1.0 PERMITS

1.1 Required Drawings and Plans

A building permit to construct a deck is required for every deck that has:

- A height which exceeds 600mm [23-⅝"] above finished ground adjacent to the deck, or
- A building area that exceeds 10m² [108 sq. ft.]

When a building permit to construct a deck is required, the permit must be issued and in the possession of the Property Owner prior to the start of any construction.

1.2 Obtaining a Building Permit to construct a deck

A permit application is available from the Building & Enforcement Department office at the Township of West Lincoln or at the Township of West Lincoln's website www.westlincoln.ca. The review of your submitted application package will not begin until all the required information is submitted and the application package is deemed complete, this includes all applicable law. A Building Official will then review the submitted application package for compliance with all applicable building codes, by-laws, and other regulations. This process may take up to two (2) weeks from the submission of the permit application package. You will then be contacted when the permit is available to pick up.

A complete application shall include:

- A complete application form
- All required drawings and plans
- All permit fees and deposits

1.3 Required Drawings and Plans

An application for a building permit to construct a deck shall be accompanied by specific drawings. A complete set of drawings will consist of the following drawings:

- The site plan drawing must show the entire property, the location of all buildings and the proposed location of the deck. Dimensions shall be given from the proposed deck to all property lines and buildings which may exist on site.
- The Structural / Floor Plan drawing(s) must include all sizes, spans and spacing of structural members and components. These components may consist of, but are not limited to all columns, posts, beams, joists, deck boards, guards, pickets and required fasteners.
- The Section / Detail drawing(s) must illustrate the proposed construction of the deck, connection to existing structure(s), stairs, as well as the required guards and / or handrails. Sizing and spacing of all proposed members and the required fasteners are to be provided on the Section / Detail drawing(s)

Additional drawings may be requested by the Building Official if the information submitted is insufficient to provide the details requested.

1.4 Building Permit Fees and Deposits

A performance / security deposit of $500.00 will be taken from the applicant and can be released upon successful completion of the construction. During the plans examination process the fee will be calculated based on the rate listed below, however the minimum building permit fee is $125.00 on all projects.

- Deck Fee ..... $3.00 / m²

2.0 OWNER RESPONSIBILITIES

The owner of a property has several responsibilities in any building project. These responsibilities begin before the commencement of construction and continue after the construction of the deck is complete.

2.1 Prior to Construction

It is the responsibility of the Property Owner to:

- Obtain a building permit
- Create or obtain accurate drawings and plans as required (a surveyor may be required)
- Ensure that the proposed deck is not located on any easement, drainage swale, septic system or right of way
- Obtain all applicable permits for any electrical works from the appropriate authority
- Call for locates of any services on the property

It is also the responsibility of the Property Owner to obtain approval from the Niagara Peninsula Conservation Authority (NPCA) for the construction of a deck on property under the jurisdiction of the N
i

For Utility Locates Call…

Water Service & Sewer	Public Works	905 957 3346
Electricity	Hydro One	800 664 9376
Natural Gas	Enbridge Gas	877 362 7434
Telephone	Bell Canada	905 310 2355
Cable Television	Cogeco Cable	866 427 7451
Locate before you dig	Ontario One Call	800 400 2255

Underground utilities other than those listed above may exist

l
a Conservation Authority.

2.2 During Construction

It is the responsibility of the Property Owner to:

- Ensure the deck is situated on the lot and constructed as per the approved drawings and plans

- Ensure that sufficient provisions have been taken to secure any door leading to the exterior where stairs may have been removed for the construction of the deck as an unsafe condition may be present
- Schedule all required inspections upon the completion of each stage of the construction process as described below (24 hour notice is required), and ensure that no person shall occupy the deck for the purposes other than construction activity until final inspection of the deck has been conducted and approved by the Chief Building Official
- Ensure that all electrical installations are installed in accordance with all applicable electrical codes and standards, and that the necessary electrical inspections are conducted

2.3 After Construction

It is the responsibility of the Property Owner to:

- Schedule the final inspection, and ensure that no person shall occupy the deck until final inspection of the deck has been conducted by the Building Official
- Maintain all deck components in accordance with the approved minimum standards

3.0 REQUIRED INSPECTIONS

3.1 Footing & Excavations Inspection

The Footing and Excavation inspection is required prior to the pouring of any concrete and upon the completion of the foundation pier excavation. The Ontario Building Code requires that the bottom of a foundation pier be at a minimum depth of 1.2m [3'-11¼"] from grade level. It should be noted that wood columns shall not be embedded in any concrete foundation pier.

3.2 Framing Inspection

The Framing Inspection is required prior to the installation of the deck boards (walking surface). The Building Official must be able to inspect all structural elements including connections to the dwelling (where applicable), connections to the foundation elements, framing members, posts, columns, and beams. Where these items can be inspected from below with reasonable accessibility, the deck boards are permitted to be installed prior to the inspection.

3.3 Final Inspection

The Final Inspection is required upon completion of the deck construction and prior to occupancy of the deck. The project is considered complete when all framing, walking surfaces, stairs, handrails and guards are installed as indicated on the approved drawings and plans in accordance with all applicable codes and by-laws. The Building Official will then issue and inspection report stating that the deck is "okay to occupy" upon the successful completion of the Final Inspection.

4.0 ENFORCEMENT

4.1 Inspection for Compliance

The Building Official may inspect at any time during construction to determine compliance with any applicable codes and regulations. Where non-compliance exists, removal of deficient items may be ordered or occupancy denied until the items are rectified to the satisfaction of the Building Official.

