

IT-12: SEISMIC RESISTANCE			
	INSPECTION TASK	FREQ	REFERENCE
✗	1. PRIOR TO ANY WORK TAKING PLACE, EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A SEISMIC FORCE-RESISTING SYSTEM (SFRS) OR COMPONENT SHALL SUBMIT A WRITTEN STATEMENT OF CONTRACTOR RESPONSIBILITY.		IBC 1704.4
✗	2. STRUCTURAL STEEL (SEE IT-13 TABLES). [SDC ≥ D OR SDC ≥ B WHERE B > 3]		IBC 1705.12.1
□	3. STRUCTURAL WOOD [SDC ≥ C]	C	IBC 1705.12.2.1
	A. VERIFY FIELD GLUING OPERATIONS OF ELEMENTS OF THE SFRS.	P	IBC 1705.12.2.2
	B. INSPECT NAILING, ANCHORING, AND FASTENING OF COMPONENTS WITHIN THE SFRS INCLUDING SHEAR WALLS, DIAPHRAGMS, DRAG STRUTS, BRACES, AND HOLD-DOWNS.		
□	4. COLD-FORMED STEEL FRAMING CONSTRUCTION [SDC ≥ C]		
	A. INSPECT WELDING OPERATIONS AT ELEMENTS OF THE SFRS.	P	IBC 1705.12.3.1
	B. INSPECT SCREW ATTACHMENT, BOLTING, ANCHORING, AND FASTENING OF ELEMENTS WITHIN THE SFRS.	P	IBC 1705.12.3.2
	C. INSPECT SPECIAL BOLTED MOMENT FRAMES. [SDC ≥ D]	P	IBC 1705.12.9
✗	5. VERIFY ERECTION AND FASTENING OF EXTERIOR CLADDING, NON-BEARING WALLS, AND VENEER TALLER THAN 20' ABOVE FINISHED GRADE. [SDC ≥ D]	P	IBC 1705.12.5
□	6. CONFIRM ANCHORAGE OF ACCESS FLOORS. [SDC ≥ D]	P	IBC 1705.12.5.1
□	7. CONFIRM ANCHORAGE OF STORAGE RACKS AT LEAST 8'-TALL. [SDC ≥ D]	P	IBC 1705.12.7
✗	8. COLLECT CERTIFICATES OF COMPLIANCE FOR QUALIFYING EQUIPMENT, SUPPORTS, ATTACHMENTS, AND COMPONENTS; VERIFY CORRECTNESS OF LABELS AND INSTALLATION. [SDC ≥ C]	C	IBC 1705.12.4, 1705.13.2 ASCE 7 13.2.1, 13.2.2
	9. PLUMBING, MECHANICAL, AND ELECTRICAL COMPONENTS		
✗	A. VERIFY ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY AND STANDBY POWER SYSTEMS. [SDC ≥ C]	P	IBC 1705.12.6
	B. VERIFY INSTALLATION AND ANCHORAGE OF PIPE AND DUCT SYSTEMS CARRYING HAZARDOUS MATERIALS AND ASSOCIATED MECHANICAL UNITS. [SDC ≥ C]	P	IBC 1705.12.6
	C. CONFIRM THE INSTALLATION AND ANCHORAGE OF VIBRATION ISOLATION SYSTEMS WITH NOMINAL CLEARANCES ≤ 1/4". [SDC ≥ C]	P	IBC 1705.12.6
✗	D. INSPECT AND TEST SEISMIC ISOLATION SYSTEMS AT SEISMICALLY ISOLATED STRUCTURES. [SDC ≥ B]	P	IBC 1705.12.8, 1705.13.4 ASCE 7 17.2
<p>INSPECTION IS NOT REQUIRED FOR STRUCTURES OF LIGHT-FRAME CONSTRUCTION WHERE $S_{DS} \leq 0.5$ AND THE BUILDING HEIGHT $\leq 35'$, NOR FOR SFRS OF REINFORCED MASONRY/CONCRETE WHERE $S_{DS} \leq 0.5$ AND THE BUILDING HEIGHT $\leq 25'$. INSPECTION IS NOT REQUIRED FOR SHEAR WALLS, SHEAR WALL PANELS, AND DIAPHRAGMS WHERE THE FASTENER SPACING $> 4 \times D$.</p>			
<p>SEISMIC FORCE-RESISTING SYSTEMS AND COMPONENTS/CONNECTIONS SUBJECT TO INSPECTION INCLUDE: STEEL SPECIAL CONCENTRICALLY BRACED FRAMES AND SPECIAL REINFORCED MASONRY SHEAR WALLS</p>			

