 162,328.98 | -11,127.00 | 203,954.98 | 2,411.23 | 148,776.20 | 46,659.37 | 8,519.41 | 95.823 |

Run: 7/08/25
9:59AM

Expenditure Report - Including Carry Forward Activity
Conservation Committee
Town of Hudson, NH
As Of: June 2025, GL Year 2025

Page: 2
mwhitemor
ReportSortedExpenditure
Conservation

| Account Number | Budget | Prior Year Encumbered | Budget & PY Adjustments | Net Budget | MTD Exp | YTD Exp | Encumbered | Balance Available | %Used |
|----------------|-----------|--------------------------|----------------------------|------------|----------|------------|------------|----------------------|---------|
| Selected Year | 52,753.00 | 0.00 | 14,408.00 | 67,161.00 | 280.00 | 29,420.59 | 29,221.00 | 8,519.41 | 87.315 |
| Prior Year | 0.00 | 162,328.98 | -25,535.00 | 136,793.98 | 2,131.23 | 119,355.61 | 17,438.37 | 0.00 | 100.000 |
| Grand Total | 52,753.00 | 162,328.98 | -11,127.00 | 203,954.98 | 2,411.23 | 148,776.20 | 46,659.37 | 8,519.41 | 95.823 |



TOWN OF HUDSON

Conservation Commission



Carl Murphy, Chairman

Dave Morin, Selectmen Liaison

12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-816-1291

DATE: June 9, 2025

MEETING MINUTES: Below is a listing of minutes for the Hudson Conservation Commission. Minutes are not a verbatim record of each meeting, but rather represent a summary of the discussion and actions taken at the meeting. All Conservation Commission meetings are televised live and repeated during the following week on HCTV, cable television channel 22. Official copies of the minutes are available to read and copy at the Town Engineer's Office during regular business hours (Monday through Friday, 8:00 A.M. to 4:30 P.M.).

Should you have any questions concerning these minutes or wish to see the original recording, please contact the Town Engineer's Office at 603-886-6008.

In attendance = X Alternates Seated = S Partial Attendance = P Excused Absence = E

Carl Murphy
Chairman X

Ken Dickinson
Vice-Chair X

Christopher Cameron
Clerk X

John Walter
Member X

Kathryn Griswold
Member X

Linda Krisciunas
Alternate E

David Morin
Selectman Rep X

Elvis Dhima
Town Engineer E

.....
CALL TO ORDER BY CHAIRPERSON AT 07:01 P.M.

PLEDGE OF ALLEGIANCE

ROLL CALL

SEATING OF ALTERNATES: None

Public Input Related to Non-Agenda Items: None

I. New Business

a. Workshops Discussion

i. Open Space Report

The Commission discussed the need for workshop(s) to update the Hudson Open Space Report, created in 2012 and not updated since. Mr. Dickinson worked on the original report with other commission members at the time and indicated it was a significant undertaking, however the bulk of the work has been done and the task of updating the report should require much less time and effort. Members agreed that the focus of upcoming meetings and workshops should be on preparing for the ZORC meetings this summer/fall and that Open Space Plan workshop(s) could be held later in the fall/winter.

ii. Zoning Ordinance Review Committee Meetings

The Commission discussed the role of the ZORC and the respective role of the various boards included (Planning Board, Zoning Board, Conservation Commission). It was suggested that the Commission look at a number of sample ordinances from other communities and work to identify ones that are best aligned with the objectives of the Town and the Commission. It would be most effective to focus on a few key items to propose during the ZORC meetings.

iii. Natural Resources Inventory (NRI)

The Commission discussed the format and content of an NRI and whether the Natural Resources section of the Hudson Master Plan (updated 2020) constitutes an NRI. Potential workshop(s) could focus on updating the NRI along with the Open Space Plan and ensuring the two are aligned.

