

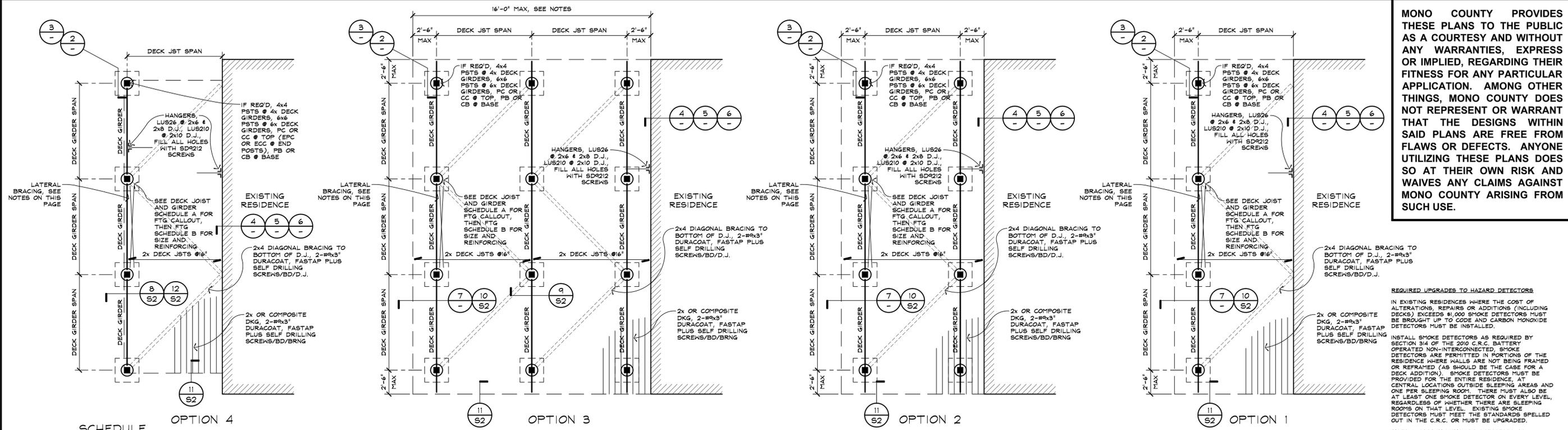
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| REVISIONS | BY |
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STANDARD STRUCTURAL REQUIREMENTS
HIGH RESIDENTIAL DECKS WITH 40 PSF SNOW LOAD
MONO COUNTY, CALIFORNIA

COUNTY OF MONO
COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING DIVISION
P.O. BOX 2669
MANKOTA, CALIFORNIA 93246
(760) 924-1800; FAX: 924-1801

DATE
SCALE 3/4"=1'-0"
DRAWN
JOB
SHEET
OF 2 SHEETS



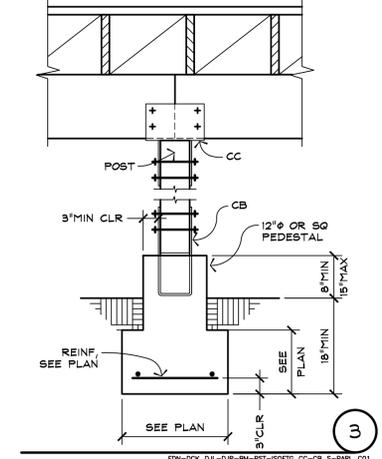
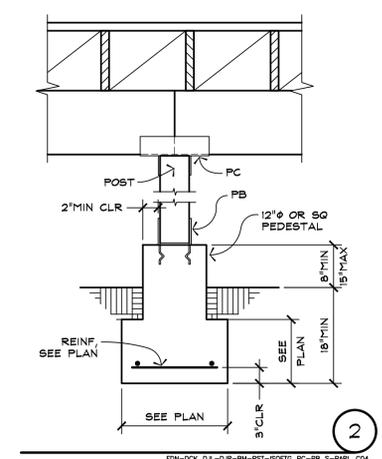
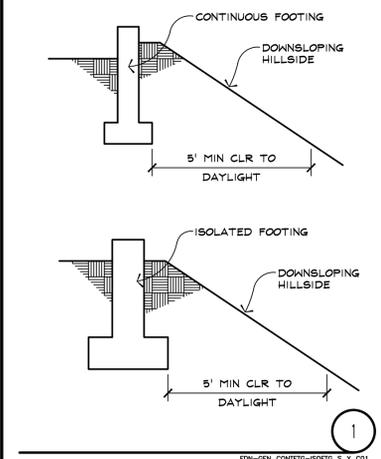
SCHEDULE ISOLATED AND WIDENED FOOTINGS