IT-13A: SEISMIC RESISTANCE, STRUCTURAL STEEL AND HIGH-STRENGTH BOLTING		FREQ	REFERENCE
INSPECTION TASK			
1.	INSPECTIONS PRIOR TO HIGH-STRENGTH BOLTING:		
A.	ENSURE CORRECT FASTENERS AND BOLTING PROCEDURES ARE SELECTED FOR JOINT DETAILS.	0	AISC 341 TABLE J7.1
B.	VERIFY CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION (WHEN SPECIFIED), COMPLY WITH THE CONTRACT DOCUMENTS.	0	AISC 341 TABLE J7.1
C.	OBSERVE AND DOCUMENT PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL FOR FASTENER ASSEMBLIES AND METHODS.	0	AISC 341 TABLE J7.1
D.	VERIFY PROPER STORAGE PROVIDED FOR ALL FASTENER COMPONENTS.	0	AISC 341 TABLE J7.1
2.	INSPECTIONS DURING HIGH-STRENGTH BOLTING:		
A.	ENSURE CORRECT FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS (WHEN SPECIFIED) ARE POSITIONED AS REQUIRED.	0	AISC 341 TABLE J7.2
B.	VERIFY JOINT BROUGHT TO SNUG-TIGHT CONDITION PRIOR TO PRE-TENSIONING.	0	AISC 341 TABLE J7.2
C.	VERIFY FASTENER COMPONENTS NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING.	0	AISC 341 TABLE J7.2
D.	VERIFY FASTENERS ARE PRE-TENSIONED IN ACCORDANCE WITH RCSC, PROGRESSING FROM THE MOST RIGID JOINT TOWARDS FREE EDGES.	0	AISC 341 TABLE J7.2
3.	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS AFTER HIGH-STRENGTH BOLTING IS COMPLETE.	0	AISC 341 TABLE J7.3
4.	VERIFY CONTOUR, FINISH, AND DIMENSIONAL TOLERANCES OF REDUCED BARE SECTIONS (RBS).	0	AISC 341 TABLE J8.1
5.	ENSURE NO HOLES OR UNAPPROVED ATTACHMENTS ARE MADE BY THE FABRICATOR OR ERECTOR IN THE PROTECTED ZONE.	0	AISC 341 TABLE J8.1
6.	INSPECTIONS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT:		
A.	VERIFY REINFORCING STEEL TYPE AND GRADE.	0	AISC 341 TABLE J9.1
B.	DETERMINE CARBON EQUIVALENT FOR REINFORCING STEEL OTHER THAN ASTM A706.	0	AISC 341 TABLE J9.1
C.	VERIFY REINFORCING SIZE, SPACING, AND ORIENTATION.	0	AISC 341 TABLE J9.1
D.	VERIFY REINFORCING IS NOT RE-BENT IN FIELD.	0	AISC 341 TABLE J9.1
E.	VERIFY REINFORCING IS TIED AND SUPPORTED AS REQUIRED.	0	AISC 341 TABLE J9.1
F.	VERIFY REQUIRED REINFORCING CLEARANCES ARE PROVIDED.	0	AISC 341 TABLE J9.1
G.	CONFIRM COMPOSITE MEMBER HAS REQUIRED SIZE.	0	AISC 341 TABLE J9.1
7.	INSPECTIONS OF COMPOSITE CONSTRUCTION DURING CONCRETE PLACEMENT:		
A.	VERIFY MIX DESIGN, COMPRESSIVE STRENGTH, MAXIMUM AGGREGATE SIZE, AND MAXIMUM SLUMP.	0	AISC 341 TABLE J9.2
B.	CONFIRM LIMITS ON WATER ADDED AT THE TRUCK/PUMP.	0	AISC 341 TABLE J9.2
C.	CONFIRM PROPER PLACEMENT TO LIMIT SEGREGATION.	0	AISC 341 TABLE J9.2
8.	AFTER CONCRETE PLACEMENT OF COMPOSITE STRUCTURES, VERIFY SPECIFIED F_u ACHIEVED AT SPECIFIED AGE.	C	AISC 341 TABLE J9.3
INSPECTION IS ONLY REQUIRED FOR $SDC \geq D$, OR $SDC \geq B$ WHERE $R > 3$.			

