



**W. M. JORDAN COMPANY SUPPLEMENTARY INSTRUCTIONS TO BIDDERS**

**GRACE BAPTIST CHURCH RENOVATIONS  
WILMINGTON, NC**

***DATE 3-22-19***

The following information and scope clarification should be incorporated in all subcontract proposals submitted for the ***Grace Baptist Church Renovations*** project. Please acknowledge receipt of these instructions in your proposal.

**Division 01:**

1. It is recommended that all subcontractors visit the site prior to bidding. Coordinate with WMJ prior to going to the site. The site is an active school campus and visitors must check in at the school office prior to visiting any areas. WMJ will schedule onsite walk-thru.
2. Your base proposal should be per plans and specifications. W. M. Jordan Company encourages all subcontractors and suppliers to submit alternate value engineering suggestions when preparing their proposals. **Please separate pricing per the alternates listed. See cover sheet for alternate descriptions.**
3. If applicable, subcontractors must comply with North Carolina License Requirements for the type and dollar amount of work. Reference North Carolina Contracting License Requirements. ([www.ncibgc.org/link\\_fr.html](http://www.ncibgc.org/link_fr.html))
4. **The overall project duration to substantial completion is 4 months (Please see attached preliminary schedule.) The schedule is for general durations and timelines for the project for bidding purposes. The final schedule will be adjusted prior to project start. The schedule is using 6 day work week with 10 hr days (Critical Path Activities). The goal is to be complete by September. Extra work hours and after hours work may be required to reach the schedule. Please price accordingly. Sunday work is not allowed.**
5. To maintain the project schedule, subcontractors may be required to supplement their workforce with additional manpower and/or multiple crews working in various areas simultaneously, as directed by W. M. Jordan Company. It should be noted that this project will require afterhours work and to be working in multiple areas at once.
6. Pre-ordered material will be assigned to the subcontractor. Such assignment includes, but is not limited to, coordination, receipt, unload, store, protect, assume full care and custody, installation and payment to the vendor by the subcontractor.
7. When equipment, materials, suppliers, vendors, sub-subcontractors are specifically listed by name in the subcontractor inclusions, it does not imply that W. M. Jordan Company, the Owner, or the A/E is responsible or liable in any way to verify and/or accept the performance of the projects, vendors or subcontractors listed. The subcontractor is completely (and solely)

responsible for procuring, coordinating, complying with the design documents, installing and warranting all of their products, equipment and systems.

8. Each subcontractor is responsible for daily clean-up. Subcontractors will participate in a composite clean-up crew during the timeframe(s) in which the subcontractor is onsite if it is deemed daily clean-up is insufficient by W. M. Jordan Company's Superintendent. Contribution to the composite clean-up crew will be one (1) person per ten (10) personnel onsite. If the crew size is smaller than ten (10), one (1) person shall be provided. W. M. Jordan Company will provide a superintendent that will be responsible for the management of the composite clean-up crew.
9. Parking:
  - ❖ Onsite parking is available. Coordination on amount of vehicles, areas and times will be needed.
10. The subcontractor shall not have an onsite storage trailer. All materials and equipment shall be delivered to the jobsite as needed when needed. All deliveries must be scheduled with the W. M. Jordan Company's superintendent at least forty-eight (48) hours in advance. Deliveries may be required during off-hours. Subcontractor shall provide all labor necessary to handle and redistribute any materials it delivers to the jobsite before it is required for installation, until they have been installed.
11. Subcontractor's superintendent and sub-subcontractor's superintendent shall be equipped with a cellular communication device at all times enabling constant communication with W. M. Jordan Company management. Details regarding phone numbers are required to be provided on subcontractor's information form as part of your contract documentation/execution process.
12. Subcontractor shall dispose of all debris generated from the performance of this subcontract, including all lunch and coffee break waste, to maintain a safe, clean, neat and orderly jobsite. If after twenty-four (24) hour written notice and in the opinion of the Owner, Architect or Contractor, proper housekeeping is not maintained, clean-up will be performed by the Contractor at the subcontractor's expense, provided Subcontractor's participation in the composite clean-up has not remedied the situation.
13. Subcontractor shall furnish and install all blocking, backing or other support required for equipment provided under this Subcontract Agreement.
14. All subcontractors shall coordinate their work with all above-ceiling work including, but not limited to, mechanical, plumbing, sprinkler and electrical work.
15. Each subcontractor will be responsible for providing his own hoisting and crane rental for all material deliveries to the building. Deliveries must be scheduled with the Project Superintendent forty-eight (48) hours in advance.
16. Subcontractor shall furnish the Contractor with a list of all proposed second-tier suppliers and subcontractors within two weeks of the issuance of a Subcontract Agreement. Should any second-tier supplier(s) or subcontractor(s) not be acceptable to W. M. Jordan Company, the subcontractor shall either self-perform its work or hire another second-tier entity that is acceptable, at no additional cost to the Contractor.
17. W. M. Jordan Company's standard workweek is Monday through Friday, except as may be otherwise required by the contract documents or adjusted by the Contractor. Subcontractor shall not utilize a four-day workweek. Subcontractor shall work Saturdays following lost work days when its forces could not perform a full day's work due to inclement weather.
18. Subcontractor shall provide all traffic control in accordance with local authority when its work impedes pedestrian and vehicular traffic both inside and outside of the jobsite boundaries.

