



REQUEST FOR PROPOSALS No. 24-044

Nile Creek Trail Design-Build Construction

ISSUED: July 18, 2024

CLOSING DATE AND TIME:

Submissions must be received on or before:
3:00 PM (15:00 hrs) Local Time on August 8, 2024

Submissions and Questions are to be directed to:

Jonathan Behnke, Parks Planner
jbehnke@rdn.bc.ca

Questions are requested at least five (5) business days before the closing date.

Proponent's Information Meeting:

There will be a non-mandatory site meeting on July 25, 2024, at 10:00 a.m., meeting at the end of Charlton Drive, Qualicum Beach

Proposals will not be opened in public.



1. Instructions to Proponents

1.1 Closing Date/Time/Submission Method

Submissions must be received on or before 3:00 PM (15:00 hrs), Local Time, on August 8, 2024.

Submission Method:

By Email: In PDF format with “24-044 Nile Creek Trail Design-Build Construction” as the subject line at this electronic address:

jbehnke@rdn.bc.ca

Please note: Maximum email file size limit is 20MB, or less. The RDN will not be liable for any technological delays of submissions.

Submissions received in any other manner will not be accepted.

1.2 Amendment to Proposals

Proposals may be amended in writing and sent via email to the RDN contact person identified on the cover page on or before the closing. Such amendments should be signed by the authorized signatory of the Proponent.

1.3 Addenda and Questions & Answers

If the RDN determines that an amendment or questions & answers are required for this RFP, the RDN will post the Addendum on the RDN (<https://www.rdn.bc.ca/current-bid-opportunities>) and BC Bid (<https://bcbid.gov.bc.ca/>) websites. Each addendum will be incorporated into and become part of the RFP. No amendment of any kind to the RFP is effective unless it is contained in a written addendum issued by the RDN. It is the sole responsibility of the Proponent to check and ensure all amendments are included prior to submitting their final Proposal submission.

1.4 Withdrawal of Proposals

The Proponent may withdraw their Proposal at any time by submitting a written withdrawal email to the RDN contact person identified on the cover page on or before the closing.

1.5 Unsuccessful Vendors

The Regional District will offer debriefings to unsuccessful Proponents, on request, at a mutually agreeable time.



2. INTRODUCTION

The purpose of this Request for Proposal is to solicit submissions from qualified firms to design, supply and install trails connecting the new Nile Creek bridge to the north and south loops of Lighthouse Country Regional Trail. Trails may include boardwalks, steps, and slope retention structures.

The desired completion date is by November 30, 2024.

3. BACKGROUND

This project will connect the north and south loops of Lighthouse Country Regional Trail, which are currently separated by Nile Creek. The trail will be located in an undeveloped Ministry of Transportation and Infrastructure (MoTI) right-of-way. A 1.2m wide pedestrian bridge over Nile Creek is being built in a separate contract.

4. SCOPE OF SERVICES

This project includes design, supply and installation of a new trail, including trail structures such as boardwalks, steps and slope retention structures as needed.

Design Services

- Site reconnaissance to review existing conditions.
- Survey and staking required for project layout. The trail alignment, construction and staging must be located within the MoTI right-of-way. Contractor is responsible for flagging MoTI right-of-way.
- Assess site conditions to determine which sections of the trail require boardwalks, steps or slope retention works.
- Layout plan showing location and length of trail, boardwalk, steps (stringer and/or crib), retention structures and stream crossings. Trail alignment should avoid removal of trees with Pileated woodpecker nest cavities.
- Review typical details (Appendix 2) and propose improvements or alternatives to suit site conditions, if necessary.
- Provide engineering services as required.
- Coordinate with project environmental consultant as required.

Construction Services

- Mobilization, project layout, access plan and environmental mitigation. Provide detailed engineering and surveying as required.
- Secure adequate parking, laydown, staging, and storage areas as required to complete the work. The construction staging area must be in the MoTI right-of-way and cannot block road access. Provide a written document and/or plan detailing proposed methods for site access, laydown, and staging for review by the RDN.



- Supply and install trail infrastructure including surfacing, steps, boardwalks, slope retention structures and ditch or stream crossings. Provide engineering services as required.
- Provide tree protection fencing around habitat trees identified by project environmental consultant.
- Make good all site damage resulting from construction activities.
- Provide safety barricades as required to protect the public during construction.
- Provide warranty details. Warranty must include workmanship, parts, and all materials for a minimum of one year.

5. REFERENCE/BACKGROUND INFORMATION

Please see attached for the following:

Appendix 1: Concept Plan

Appendix 2: Typical Details

6. PROPOSAL SUBMISSION AND EVALUATION

To assist in receiving similar and relevant information, and to ensure your Proposal receives fair evaluation, the RDN asks Proponents to provide the following information.

Please include with your proposal:

A. Company Profile

- Describe your company's background and areas of expertise.
- Describe two recent comparable projects and provide photos of the completed project, project budget, and project timeline information.

B. Project Approach and Schedule

- Layout your plan to complete the project from start to finish.
- Provide a project schedule showing key milestones, including manufacturing timeline, and anticipated delivery date if needed;

C. Communication and Quality Control

- Describe how your firm will monitor the project progression and provide regular status reports.
- Describe your quality management process and any relevant certifications.

D. Sustainability and Value-Added Services

- Describe the systems, policies and/or practices you use to reduce waste associated with by-products of production and other operational activities.
- Describe the systems, policies and/or practices you use to understand, manage, and reduce your energy consumption.
- Identify challenges, constraints and obstacles in the project and advise on strategies to minimize.
- What suggestions does your firm have to add value to the project?

- Contractor may suggest cost savings or value-added services as a separate item. This should not be reflected in the base bid price and should be identified and listed separately.

E. Fee Proposal

- Provide a comprehensive proposed fee for design and construction services, in Canadian Dollars
- Provide a proposed payment schedule that aligns with the project schedule. Include payment amounts (or percentages) for design, manufacturing, delivery, and installation. Provide an itemized cost breakdown table showing each project component.

Design Services

Item No.	Description	Unit	Estimated Quantity	Unit Price	Amount
A1	Site reconnaissance to review existing conditions	Lump sum	1		
A2	Surveying and staking as required for design	Lump sum	1		
A3	Layout plan with location and length of trail, boardwalk, steps and slope retention structures	Lump sum	1		
A4	Review typical detail drawings (Appendix 2) and adapt to site conditions.	Lump sum	1		

Construction Services

Item No.	Description	Unit	Estimated Quantity	Unit Price	Amount
B1	Mobilization and demobilization	Lump sum	1		
B2	Project layout	Lump sum	1		
B3	Public access and site safety management	Lump sum	1		
B4	Protection of wildlife trees with plastic snow fencing at drip line	Lump sum	1		
B5	Erosion and sediment control in riparian area	Lump sum	1		
B6	Grubbing, tree and stump removals	Lump sum	1		
B7	Supply and installation of Type 3 Trail, 1.0m width, natural mineral soil surfacing	Lineal metre	250		
B8	Supply and installation of boardwalk, 1.8m width	Lineal metre	110		

B9	Supply and installation of timber crib steps on grade, 1.2m width	Lineal metre	50		
B10	Supply and installation of timber stringer steps, 1.2m width	Lineal metre	25		
B11	Supply and install culvert where trail crosses ditch	each	2		
B12	Restore site damage from construction activities	Lump sum	1		

Proposals will be evaluated on the following basis 40% Technical, 60% Financial.

The lowest price proposal will receive full marks. Other proposals will receive reduced scores based on the proportion higher than the lowest price. i.e. $\text{Score} = \text{Min Cost}/\text{Cost} \times \text{Fee Points}$.

Proposals submitted should be in enough detail to allow the RDN to determine the Proponent's qualifications and capabilities from the documents received. The selection committee, formed at the RDN's sole discretion, will score the Proposals in accordance with the criteria provided.

The RDN may evaluate proposals on a comparative basis by comparing one proponent's proposal to another proponent's proposal. The RDN reserves the right to not complete a detailed evaluation if the RDN concludes the proposal is materially incomplete or, irregular or contain any financial or commercial terms that are unacceptable to the RDN.

The selection committee may proceed with an award recommendation or the RDN may proceed to negotiate with the highest evaluated proponent with the intent of developing an agreement. If the parties after having bargained in good faith are unable to conclude a formal agreement, the RDN and the Proponent will be released without penalty or further obligations other than any surviving obligations regarding confidentiality and the RDN may, at its discretion, contact the Proponent of the next best rated Proposal and attempt to conclude a formal agreement with it, and so on until a contract is concluded or the proposal process is cancelled.

The RDN reserves the right to award the assignment in whole or in part or to add or delete any portion of the work. Throughout the evaluation process, the evaluation committee may seek additional clarification on any aspect of the Proposal to verify or clarify the information provided and conduct any background investigation and/or seek any additional information it considers necessary.

