

TABLE 8 (ANSI/AISC 341 APPENDIX Q)  
REQUIRED VERIFICATION AND INSPECTION OF SLRS

TABLE 2 (CBC TABLE 1704.4) REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION			
VERIFICATION AND INSPECTION TASK		CONTINUOUS	PERIODIC
1.	INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	–	X
2.	INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1, ITEM 5B.	–	–
3.	INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	X	–
4.	INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.	–	X
5.	VERIFYING USE OF REQUIRED DESIGN MIX.	–	X
6.	AT THE TIME FRESH CONCRETE IS MIXED, TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	–
7.	INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	–
8.	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	–	X
9.	INSPECTION OF PRESTRESSED CONCRETE: A. APPLICATION OF PRESTRESSING FORCES. B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	X X	–
10.	ERECTION OF PRECAST CONCRETE MEMBERS.	–	X
11.	VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POSTTENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	–	X
12.	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	–	X

  

TABLE 3 (CBC 1704.7) REQUIRED VERIFICATION AND INSPECTION OF SOILS			
VERIFICATION AND INSPECTION TASK		CONTINUOUS	PERIODIC
1.	VERIFY MATERIALS BELOW SHALLOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	–	X
2.	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	–	X
3.	PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.	–	X
4.	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	X	–
5.	PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	–	X

  

TABLE 5 (CBC TABLE 1704.3.1) LEVEL 1 VERIFICATION AND INSPECTION OF CMU CONSTRUCTION			
VERIFICATION AND INSPECTION TASK		CONTINUOUS	PERIODIC
1.	COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED.	–	X
2.	VERIFICATION OF f'm PRIOR TO CONSTRUCTION.	–	X
3.	AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFY TO ENSURE COMPLIANCE: A. PROPORTIONS OF SITE-PREPARED MORTAR. B. CONSTRUCTION OF MORTAR JOINTS. C. LOCATION OF REINFORCEMENT.	– – –	X X X
4.	DURING CONSTRUCTION THE INSPECTION PROGRAM SHALL VERIFY: A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS. B. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION. C. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS AND ANCHORAGES. D. WELDING OF REINFORCING BARS.	– – – X	X – – –
	E. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	–	X
5.	PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: A. GROUT SPACE IS CLEAN. B. PLACEMENT OF REINFORCEMENT. C. PROPORTIONS OF SITE-PREPARED GROUT. D. CONSTRUCTION OF MORTAR JOINTS.	– – – –	X X X X
6.	GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS.	X	–
7.	PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	X	–

  

**KEY**

DOCUMENT (D) - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS. THE REPORT NEED NOT PROVIDE DETAILED MEASUREMENTS FOR JOINT FIT UP, WPS SETTINGS, COMPLETED WELDS, OR OTHER INDIVIDUAL ITEMS LISTED IN THE TABLE 6 FOR SHOP FABRICATION. THE REPORT SHALL INDICATE THE PIECE MARK OF THE PIECE INSPECTED, FOR FIELD WORK. THE REPORT SHALL INDICATE THE REFERENCE GRID LINES AND FLOOR OR ELEVATION INDICATED. WORK NOT IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS AND WHETHER THE NONCOMPLIANCE HAS BEEN SATISFACTORILY REPAIRED SHALL BE NOTED IN THE INSPECTION REPORT.

OBSERVE (O) - THE SPECIAL INSPECTOR SHALL OBSERVE THESE FUNCTIONS ON A RANDOM, DAILY BASIS. WELDING OPERATIONS NEED NOT BE DELAYED PENDING OBSERVATIONS.

PERFORM (P) - THESE INSPECTIONS SHALL BE PERFORMED PRIOR TO THE FINAL ACCEPTANCE OF THE ITEM.

