

S&I QUALITY ASSESSMENT-CONSTRUCTION CHECKLIST

Instructions:

- The PM will provide a copy of the Quality Assessment (QA) Development and Construction Checklists to the Project Architect (PA) and General Contractor (GC) during the identified project process step.
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QA Checklist requirements and responsibilities:

- The PA reviews each of the QA checklist items with the assistance of the GC and uses the indicated Verification Criteria to verify that each item has been completed correctly.
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Item Number	Discipline Name	Training Item #	Item	Verification Criteria
1	CIVIL	1	Grades adjacent to building provide adequate drainage.	<p>Verification Criteria</p> <p>Verify by electronic level that final grades of landscaped and walkway areas provide adequate drainage around the building:</p> <ul style="list-style-type: none"> • 2% (minimum) slope at lawn areas • 2% (minimum) slope, 8% (maximum) slope at sidewalks • 2 horizontal to 1 vertical (maximum) at landscaped areas • 3 horizontal to 1 vertical maximum slope in lawn areas
2	CIVIL	2	Spacing and location of control joints and expansion joints in mow strips, concrete sidewalks and entries are per contract document.	<p>Verification Criteria</p> <p>Verify visually that control joints and expansion joints are installed at the spacing's indicated in specification Section 03 3053:</p> <p>Joint sealants are required in all expansion joints noted in specification section 03 3053 (caulk).</p> <p>In sidewalks:</p> <ul style="list-style-type: none"> • Control joints should be spaced between 4' and 6' on center. • Expansion joints should be spaced between 40' and 100' on center. <p>In mow strips:</p> <ul style="list-style-type: none"> • Control joints in mow strips should be between 3' and 5' on center • Expansion joints should be spaced at 40' to 100' on center.

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3	CIVIL	3	Water does not pond on pavement, in gutters, and in lawn or landscape areas.	<p>Verification Criteria</p> <p>Verify by electronic level that ponding does not occur on pavement or in gutters:</p> <ul style="list-style-type: none"> • 2% minimum slope on asphalt paving • 5% maximum slope on asphalt paving • 1% minimum slope on concrete paving • 5% maximum slope on concrete paving • .5% minimum slope in gutters • 8% maximum slope in gutters • 2% minimum slope in lawn areas intended to drain • 3 horizontal to 1 vertical maximum slope in lawn areas • 2% minimum slope in landscaped areas intended to drain • 2 horizontal to 1 vertical maximum slope in planter areas
4	CIVIL	4	Concrete strength used in site work is per contract documents.	<p>Verification Criteria</p> <p>Verify by review of concrete test reports that the concrete mix design and tests for concrete strength match specification Section 03 3111.</p> <ul style="list-style-type: none"> • For exterior concrete in areas of freeze/thaw, the concrete strength in the Schedule of Construction Materials in the structural drawings should be 4,500 psi (Concrete Mix Type D). • It should be 3,000 psi (Concrete Mix Type A) unless the geotechnical report requires otherwise.

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5	CIVIL	5	Mix designs used match the specifications of the contract documents and material and workmanship of pavement (asphalt or concrete) are per standard.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify that the mix designs (or specifications) for the paving supplied matches that of the specifications of the contract documents. 2. Provide the specification actually used for the project if other than the specification within the contract specifications. 3. Verify that the reports- <ul style="list-style-type: none"> For asphalt: <ol style="list-style-type: none"> a. For Marshall or Hveem Mix Designs, the compaction of the asphalt is 96% minimum. b. For Superpave Mix Designs, the compaction of the asphalt is between 92% and 96%. For Concrete: <ol style="list-style-type: none"> a. Concrete strength is 4500 psi in freeze thaw areas, 4000 psi otherwise. b. Surfaces are smooth (1/4" in 10').
6	LANDSCAPE	1	Proper finish grading depth at lawn areas.	<p>Verification Criteria</p> <p>Verify by measurement of finish grade depth at lawn areas as follows:</p> <ol style="list-style-type: none"> 1. Sod areas: 2 inches 2. Seed areas: 1 inch
7	LANDSCAPE	2	Trees have top 1/3 of burlap / containers removed, are properly staked, and are planted at appropriate depth.	<p>Verification Criteria</p> <p>Observe one tree for proper staking (2 - 2" diameter stakes, 5' above ground, connected with a cinch tie), planting depth (2" above finish grade), and that top 1/3 of burlap or container materials were removed. Staking height of evergreen trees should be 6" less than the height of tree.</p>
8	LANDSCAPE	3	Proper depth of bark mulch, rock mulch, or decomposed granite are provided in shrub beds.	<p>Verification Criteria</p> <p>Observe one shrub bed that a minimum of 3" in depth of specified bark or rock mulch is provided. Exception: A 2" rock mulch depth may be allowed in locations such as Southern Arizona and Southern Nevada where that depth is common.</p>