7. PROPOSED PURCHASE CONTRACT

The RDN's preferred form of Contract is CCDC4-2011. However, the RDN and successful proponent retain the option to discuss and agree on another contract form if mutually agreed between the parties.

8. GENERAL CONDITIONS

8.1 No Contract



By submitting a Request for Proposal and participating in the process as outlined in this RFP, proponents expressly agree that no contract of any kind is formed until a fully executed contract is in place.

8.2 Privilege Clause

The lowest or any proposal may not necessarily be accepted.

8.3 Acceptance and Rejection of Submissions

This RFP does not commit the RDN, in any way to select a preferred Proponent, or to proceed to negotiate a contract, or to award any contract. The RDN reserves the right in its sole discretion cancel this RFP, up until award, for any reason whatsoever.

The RDN may accept or waive a minor and inconsequential irregularity, or where applicable to do so, the RDN may, as a condition of acceptance of the Submission, request a Proponent to correct a minor or inconsequential irregularity with no change in the Submission.

8.4 Conflict of Interest

Proponents shall disclose in their Proposals any actual or potential Conflict of Interest and existing business relationships it may have with the RDN, its elected officials, appointed officials or employees.

8.5 Solicitation of Board Members and RDN Staff

Proponents and their agents will not contact any member of the RDN Board or RDN Staff with respect to this RFP, other than the RDN Contact named in this document.

8.6 Litigation Clause

The RDN may, in its absolute discretion, reject a Proposal submitted by Proponent, if the Proponent, or any officer or director of the Proponent is or has been engaged either directly or indirectly through another corporation in legal action against the RDN, its elected or appointed officers and employees in relation to:

- (a) any other contract for works or services; or
- (b) any matter arising from the RDN's exercise of its powers, duties, or functions under the Local Government Act, Community Charter or another enactment within five years of the date of this Call for Proposals.

In determining whether to reject a Proposal under this clause, the RDN will consider whether the litigation is likely to affect the Proponent's ability to work with the RDN, its consultants and representatives and whether the RDN's experience with the Proponent indicates that the RDN is likely to incur increased staff and legal costs in the administration of this Contract if it is awarded to the Proponent.

8.7 Exclusion of Liability

Proponents are solely responsible for their own expenses in preparing and submitting a Proposal and for any meetings, negotiations, or discussions with the RDN. The RDN will not be liable to any Proponent for any claims, whether for costs, expense, losses or damages, or loss of anticipated profits, or for any other matter whatsoever, incurred by the Proponent in preparing and submitting a Proposal, or participating in



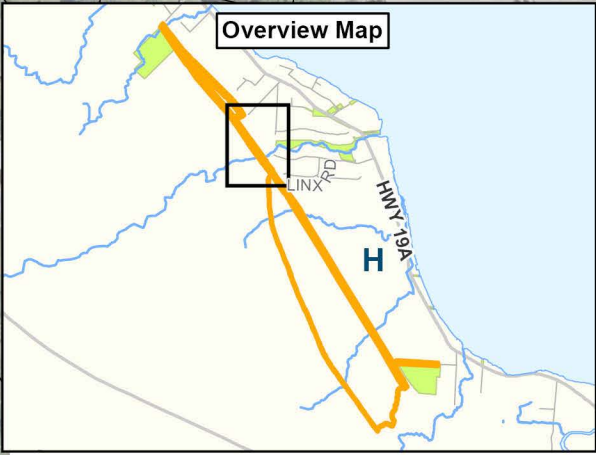
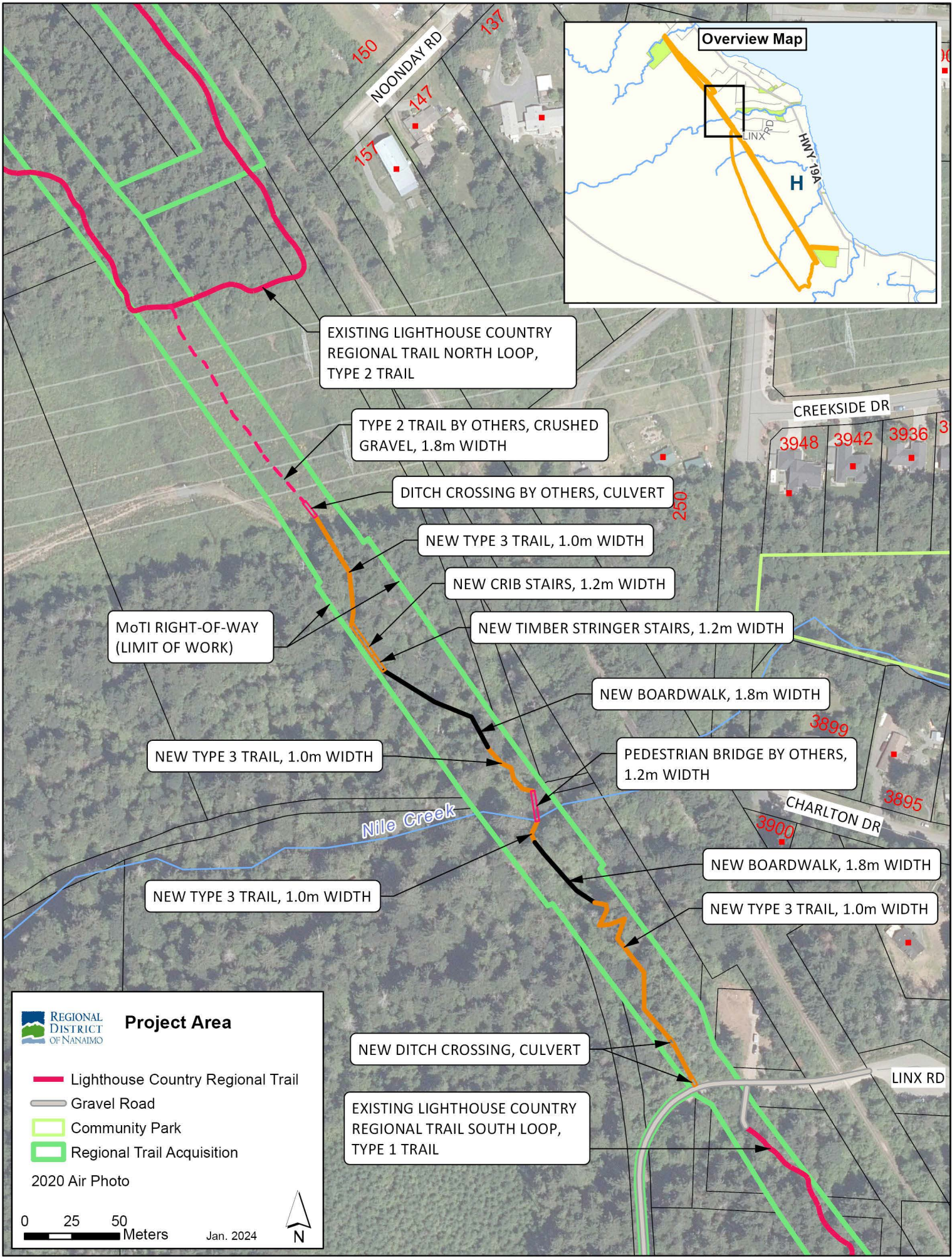
negotiations for a Contract, or other activity related to or arising out of this RFP. Except as expressly and specifically permitted in these Instructions to Proponents, no Proponent shall have any claim for compensation of any kind whatsoever, as a result of participating in this RFP, and by submitting a Proposal each Proponent shall be deemed to have agreed that it has no claim.

8.8 Ownership of Proposals

All Proposals, including attachments and any documentation, submitted to and accepted by the RDN in response to this RFP become the property of the RDN.

8.9 Freedom of Information

All submissions will be held in confidence by the RDN. The RDN is bound by the Freedom of Information and Protection of Privacy Act (British Columbia) and all documents submitted to the RDN will be subject to provisions of this legislation. The successful vendor and value of the award is routinely released.



