GENERAL

1. THE OWNER WILL EMPLOY A QUALIFIED INSPECTION/TESTING AGENCY TO PERFORM SPECIAL INSPECTION AND FIELD QUALITY CONTROL TESTING. THE NAME AND QUALIFICATIONS OF THE INSPECTION/TESTING AGENCY WILL NEED TO BE FORWARDED TO THE BUILDING OFFICIAL.

2. SPECIAL INSPECTORS SHALL KEEP RECORDS OF ALL INSPECTIONS AND FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE CONTRACTORS, AND TO THE REGISTERED DESIGN PROFESSIONAL IN CHARGE IN A TIMELY MANNER. INSPECTION REPORTS SHOULD INDICATE COMPLIANCE OR NON-COMPLIANCE WITH THE REQUIRED INSPECTION PROVISIONS OF THE CONTRACT DOCUMENTS, THE APPROVED SUBMITTALS AND THE GOVERNING BUILDING CODE FOR THE MATERIALS NOTED BELOW AS WELL AS ADDITIONAL TEST REPORTS IN ACCORDANCE WITH SPECIFICATIONS AND GOVERNING BUILDING CODE REQUIREMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF NOT CORRECTED IN A TIMELY MANNER, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF WORK. A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING ALL SPECIAL INSPECTIONS, TESTING AND CORRECTION OF DISCREPANCIES SHALL BE SUBMITTED AT THE COMPLETION OF WORK TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN CHARGE. THE SPECIAL INSPECTOR OF RECORD SHALL BE A PROFESSIONAL ENGINEER LICENSED IN THE PROJECT STATE.

3. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE INSPECTION/TESTING AGENCY IS PRESENT FOR ALL WORK REQUIRING SPECIAL INSPECTIONS AND/OR QUALITY CONTROL TESTING. ANY WORK THAT REQUIRES INSPECTION/TESTING THAT IS COMPLETED WITHOUT THE INSPECTION/TESTING AGENCY PRESENT IS SUBJECT TO BEING DEMOLISHED AND RECONSTRUCTED. THE CONTRACTOR SHALL BE CO-OPERATIVE WITH THE INSPECTION AND TESTING AGENCIES AND SHALL BE RESPONSIBLE FOR SCHEDULING INSPECTIONS AND TESTS. SUFFICIENT ADVANCE NOTICE MUST BE PROVIDED FOR THE INSPECTION AND TESTING TO BE PERFORMED WITHOUT IMPEDING CONSTRUCTION OPERATIONS. SAFE ACCESS MUST BE PROVIDED, INCLUDING THE INSTALLATION OR AVAILABILITY OF SCAFFOLDING, LIFTS, LADDERS, LABOR, STORAGE SPACE, ETC., TO FACILITATE THE INSPECTION AND TESTS AS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ADDITIONAL INSPECTIONS OR TESTING FOR WORK OR MATERIAL NOT COMPLYING WITH THE CONTRACT DOCUMENTS.

4. REFER TO OTHER PORTIONS OF THE CONSTRUCTION DOCUMENTS FOR TESTING AND SPECIAL INSPECTION OF ARCHITECTURAL COMPONENTS, MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS AND OTHER NON-STRUCTURAL ITEMS, INCLUDING FIRE PROOFING, MPE BRACING, ETC.

5. ACCORDING TO ASTM C 1077 AND ASTM E 329 TO SAMPLE MATERIALS, PERFORM TESTS, AND SUBMIT TEST REPORTS DURING CONCRETE PLACEMENT, AS DOCUMENTED ACCORDING TO ASTM E 548. THE SPECIAL INSPECTOR OF RECORD SHALL BE A PROFESSIONAL ENGINEER LICENSED IN THE PROJECT STATE. THE AGENT(S) OF THE SPECIAL INSPECTOR SHALL BE QUALIFIED IN ACCORDANCE WITH THE SPECIFIED CERTIFICATION REQUIREMENTS FOR THE MATERIAL BEING INSPECTED/TESTED.