Further, subcontractor shall obtain any permits required by the local municipality to work in public streets and rights-of-way.

19. Contractor shall provide subcontractor with one (1) set of the electronic plans and specifications via SharePoint.
20. Unless required otherwise by the contract documents, the subcontractor shall purchase and maintain insurance of the following types of coverage and limits of liability:
  - 1) Commercial General Liability:
    - General Aggregate - \$2,000,000
    - Products – Completed Operations Aggregate - \$2,000,000
    - Personal & Advertising Injury - \$1,000,000
    - Each Occurrence - \$1,000,000
    - a) If the CGL coverage contains a General Aggregate Limit, such General Aggregate shall apply separately to each project.
    - b) CGL coverage shall be written on ISO Occurrence form CG 00 01 1093 or a substitute form providing equivalent coverage and shall cover liability arising from premises, operations, independent contractors, products-completed operations, and personal and advertising injury.
    - c) General Contractor, Owner and all other parties required by the General Contractor, shall be included as insureds on the CGL, using ISO Additional Insured Endorsement CG 20 10 (11 85) or CG 20 10 (10 93) AND CG 20 37 (10 01) or CG 20 33 (10 01) AND CG 20 37 (10 01) or an endorsement providing equivalent coverage to the additional insureds. This insurance for the additional insureds shall be as broad as the coverage provided for the named insured subcontractor. It shall apply as Primary and non-contributing Insurance before any other insurance or self-insurance, including any deductible, maintained by, or provided to, the additional insured.
    - d) Subcontractor's CGL and Umbrella coverage shall include coverage for Completed Operations arising out of residential construction.
    - e) Subcontractor shall maintain CGL coverage for itself and all additional insureds for the duration of the project and maintain Completed Operations coverage, including coverage for claims arising out of residential construction, for itself and each additional insured for at least 3 years after completion of the Work.
  - 2) Automobile Liability
    - a) Business Auto Liability with limits of at least \$1,000,000 each accident.
    - b) Business Auto coverage must include coverage for liability arising out of all owned, leased, hired and non-owned automobiles.
    - c) General Contractor, Owner and all other parties required by the General Contractor, shall be included as insureds on the auto policy.
  - 3) Commercial Umbrella
    - a) Umbrella limits must be at least \$5,000,000.
    - b) Umbrella coverage must include as insureds all entities that are additional insureds on the CGL.
  - 4) Workers' Compensation and Employer's Liabilities:
    - Each Accident – \$100,000
    - Each Disease – Policy Limit - \$500,000
    - Each Employee - \$100,000
    - a) Where applicable, U.S. Longshore and Harborworkers Compensation Act Endorsement shall be attached to the policy.
    - b) Where applicable, the Maritime Coverage Endorsement shall be attached to the policy
  - 5) Professional Liability, if applicable - \$1,000,000
  - 6) Pollution Liability, if applicable - \$1,000,000
  - 7) Waiver of Subrogation:

Subcontractor waives all rights against Contractor, Owner and Architect and their agents, officers, directors and employees for recovery of damages to the extent these damages are covered by Commercial General Liability, Commercial Umbrella Liability, Business Auto Liability or Workers Compensation and Employers Liability insurance maintained per requirements stated above. Subcontractor's Workers Compensation policy has WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT with Contractor, Owner and Architect listed on SCHEDULE.

