This Information Bulletin describes the minimum requirements for obtaining a building permit for an attached or detached deck accessory to a single-family dwelling or a duplex. The information bulletin cannot be used for decks closer than 5 feet from a property line or when heavy concentrated loads such as equipment or a hot tub are placed on the deck. The information and sample drawings provided herein are suitable as a guide and cannot be used for construction. Project specific construction plans must be drawn and provided for review.

I. WHEN IS A PERMIT REQUIRED?
A building permit is required for any residential deck that exceeds 200 square feet in area, when located more than 30 inches above grade at any point, when attached to a dwelling, or when it serves as the main exit door.

II. SUBMITTAL REQUIREMENTS
A. Forms
1. General Application
   A General Application form (DS-3032) must be submitted.

2. Owner-Builder Verification Form
   This form is required if the property owner is acting as the general contractor. If you are not a licensed contractor and intend on performing the work yourself or hiring licensed subcontractors, an Owner-Builder Verification form (DS-3042) must be completed and submitted with your project documents.

3. Water Meter Data Card
   A Water Meter Data Card (DS-16) must be completed if new plumbing fixtures are being added. This form is not required when replacing or relocating existing fixtures.

B. Plans
   Plans must be drawn to scale and be of sufficient clarity to indicate the location, nature and extent of the proposed work. Existing and proposed construction should be clearly shown. Plans must show that all work conforms to the provisions of the current edition of the California Residential Code (CRC), Zoning Ordinances and all other relevant laws, ordinances and regulations applicable in the City of San Diego.
   1. Site Plan and Vicinity Map (See Figure 1)
      See Information Bulletin 122 for detailed information. See Figure 2 for the required setback when deck is located on a sloping site.

   2. Types of Plans
      Plans for decks shall be in accordance to one of the following:
      a. Project-specific construction plans and framing system determined in accordance with this Information Bulletin. To facilitate plan review also mark on the bulletin the selected structural framing sizes such as decking, joists, beams, posts, foundation, etc.
      b. Engineered framed deck plans and design calculations. The plans should include deck framing plan, foundation plan, elevations, cross sections, connection details, etc.
3. Overall Plan
When the deck is proposed to be attached or located directly adjacent to an existing dwelling, include a floor plan of the deck and the existing dwelling and show the following information:
   a. The use and dimensions for all rooms in the building opening onto the deck.
   b. The location and size of all windows and doors opening onto the deck from those rooms.
   c. The location of main exit door to the dwelling.

4. Deck Framing (See Figure 3)
   a. Framing members:
      i. Decking and nailing (See Table F)
      ii. Size of joists and beams (See Table A, B, and C)
      iii. Joist connection over beams (See Table F)
      iv. Joist hung from ledgers (See Figure 8 Case 1)
   v. Size of posts based on the maximum heights (See Table D)
   vi. Post footing and connection (See Table E, Figure 6)
   b. Lateral Bracing:
      i. Conventional diagonal bracing member and connection to beam and post, or decorative-diagonal bracings with an equal of the net area and (See Figure 4, and 10)
      ii. Hold-downs at end of attached deck to existing dwelling (See Figure 11)
      iii. Additional diagonal bracing for detached deck parallel to exterior wall of existing dwelling (See Figure 8 Case 2)
   c. Stair Handrails (See Figure 7)
      Handrail is required at least on one side of stairs with four or more risers. The required handrail shall be one of the following types:
      i. Handrails with a circular cross section shall have an outside diameter of at least 1.25 inches and not greater than 2 inches.
      ii. If the handrail is not circular it shall have a perimeter dimension of at least 4 inches and not greater than 6.25 inches with a maximum cross section dimension of 2.25 inches. Edges shall have a minimum radius of 0.01 inch.
   c. Guards:
      Guards shall be provided along the open side of a deck or stairs that are located more than 30 inches above grade below. Guards shall be not less than 42” high, and openings in guards shall not allow passage of a sphere 4 inches in diameter. (see Figure 5, 9 and 10).

III. ADDITIONAL REGULATIONS
A. Smoke Alarms
   Deck when attached to a house or when modifying the exterior wall of the house, smoke alarms within the house are required per sections R314 of the California Residential Code (CRC).