QUALITY ASSURANCE PLAN FOR SEISMIC RESISTANCE OF STRUCTURAL ELEMENTS

STATEMENT OF SPECIAL INSPECTIONS AND TESTS:

1. THIS STATEMENT OF SPECIAL INSPECTIONS AND TESTS IS SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS OF THE 2018 IBC. REFER TO SECTION 1704 FOR MINIMUM REQUIREMENTS FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, AND CONTRACTOR RESPONSIBILITIES. REFER TO ARCHITECTURAL, MECHANICAL AND OTHER DISCIPLINE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL NON-STRUCTURAL REQUIREMENTS.

2. REQUIRED VERIFICATIONS AND INSPECTIONS OF BUILDING ELEMENTS SHALL BE PER THE FOLLOWING IBC SECTIONS AS APPLICABLE:

   A. 1704.2.5 FABRICATED ITEMS
   B. 1705.2 STEEL CONSTRUCTION
      a. 1705.2.1 STRUCTURAL STEEL
      b. 1705.2.2 COLD FORMED STEEL DECK
      c. 1705.2.3 OPEN WEB STEEL JOISTS AND JOIST GIRDERS
   C. 1705.3 CONCRETE CONSTRUCTION
      a. 1705.3.1 WELDING OF REINFORCING BARS
      b. 1705.3.2 MATERIAL TESTS
   D. 1705.4 MASONRY
   E. 1705.5 WOOD
   F. 1705.6 SOILS
   G. 1705.7 DRIVEN DEEP FOUNDATIONS
   H. 1705.8 CAST IN PLACE DEEP FOUNDATIONS
   I. 1705.11.2 COLD FORMED STEEL LIGHT FRAME CONSTRUCTION

3. THE FOLLOWING TABLES OF SPECIAL INSPECTIONS SUMMARIZE THE SPECIAL INSPECTION AND TESTS REQUIRED FOR THE CATEGORIES LISTED ABOVE. SPECIAL INSPECTORS SHALL REFER TO THE APPROVED PLANS, SPECIFICATIONS, AND IBC CHAPTER 17 FOR DETAILED INSPECTION REQUIREMENTS. ANY ADDITIONAL TESTS AND INSPECTIONS REQUIRED BY THE APPROVED PLANS AND SPECIFICATIONS WILL ALSO BE PERFORMED.

4. WHERE APPLICABLE, STRUCTURAL OBSERVATIONS AS REQUIRED BY SECTION 1704.6 SHALL BE PROVIDED BY A REGISTERED DESIGN PROFESSIONAL RETAINED BY THE OWNER. AT THE CONCLUSION OF WORK, THE STRUCTURAL OBSERVER WILL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

5. STRUCTURAL OBSERVATION COORDINATION REQUIREMENTS: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE STRUCTURAL ENGINEER AS TO WHEN WORK HAS PROGRESSED ENOUGH FOR STRUCTURAL OBSERVATIONS TO TAKE PLACE. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL OBSERVER AT LEAST 48 HOURS IN ADVANCE OF THE REQUIRED STRUCTURAL OBSERVATIONS FOR SCHEDULING PURPOSES. FAILURE BY THE CONTRACTOR TO MEET THEIR REQUIREMENT MAY REQUIRE REMOVAL OF ANY SUBSEQUENT WORK FOR OBSERVATION AT THE CONTRACTOR'S EXPENSE.

6. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON, AS REQUIRED BY SECTION 1704.2.1, APPROVED BY THE LOCAL BUILDING OFFICIAL, FOR THE INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A MINIMUM OF 24 HOURS NOTICE TO THE SPECIAL INSPECTOR AND THE TESTING LABORATORY PRIOR TO BEGINNING ANY WORK FOR WHICH SPECIAL INSPECTION OR TESTING IS REQUIRED.

8. THE SPECIAL INSPECTOR IS NOT AUTHORIZED TO STOP OR DELAY ANY WORK. IF THE CONTRACTOR ELECTS TO CONTINUE WITH CERTAIN WORK AFTER BEING NOTIFIED BY THE SPECIAL INSPECTOR THAT SUCH WORK IS UNACCEPTABLE, THE CONTRACTOR DOES SO AT THEIR OWN RESPONSIBILITY, AND RISKS CORRECTING THE WORK.