IT-138: SEISMIC RESISTANCE, WELDING OF STRUCTURAL STEEL			
INSPECTION TASK		FREQ	REFERENCE
1.	INSPECTIONS PRIOR TO WELDING:		
A.	CONFIRM WELD MATERIAL TYPE AND GRADE.	0	AISC 341 TABLE J6.1
B.	CONFIRM METHOD OF WELDER IDENTIFICATION.	0	AISC 341 TABLE J6.1
C.	INSPECT FIT-UP AND JOINT GEOMETRY FOR GROOVE WELDS, INCLUDING JOINT PREPARATION, DIMENSIONS, ALIGNMENT, ROOT OPENING, ROOT FACE AND BEVEL, CLEANLINESS OF STEEL SURFACES, TACK WELD QUALITY AND LOCATION, AND BACKING TYPE AND FIT.	0	AISC 341 TABLE J6.1
D.	INSPECT ACCESS HOLE CONFIGURATION AND FINISH.	0	AISC 341 TABLE J6.1
E.	INSPECT FIT-UP FOR FILLET WELDS, INCLUDING DIMENSIONS, ALIGNMENT, ROOT GAPS, CLEANLINESS OF STEEL SURFACES, TACK WELD QUALITY AND LOCATION.	0	AISC 341 TABLE J6.1
2.	INSPECTIONS DURING WELDING:		
A.	MONITOR PROPER IMPLEMENTATION OF WELDING PROCEDURE SPECIFICATION (WPS), INCLUDING SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, WELDING MATERIALS SELECTED, SHIELDING GAS TYPE AND FLOW RATE, PREHEAT APPLICATION, INTERPASS TEMPERATURE MAINTAINED, WELD POSITION (V, H, OH), AND INTERMIX OF FILLER METALS AVOIDED (UNLESS APPROVED BY THE RDPRC).	0	AISC 341 TABLE J6.2
B.	VERIFY WELDER QUALIFICATIONS.	0	AISC 341 TABLE J6.2
C.	VERIFY PROPER CONTROL AND HANDLING OF WELDING CONSUMABLES, INCLUDING PACKAGING AND EXPOSURE.	0	AISC 341 TABLE J6.2
D.	MONITOR THAT ENVIRONMENTAL CONDITIONS, INCLUDING WIND SPEED, PRECIPITATION AND TEMPERATURE, ARE WITHIN DEFINED LIMITS.	0	AISC 341 TABLE J6.2
E.	VERIFY WELDING TECHNIQUES, INCLUDING INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, AND EACH PASS MEETS QUALITY REQUIREMENTS.	0	AISC 341 TABLE J6.2
F.	INSPECT WELDING TECHNIQUES, INCLUDING NO WELDING OVER CRACKED TACK WELDS.	0	AISC 341 TABLE J6.2
3.	INSPECTIONS AFTER WELDING:		
A.	VERIFY WELDS HAVE BEEN CLEANEED.	0	AISC 341 TABLE J6.3
B.	CONFIRM THE INSTALLED SIZE, LENGTH, AND LOCATION OF WELDS MATCHES THE CONTRACT DOCUMENTS.	C	AISC 341 TABLE J6.3
C.	VERIFY WELDS MEET VISUAL ACCEPTANCE CRITERIA, INCLUDING CRACK PROHIBITION, WELD/BASE-METAL FUSION, CRATER CROSS SECTION, FILLET PROFILES AND SIZE, UNDERCUT, AND POROSITY.	C	AISC 341 TABLE J6.3
D.	INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3" OF THE WELD FOR DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS AND BE PERFORMED NO SOONER THAN 48 HOURS FOLLOWING COMPLETION OF THE WELDING.	C	AISC 341 TABLE J6.3
E.	CONFIRM PLACEMENT OF REINFORCING OR CONTOURING FILLET WELDS.	C	AISC 341 TABLE J6.3
F.	VERIFY BACKING AND WELD TABS ARE REMOVED (AS REQUIRED), FINISHED, AND FILLET WELDS ADDED.	C	AISC 341 TABLE J6.3
G.	OBSERVE AND INSPECT WELD REPAIR ACTIVITIES.	C	AISC 341 TABLE J6.3
INSPECTION IS ONLY REQUIRED FOR SDC ≥ D, OR SDC ≥ B WHERE R > 3.			