| MARK | FOOTING DIMENSIONS | REINFORCING STEEL | PEDESTAL @ ISOLATED FTGS | ALLOW. LOAD @2000 PSF BRNG |
|------|--------------------|-------------------|--------------------------|----------------------------|
| A | 18"SQ x 12"THK | 2-#4 S.E.E.W. | 12"Ø OR SQ | 3.9k |
| B | 21"SQ x 12"THK | 2-#4 S.E.E.W. | 12"Ø OR SQ | 5.6k |
| C | 24"SQ x 12"THK | 2-#4 S.E.E.W. | 12"Ø OR SQ | 7.3k |

DECK FRAMING AND FOUNDATION PLANS

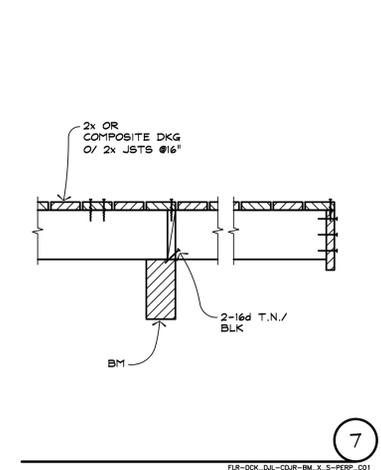
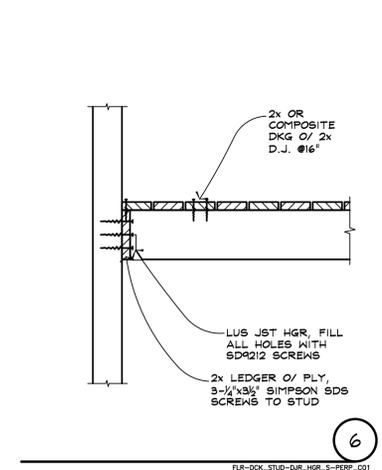
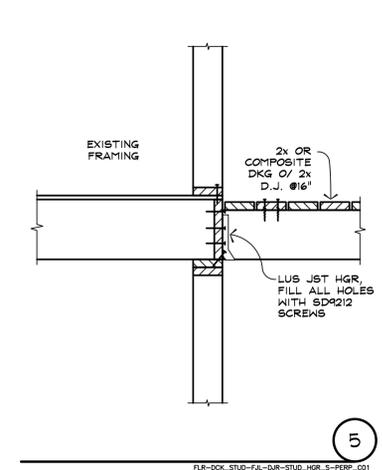
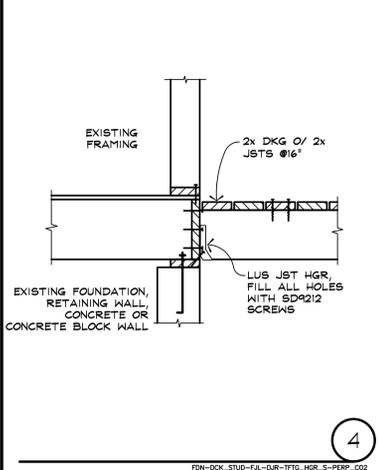
1/4"=1'-0"

| JOIST SIZE | SPAN | 4x6 GIRDER | | 4x8 GIRDER | | 6x8 GIRDER | | 6x10 GIRDER | |
|------------|--------|------------|-----|------------|-----|------------|-----|-------------|-----|
| | | SPAN | FTG | SPAN | FTG | SPAN | FTG | SPAN | FTG |
| 2x6 @16' | 9'-0" | 5'-6" | A | 6'-6" | A | 9'-6" | B | 12'-0" | B |
| 2x8 @16' | 12'-0" | 4'-6" | A | 6'-0" | A | 8'-6" | B | 10'-6" | B |
| 2x10 @16' | 15'-0" | - | - | - | - | 7'-6" | C | 9'-6" | C |



LATERAL BRACING

LATERAL BRACING IS REQUIRED ON HIGH DECKS, UNLESS THE CENTERLINE OF THE OUTSIDE GIRDER LINE IS WITHIN 6' OF THE BUILDING, AND THE OVERALL DEPTH OF THE DECK IS 8' OF LESS. LATERAL BRACING CAN ALSO BE USED TO STABILIZE A FREE STANDING LOW DECK ON POSTS (SEE NOTES TO SUBMITTER ON THIS PAGE). MAXIMUM SQUARE FOOTAGE FOR DECKS BASED UPON THE TYPE OF BRACING IS NOTED ON THE BRACING DETAIL. SEE 15 FOR BRACING WITH ALL-THREAD TIES AND 16 FOR BRACING WITH 2x4'S.