EXISTING LIGHTHOUSE COUNTRY REGIONAL TRAIL NORTH LOOP, TYPE 2 TRAIL

TYPE 2 TRAIL BY OTHERS, CRUSHED GRAVEL, 1.8m WIDTH

DITCH CROSSING BY OTHERS, CULVERT

NEW TYPE 3 TRAIL, 1.0m WIDTH

NEW CRIB STAIRS, 1.2m WIDTH

NEW TIMBER STRINGER STAIRS, 1.2m WIDTH

NEW BOARDWALK, 1.8m WIDTH

PEDESTRIAN BRIDGE BY OTHERS, 1.2m WIDTH

NEW BOARDWALK, 1.8m WIDTH

NEW TYPE 3 TRAIL, 1.0m WIDTH

NEW DITCH CROSSING, CULVERT

EXISTING LIGHTHOUSE COUNTRY REGIONAL TRAIL SOUTH LOOP, TYPE 1 TRAIL

MoTI RIGHT-OF-WAY (LIMIT OF WORK)

NEW TYPE 3 TRAIL, 1.0m WIDTH

NEW TYPE 3 TRAIL, 1.0m WIDTH



Project Area

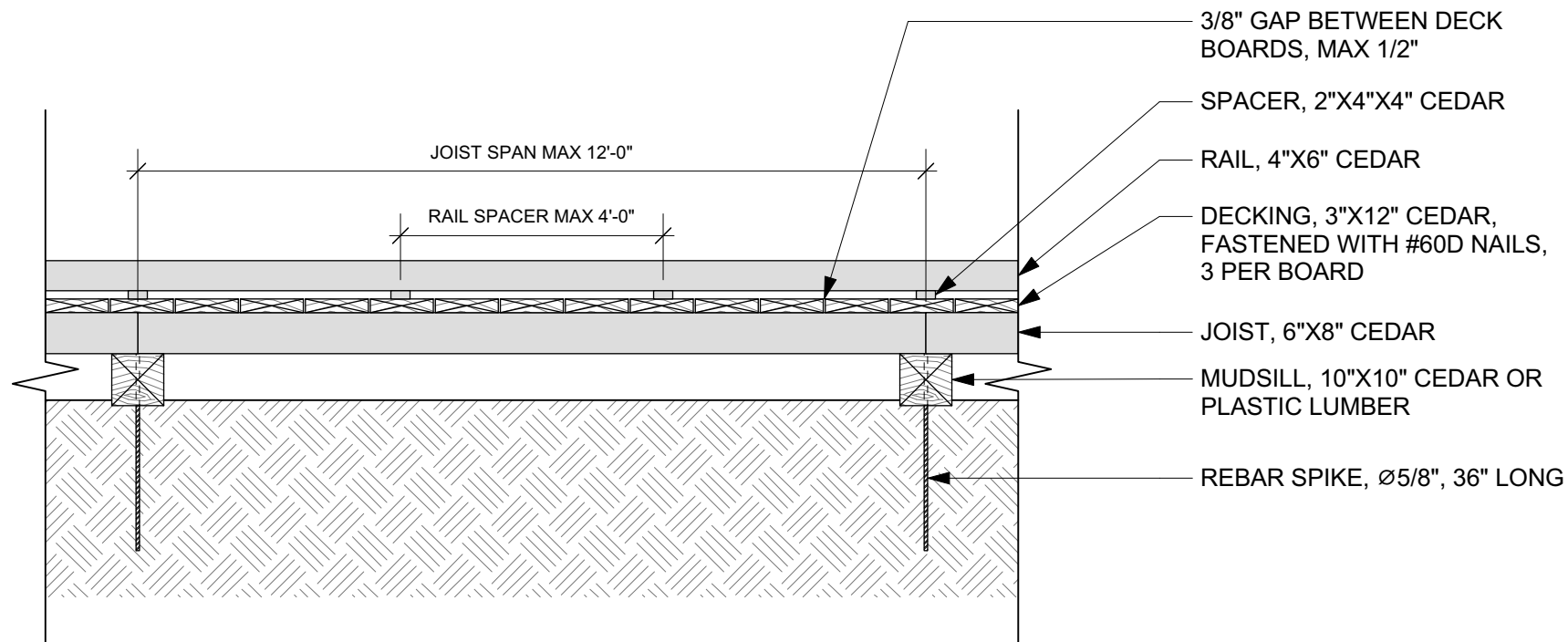
- Lighthouse Country Regional Trail
- Gravel Road
- Community Park
- Regional Trail Acquisition

2020 Air Photo

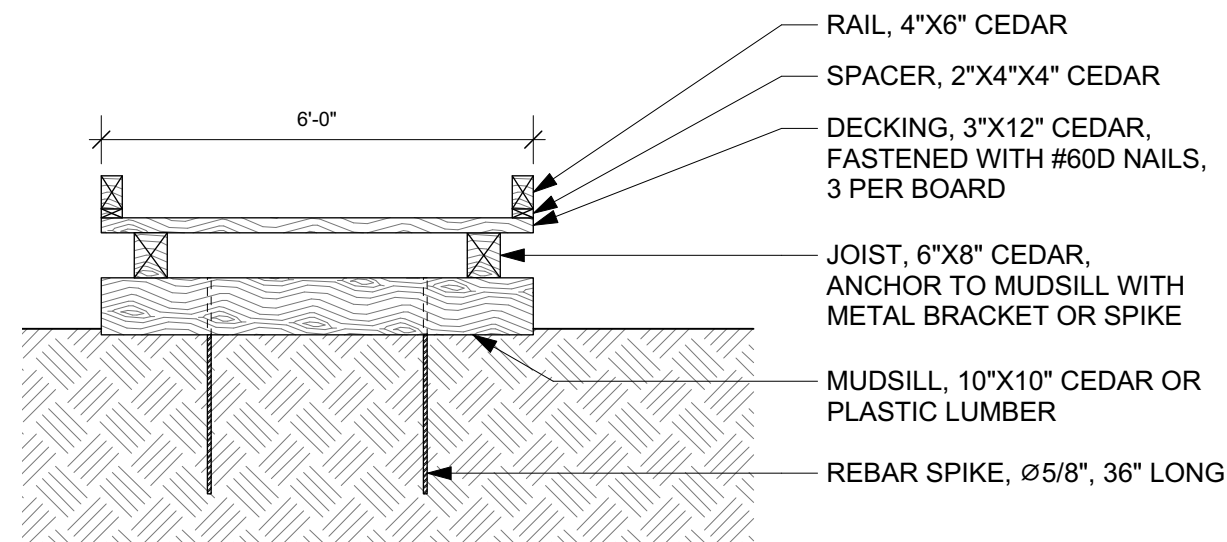


Jan. 2024

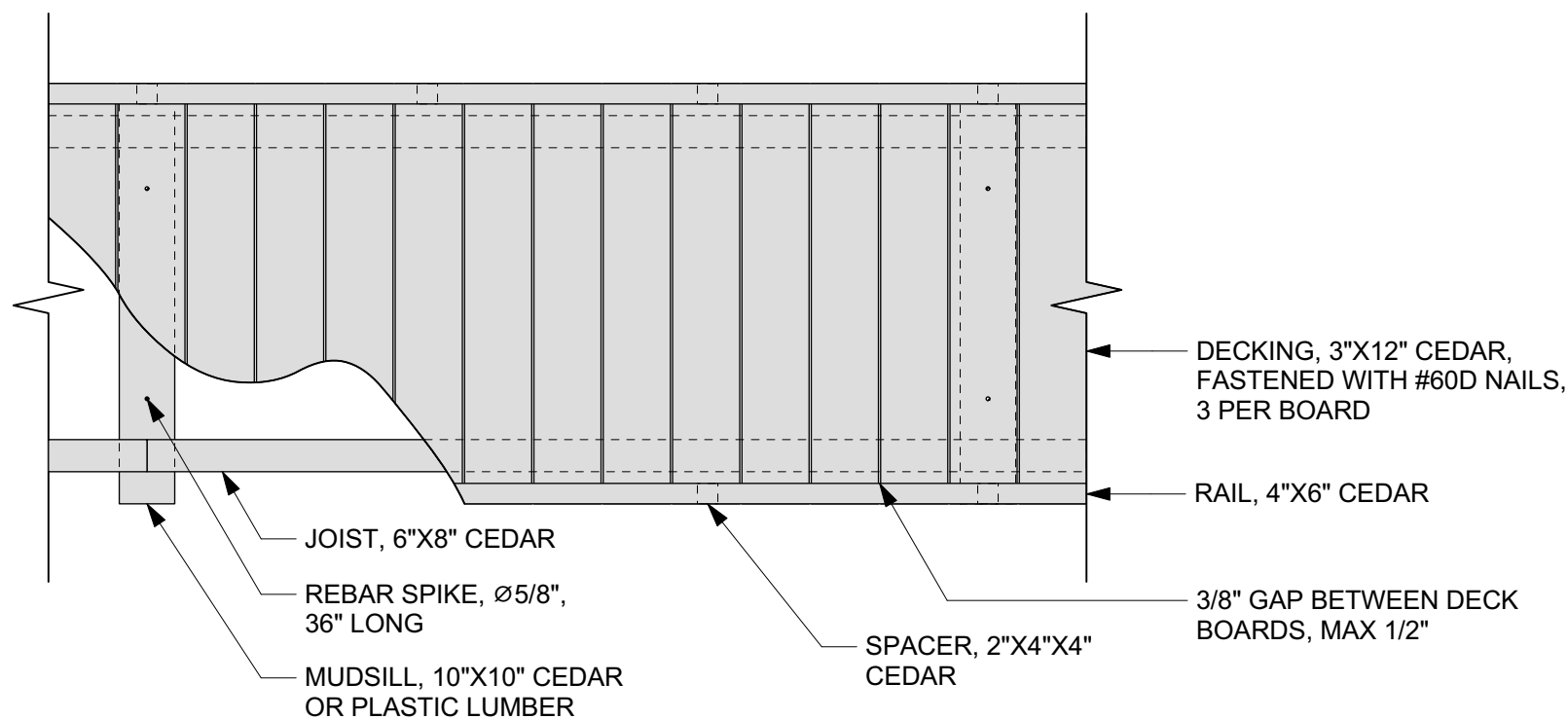




1 **SIDE VIEW**
Scale: 3/8" = 1'-0"



