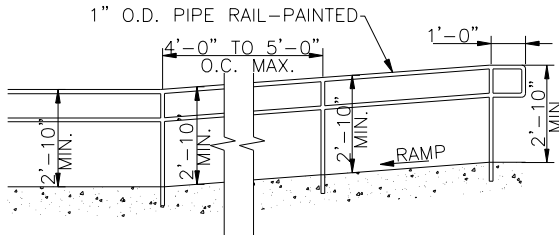


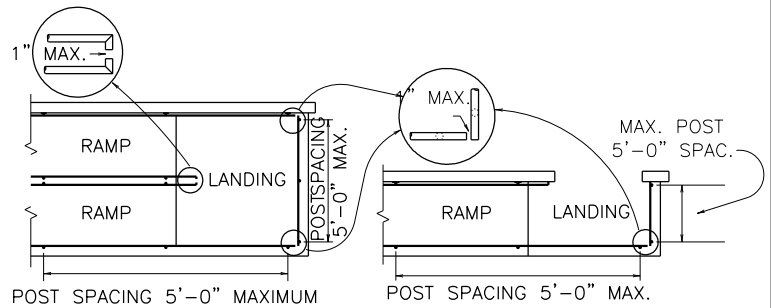
RAIL POSTS, MAY BE CAST INTO SIDEWALK OR ANCHORED IN BLOCKOUT AFTER SIDEWALK CONCRETE HAS CURED.

OPTIONAL RAIL POST WITHOUT CURB



FLOOR MOUNTED

HANDRAIL TERMINATION AT RAMP-TYP.
(BOTH SIDES OF STEPS)

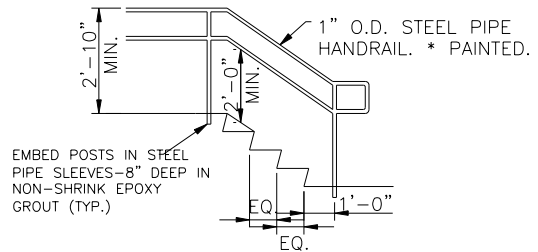


PLAN

MULTI-LEVEL RAMP

PLAN

SINGLE-LEVEL RAMP



STAIR HANDRAIL

(BOTH SIDES OF STEPS)

GENERAL NOTES:

DESIGN CONFORMS TO TEXAS ACCESSIBILITY STANDARDS AND AASHTO 1993 STANDARD AND CURRENT INTERIM SPECIFICATIONS.

SEE SIDEWALK AND RAMP DETAILS FOR (*) RAMP SLOPE, DIMENSIONS AND FOR TYPICAL CONCRETE AND REINFORCING STEEL. THIS SHEET SHOWS ADDITIONAL REINFORCING STEEL REQUIRED FOR HANDRAIL.

MATERIAL FOR POSTS AND HANDRAILS SHALL BE ASTM A53 GR B, OR A501. BASE PLATES SHALL BE A36. ALL PARTS SHALL BE GALVANIZED IN ACCORDANCE WITH THE SPECIFICATIONS.

SQUARE TUBING OF EQUIVALENT OUTSIDE DIMENSIONS AND STRENGTH MAY BE SUBSTITUTED FOR THE ROUND SHAPES SHOWN AS DIRECTED BY THE ENGINEER.

ANCHOR BOLTS FOR HANDRAILS ATTACHED TO THE WALL SHALL BE PLACED USING AN ADHESIVE DOWELING SYSTEM APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL HAVE AN ALLOWABLE CAPACITY OF 2400 LBS IN TENSION AND 2300 LBS IN SHEAR. INSTALLATION OF THE ANCHOR BOLTS, INCLUDING HOLE DEPTH AND DIAMETER, SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATION. IF REQUIRED BY THE ENGINEER, 3 OF THE FIRST 10 ANCHORS, AND 5% OF THE REMAINING ANCHORS SHALL BE TESTED TO 70% OF MINIMUM SPECIFIED YIELD. THE CONTRACTOR SHALL PROVIDE A SUITABLE RAM, PUMP, PRESSURE GAUGE AND REACTION SYSTEM.

ANCHOR BOLTS FOR POSTS ATTACHED ON THE RAMP SHALL CONFORM TO ASTM A36 OR APPROVED EQUAL. NUTS FOR ANCHOR BOLTS SHALL CONFORM TO ASTM A563 GR A OR BETTER HEAVY HEX. THREADS FOR ANCHOR BOLTS AND NUTS SHALL BE ROLLED OR CUT THREADS OF UNIFIED NATIONAL COARSE (UNC) THREAD SERIES. BOLTS AND NUTS SHALL HAVE CLASS 2A AND 2B FIT TOLERANCES. ANCHOR BOLTS AND EXPOSED NUTS SHALL BE GALVANIZED OR COATED WITH ZINC-RICH PAINT. WASHERS SHALL BE GALVANIZED. ANCHOR BOLTS IN RAMP AND SIDEWALK MAY BE ANCHORED USING A DRILL AND GROUT SYSTEM.

EXPOSED EDGES OF HANDRAIL AND HANDRAIL POSTS SHALL BE ROUNDED OR CHAMFERED TO APPROXIMATELY 1/8 INCH BY GRINDING.

ANCHOR BOLTS, NUTS AND WASHERS TO BE INCLUDED IN UNIT PRICE BID FOR RAILING.

ERECTION DRAWINGS SHOWING PANEL LENGTHS, SPLICE LOCATIONS, RAIL POST SPACING AND ANCHOR BOLTS SETTING SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

RAIL MAY BE ASSEMBLED (WELDED) IN THE FIELD.

PIPE SHALL BE GALVANIZED, OR PRIMED, AND PAINTED AS DIRECTED BY THE ENGINEER.

SCALE: NOT TO SCALE



MARBLE FALLS

800 THIRD STREET
MARBLE FALLS, TX 78654

PH: (830) 693-6737

These documents were prepared by,
or under the supervision of:

ERIC BELAJ 107148 May 31, 2017
Engineer's Name PE# Date

Engineer's Signature

SECTION

PAVING

DETAIL NO.

PV-22

TITLE

RAMP HANDRAIL
(2 OF 2)