DEFINITION OF A LOW DECK

A HIGH DECK SHALL NOT HAVE AN AVERAGE HEIGHT GREATER THAN 11" (TOP OF DECK TO GRADE) NOR SHALL ANY POST EXCEED 12" (FOUNDATION TO GIRDER).

OPTIONS

- OPTION 1: OPTION 1 IS FOR DECKS ATTACHED DIRECTLY TO BUILDINGS. OPTION 1 IS ONLY AVAILABLE IF THE FOLLOWING CRITERIA ARE IN PLACE, THAT THE EXISTING FOUNDATION AT THE BUILDING IS CONTINUOUS AND SOUND, AND MADE FROM CONCRETE OR CONCRETE BLOCK, THAT THE CONNECTION IS MADE AT THE RIM RIGHT OVER THE FOUNDATION (DETAIL 6) AT THE RIM OVER A SMALL CRIPPLE WALL (DETAIL 6) OR AT THE CRIPPLE WALL (DETAIL 7). LASTLY, THAT ANY CRIPPLE OR LOWER FLOOR WALL THAT SUPPORTS THE HANGER, THE LEDGER USES 3/4"x3/8" SIMPSON SDS SCREWS, GIVING IT A VALUE OF 816 PER STUD. ALTERNATIVE DETAILS FOR RESISTANCE OF TRANSVERSE LATERAL FORCES CAN BE CONSIDERED, IF THE SUBMITTER CAN DEMONSTRATE THAT THEY CAN RESIST EQUIVALENT LOADS. FREE STANDING DECKS ARE EXEMPT OF THIS REQUIREMENT.
- OPTION 2: OPTION 2 CREATES A DECK THAT DOES NOT RELY ON THE EXISTING BUILDING FOR VERTICAL SUPPORT. IT IS STILL ATTACHED TO THE BUILDING FOR GENERAL LATERAL SUPPORT.
- OPTION 3: OPTION 3 IS SHOWING MULTIPLE SPANS. THE FARTHEST OUT SUPPORT LINE MUST BE 18' OR LESS FROM THE EXISTING BUILDING.
- OPTION 4: OPTION 4 IS FOR FRAMING THE DECK GIRDER FLUSH. IF THE OWNER OR BUILDER DO NOT DESIRE FOR THE BEAM TO DROP DOWN, THIS IS HOW IT SHOULD BE FRAMED.

NOTES THAT FEATURES OF OPTIONS MAY BE COMBINED, FOR EXAMPLE A DECK COULD HAVE A FLUSH BEAM AT ITS OUTER EDGE AND A BEAM LINE SUPPORTING NEXT TO THE BUILDING (COMBINING OPTIONS 4 AND 2), OR A FLUSH BEAM WITH MULTIPLE SPANS, POSSIBLE WITH FLUSH INTERMEDIATE BEAMS (COMBINING OPTIONS 4 AND 3).

ALL DECKS SHOWN ARE ATTACHED TO BUILDINGS AND ALL HIGH DECKS BASED UPON THESE PRESCRIPTIVE PLANS MUST BE ATTACHED TO A BUILDING. FREE STANDING DECKS THAT MEET THE REQUIREMENTS FOR A LOW DECK (AVERAGE HEIGHT 11" OR LESS, NO POST TALLER THAN 12") ARE PERMITTED WITH THE LATERAL BRACING SPECIFIED ON THESE PLANS, SEE DETAILS 15 AND 16. LATERAL BRACING IS REQUIRED ON ALL 4 SIDES OF THE FREE STANDING DECK, WITH SQUARE FOOTAGE MAXIMUMS AS OUTLINED ON THE DETAILS.

NOTES TO SUBMITTER

THESE PRESCRIPTIVE DESIGNS ARE INTENDED TO APPLY TO THE MOST COMMON SITUATIONS ENCOUNTERED IN MONO COUNTY. HOWEVER, UNIQUE SITE CONDITIONS OR SUBSTANTIAL DEVIATIONS FROM THESE DESIGNS AS DETERMINED BY THE BUILDING OFFICIAL MAY WARRANT ADDITIONAL ARCHITECTURAL OR STRUCTURAL DESIGN REQUIREMENTS.