4.2 Penalty

Every Person who contravenes the provisions of the Ontario Building Code is guilty of an offence and upon conviction is liable to fines as provided for in the Provincial Offences Act, R.S.O. 1990, c. P33

5.0 ACCEPTABLE DECK LOCATIONS

5.1 Deck Regulations

The Township of West Lincoln's Comprehensive Zoning By-law (2017-70) regulates the acceptable location of decks within the boundaries of residential properties. It is recommended that all applicants speak with the Planning Department to determine whether or not their proposed deck complies with the Zoning By-law.

6.0 DECK CONSTRUCTION

6.1 Applicable Codes

In addition to the other regulations discussed in this package, the construction of decks and exterior stairs must satisfy the requirements of the Ontario Building Code. The following sections of this package have been included to

- Offer information from the Ontario Building Code (OBC)
- Provide illustrations of how to construct a deck and / or exterior stair in conformance with the requirements of the Ontario Building Code (OBC)

This information is offered for reference as it is understood that many home owners do not have access to the codes in question. Most of the illustrations provided in this package are labelled "typical" as they are common to residential deck construction, however, they are certainly not the only way to satisfy the requirements of the OBC. For complicated designs and construction detailing, the assistance of a professional designer should be sought to ensure compliance with the required regulations.

6.2 Building Materials

Lumber grades shall meet the following [OBC SB-7 2.1.1] :

- The minimum grade of soft wood dimensional lumber for posts, rails and joists shall be Northern Species, No. 2
- The minimum grade of softwood dimensional lumber for pickets shall be Northern Species, No. 2 picket grade, and
- Wood pickets shall be free of loose knots

Lumber for guard and floor systems must be resistant to decay it shall be [OBC SB-7 2.1.5]

- A species resistant to decay
- Preservative treated to prevent decay, or
- Pressure treated

and all cut ends of preservatives or pressure treated lumber shall be treated to prevent decay.

Connectors used in deck construction shall [OBC SB-7 2.1.4] :

- Nails, screws, lag bolts and machine bolts shall not cause splitting of wood elements
- Fasteners shall be resistant to corrosion, and
- All nails shall be common spiral

Guard Element	Post	Top Rail	Bottom Rail	Picket / Baluster

Minimum Size, mm [in.]	89mm x 89mm [4" x 4" nominal]	38mm x 89mm [2" x 4" nominal]	38mm x 89mm [2" x 4" nominal]	32mm x 32mm [1-¼" x 1-¼" nominal]

Minimum Size of Loadbearing Elements [OBC SB-7 2.1.1] :

Minimum Size of Floor Elements [OBC SB-7 2.1.3]:

Floor Element	Minimum Size, mm [in.]
Dimensional Lumber Decking	25mm x 140mm [5/4" x 6" nominal] when each deck board is fastened with 2 – 63mm [2½"] nails
	38mm x 89mm [2" x 4" nominal] when each deck board is fastened with 2 – 76mm [3"] nails
Dimensional Lumber Joists	38mm x 184mm [2" x 8" nominal]

6.3 Guard Construction

A guard as defined by the OBC is a protective barrier at the open sides of a deck, stair, landing, balcony or other such structures to prevent accidental falls from one level to another.

The OBC requires that a guard be installed on walking surfaces on each side that is not protected by a wall where [OBC Div B 9.8.8.1.(1)]:

- There is a difference in elevation of more than 600mm [23-⅝"] between the walking surface and the adjacent surface, or
- The adjacent surface within 1.2m [3'-11¼"] from the walking surface has a slope of more than 1/12

The OBC require that an exterior guard shall be [OBC Div B 9.8.8.3]

- Not less than 900mm [2'-11"] high where the walking surface served by the guard is not more than 1.8m [5'-11"] above finished ground level
- Not less than 900mm [2'-11"] high guards installed on flights of steps, where the height of a guard on a flight of steps is measured vertically from a line drawn through the leading edge of the treads served by the guard, and
- Not less than 1070mm [3'-6"] in all other situations

The OBC also requires that guards be constructed so that [OBC Div B 9.8.8.5 & 9.8.8.6]:

- Openings through any required guards shall be of a size that will prevent the passage of a spherical object having a diameter of more than 100mm [4"], and
- No member, attachment or opening will facilitate climbing

6.4 Handrail Construction

A handrail simply defined is a component of a stair and is used to assist the user should they require something to hold on to for additional stability while using the stair. It can also be a component of a ramp to provide a graspable member for support while using the ramp.

The OBC requires that a handrail be installed on [OBC Div B 9.8.7.1.(2)] :

- Every exterior stair having more than 3 risers, and
- Every ramp rising more than 400mm [15-¾"]

The OBC requires that every handrail shall be mounted at a height [OBC Div B 9.8.7.4.(2)]:

- Not less than 865mm [2'-10"]
- Not more than 965mm [3'-2"]

6.5 Structural Requirements & Element Sizing

Any Deck must support the weight of its users, furniture and other items used for the enjoyment of the deck as well as the snow load in the winter months. As such the deck must comply with the same structural requirements as a floor system within a home. Members must be sized appropriately in order to ensure the structural stability of the deck. Information has been provided below to assist in the process of properly sizing joists, beams, columns and piers. The size of each member is critical in determining compliance with the OBC. For this reason it is to be included with any drawings accompanying a Building Permit Application for a deck.

