TECHNICAL SPECIFICATIONS

Prepared for:
New Bedford Department of Public Facilities
294 Liberty Street
New Bedford, MA 02740
Contract # 20192006

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TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

| 01 1100 | Summary of Work |
| 01 3300 | Submittal Procedures |
| 01 3516 | Alteration Project Procedures |
| 01 4500 | Quality Control |
| 01 5000 | Temporary Facilities and Controls |
| 01 7329 | Cutting and Patching |

DIVISION 02 - EXISTING CONDITIONS

| 02 4120 | Selective Building Demolition |

DIVISION 04 - MASONRY

| 04 0513 | Masonry Mortaring |

DIVISION 06 - WOOD, PLASTICS AND COMPOSITES

| 06 1100 | Framing and Sheathing |

END OF TABLE OF CONTENTS
Part 1: General

1.01 GENERAL SUMMARY OF WORK

A. The work under the contract includes but is not limited to:

1. Demolition and replacement of structural framing of the 1st floor of the Congdon Lucas House

1.02 TIME OF COMPLETION

A. In accordance with the General Conditions, the work shall start as stated in the Notice to Proceed and shall be completed in 90 calendar days.

END OF SECTION
1. RELATED DOCUMENTS

A. Consult the individual sections of the specifications for the specific submittals required under those sections and for further details and descriptions of the requirements.

2. GENERAL PROCEDURES FOR SUBMITTALS

A. Timeliness - The Contractor shall transmit each submittal to the Architect sufficiently in advance of performing related Work or other applicable activities so that the installation is not delayed by processing times, including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery, and similar sequenced activities. No extension of time will be authorized because of the Contractor's failure to transmit submittals to the Architect in advance of the Work.

B. Sequence - The Contractor shall transmit each submittal in a sequence which will not result in the Architect's approval having to be later modified or rescinded by reason of subsequent submittals which should have been processed earlier or concurrently for coordination.

C. Contractor's Review and Approval - Only submittals received from and bearing the stamp of approval of the Contractor will be considered for review by the Architect. Submittals shall be accompanied by a transmittal notice stating name of Project, date of submittal, "To", "From" (Contractor, Subcontractor, Installer, Manufacturer, Supplier), Specification Section, or Drawing No. to which the submittal refers, purpose (first submittal, resubmittal), description, remarks, distribution record, and signature of transmitter.

D. Architect's Action - The Architect will review the Contractor's submittals and return them with one of the following actions recorded thereon by appropriate markings:

   (1) Final Unrestricted Release: Where marked "Provide as Submitted" the Work covered by the submittal may proceed provided it complies with the requirements of the Contract Documents.

   (2) Final-But-Restricted Release: When marked “Provide except as Noted” the Work may proceed provided it complies with the Architect's notations or corrections on the submittal and complies with the requirements of the Contract Documents. Acceptance of the Work will depend on these compliances.

   (3) Returned for Resubmittal: When marked "Revise and Resubmit" or "Disapproved" the Work covered by the submittal (such as purchasing, fabrication, delivery, or other activity) should not proceed. The submittal should be revised or a new submittal resubmitted without delay, in accordance with the Architect's notations stating the reasons for returning the submittal.

E. Processing - All costs for printing, preparing, packaging, submitting, resubmitting, and mailing, or delivering submittals required by this contract shall be included in the Contract Sum.
3. OR EQUALS
   A. Definition - Whenever a specification section names one or more brands for a given item, and
      the Contractor wishes to submit, for consideration, another brand, the submission shall be
      considered an "or-equal" or a "material substitution". For the purposes of this Contract, the
      terms "or-equal" and "material substitution" shall be considered synonymous.
   B. In no case may an item be furnished on the Work other than the item named or described,
      unless the Architect, with the Administrator's written concurrence, shall consider the item equal
      to the Item so named or described, as provided by M.G.L. c.30 § 39M.
   C. The equality of items offered as "equal" to items named or described shall be proved to the
      satisfaction of the Architect at the expense of the Contractor submitting the substitution in
      accordance with the process described in Section 01.25.00 of these specifications.

4. SUBMISSION OF PRODUCT DATA
   A. The Contractor shall submit 7 copies of Product Data to the Architect. All such data shall be
      specific and identification of material or equipment submitted shall be clearly marked in ink.
      Data of general nature will not be accepted.
   B. Product Data shall be accompanied by a transmittal notice. The Contractor's stamp of approval
      shall appear on the printed information itself, in a location which will not impair legibility.
   C. Product Data returned by the Architect as "Disapproved" shall be resubmitted in 7 copies until
      the Architects approval is obtained.
   D. When the Product Data are acceptable, the Architect will stamp them "Approved" or "Approved
      as Corrected", retain 3 copies, and return 4 copies to the Contractor. The Contractor shall
      provide and distribute additional copies as may be required to complete the Work.
   E. The Contractor shall maintain one full set of approved, original, Product Data at the site.

