Building a Deck Information Guide and Process

When is a building permit required for a deck?
- If the deck (new or replacement) is 24” high or greater above finished grade.
- A permit is also required if structural renovations will be made to an existing deck.

Drawing requirements for a building permit application
1. A copy of the property survey or site plan of your lot.
   a. Please draw on location of deck with dimensions to lot lines
2. Deck drawings (Building centre drawings or hand drawn to scale and dimensioned)
   a. Plan view showing posts, floor joists, beams, stairs, landings
   b. Side view showing height or deck and guard
   *ask for our deck design details for assistance

Guards/Railings (for decks 24” or higher)
The Ontario Building Code permits the installation of wood guards/railings. Should you plan on installing anything other than a wood guard/railing, please submit a copy of the Pre-Engineered guard/railing details with your building permit application. Typically you can receive this package of details from the supplier.
NOTE: Hollow plastic or vinyl guards/railing are not permitted

Approved Decking Materials (for decks 24” or higher)
- 5/4” wood decking
- CWS Composite Decking
- Duradek boards
- Brite Composite Decking
- Nexwood Composite Decking
- Trex Wood-Polymer Composite Decking
- Eon Composite Decking System
- Baleboard Poly Decking
- FORMADECK vinyl deck boards
- NCP Euroboard, Enviroboard, Northern Lite Decking
- Gorilla Deck PVC Deck Boards

Where to apply for a building permit
Apply online at www.kitchener.ca/onlinepermits or bring all required drawings to the 5th floor at City Hall. City Hall is located at 200 King St W, Kitchener, Ontario.

Cost of building permit
Please see our fee schedule online for our current building permit rates. We accept cash, cheque and debit as methods of payment. This includes the review of drawings, the building permit and building inspections. Our office hours are Monday to Friday, 8:30am - 5:00pm.

Time
Once a complete permit application is made the permit will be reviewed within a maximum of 10 business days.

Required Building Inspections
Building inspections are booked through our automated phone system or online. Please schedule in advance, same day service is only available when booked before 8:00am the day of the inspection. Required inspections include;
- Excavation/Footing inspection - Once the holes have been dug, but prior to concrete being poured
- Structural Wood Frame inspection - Once the framing is complete (posts, beams, joists)
- Final Building inspection - When the deck and guard/railing are complete

Important Numbers to know
- Ontario One Call (natural gas, sewer/ water lines, KW Hydro, Rogers Cable and Bell locates)1-800-400-2255
- Electrical Safety Authority: 1-877-ESA-SAFE (1-877-372-7233)

Any Questions?
Phone: 519-741-2433
Email: building@kitchener.ca
Web: www.kitchener.ca/building
**Deck Layout**

**Maximum 2-Ply Beam Length**

<table>
<thead>
<tr>
<th>Supported Joist Length</th>
<th>2 x 8</th>
<th>2 x 10</th>
<th>2 x 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>4'-0&quot;</td>
<td>11'-7&quot;</td>
<td>14'-10&quot;</td>
<td>17'-4&quot;</td>
</tr>
<tr>
<td>6'-0&quot;</td>
<td>9'-10&quot;</td>
<td>12'-1&quot;</td>
<td>14'-0&quot;</td>
</tr>
<tr>
<td>8'-0&quot;</td>
<td>8'-7&quot;</td>
<td>10'-6&quot;</td>
<td>12'-3&quot;</td>
</tr>
<tr>
<td>10'-0&quot;</td>
<td>7'-8&quot;</td>
<td>9'-4&quot;</td>
<td>10'-8&quot;</td>
</tr>
</tbody>
</table>

**Maximum 3-Ply Beam Length**

| 8'-0"                  | 10'-8"| 13'-0"| 15'-1"|
| 10'-0"                 | 9'-6" | 11'-8"| 13'-6"|