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9	LANDSCAPE	4	Installation of valve box assembly.	<p>Verification Criteria</p> <p>Verify by observation of one valve box to check dimensions, location of elements and depth as follows:</p> <ol style="list-style-type: none"> 1. Gravel - Located 4" below lateral line 2. Action unions - Verify that one is located on each side of the valve 3. Valve locations - Verify that no more than two valves are located in each valve box 4. Control wire connections - Verify that waterproof wire connectors have been installed properly.
10	LANDSCAPE	5	Proper installation and location of drip system and/or spray heads in shrub areas.	<p>Verification Criteria</p> <p>Verify by observation of two different heads in shrub areas for depth, location and spacing as follows:</p> <ol style="list-style-type: none"> 1. Spray heads - 1" below top of concrete, 1" minimum to 3" maximum from edge of concrete, number and location of heads match irrigation plan 2. Drip system - drip emitter should be located 2" above top of mulch and is visible; emitters are located next to shrubs and trees as per irrigation plan; number and location of heads match irrigation plan
11	LANDSCAPE	6	Proper location and depth of lawn irrigation heads.	<p>Verification Criteria</p> <p>Verify by observation of two spray or rotor heads in lawn areas for location, depth and spacing as follows:</p> <ol style="list-style-type: none"> 1. Rotor - 3/4" minimum, 1 1/2" maximum below top of concrete, 1" minimum to 3" maximum from edge of concrete, number and location of heads match irrigation plan 2. Spray - 3/4" minimum, 1 1/2" maximum below top of concrete, 1" minimum to 3" maximum from edge of concrete, number and location of heads match irrigation plan
12	LANDSCAPE	7	Lamination and location of irrigation as-built drawing.	<p>Verification Criteria</p> <p>Verify visually that 11" x 17" copy of the record drawing irrigation plan has been provided at half size, is laminated for protection, and located in the building for easy access to the FM group.</p>

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13	LANDSCAPE	8	Controller, rain sensor, wire connections and grounding for lightning protection are properly installed.	<p>Verification Criteria</p> <p>Verify visually that controller and rain sensor are:</p> <ol style="list-style-type: none"> 1. Mounted properly with 2 1/2 " steel conduit. 2. Wired properly with 18 gauge wires connected to controller. 3. Properly grounded for lightning protection with ground wire connected inside of controller.
14	LANDSCAPE	9	Determine that the irrigation main line has been tested.	<p>Verification Criteria</p> <p>Verify by review of observation report from architect or landscape architect that irrigation main line was tested per specification Section 32 8423.</p>
15	LANDSCAPE	10	Landscape elements are installed per contract documents.	<p>Verification Criteria</p> <p>Verify by observation that the installation for the number, size, spacing and location of trees, shrubs, ground cover and boulders matches the landscape planting plan.</p>
16	LANDSCAPE	11	Meetinghouse Site Management Plan (MSMP) including Topsoil Testing Report was prepared by landscape architect and appropriate FM training completed.	<p>Verification Criteria</p> <p>Review MSMP to verify that:</p> <ol style="list-style-type: none"> 1. Document follows standard format and is completed. 2. FM and subcontractor have signed the Plant Establishment Period and training verification section of the document. 3. Training is complete.
17	ARCHITECTURAL	1	Exposed concrete foundation has a consistent smooth rubbed surface finish.	<p>Verification Criteria</p> <p>Verify visually exposed concrete foundation surface has a consistent smooth rubbed finish and is free of rough surfaces, discoloration, broken corners, voids, and/or unrepaired damaged areas. Parge coats are not approved.</p>
18	ARCHITECTURAL	2	Brick veneer maintains a consistent overhang of the concrete foundation.	<p>Verification Criteria</p> <p>Verify visually brick veneer consistently overhangs the face of the foundation. Foundation should not extend past the face of the masonry. Specified overhang ranges from 1/2 inch up to 1-1/4 inch, according to plan type, with an allowed +1/4 inch tolerance.</p>
19	ARCHITECTURAL	3	Brick veneer is uniform in appearance and weep vents are correctly installed.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify visually brick are laid flush in plane with properly tooled and consistently sized joints. 2. Verify visually that weep vents are installed at 33 inches maximum spacing, including within bottom courses over door and window heads.