Concrete Pier Sizing:

Joist Span	Pier Spacing			
	1.2m [3'-11"]	1.8m [5'-11"]	2.4m [7'-10"]	3.0m [9'-10"]
1.8m [5'-11"]	200mm [8"]	250mm [10"]	300mm [12"]	350mm [14"]
2.4m [7'-10"]	250mm [10"]	300mm [12"]	350mm [14"]	400mm [16"]
3.0m [9'-10"]	300mm [12"]	350mm [14"]	400mm [16"]	460mm [18"]
3.6m [11'-0"]	300mm [12"]	350mm [14"]	400mm [16"]	460mm [18"]

Note: Above table is based on 75 kPa Soil Bearing Capacity (Firm Clay).

Calculation: Pier Size (m^2) = Supported Deck Area (m^2) x Live Load (min 1.9kPa) / Soil Bearing Capacity (75kPa)

Joist Span:

Joist Spacing (on centre)	Joist Span			
	1.8m [5'-11"]	2.4m [7'-10"]	3.0m [9'-10"]	3.6m [11'-10"]
300mm [12"]	38mm x 184mm [2" x 8"]	38mm x 184mm [2" x 8"]	38mm x 184mm [2" x 8"]	38mm x 184mm [2" x 8"]
400mm [16"]	38mm x 184mm [2" x 8"]	38mm x 184mm [2" x 8"]	38mm x 184mm [2" x 8"]	38mm x 184mm [2" x 8"]

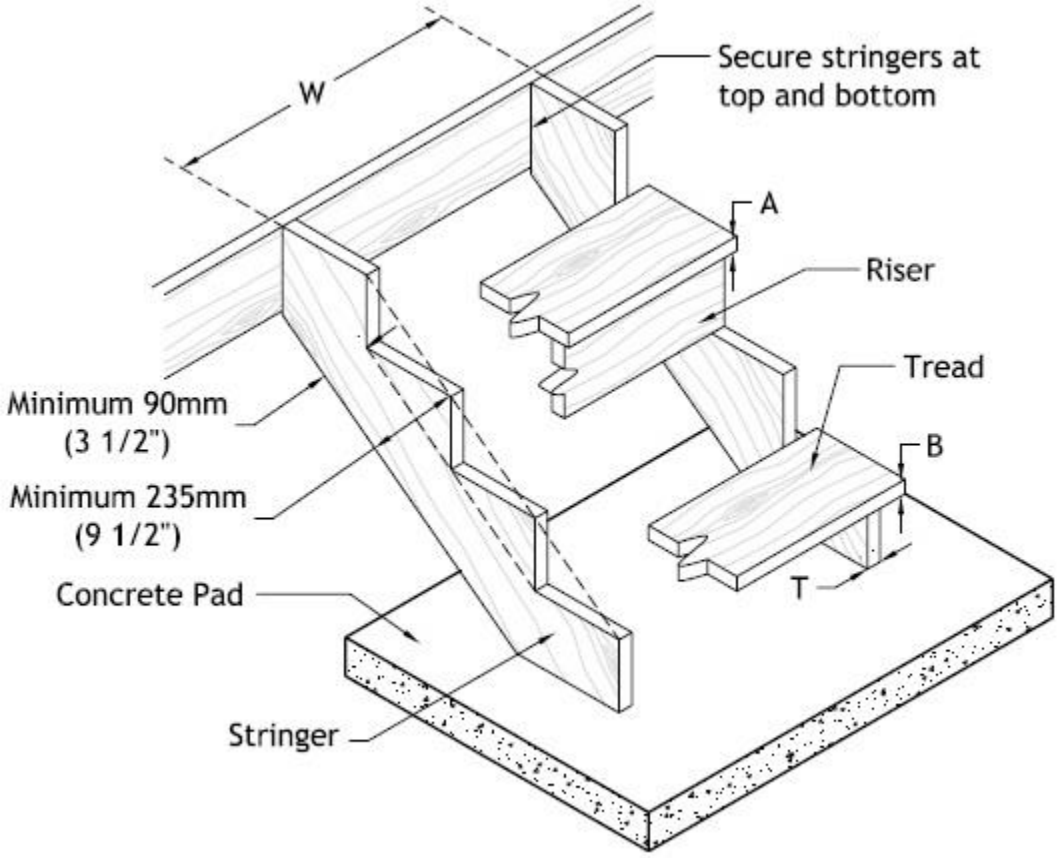
600mm [24"]	38mm x 184mm [2" x 8"]	38mm x 184mm [2" x 8"]	38mm x 184mm [2" x 8"]	38mm x 235mm [2" x 10"]

Beam Sizing:

Joist Size	**Pier Spacing**			
	1.2m [3'-11"]	**1.8m [5'-11"]**	**2.4m [7'-10"]**	**3.0m [9'-10"]**
38mm x 184mm [2" x 8"]	2 – 38mm x 184mm [2 – 2" x 8"]	2 – 38mm x 184mm [2 – 2" x 8"]	2 – 38mm x 235mm [2 – 2" x 10"]	2 – 38mm x 286mm [2 – 2" x 12"]
38mm x 235mm [2" x 10"]	2 – 38mm x 184mm [2 – 2" x 8"]	2 – 38mm x 184mm [2 – 2" x 8"]	2 – 38mm x 235mm [2 – 2" x 10"]	2 – 38mm x 286mm [2 – 2" x 12"]