3 **END VIEW**
Scale: 3/8" = 1'-0"



2 **TOP VIEW**
Scale: 3/8" = 1'-0"

GENERAL NOTES:

1. AVOID NOTCHING INTO JOISTS AND MUDSILLS.
2. ALL FASTENERS TO BE GALVANIZED STEEL.
3. ALL WOOD TO BE ROUGH CUT CEDAR GROUP A, #2 OR BETTER.
4. ALL WOOD TIMBER COMPONENTS TO BE STAINED WITH OLYMPIC MAXIMUM STAIN + SEALANT IN ONE TONER, 'CEDAR' COLOUR.

Table 7 Trail Type 3

TRAIL TYPE 3 - NATURAL SURFACE		
DESCRIPTION	RELATIVE LEVEL OF USE	MAINTENANCE
Single-track trail, typically not universally accessible due to surfacing and terrain. Provides a back-country recreation experience and very few amenities. The narrow natural surface trail has fewer environmental impacts, protects sensitive ecosystems, and enhances user experience.	Low	Low
Trail examples: Arrowsmith CPR Trail, Mount Benson Regional Park		

Sample Image



Benson Creek Falls Regional Park

DESIGN ELEMENTS						
SURFACING	SLOPE	TRAIL WIDTH (M)	CLEARING WIDTH ON EACH SIDE OF TRAIL (M)	CLEARING HEIGHT (M)	CROSS SLOPE	SIGHT LINES (M)
Natural Surface/ gravel added where needed	Up to 30%	0.5-1	0.5	2.5	2-4%	Provide safe sight lines

TYPICAL USERS					
HIKING	WALKING	EQUESTRIAN	MOUNTAIN BIKING	CYCLING	UNIVERSAL ACCESS

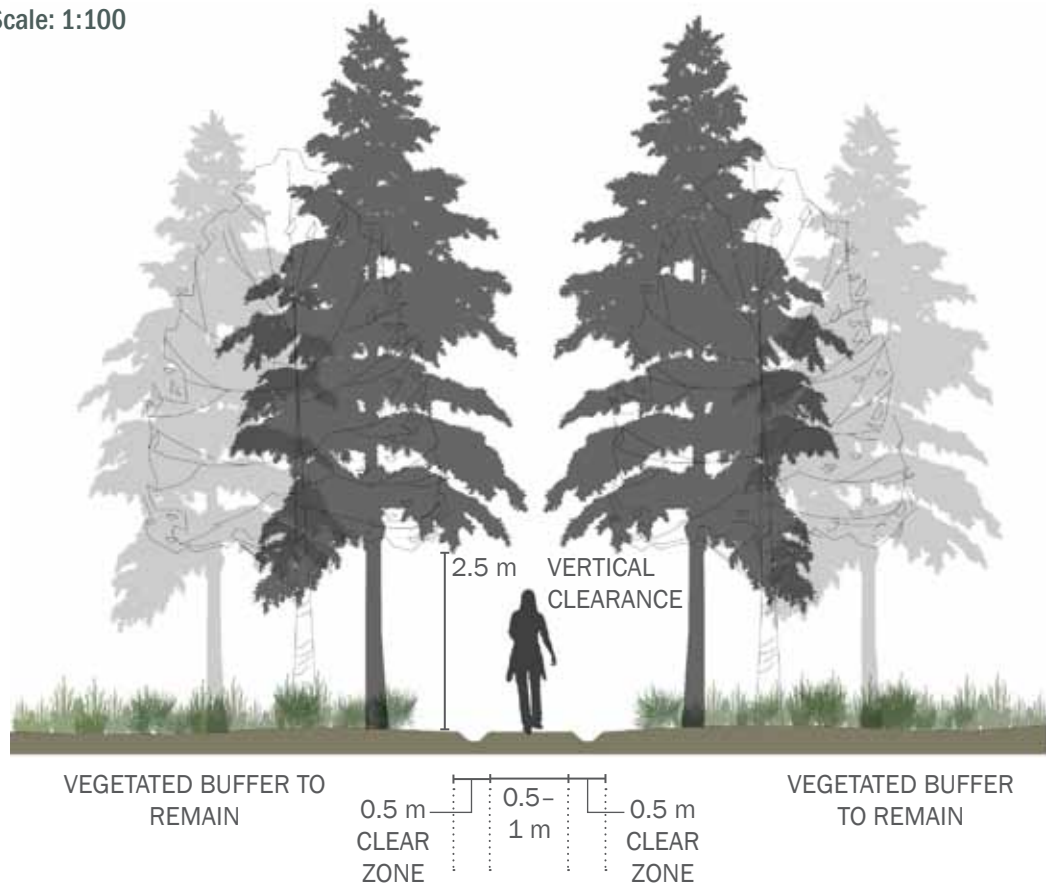
AMENITIES						
FURNISHINGS	GARBAGE RECEPTACLES	KIOSK	REST AREAS	TOILETS	BICYCLE PARKING	VEHICLE PARKING

