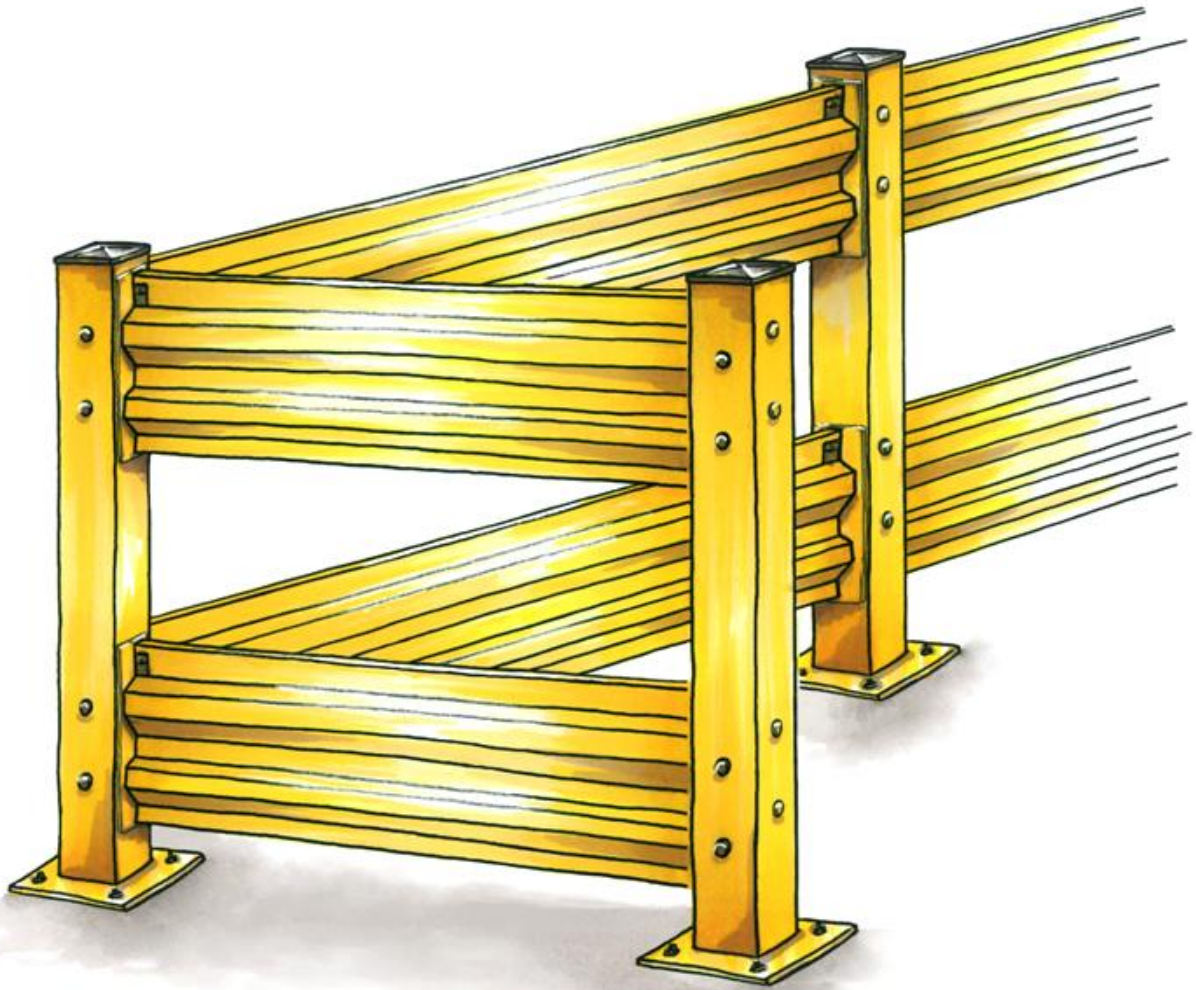


# BARRIER GUARDRAIL INSTALLATION MANUAL

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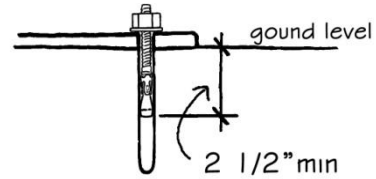


**Cogan**<sup>®</sup> **FASTER.  
LEANER.  
BETTER.**<sup>™</sup>

## ANCHOR BOLTS

Cogan shall not supply anchor bolts. The client or owner shall be responsible for adequate anchoring conditions and shall be responsible for the installation of adequate anchor bolts. All base plates are fabricated with  $\phi 3/4$ " holes (typically 4 anchor holes per base plate).