5. SUBMISSION OF SHOP DRAWINGS
   A. Shop Drawings shall be complete, giving all information necessary or requested in the individual
      section of the specifications. They shall also show adjoining Work and details of connection
      thereto.
   B. Shop Drawings shall be for whole systems. Partial submissions will not be accepted.
   C. The Architect reserves the right to review and approve shop drawings only after approval of
      related product data and samples.
   D. Shop drawings shall be properly identified and contain the name of the project, name of the firm
      submitting the shop drawings, shop drawing number, date of shop drawings and revisions,
      Contractor's stamp of approval, and sufficient spaces near the title block for the Architect's
      stamp.
   E. The Contractor shall submit to the Architect seven (7) black line prints of each shop drawing.
      Prints shall be mailed or delivered in roll form. Each submittal shall be accompanied by a
      transmittal notice bearing the Contractor's approval stamp.
   F. In addition to the hard copies described above, the Architect and Contractor may utilize a
      mutually acceptable electronic system to expedite the submittal process. This electronic system
      shall not be used as a substitute for the hard copy process.
   G. When the Architect returns a marked submittal with the stamp "Revise and Resubmit" or
      "Disapproved", the Contractor shall correct the original drawing or prepare a new drawing and
      resubmit seven prints thereof to the Architect for approval. This procedure shall be repeated
until the Architect's approval is obtained.

H. When the Architect returns submittal with the stamp "Approved" or "Approved as Corrected", the Contractor shall provide and distribute the prints for all Contractor and Subcontractors use, and in addition submit, within 10 calendar days after approval, 4 prints to the Architect.

I. The Contractor shall maintain one full set of approved shop drawings at the site.

6. SUBMISSION OF SAMPLES

A. Unless otherwise specified in the individual section, the Contractor shall submit two specimens of each sample.

B. A transmittal notice with the Contractors stamp of approval shall be included with all sample submittals.

C. Samples shall be of adequate size to permit proper evaluation of materials. Where variations in color or in other characteristics are to be expected, samples shall show the maximum range of variation. Materials exceeding the variation of approved samples will not be approved on the Work.

D. Samples of items of interior finishes shall be submitted all at once to permit a coordinated selection of colors and finishes.

E. Samples that can be conveniently mailed shall be sent directly to the Architect, accompanied by a transmittal notice. All transmittals shall be stamped with the Contractor's approval stamp of the material submitted.

F. All other samples shall be delivered at the field office of the Project Representative with sample identification tag attached and properly filled in.

G. Transmittal notice of samples so delivered with the Contractor's stamp of approval shall be mailed to the Architect.

H. If a sample is rejected by the Architect, a new sample shall be resubmitted in the specified manner. This procedure shall be repeated until the Architect approves the sample.

I. Samples will not be returned unless return is requested at the time of submission. The right is reserved to require submission of samples whether or not particular mention is made in the specifications, at no additional cost to the Owner.

END OF SECTION 01.33.00

SUBMITTALS
SECTION 01 3516
ALTERATION PROJECT PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Patching and extending existing work.
   2. Transitions and adjustments.
   3. Repair of damaged surfaces.
   4. General Requirements for Restoration and Renovation

B. Include General Conditions and applicable parts of Division 1.

C. Examine other sections of the specifications for requirements which affect the work of this Section, whether or not such requirements are particularly mentioned herein.

D. Coordinate work of this Section with that of all other trades affected or related to the work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract

1.2 PROJECT CONDITIONS

A. Provide materials, labor, equipment and services necessary to furnish, deliver and install all work of this Section as shown on the drawings, as specified and as required by job conditions, including but not limited to the following:

1. Alterations required by the drawings, herein specified, and as required by the conditions encountered during progress of the work.

2. Alterations neither indicated on the drawings nor specified herein, but necessary to restore existing work disturbed under this Contract to finished condition satisfactory to the Architect.

3. Temporary work required by the drawings and/or herein specified, including the protection of existing construction and finishes, temporary enclosures for openings in exterior walls and roofs, and other precautions as may be required to prevent damages.

4. Demolition and removal of existing construction and materials as shown on drawings or required to produce the final conditions indicated or intended.

5. Cutting and patching required for the installation of new construction, equipment and finishes.

6. Salvaging and reusing and/or storing existing materials, etc., where shown, specified or directed.

7. Preparation of existing surfaces and work as required for the reception of new construction and finishes.

8. Required bracing and similar work that may be required to complete the work of this Contract in a safe and workmanlike manner.

9. Replacing or repairing and refinishing to the satisfaction of the Architect, all work damaged, disturbed or otherwise affected by the work of this Contract.