THESE PLANS ARE PRIMARILY FOR THE STRUCTURAL REQUIREMENTS OF DECKS. THE SUBMITTER IS RESPONSIBLE FOR PREPARING AN ARCHITECTURAL PLAN, SHOWING THE ACTUAL LAYOUT OF THE DECK. THE PLAN SHALL ALSO SHOW A STRUCTURAL LAYOUT BASED UPON THE REQUIREMENTS OF THESE PLANS.

IF A PROPOSED DECK IS WITHIN 5' OF A PROPERTY LINE, ADDITIONAL FIRE PROTECTION REQUIREMENTS WILL NEED TO BE ADDRESSED. THESE REQUIREMENTS ARE BEYOND THE SCOPE OF THESE PLANS AND NEED TO BE ADDRESSED BY THE SUBMITTER.

LASTLY, THE SUBMITTER IS RESPONSIBLE FOR ALL SITE SPECIFIC REQUIREMENTS, INCLUDING FLOOD PLAIN ZONES, CAL-FIRE WILDLAND AND URBAN INTERFACE REQUIREMENTS, LAHONTAN EROSION CONTROL REQUIREMENTS AND ANY SIMILAR REQUIREMENTS. IN REGARDS TO FIRE RESISTIVE REQUIREMENTS FROM C.B.C. CHAPTER 7A AND C.R.C. SECTION 702, THESE REQUIREMENTS MUST BE COMPLIED WITH IF THE ORIGINAL RESIDENCE WAS SUBMITTED FOR PERMIT ON OR AFTER JULY 1, 2008.

NOTES ON COMPOSITE DECKING

THE SUBMITTER IS RESPONSIBLE FOR CHECKING THE SPECIFICATIONS AND SPAN REQUIREMENTS FOR ANY COMPOSITE DECKING THAT IS SELECTED AND GENERALLY INSTALLING IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. INSTALLED COMPOSITE DECKING MUST HAVE A LABEL, IN COMPLIANCE WITH CRC 917.4, INDICATING THE REQUIRED PERFORMANCE LEVELS AND DEMONSTRATING COMPLIANCE WITH THE PROVISIONS OF ASTM D 7082.

ADDITIONALLY, SOME COMPOSITE DECKING SYSTEMS HAVE A PROPRIETARY ATTACHMENT SYSTEM. IF THE SUBMITTER HOPES TO USE A PROPRIETARY ATTACHMENT SYSTEM IN PLACE OF THE SCREENS CALLED OUT, THE SUBMITTER IS TO SUBMIT WITH THE PLANS THE INSTALLATION GUIDELINES FOR THE PROPRIETARY SYSTEM WHEN SUBMITTING FOR A BUILDING PERMIT. UPON APPROVAL OF THE BUILDING DEPARTMENT PROPRIETARY ATTACHMENT SYSTEMS MAY BE USED.

STRUCTURAL NOTES

PROJECT SHALL COMPLY WITH THE 2010 CALIFORNIA CODES, WHICH ARE BASED UPON THE 2009 INTERNATIONAL BUILDING CODE, THE 2009 INTERNATIONAL RESIDENTIAL CODE, THE 2009 UNIFORM PLUMBING CODE, THE 2009 UNIFORM MECHANICAL CODE, THE 2008 NATIONAL ELECTRICAL CODE, AND THE 2008 TITLE 24 ENERGY STANDARDS.

SOIL BEARING ALLOWABLE ASSUMED TO BE 2000 PSF. ALL EXTERIOR FOOTINGS SHALL HAVE 18" MIN EMBEDMENT.

ALL FOOTINGS SHALL ALSO BE EMBEDDED DEEP ENOUGH THAT A 5' MIN HORIZONTAL DISTANCE TO DAYLIGHT IS ATTAINED. SEE 1.

FB, CC, ETC ARE SIMPSON STRONG-TIE HARDWARE. REFER TO SIMPSON CATALOG C-2019 FOR INSTALLATION INFORMATION. USE EXACT TYPE, SIZE, AND NUMBER OF FASTENERS SPECIFIED IN CATALOG.