9. THE SPECIAL INSPECTOR IS NOT INSPECTING FOR OSHA COMPLIANCE AND TEMPORARY CONSTRUCTION, SUCH AS BRACING, OR ANY SAFETY RELATED ITEMS.

10. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE PROVISIONS FOR THE STRUCTURAL INSPECTOR, TO ALLOW THE INSPECTOR TO PERFORM THEIR WORK SAFELY, AND EFFICIENTLY.

11. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:

    A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK REQUIRED TO BE SPECIAL INSPECTED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
    B. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE ENGINEER OR ARCHITECT OF RECORD AND THE BUILDING OFFICIAL.
    C. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE ENGINEER AND ARCHITECT OF RECORD WITHIN 30 DAYS OF INSPECTION.
    D. IN ACCORDANCE WITH SECTION 1704.2.4 THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A SEALED FINAL REPORT OF SPECIAL INSPECTIONS. UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN A FINAL REPORT CERTIFYING THAT TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.

12. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY THE BUILDING OFFICIAL'S INSPECTOR. ALL WORK REQUIRING SPECIAL INSPECTION WHICH IS INSTALLED OR COVERED WITHOUT APPROVAL OF THE BUILDING OFFICIAL'S INSPECTOR IS SUBJECT TO REMOVAL.

STRUCTURAL STEEL CONSTRUCTION

1. AN AWS/ AISC CERTIFIED STRUCTURAL STEEL INSPECTOR (OR EQUIVALENT), UNLESS NOTED OTHERWISE BELOW, SHALL PERFORM SPECIAL INSPECTION FOR ALL STEEL SHOP FABRICATION AND FIELD ERECTION.

STEEL DECK CONSTRUCTION

1. AN AWS/ AISC CERTIFIED STRUCTURAL STEEL INSPECTOR (OR EQUIVALENT), UNLESS NOTED OTHERWISE BELOW, SHALL PERFORM SPECIAL INSPECTION FOR ALL STEEL DECK SHOP FABRICATION AND FIELD ERECTION.

CONCRETE CONSTRUCTION

1. PERSONNEL CONDUCTING FIELD SAMPLING AND TESTING OF CONCRETE SHALL BE CERTIFIED AS AN ACI CONCRETE FIELD TECHNICIAN, GRADE 1, ACCORDING TO ACI CP-1 OR AN EQUIVALENT CERTIFICATION PROGRAM. PERSONNEL CONDUCTING STRENGTH TESTING OF CONCRETE SHALL BE CERTIFIED BY ACI AS A STRENGTH TESTING TECHNICIAN OR AN EQUIVALENT CERTIFICATION PROGRAM.

2. FIELD QUALITY CONTROL TESTING SHALL BE PROVIDED FOR ALL STRUCTURAL CONCRETE PLACEMENT INCLUDING FOUNDATIONS, SLABS, COLUMNS, BEAMS, AND CONCRETE WALLS AS FOLLOWS TESTING SERVICES: TESTING OF COMPOSITE SAMPLES OF FRESH CONCRETE OBTAINED ACCORDING TO ASTM C 172 SHALL BE PERFORMED ACCORDING TO THE FOLLOWING REQUIREMENTS:

   A. TESTING FREQUENCY: OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIX EXCEEDING 5 CU YD, BUT LESS THAN 25 CU YD, PLUS ONE SET FOR EACH ADDITIONAL 50 CU YD OR FRACTION THEREOF. WHEN FREQUENCY OF TESTING WILL PROVIDE FEWER THAN FIVE COMPRESSIVE STRENGTH TESTS FOR EACH CONCRETE MIX, TESTING SHALL BE CONDUCTED FROM AT LEAST FIVE RANDOMLY SELECTED BATCHES OR FROM EACH BATCH IF FEWER THAN FIVE ARE USED.

   B. COMPRESSION TEST SPECIMENS: ASTM C 31/C 31M, CAST AND LABORATORY CURE ONE SET OF SIX STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE.