10. Conforming newly exposed existing work or surfaces which are presently concealed so as to match existing corresponding exposed work or adjoining new work, as required by the conditions encountered.
1.3 GENERAL REQUIREMENTS

A. Unless otherwise required by the drawings or specified herein, all materials and workmanship for the work of Alterations shall conform to the applicable requirements of the technical sections of the specifications.

B. It is the intent of the Owner to achieve a complete, finished condition insofar as alterations to the existing building are concerned. Areas affected shall be inspected and the drawings shall be carefully checked to ascertain all of the required work. Particular attention is called to the type of finishes that are to be patched. Areas that will be altered shall match existing corresponding surfaces or adjoining new surfaces as required.

C. The Contractor shall do all cutting, patching, altering and adding to existing construction as required to leave such construction in a condition satisfactory to the Architect, in conformance with requirements of the Contract Documents.

D. The Contractor shall protect and be responsible for the existing building, facilities and improvements within the areas of his operations under this Contract. Any disturbance or damage to the existing building and improvements, or any impairments of facilities resulting directly or indirectly from the Contractor's operations, shall be promptly restored, repaired or replaced to the satisfaction of the Architect, at no additional cost to the Owner.

E. The Contractor shall thoroughly examine existing conditions and verify dimensions at the building as early as practicable, in each area of work, so that all new work will properly join the existing work. Before commencing work the Contractor shall examine all existing work on which the work is in any way dependent for satisfactory completion according to the intent of the Contract Documents, and shall report to the Architect any conditions which will prevent the performance of the work in a first class manner. No "Waiver of Responsibility" for incomplete, inadequate, or defective adjoining work will be considered unless notice has been filed by the Contractor and approved in writing by the Owner and Architect before Contractor begins any part of the work.

F. Provide all necessary temporary closures, guard rails, barricades, etc., to adequately protect all persons from injury. Provide all necessary temporary partitions, enclosures, coverings and the like of approved materials and construction, for the exclusion of the weather, and for confining the dust and debris.

G. The Contractor shall not overload or permit any part of the existing building to be overloaded with any materials or equipment that may endanger their structural safety.

1.4 CONDUCT OF OPERATIONS

A. In accordance with the requirements set forth in the Contract Documents, a progress schedule shall be developed by the Contractor outlining the schedule of dates for commencing and completing each phase or portion of the work; setting forth any specific matters of coordination to be observed by the trades concerned.

B. Each trade or Subcontractor is responsible for disconnecting, dismantling, and removal of existing equipment, systems and materials required to be demolished and/or removed which are customarily removed by that trade whether specifically indicated in the contract documents or not.

C. The premises shall not be used as a workshop to the detriment of the progress of construction.

D. Care shall be taken at all times to protect the interior of the building from the weather.

E. CUTTING and PATCHING shall be neatly and carefully performed, and new materials and methods shall match existing corresponding work unless particularly shown or specified otherwise. Exposed patches and repairs shall be as inconspicuous as possible and shall be subject to approval by the Architect.
G. All new, altered, or restored work in the building shall match existing corresponding work in materials, construction, finish, etc., unless otherwise specified or required by the drawings. Samples shall be submitted to the Architect for approval of all new materials proposed to match existing materials. However, during the progress of the work, if it is found that existing materials are sound and of proper quality and dimensions, as required by the plans, details and specifications, the Contractor may use same, provided they are acceptable and have first been approved by the Architect, who will determine the proper allowance to be made for the omission of new materials, if any.

PART 2 PRODUCTS

2.1 MATERIALS

A. New Materials:
1. Provide new materials to match existing adjacent materials for closing of openings, repairs, and reconstructions where suitable salvaged materials do not exist, are insufficient in quantity, or where reuse is not permitted.
2. Match existing materials in material, type, size, quality, color, finish, and other attributes.

B. Reused Materials:
1. Clean and prepare salvaged materials for reuse.
2. Do not use materials with objectionable chips, cracks, splits, dents, scratches, or other defects.
3. Repair operable items to function properly.

C. Where new work is to be built into existing work, the existing work shall be removed and replaced with new to the extent required to solidly build and anchor the new work in place.

D. TITLE TO MATERIALS The Contractor shall have no right or title to any of the equipment, materials or other items to be removed from the existing building unless approved by the Owner and until such items have been removed from the premises.

PART 3 EXECUTION

3.1 PREPARATION

A. Test materials to be used in repairs for compatibility with existing materials; do not use incompatible materials.

B. Cut, move, or remove items as necessary for access to alterations and renovation work. Replace and restore upon completion.

C. Remove, cut, and patch work in manner to minimize damage and to provide means for restoring products and finishes to their original or specified new condition.