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20	ARCHITECTURAL	4	Fascia and soffit are correctly fabricated and installed in weather tight fashion.	Verification Criteria Verify visually metal surfaces are smooth, and that joints are tight with no gaps at juncture with dissimilar surfaces.
21	ARCHITECTURAL	5	EIFS or siding is properly installed and properly integrated into building facade.	Verification Criteria Verify visually EIFS is correctly installed and perimeter edges are properly sealed where abutting dissimilar materials.
22	ARCHITECTURAL	6	Exterior handrails and railings are properly installed and grouted.	Verification Criteria 1. Verify visually exterior handrails and railings are properly grouted, where applicable. Handrails should be continuous, without interruption or other obstructions (such as skateboard deterrents) in compliance with IBC 1012.4. 2. Verify by measurement installed height is between 34 and 38 inches.
23	ARCHITECTURAL	7	Joint sealants are properly installed.	Verification Criteria 1. Verify visually joint sealants are installed where dissimilar materials intersect and applied to provide a weather tight seal and prevent entry of insects. 2. Review joint sealant submittal for compliance with specification Section 07 9213 and to verify that no latex based sealant has been used.
24	ARCHITECTURAL	8	Roofing shingles are correctly installed.	Verification Criteria 1. Verify visually shingle courses are installed in straight, uniform lines with no exposed fasteners. 2. Verify by photo that each shingle is fastened with four nails minimum, set flush, straight, and secure to roof slope.
25	ARCHITECTURAL	9	Valley metal installation properly tapers with sealed shingle edges.	Verification Criteria 1. Verify visually that valley metal is installed with tapered exposure (about one inch in 11 feet down slope divergence). 2. Verify by touch that cut shingle edges are firmly set in mastic to valley metal and drip edge flashing. 3. Verify visually water diverter is installed at bottom spill point of valley metal.

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26	ARCHITECTURAL	10	Roof flashings, including drip edges and flashings around roof penetrations, are weather tight.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify visually VTR's are securely installed plumb and properly sealed with flexible rubber flashing that does not significantly reduce inside clear opening of vent pipe. Minimum VTR extension above roof surface (measured on upslope side) is six inches, except in areas where front/snow closure is possible, minimum extension is 10 inches. 2. Verify visually flues and penthouses are securely installed and sealed with metal flashings and water diverter upslope of penthouse.
27	ARCHITECTURAL	11	Ridge vent is properly installed.	<p>Verification Criteria</p> <p>Verify visually ridge vent is securely fastened with painted corrosion resistant screws at eight inch spacing (top and skirting), flush to roof slope, and straight. End caps are installed.</p>
28	ARCHITECTURAL	12	Applicable gutters are properly installed with adequate drainage.	<p>Verification Criteria</p> <p>Verify visually gutters and downspouts are correctly fabricated with smooth metal finish, are properly sealed and sloped.</p>
29	ARCHITECTURAL	13	Tile and grout are properly installed in restrooms, electric water coolers and serving area (where applicable).	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify tile and grout are installed uniformly and grout is absent of voids, bubbles or cracks. 2. Verify the wall tile colors and pattern comply with the contract documents. 3. Verify that grout is set and not easily removed. 4. Verify wall tile height in restrooms is per standard plan documents. 5. Verify tile is per spec and installed in the proper location. 6. Verify that the joint between the ceiling and wall is level.