- 8) Certificate and Endorsements
  - a) One (1) current certificate of insurance must be on file prior to the start of work.
  - b) Please state "Various Projects" under the Description of Operations. (This eliminates the need for a separate per project certificate).
  - c) Attached to each certificate of insurance shall be a copy of the Additional Insured Endorsement that is part of the Subcontractor's Commercial General Liability Policy. These certificates and the insurance policies required by this Article 13 shall contain a provision that coverage afforded under the policies will not be canceled or allowed to expire until at least 30 days prior written notice has been given to the Contractor.
  - d) Certificate Holder: W. M. Jordan Company, Inc.

For projects within the State of North Carolina: The Subcontractor shall defend, indemnify and hold harmless the Contractor and all of its agents and employees from and against all claims, damages, losses and expenses including attorneys fees arising out of or resulting from the performance of the Subcontractor's work under this Subcontract, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the Subcontractor or anyone directly or indirectly employed by him or anyone for whose acts he may be liable, regardless of whether it is caused in part by a party indemnified hereunder, but only to the extent of that portion of the claim, damage, loss or expense attributable to the Subcontractor.

21. In accordance with the provisions of the Federal OSHA Hazard Communication Standard 29CFR 1910-1200(g), vendors must submit a "Safety Data Sheet" for any product(s) which will be delivered to the jobsite or used on the jobsite which is defined under the OSHA Standard as hazardous. The SDS must be received by the Contractor **prior to the delivery** of the product(s).

Further, the vendor shall strictly comply and require the same strict compliance by its employees, subcontractors and suppliers, with all Federal, State and Local laws, rules, ordinances and/or regulations governing the acquisition, possession, storage and disposal of hazardous materials of any nature, utilized, produced or is a by-product of the performance of this Agreement, and shall hold the Contractor and the Owner harmless from any and all associated costs and claims related to their use.

22. Subcontractor and supplier shall pay all sales tax, which is applicable to the materials purchased under this Subcontract Agreement.
23. The Contractor will provide project baseline control points and benchmarks from which all other layouts will be determined. All engineering and layout necessary for the performance of the work covered by this Subcontract Agreement is the responsibility of the Subcontractor. Subcontractor is responsible for all field measurements associated with its work.
24. Subcontractor shall include all cutting and patching associated with their work.

25. Subcontractor shall provide temporary power and/or fuel for all welding equipment required for the work.
26. Subcontractor shall furnish and install all fire-safing, fire-caulking, acoustical sealant or smoke sealant as required to maintain the integrity of all fire-rated walls, floors and ceilings at penetrations made in connection with the performance of their work. All fire-safing and firestopping to be installed per contract documents and in accordance with local jurisdiction.
27. Each subcontractor shall furnish and locate, for installation by drywall subcontractor, all access doors not shown on Architectural drawings but required to access any items provided under their scope of work. Drywall subcontractor will furnish and install access doors shown on the Architectural and Structural drawings.
28. **Safety requirements**: Any subcontractor with two (2) or more workers on the jobsite is required to have a designated safety person on the job. This person **can be a tooled worker** but should be the company competent person for inspecting tools, equipment, work conditions (trench, excavation, scaffold, etc.) and would be our direct, **onsite** contact person for safety concerns. This person should be at least OSHA 30-hour trained. This person would also be required to attend the EM 385 required onsite monthly safety meeting with one of W. M. Jordan Company's safety managers.
29. **Quality Control and Field Management**: Subcontractor shall provide one (1) foreman for each twenty (20) works onsite for quality control and field management/coordination. This person shall not be a tooled worker. For projects with less than ten (10) workers onsite, the foreman may be a tooled worker.