D. Remove unsuitable materials not marked for salvage.

E. Remove debris and abandoned items from areas of work and from concealed spaces.

F. All DEMOLITION and REMOVAL work shall be executed in a careful and orderly manner, with the least possible amount of noise and disturbance. Materials shall be sprinkled as required to avoid any annoyance from dust, and all necessary precautions shall be taken to prevent fire.

G. The Contractor shall confer with the Architect regarding the disposition of items for which instructions have not been given in advance. The Owner reserves the right to decide, as the work progresses, on the disposition of any existing items in question, and the Contractor shall be governed accordingly.
H. Materials resulting from removals which are not required or approved for use in connection with the work of this Contract, shall not be allowed to accumulate on the floors or roof of the building or about the premises, but shall be promptly removed and legally disposed of away from the premises.

3.2 ALTERATIONS

A. Coordinate alterations and renovations to expedite completion.

B. Install products and finish surfaces as specified in individual sections, or where no specification section exists to match existing.

C. Refinish visible surfaces to specified condition, with neat transition to adjacent surfaces.

D. Finish patches to provide uniform color and texture over entire surface, with repairs not discernible from normal viewing distance. If finish cannot be matched, refinish entire surface to nearest intersections.

E. Where new work abuts or aligns with existing, provide smooth and even transition. Where a change in plane of 1/4 inch or more occurs, submit recommendation to Architect for transition.

F. Where alterations expose mechanical and electrical components that were previously concealed, renovate to be concealed in completed work.

G. In addition to specified replacement of equipment and fixtures, restore mechanical and electrical systems to full operational condition.

H. Patch holes in exposed surfaces left by removal of mechanical and electrical components.

I. Existing Fire-Rated Assemblies:
   1. Patch or replace fire protection materials to maintain integrity of fire ratings.
   2. Seal penetrations through and perimeter of fire-rated assemblies under provisions of Section 07 8400.

3.3 CLEANING AND RESTORATION

A. Upon completion of his work, and also when directed during the course of the work, the Contractor shall remove from the premises all rubbish and debris for which he is responsible.

B. Upon completion of the work, and also when directed, the Contractor shall thoroughly clean all surfaces which have become soiled as a result of the Contract operations.

C. All tools, appliances, materials, and equipment belonging to the Contractor shall be removed from the premises upon completion of the work.

D. The Contractor shall restore or replace to their former conditions, and to the satisfaction of the Architect, all existing construction, and other improvements that are to remain and that have been damaged as a result of his operations under this Contract, at his own expense.

END OF SECTION
SECTION 01 4500
QUALITY CONTROL

45.1 GENERAL SCOPE OF THE WORK

A General Contractor’s quality control and control of installation.

B Tolerances.

C References.

D Testing and Inspection Services.

E Manufacturers’ field services.

F Examination.

45.2 RELATED DOCUMENTS

A This section supplements the General Conditions, Supplementary Conditions, the Drawings, and all other parts of the Contract Documents.

B Consult the individual sections of the specifications for specific items required under those sections.

45.3 QUALITY CONTROL AND CONTROL OF INSTALLATION

A The General Contractor shall provide inspections, tests, and quality control services specified herein and in individual specification sections and required by governing authorities having jurisdiction. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B Comply with manufacturer’s instructions, including each step in sequence.

C When manufacturer’s instructions conflict with the Contract Documents, request clarification from the Architect before proceeding.

D Comply with specified standards as minimum quality of Work except where more stringent tolerances, codes, or specific requirements indicate higher standards or workmanship.

E Perform the Work using persons qualified to produce the required and specified quality.

F Verify field measurements are as indicated on Shop Drawings or as instructed by the manufacturer.

G Secure products in place with appropriate positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

45.4 TOLERANCES

A Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not allow tolerances to accumulate.

B Comply with manufacturer’s tolerances. When manufacturers’ tolerances conflict with Contract Documents, request clarification from the Architect before proceeding.

C Adjust products to appropriate dimensions; position before securing products into place.

45.5 REFERENCES

A For products or workwomanship specified by associations, trade or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.

B Conform to reference standard by date of issue current on the date of Bid Opening. Except where specific date is established by applicable code.
C Obtain copies of standards where required by product specification sections.

D When specified reference standards conflict with Contract Documents, request clarification from the Architect before proceeding.

E Neither contractual relationships, duties, nor responsibilities of parties, nor those of the Architect shall be altered from the Contract Documents by mention or inference otherwise in reference documents.

45.6 MOCK UP REQUIREMENTS (Not Used)

45.8 TESTING AND INSPECTION SERVICES

A The Owner may employ and pay for specified services of an independent firm to perform testing and inspection.

B Reports will be submitted by the independent firm to the Architect and Contractor indicating observations and results of tests.

C The Contractor and all Subcontractors shall cooperate with the independent firm, furnish sample materials, equipment, tools, storage, safe access, and assistance by incidental labor as requested.

