

SCHEDULE OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS

Project Name: USM Exterior Fuel Tank
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Project No.: 06050

| MATERIAL/ACTIVITY | | ITEM | SERVICE | APPLICABLE TO THIS PRODUCT | | | | REV # |
|--|------|--|---------|---|--|----------|---------|-------|
| | | | | Y/N | EXTENT (All, Sample, Other, None) | COMMENTS | AGENT # | |
| IBC 1704.3 - STEEL CONSTRUCTION (See also IBC 2003 Table 1704.3) | | | | | | | | |
| STRUCTURAL STEEL - Fabrication NOTE: Structural Engineer of Record (SER) may waive Fabricator shop inspection if Fabricator is currently certified through the AISC Quality Certification Program. | 1.1a | Review Fabricator QA/QC procedures manual. | N | One shop inspection required. | | | | |
| | 1.1b | Review Fabricator QA/QC procedures implementation and conformance. | N | One shop inspection required. Visual inspection of shop conformance. | | | | |
| | 1.1c | Review material certificates of compliance (bolts, nuts, washers, structural steel and weld filler material). | N | Obtain copies of mill certificates for all structural steel, bolts and weld material. | From contractor. | | | |
| | 1.1d | Review welder certification. | N | Obtain certification numbers for all welders and all steel. | From contractor. | | | |
| | 1.1e | Review structural steel and fabrication for conformance to approved shop drawings. | N | Verify member sizes, piece marks and connection details match approved shop drawings. Visually inspect bolts and welds. | Obtain copy of approved shop drawings from SMRT. | | | |
| | 1.1f | Review welding of seismic-resisting systems in Category "C" buildings. | N | Magnetic particle test all welds. | | | | |
| | 1.2a | Review welder certification. | Y | Obtain certification numbers for all welders and all steel not already obtained from I.I.d. | From contractor. | | | |
| | 1.2b | Review material certificates of compliance (bolts, nuts, washers, and weld filler material). | Y | Obtain copies of mill certificates for all structural steel, bolts and weld materials not already obtained from I.I.c. | From contractor. | | | |
| | 1.2c | Review structural steel and erection for conformance to approved shop drawings. | N | Verify member sizes, piece marks and connection details. | Obtain copy of approved shop drawings from SMRT. | | | |
| | 1.2d | Inspect field bolting installation in accordance with Section 9 of RCSC <i>Specification for Structural Joints Using ASTM A325 or A490 Bolts</i> . | Y | Random check 10% of connections. | Testing agency to check connections. Special Inspector to review inspection reports. | | | |
| | 1.2e | Review Shear connections. | N | Visually inspect. | | | | |
| | 1.2f | Review Moment connections and Category "C" seismic connections. | N | Visually inspect all. | | | | |
| | 1.2g | Review Bracing connections. | N | Visually inspect all. | | | | |
| | 1.2h | Review Column splices. | N | Visually inspect all. | | | | |
| | 1.2i | Review base metal testing for t > 1.5". | N | Ultrasonic testing of all welds per Aws D1.1 | | | | |
| STEEL JOIST AND JOIST GIRDERS - Fabrication NOTE: SER may waive Fabricator shop inspection if Fabricator is currently a member of the Steel Joist Institute. | 1.3a | Review Fabricator QA/QC procedures manual. | N | One shop inspection required. | | | | |
| | 1.3b | Review Fabricator QA/QC procedures implementation and conformance. | N | One shop inspection required. Visual inspection of shop conformance. | | | | |
| | 1.3c | Review material certificates of compliance (bolts, nuts, washers, structural steel and weld filler material). | N | Obtain copies of mill certificates for all structural steel, bolts and weld material. | From contractor. | | | |
| | 1.3d | Review welder certification. | N | Obtain certification numbers for all welders and all steel. | From contractor. | | | |