Ms. Griswold made a motion, seconded by Mr. Cameron, to go out of the regular order of business to continue the discussion on the conditional use permit application for 140 Old Derry Rd (see “Old Business” below). The motion carried 5/0/0.

b. Hudson Trails Challenge

Mr. Cameron mentioned that he had put together a trail checklist, based on the “Pelham Trails Challenge”, whereby applicants could earn a patch for hiking all of the trails on the town conservation properties. Currently listed properties in the checklist: Pelham Rd, Benson Park, Musquash, Colburn Town Forest, Kimball Hill Town Forest, Rangers Dr Town Forest, Tiger Rd, and Robinson Pond. The checklist will need to be refined with missing trail names and distances. Parameters and a patch will need to be created, along with a means for hikers to apply for recognition of challenge completion. Mr. Cameron mentioned that a patch would need to be designed – Selectman Morin suggested that a contest could be held at the local school(s) to design a patch. There was a brief discussion on the cost of patches and that it could either be funded through the Conservation Commission funds or with a fee for patch application.

c. Town Website Updates

Mr. Murphy to reach out to Laurie Weissgarber to request updates to the Hudson Parks and Trails

section of the website.

II. Old Business

a. Conditional Use Permit – 140 Old Derry Rd, Map 105, Lot 032-000 – Business Expansion

The applicant's representative, Alex Giuffrida, engineer with Haynor/Swanson, Inc. (now IMEG), on behalf of the applicant, Nirel LLC, was present to hear the motion concerning the conditional use permit application and answer any questions. After briefly reading through the recommendations the applicant's representative indicated that he believe them to be reasonable and that he would confer with the applicant however he believed that they would be amenable to the recommendations.

Ms. Griswold made a motion, seconded by Mr. Walter, to recommend to the Planning Board approval of the conditional use permit application for Nirel, LLC related to the site plan application for 140 Old Derry Rd, Tax Map 105, Lot 32, with the following recommendations:

1. A stipulation and/or note should be added to the plan(s) that states: "During construction and restoration erosion control barriers shall be installed and maintained to the satisfaction of the Town Engineer.
2. It is recommended that the applicant evaluate reconfiguring the parking area and/or stormwater retention pond to shift the pond closer to the driveway entrance if at all feasible, thereby reducing impacts to the wetland buffer area.
3. A stipulation and/or note should be added to the plan(s) that states: "During construction, construction vehicles shall not be parked overnight or left unattended within seventy-five (75) feet of any wetland or within any wetland buffer boundaries".
4. A stipulation and/or note should be added to the plan(s) that states: "Stockpiling of construction materials is not allowed within the wetland or wetland buffer areas of the site or in areas designated for permanent conservation".
5. A stipulation and/or note should be added to the plan(s) that states: "Storage sheds for chemicals used to manage snow and ice at the site shall not be placed within seventy-five (75) feet of any wetland or within wetland buffer areas and such storage areas shall be shown on the final plan set.
6. It is recommended that the applicant install approved "do not cut/do not disturb" town conservation markers along the conservation district boundaries (75-foot wetland buffer).
7. Any vegetation associated with post-construction BMPs and slope restoration shall be suitably established to withstand erosion and shall be inspected by the Town Engineer and the property owner shall be required to provide a suitable replacement for any vegetation not suitably established during the relevant monitoring period.
8. A stipulation and/or note should be added to the plan(s) that states: "BMPs should be used to eliminate the Japanese Knotweed stand in the wetland/wetland buffer area to prevent further

spread of the invasive species. Methods for more involved management of invasive species using herbicide application shall be discussed with the Engineering Department.”

9. A stipulation and/or note should be added to the plan(s) that states: “Fertilizers utilized for landscaping and lawn care shall be slow release, low-nitrogen types (<5%), and shall not be used within seventy-five (75) feet of wetland resource areas. Pesticides and herbicides shall not be used within seventy-five (75) feet of a wetland resource area.”