SEE 15 AND 16 FOR FRAMING OF STAIRS IF REQ'D

DECKS MUST HAVE DETAILING TO RESIST TRANSVERSE LATERAL FORCES (FORCES THAT WOULD PULL THE DECK AWAY FROM THE BUILDING). TO RESIST THESE FORCES THE DECKS ARE ATTACHED WITH LUG HANGERS, EITHER TO A RIM OR TO A LEDGER. THESE HANGERS MUST USE SIMPSON SD4212 SCREWS, OR SIMILAR #8 SCREWS SHOWN TO HAVE EQUIVALENT VALUES. THE HANGERS ATTACHED WITH SCREWS HAVE A WITHDRAWAL VALUE OF AT LEAST 520# PER HANGER. THE LEDGER USES 3/4"x3/8" SIMPSON SDS SCREWS, GIVING IT A VALUE OF 816 PER STUD. OTHER ALTERNATIVE DETAILS FOR RESISTANCE OF TRANSVERSE LATERAL FORCES CAN BE CONSIDERED, IF THE SUBMITTER CAN DEMONSTRATE THAT THEY CAN RESIST EQUIVALENT LOADS. FREE STANDING DECKS ARE EXEMPT OF THIS REQUIREMENT.

DETAILS ON ACCOMPANYING DETAIL SHEETS ARE DRAWN TO THE SCALE NOTED IN THE TITLE BLOCK OF THE SHEET. UNLESS OTHERWISE NOTED, THE SIZE OF EACH SCALED ELEMENT SHOWN ON THE DETAILS DOES NOT NECESSARILY REPRESENT THE SIZE OF THE MEMBERS CALLED OUT ON THE PLAN, OR EXISTING IN THE STRUCTURE.

GUARDS (FORMERLY KNOWN AS GUARDRAILS) SHALL BE 42" HIGH, INTERMEDIATE RAILS, BALUSTERS OR OTHER BARRIERS SHALL BE SPACED SO THAT A 4" DIAMETER SPHERE CANNOT PASS THROUGH. GUARDS ARE REQUIRED AT ALL OPEN SIDED WALKING SURFACES, MEZZANINES, STAIRWAYS, RAMPS AND LANDINGS THAT ARE MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW.

STAIRS SHALL HAVE A MAXIMUM RISE OF 7.75" AND A MAXIMUM RUN OF 10" AND A MINIMUM WIDTH OF 36". OPENINGS AT TURNS SHALL BE SUCH THAT A 4" DIAMETER SPHERE CANNOT PASS THROUGH. GUARDS ARE REQUIRED AT ALL OPEN SIDED WALKING SURFACES, MEZZANINES, STAIRWAYS, RAMPS AND LANDINGS THAT ARE MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW.

AT EXTERIOR STAIRWAYS A MEANS SHALL BE PROVIDED TO ILLUMINATE THE STAIRS, INCLUDING LANDINGS TREADS AND THE TOP LANDING AREA. A LIGHT THAT IS OVER THE ENTIRE STAIRWAY MAY BE REQUIRED.

CONTROL FOR THESE LIGHTS SHALL BE EITHER WITHIN THE RESIDENCE, OR SHALL BE AUTOMATIC (MOTION OR PHOTO-SENSITIVE CONTROLLED).

HANDRAILS ARE REQUIRED ON AT LEAST ONE SIDE OF A STAIRWAY THAT HAS FOUR OR MORE RISERS. THE TOP OF THE HANDRAIL SHALL BE 34" MINIMUM TO 38" MAXIMUM HEIGHT MEASURED VERTICALLY FROM THE NOSING OF THE TREAD. HANDRAILS SHALL EXTEND FROM A POINT DIRECTLY ABOVE THE TOP RISER OF A FLIGHT TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT. THE ENDS OF A HANDRAIL ARE TO BE RETURNED OR TERMINATED IN A NEVEL POST OR SAFETY TERMINALS. THE USE OF A VOLUTE, TURNOUT OR STARTING EASING IS ALLOWED OVER THE LOWEST RISER. HANDRAILS ADJACENT TO A WALL OR GUARD NEED TO HAVE A SPACE NOT LESS THAN 1 1/2 INCHES BETWEEN THE WALL AND THE HANDRAIL. HANDRAILS SHALL BE CONTINUOUS FOR THE ENTIRE RUN, EXCEPT A NEVEL POST CAN INTERRUPT HANDRAILS AT A TURN. HANDRAILS GRIPS SHALL BE AS SPECIFIED BELOW FOR A TYPE I OR A TYPE II HANDRAIL, OR OF ANOTHER DESIGN APPROVED BY THE BUILDING OFFICIAL AS PROVIDING AN EQUIVALENT GRASPABILITY. VISUAL EXAMPLES OF EACH TYPE ARE PROVIDED, BUT NOTE THAT THESE ARE REPRESENTATIVE OF COMPLIANT CONCEPTS, BUT MANY OTHER PROFILES CAN BE COMPLIANT.