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30	ARCHITECTURAL	14	Plumbing fixtures are properly mounted and caulked.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify visually plumbing fixtures are caulked at floors and walls with a continuous, full bead of caulk. 2. Verify by measurement plumbing fixture elevations are: <ul style="list-style-type: none"> - Water closet seat: 17 - 19 inches above the floor - Wall hung urinal: 17-24 inches above floor to the rim - Lavatory: 34 inches maximum above the floor to the higher of the rim or counter surface - Wheel chair drinking fountain: 36 inches maximum to the spout outlet - Standing drinking fountain: 38 - 43 inches to the spout outlet - Accessible urinal: 17 inches maximum above floor to the rim
31	ARCHITECTURAL	15	Correct T-bar detail is used in classroom suspended ceilings.	<p>Verification Criteria</p> <p>Verify that ceiling T-bars match detail and specification section 09 5323.</p>
32	ARCHITECTURAL	16	Acoustical wall carpeting and sisal wall coverings are correctly applied.	<p>Verification Criteria</p> <p>Verify acoustical wall carpeting and sisal wall coverings are installed as specified in the contract documents. Verify that seams are tight with no frayed edges and that there are no bubbles or creases. No horizontal seams.</p>
33	ARCHITECTURAL	17	Where folding panel partition occurs, chair rail added to partition (after leveling) is per detail and the partition is operational.	<p>Verification Criteria</p> <p>Verify rail is proper thickness (3/8") and clears edges of panels per detail.</p>
34	ARCHITECTURAL	18	Supports are installed for suspended gypsum board ceiling track system. Seismic bracing is correctly installed where applicable.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Supports should be taut and not loose to the touch. 2. For Seismic Category D, E, and F locations, verify visually from mechanical mezzanine level that required seismic support wires are securely fastened at 45 degree angles from the suspended ceiling grid/track to overhead structure and grid support points are spaced at 12 feet maximum each way. Compression post/struts are correctly installed to restrict vertical movement in ceiling grid.

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35	ARCHITECTURAL	19	Hollow metal door frames, including silencers and smoke seals, are installed properly.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify insulation placement in hollow metal door frames by tapping on the frame and listening for a low resonating tone. 2. Verify visually frame perimeter is properly caulked with no exposed gaps at wall juncture and verify by touch that frame is not bent outward at corners or otherwise damaged. 3. Verify visually installation of silencers and/or smoke seals on door frames. Smoke seals should be properly compressed when door is fully closed.
36	ARCHITECTURAL	20	Custom casework is properly installed.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify visually installation of wood veneer on inside face of cabinet doors. 2. Verify visually installation of melamine on the inside face of cabinets. 3. Verify visually running book match on outside face of cabinet doors. 4. Verify journal cabinets have 180 degree hinges as specified. 5. Verify special door edge. 6. Verify hardwood veneer shelving in offices with hardwood edge at front. <p>See section 06 4114.</p>
37	ARCHITECTURAL	21	Interior wood trim is properly installed.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify visually wood trim is stained. 2. Verify visually that nail holes are filled and not visible from minimum six feet. 3. Verify visually that interior trim lengths are not less than 24 inches. 4. Verify visually that mitered joints are tight and aligned.
38	ARCHITECTURAL	22	Wood doors are properly hung in the frame with correct gaps between double doors.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify visually door perimeter gap is uniform as hung in the frame. Door is not warped in place. 2. Gap between double doors is 3/16 inches maximum.
39	ARCHITECTURAL	23	Ceiling sound insulation is properly installed.	<p>Verification Criteria</p> <p>Verify visually that sound blanket insulation is the correct thickness, is properly and uniformly placed to fit snugly.</p>

