TOWN OF
SAN ANSELMO
EST. 1907

DECKS, STAIRS, HANDRAILS, GUARDRAILS & LANDINGS

- **Site Plan** showing existing building footprint and the location of new/reconstructed deck/porch/stair with distances to property lines. The site plan shall also contain project information [i.e., title block, project address, owner's information, scope of work statement).
- **Framing Plan** showing size, spacing and span of floor joists and supporting beams/ girders.
- **Foundation Plan** showing location, size and depth of supporting individual footings/ piers. Foundation and framing plans can be combined if clarity is maintained.
- **Construction Sections/Details** of footings/piers, framing, connections, floor transitions, stairs, guardrails and handrails. Materials used must be provided.

Decks:

1. Deck framing shall be positively anchored to the primary structure for both vertical and lateral loads. Such attachment shall not be accomplished by the use of toenails or nails subject to withdrawal. Where the positive connection to the primary structure cannot be provided, decks shall be self-supporting. [CRC R311.5.1 and R507.1].
2. Ledger shall be attached as set forth in CRC Table R507.2 with 1/2-inch minimum lag screws or bolts with washers, all hot-dip galvanized or stainless steel. Lag screws or bolts shall be placed 2" in from bottom and top of deck ledger and shall be staggered. [CRC Table R507.2.1 footnote a].
3. Deck framing shall have positive tension tie connections with floor framing. Hold-down tension devices shall be installed in not less than 2 locations per deck, and each device shall have an allowable design capacity of not less than 1500 pounds. [CRC §R507.2.4, Figure R507.2.3(2)].
4. Deck ledger shall be flashed to prevent water from contacting the house band/rim joist. [CRC Table R507.2 footnote a, Figure R507.2.3(1)].
5. Deck ledger shall be minimum 2x8 pressure treated No 2 [or better) grade lumber. [CRC R507.2.1].
6. The maximum distance between the face of the ledger and the face of the band joist shall not exceed one inch. [CRC Table R507.2).
7. Ledger connections not conforming to the above requirements shall be designed in accordance with accepted engineering practice.
8. Deck framing [e.g., girders, joists, beams, decking, post, poles and columns etc.) shall be of approved naturally durable or pressure-preservative-treated wood. [CRC §R317.1.3, R202].

Stairs:

1. Stairways shall not be less than 36 inches in clear width above the handrails. Handrail projections are limited to not more than 4-1/2 inches on either side of the stairway. [CRC §R311.7.1]
2. Headroom shall not be less than 6 feet 8 inches measured vertically from the sloped line adjoining the tread nosings. [CRC R311.7.2]
3. Riser height shall not exceed 7-3/4 inches. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch. [CRC §R311.7.5.1]

4. Tread depth [measured between the nosings) shall be at least 10 inches. The largest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch. [CRC §R311.7.5.2]
5. Nosings not less than 3/4 inch but not more than 1-1/4 inch shall be provided on stairways with solid risers if the tread depth is less than 11 inches. The radius of curvature at the nosing shall be not greater than 9/16 inch. [CRC §R311.7.5.3]
6. Open risers are permitted, provided that the openings located more than 30 inches, as measured vertically, to the floor or grade below do not permit the passage of a 4-inch diameter sphere. [CRC §R311.7.5.1]

Handrails:

1. Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers. [CRC §R311.7.8]
2. The top of handrails shall be 34 to 38 inches above the tread nosings. [CRC §R311.7.8.1].
3. Handrails ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1-1/2 inch between the wall and the handrails. [CRC §R311.7.8.2]
4. Handrails shall be grippable and shall be of one of the following types:
    a. Type I: Handrails with a circular cross-section of not less than 1-1/4 inches and not greater than 2 inches in diameter. If the handrail is not circular, it shall have a perimeter dimension of not less than 4 inches and not greater than 6-1/4 inches with a cross sectional dimension of not more than 2-1/4 inches. [CRC §R311.7.8.3]
    b. Type II: Handrails with a perimeter greater than 6-1/4 inches shall have a graspable finger recess area on both sides of the profile. The minimum width of the handrail above the recess shall be not less than 1-1/4 inches and not more than of 2-3/4 inches. [CRC §R311.7.8.3]

Guardrails:

1. Guards shall be located along open sides of walking surfaces including decks, porches, landings, stairs, ramps that are located more than 30 inches measured vertically to the floor or grade below at any point within 36 inches horizontally if the edge of the open side. [CRC §R312.1.1]
2. Guards shall be not less than 42 inches high measured vertically above the walking surface, adjacent walking surface or the line connecting the leading edges of the treads. Guards on the open side of stairs shall have a height not less than 34 inches measured vertically from a line connecting the leading edges of treads. [CRC §R312.1.2]
3. Guards shall not have openings from the walking surface to the required guard height which allow passage of a sphere 4 inches in diameter. Guards on the open sides of stairs shall not have openings which allow passage of a sphere 4-3/8 inch in diameter. [CRC §R312.3]
4. Guards and handrails shall be capable to withstand a single concentrated load of 200 pounds applied in any direction at any point along the top of the rail. [CRC Table R301.5]
5. Guard in-fill components, balusters and panel fillers shall be capable to withstand a horizontally applied normal load of 50 pounds on an area equal to 1 square foot. This load need not be assumed to act concurrently with any other live load requirement. [CRC Table R301.5]

Landings

1. There shall be a landing or floor on each side of each exterior door. The width of each landing shall be not less than the door served. Every landing shall have a minimum dimension of 36 inches measured in the direction of travel. Exterior landings are permitted to have a slope not exceeding 1/4 unit vertical in 12 units horizontal [2-percent). [CRC §R311.3]
2. Exterior landings at out-swinging exterior egress doors shall not be more than 1-1/2 inches lower than the top of the threshold. [CRC §R311.3.1]
3. Exterior landing at in-swinging exterior egress doors shall not be more than 7-3/4 inches below the top of the threshold. [CRC §R311.3.1]
4. Doors other than the required egress door shall be provided with landings not more than 7-3/4 inches below the top of the threshold. [CRC §R311.3.2]
   Exception: A landing is not required where a stairway of two or fewer risers is located on the exterior side of the door, provided the door does not swing over the stairway.

WUI Zone Decking: The walking surface material of decks, porches, balconies and stairs shall be of one of the following: [CRC §R337.9.3] :

1. Ignition-resistant material that complies with the performance requirements of both SFM Standard 12-7A-4 and 12-7A-5 [materials shall bear identification issued by ICC-ES or a testing agency recognized by the State Fire Marshal); or
2. Non-combustible materials; or
3. Materials passing performance requirements of SFM Standard 12-7A-4A when the exterior wall covering is also either a noncombustible or ignition-resistant material. Exception: Wall materials may be of any material that otherwise complies with CRC §R337 when the decking surface material complies with the performance requirements ASTM E 84 with a Class B flame spread rating.