TYPICALLY PROVIDED

OCCASIONALLY PROVIDED

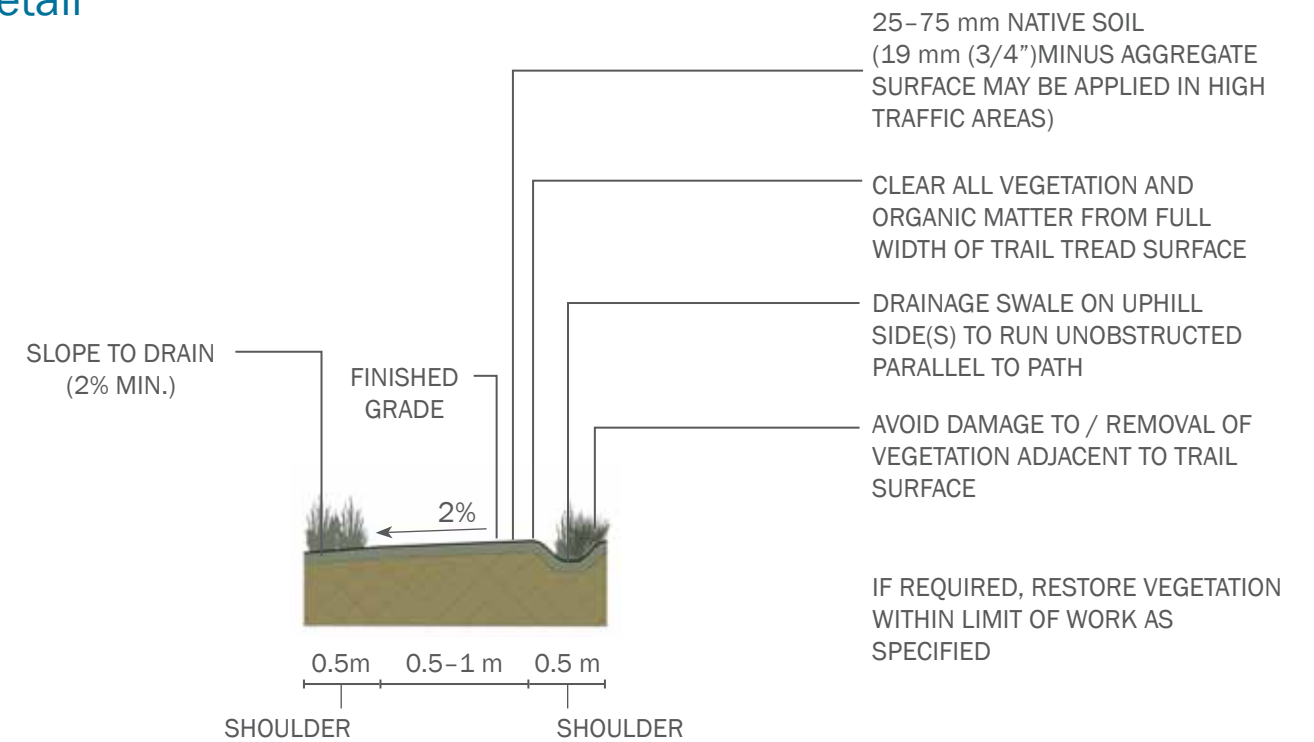
Trail Section

Scale: 1:100

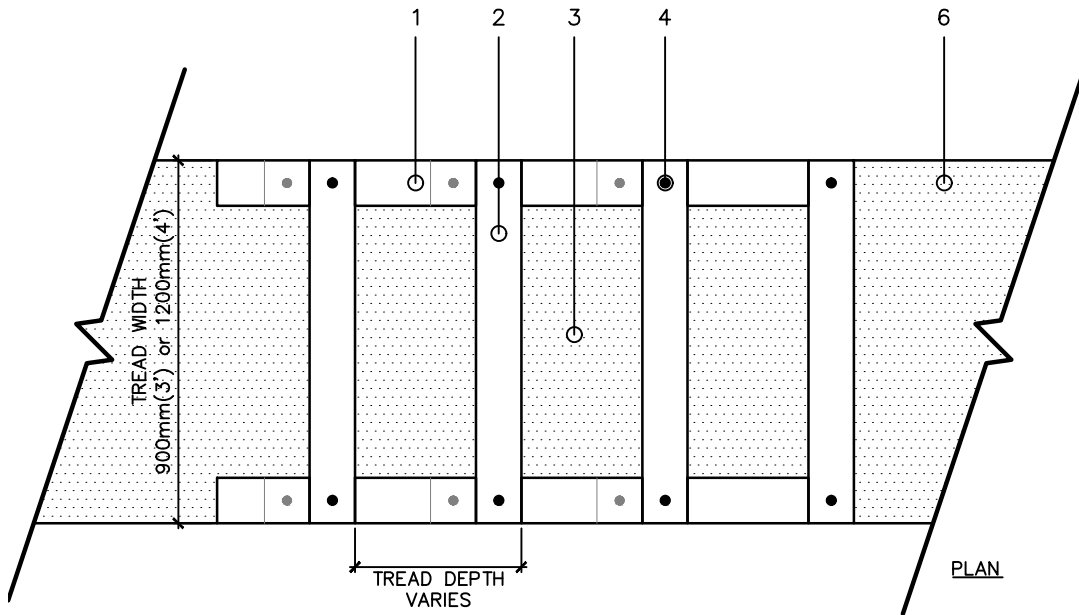


Concept Detail

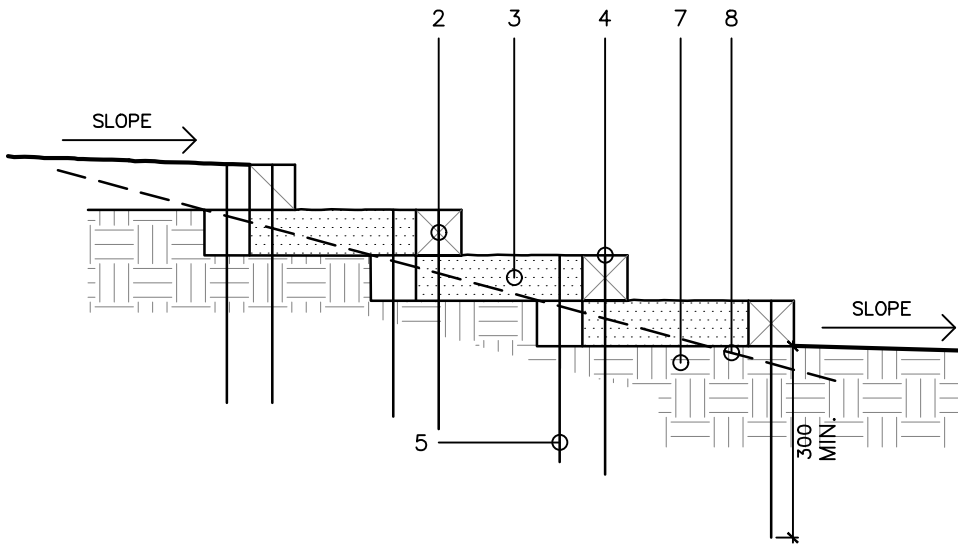
Scale: 1:50



SUPPLEMENTARY DETAIL DRAWINGS



- 1 140 X 140mm (6 X 6") PRESSURE TREATED TIMBER STRINGER (TYP.)
- 2 140 X 140mm (6 X 6") PRESSURE TREATED TIMBER RISER (TYP.)
- 3 BACKFILL STEPS WITH COMPACTED NATIVE MINERAL SOIL OR CRUSHER CHIP AS REQUIRED, FINISH SMOOTH TO TOP OF STEP
- 4 INSERT 10M REBAR THROUGH PREDRILLED HOLES; REBAR TO SIT FLUSH WITH TIMBER
- 5 REBAR TO EXTEND INTO SUBGRADE MIN. 305mm (12")
- 6 ADJACENT HARD SURFACE REFER TO LAYOUT DWGS
- 7 UNDISTURBED SUBGRADE
- 8 EX. SUBGRADE SLOPE



EX. SUBGRADE SLOPE	TREAD DEPTH
25%	0.60m
33%	0.45m
50%	0.30m

TABLE A

NOTES:

- A 3 RISERS MINIMUM (I.E. MINIMUM OF 3 RISERS TO A SET OF STAIRS)
- B DESIRED TREAD DEPTH IS 305-610mm (12-24"); REFER TO TABLE A
- C STAIR TREAD WIDTH VARIES PER TRAIL TYPE - REFER TO PROJECT DWGS. AND SCHEDULE OF QUANTITIES FOR WIDTH
- D MAINTAIN RISE:RUN FOR ENTIRE LENGTH OF STAIRCASE
- E ALL WOOD TIMBER SHALL BE PRESSURE TREATED AND MEET UC4.1 AS PER CSA.080.1
- F WHERE METAL HANDRAIL IS SPECIFIED, REFER TO SUPPLEMENTARY DETAIL 32 15 51.14
- G WHERE TIMBER HANDRAIL IS SPECIFIED, REFER TO SUPPLEMENTARY DETAIL 32 15 51.15
- H WHEN BIKE RAMP IS SPECIFIED, REFER TO SUPPLEMENTARY DETAIL 32 15 51.13