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40	ARCHITECTURAL	24	Proper window glazing and muntin (grid) pattern has been installed on the project.	<p>Verification Criteria</p> <ul style="list-style-type: none"> • Clear glazing in windows (on S&I stand-alone facilities). • Obscure glazing on S&I pods to meetinghouses. • Muntin (grid) pattern provided is per plan documents.
41	STRUCTURAL	1	The engineered fill is compacted as per contract documents.	<p>Verification Criteria</p> <p>Verify by review of the compaction test reports that engineered fill under the paving and building pad areas has been properly compacted.</p> <ul style="list-style-type: none"> • Engineered fill under footings is normally compacted to 95%. Verify this with the geotechnical report. • Engineered fill under slabs on grade is normally compacted to 90%. Verify this with the geotechnical report.
42	STRUCTURAL	2	Footings and foundation walls are reinforced as per contract documents.	<p>Verification Criteria</p> <p>Verify by review of the structural engineer's site observation report(s) and two photos that the footings and foundation walls are reinforced.</p> <ul style="list-style-type: none"> • Footings require horizontal reinforcing. • Walls require vertical and horizontal reinforcing. • Dowels are required from footings into walls.
43	STRUCTURAL	3	Prefabricated trusses are as per contract documents.	<p>Verification Criteria</p> <p>Verify by review of structural engineer's site observation report(s) and two photos that the prefabricated wood trusses are acceptable.</p> <ul style="list-style-type: none"> • Trusses show no signs of breakage or damage • Trusses have been stored in a vertical position • Trusses are not in contact with the ground
44	STRUCTURAL	4	Structural wall connections to foundations are as per the contract documents.	<p>Verification Criteria</p> <p>Verify by review of the structural engineer's site observation report(s) and by two photos that:</p> <ul style="list-style-type: none"> • The walls are attached to the foundation walls with specified anchor bolts. At least one photo should show anchor bolts. • Washer plates are installed in Seismic Design Categories D, E and F. At least one photo should show washer plates. • The jambs are attached to the foundation walls with specified holdown anchors. At least one photo should show holdown anchors.

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- The PM will provide a copy of the Quality Assessment (QA) Development and Construction Checklists to the Project Architect (PA) and General Contractor (GC) during the identified project process step.
- The PA has prime responsibility for quality assurance on the project.
- The PA should ensure completion of both QA checklists with the assistance of the GC.
- These checklists are to be used throughout the duration of the project.
- The PM ensures that the QA checklists are applied during all new construction projects and that all required verification information is gathered and filed upon completion of the project.

QA Checklist requirements and responsibilities:

- The PA reviews each of the QA checklist items with the assistance of the GC and uses the indicated Verification Criteria to verify that each item has been completed correctly.
- The PA & GC provides the requested evidence (photographs, field reports, test results, record drawings, contract documentation, etc.) verifying compliance.
- The PA provides both completed QA checklists and documented evidence to the PM at the completion of the project.

The checklists and documentation serve as a basis for the project Quality Assessment (QA) review. All documentation should be brought to the QA review. This information is critical for an effective QA assessment and any missing or incomplete information may negatively impact the QA score.