IT-13C: SEISMIC RESISTANCE, NON-DESTRUCTIVE TESTING OF WELDED JOINTS		FREQ	REFERENCE
INSPECTION TASK			
1. TEST WEB BASE METAL FOR CRACKS USING MAGNETIC PARTICLE TESTING (MT) WHEN DOUBLER PLATES, CONTINUITY PLATES, OR STIFFENERS ARE WELDED IN THE K-AREA. MT INSPECTION SHALL INCLUDE K-AREA METAL WITHIN 7" OF THE WELD AND BE PERFORMED AFTER 48 HOURS.		C	AISC 341 16.2a
2. COMPLETE JOINT PENETRATION (CJP) GROOVE WELDS IN MATERIALS $\geq 5/16"$ THICK			
A. PERFORM ULTRASONIC TESTING (UT) ON 100% OF CJP GROOVE WELDS, EXCEPT FOR ORDINARY MOMENT FRAMES FOR WHICH ONLY DEMAND CRITICAL WELDS NEED BE TESTED.	C	AISC 341 16.2b, 16.2g AWS D1.1	TABLE 6.2
B. PERFORM MT ON 25% OF BEAM-TO-COLUMN CJP GROOVE WELDS, EXCEPT FOR ORDINARY MOMENT FRAMES FOR WHICH ONLY DEMAND CRITICAL WELDS NEED BE TESTED.	C	AISC 341 16.2b, 16.2h	
C. AT THE END OF WELDS WHERE WELD TABS HAVE BEEN REMOVED (EXCLUDING CONTINUITY PLATE WELD TABS), PERFORM MT ON 100% OF BEAM-TO-COLUMN JOINTS RECEIVING UT IN ACCORDANCE WITH ITEM 2.A.	C	AISC 341 16.2i, 16.2h	
3. PROVIDE UT FOR BASE METAL, LAMELLAR TEARING AND LAMINATIONS AT BASE METAL THICKNESS $\geq 1 1/2"$ LOADED IN TENSION IN THROUGH-THICKNESS DIRECTION, IN TEE AND CORNER JOINTS WHERE CONNECTED MATERIAL IS $\geq 3/4"$ AND CONTAINS CJP GROOVE WELDS.		C	AISC 341 16.2c AWS D1.1 TABLE 6.2
4. AT WELDED SPLICES AND CONNECTIONS, PERFORM MT OR PENETRANT TESTING AT THERMALLY CUT SURFACES OF BEAM CORES AND ACCESS HOLES FOR ROLLED SECTIONS WITH $d_f \geq 1 1/2"$ AND BUILT-UP SHAPES WITH $b_w \geq 1 1/2"$.		C	AISC 341 16.2d
5. PERFORM MT ON WELDS AND ADJACENT AREAS OF REDUCED BEAM SECTION (RBS) CUT SURFACES REPAIRED BY WELDING, OR ON BASE METAL OF RBS CUT SURFACES IF A SHARP NOTCH WAS REMOVED BY GRINDING.		C	AISC 341 16.2e
INSPECTION IS ONLY REQUIRED FOR SDC $\geq D$, OR SDC $\geq B$ WHERE $R > 3$.			