DRAWING TITLE

CRIB STAIRS

LAST REVISED

AUG 28/14

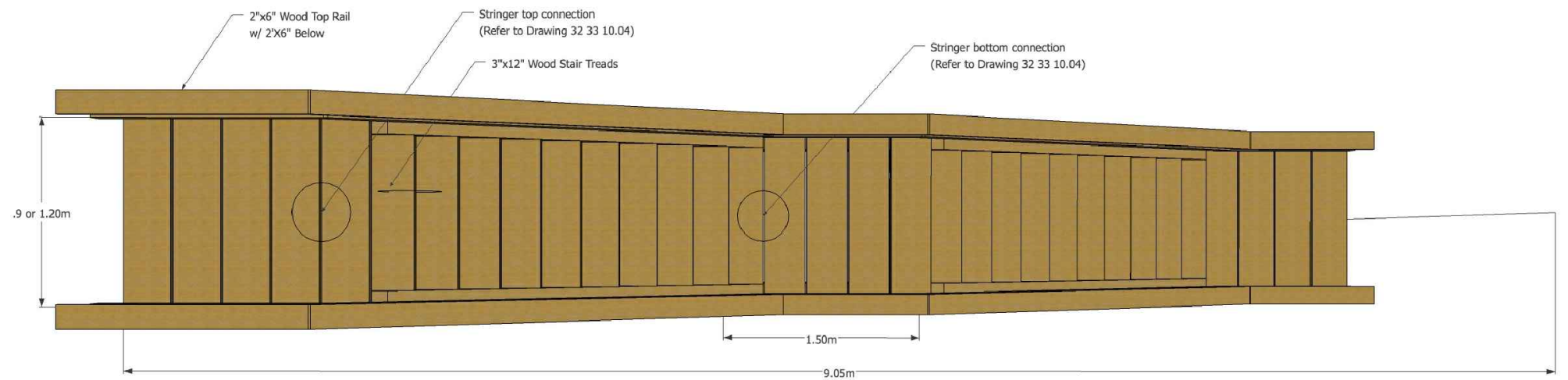
SCALE

1:25

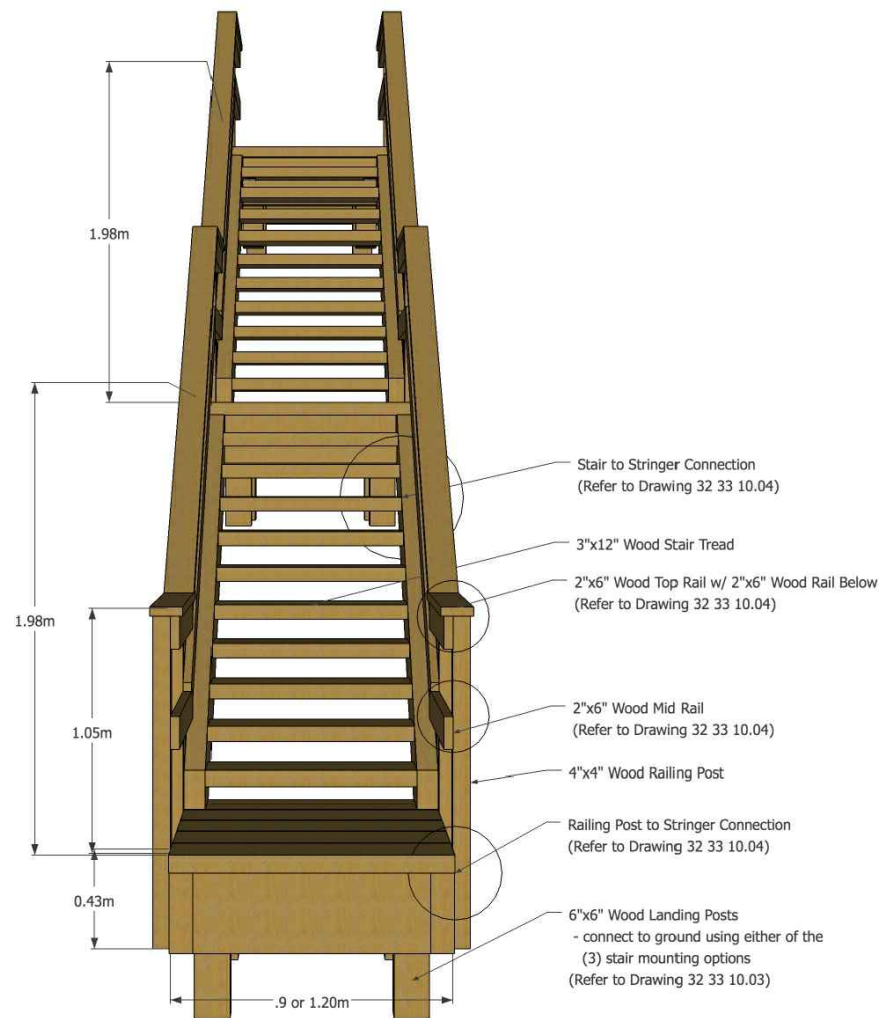
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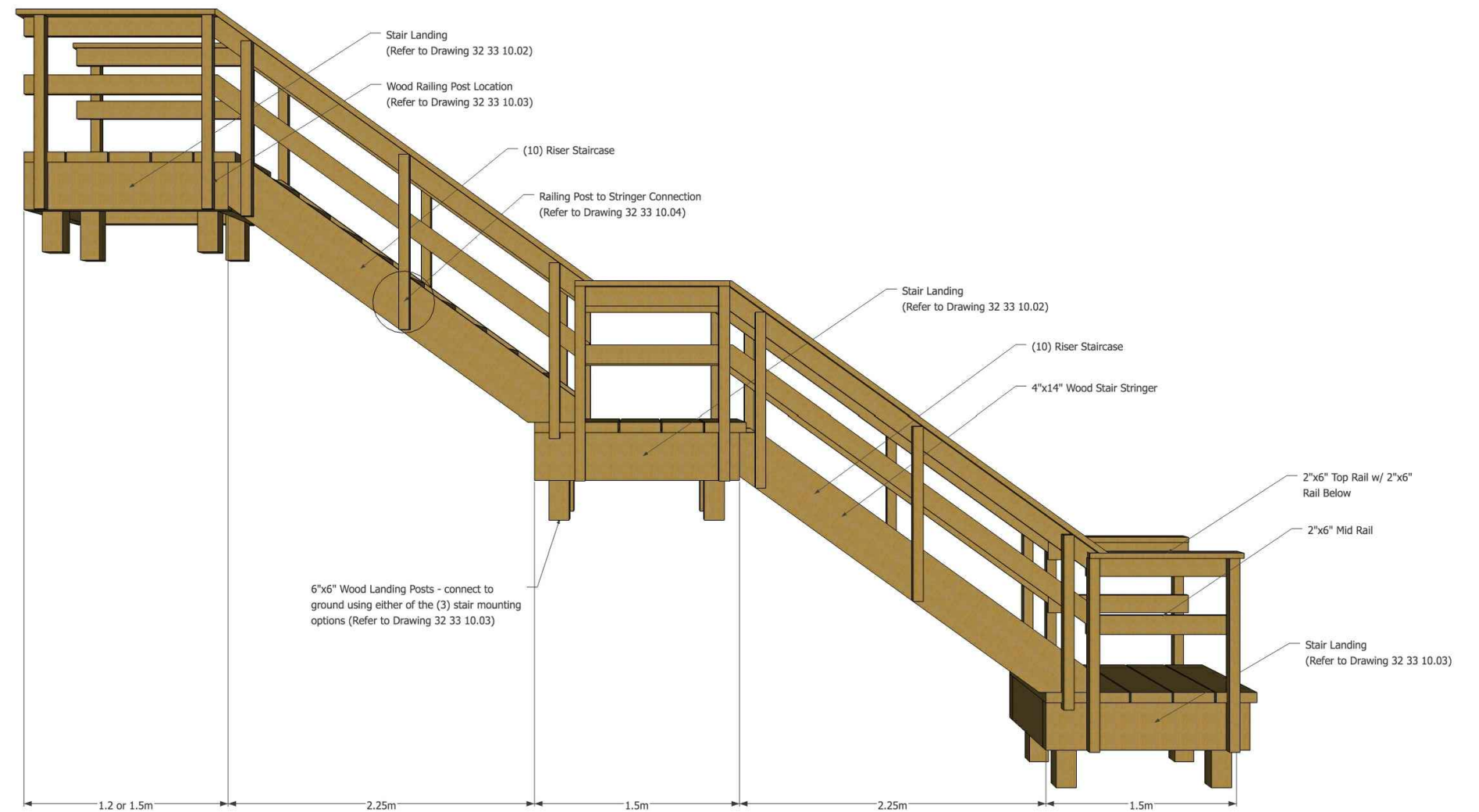
SUPPLEMENTARY DETAIL DRAWINGS