#### **Divisions 02, 31, 32 and 33:**

30. Selective demolition subcontractor to salvage Owner mandated items and turn over to W. M. Jordan Company.
31. Selective demolition subcontractor shall remove walls, slabs-on-grade complete, including any and all shoring required for the duration of the work.
32. Selective demolition subcontractor to provide an add to furnish and install shoring needed in order to remove the existing walls (1&D /A303) in prep for the new steel.
33. Selective Demolition subcontractor shall remove all flooring and ceilings, including adhesives and grout complete.

#### **Division 03:**

34. Concrete subcontractor shall include installation and grout of the steel column leveling plates and grouting of column base plates. If leveling nuts are used, the concrete subcontractor shall install one (1) level nut to elevation per column.
35. Concrete subcontractor is responsible for ensuring that the slab finish tolerances and curing materials are compatible with floor finishes specified in Division 09. Any repair necessary to meet the floor finish requirements is included in this subcontractor's scope of work.
36. Concrete subcontractor shall furnish and install slab-on-grade concrete infill at all plumbing trenches in existing facility. Reference Structural and Mechanical drawings for extent.
37. Concrete subcontractor shall furnish and install all concrete footings, concrete slabs-on-grade complete.

38. Concrete subcontractor shall furnish and install all granular fill, vapor barriers and foundation insulation complete.
39. Concrete subcontractor shall furnish and install all reinforcing for the work.
40. Concrete subcontractor shall backfill and compact all interior concrete walls.
41. Concrete subcontractor shall verify sub-grade at ground level prior to commencing work.
42. Concrete subcontractor shall be responsible for all control and construction joints in slabs-on-grade.
43. Concrete subcontractor shall drill and epoxy bars as required for slab and footing tie-ins.
44. Concrete subcontractor shall receive, store and place all embeds on concrete.
45. Concrete subcontractor shall protect all slabs and walls from weather as required.
46. Concrete subcontractor shall remove any concrete wash-out.
47. Concrete subcontractor shall reference Architectural and Structural drawings.

#### **Division 04:**

48. Reinforcing steel for masonry work shall be furnished and installed by the masonry subcontractor.
49. Masonry subcontractor shall receive, unload, inventory, distribute, layout and install all embeds in masonry work (embeds provided by others).
50. Masonry subcontractor must provide and install a DEQ acceptable masonry wash-out pit and maintain it for the duration of their contract.
51. Masonry subcontractor shall set all steel lintels supplied by others.
52. Masonry subcontractor shall furnish and install all masonry lintels.
53. Masonry subcontractor shall furnish and install all interior, exterior and below-grade masonry complete.
54. Masonry subcontractor shall furnish and install all rigid insulation behind brick veneer.
55. Masonry subcontractor shall furnish and install insulation required within masonry cells.
56. Masonry subcontractor shall drill and epoxy any reinforcing downs required for the work.
57. Masonry subcontractor shall furnish and install all grout within masonry.
58. Masonry subcontractor shall brace masonry walls as required until properly braced by adjacent structure.
59. Masonry subcontractor shall provide any required formwork for arches and the like.
60. Masonry subcontractor shall furnish and install all interior masonry.
61. Masonry subcontractor shall install all hollow metal frames within masonry walls.

#### **Division 05:**

62. Steel subcontractor shall be responsible for materials including bolts and washers for the duration of the project.
63. Prime paint touch-up of the field wells will be performed by the steel subcontractor.
64. Steel subcontractor is responsible for cleaning off any dirt and debris from the structural and miscellaneous steel.
65. Steel subcontractor shall include in their bid or proposal the cost of furnishing and installing a metal closure strip to conceal the gap between stair/landing stringers and the adjacent wall.

66. Steel subcontractor shall be responsible for setting leveling nuts to the proper elevation for the work.
67. Steel subcontractor shall furnish base plate/anchor bolt templates with nail holes to the concrete subcontractor.
68. Steel subcontractor shall furnish all embeds for the work to concrete and masonry subcontractors. Additional work required for missing or late embeds will be the responsibility of this subcontractor.
69. Steel subcontractor shall furnish and install structural frame complete including, but not limited to, all steel columns, beams, braces, kickers, headed studs, pour stops, metal deck and metal deck accessories.
70. Steel subcontractor shall furnish and install the monumental sign support steel.
71. Steel subcontractor shall furnish and install all CMU top-of-wall bracing complete.
72. Steel subcontractor shall furnish and install all miscellaneous tube framing and supports.
73. Steel subcontractor shall furnish and install all guard rails and handrails.
74. Steel subcontractor to furnish and install supplemental steel framing at curtain walls and storefronts.
75. Steel subcontractor shall furnish and install all interior and exterior ornamental glass rails, glazing wall, handrails, shoe molds and embeds.