B. Very High Fire Hazard Severity Zone (VHFHSZ)
   When a deck is attached to an existing house that is in a VHFHSZ and the building permit application for the existing house was deemed complete on or after 8/27/2009, or any detached deck located in a VHFHSZ, the material and method of construction used for the deck shall comply
C. Brush Management Zone
When a deck is encroaching or located within Brush Management Zones it shall comply with the City of San Diego’s Landscape Regulations, SDMC Section 142.0412.

D. Zoning and Planning Regulations
The following regulations typically apply to residential deck additions. Please consult the City of San Diego’s Land Development Codes for all zoning regulations that may apply to your project.

<table>
<thead>
<tr>
<th>Regulations</th>
<th>SDMC Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Base Zones</td>
<td>131.0401</td>
</tr>
<tr>
<td>Planed Districts</td>
<td>151.0101</td>
</tr>
<tr>
<td>Brush Management</td>
<td>142.0403</td>
</tr>
<tr>
<td>Landscape</td>
<td>142.0401</td>
</tr>
<tr>
<td>Environmentally Sensitive Lands</td>
<td>143.0101</td>
</tr>
<tr>
<td>Parking</td>
<td>142.0501</td>
</tr>
<tr>
<td>Overlay Zones</td>
<td>132.0101</td>
</tr>
</tbody>
</table>

E. HISTORICAL REVIEW
1. Historical Review - Designated Historic
   If the project involves any parcel containing designated historical resource, or is located within the boundaries of an adopted historic district, plans will be required and shall be submitted for Historical Review. Please refer to Information Bulletin 581, “Designated Historical Resource Review” for additional Historic Review information.

2. Historical Review - Potential Historic Resource
   If the site contains buildings or structures 45 years old or older, and the scope includes any exterior work (except in-kind roof repair and replacement), plans and other information will be required and shall be submitted for Historical Review. (For other potential historic review exemptions, see Municipal Code Section 143.0212).

Because of a commitment to consider public information in the review of projects 45 years old or older, there is no over-the-counter review. The length of this review will typically be ten business days. See Information Bulletin 580, “Potential Historical Resource Review” for supplemental submittal requirements.

IV. OPTIONS FOR REVIEW PROCESS
A. SUBMITTED REVIEW
   Most projects are reviewed through the Submitted Review process. Please refer to Section 2A of the Project Submittal Manual for requirements related to the submitted process.

B. OVER-THE-COUNTER REVIEW (OTC)
   Plans for decks when using this information bulletin for structural and fire-life-safety requirements may be reviewed over-the-counter. The OTC review can be done as follow:
   a. By Appointment, to schedule an appointment, call (619) 446-5300.
   b. For Walk-in service, visit Check - In counters of the Development Services Department.
c. Decks containing unusual design features and framing irregularities must be designed by a registered design professional (licensed architect or civil engineer) and may not qualify for an OTC review.

Note: Appointments are strongly encouraged. Walk-in service is subject to staff availability and assigned on a first-come, first-served basis.

V. PROJECT FEES
Refer to Information Bulletin 501, “Fee Schedule, Construction Permits - Structures” for all applicable fees.

VI. INSPECTIONS
For inspection requirements, refer to Information Bulletin 120.

Documents Referenced in this Information Bulletin

- 2019 California Residential Code (CRC)
- Land Development Code, (LDC)
- San Diego Municipal Code, (SDMC)
- Project Submittal Manual, Section 2A
- Information Bulletin 501, Fee Schedule Construction Permits - Structures
- Information Bulletin 580, Potential Historical Resource Review
- Information Bulletin 581, Designated Historical Resource Review
- Water Meter Data Card, DS-16
- Inspection Record Card, DS-1798
- General Application, DS-3032
- Owner-Builder Verification, DS-3042
### TABLE A - ALLOWABLE SPAN FOR DECK JOISTS (ft. - in.)¹, ², ³