   (1.) Notify the Architect 24 hours prior to expected time for operations requiring services.

   (2.) The Architect will make the final decision as to when services or testing will or will not be performed.

   (3.) Make arrangements with the independent firm and pay for additional samples and tests for the Contractor's use.

D Testing and employment of testing agency or laboratory shall not relieve the Contractor of the obligation to perform work in accordance with the requirements of the Contract Documents.

E Re-testing or re-inspection required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the Architect. Payment for re-testing or re-inspection will be charged to the Contractor by deducting testing charges from the Contract Sum.

F Testing Agency responsibilities:

   (1.) Test samples of mixes submitted by the Contractor.

   (2.) Provide qualified personnel at the site. Cooperate with the Architect and Contractor in performance of services.

   (3.) Perform specified sampling and testing of products in accordance with specified standards.

   (4.) Promptly notify the Architect and Contractor of observed irregularities or non-conformance of Work or products.

   (5.) Perform additional tests required by the Architect.

   (6.) Attend progress meetings if requested by the Architect.

G Testing Agency Reports: After each test, promptly submit two copies of the report to the Architect and to the Contractor. Provide interpretation of the results when requested by the Architect. All test reports shall include:

   (1.) Date issued.

   (2.) Project title and number.

   (3.) Name of inspector.

   (4.) Date and time of sampling or inspection.
(5.) Identification of product and specification section(s).
(6.) Test location.
(7.) Type of inspection or test.
(8.) Date of test.
(9.) Results of tests or inspection.
(10.) Conformance with Contract Documents.

H Limits of Testing Agency Authority
(1.) Testing Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
(2.) Testing Agency may not approve or accept any portion of the Work.
(3.) Testing Agency may not assume duties of the Contractor.
(4.) Testing Agency has no authority to stop Work.

45.9 Manufacturers' Field Services
A When individual specification section(s), require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces to receive work, and installation quality of workmanship, start-up of equipment, test, adjust, and balance equipment as applicable and to initiate instructions when necessary these services shall be provided at no additional cost to the Owner.
B Submit the qualifications of any observers to the Architect and Owner prior to of required observations. Observers are subject to the approval of the Owner based on the observer’s credentials. This submission shall be made allowing adequate time for the Architect to review the observer’s credentials. This approval does not relieve the Contractor of any obligation to complete the Work in accordance with the Contract Documents.
C Report to the Architect, observations and site decisions or instruction given to applicators or installers that are supplemental or contrary to manufacturers’ written instructions.

45.10 EXAMINATION
A The Contractor shall verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
B The Contractor shall verify existing substrate is capable of structural support or attachment of new Work being applied or attached.
C The Contractor shall examine and verify specific conditions described in individual specification sections.
D The Contractor shall verify utility services are available, of correct characteristics, and in correct locations.

END OF SECTION 01 4500
QUALITY CONTROL
50.00 GENERAL REQUIREMENTS

A The Contractor shall be responsible for providing and maintaining all temporary facilities until Substantial Completion. Removal of such prior to Substantial Completion must be with the concurrence of the Architect. The Contractor bears full responsibility for providing any facility removed prior to Substantial Completion.

B Removal of all temporary facilities shall be a condition precedent to Substantial Completion unless directed otherwise by the Architect or specifically noted in the specifications.

C The Contractor must comply with all safety laws and regulations of the Commonwealth of Massachusetts, the United States Government, and local government agencies applicable to Work under this contract. The Contractor's attention is directed to the Commonwealth of Massachusetts, Department of Labor, Division of Occupational Safety Regulations.

51.13 TEMPORARY ELECTRICITY

A Temporary service and lighting shall be provided by a licensed electrician selected and paid for by the Contractor. This work shall be performed under the direct supervision of at least one master electrician, who will be present on the project at all times when such work is being performed. This service shall include coordination with the local utility and other authorities having jurisdiction.

B The Contractor may make use of the electricity available at the site, metered and paid for by the Owner.

C Where heavy duty electric equipment drawing current in excess of 15 amperes is involved, the trade requiring such excessive amperage shall provide temporary service to supply the power.

D All temporary work shall be provided in conformity with the National Electric Code, State laws, and requirements of the power company. Particular attention is called to Commonwealth of Massachusetts, Department of Labor Division of Occupational Safety Regulations.

E Temporary Electric Service and Lighting shall include but not be limited to:

1. All labor, materials, and equipment necessary to supply temporary power of adequate capacity for the project.

2. Transformers and meters, when required by the power company, furnished by the power company and paid for by the Contractor.

3. Temporary work of a special nature, not otherwise specified hereunder, shall be provided, maintained, and paid for by the trade requiring same.

