READY TO INSPECT — FIELD CHECKLIST

Structural steel rough-in inspection checklist

Structural steel rough-in is the last time the work is fully visible. Once the cover inspection passes and the walls, ceilings and slabs close, every defect left behind becomes a demolition bill. This checklist walks the rough-in in the order the work goes in, with the photo each item needs before it gets buried. Work is commonly verified against AISC, AWS D1.1, the applicable building code. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The GC's superintendent walking the erection with the steel foreman, often alongside the special inspector on bolting and welding. When: As each tier or bay is erected and while the crane is still on the connections, before metal deck is laid and long before fireproofing goes on.

Anchorage and base plates

- [ ] Anchor bolts, base plates and leveling set correctly
  Anchor bolt pattern and projection match the drawings, base plates bearing on the leveling nuts or shims as detailed, no bent or field-cut anchors.
  2 photos required
- [ ] Grout placed solid under base plates
  Non-shrink grout packed full under the plate with no edge-only dams or voids, plates set to the correct elevation.
  2 photos required
- [ ] Anchor rod survey reviewed before columns are set
  Surveyed rod locations, projections and top-of-concrete elevations compared with the drawings; out-of-tolerance rods referred to the engineer of record for a repair detail before erection.
  No photo required
- [ ] Anchor rod nuts and plate washers tight at every column base
  Nuts run down on every anchor rod with the plate washers detailed, none left finger-tight or missing once the column is released from the crane.
  1 photo required

Members and field changes

- [ ] Delivered members checked for shipping and rigging damage
  Flanges, stiffeners, connection plates and shop coat looked over at shake-out; any bent, gouged or bare piece tagged and reported before it is set.
  1 photo required
- [ ] Members set match the piece marks on the erection drawings
  Piece marks read against the erection drawings for size, bay and orientation, no member swapped or substituted without an approved RFI response.
  1 photo required
- [ ] Erector's field fixes covered by an engineer's detail
  Any cut, cope, added plate, reamed or burned hole, or relocated connection the fit-up needs is backed by an RFI response or revised detail before the erector makes it.
  No photo required

Plumb and alignment

- [ ] Columns plumb and frame aligned before lockup
  Columns checked for plumb and the frame surveyed for line and elevation, guys and temporary bracing holding it in position before connections are finalized.
  2 photos required
- [ ] Erection sequence and bracing plan current at the crane
  The erector's erection plan and temporary bracing drawings on site and current, and the bays going up follow the sequence it shows.
  No photo required
- [ ] Beams set at their top-of-steel elevation and oriented as marked
  Top of steel shot at beam ends against the drawings, piece marks facing the way the erection drawings show, any camber set crown-up.
  1 photo required

Bolted connections

- [ ] Bolted joints installed and tightened per the joint type
  Correct bolt, washer and nut assemblies in place, snug-tight joints drawn tight and pretensioned joints tensioned by the specified method, match-marked so completion is visible.
  2 photos required

- [ ] Faying surfaces and connection material correct
  Slip-critical faying surfaces prepared as specified, plies drawn into firm contact, no missing bolts or open holes at the connection.
  1 photo required

- [ ] Bolt kegs on the floor labeled to match the approved submittal
  Keg or box label photographed showing grade, type and lot, matched to the approved submittal; containers kept closed and dry, no rusted or mixed assemblies in use.
  1 photo required

- [ ] Special inspector scheduled ahead of bolt-up in each area
  Observation booked for the connections the statement of special inspections lists, so the special inspector sees them before the joints are tensioned and covered.
  No photo required

Welded connections

- [ ] Field welds visually inspected before they are covered
  Complete welds at the size and length shown, no undercut, porosity or cracks visible, arc strikes ground out, before deck or fireproofing hides the joint.
  2 photos required