NON-EXPOSED FASTENER

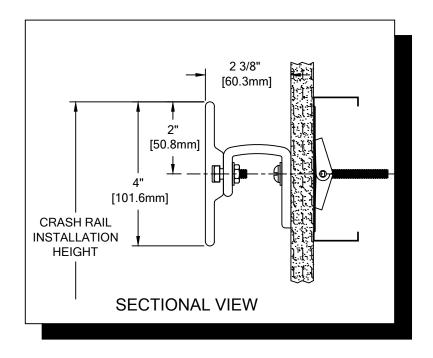
### PLEASE READ

PLEASE READ THESE INSTRUCTIONS THOROUGHLY PRIOR TO BEGINNING THE <u>ECR-32 CRASH RAIL</u> INSTALLATION!

THIS INSTRUCTION SHEET IS INTENDED TO PROVIDE A SPECIFIC GUIDE TO FOLLOW FOR THE INSTALLATION OF <u>ECR-32 CRASH RAIL</u>. CONTAINED WITHIN IS THE THE TECHNICAL INFORMATION AND INSTALLATION TECHNIQUES REQUIRED TO COMPLETE AN EFFICIENT, NEAT AND LONG-LASTING INSTALLATION.

INSPECT ALL MATERIALS FOR DAMAGE OR MISSING PARTS. IF YOU DISCOVER DAMAGED OR MISSING MATERIALS, IN THE USA PLEASE NOTIFY THE FACTORY AT (800) 233-8493, AND IN CANADA (888) 895-8955.

ECR-32 CRASH RAIL MUST BE INSTALLED IN ACCORDANCE WITH THESE INSTRUCTIONS! FAILURE TO FOLLOW THESE INSTRUCTIONS MAY VOID ANY PRODUCT WARRANTIES AND RESULT IN AN UNSUCCESSFUL INSTALLATION. FOR SPECIFIC QUESTIONS REGARDING THE INSTALLATION OF ECR-32 CRASH RAIL PLEASE CALL THE FACTORY AT (800) 233-8493 OR EMAIL IWPTECHSUPPORT@C-SGROUP.COM. IN CANADA CALL (888) 895-8955.



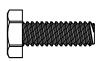
## **IMPORTANT NOTES**

- 1. THIS MATERIAL HAS BEEN MANUFACTURED TO CUSTOMER SPECIFIED DIMENSIONS AND CAN NOT BE CUT OR MODIFIED ON SITE. TO DO SO COULD VOID THE WARRANTY.
- RADIAL MATERIAL MAY BE SUPPLIED FACTORY FORMED OR IN STRAIGHT LENGTHS FOR FIELD FORMING. CONSULT FACTORY FOR OPTIONS.
- 3. ALL DIMENSIONS ARE TYPICAL.
- 4. FOR DRYWALL/PLASTER WALL CONSTRUCTION, IT IS RECOMMENDED FOR FASTENERS TO BE ENGAGED INTO METAL/WOOD STUDS TO MAINTAIN MAXIMUM PULLOUT STRENGTH. IF DURING INSTALLATION YOU ENCOUNTER SPECIAL WALL CONDITIONS THAT DO NOT ALLOW FOR DIRECT ATTACHMENT TO THE STUDS PLEASE CONSULT THE LOCAL AUTHORITY HAVING JURISDICTION.
- 5. MATERIAL MUST REACH 65°F MIN. TO 75°F MAX. 24 HOURS PRIOR TO INSTALLATION. THIS IS ESSENTIAL TO MINIMIZE EXPANSION AND CONTRACTION OF MATERIAL.
- 6. MAY REQUIRE USE OF FIRE PUTTY WHEN INSTALLED ON FIRE WALL WITH TOGGLE BOLTS. REFERENCE INSTRUCTIONS 24FIREPUTTY FOR FIRE PUTTY INSTALLATION.
- 7. THIS CRASH RAIL REQUIRES A MINIMUM OF 2 MOUNTING BRACKETS PER UNIT. MINUMUM END BEND TO END BEND RUN IS 13" 330.2mm][
- 8. FOR MORE INFORMATION ON ECR-32 CRASH RAIL SEE OUR WEBSITE AT www.c-sgroup.com.

## **COMPONENTS & FASTENERS**











ECR-32A ALUMINUM CRASH RAIL (24A241000)

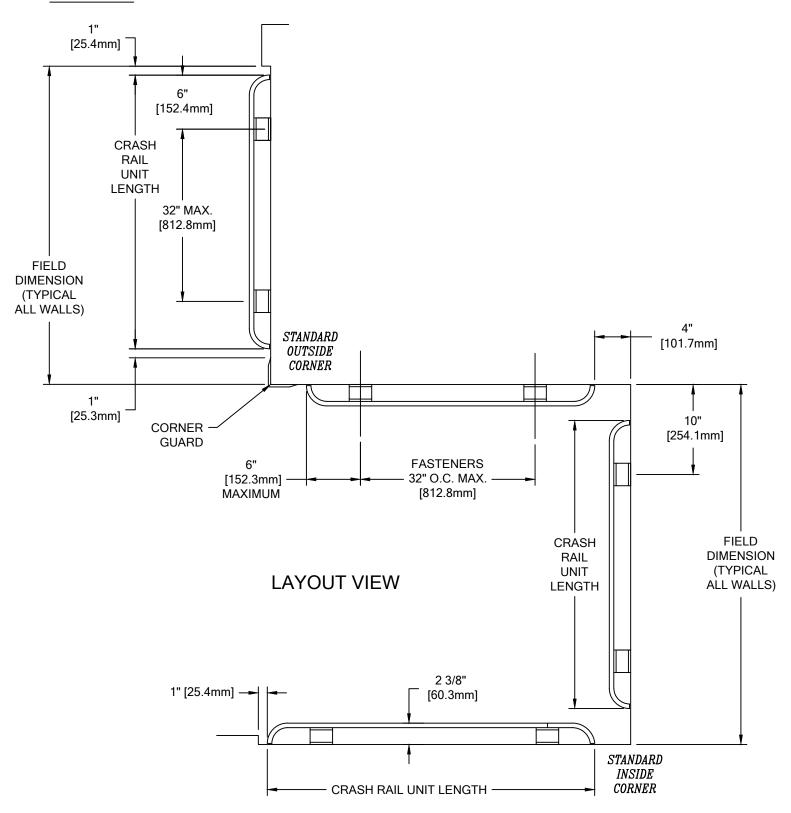
MOUNTING BRACKET (24F180003)