7.0 REFERENCE MATERIAL

7.1 Wood Stair Construction



Tread Thickness

A = minimum 25mm [1"] when risers support front of tread
B = minimum 38mm [1 1/2"] when tread unsupported at front and distance between stringers is no greater than 750mm [30"] as per the Ontario Building Code Division B 9.8.9.5

Stringer Thickness

T = 25mm [1"] if supported along the length (i.e. secured to a wall)
T = 38mm [1 1/2"] if unsupported along the length

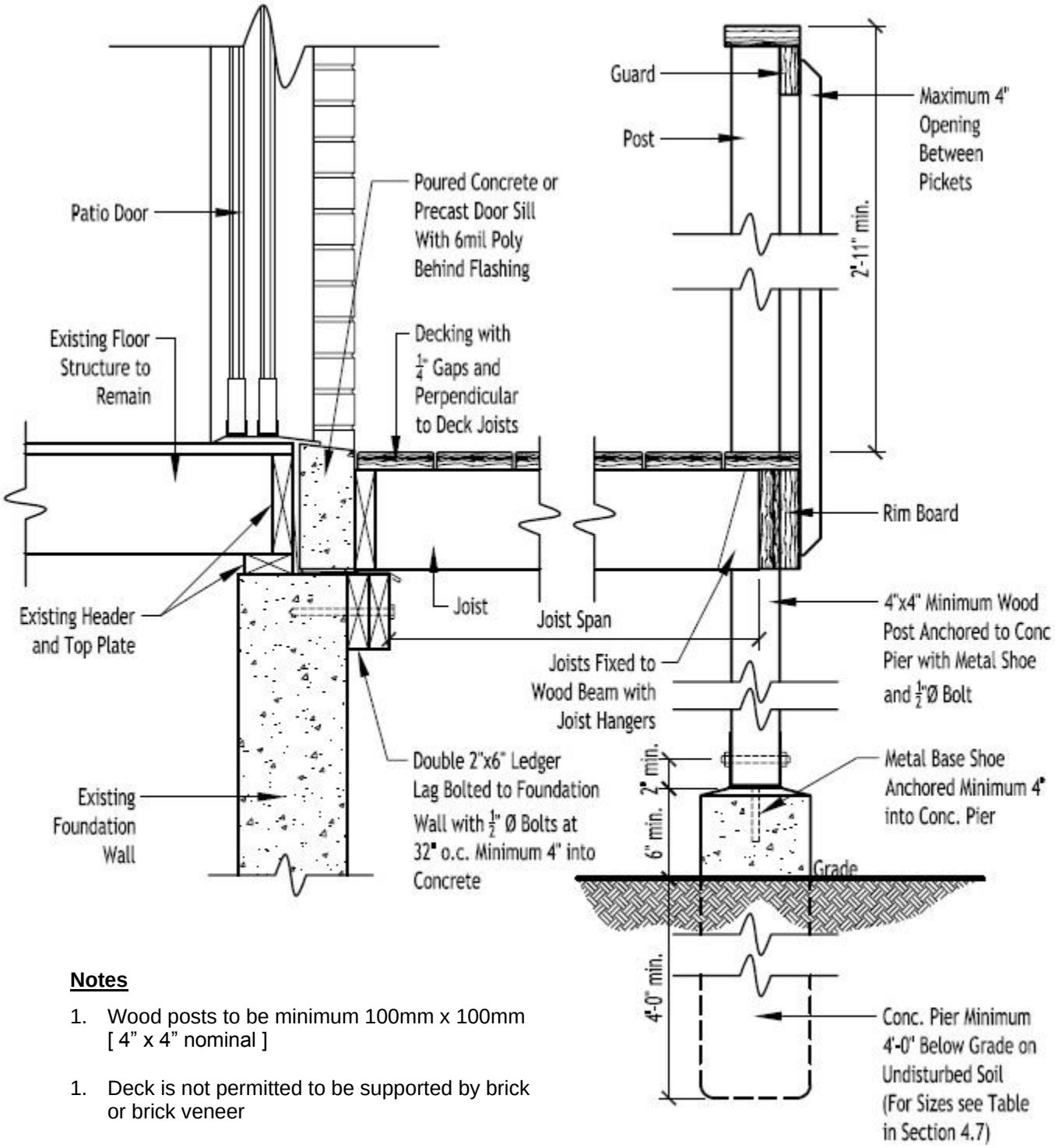
Stair Width

W = maximum 900mm [2'-11"] in dwelling units
W = maximum 1.2m [3'-11"] in dwelling units when risers support the front of the treads unless stringers and treads are designed for wider spacing
W = maximum 600mm [2'-0"] in other than dwelling units

Stair treads of plywood or O-2 grade OSB must have their face grain or direction of face orientation at right angles to the stringers as per the Ontario Building Code Division B 9.8.9.5

Exterior wood steps shall not be in direct contact with the ground unless treated to prevent decay (i.e. preservatives) as per the Ontario Building Code Division B 9.8.9.3