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| STEEL JOIST AND JOIST GIRDERS – Fabrication (continued) | 1.3e | Review connections. Visually inspect bolts and welds. | N | Verify member sizes, piece marks and connection details match approved shop drawings. | Obtain copy of approved shop drawings from SMRT. | | |
| | 1.4a | Review welder certification. | N | Obtain certification numbers for all welders and all steel not already obtained from 1.3d. | From contractor. | | |
| | 1.4b | Review materials certificates of compliance (bolts, nuts, washers, and weld filler material). | N | Obtain copies of mill certificates for all structural steel, bolts, and weld materials not already obtained from 1.3c. | From contractor. | | |
| | 1.4c | Review steel joist and erection for conformance to approved shop drawings. | N | Verify member sizes, piece marks and connection details. | Obtain copy of approved shop drawings from SMRT. | | |
| | 1.4d | Review joist bearing connection, bearing length, and bridging. | N | Visually inspect. | | | |
| SECONDARY/MISC STRUCTURAL STEEL | 1.5a | Review Start connections. | N | Visually inspect. | | | |
| | 1.5b | Review Girt connections. | N | Visually inspect all. | | | |
| | 1.5c | Verify number, type and location of steel deck connection to framing and side lap fasteners. | N | Visually inspect. | | | |
| | 1.5d | Review Lintel connections/installation. | N | Visually inspect all. Verify bearing length. | | | |
| | 1.5e | Review installation of shear studs. | N | Visually inspect all. Verify number and location. Random test 20% of studs per AWS Chapter 5. | | | |
| | 1.5f | Review details of steel frames. | N | Visually inspect. | | | |
| IBC 1704.4 – CONCRETE CONSTRUCTION (See also IBC Table 1704.4) | | | | | | | |
| CONCRETE MATERIALS | 2.1a | Test concrete materials in accordance with contract documents and Chapter 3 of ACI 318. | Y | As directed by SER in accordance with specifications. | Testing by testing agency. Special Inspector to review tests results for compliance. | | |
| | 2.1b | Review concrete mix design. | Y | As directed by SER in accordance with specifications. | SER to review mix designs and supply copy of approved mix design to Special Inspector. | | |
| | 2.1c | Review reinforcing certifications & weldability (ASTM 706). | Y | As directed by SER in accordance with specifications. | From contractor. | | |
| REINFORCING AND PROCESSING STEEL | 2.2 | Inspect condition and placement of reinforcing steel for conformance with contract documents and Chapters 3 and 7 of ACI 318. | Y | Visually inspect reinforcing steel. | SER | | |

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| FORMWORK | 2.3 | Inspect installation of Formwork and removal in accordance with Section 6.1 and 6.2 of ACI 318. | Y | Visually inspect formwork. | SER | | | |
| | 2.4a | Observe mix proportions and techniques for compliance with Chapter 5 of ACI 318. | N | Minimum one inspection of ready-mix plant or field batching per class of concrete. | | | | |
| CONCRETE OPERATIONS | 2.4b | Observe field testing of concrete for compliance with contract documents. | Y | See contract documents for testing frequency. | Special inspector to monitor concrete testing for compliance with specifications. SER | | | |
| | 2.4c | Observe concrete placement for compliance with contract documents and Chapter 5 of ACI 318. | Y | | | | | |
| PRESTRESSING OPERATIONS | 2.5a | Observe application of prestressing force for compliance with Section 18.18 of ACI 318. | N | | | | | |
| | 2.5b | Observe grouting of bonded prestressing tendons in Category "C" seismic resisting systems. | N | | | | | |
| PRECAST MANUFACTURING | 2.6a | Review Fabricator QA/QC procedures manual. | N | One shop inspection required. | | | | |
| | 2.6b | Review Fabricator QA/QC procedures implementation and conformance. | N | One shop inspection required. Visual inspection of shop conformance. | | | | |
| | 2.6c | Review material certificates of compliance (concrete, reinforcing, embedded items). | N | Obtain copies of mill certificates for all concrete components, reinforcing and embedded items. | From contractor. | | | |
| | 2.6d | Review fabrication for conformance to approved shop drawings. Visually inspect embedded items. | N | Verify member sized, piece marks and connection details match approved shop drawings. | Obtain copy of approved shop drawings from SMRT. | | | |
| PRECAST CONCRETE ERECTION | 2.7a | Review precast erection for conformance to approved shop drawings. | N | Verify member sizes, piece marks and connection details. | Obtain copy of approved shop drawings from SMRT. | | | |
| | 2.7b | Inspect field bolting for conformance with contract documents. | N | Visually inspect connections. | | | | |
| | 2.7c | Inspect field welding for conformance with contract documents. | N | Visually inspect connections. | | | | |
| | 2.7d | Inspect key reinforcing and grouting. | N | Visually inspect joints. | | | | |