4. The Contractor shall furnish, install, and maintain lamps in operating condition.

5. The Contractor, and each Subcontractor, shall furnish their own extension cords and additional lamps as may be required for their work.

6. All lamps installed in permanent lighting fixtures and used as temporary lights during the construction period shall be removed and replaced shortly before Substantial Completion by the appropriate set of lamps required to be provided under the Electrical section of the specifications.

7. The temporary electrical facilities shall be dismantled and completely removed from the project site. This removal shall occur when the permanent electrical system is operational and accepted by the Architect. Removal shall be done by a properly licensed electrician.

51.16 TEMPORARY FIRE PROTECTION

A The Contractor shall take necessary precautions to insure against fire during construction. The Contractor shall be responsible to insure that the area within contract limits is kept orderly and clean and that combustible rubbish and construction debris is promptly removed from the site.
51.17 TEMPORARY TELECOMMUNICATIONS (Not used)

51.18 TEMPORARY WATER
   A The Contractor may make use of the available water supply at the site for construction purposes, provided the permission of the Owner is obtained beforehand and only as long as the water is not used wastefully.
   B The Contractor shall provide all necessary piping and hoses to utilize the available sources of water.
   C The Contractor shall provide an adequate supply of cool potable drinking water with individual drinking cups for personnel on the job.

52.13 FIELD OFFICES (Not Used)

52.14 TEMPORARY STRUCTURES AND MATERIAL HANDLING
   A The Contractor shall provide such storage sheds, temporary buildings, or trailers as required for the performance of the Contract. Subcontractors shall provide their own temporary buildings and trailers.
   B Materials shall be handled, stored, installed, cleaned, and protected in accordance with the best practice in the industry and, except where otherwise specified in the Contract Documents, in accordance with manufacturer's specifications and directions.
   C The Contractor must obtain the permission of the Owner for the use of any storage facilities available on site, but the Owner assumes no responsibility for articles stored.
   D The Contractor shall erect temporary fencing to limit access to the work area by non-authorized personnel. The fencing shall be sufficient in height and design to prevent access over the top of the fence and shall have locked gates.
   E The Contractor shall be responsible for maintaining the main entry doors within the work area open for as long as possible during construction. Provide all temporary protections as may be warranted to safeguard the pedestrian traffic. IF the Contractor chooses to use the adjacent paved areas outside the entry path as staging areas for the work, erect temporary fencing with locked gates to bar access by non-authorized personnel.

52.19 SANITARY FACILITIES
   A The Contractor shall provide and service an adequate number of toilet booths with chemical type toilets.
   B The toilets shall be erected in a location approved by the Owner and shall be maintained by the Contractor in a clean and orderly condition in compliance with all local and state health requirements.
   C Under no circumstances will the Contractor's personnel be allowed to use Senior Center's toilets.

54.16 HOISTING FACILITIES
   A Except as otherwise specified, the Contractor shall provide, operate, and remove material hoists, cranes, and other hoisting as required for the performance of the Work by all trades. All such hoisting service shall be without cost to the Subcontractors.

54.26 TEMPORARY STAGING, STAIRS, CHUTES
   A Except as otherwise specified, the General Contractor shall furnish, install, maintain in safe condition, and remove all scaffolds, staging, and planking over 8 ft. in height, as required for the use of all trades for proper execution of the Work.
   B The Contractor shall furnish, install, maintain in safe condition, and remove all temporary ramps, stairs, ladders, and similar items as required for the use of all trades for the proper execution of the Work.
   C Permanent stairs shall be erected as soon as possible, for which the Contractor shall provide temporary protective treads, risers, handrails, and shaft protection.
   D Debris shall not be allowed to fall freely from upper levels of the building. Materials shall not be dropped from open windows.
E  Erect overhead protection at the building main entrance to prevent construction debris from falling on pedestrian traffic.

55.19  TEMPORARY PARKING

A. The contractor shall check with the Owner to make arrangements for the parking of Construction personnel. On-site parking is strictly monitored and used by the occupants of the building.

56.00  TEMPORARY PROTECTION

A. The building will be in continuous use as a Senior Center during the Construction period. The Contractor shall take all necessary precautions to ensure the public safety and convenience of the occupants during construction.

B. Any damage to buildings, roads, (public and private), bituminous concrete areas, fences, lawn areas, trees, shrubbery, poles, underground utilities, etc. shall be made good by and at the Contractor's own expense, all to the satisfaction of the Owner.

C. The Contractor shall patch, repair and/or replace all adjacent materials and surfaces damaged after the installation of new work at no expense to the Owner. All repair and replacement work shall match the existing in kind and appearance.