PLAN - 3D VIEW

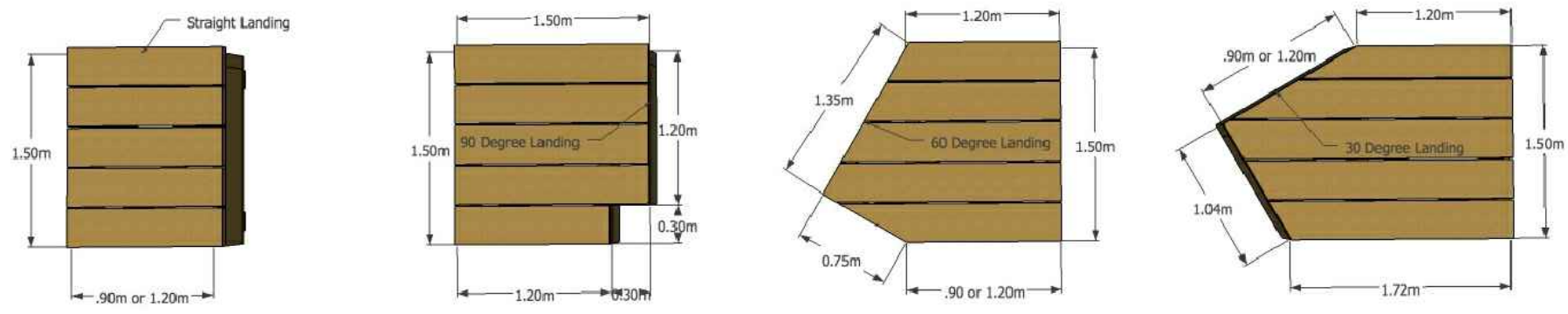


ELEVATION 1 - 3D VIEW

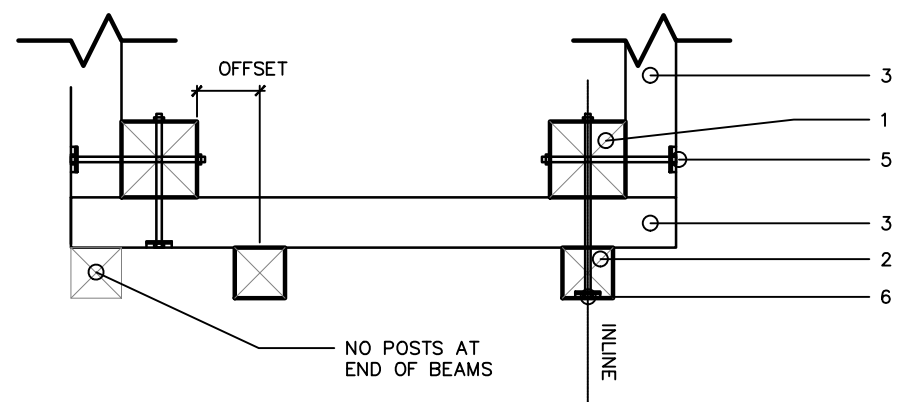


ELEVATION 2 - 3D VIEW

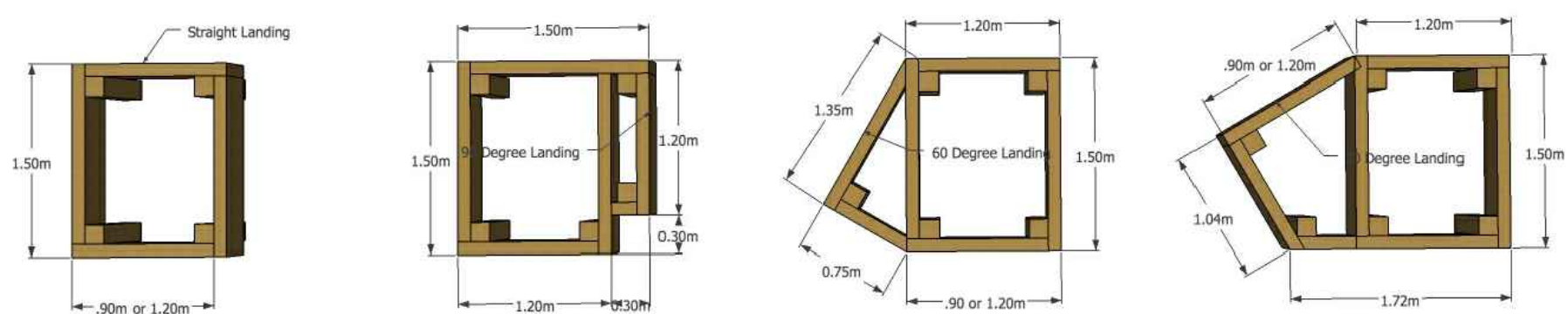
SUPPLEMENTARY DETAIL DRAWINGS



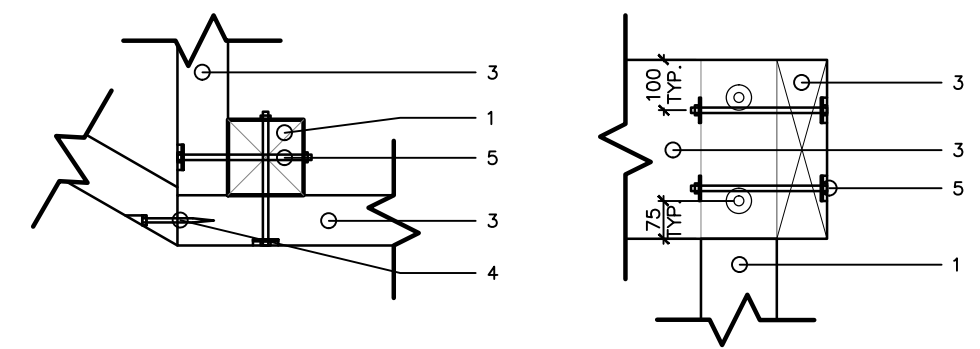
LANDING LAYOUTS 1 - 3D VIEW



RAILING POST LOCATIONS
SCALE 1:15



LANDING LAYOUTS 2 - 3D VIEW



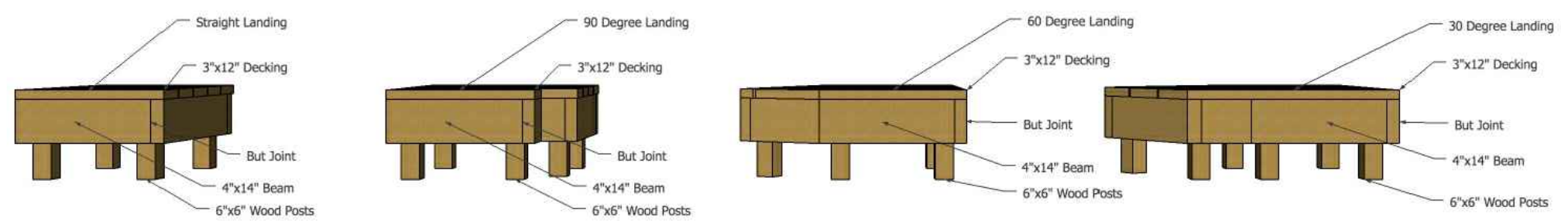
ANGLED BEAM CONNECTION
SCALE 1:15

LANDING BEAM TO POST CONNECTION
SCALE 1:15

- 1 152 X 152mm (6 X 6") WOOD LANDING POST
- 2 101 X 101mm (4 X 4") WOOD RAILING POST
- 3 101 X 356mm (4 X 14") WOOD LANDING BEAM
- 4 (2) 8Ø X 152mm (5/8" X 6") GRK RSS LAG SCREW (NOT GALVANIZED)
- 5 16Ø X 305mm (5/8" X 12") MACHINE BOLTS (WASHERS ON BOTH SIDES)
- 6 16Ø X 406mm (5/8" X 16") MACHINE BOLTS (WASHERS ON BOTH SIDES)

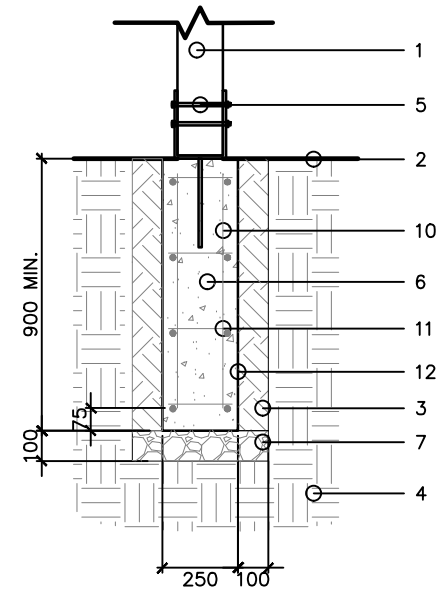
NOTES:

- A ALL FASTENERS TO BE GALVANIZED U.N.O UNLESS OTHERWISE NOTED
- B ALL WOOD TIMBER TO BE FULL DIMENSION ROUGH CUT DOUGLAS FIR-L #2 OR BETTER
- C ALL WOOD TIMBER COMPONENTS TO BE STAINED WITH SIKKENS CETOL 1, COLOUR 'NATURAL 078'
- D ALL WOOD RAILING POSTS CAN BE LOCATED INLINE OR OFFSET FROM 6"x6" WOOD LANDING POSTS. ALL WOOD RAILING POSTS CAN NOT BE LOCATED AT END OF BEAMS
- E ALL VISIBLE/EXPOSED MACHINE BOLTS TO BE COUNTER SUNK INTO WOOD

