

- 1) RAMP SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 1/12 (8% SLOPE)
- 2) THE MAXIMUM VERTICAL RISE OF RAMP RUN SHALL BE 30" MAXIMUM.
- 3) THE SLOPE PERPENDICULAR TO THE DIRECTION OF TRAVEL AND THE SLOPE ON LANDINGS SHALL NOT BE STEEPER THAN ONE UNIT VERTICAL IN 48 UNITS HORIZONTAL.
- 4) WHEN CHANGES IN DIRECTION OF TRAVEL OCCUR AT LANDINGS BETWEEN RAMP RUNS, THE LANDING SHALL BE 60x60" MINIMUM
- 5) MANEUVERING CLEARANCE ON PULL SIDE OF DOOR SHALL BE 18" ON INTERIOR AND 24" EXTERIOR WITH 60" LANDING IN FRONT OF DOOR.
- 6) HANDRAILS SHALL BE CONTINUOUS ALONG BOTH SIDES. HANDRAILS SHALL BE PARALLEL WITH THE SURFACE AND PROJECT 1 1/2"
- 7) TOP OF HANDRAILS SHALL BE MOUNTED BETWEEN 33" AND 36" ABOVE THE SURFACE.
- 8) CLEARANCE BETWEEN RAIL AND WALL SHALL BE 1 1/2".
- 9) GUARD RAILS SHALL TO BE DESIGNED FOR A CONCENTRATED LOAD OF 200# APPLIED @ ANY POINT AND ANY DIRECTION ALONG THE RAIL OR A UNIFORM LOAD OF 50#/LF APPLIED HORIZONTALLY TO THE GUARD HEIGHT.
- 10) BALUSTERS ARE INDEPENDENTLY DESIGNED FOR A CONCENTRATE LOAD OF 200# APPLIED TO ONE SQUARE FOOT OF AREA.
- 11) HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION WITH AN OUTSIDE MAXIMUM DIAMETER OF 1 1/4" MINIMUM AND 2" MAXIMUM.
- 12) GRIPPING SURFACE SHALL BE UNINTERRUPTED BY POSTS OR OTHER CONSTRUCTION ELEMENTS OR OBSTRUCTIONS.
- 13) HANDRAILS SHALL NOT ROTATE IN THEIR FITTINGS.
- 14) ENDS OF HANDRAILS SHALL RETURN SMOOTHLY TO FLOOR, WALL OR POST.
- 15) STEPS, RAMPS AND PLATFORMS SHALL BE DESIGNED FOR 100 PSF LIVE LOAD.
- 16) SUBMIT SHOP DRAWINGS FOR APPROVAL

1 RAMP NOTES

SCALE: NTS

- HANDRAIL NOTES:
- 1) MANEUVERING CLEARANCE ON EXTERIOR PULL SIDE OF DOOR SHALL BE 24" MINIMUM WITH 60" MINIMUM LANDING IN FRONT OF DOOR.
 - 2) HANDRAILS SHALL BE CONTINUOUS ALONG BOTH SIDES. HANDRAILS SHALL BE PARALLEL WITH THE SURFACE AND PROJECT 1 1/2" ON TOP OF RISER AND 1 1/2" PLUS 1" TREAD AT BOTTOM RISER.
 - 3) HANDRAILS WHERE HANDRAIL ARE NOT CONTINUOUS BETWEEN RUNS THE HANDRAIL SHALL EXTEND HORIZONTALLY ABOVE THE LANDING 1 1/2" MINIMUM BEYOND TOP AND BOTTOM RAMPS.
 - 4) TOP OF HANDRAILS SHALL BE MOUNTED BETWEEN 33" AND 36" ABOVE THE SURFACE.
 - 5) CLEARANCE BETWEEN RAIL AND WALL SHALL BE A MINIMUM OF 1 1/2".
 - 6) GUARD RAILS ARE TO BE DESIGNED FOR A CONCENTRATED LOAD OF 200# APPLIED @ ANY POINT AND ANY DIRECTION ALONG THE RAIL OR A UNIFORM LOAD OF 50#/LF APPLIED HORIZONTALLY @ GUARD HEIGHT.
 - 7) BALUSTERS ARE INDEPENDENTLY DESIGNED FOR A CONCENTRATED LOAD OF 200# APPLIED TO ONE SQUARE FOOT OF AREA.
 - 8) HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION WITH AN OUTSIDE DIAMETER OF 1 1/4" MINIMUM AND NOT GREATER THAN 2" MAXIMUM.
 - 9) GRIPPING SURFACE SHALL BE UNINTERRUPTED BY POSTS OR OTHER CONSTRUCTION ELEMENTS OR OBSTRUCTIONS.
 - 10) HANDRAILS SHALL NOT ROTATE IN THEIR FITTINGS.
 - 11) ENDS OF HANDRAILS SHALL RETURN SMOOTHLY TO FLOOR, WALL OR POST.

3 STRUCTURAL NOTES

SCALE: NTS

2 RAILING NOTES

SCALE: NTS

REFERENCE IBC 2009

DESIGN LOADS:

LIVE LOAD- 100 PSF

HANDRAIL IMPACT- 200 LBSF

MATERIALS

ROUND STEEL TUBE- ASTM A513 Fy= 35 KSI

SQUARE STEEL TUB. ASTM A500 GR. B Fy= 46 KSI


ALUMINUM SHEET- 3003-H12 Fy= 27 KSI F_u= 21 KSI

OR 5052-H34 Fy= 24 KSI F_u= 24 KSI

WELDS

WELDING SHALL BE IN ACCORDANCE WITH AWS D.1.1:88

USING E70XX ELECTRODES FOR STEEL



RS TAVARES ASSOCIATES
 PROFESSIONAL ENGINEERING ARCHITECTS
 10000 W. 10th Ave., Suite 1000
 Denver, CO 80202
 303.751.1500
 www.rstavares.com

THE PLATE, LOGO & DESIGN SIGNUM OF THESE DRAWINGS ARE THE PROPERTY OF R & S TAVARES ASSOCIATES. DESIGNER'S NAME FOR THIS CONTRACT. THESE DRAWINGS ARE TO BE USED ONLY FOR THE PROJECT OR IN PART FOR ANY PURPOSE FOR WHICH THEY WERE NOT INTENDED WITHOUT THE EXPRESS WRITTEN CONSENT OF R & S TAVARES ASSOCIATES.

REVISION

PROFESSIONAL STAMP

PROJECT TITLE
COMPLETE ACCESS STAIRS & RAMPS
 CODE: IBC 2004, 2007 USC

SHEET TITLE
RAMP

NOTES

PROJECT NUMBER
 10027

DRAWN BY
 ST RT

CHECKED BY
 RT

DATE
 05-14-2010

SHEET NO.
A1.0