56.19  NOISE AND DUST CONTROL

The Contractor shall take special measures to protect the residents, neighbors, and general public from noise, dust, and other disturbances by:

A. Keeping common pedestrian and vehicular circulation areas clean and unobstructed;

B. Sealing dust and fumes from contaminating occupied spaces.

56.23  TEMPORARY BARRICADES

A. The Contractor shall:

(1.) Protect other areas and private property of the occupants and the Owner. Any areas damaged by the Contractor shall be restored to the original condition or compensated at the Contractor's expense.

B. Roof surfaces and waterproofed surfaces shall not be subjected to traffic nor shall they be used for storage of materials. Where some activity must take place in order to carry out the Work, adequate protection must be provided.

C. After the installation of any Work is completed, the Contractor shall be responsible for its protection and for repairing, replacing, or cleaning any such Work which has been damaged by other trades or by any other cause, so that all Work is in first class condition at the time of Substantial Completion.

56.29  TEMPORARY PROTECTIVE WALKWAYS

The Contractor shall, at all times, leave an unobstructed way along walks and roadways, and shall maintain barriers and lights for the protection of all persons and property in all locations where materials are stored or work is in progress.

56.26  TEMPORARY CONSTRUCTION FENCE

A. The Contractor shall be responsible for providing and maintaining temporary fencing or barricades around the construction as may be necessary to assure the safety of all persons authorized or unauthorized. Such protective measures shall be located and constructed as required by local, state, and federal ordinances, laws, codes, or regulations.

56.33  SECURITY

A. The Contractor shall be responsible for providing all security precautions necessary to protect the Contractor's and Owner's interests.
57.23 TEMPORARY STORMWATER POLLUTION CONTROL (Not Used)

57.33 WEATHER PROTECTION

A The Contractor shall provide temporary enclosures and heat to permit work to be carried on during the months of November through March in compliance with MGL c.149 §44G (d). These specifications are not to be construed as requiring enclosures or heat for operations that are not economically feasible in the opinion of the Owner. Without limitation this includes such items as excavation, pile driving, steel erection, erection of certain exterior wall panels, roofing, and similar operations.

B "Weather Protection" means the temporary protection of that Work adversely affected by moisture, wind, and cold by covering, enclosing, and/or heating. This protection shall provide adequate working areas during the months of November through March as determined by the Owner and consistent with the construction schedule to permit the continuous progress of all Work necessary to maintain an orderly and efficient sequence of construction operations. The Contractor shall furnish and install "Weather Protection" material and be responsible for all costs, including heating required to maintain a minimum of 40 degrees F. at the working surface. This provision does not supersede any specific requirements for methods of construction, curing of materials, or the applicable conditions set forth in the Contract Documents with added regard to performance obligations of the Contractor.

C Within 30 calendar days after award of the Contract, the Contractor shall submit in writing, to the Architect for approval, three (3) copies of the proposed methods for "Weather Protection".

D The Contractor shall assume the entire responsibility for weather protection during construction (until Substantial Completion), and shall be liable for any damage to any Work caused by failure to supply proper weather protection and proper ventilation.

E Work damaged by frost shall be removed and replaced by and at the Contractor's expense and as directed by the Architect.

F It is to be specifically understood that the Contractor shall do no work under any conditions deemed unsuitable by the Contractor to the execution of the Work. This provision shall not constitute any waiver, release, or lessening of the Contractor's obligation to bring the Work to Substantial Completion within the period of time set forth in the Contract Documents.

2. WIND PROTECTION

Should high wind warnings be issued by the U.S. Weather Bureau, the Contractor shall take every precaution to minimize danger to persons, to the Work, and to the adjacent property.

END OF SECTION 01 5000
SECTION 01 7329
CUTTING AND PATCHING

1 GENERAL SCOPE OF THE WORK
A Unless specified elsewhere, the Contractor shall be responsible for:
   (1.) All cutting and patching required for the project construction.
   (2.) Products and installation for patching and extending Work.
   (3.) Transition and adjustments.
   (4.) Repair of damaged surfaces, finishes, and cleaning.
   (5.) Coordination of any cutting and patching required by subtrades.
B Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
C The Contractor must comply with all safety laws and regulations of the Commonwealth of Massachusetts, the United States Government, and local government agencies applicable to Work under this contract. The Contractor's attention is directed to the Commonwealth of Massachusetts, Department of Labor, Division of Occupational Safety Regulations.

2 RELATED SECTIONS
A This section supplements the General Conditions including but not limited to Article 4.3. of the General Conditions.
B Consult the individual sections of the specifications for specific items required under those sections.

3 EXAMINATION
A Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting, including elements subject to damage or movement during cutting and patching. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
B Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace visually unacceptable areas of cutting and patching at no additional cost to the Owner.
C Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
D Beginning of cutting or patching means acceptance of existing conditions.
E After uncovering existing Work, assess conditions affecting performance of work.