As a minimum, Cogan recommends 5/8" X 4 1/2" anchors with a minimum of 2 1/2" embedment.

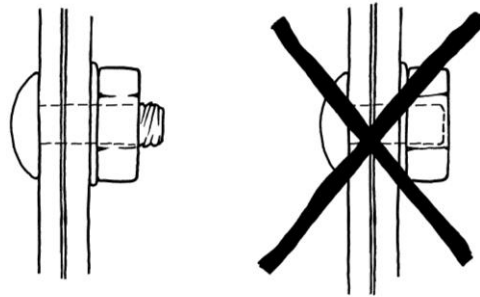


## BOLT TIGHTENING

Bolts must be installed in properly aligned holes. Initially, they need only be tightened to the snug tight condition. The snug tight condition is defined as the tightness that exists when all plies in a joint are in firm contact. This may be obtained by the full effort of a man using an ordinary spud wrench.

To ensure that the correct length of bolt has been used, verify that the entire thread of the nut is engaged with the bolt. If bolt does not exceed past the face of the nut, recheck installation details for type of hardware required.

Subsequently, the bolts should be tightened, but not exceed, an additional 1/3 turn past the snug tight condition. This ensures correct bolt tensioning.



## QUALITY ASSURANCE

1. System manufacturer:
  - Established firm with a minimum of 10 (ten) years of experience in the design and fabrication of guardrail systems.
2. System design:
  - Under the direct supervision of an engineer experienced in the design of guardrails in accordance with NBC, AISC and CSA standards. (listed in §13145.3)
3. Installation contractor shall have adequate experience in installing Cogan's Guardrail system.

## MATERIALS

Finish shall be security yellow, applied with an oven cured, powder coating process.

## TOOLS REQUIRED FOR INSTALLATION

- Measuring tape
- Chalk line
- 2 FT Level (preferably magnetic)
- Hammer drill with 5/8" drill bit
- 15/16" and 3/4" Wrench or sockets (anchor bolts)
- Miscellaneous extensions

SAMPLE APPROVAL DRAWING

**IMPORTANT NOTE**

THE CLIENT AND/OR OWNER SHALL BE RESPONSIBLE FOR ALL QUANTITIES AND DIMENSIONS INCLUDING THE VERIFICATION OF AND COORDINATION WITH FIELD CONDITIONS. THE CLIENT AND/OR OWNER SHALL VERIFY ALL CRITICAL DIMENSIONS AND CONDITIONS OF EXISTING CONSTRUCTION THAT RELATE TO THIS PROJECT PRIOR TO MANUFACTURING. COGAN MUST BE NOTIFIED IN WRITING OF ANY ELEMENTS FOUND TO BE INCONSISTENT OR NOT COMPATIBLE WITH THE DETAILS INDICATED BY THESE APPROVAL DRAWINGS.

THE CLIENT AND/OR OWNER MUST SUBMIT SIGNED (APPROVED) DRAWINGS PRIOR TO THE START OF THE PRODUCTION.

**GUARD RAIL SPECIFICATIONS:**

- ALL BASEPLATES 10"x10"x3"
- GUARD RAIL POSTS ARE MADE OF 5"x5"x3/4"
- GUARD RAILS ARE 12" HIGH, MADE WITH 12ga CORRUGATED STEEL.