**Division 06:**

76. Rough carpentry subcontractor shall furnish and install in-wall fire-rated wood blocking at all wall-mounted items including, but not limited to, toilet partitions, toilet accessories, wall rails, wall protection bumpers, projection screens, marker boards, miscellaneous casework, laboratory casework, storefronts, window shades, metal panels and the like.
77. Rough carpentry subcontractor shall receive, sort, store and install all wood and hollow metal doors and hardware supplied by others.
78. Rough carpentry shall receive, sort, store and install hollow metal door frames in masonry or cast-in-place concrete walls.
79. Rough carpentry subcontractor shall receive, sort and install toilet partitions, laundry accessories and toilet accessories supplied by others.
80. Rough carpentry subcontractor shall receive, sort, store and install surface-mounted fire extinguisher cabinets and all fire extinguishers.
81. Millwork subcontractor shall furnish and install all p-lam countertops, base cabinets, hardware and countertops.
82. Millwork subcontractor shall furnish and install all base cabinets and vanities with solid surface countertops and backsplashes.
83. Millwork subcontractor shall seal any solid surface tops as required.
84. Millwork subcontractor shall provide all holes in countertops.
85. Millwork subcontractor is responsible for all field measuring, including use of scribes as required.
86. Millwork subcontractor shall furnish and install wood paneling, ship lap and running trim.
87. Millwork subcontractor shall furnish and install all blocking shown or required outboard of the drywall.
88. Millwork subcontractor shall furnish and install the custom built choir risers.

**Division 07:**

- 89. Caulking subcontractors are responsible for cleaning joints in preparation for caulking.
- 90. Caulking subcontractor shall furnish and install caulking in all exterior control joints.

**Division 08:**

- 91. Door, frame and hardware supplier will be responsible for packaging material, by floor and phase, for delivery to the jobsite.
- 92. Door and hardware installer will be responsible for unloading of frames, doors and hardware. Hardware protection and storage will be full responsibility of hardware installer at receipt of delivery. Any discrepancies from delivery and project requirements shall be noted in writing at time of receipt of delivery.
- 93. Door, frame and hardware supplier to provide an add alternate to change the double doors at the sanctuary (A104) to rated frames and doors to avoid the need to use the 60 min protective curtain.
- 94. Electrical subcontractor will be responsible for power and control wiring and wiring terminations associated with personnel doors, overhead and coiling doors and operable partitions. The door supplier will be responsible for furnishing necessary control and switching hardware.
- 95. Glazing subcontractor shall furnish and install all curtain wall complete.
- 96. Glazing subcontractor shall furnish and install all exterior and interior storefronts complete.
- 97. Glazing subcontractor shall furnish and install all security windows and glazing.
- 98. Glazing subcontractor shall furnish and install all shims for the work.
- 99. Glazing subcontractor shall furnish and install prefinished aluminum sunshade system complete.
- 100. Glazing subcontractor shall caulk all transitions from the work to adjacent materials.
- 101. Glazing subcontractor shall furnish and install all mirrors.
- 102. Glazing subcontractor shall furnish and install all interior wood and hollow metal door glazing.
- 103. Glazing subcontractor shall pretest all systems that require third party testing.
- 104. Glazing subcontractor to provide an add alternate to change the glazing system in the sanctuary D/A303 (C) to a rated system to avoid the need to use the 60 min protective curtain.

**Division 09:**

- 105. Subcontractor shall ensure that all flooring adhesives and finished flooring products are compatible with any curing compounds and sealers that are utilized on the subflooring, even if those compounds and sealers are not specifically identified within the contract documents.