Ms. Griswold made a motion, seconded by Mr. Dickinson, to return to the regular order of business (see “New Business” above). The motion carried 5/0/0.

b. Hudson Times Feature Articles & HCTV Videos

Ms. Griswold wrote an article for inclusion in the Hudson Times newspaper that focuses on the Pelham Rd Conservation Area. The local TV station (HCTV) also filmed a video showcasing the trails at Pelham Rd, along with some natural and historic features of the property. There was general agreement that the next article and/or video would focus on Colburn Town Forest.

c. RTP Grant

The Commission discussed what would be needed to apply for next year’s round of grants. Mr. Walter indicated that he would look for bridge plans that could be used for the various projects being proposed (Musquash to Gumpus connector, Tiger Rd to Robinson Pond trails connector, Robinson Pond Recreation Area bridge replacement). Mr. Dickinson indicated that he would do some research as well and bring in some materials for the next meeting.

III. Other Business

a. Invasive Species Control

Mr. Murphy stated that Mr. Radloff had cautioned it might take 2-3 years to completely remove the invasive vegetation from Musquash Conservation Area. Mr. Radloff is planning to walk the Musquash property this month to evaluate. Mr. Murphy will continue to coordinate evaluation of the Tiger Rd property and the Rangers Drive Town Forest for invasive species management as well.

b. Forester Walk at Tiger Rd Property

Mr. Gagnon, Hillsborough State Forester, is planning to walk the Tiger Rd property to evaluate the forest health and quality as well as to provide recommendations for potential future forest management techniques. The walk was originally scheduled for Saturday, June 7, however it is being rescheduled to a date TBD.

c. Trail Workday Recap – Tiger Rd Property

The Chairman praised the Commission for their work efforts in successfully blazing and clearing a trail through the center of the property and then parallel to the shoreline that connects with the existing trail to form a complete loop. Members also cleaned up and bagged a significant amount of trash from the site, which was piled at the end of the Tiger Rd cul-de-sac and later disposed of properly by the Town DPW. The team identified a significant amount of poison ivy and invasive vines on the property and along the road which can be evaluated for potential management options.

d. Trail Workday – Schedule

Trail work day scheduled for Sat 6/28/2025 at 8am – meet at the Musquash Conservation Area parking area on Musquash Rd. Work will include clearing brush and blowdowns, as well as other needed trail maintenance.

IV. Financial Status

Current Report – No concerns.

V. Correspondence

a. Wildlife Monitoring Report – Department of Natural Resources and the Environment – Bill Collins sent an update on the report, anticipated to be provided soon, and a request to continue the monitoring through 2030. There were no objections from the Commission.

b. NH Lakes Donation Request – Request for a repeat donation of \$100/year. Mr. Walter made a motion, seconded by Mr. Cameron, to expend \$100 for the requested donation. The motion carried 5/0/0.

c. NHDES – Wetland Violation Reports – Notification, no action needed.

i. Report of alleged fill in wetlands at 112 Musquash Rd – possible violation.

ii. Report of water quality concerns adjacent to Barretts Hill Rd ongoing development – alleged failure to properly install/maintain erosion/sediment controls – possible violation and need for remediation.

d. Hudson Planning Board – Site Walk – 9 Alvirne Dr

The Planning Board invited the Conservation Commission to attend (as observers only) a site walk, scheduled for 9am on Saturday, 6/14/2025, at 9 Alvirne Drive, related to the proposed residential subdivision. The Commission's responsibility related to the subdivision application would be as advisory to the Planning Board only, with no jurisdiction over the proposal.

VI. Approval of Minutes

Motion made by Ms. Griswold, seconded by Mr. Walter, to accept the minutes from the 5/12/2025 meeting and the 5/29/2025 site walk. Mr. Walter clarified that the proposed 14' span bridge is at Robinson Pond Recreation Area and the proposed span over the Robinson Pond outlet, to connect with the Tiger Rd property, would be significantly longer. The motion carried 5-0-0.

VII. Commissioners' Comments

Mr. Walter commented that the town has made improvements to the parking area for the Kimball Hill Town Forest.

VIII. Motion to Adjourn

Mr. Dickinson made a motion, seconded by Ms. Griswold, to adjourn the regular meeting at 8:55 pm. The motion carried 5/0/0.

Next Regular Meeting: Monday, July 14, 2025 at 7:00 p.m.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Chris Cameron", written over a horizontal line.

Christopher Cameron, Clerk