   C. SLUMP: ASTM C 143, ONE TEST AT POINT OF PLACEMENT PER TRUCKLOAD OF READY MIXED CONCRETE. PERFORM ADDITIONAL TESTS IF CONCRETE CONSISTENCY APPEARS TO CHANGE. WHEN HIGH-RANGE WATER REDUCER IS ADDED AT JOBSITE, INITIAL SLUMP MUST BE VERIFIED.

   D. AIR CONTENT: ASTM C 231, PRESSURE METHOD, FOR NORMAL-WEIGHT CONCRETE, ASTM C 173, VOLUMETRIC METHOD, FOR STRUCTURAL LIGHTWEIGHT CONCRETE. ONE TEST AT POINT OF PLACEMENT PER TRUCKLOAD OF READY MIXED CONCRETE.

   E. CONCRETE TEMPERATURE: ASTM C 1064, ONE TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEG F AND BELOW AND WHEN 80 DEG F AND ABOVE, AND ONE TEST FOR EACH COMPOSITE SAMPLE.

   F. UNIT WEIGHT: ASTM C 567, FRESH UNIT WEIGHT OF STRUCTURAL LIGHTWEIGHT CONCRETE. ONE TEST AT TRUCK DISCHARGE PER TRUCKLOAD OF READY MIXED CONCRETE.

3. COMPRESSIVE STRENGTH TESTS: ASTM C 39, TEST TWO LABORATORY CURED SPECIMENS AT 7 DAYS AND TWO AT 28 DAYS. MAINTAIN TWO CYLINDERS AS SPARES. A COMPRESSIVE-STRENGTH TEST SHALL BE THE AVERAGE COMPRESSIVE STRENGTH FROM TWO SPECIMENS OBTAINED FROM SAME COMPOSITE SAMPLE AND TESTED AT AGE INDICATED. STRENGTH OF EACH CONCRETE MIX WILL BE SATISFACTORY IF EVERY AVERAGE OF ANY THREE CONSECUTIVE COMPRESSIVE-STRENGTH TEST EQUALS OR EXCEEDS SPECIFIED COMPRESSIVE STRENGTH AND NO COMPRESSIVE STRENGTH TEST VALUE FALLS BELOW SPECIFIED COMPRESSIVE STRENGTH BY MORE THAN 500 PSI.

4. TEST RESULTS SHALL BE REPORTED IN WRITING TO ARCHITECT, CONCRETE MANUFACTURER AND CONTRACTOR WITHIN 48 HOURS OF TESTING. REPORTS OF COMPRESSIVE-STRENGTH TESTS SHALL CONTAIN PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING AND INSPECTING AGENCY, LOCATION OF CONCRETE PLACEMENT, AMBIENT TEMPERATURE, CONCRETE TEMPERATURE, SLUMP, AIR CONTENT, UNIT WEIGHT, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIX PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, TYPE OF BREAK FOR BOTH 7-AND 28-DAY TESTS AND OTHER PERTINENT INFORMATION SUCH AS THE ADDITION OF WATER AND ADMIXTURES ON-SITE.

5. NON-DESTRUCTIVE TESTING: IMPACT HAMMER, SONOSCOPE OR OTHER NONDESTRUCTIVE DEVICE MAY BE PERMITTED BY THE STRUCTURAL ENGINEER BUT WILL NOT BE USED AS SOLE BASIS FOR APPROVAL OR REJECTION OF CONCRETE.

6. ADDITIONAL TESTS: TESTING AND INSPECTING AGENCY SHALL MAKE ADDITIONAL TESTS OF CONCRETE WHEN TEST RESULTS INDICATE THAT SLUMP, AIR ENTRAINMENT, COMPRESSIVE STRENGTHS OR OTHER REQUIREMENTS HAVE NOT BEEN MET, AS DIRECTED BY ARCHITECT. TESTING AND INSPECTING AGENCY MAY CONDUCT TESTS TO DETERMINE ADEQUACY OF CONCRETE BY CORED CYLINDER COMPLYING WITH ASTM C 42 OR BY OTHER METHODS AS DIRECTED BY ARCHITECT.

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