106. Metal stud and drywall subcontractor shall include the cost to unload, distribute and install the hollow metal doorframes to be installed within metal stud framing. The drywall subcontractor will be responsible for maintaining the frames in a plumb and square condition.
107. Drywall subcontractor is reminded to review the Electrical drawings for special lighting requirements such as wall-washing lights that may substantially affect their work.
108. To ensure the proper drywall and paint finish is received, the drywall subcontractor is responsible for completing touch-up on prime-coated walls before painter completes the finish coat of paint. It is the responsibility of these two trades to work together to ensure that these activities are coordinated.
109. The drywall subcontractor will include using moisture resistant sheetrock (rated where applicable) behind the shower stalls as required to allow for installation of the bath tub/shower stalls prior to the building being water tight.
110. Drywall subcontractor is responsible for acoustical sealants associated with their work.
111. Drywall subcontractor is responsible for all interior control joints and expansion joints.
112. Metal framing subcontractor shall provide interior vapor barrier behind drywall as shown/specified.
113. Drywall subcontractor shall provide exterior sheathing and air vapor barrier as shown/specified.
114. Drywall subcontractor is responsible for total UL rated assemblies.
115. Drywall subcontractor shall furnish and install all batt and rigid insulation within interior and exterior walls.
116. Drywall subcontractor shall furnish, install and remove temp walls/doors. See WMJ Sketch.
117. Drywall subcontractor shall furnish and install all partition types complete. Masonry by others.
118. Drywall subcontractor shall furnish and install all drywall ceilings, soffits and bulkheads.
119. Drywall subcontractor shall furnish and install all metal stud framing and insulation at exterior canopies and overhangs.
120. Drywall subcontractor shall furnish and install metal studs detailed on the Structural drawings.
121. Drywall subcontractor shall furnish and install exterior wall system complete including studs, batt insulation, interior drywall, exterior sheathing and weather barrier.
122. Drywall subcontractor shall receive, sort, store and install recessed fire extinguisher cabinets and access doors supplied by others.
123. Drywall subcontractor shall be responsible for any costs associated with engineering judgements for the work.
124. Drywall subcontractor to provide add to furnish and install blocking for toilet partitions and toilet accessories.
125. Drywall subcontractor to furnish and install FRP.
126. Ceramic tile subcontractor shall furnish and install floor leveling, waterproof membranes, minor floor repairs and crack bridging as required.
127. Flooring subcontractor shall furnish and install all resilient tile, resilient sheet, resilient base and accessories, static-control resilient and carpet tile and base.
128. Flooring subcontractor shall furnish and install floor protection in finished areas.
129. Flooring subcontractor shall furnish and install wood flooring at the new choir risers.
130. Epoxy floor and wall coatings subcontractor shall examine all surfaces prior to commencing work and notify W. M. Jordan Company of any deficiencies of the substrate prior to commencing work.

- 131. Painting subcontractors shall include caulking of hollow metal door frames and all wood trim to be painted.
- 132. Painting subcontractor shall inspect all surfaces prior to commencing work and notify W. M. Jordan Company of any deficiencies of the substrate prior to commencing work.
- 133. Painting subcontractor shall furnish and install all interior and exterior painting.
- 134. Painting subcontractor shall furnish and install concrete sealers.
- 135. Painting subcontractor shall furnish and install concrete block and concrete wall fillers and sealers prior to painting.
- 136. Painting subcontractor shall furnish and install degreasers, primers and final paint on all exposed mechanical, electrical, telecommunications and fire sprinkler piping.
- 137. Painting subcontractor shall furnish and install all painting of exposed roof areas.

**Division 10:**

- 138. Toilet partition supplier will provide cut-outs in the partitions for thru-partition mounted accessories.

**Division 13:**

- 139. Metal building subcontractor to review all drawings.
- 140. Repair of existing metal building structure, insulation, and roofing complete.
- 141. Alternate amount to add insulation to the existing gym ceiling.