[illegible]

ARCHITECTURAL COMPONENTS: PERIODIC SPECIAL INSPECTION IS REQUIRED DURING THE ERECTION AND FASTENING OF EXTERIOR CLADDING. INTERIOR

## 8. DEFINITIONS

- EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND OR SEISMIC FORCE RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND OR SEISMIC RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE ARCHITECT, ENGINEER, AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:
1. ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.
  2. ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL.
  3. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS.
  4. IDENTIFICATION AND QUALIFICATION OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION."

AN APPROVED AGENCY, RETAINED BY OWNER AND SATISFACTORY TO ARCHITECT (STRUCTURAL ENGINEER) AND GOVERNING CODE AUTHORITY, SHALL PERFORM REQUIRED TESTS AND SPECIAL INSPECTIONS OF THIS CONTRACT AND APPLICABLE CODE. AN APPROVED AGENCY IS AN ESTABLISHED AND RECOGNIZED AGENCY REGULARLY ENGAGED IN CONDUCTING TESTS AND/OR FURNISHING INSPECTION SERVICES, WHEN SUCH AN AGENCY IS APPROVED.

- A. STRUCTURAL STEEL: SEE TABLE 8 AND THE FOLLOWING NONDESTRUCTIVE TESTING (NDT) OF WELDS:
- 1) PROCEDURES
    - a) ULTRASONIC TESTING (UT) SHALL BE PERFORMED ACCORDING TO THE PROCEDURES DESCRIBED IN ANSII/ASQC 341 APPENDIX W, SECTION W4.1.
    - b) MAGNETIC PARTICLE TESTING (MT) SHALL BE PERFORMED ACCORDING TO THE PROCEDURES DESCRIBED IN ANSII/ASQC 341 APPENDIX W, SECTION W4.2.
  - 2) REQUIRED NDT
    - a) K-AREA NDT: WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES, OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, THE WEB SHALL BE TESTED FOR CRACKS USING MT. THE MT INSPECTION AREA SHALL INCLUDE THE K-AREA BASE METAL WITHIN 3 INCHES OF THE WELD.
    - b) C/P GROOVE WELD NDT: C/P GROOVE WELDS SHALL BE PERFORMED ON 100 PERCENT OF C/P GROOVE WELDS IN MATERIALS 5/16 INCH OR GREATER. UT IN MATERIAL LESS THAN 5/16 INCH THICK IS NOT REQUIRED. MT SHALL BE PERFORMED ON 25 PERCENT OF ALL BEAM-TO-COLUMN C/P GROOVE WELDS. MT SHALL BE AVOIDED ON OR REJECTED ON THE BASIS OF CRITERIA OF AWS D1.1 TABLE 6.2, WHERE T IS THE THICKNESS OF THE PART SUBJECTED TO THE THROUGH-THICKNESS STRESS.
    - c) BASE METAL NDT: AFTER JOINT COMPLETION, BASE METAL THICKER THAN 1-1/2 INCHES LOADED IN TENSION IN THE THROUGH THICKNESS DIRECTION IN TEES AND CORNER JOINTS, WHERE THE CONNECTED MATERIAL IS THICKER THAN 3/4 INCH AND CONTAINS C/P GROOVE WELDS, SHALL BE UT FOR DISCONTINUITIES BEHIND AND ADJACENT TO THE FUSION LINE OF SUCH WELDS. ANY BASE METAL DISCONTINUITIES FOUND WITHIN 1/4 OF THE STEEL THICKNESS SHALL BE AVOIDED OR REJECTED ON THE BASIS OF CRITERIA OF AWS D1.1 TABLE 6.2, WHERE T IS THE THICKNESS OF THE PART SUBJECTED TO THE THROUGH-THICKNESS STRESS.
