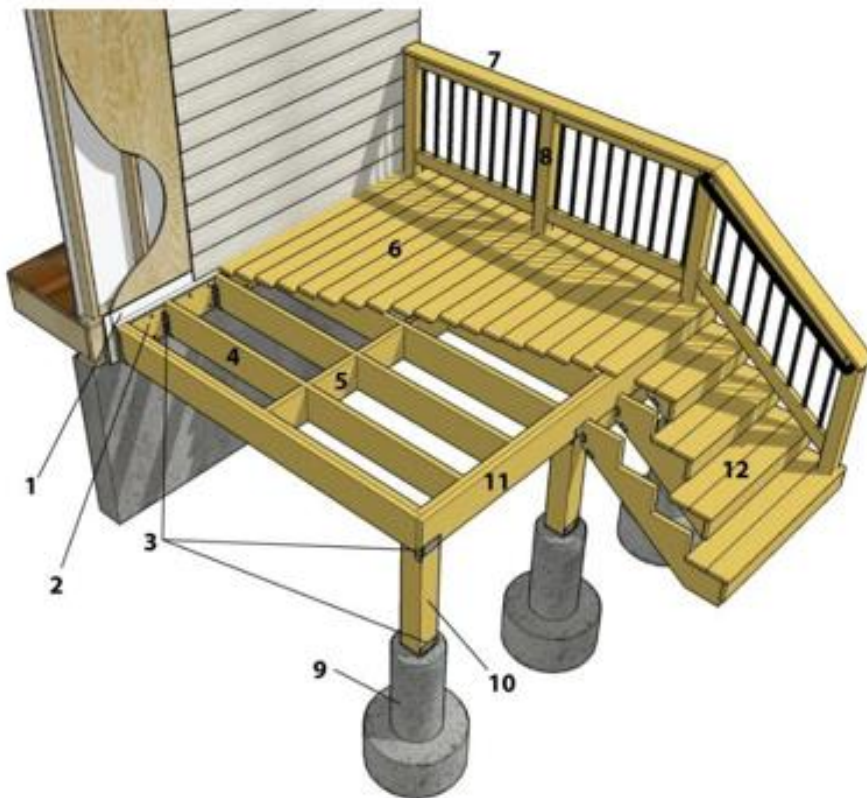


# RESIDENTIAL DECK CONSTRUCTION GUIDE



1. Flashing
2. Ledger
3. Hardware
4. Joists
5. Bridging
6. Decking
7. Guard
8. Guard Post
9. Footing
10. Deck Support Post
11. Beam
12. Stairs

# General Requirements

A Building Permit is required for a deck with a walking surface more than 24" above grade at any point.

This document may be used in place of submitting construction drawings with a permit provided:

The proposed deck is for residential use only; house (up to duplex), single, semi, townhouse, and is unenclosed with no roof, and no hot tubs, pergolas, gazebos, trellis or other roof structures are supported by the deck.

Any proposed deck construction on a property with a septic system shall comply with the required clearances in Part 8 of the Ontario Building Code.

**All construction shall conform to the latest edition of the Building Code, as amended.**

## Application Requirements:

<https://cvportal.collingwood.ca/Portal/Account/Logon>

Be sure you have:

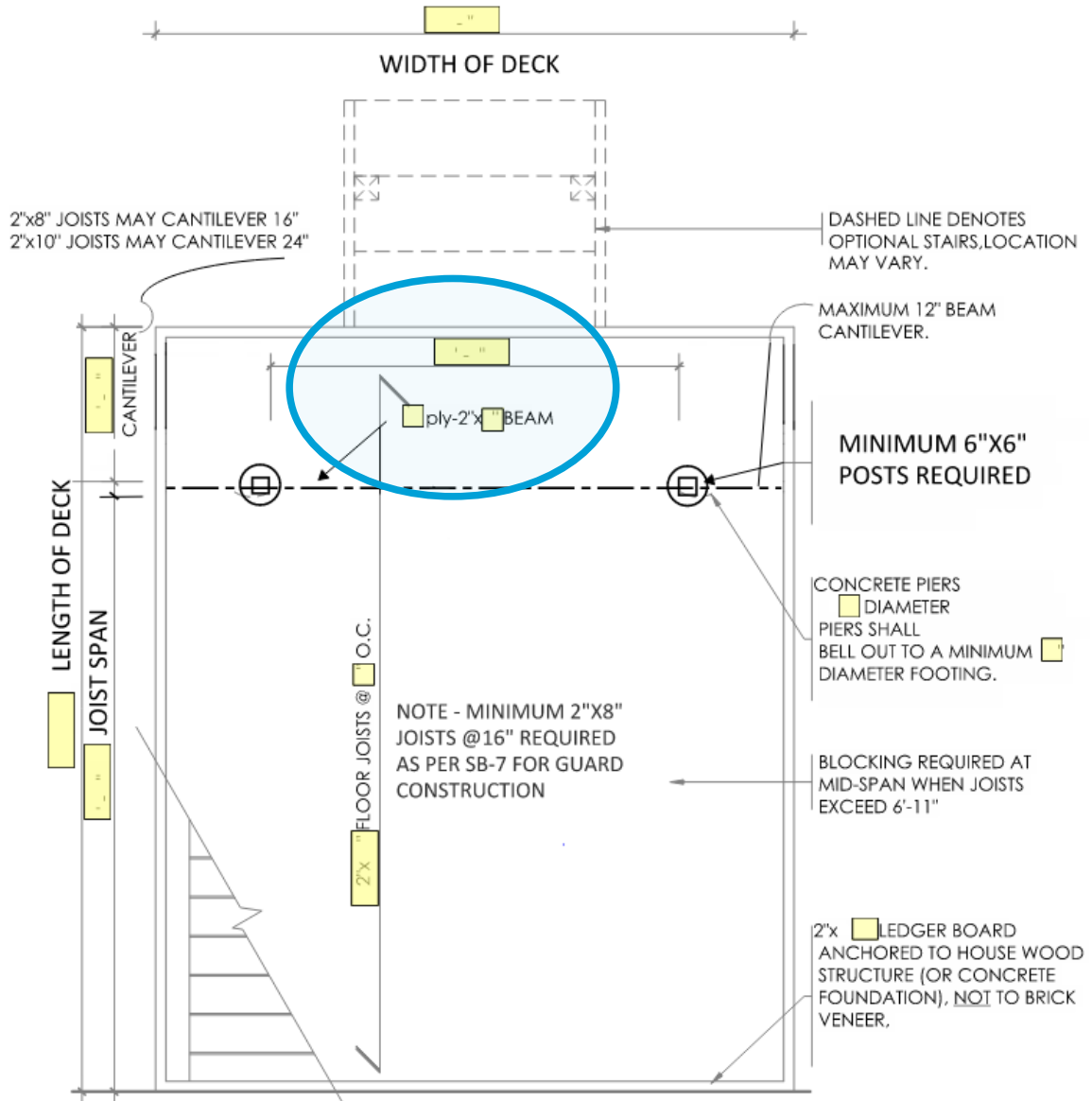
- Zoning Certificate is required to be obtained prior to applying for a Building Permit.
- Completed Building Permit Application Form.
- Approved copy of site plan or survey received with Zoning Certificate.
- Additional construction drawings or details not forming a part of this guide.
- Completed Deck Information Sheet, page 3 of this guide.
- Building Permit Fee.

## Material specifications:

- Lumber shall be preservative-treated, spruce pine fir, grade #2 or better.
- Concrete in footings shall have a minimum compressive strength of 15Mpa after 28 days.
- Nails shall be threaded, ring-shanked or annular grooved. A 1/8 inch pilot hold shall be used at toe nailing locations
- Carriage-bolts may be substituted where through-bolts are specifically provided carriage-bolt washers (with square holes) are installed at the bolt head. Note: GRK Screws are not approved for this detail.
- Fasteners shall be hot-dipped galvanized, stainless steel or approved for use with preservative treated lumber.
- Hardware and Mechanical connectors, e.g., joist hangers or post anchors, shall be stainless steel or galvanized with 1.85 ounces of zinc per square foot (G-185 coating). Look for product lines such as "Zmax," "Triple Zinc" or "Gold Coat."
- Minimum Decking: 5/4" lumber
- Composite decking is required to have BMEC or CCMC approvals.