<table>
<thead>
<tr>
<th>Species</th>
<th>Size</th>
<th>Spacing of Joists (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Douglas fir - larch #2</td>
<td>2 x 6</td>
<td>6-9</td>
</tr>
<tr>
<td>or Redwood #1</td>
<td>2 x 8</td>
<td>8-10</td>
</tr>
<tr>
<td></td>
<td>2 x 10</td>
<td>11-2</td>
</tr>
<tr>
<td></td>
<td>2 x 12</td>
<td>12-9</td>
</tr>
</tbody>
</table>

1. Live load = 60 psf, Dead load = 10 psf, L/Δ = 360.
2. If joists within 8” inches of grade, use Pressure Treated Douglas Fir - Larch or foundation – Grade Redwood.
3. Include incising factor (Ci= 0.8)

### TABLE B - CANTILEVER LENGTH FOR DECK JOISTS (ft. - in.³, ⁴, ⁵)

<table>
<thead>
<tr>
<th>Size</th>
<th>Spacing (in.)³, ⁴, ⁵</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12</td>
</tr>
<tr>
<td>2x6</td>
<td>1-0</td>
</tr>
<tr>
<td>2x8</td>
<td>1-7</td>
</tr>
<tr>
<td>2x10</td>
<td>2-5</td>
</tr>
<tr>
<td>2x12</td>
<td>3-2</td>
</tr>
</tbody>
</table>

1. Live load = 60 psf, Dead load = 10 psf, L/Δ = 240
2. Beam cantilevers are limited to the adjacent beam's span divided by 4.
3. Joist spacing for diagonal decking shall not exceed 16 inches.
4. Cantilever span includes 220 lbs. point load applied to end.
5. Solid blocking shall be provided between joists at the support.
## TABLE C - DECK BEAMS

**Beam span lengths (ft.- in.)**\(^1, 2, 3, 4, 6, 7\)

<table>
<thead>
<tr>
<th>Species</th>
<th>Size (5)</th>
<th>Joist span less than or equal to: (^{(8)})</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>6 ft.</td>
</tr>
<tr>
<td><strong>Douglas Fir – Larch #2</strong></td>
<td>3 x 6 or 2 – 2 x 6</td>
<td>3-9</td>
</tr>
<tr>
<td></td>
<td>3 x 8 or 2 - 2 x 8</td>
<td>4-9</td>
</tr>
<tr>
<td></td>
<td>3 x 10 or 2 - 2 x 10</td>
<td>5-10</td>
</tr>
<tr>
<td></td>
<td>3 x 12 or 2 - 2 x 12</td>
<td>6-10</td>
</tr>
<tr>
<td></td>
<td>4 x 6</td>
<td>4-6</td>
</tr>
<tr>
<td></td>
<td>4 x 8</td>
<td>5-11</td>
</tr>
<tr>
<td><strong>Redwood #1</strong></td>
<td>4 x 10</td>
<td>7-0</td>
</tr>
<tr>
<td></td>
<td>4 x 12</td>
<td>8-2</td>
</tr>
<tr>
<td></td>
<td>3 - 2 x 6</td>
<td>5-3</td>
</tr>
<tr>
<td></td>
<td>3 - 2 x 8</td>
<td>6-9</td>
</tr>
<tr>
<td></td>
<td>3 - 2 x 10</td>
<td>8-6</td>
</tr>
<tr>
<td></td>
<td>3 - 2 x 12</td>
<td>9-10</td>
</tr>
</tbody>
</table>

1. Live load = 60 psf, Dead load = 10 psf, \(L/A = 360\) at main span.
2. Beams supporting deck joists from one side only. See footnote (8) below for beams supporting cantilevered joists.
3. Beam depth shall be greater than or equal to depth of joists with a flush beam condition.
4. Beams within 8" of grade shall be Pressure-Treated Douglas Fir-Larch or Foundation – Grade Redwood.
5. Beams plies shall be fastened with two rows of 10d threaded nails or #10d nails at 16" on center along the edges.
6. Beams are permitted to cantilever not more than one-fourth of the span.
7. Include incising factor (\(Ci = 0.8\))
8. Beams supporting cantilevered joists:
   - To select a joist span from Table, use span length equal to joist span length + 125% of cantilevered length. (Example: Joist with 12 ft. span & 3 ft. cantilevered length, calculated joist span = 12' + 125% X (3') = 15.75' therefore, beam allowable span shall be based on 16' joist span).
### TABLE D - DECK POST