    - d) BEAM COPE AND ACCESS HOLES: NDT: AT WELDED SPLICES AND CONNECTIONS, THERMALLY CUT SURFACES OF BEAM COPES AND ACCESS HOLES SHALL BE TESTED USING MT OR DT, WHEN THE FLANGE THICKNESS EXCEEDS 1-1/2 INCHES FOR ROLLED SHAPES, OR WHEN THE WEB THICKNESS EXCEEDS 1-1/2 INCHES FOR BUILT-UP SHAPES.
    - e) REDUCED BEAM SECTION (RBS) REPAIR NDT: MT SHALL BE PERFORMED ON ANY WELD AND ADJACENT AREA OF THE RBS PLASTIC HINGE REGION. REPAIRS SHALL BE REPAIRED BY GRINDING, OR ON THE BASE METAL OF THE RBS PLASTIC HINGE REGION IF A SHARP NOTCH HAS BEEN REMOVED BY GRINDING.
    - f) BEAM TAB REMOVAL SITES: MT SHALL BE PERFORMED ON THE END OF WELDS FROM ANY OF THE TABS HAVE BEEN OPENED, REMOVED, EXCEPT FOR CONTINUITY PLATE WELD TABS.
    - g) REDUCTION OF PERCENTAGE OF UT: THE AMOUNT OF UT IS PERMITTED TO BE REDUCED IF APPROVED BY THE ENGINEER OF RECORD AND THE GOVERNING CODE AUTHORITY. THE NDT RATE FOR AN INDIVIDUAL WELD SHALL BE REDUCED TO 10 PERCENT, OR TO 25 PERCENT, PROVIDED THE REJECT RATE IS DEMONSTRATED TO BE 5 PERCENT OR LESS OF THE WELDS TESTED FOR THE WELDER OR WELDING OPERATOR. A SAMPLING OF AT LEAST 20 COMPLETED WELDS FOR A JOB SHALL BE MADE FOR SUCH REDUCTION EVALUATION. REJECT RATE IS THE NUMBER OF WELDS CONTAINING REJECTABLE DEFECTS DIVIDED BY THE NUMBER OF WELDS COMPLETED. FOR EVALUATING THE REJECT RATE, CONTINUOUS WELDS OVER 3 FEET IN LENGTH WHERE THE EFFECTIVE THROAT THICKNESS IS 1 INCH OR LESS, EACH 12 INCH INCREMENT OR FRACTION THEREOF SHALL BE CONSIDERED AS ONE WELD. FOR EVALUATING THE REJECT RATE, CONTINUOUS WELDS OVER 3 FEET IN LENGTH WHERE THE EFFECTIVE THROAT THICKNESS IS GREATER THAN 1 INCH, EACH 6 INCHES OF LENGTH OR FRACTION THEREOF SHALL BE CONSIDERED ONE WELD.
    - h) REDUCTION OF PERCENTAGE OF MT: THE AMOUNT OF MT ON C/P GROOVE WELDS IS PERMITTED TO BE REDUCED IF APPROVED BY THE ENGINEER OF RECORD AND THE GOVERNING CODE AUTHORITY. THE MT RATE FOR AN INDIVIDUAL WELDER OR WELDING OPERATOR MAY BE REDUCED TO 10 PERCENT, PROVIDED THE REJECT RATE IS DEMONSTRATED TO BE 5 PERCENT OR LESS OF THE WELDS TESTED FOR THE WELDER OR WELDING OPERATOR. A SAMPLING OF AT LEAST 20 COMPLETED WELDS FOR A JOB SHALL BE MADE FOR SUCH REDUCTION EVALUATION. REJECT RATE IS THE NUMBER OF WELDS CONTAINING REJECTABLE DEFECTS DIVIDED BY THE NUMBER OF WELDS COMPLETED. THIS REDUCTION IS NOT PERMITTED ON WELDS IN THE K-AREA, AT REPAIR SITES, WELD TAB AND BAKING REMOVAL SITES, AND ACCESS HOLES.
  - 3) DOCUMENTATION: ALL NDT PERFORMED SHALL BE DOCUMENTED. FOR SHOP FABRICATION, THE NDT REPORT SHALL IDENTIFY THE TESTED WELD BY PIECE MARK AND LOCATION IN THE PIECE. FOR FIELD WORK, THE NDT REPORT SHALL IDENTIFY THE TESTED WELD BY LOCATION IN THE STRUCTURE, PIECE MARK, AND THE LOCATION IN THE PIECE.