**Division 22 and 23:**

- 142. Mechanical, electrical and fire sprinkler subcontractors shall be responsible for identifying their piping systems. It should be noted that mechanical, electrical and low voltage subcontractors should include the investigation and tracing the existing systems. There are low voltage lines that run through the Meshaw building that must remain active in order to feed and keep the Fellowship Hall up and running while the area we are working on gets renovated.
- 143. Current systems:  
 Keller- Fire Protection  
 Tyco-Access Control  
 Proserve-Intercom  
 Computer Network- Grace Baptist's Own System
- 144. The mechanical subcontractor shall prepare ductwork fabrication drawings for review and coordination with the Architect and other design consultants, the electrical, plumbing, sprinkler and other relative subcontractors. Drawings shall be in sufficient detail to show overall ductwork dimensions, clearances and relative locations of work in allotted spaces. Ductwork routing and sectional elevations shall be provided for congested areas. The mechanical subcontractor will disseminate the ductwork drawings and direct and expedite review by the various trades. Each trade shall indicate where conflicts or clearance problems exist for his work and subsequently seek resolution from the Architect/Engineer via the Contractor. Final coordinated drawings shall be produced by the mechanical subcontractor, who shall obtain

approval for any changes to duct or pipe sizes and significant changes in routing. Electrical, sprinkler and other relative subcontractors are required to participate in and coordinate fully with the coordination process.

145. The permanent HVAC system will be used for construction heating and cooling as the project finishes. The HVAC subcontractor will be responsible for furnishing, installing and maintaining the temporary and new permanent filters as required, as well as any costs associated with extending any warranties so that the warranty requirements from the date of substantial completion are maintained. At a minimum, the mechanical subcontractor shall assign a dedicated person to check and replace filter media daily and submit a daily filter inspection log.
146. Mechanical subcontractor is responsible for furnishing and installing blank-off panels for louvers that their duct ties into.
147. Mechanical subcontractor is responsible for furnishing and install all louvers to include architectural louvers.
148. The mechanical subcontractor shall provide and install all hoods and associated duct, equipment, controls, testing and integration of other systems on the project unless specifically noted as by others in the contractor documents.
149. Mechanical subcontractor is responsible for power wiring within their mechanical equipment and additional power wiring associated with their equipment that is not specifically shown on the electrical drawings.
150. Mechanical subcontractor shall perform a baseline test and balance of the existing to remain facility prior to starting any mechanical work in existing facility. A third-party test and balance (TAB) subcontractor is required.
151. The plumbing subcontractor shall hire a third-party TAB firm to test and balance the domestic water systems including, but not limited to, pump set-up, balancing valve set-up and testing, hot water to point-of-use timing/testing, final report generation.
152. Mechanical subcontractor shall cut, cap and make-safe all systems scheduled to be removed during renovation and perform any selective/surgical demolition of HVAC and plumbing systems that may be necessary to facilitate the construction process.
153. Mechanical subcontractor shall make any adjustments or modifications to existing systems to maintain operations during construction.
154. Mechanical subcontractor shall furnish and install all motor starters, disconnects and VFD's, unless specifically stated in the design documents as by others.
155. Mechanical subcontractor is required to deliver a complete functioning system as shown on any/all documents (ex: if a sink is shown on the Architecturals, but the domestic water is not shown on the Plumbing, then the mechanical subcontractor is expected to have included whatever is necessary to provide the Owner with a complete, functioning sink. If a diffuser is shown the Architecturals, but is not shown on the HVAC drawings, then the mechanical subcontractor is expected to have included that diffuser and any associated duct, dampers, hangers, trim, etc.).
156. All equipment shall be Basis of Design equipment, the exact brands and models shown in the equipment schedules. If not scheduled, then the first make/model listed in the specifications under approved manufacturers.
157. Commissioning of all HVAC and plumbing systems. Pre-functional testing and functional performance testing requirements, as determined by the Owner's commissioning agent is

- included. Incomplete work or failed testing that result in additional expenses for the third-party commissioning agent will be the responsibility of the mechanical subcontractor.
- 158. Mechanical subcontractor shall include third-party test and balance (TAB).
  - 159. Mechanical subcontractor is responsible for providing and installing all fire, smoke and combination dampers including all wiring regardless of voltage or function of wiring, unless specifically shown and circuited on the electrical drawings.
  - 160. Mechanical subcontractor to provide an add to furnish negative air equipment for the Meshaw building in the area shaded on the WMJ sketch.