**DISCLAIMER**

- COGAN TEST CONDITIONS DEMONSTRATE THAT WITH PROPER INSTALLATION, GUARD RAILS CAN WITHSTAND A 10,000 LB LOAD FROM BREAKING THROUGH AT FOUR (4) MPH.
- INSTALLING COGANS GUARD RAIL SYSTEM AT A MINIMUM 12 INCH DISTANCE, WILL HELP ENSURE THE SAFETY OF YOUR PROTECTED AREA DUE TO RAIL DEFORMATION CAUSED BY COLLISION.
- BASED ON 4000 PSI CONCRETE, COGAN RECOMMENDS ANCHORS Ø5/8" x 4-1/2" (WEDGE TYPE).

**FIELD MEASUREMENTS**

ALL FIELD MEASUREMENTS MUST BE VERIFIED AND GIVEN TO COGAN. IN OPENING SIZE WITH NO REDUCTIONS. COGAN WILL REDUCE ALL OPENINGS ACCORDING TO THEIR NEED FOR DOOR AND PANEL CLEARANCE REQUIREMENTS.

**LEGEND:**

C/C: CENTER TO CENTER  
O.D.: OUTSIDE DIMENSION

- THE COMPONENTS ARE COLORED WITH ONE COAT OF COGAN POWDER \*\*\*\* PAINT.

APPROVED BY: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

**CoganGuardrails**

**PROJECT NAME:** \_\_\_\_\_

**CLIENT NAME:** \_\_\_\_\_

NTS \_\_\_\_\_

DATE: YYYY/MM/DD ... X

SCALE: 1/1

DO NOT MAKE ANY MODIFICATIONS TO CORRECT ANY PROBLEM BE IT PRODUCT OR SITE CONDITION, WITHOUT FIRST CONTACTING OUR CUSTOMER SUPPORT DEPARTMENT AT COGAN WIRE (1-800-907-2842). ANY MODIFICATIONS TO THIS DRAWING WILL BE AT THE CLIENT'S RISK. COGAN WILL NOT BE RESPONSIBLE FOR ANY UNAUTHORIZED WORK. CUSTOMER SUPPORT IS AVAILABLE DURING REGULAR BUSINESS HOURS 9AM-5PM, MONDAY-FRIDAY.

APPROVAL DRAWING

**GUARD RAIL SPECIFICATIONS:**

- ALL BASEPLATES 10"x10"x½"
- GUARD RAIL POSTS ARE MADE OF 5"x6"x¼"
- GUARD RAILS ARE 12" HIGH, MADE WITH 12ga CORRUGATED STEEL

**DISCLAIMER**

- COGANS TEST CONDITIONS DEMONSTRATE THAT WITH PROPER INSTALLATION, GUARD RAILS CAN WITHSTAND A 10,000 LB LOAD FROM BREAKING THROUGH AT FOUR (4) MPH.
- INSTALLING COGANS GUARD RAIL SYSTEM AT A MINIMUM 12 INCH DISTANCE, WILL HELP ENSURE THE SAFETY OF YOUR PROTECTED AREA DUE TO RAIL DEFORMATION CAUSED BY COLLISION.
- BASED ON 4000 PSI CONCRETE, COGAN RECOMMENDS ANCHORS 600P x 4-1/2" (WEDGE TYPE)

**FIELD MEASUREMENTS**

ALL FIELD MEASUREMENTS MUST BE VERIFIED AND GIVEN TO COGAN, IN OPENING SIZE WITH NO REDUCTIONS. COGAN WILL REDUCE ALL OPENINGS ACCORDING TO THEIR NEED FOR DOOR AND PANEL CLEARANCE REQUIREMENTS.

**LEGEND:**

- ARL: ACTUAL RAIL LENGTH
- CC: CENTER TO CENTER
- O.D.: OUTSIDE DIMENSION
- THE COMPONENTS ARE COLORED WITH ONE COAT OF COGAN POWDER YELLOW PAINT.