# Deck Information Sheet

## Layout Information Required:



## Additional Information Required:

Deck height above grade:			
Guard Height:			
Guard Type: SB-7			
<ul style="list-style-type: none"> <li>• Infill Pickett</li> <li>• Top and Bottom Rail</li> </ul>			
Engineered Guard System:			
Specify:			

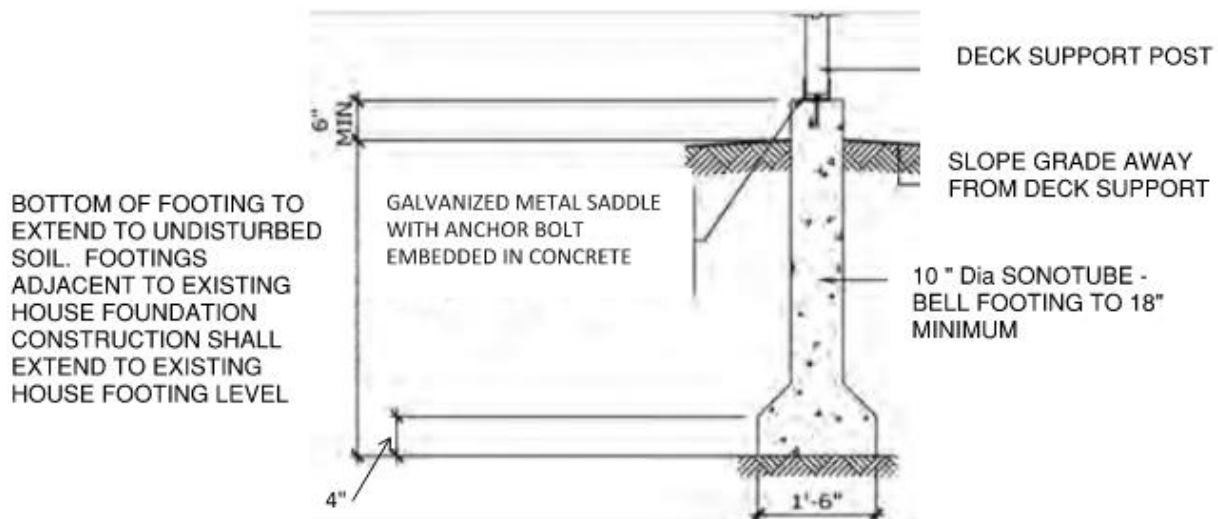
## Beam and Joist Selection Tables:

<b>(A) JOIST SPAN</b>				
Size	12" o/c	16" o/c	24" o/c	Maximum Cantilever
2 x 8	12'-3"	11'-6"	10'-0"	16"
2 x 10	14'-6"	13'-6"	12'-6"	24"
2 x 12	16'-6"	15'-6"	14'-6"	24"

<b>(B) BEAM SPAN</b>						
Based on an 11—10" support length of joist span (A) plus cantilever*						
Members and Plys						
2 x 8		2 x 10		2 x 12		Cantilever*
Ply	Max Span	Ply	Max Span	Ply	Max Span	
2 ply	5'-6"	2 ply	6'-9"	2 ply	7'-9"	Maximum cantilever on any beam is 12" beyond bearing post.
3 ply	6'-9"	3 ply	8'-3"	3 ply	9'-6"	
4 ply	7'-9"	4 ply	9'-6"	4 ply	11'-0"	