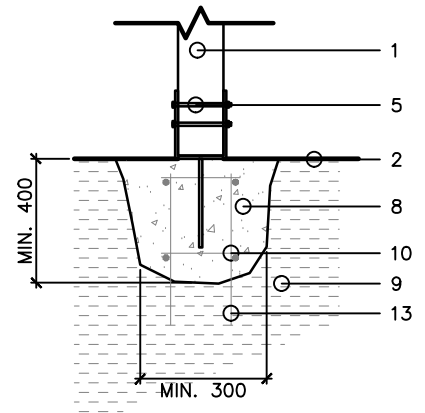


LANDING ELEVATIONS - 3D VIEW

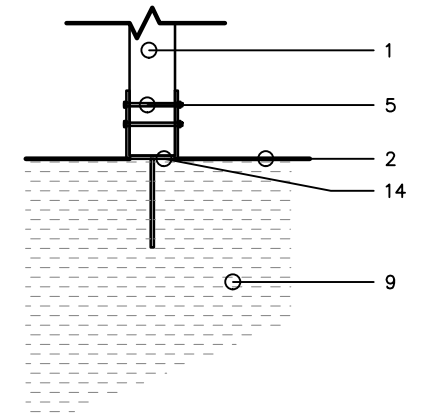
SUPPLEMENTARY DETAIL DRAWINGS



CONCRETE FOOTING OPTION



FRACTURED ROCK MOUNT OPTION



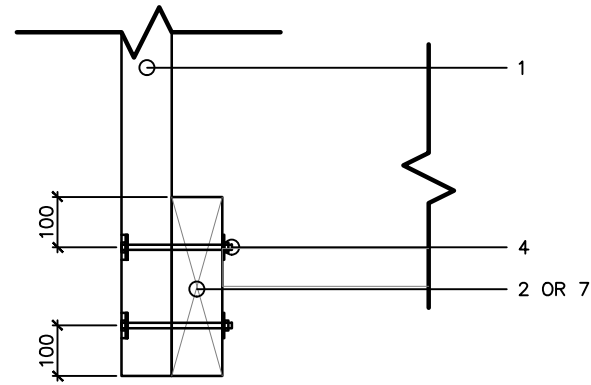
SOLID ROCK MOUNT OPTION

- 1 WOOD LANDING POST
- 2 FINISH GRADE
- 3 BACKFILL AND COMPACT WITH NATIVE SOIL
- 4 UNDISTURBED SUBGRADE
- 5 SIMPSON STRONG-TIE CBGT5-6 COLUMN BASE OR APPROVED EQUAL, POWDERCOATED BLACK, CAST INTO CONCRETE FOOTING. INSTALL POSTS WITH 3/8" HEX LAG BOLT, NUT, AND WASHER, TWO PER POST. INSTALL WITH EXPOSED PLATES PARALLEL TO TRAIL.
- 6 CIP CONCRETE SONO TUBE FOOTING, 25MPa CONCRETE, 4-7% AIR, 70mm SLUMP, CLASS F2
- 7 GRANULAR BASE (COMPACT TO MMCD SPEC.)
- 8 FRACTURED ROCK CONCRETE FOOTING, 25MPa CONCRETE, 4-7% AIR, 70mm SLUMP, CLASS F2, IN BEDROCK; BREAK AND REMOVE TOP LAYER OF SUBSTRATE TO MIN. 400mm DEPTH OR TO SOLID BEDROCK

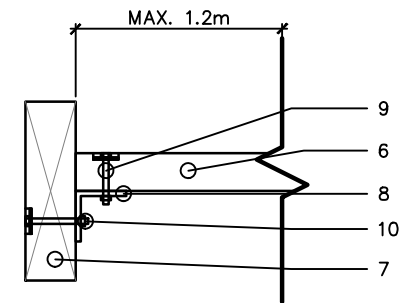
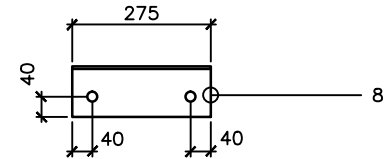
- 9 EX. BEDROCK
- 10 (6) 10M VERTS EVENLY SPACED
- 11 10M TIES @ 254mm O.C.
- 12 254mm (10") Ø SONO TUBE.
- 13 (6) 10M VERTS DRILLED/EPOXIED 150mm INTO BEDROCK W/ HILTI HIT HY 200
- 14 NON SHRINK GROUT BELOW SADDLE FOR UNEVEN BEDROCK

NOTES:
A FOOTING TYPE IS DEPENDENT ON SITE CONDITIONS

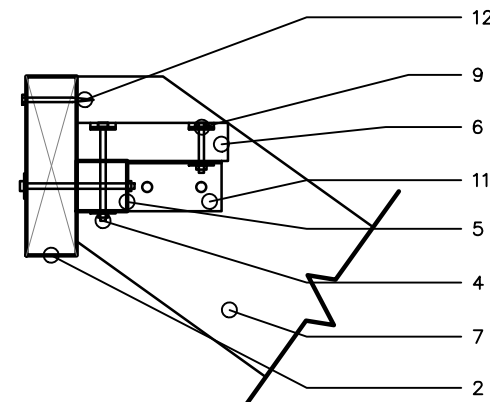
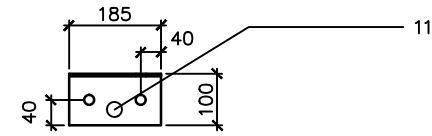
SUPPLEMENTARY DETAIL DRAWINGS



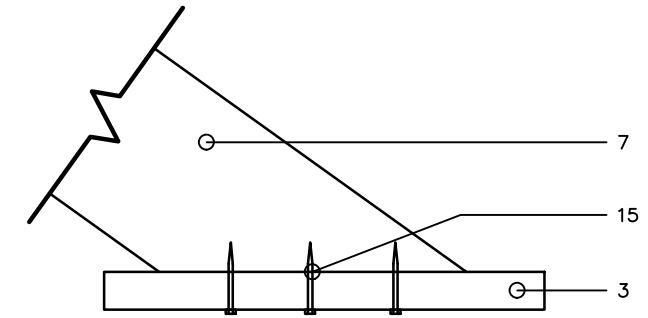
RAILING POST TO BEAM/STRINGER CONNECTION



STAIR TO STRINGER CONNECTION



STRINGER TOP CONNECTION



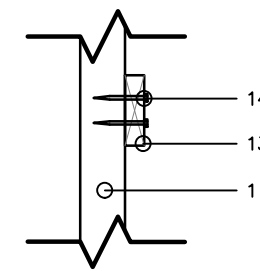
STRINGER BOTTOM CONNECTION

- 1 102 X 102mm (4 X 4") WOOD RAILING POST
- 2 102 X 356mm (4 X 14") WOOD LANDING BEAM
- 3 76 X 305mm (3 X 12") WOOD DECKING
- 4 16 ϕ X 254mm ($\frac{5}{8}$ " X 10") MACHINE BOLTS (WASHER ON BOTH SIDES)
- 5 102 X 102mm (4 X 4") WOOD BEAM FOR STRINGER TOP CONNECTION
- 6 76 X 305mm (3 X 12") WOOD STAIR TREADS
- 7 102 X 356mm (4 X 14") WOOD STAIR STRINGERS
- 8 102 X 102 X 6mm (4 X 4 X $\frac{1}{4}$ ") STEEL ANGLE CUT 275mm (7") LONG PER SIDE OF STAIR TREADS
- 9 (2) 10 ϕ X 127mm ($\frac{3}{8}$ " X 5") MACHINE BOLTS (WASHER ON WOOD SIDE)
- 10 (2) 16 X 152mm ($\frac{5}{8}$ " X 6") MACHINE BOLTS (WASHER ON WOOD SIDE)
- 11 102 X 102 X 6mm (4 X 4 X $\frac{1}{4}$ ") STEEL ANGLE CUT 178mm (7") LONG
- 12 (3) 10mm ϕ X 152mm ($\frac{3}{8}$ " X 6") GRK RSS LAG SCREWS FROM LANDING BEAM & INTO END OF STRINGERS @ TOP
- 13 51 X 152mm (2 X 6") WOOD TOP & MID RAILS
- 14 6 ϕ X 152mm ($\frac{1}{4}$ " X 4") LAGS

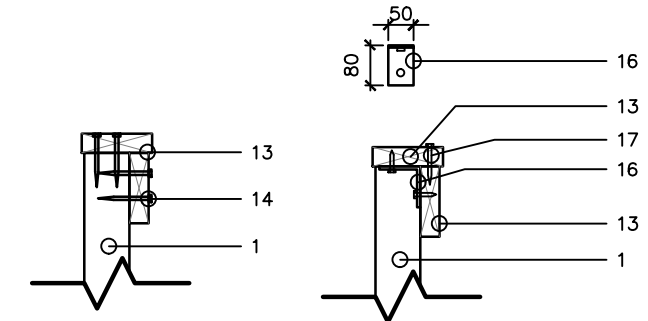
- 15 (3) 9.5 ϕ X 152mm ($\frac{3}{8}$ " X 6") GRK RSS LAG SCREWS FROM DECKING & INTO END OF STRINGERS
- 16 51x51x6mm (2 X 2 X $\frac{1}{4}$ ") STEEL ANGLE CUT 76mm (3") LONG W/ 38mm (1 $\frac{1}{2}$ ") SCREWS
- 17 76mm (3") SIMPSON STRONG DRIVER TIMBER SCREWS @ 610mm 24" O.C.

NOTES:

- A ALL FASTENERS TO BE GALVANIZED U.N.O. UNLESS OTHERWISE NOTED
- B ALL WOOD TIMBER TO BE FULL DIMENSION ROUGH CUT DOUGLAS FIR-L #2 OR BETTER
- C ALL WOOD TIMBER COMPONENTS TO BE STAINED WITH SIKKENS CETOL 1, COLOUR 'NATURAL 078'
- D ALL HANDRAILS, SIDE RAILS & TOP RAILS SHALL BE S4S LUMBER/PLANED ON FOUR (4) SIDES
- E MITRE & WELD ALL METAL ANGLES PRIOR TO GALVANIZATION
- F ALL VISIBLE/EXPOSED MACHINE BOLTS TO BE COUNTER SUNK INTO WOOD



MID RAIL TO POST CONNECTION



TOP RAIL TO POST CONNECTION