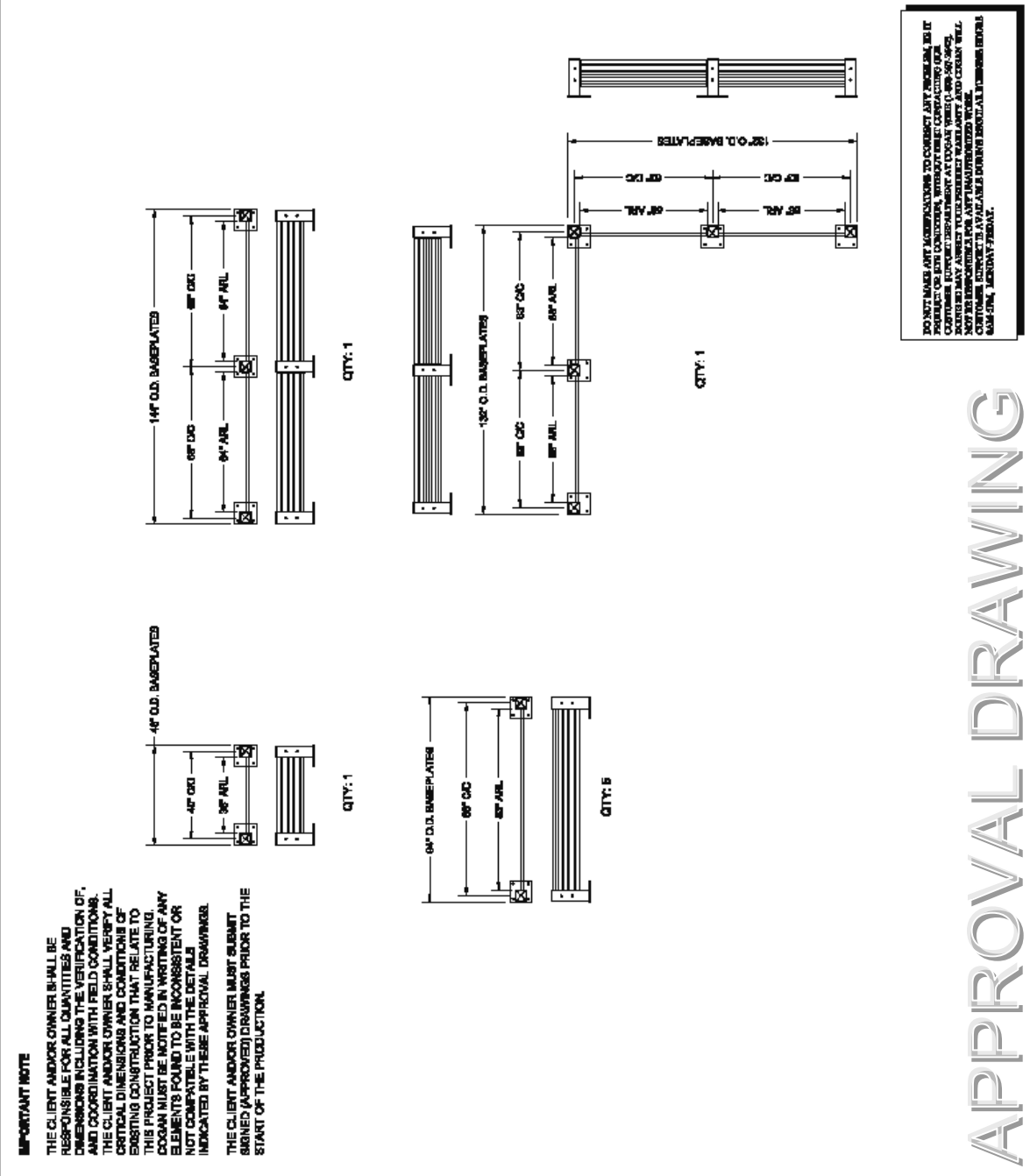
APPROVED BY: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

**CoganGuardrails**

PROJECT NAME	XXXX	APPROVED BY	XXXX
CLIENT NAME	XXXX	DATE	XXXX-XX-XX
PROJECT	XXXX	QUANTITY	X
DRAWING NO.	XXXX-005-001	SCALE	X