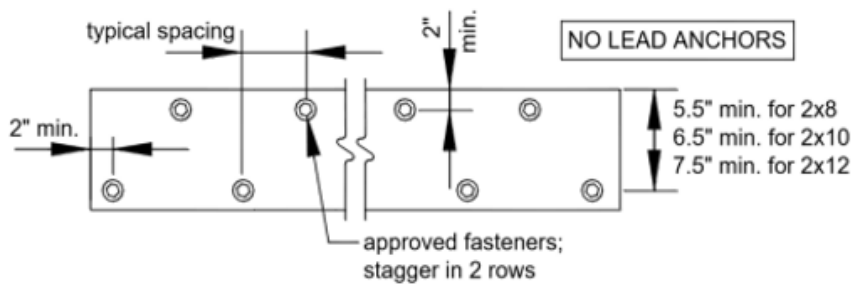
## Construction Details

### Excavation and Footing:



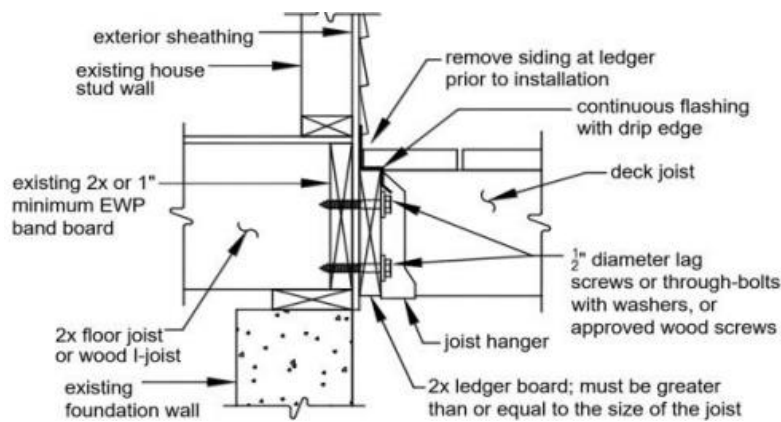
Maximum spacing between piers shall not exceed 3.5m (11'-6")

### Ledger Board Attachment:

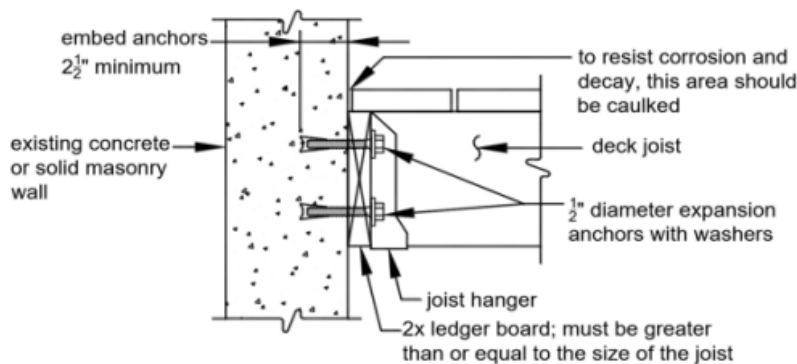


### Note:

#### Connection to Rim Board:



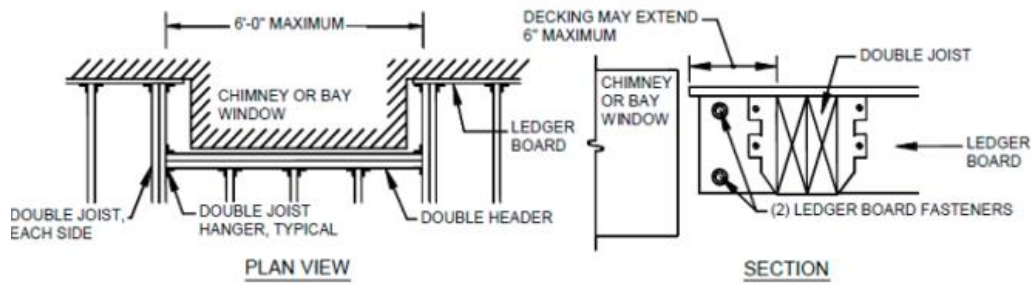
#### Connection to Poured Concrete Foundation Wall:



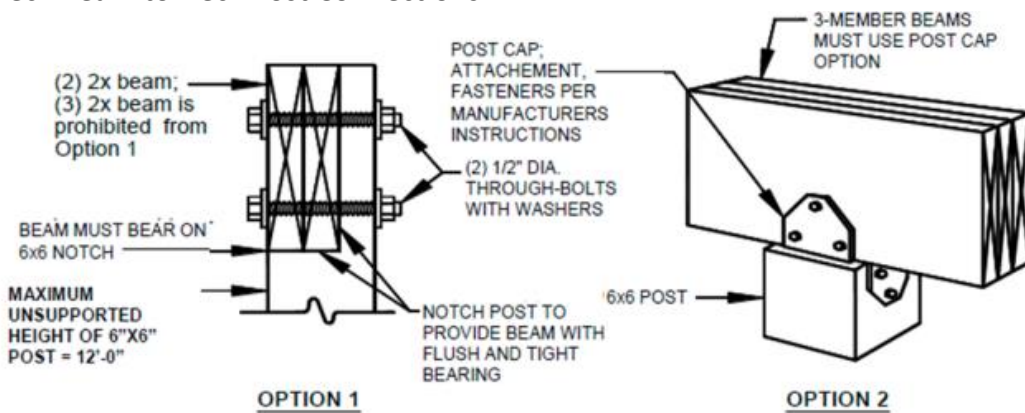
### **Note: Deck Cannot be Supported by Brick Veneer**