<table>
<thead>
<tr>
<th>Post Size</th>
<th>Maximum Height (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 x 4</td>
<td>4'-10&quot; (4)</td>
</tr>
<tr>
<td>4 x 6</td>
<td>7'-0&quot;</td>
</tr>
<tr>
<td>6 x 6</td>
<td>10'-0&quot;</td>
</tr>
<tr>
<td>8 x 8</td>
<td>14'-0&quot;</td>
</tr>
</tbody>
</table>

1. Deck loads: Live load = 60 psf, Dead load = 10 psf
2. Species: Douglas Fir-Larch #1, or Redwood #1
3. Measured to the underside of the beam.
4. Maximum permitted height is 5'-8" when supporting one and two-ply beams.

### TABLE E - SQUARE FOOTING AT POSTS (INCHES)

<table>
<thead>
<tr>
<th>Footing Dimensions</th>
<th>Tributary Area (sq. ft.) (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Width (in.)</td>
<td>12</td>
</tr>
<tr>
<td>Depth (in.)</td>
<td>8</td>
</tr>
</tbody>
</table>

1. Footings shall have #4 @ 12" each way at bottom.
2. Concrete strength minimum 2,500 PSI.
3. Footing sizes are based on 1,500 PSF allowable soil bearing pressure.
4. Footings shall be placed not less than 12 inches below the undisturbed ground surface.
5. Area of deck surface supported by a post and a footing.

### TABLE F - NAILING SCHEDULE FOR DECKS

<table>
<thead>
<tr>
<th>Connection</th>
<th>Nails or Screws (Box or Common)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joist to Girder</td>
<td>3-8d common nails</td>
</tr>
<tr>
<td>2 inches nominal thickness spaced decking boards approximately 1/8&quot; apart (2)</td>
<td>2-8d threaded nails or 2 #8 screws</td>
</tr>
</tbody>
</table>

1. Decking within 8 inches of grade shall be Pressure-Preservative treated lumber or foundation- Grade redwood.
2. Decking placement may range from an angle perpendicular to Joists to an angle of 45 degrees to the joists.
   - Each segment of decking must bear on minimum of 3 Joists.
3. All fasteners and connectors shall be hot-dipped galvanized or stainless steel.
FIGURE 1 - SAMPLE DECK SITE PLAN
FIGURE 2 - STRUCTURES ON OR ADJACENT TO SLOPES/FOUNDATION CLEARANCE FROM SLOPES

FIGURE 3 - TYPICAL DECK

WOOD DECKS IN AREAS WITHIN VERY HIGH FIRE HAZARD SEVERITY ZONES OR CITY OF SAN DIEGO BRUSH MANAGEMENT ZONES MAY BE SUBJECT TO ADDITIONAL REQUIREMENTS
FIGURE 4 - POST-TO-GIRDER CONNECTION

Case 1 / End Condition

- Approved listed post cap or 7 gauge steel "L" straps, 1/2" wide each side with (4) 5/8" diameter bolts.
- Brace each way at corner conditions
- Provide 4X4 diagonal brace at all post-to-beam connections
- Two 1/2" diameter lag bolts top & bottom, 3" penetration (typical), 1" offset
- Do not over countersink lag bolts

Case 2 / Interior Condition

- Approved post cap or 7 gauge steel "L" straps, 1/2" wide each side with (4) 5/8" diameter bolts.
- Larger of 24" or 25% of post height
Figure 5 - Typical Deck Elevation Looking Parallel to Rear of Dwelling

- Dwelling
- Guard Detail (See Figure 9 and 10)
- Beam (See Table C)
- Stair Detail (See Figure 7)
- Existing door
- Ledger (See Figure 8)
- Joist
- Post (See Table D)
- Preservative – Treated Deck framing members when less than 8” from Ground
- Footing (See Figure 6)
- 36” Min. Landing
- 12” Min.