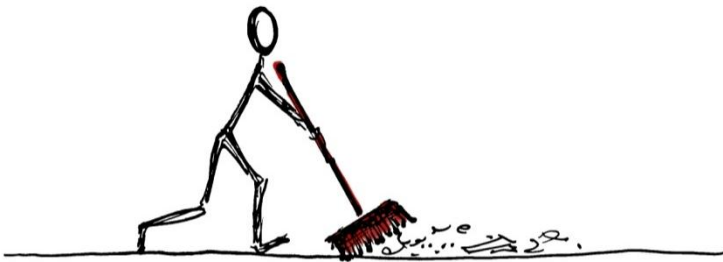


APPROVAL DRAWING

## READY, SET, INSTALL !



Make sure the installation site is cleaned of all debris to ensure an adequate access for the installer. The client or owner shall advise the installation company of any embedded floor obstacles that may interfere with the floor anchors.



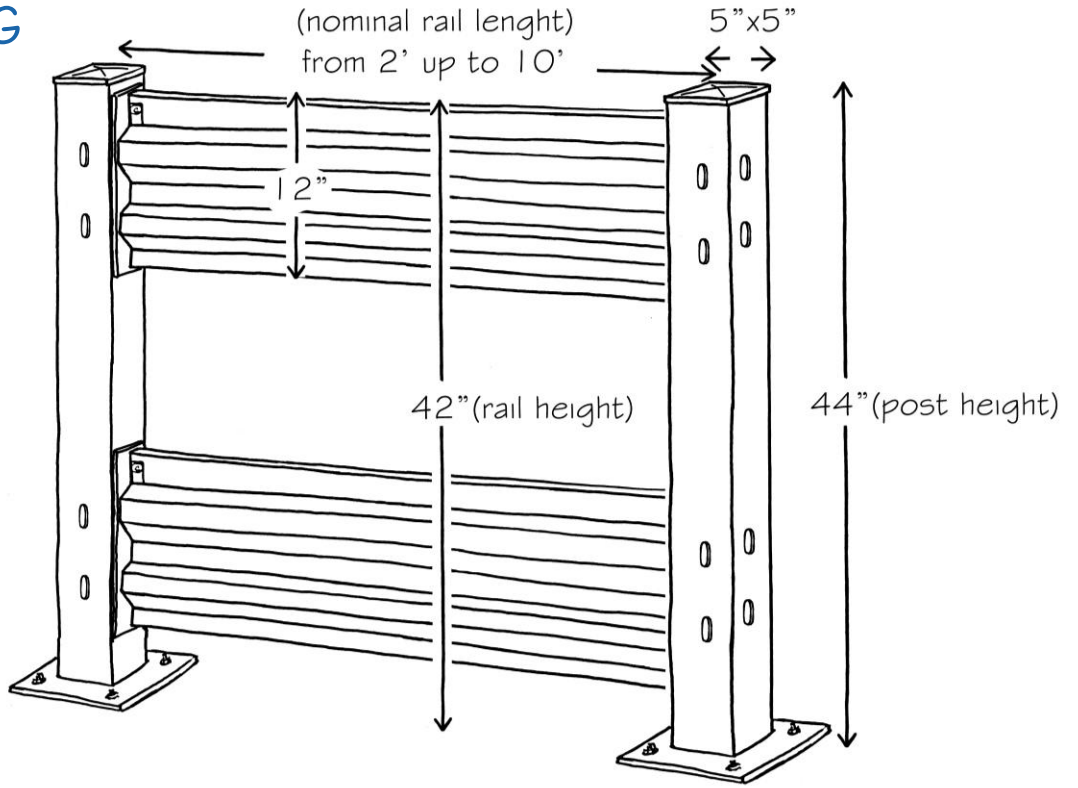
Carefully inspect all the installation site. The guardrail contractor's technician shall inspect the job site prior to the preparation of approval drawings.