**Maximum Floor Joist Length**

<table>
<thead>
<tr>
<th>Joist Size</th>
<th>Max. Span</th>
<th>Max. Cantilever</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x8 @ 12&quot; O.C.</td>
<td>12'-6&quot;</td>
<td>20&quot;</td>
</tr>
<tr>
<td>2x8 @ 16&quot; O.C.</td>
<td>11'-9&quot;</td>
<td>16&quot;</td>
</tr>
<tr>
<td>2x8 @ 24&quot; O.C.</td>
<td>11'-0&quot;</td>
<td>14&quot;</td>
</tr>
<tr>
<td>2x10 @ 12&quot; O.C.</td>
<td>14'-6&quot;</td>
<td>28&quot;</td>
</tr>
<tr>
<td>2x10 @ 16&quot; O.C.</td>
<td>13'-8&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>2x10 @ 24&quot; O.C.</td>
<td>12'-10&quot;</td>
<td>20&quot;</td>
</tr>
<tr>
<td>2x12 @ 12&quot; O.C.</td>
<td>16'-5&quot;</td>
<td>28&quot;</td>
</tr>
<tr>
<td>2x12 @ 16&quot; O.C.</td>
<td>15'-6&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>2x12 @ 24&quot; O.C.</td>
<td>14'-6&quot;</td>
<td>20&quot;</td>
</tr>
</tbody>
</table>

**Notes:**
- **Existing House**
- **Ledger Board Size**
- **Supported Joist Length**
- **Cantilever**
- **Post Size**
- **Sonotube Size**
- **Floor Joist Size and Spacing**
- **Beam Size**
- **Post Spacing**
- **Overall Dimension**
- **Joist Span**

**Deck Layout**

*All decking is to be 5/4 x 6 wood material or approved equal.*

*Install solid blocking when floor joist span exceeds 6'-10". Blocking required to be of the same material and size as the floor joist and located not more than 6'-10" from each support and other rows of blocking.*
MIN. GUARD HEIGHT
WITH DECKS:
- 5'-11" OR LESS
  ABOVE GROUND = 35"
- MORE THAN 5'-11"
  ABOVE GROUND = 42"

Option A

Guard Details

Option B

NOTE: ANYTHING OTHER
THAN A WOOD GUARD/
RAILING, PLEASE SUBMIT
A COPY OF THE
PRE-ENGINEERED
GUARD/RAILING DETAILS
WITH YOUR BUILDING
APPLICATION.

4 x 4 GUARD POST
MAXIMUM 5'-11"
SPACING BETWEEN
POSTS
(POST IS NOT
PERMITTED TO BE
NOTCHED)

Guard Post Detail

Ledger Board Detail

**SOLID BLOCKING REQUIRED FOR BEAMS @ 18" O.C.

**ADDITIONAL LATERAL BRACING MAY BE REQUIRED. CONFIRM
WITH BUILDING INSPECTOR @ FRAMING INSPECTION.
Deck Elevation

Sonotube Sizes

<table>
<thead>
<tr>
<th>Diameter</th>
<th>*Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>8&quot;Ø</td>
<td>1047 lbs</td>
</tr>
<tr>
<td>10&quot;Ø</td>
<td>1635 lbs</td>
</tr>
<tr>
<td>12&quot;Ø</td>
<td>2355 lbs</td>
</tr>
<tr>
<td>14&quot;Ø</td>
<td>3207 lbs</td>
</tr>
<tr>
<td>16&quot;Ø</td>
<td>4189 lbs</td>
</tr>
</tbody>
</table>

*Weight = (supported joist length each side of post x half beam length each side of post) x 40 lbs/SF

Stair Detail

Stair Dimensions

<table>
<thead>
<tr>
<th>Type</th>
<th>Max.</th>
<th>Min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rise</td>
<td>7 7/8&quot;</td>
<td>4 7/8&quot;</td>
</tr>
<tr>
<td>Run</td>
<td>14&quot;</td>
<td>8 1/4&quot;</td>
</tr>
<tr>
<td>Tread</td>
<td>14&quot;</td>
<td>9 1/4&quot;</td>
</tr>
</tbody>
</table>

*Risers shall have a uniform height in any one flight of stairs.
*Treads shall have a uniform run and tread depth in any one flight of stairs.

**max 1" nosing**