7.2 Typical Structural Connection to Dwelling – Without Cantilever



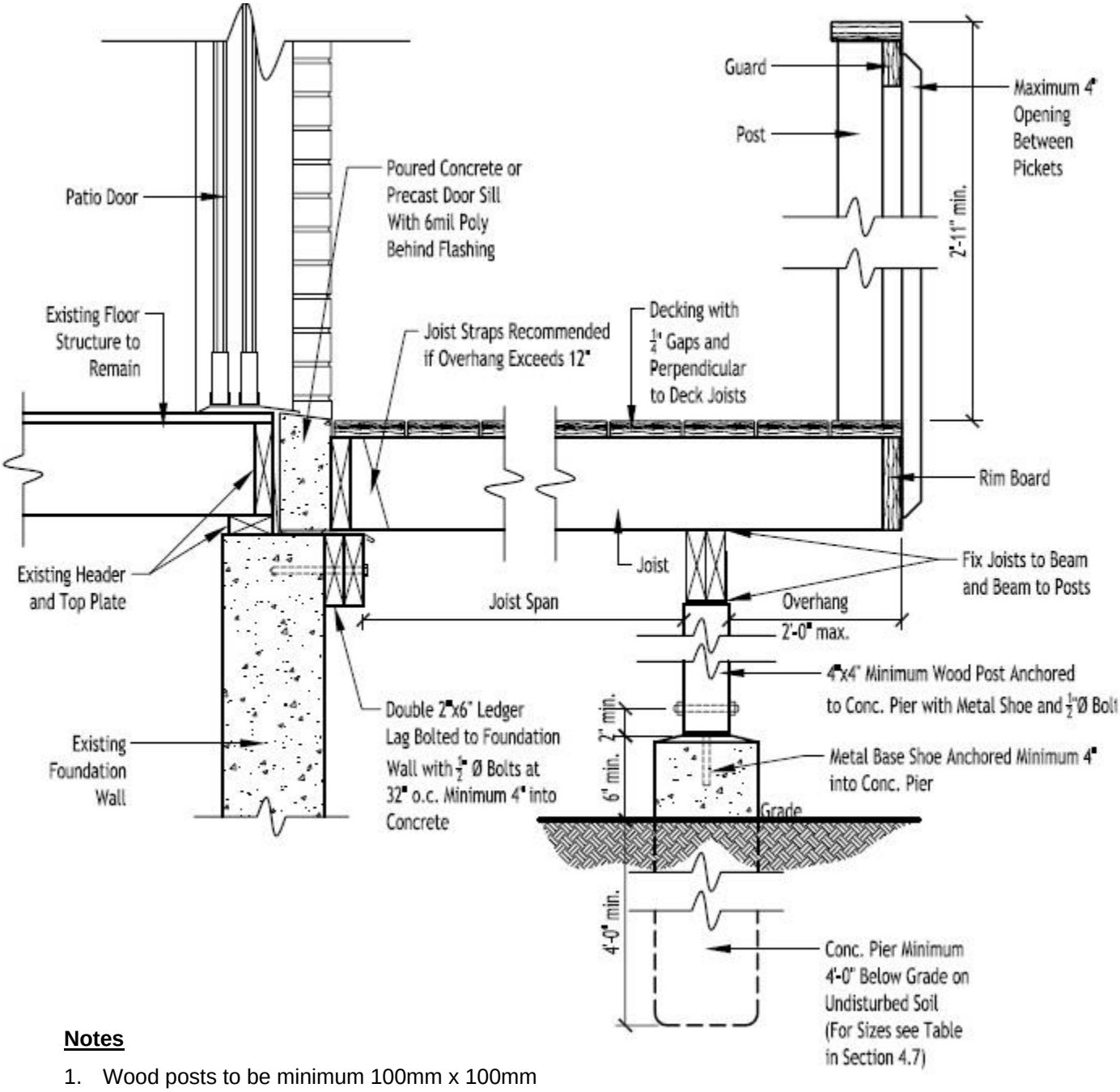
Notes

1. Wood posts to be minimum 100mm x 100mm [4" x 4" nominal]

1. Deck is not permitted to be supported by brick or brick veneer

2. Concrete piers shall bear on undisturbed soil with a minimum bearing capacity of 75kPa

7.3 Typical Structural Connection to Dwelling – With Cantilever



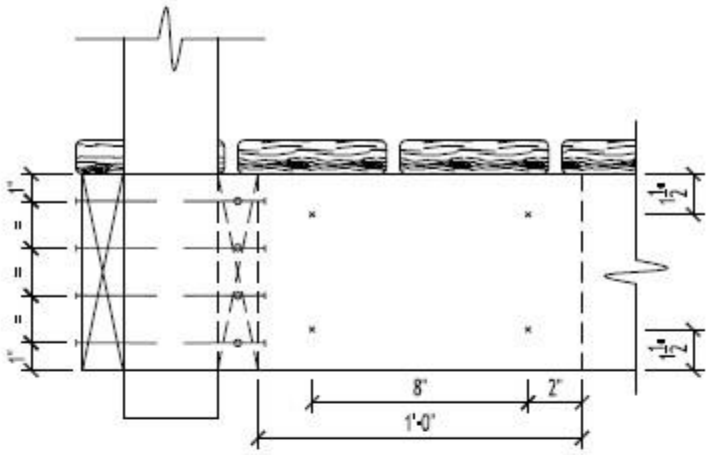
Notes

1. Wood posts to be minimum 100mm x 100mm [4" x 4" nominal]

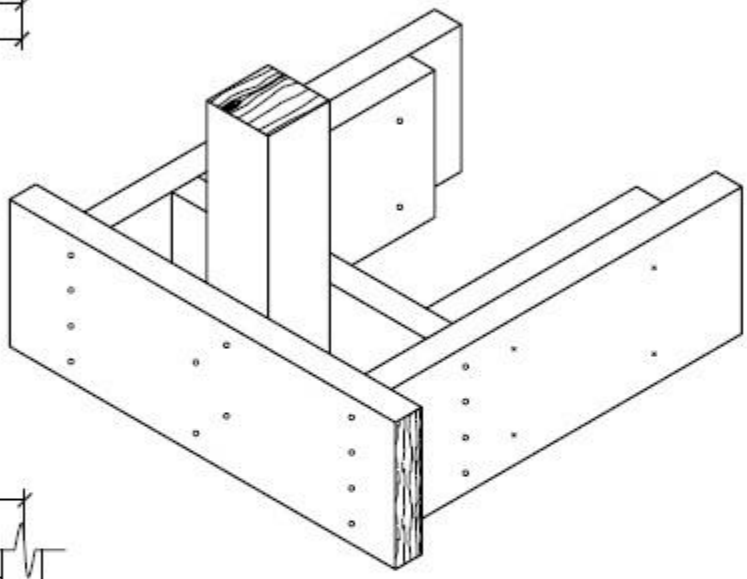
2. Deck is not permitted to be supported by brick or brick veneer