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| ELEVATED CONCRETE | 2.8 | Inspect placement of elevated concrete for compliance with contract documents. | N | | | | | |
| IBC 1704.5 – MASONRY CONSTRUCTION (See also Table 1704.5.1) | | | | | | | | |
| MATERIALS | 3.1a | Review material certification for compliance with contract documents and ACI 530. | N | | | | | |
| | 3.1b | Review grout materials and mix design for compliance with ACI 530. | N | | | | | |
| | 3.1c | Review mortar materials and mix design for compliance with ACI 530. | N | | | | | |
| | 3.1d | Review strength determination in accordance with the Unit Strength Method in ACI 530. | N | | | | | |
| | 3.1e | Review strength determination in accordance with the Prism Strength Method in ACI 530. | N | | | | | |
| | 3.1f | Inspect testing of grout for compliance with contract documents and ACI 530. | N | | See contract documents for testing frequency. | | | |
| MATERIALS (continued) | 3.1g | Inspect testing of mortar for compliance with contract documents and ACI 530. | N | | See contract documents for testing frequency. | | | |
| GENERAL MASONRY WORK | 3.2a | Inspect mortar mix proportions and mixing for conformance to ACI 530. | N | | | | | |
| | 3.2b | Inspect grout mixture proportions and mixing for conformance to ACI 530. | N | | | | | |
| | 3.2c | Inspect installation of horizontal, vertical and joint reinforcing including location, size, splices and positioning devices. | N | | Visually inspect all. | | | |
| | 3.2d | Inspect installation of anchorage devices and venteer ties. | N | | Visually inspect all. | | | |
| IBC 1704.6 – WOOD CONSTRUCTION | | | | | | | | |
| WOOD TRUSS FABRICATION | 4.1a | Review Fabricator QA/QC procedures manual. | N | | One shop inspection required. | | | |
| | 4.1b | Review Fabricator QA/QC procedures implementation and conformance. | N | | One shop inspection required. Visual inspection of shop conformance. | | | |
| | 4.1c | Review material certificates of compliance (wood grade and species, metal connectors). | N | | Obtain copies of mill certificates for all lumber and metal connectors used in truss fabrication. | Get from contractor | | |
| | 4.1d | Inspect fabrication for conformance to approved shop drawings. Visually inspect grade stamps and metal plates. | N | | Verify member sizes, piece marks and connection details match approved shop drawings. | Obtain copy of approved shop drawings from SMRT. | | |
| WOOD TRUSS ERECTION | 4.2a | Inspect wood trusses and erection for conformance to approved shop drawings. | N | | Verify member sizes, piece marks and connection details. | Obtain copy of approved shop drawings from SMRT. | | |

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| GENERAL WOOD CONSTRUCTION | 4.2b | Inspect wood truss bearing connection, bearing length, and bracing. | N | Visually inspect all trusses. | | | |
| | 4.2c | Inspect installation of metal connectors for compliance with contract documents and manufacturer's recommendations. | N | Visually inspect connections. | | | |
| | 4.3a | Inspect installation, spacing and connection of wood framing for conformance to contract documents. | N | Visually inspect framing and connections. | | | |
| | 4.3b | Inspect installation and fastening of structural wood panels to wood framing. | N | Visually inspect fastening of structural wood panels to wood framing. | | | |
| | 4.3c | Inspect nail size and spacing at all horizontal diaphragm and vertical shearwalls for conformance to plans. | N | Visually inspect. | | | |
| | 4.3d | Inspect installation of metal connectors for compliance with contract documents and manufacturer's recommendation. | N | Visually inspect connections. | | | |
| | IBC 1704.7 – PREPARED FILL | | | | | | |
| SITework | 5.1a | Inspect site preparation and soil conditions impacting building prior to placement of fill for conformance with contract documents and soils report. | Y | | | | |
| | 5.1b | Inspect material testing of fill material for conformance with contract documents and soils report. | Y | Testing by test agency. Special Inspector to review all test results. | | | |
| | 5.1c | Review soils testing for compliance with contract documents and soils report. | Y | Special Inspector to monitor soil testing is conducted in compliance with specifications. | | | |
| IBC 1704.11 – SPRAYED CEMENTITIOUS AND MINERAL FIBER FIRE RESISTIVE MATERIALS | | | | | | | |
| SPRAYED-ON FIREPROOFING | 6.1a | Inspect surface of structural members to be sprayed for conformance with contract documents. | N | Visually inspect all. | | | |
| | 6.1b | Observed application conditions for conformance with the approved manufacturer's written instructions. | N | At each fireproofing application. | | | |
| | 6.1c | Observe field testing of thickness, density, and bond strength of the sprayed fire resistive material for compliance with contract documents. | N | As specified in IBC 2003, Section 1704.11.3 | | | |
| IBC – 1704.13 – SPECIAL CASES | | | | | | | |
| N/A | | | | | | | |

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