IT-17: FIRE-RESISTANT PENETRATIONS AND JOINTS			
INSPECTION TASK		FREQ	REFERENCE
1. INSPECT THROUGH-PENETRATION FIRESTOP SYSTEMS AT FIRE WALLS, FIRE BARRIERS, SMOKE BARRIERS AND FIRE PARTITION WALLS IN ACCORDANCE WITH ASTM E2174.			IBC 714.3.1.2, 1705.17.1
2. INSPECT PENETRATION FIRESTOP SYSTEMS AT PENETRATIONS THROUGH MEMBRANES THAT ARE PART OF A HORIZONTAL ASSEMBLY IN ACCORDANCE WITH ASTM E2174.			
A. VERIFY MATERIALS BEFORE INSTALLATION.	P	IBC 714.4.2, 1705.17.1	
B. VERIFY INSTALLATION AGAINST THE CONTRACT DOCUMENTS AND APPROVED MATERIAL/INSTALLATION SUBMITTALS.	P	IBC 714.4.2, 1705.17.1	
C. FOR EACH TYPE OF FIRESTOP, WITNESS 10% OF INSTALLATIONS – OR DESTRUCTIVE TESTING ON 2% OF INSTALLATIONS FOR 10,000 SF FLOOR AREA.	P	IBC 714.4.2, 1705.17.1	
3. INSTALLATION OF FIRE-RESISTANT JOINT SYSTEMS IN ACCORDANCE WITH ASTM E2393			
A. VERIFY MATERIALS BEFORE INSTALLATION.	P	IBC 715.3, 715.4, 1705.17.2	
B. VERIFY INSTALLATION AGAINST THE CONTRACT DOCUMENTS AND APPROVED MATERIAL/INSTALLATION SUBMITTALS.	P	IBC 715.3, 715.4, 1705.17.2	
C. FOR EACH TYPE OF JOINT SYSTEM, WITNESS INSTALLATION OF A MINIMUM OF 5% OF THE TOTAL LINEAL FEET BEING INSTALLED – OR DESTRUCTIVE TESTING, DISASSEMBLY, OR VISUAL INSPECTION AT LEAST THE RATE OF 1 SAMPLE FOR EVERY 500 LINEAL FEET BEING INSTALLED.	P	IBC 715.3, 715.4, 1705.17.2	
INSPECTION IS ONLY REQUIRED FOR HIGH-RISE BUILDINGS OR BUILDINGS ASSIGNED TO RISK CATEGORY III OR IV. ADDITIONS, CHANGES OF USE, EVALUATIONS PER CHAPTER 14 OF THE IBC, AND LEVEL 3 ALTERATIONS WITHIN EXISTING HIGH-RISE BUILDINGS OR BUILDINGS ASSIGNED TO RISK CATEGORY III OR IV SHALL ALSO REQUIRE THESE INSPECTIONS.			

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STATEMENT OF SPECIAL INSPECTIONS

DATE: 12.04.2020
PROJECT NO: 20003

REVISIONS

NO:	DATE:	DESCRIPTION:
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