When deck ledger boards are attached to engineered wood products (structural composite lumber rim board or laminated veneer lumber, ie tji's), or ICF construction the ledger board attachment shall be designed in accordance with the manufacturer's recommendations or good engineering practices. Alternatively, provide a design that does not require a ledger board for support.

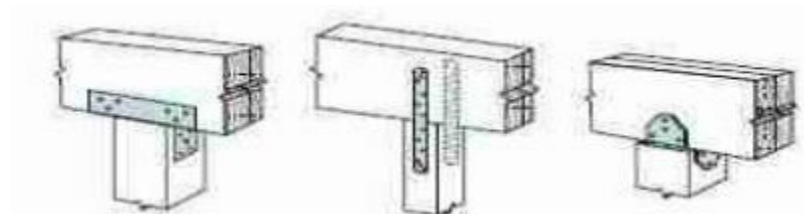
**Framing Around Openings:**



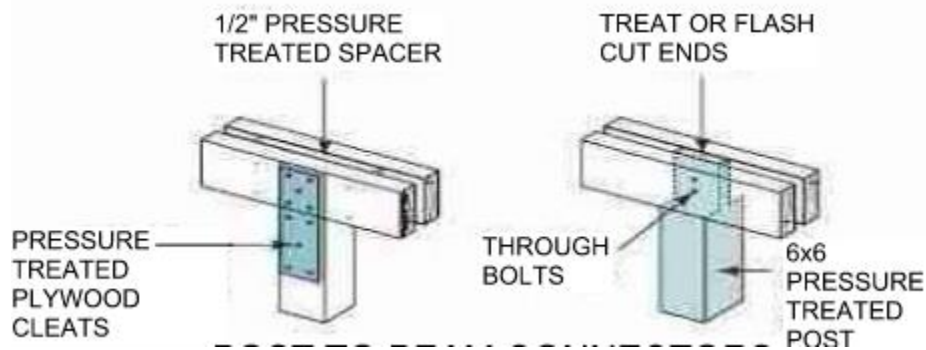
**Deck Beam to Deck Post Connections:**



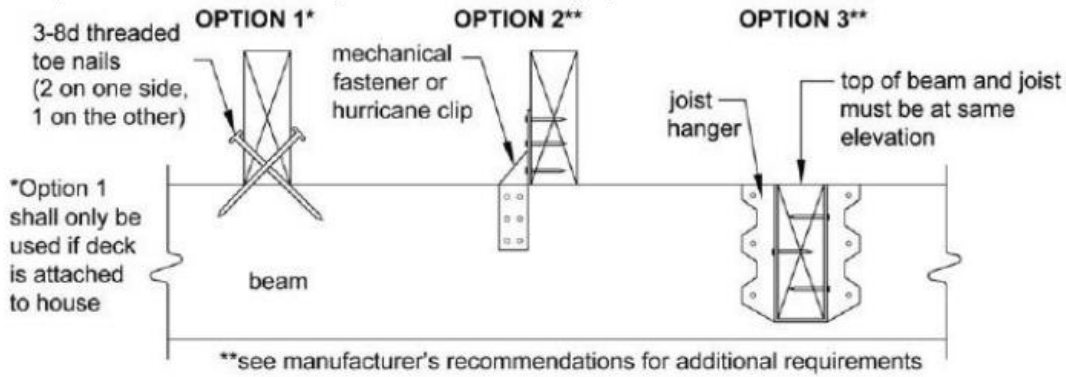
**Steel Post Cap Connectors:**



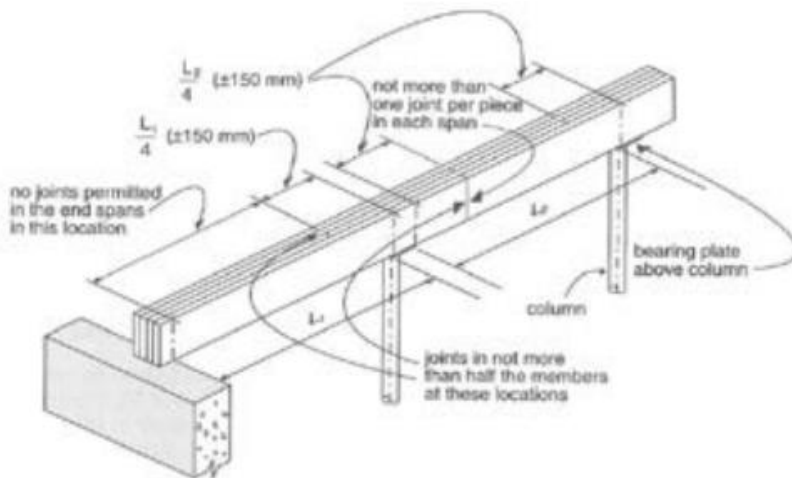
**Post to Beam Connectors:**



**Joist Connection Details:**

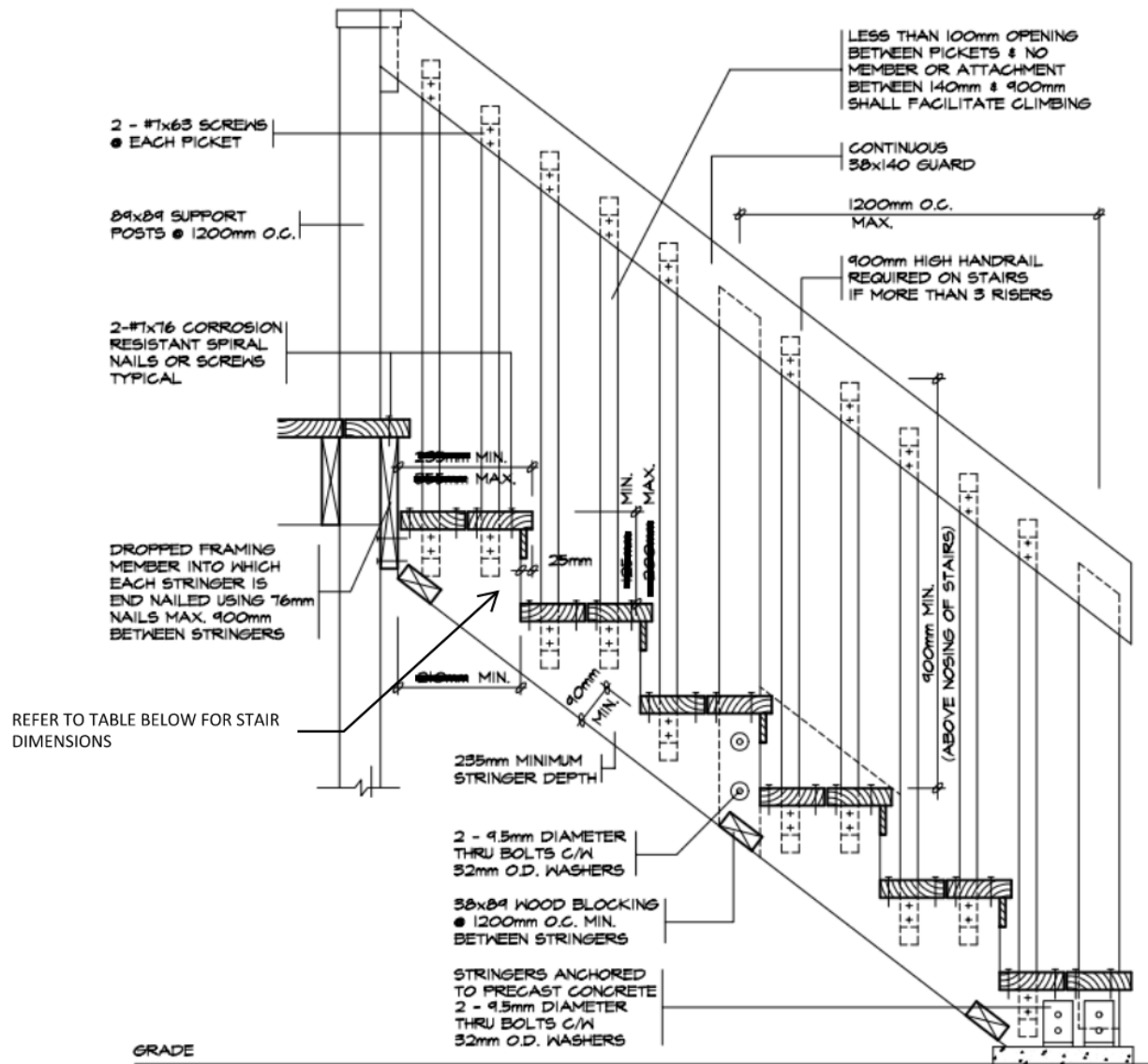


**Built-up Wood Beam Requirements:**



- Except as noted, where individual members of a built-up beam are butted together to form a joint, the joint shall occur over a support.
- Where a beam is continuous over more than one span, individual members are permitted to be butted together to form a joint at or within 6" of the end quarter points of the clear spans, provided the quarter points are not those closest to the ends of the beam.
- Members joined at quarter points shall be continuous over adjacent supports.
- Individual members shall be nailed together with a double row of nails not less than 89 mm in length, spaced not more than 18" apart in each row with the end nails located 4" to 6" from the end of each piece. **Or**, bolted together with not less than 1/2" diam bolts equipped with washers and spaced not more than 4'-0" o.c., with the end bolts located not more than 24" from the ends of the members.