3. Concrete piers shall bear on undisturbed soil with a minimum bearing capacity of 75kPa

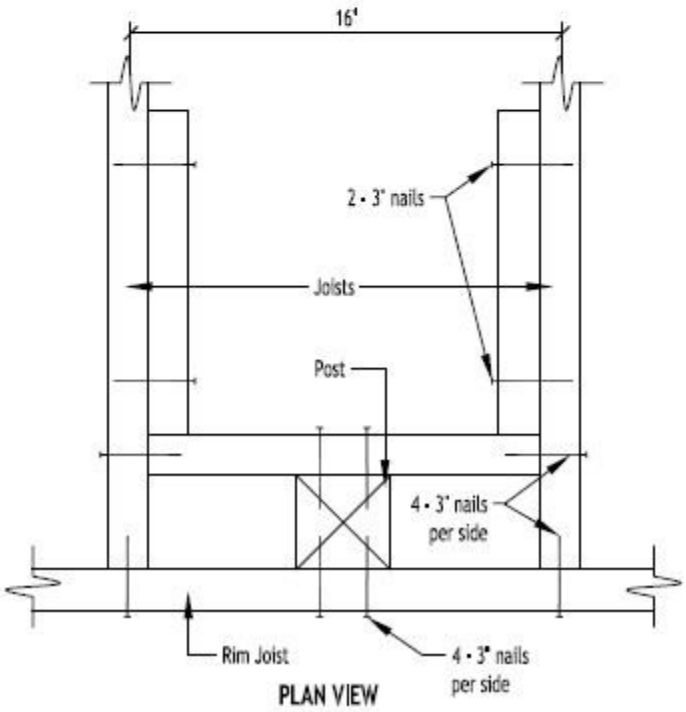
7.4 Typical Post Connection – Nailed to Rim Joist



SIDE ELEVATION VIEW



AXONOMETRIC VIEW

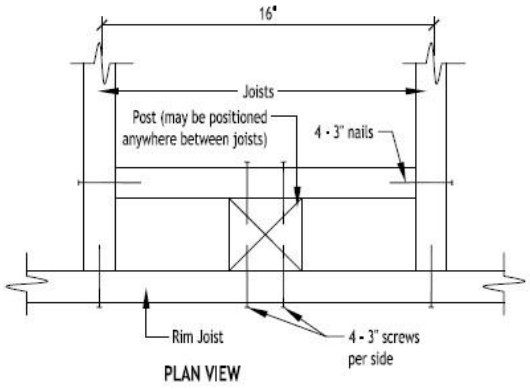


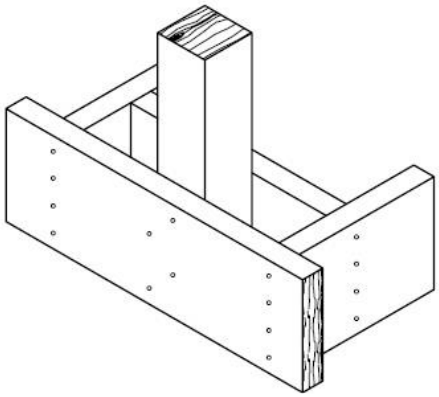
PLAN VIEW

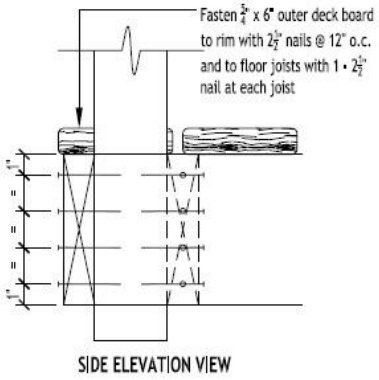
Notes

1. Fasten 25mm x 140mm [5/4" x 6" nominal] outer deck board to rim joist with 63mm [2 ½"] nails at 300mm [12"]
2. Fasten 25mm x 140mm [5/4" x 6" nominal] outer deck board to floor joist with 1 – 63mm [2 ½"] nails each joist
3. The post may be positioned anywhere between the joists
4. The maximum spacing between posts is 1.22m [4'-0"]