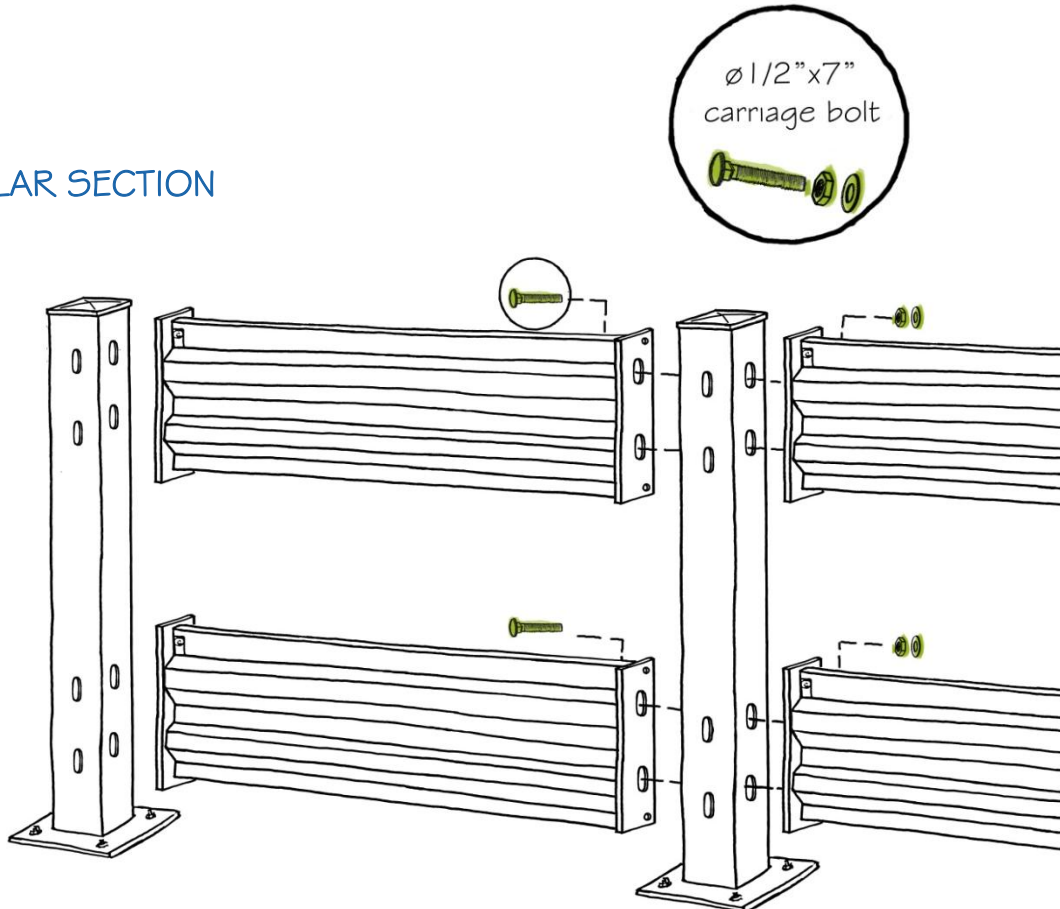
Review carefully all your installation drawings. Installation and assembly of guardrails and accessories shall be in accordance with the specification and instructions contained in this manual and installation drawings. Any Cogan product requiring modification during installation (on site) should be approved by a Cogan product engineer.