## Stair Construction:



Maximum Rise	Minimum Rise	Maximum Run	Minimum Run
200mm/8"	125mm/5"	355mm/14"	255mm/10"

- Rise is measured as the vertical nosing-to-nosing distance.
- Run means the horizontal distance between two adjacent tread nosings on a stair.
- Rise and run shall be uniform for the flight of stairs.
- Minimum width of stair is 860mm (34").
- The maximum vertical height of a flight of stairs shall not exceed 3.7m(12'-2").
- Note: landings shall be at least as wide and as long as the width of the stairs in which they occur.
- Handrails shall be 865 mm (34") to 1 070 mm (42") high.
- The clearance between a handrail and any surface behind it shall be not less than 2".
- All handrails to be continually graspable along their entire length with no obstruction on or above them to break a handhold -Maximum 2"x4" on flat or 2"x6" on edge.



## Guard Construction:

- Shall conform to the details issued with your approved building permit. All revisions to be submitted to Collingwood Building Services for review.
- Engineered details will be required if OBC 2012, SB-7 is not being used. Engineering is required to be submitted to CBS for review prior to installation.
- Height of guards where deck height is between 600mm (24") & 1800mm (5'-11") above grade is 890mm (35").
- Height of guards for a deck more than 1800mm (5'-11") above grade is 1070mm (42")
- Maximum 100mm (4") openings between pickets and no member or attachment between 140mm (5.5") and 890mm (35") shall facilitate climbing.
- Guard posts shall not be notched. They shall be attached by installing (2) ½" bolts or hold down anchors per manufacturer's specifications.
- All fasteners shall be resistant to corrosion. All lumber shall be decay resistant. All cut ends of preservative treated lumber shall be treated to prevent decay.
- A privacy wall/ fence boards may be permitted if constructed as a guard and should be discussed with your Building Inspector prior to constructing.

The information contained in this document is for reference only. It is intended to assist homeowners with their deck project while ensuring compliance with the requirements of the Ontario Building Code. The drawings and details specified are typical construction details and other methods may be permitted upon authorization from Building Services at the discretion of the Building Official.

All construction shall be inspected including excavation prior to placing concrete, framing and a final inspection prior to use. Do not cover prior to passing the required inspections.

**All construction shall conform to the latest edition of the Building Code, as amended.**

**All construction shall be in accordance with the reviewed permit drawings and associated permit documentation. Any deviations from the approved permit require approval prior to making any changes on site – revision fees may be applicable. Talk to your Building Inspector if you are contemplating a change.**