Item Number	Discipline Name	Training Item #	Item	Verification Criteria
45	STRUCTURAL	5	Structural wall sheathing and edge blocking are installed as per the contract documents.	<p>Verification Criteria</p> <p>Verify by review of structural engineer's site observation report(s) and by two photos that:</p> <ul style="list-style-type: none"> • The walls are attached to the structure with the specified nails (or staples). At least one photo should show a nail pattern. • The edge blocking is installed as specified. At least one photo should show edge blocking.
46	STRUCTURAL	6	Gable end outlookers and blocking between outlookers are installed as per the contract documents.	<p>Verification Criteria</p> <p>Verify by review of the structural engineer's site observation report(s) and two photos that:</p> <ul style="list-style-type: none"> • Outlookers are attached to the walls with framing anchors as specified. At least one photo should show framing anchors. • Blocking between outlookers is installed with framing anchors as specified. At least one photo should show blocking and framing anchors.
47	STRUCTURAL	7	Wood trusses and blocking between wood trusses are installed as per the contract documents.	<p>Verification Criteria</p> <p>Verify by review of the structural engineer's site observation report(s) or photos that:</p> <ul style="list-style-type: none"> • Wood trusses are attached to the walls with the specified framing anchors or toe nails. At least one photo should show framing anchors. • Blocking between wood trusses is installed as specified. At least one photo should show framing anchors.
48	STRUCTURAL	8	Beam/girder to wall/column connections are installed per the contract documents.	<p>Verification Criteria</p> <p>Verify by review of the structural engineer's site observation report(s) or photos that:</p> <ul style="list-style-type: none"> • Beams are attached to columns with steel buckets and thru bolts. At least one photo should show a complete beam to column connection. • Beams are attached to other beams using framing anchors. At least one photo should show a complete beam to beam connection. • Trusses are attached to walls with framing anchors. At least one photo should show a complete truss to wall connection.

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49	STRUCTURAL	9	Structural roof sheathing has been properly installed as per contract documents.	<p>Verification Criteria</p> <p>Verify by review of structural engineer's site observation report(s) or two photos noting that roof sheathing has been attached per the contract documents.</p> <p>For example:</p> <ul style="list-style-type: none"> • Nail spacing is typically 6" on center at edges; 12" on center in-field. • Blocking is installed above all structural walls.
50	FIRE PROTECTION	1	Fire sprinkler heads are installed flush with the ceiling.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify visually that concealed fire sprinkler heads are installed flush with ceiling. 2. Unscrew a concealed cover plate and verify deflector drops below ceiling.
51	FIRE PROTECTION	2	Building insulation envelope maintains temperatures above freezing in wet pipe areas.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify visually that gypsum board is installed and holds insulation in place. 2. Verify visually that gypsum board joints are sealed. 3. Verify visually that all penetrations are sealed.
52	FIRE PROTECTION	3	Anti-freeze has been added to anti-freeze system by taking a sample at the bottom of the anti-freeze loop. System should not be leaking.	<p>Verification Criteria</p> <p>Open test valve on glycol riser enough to check a small sample for glycol. Solution will be slick (oily) to the touch and colored if glycol has been added. Solution should not be leaking from test valve.</p>
53	FIRE PROTECTION	4	Pressure gauge differential at dry pipe riser.	<p>Verification Criteria</p> <p>Verify visually by reading pressure of the water gauge and air gauge. Pressures should be significantly different. Water pressure ranges will be 60 to 100 psig. Air pressure ranges are 30 to 50 psig. If pressure readings are the same (within 1 PSIG), the dry system is full of water.</p>
54	FIRE PROTECTION	5	Fire protection system passed the above ground contractor's test.	<p>Verification Criteria</p> <p>Verify by reviewing the completed contractor's test form in the FM O&M manual.</p>
55	MECHANICAL	1	Thermostats are installed properly.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify that the installation CD has been given to FM. 2. Verify set-up of one thermostat by pushing thermostat center button to display set point temperature and push button again to display discharge air temperature.

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Item Number	Discipline Name	Training Item #	Item	Verification Criteria
56	MECHANICAL	2	Remote sensor installation and operation.	Verification Criteria 1. With the system in unoccupied mode, push the over-ride occupancy button. The LED should light up and the furnace turn on. 2. With the RED and BLUE arrows keys, move LED associated with them to the right and to the left. If the LED moves, the sensor is functioning.
57	MECHANICAL	3	RP panels are supplied by approved panel manufacturers.	Verification Criteria Remove cover from panel. Verify visually that panel builder's sticker is located inside panel. Panel builders are listed in specification Section 23 0933.
58	MECHANICAL	4	Heating is operating.	Verification Criteria On a thermostat perform the following functions: 1. Press Temporary Occupied and wait for furnace to come on. 2. Press Occupied Cool and press the up arrow (raise) to raise cooling set point to 76° F. 3. Press Occupied Heat and press the up arrow (raise) to raise heat set point to bring furnace burner on. 4. Press the center button twice to reveal discharge air temperature. Verify temperature goes up. 5. Press Occupied Heat and press the down arrow (lower) to lower heat set point to original setting. 6. Press Occupied Cool and press the down arrow (lower) to lower cooling set point back to original setting. 7. Press Run Schedule.