7.5 Typical Post Connection – Screwed to Rim Joist



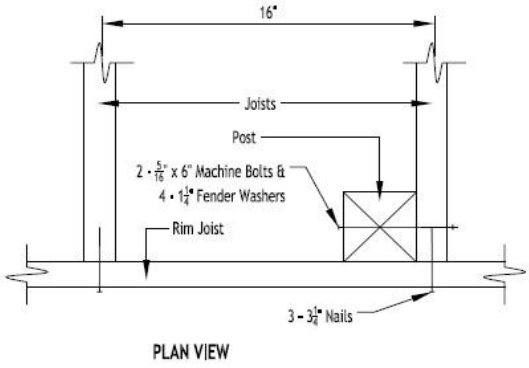


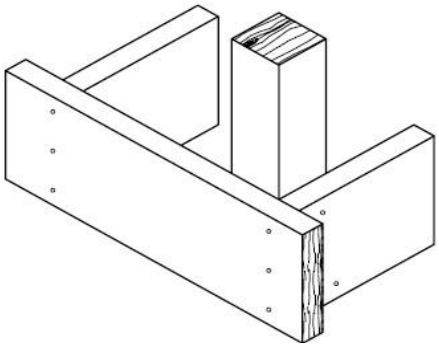


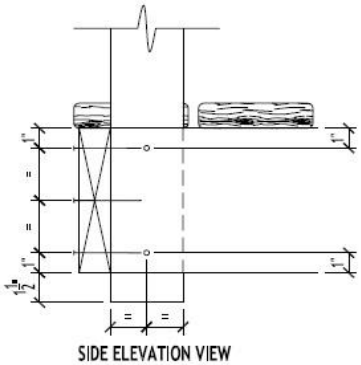
Notes

1. Fasten 25mm x 140mm [5/4" x 6" nominal] outer deck board to rim joist with 63mm [2 ½"] nails at 300mm [12"]
2. Fasten 25mm x 140mm [5/4" x 6" nominal] outer deck board to floor joist with 1 – 63mm [2 ½"] nails each joist
3. The post may be positioned anywhere between the joists
4. The maximum spacing between posts is 1.56m [5'-1"]

7.6 Typical Post Connection – Bolted to Floor Joist



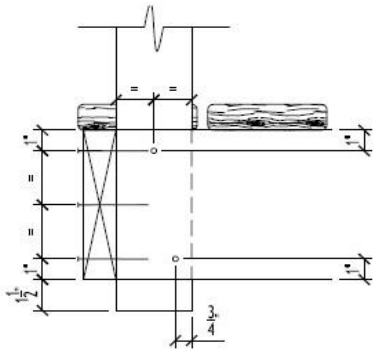


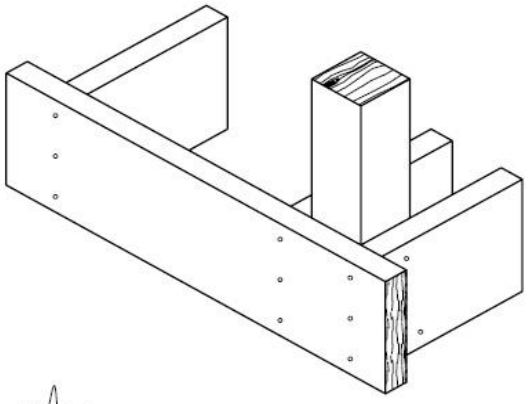


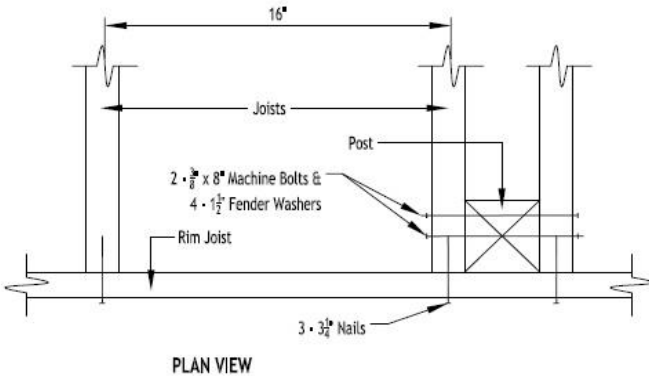
Notes

1. 38mm [1 ½" nominal] post projection is not required where the maximum spacing between posts does not exceed 1.2m [3'-11"]
2. Joists may be spaced at 610mm [24"] o.c. or 406mm [16"] o.c.
3. Where the floor joists are spaced at 610mm [24"] o.c., decking shall have a minimum thickness of 38mm [1 ½"] and shall be fastened to the floor with 2 – 76mm [3"] nails
4. The maximum spacing between posts is 1.29m [4'-3"]

7.7 Typical Post Connection – Bolted to two Floor Joist







Notes

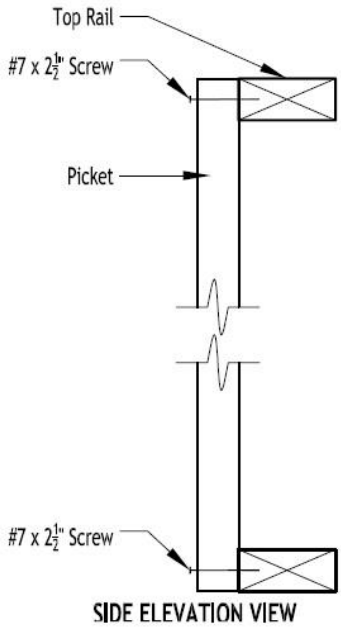
1. 38mm [1 ½" nominal] post projection is not required where the maximum spacing between posts does not exceed 1.2m [3'-11"]

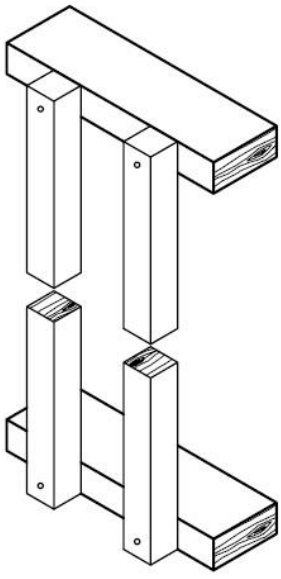
2. Joists may be spaced at 610mm [24"] o.c. or 406mm [16"] o.c.