**Division 26 and 28:**

- 161. Electrical subcontractor is responsible for providing support for light fixtures installed in acoustical ceilings as require by the applicable codes.
- 162. Electrical subcontractor shall furnish, install, maintain and remove temporary lighting for the entire construction area in accordance with current OSHA requirements. Subcontractors performing finish work shall be responsible for providing any additional light required to perform his work in accordance with the contract documents.
- 163. Electrical service for construction activity will be provided by the electrical subcontractor throughout the building either through the existing building electrical system or a temporary electrical system. Receptacles shall be placed at locations where the greatest distance to an available power source is approximately seventy-five feet (75'). All electrical tools and extension cords shall be plugged into a ground-fault-interrupting device provided by the subcontractor prior to plugging into the electrical system. Electricity for welding machines is not available. Subcontractor shall be responsible for providing his own special power sources which are above and beyond those described above.
- 164. Electrical subcontractor will be responsible for power and control wiring (including low voltage) and wiring terminations associated with personnel doors, overhead and coiling doors, roller shades and operable partitions. The door supplier will be responsible for furnishing necessary control and switching hardware.
- 165. Electrical subcontractor shall furnish and install fire alarm system complete per most stringent review authority.
- 166. Electrical subcontractor shall furnish and install line voltage to smoke and combination dampers as required. Furnish and install all wiring necessary to make these dampers function as intended and as required by code.
- 167. Electrical subcontractor shall furnish project specific fire alarm shop drawings, product data and calculations to be submitted no later than 45 days after the date of the subcontract.
- 168. Electrical subcontractor shall provide installation, maintenance and replacement of permanent lamps in the permanent fixtures during construction. Permanent fixtures will be used during construction.
- 169. Electrical subcontractors are required to deliver a complete functioning system as shown on any/all documents (ex: if light fixture is shown on the Architectural drawings but not on the Electrical drawings, then the electrical subcontractor is expected to have included whatever is necessary to provide the Owner with a complete and functioning lighting fixture at that location; also, if a piece of mechanical equipment is shown on the Mechanical drawings but is not shown on the Electrical drawings, then the electrical subcontractor is expected to have included the necessary electrical provisions to provide for a functioning system).

170. Electrical subcontractor shall furnish and install lighting controls and BAS integration, including any necessary relays, transformers or communications electronics.
171. Electrical subcontractor shall furnish and install all primary and secondary ductbanks including, but not limited to, excavation, conduits, feeders, concrete, backfill, final grade restoration and removal of spoils.
172. Electrical subcontractor shall furnish and install buried low voltage pathways with pull strings.
173. Electrical subcontractor shall furnish and install electrical manholes and perform tie-ins to existing service.
174. Electrical subcontractor shall furnish and install all motor starters, disconnects and VFD's unless specifically stated in the design documents as by other.
175. Electrical subcontractor shall cut, cap and make-safe all systems scheduled to be removed during phased renovations, and perform any selective/surgical demolition of electrical systems that may be necessary to facilitate the construction process.
176. Electrical subcontractor shall mark any electrical wiring and devices prior to demolition.
177. Electrical subcontractor shall make any necessary adjustment or modifications to maintain electrical and fire alarm systems during construction.
178. Electrical subcontractor shall furnish and install all low voltage pathways with pull strings including, but not limited to, back boxes, in-wall conduits and cable trays. Firestopping inside and outside of raceways is to be included as well.
179. The Electrical subcontractor shall provide and install any necessary grounding/bonding for the low voltage systems as well as provide and install the MDF/IDF fire-rated and painted plywood.
180. Electrical subcontractor shall cut, cap and make-safe all communications wiring and devices prior to demolition.
181. Electrical subcontractor shall mark communications wiring and devices scheduled or required to stay to maintain continuous operations of the existing facility prior to demolition.
182. Electrical subcontractor shall relocate active communications wiring and devices as necessary to maintain continuous operation and support phasing.
183. Electrical subcontractor to provide power to the negative air machines in the Meshaw and Sanctuary buildings per the WMJ sketch.

*End of Supplementary Instructions*