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59	MECHANICAL	5	Cooling is operating.	<p>Verification Criteria</p> <p>On a thermostat perform the following functions:</p> <ol style="list-style-type: none"> 1. Press Temporary Occupied and wait for furnace to come on. 2. Press Occupied Heat and push lower button to lower heating set point to 65 F. 3. Press Occupied Cool and push the down arrow (lower) to lower cooling set point to bring condensing unit on. 4. Press the center button twice to reveal discharge air temperature. Verify temperature goes down. 5. Press Occupied Cool and push the up arrow (raise) to raise cooling set point back to original setting. 6. Press Occupied Heat and push the up arrow (raise) to raise heating set point back to original setting. 7. Press Run Schedule.
60	MECHANICAL	6	Outside air damper is operating.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify the damper position by opening access door between manual and motorized outside air dampers. 2. Verify visually that motorized outside air damper is open in occupied mode and closed in unoccupied mode. 3. Verify visually that the end of the damper shaft is correctly marked with damper blade orientation. 4. Verify visually that actuator jaws are clamped securely to shaft. 5. Verify visually that damper blade is secured to shaft.
61	MECHANICAL	7	Furnace filter is installed.	<p>Verification Criteria</p> <p>Open filter door and remove filter. Visually verify filter is one inch thick fiberglass type. Pleated media filters should not be used. Pleated media filters use more energy and may cause the cooling coil to freeze.</p>
62	MECHANICAL	8	Water heater is installed properly and is operational.	<p>Verification Criteria</p> <ol style="list-style-type: none"> 1. Verify visually discharge temperature is set at 110° F for an instantaneous type water heater or 140° F for a tank type water heater. 2. Verify visually hot and cold water pipe is insulated with fiberglass insulation.
63	MECHANICAL	9	Seismic gas valve is installed properly, when applicable.	<p>Verification Criteria</p> <p>Verify visually seismic gas valve is installed horizontally in gas line, is level, and is attached to the main building wall.</p>

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64	ELECTRICAL	1	Main electrical system grounding is as shown on electrical single line diagram.	Verification Criteria Verify visually main grounding conductor is installed at and bonded to building main water line.
65	ELECTRICAL	2	Emergency lighting is operational.	Verification Criteria Turn off circuit breaker of circuit feeding lighting in area and observe operation of emergency lighting.
66	ELECTRICAL	3	Electrical panel circuit schedules are accurate.	Verification Criteria 1. Verify visually that each circuit breaker is labeled with a number. 2. Verify that printed circuit schedules are included in panels. 3. Turn off one circuit breaker of lighting to verify accuracy.
67	ELECTRICAL	4	Foyer light fixtures are as shown in contract documents.	Verification Criteria Verify visually pendant lighting fixtures in foyer match the cut sheet in building O&M binder.
68	ELECTRICAL	5	Classroom and corridor light fixtures are as shown in contract documents.	Verification Criteria Verify visually lighting fixtures in classroom and corridor match the cut sheet in building O&M binder.
69	ELECTRICAL	6	Exterior lighting photo cells are properly located.	Verification Criteria Visually verify that photo cells are mounted under the soffit and not in direct sunlight.
70	ELECTRICAL	7	Electrical and data outlets are placed as detailed in contract documents in offices, workroom, and classrooms.	Verification Criteria Visually verify that placement of electrical and data devices are as shown on the contract drawings
71	SOUND	1	Listen in the classroom for higher than normal air handling noise.	Verification Criteria With the heating or air conditioning on, listen for distracting noise or vibration produced by the mechanical equipment which is usually caused by fan speed being set higher than needed.