3. Where the floor joists are spaced at 610mm [24"] o.c., decking shall have a minimum thickness of 38mm [1 ½"] and shall be fastened to the floor with 2 – 76mm [3"] nails

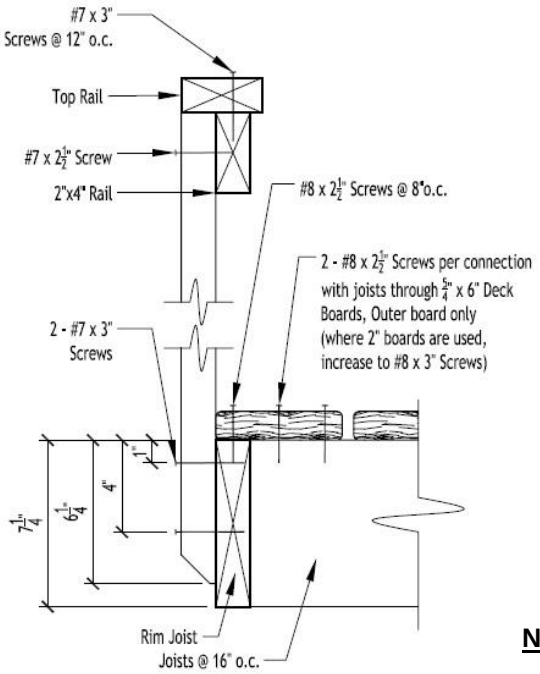
4. The maximum spacing between posts is 2.14m [7'-0"]

7.8 Typical Guard Connection – Infill Picket Screwed to Rail

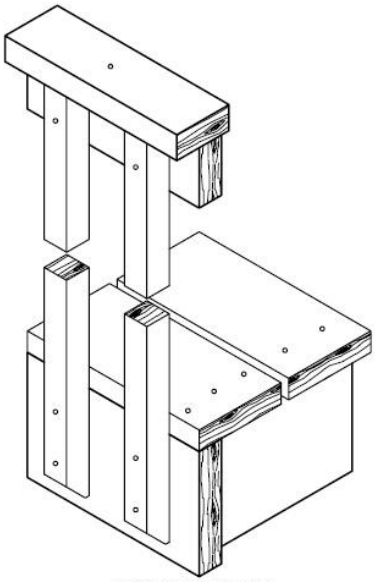




7.9 Typical Guard Connection – Cantilevered Picket Screwed to Rim Joist



SIDE ELEVATION VIEW

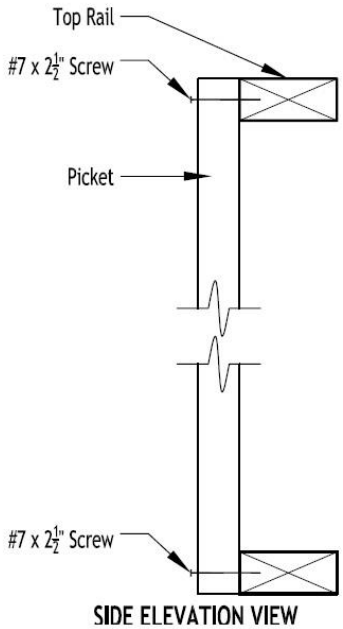


AXONOMETRIC VIEW

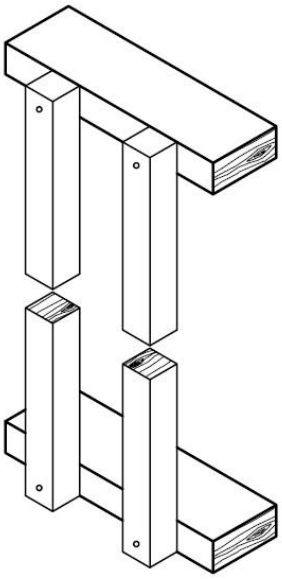
Notes

1. Fasten rim joist to each floor joist with 3 – 82mm [3 ¼"] nails
2. The outer deck board shall be not less than 140mm [6" nominal] wide. Where 38mm [2" nominal] thick boards are used, the length of the wood screws shall be not less than 76mm [3"]
3. Provide a suitable post, return, or solid support at each end of the guard.

7.10 Typical Guard Connection – Infill Picket Nailed to Rail



SIDE ELEVATION VIEW



AXONOMETRIC VIEW

8.0 CONTACT INFORMATION

8.1 Building & Enforcement Department

To book an inspection please contact:

Building Clerk

(905)-957-5130
buildinginspection@westlincoln.ca

To inquire about deck construction please contact:

Chief Building Official

(905)-957-5135

Building Inspector

(905)-957-5128

8.2 Planning Department

To inquire about the zoning regulations and required setbacks please contact:

Planner I
(905)-957-5140
planning@westlincoln.ca

8.3 Niagara Peninsula Conservation Authority

To inquire about deck construction in a Niagara Peninsula Conservation Authority Zoned Area, please contact:

Watershed Planner

(905)-788-3135