# ASSEMBLING



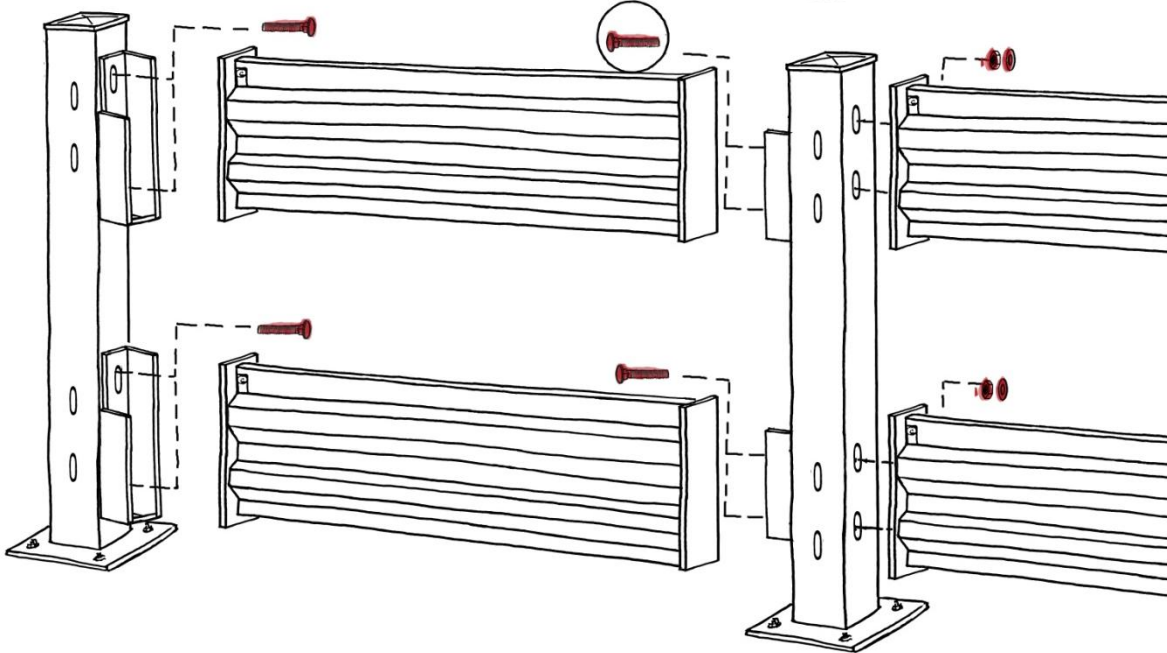
# REGULAR SECTION



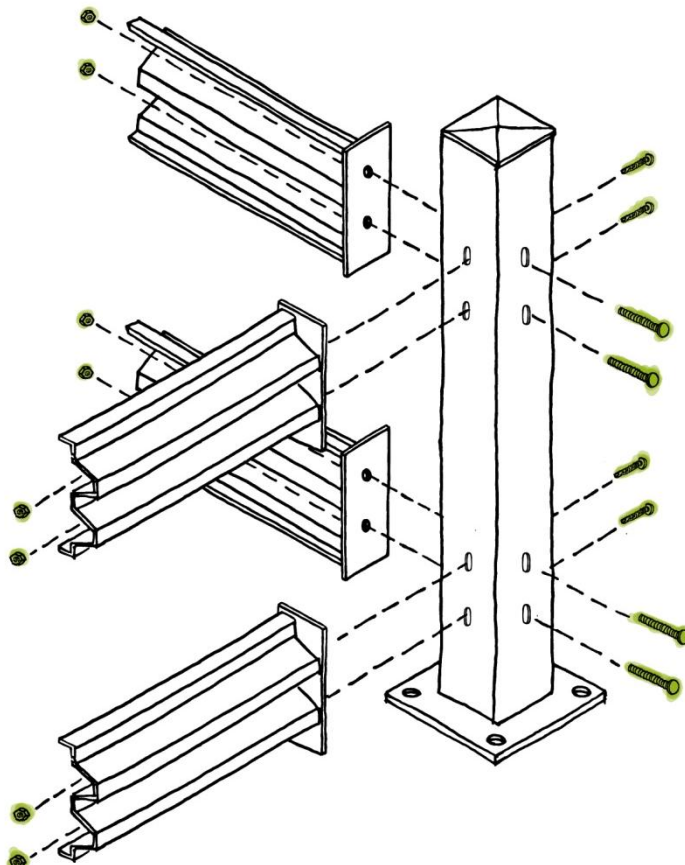
## LIFT-OUT SECTION



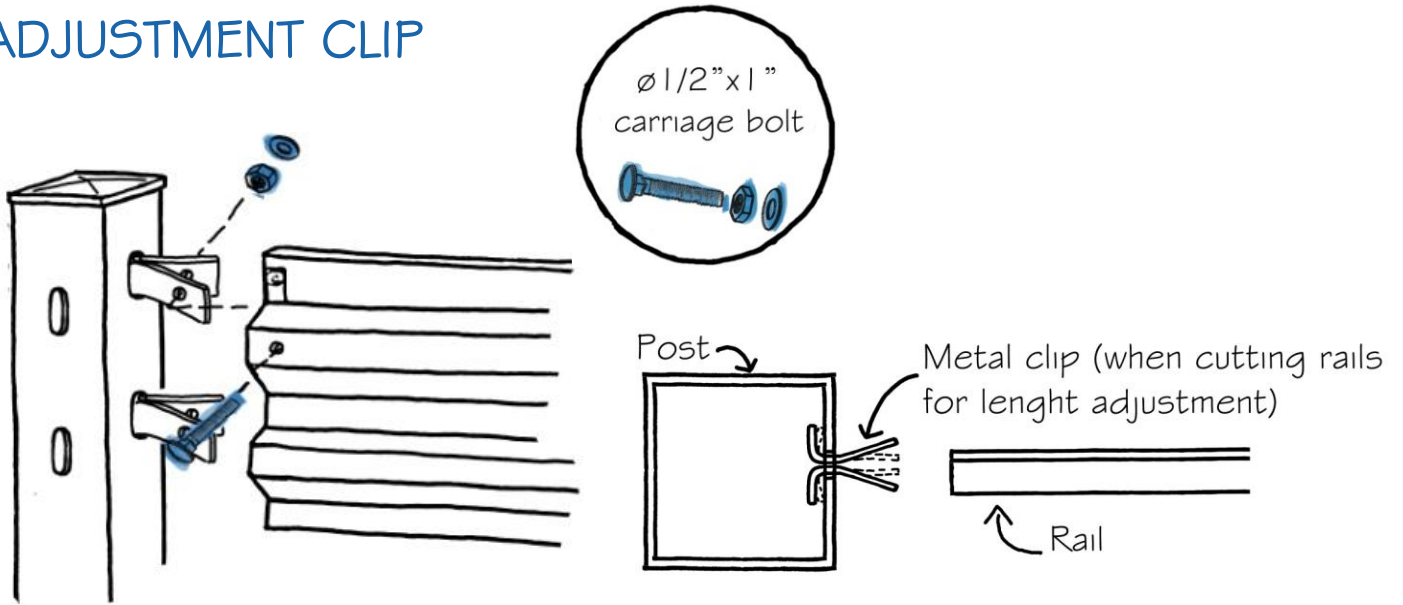
Add 1" to nominal distance in between posts when lift-out section



## CORNER

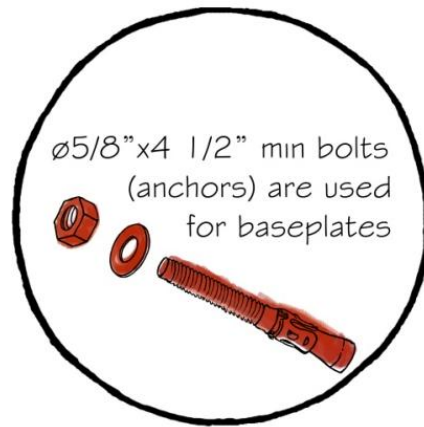
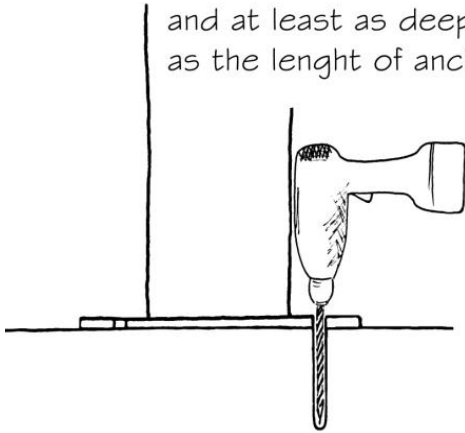


## ADJUSTMENT CLIP



## ANCHORING

Hammer drill a hole same nominal diameter and at least as deep as the length of anchors



Drive the hilti bolt in the hole so that at least **6 threads** are below the top surface of fixture. Then tighten to the recommended torque value to achieve proper anchor setting

Clean hole with blow out bulb