Wood decks in areas within very high fire hazard severity zones or City of San Diego brush management zones may be subject to additional requirements.
FIGURE 6 - TYPICAL FOOTING DETAIL

Post (See Table D)
Column base
8" Min.
1"
12" (See Table E)

FIGURE 7 - TYPICAL STAIR DETAIL

4x4 Guardrail Post (See Figure 9 for connection)
Handrail per Section II.B.4.c
2 X 2 Balusters at 4" spacing.
.25" to 1.25" tread nosing

Double joist or Beam (See Table A & C)
2 X 12 Stringer Min. @ 16" O.C.
5" Min.
Opening in Risers less than 4"

10" Min.
7.75" Max.
34" to 38" Handrail height

Maximum diameter
36" Min. Landing
12" Min.

7" Max. stringer span
12" Min.

FIGURE 8 - TYPICAL LEDGER DETAIL (FOR ADDITIONAL LATERAL CONNECTION, SEE FIGURE 11)

**Case 1 - Ledger to Rim Joist Connection (Attached Deck)**

- Siding
- Sheathing
- Wall framing
- Floor framing
- 2X Rim joist
- 2X Decking or equal
- Approved 18 ga. hot-dipped galvanized joist hanger installed per manufacturer's installation instructions
- 1/2" Lag Screw or Thru Bolt with Washer
- A 34 or Equal @ 16" O.C.
- 2X ledger (same depth as rafter)

<table>
<thead>
<tr>
<th>Joist Span (ft.)</th>
<th>(S) inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>14</td>
<td>16</td>
</tr>
</tbody>
</table>

**Case 2 - Rim Joist / Blocking at Stem Wall (Detached Deck)**

- Siding
- Sheathing
- Wall framing
- Floor framing
- Ledger
- Joist with hanger
- 1/2" diameter length hot dipped zinc-coated galvanized steel or stainless steel lag screw or thru bolt with washer
- 2" Min
- 2" Max

**WOOD DECKS IN AREAS WITHIN VERY HIGH FIRE HAZARD SEVERITY ZONES OR CITY OF SAN DIEGO BRUSH MANAGEMENT ZONES MAY BE SUBJECT TO ADDITIONAL REQUIREMENTS**
FIGURE 9 - TYPICAL GUARD DETAILS

- 2 X 4 Top and bottom
- Guard post at 6 feet maximum spacing
- Less than 4" from joist
- Outside joist
- One bay solid blocking with Hold-Down at each side connect blocking to joists with (2) 10d threaded nails each end
- Spaced Decking
- This Hold-Down is not applicable when joists are perpendicular to guards
- 2 1/2" dia. through bolt and standard steel plate washer

SECTION

PLAN VIEW

2X Blocking

Outside joist

Guard post
FIGURE 10 - TYPICAL DECK ELEVATION

Guards with Less than 4" Clearance

Decking

Beam

If greater than 2'-0" provide braces at post to beam connection

Post Base (See figure 6)

Diagonal Bracing (See figure 3 & 4)

Diagonal brace each direction at end post at detached Deck (See figure 6 case 2)

Post (See Table D)

6' Max.

Top of Deck

Guard post (See figure 9)

42" Min.

WOOD DECKS IN AREAS WITHIN VERY HIGH FIRE HAZARD SEVERITY ZONES OR CITY OF SAN DIEGO BRUSH MANAGEMENT ZONES MAY BE SUBJECT TO ADDITIONAL REQUIREMENTS
FIGURE 11 - DECK ATTACHMENT FOR LATERAL LOADS

Two locations for Hold-Downs is required. Place Hold-Downs maximum 24-inches from edge of deck.

EXISTING
STRUCTURE

NEW DECK

Floor sheathing nailing at 6" maximum on center to joist with hold-down

Hold-Down or similar tension device with minimum 1,500 lbs. capacity
Two locations per deck (minimum) 24 inches from each end of deck

Alternative to Hold-down with rod:
'\text{L}'' tension device
with minimum 750 lbs. capacity
Place at (4) locations or (4) ft. O.C. max.
Place one within 24 inches from each end of deck.
The tension device shall fully engage deck joist per manufacturer.

Ledger (See figure 8)