FASTENER #1 1/4"-20 x 3/4" HEX HEAD MACHINE SCREW (90H959002)

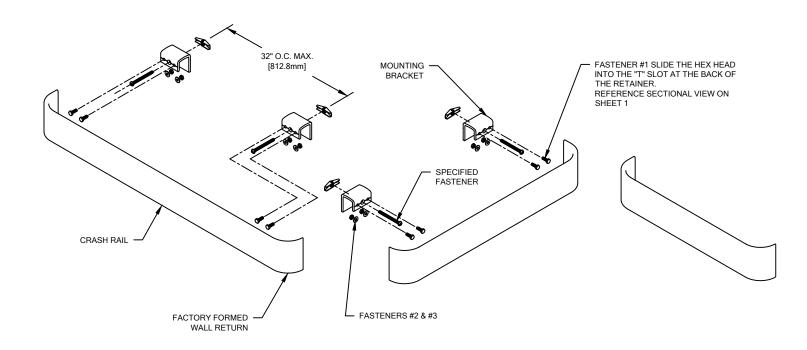
FASTENER #2 1/4-20 HEX NUT (90H001001) FASTENER #3 1/4" FLAT WASHER (90H012003)

WALL CONDITION	SPECIFIED FASTENER	DRILL DIAMETERS		CS PART
		WALL	RETAINER	NUMBER
STEEL STUD/GYPSUM WALL	1/4-20 X 3" ROUND HEAD BOLT/TOGGLE WING	3/4"	N/A	90H968002
CONCRETE/CONC. BLOCK	#14 X 4" PHILLIPS ROUND HEAD ALL-PURPOSE SCREW	7/32"	N/A	90H225002
WOOD STUD/GYPSUM WALL	#14 X 4" PHILLIPS ROUND HEAD ALL-PURPOSE SCREW	7/32"	N/A	90H225002

#### LAYOUT VIEW



#### TYPICAL ASSEMBLY



NOTE: INSTALLATION OF LINEAL OR RADIAL ECR-32A CRASH RAIL SHOULD BE DONE IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS.

- 1. DISTRIBUTE MATERIAL. MATCH THE NUMBER ON THE BACK OF THE RAIL TO THE MARK NUMBER ON THE DRAWING. SOME LARGE RUNS REQUIRE MORE THAN ONE PIECE OF CRASH RAIL. THESE ARE NOTED WITH A MARK NUMBER AND A LETTER, I.E., 2001A 2001B.
- 2. USING "LOCAL CODE" REQUIREMENTS ESTABLISH HANDRAIL HEIGHT ABOVE FINISH FLOOR. DEDUCT 2" [69.8mm] AND SNAP A CHALK LINE AT THAT HEIGHT. THIS MARKS THE LOCATION OF THE HOLE FOR MOUNTING BRACKET FASTENERS.
- DETERMINE WALL FASTENER LOCATIONS BY USING THE REQUIRED DEDUCTIONS (SEE LAYOUT VIEW) AND DRILL HOLE DIAMETER (REFERENCE CHART ON PAGE 2) IN THE WALL FOR SPECIFIED WALL FASTENERS.
- 4. INSTALL MOUNTING BRACKETS USING APPROPRIATE FASTENERS. LEVEL EACH MOUNTING BRACKET WHILE FASTENING IT TO THE WALL.
- 5. SLIDE TWO 1/4-20 X 3/4" HEX HEAD BOLTS INTO THE RECEIVER SLOT OF THE CRASH RAIL FOR ALL WALL BRACKETS.
- 6. ATTACH THE ASSEMBLED HANDRAIL TO THE WALL BRACKETS BY ALIGNING THE HEX HEAD BOLTS WITH THE MOUNTING BRACKETS AND INSERTING THE HEX HEAD BOLT INTO THE MOUNTING BRACKET HOLE. PLACE A 1/4" FLAT WASHER AND 1/4-20 HEX NUT ONTO THE HEX HEAD BOLT AND TIGHTEN AS REQUIRED.

NOTE: WHEN FIELD FORMING RADIUS CRASH RAIL, BE SURE TO APPLY NEEDED PRESSURE FROM BRACKET TO BRACKET.

06/08/18



Muncy, Pennsylvania ● (800) 233-8493 ● Fax (570) 546-5169 Mississauga Ontario ● (888) 895-8955 ● Fax (905) 274-6241 www.c-sgroup.com