4 PREPARATION
A Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
B Before proceeding, meet at the Project Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.
C Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
D Close openings in exterior surfaces to protect existing work [and salvage items] from weather and extremes of temperature and humidity. Insulate duct work and piping to prevent condensation in exposed areas.

E Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.

F Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.

G Remove debris and abandoned items from area and from concealed spaces.

H Prepare surface and remove surface finishes to provide for proper installation of new work and finishes.

5 CUTTING

A Execute all cutting and fitting necessary to complete the Work.

B Where services are required to be remove, relocated, or abandoned, by-pass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit in walls or partitions scheduled to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.

C Uncover work to install improperly sequenced work.

D Remove and replace defective or non-conforming work.

E Provide openings in the Work for penetration of mechanical and electrical work. Cut holes and slots as small as possible, nearly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover opening when not in use.

F Employ skilled and experienced workers to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

G Cut rigid materials using power saw or core drill. Cut through concrete and masonry using a cutting machine, such as a carborundum saw or a diamond-core drill. Pneumatic tools shall not be allowed without prior approval.

H Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer’s recommendations.

I To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.

J Do not cut operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.

K Perform cutting in a fashion that does not denigrate the energy performance of the building(s).

6 PATCHING

A Execute patching to complement adjacent, undisturbed finishes.

B Fit products together to integrate with other Work.

C Execute work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.

D Perform patching in a fashion that does not denigrate the energy performance of the building(s).

E Restore work with new products in accordance with requirements of Contract Documents.

F Fit work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
G  At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with appropriate material to full thickness of the penetrated element as necessary to maintain the required rating.

H  Where new work abuts or aligns with existing, perform a smooth and even transition. Patch work to match existing adjacent work in texture and appearance. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

I  Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

J  Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

K  Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

L  Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

M  Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.

7  CLEANING

A  In addition to cleaning specified in Section 01.74.13, clean all areas affected by the work of this Section including personal belongings affected by this work.

B  Completely inappropriate remove paint, mortar, oils, putty, and similar items.

C  Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

D  When cutting and patching in occupied units clean affected areas daily and or immediately after completion of the cutting and/or patching work.

END OF SECTION 01 7329
CUTTING AND PATCHING
SECTION 02 4120
SELECTIVE BUILDING DEMOLITION

PART 1  GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Removal of existing roof shingle systems.
   2. Removal designated building elements.

B. Related Sections:
   1. Division 01 - Administrative, procedural, and temporary work requirements.

1.2 SUBMITTALS

A. Submittals for Review:
   1. Schedule of Demolition work and removal sequence.
   2. Procedures for disposal, including dumpster sizes, locations and transportation methods.

1.3 REGULATORY REQUIREMENTS

A. Conform to applicable code for demolition work, safety of structure, and dust control.


C. Obtain required permits and approvals from authorities.

D. Provide Police or Fire details as may be required.

E. Review methods of operation and conform to requirements of the Local Fire Department – Fire Prevention Division.

F. Notify affected utility companies before starting work and comply with their requirements.

G. Conform to applicable codes when hazardous or contaminated materials are discovered.

H. Do not close or obstruct exits. Provide warning signs, barricades and other safety precautions as required.

1.4 PROJECT CONDITIONS

A. The Contractor shall examine the premises and thoroughly familiarize himself with all existing materials and conditions that may affect the methods, conduct or scope of the operation. The Contractor by his Bid represents that he made such an inspection and that he is prepared to carry out any and all operations necessary to effect the demolition required or implied by the documents or as required to install the materials specified in other Sections.

B. The Contractor shall examine all other work of this Section with the related work of other trades, and cooperate with such trades to assure the steady progress of all work of this Contract.

C. Minimize interference with streets, walks, driveways, public right-of-ways, and adjacent facilities.

D. Protect all existing building elements to remain including windows, doors, siding, etc.
E. Coordinate with the Owner to give advance notice to tenants prior to commencement of work. See Section 01 31 00.

F. If hazardous materials are discovered, notify Architect and await instructions.

G. If any of the following conditions are encountered, cease work immediately, notify Architect, and await instructions:
   1. Structure is in danger of movement or collapse.
   2. Materials or conditions encountered differ from those designated in the Contract Documents.

PART 2 EXECUTION

2.1 PREPARATION

A. Erect temporary partitions, barricades, warning devices, and controls.

B. Provide protective coverings, shoring, bracing, and supports for construction designated to remain.

C. Temporarily or permanently disconnect utilities as required, including building mounted electrical conduit and lighting fixtures, vents, phone, satellite and cable TV services.

2.2 DEMOLITION

A. Remove existing construction to extent indicated and as necessary to join new work to existing. Do not remove more than is necessary to allow for new construction.

B. Existing gutters, downspouts and trim to remain. Protect from damage.

C. Provide all materials, labor, equipment and services necessary to perform all demolition and related work as require by the Contract Documents and/or herein specified and as required by job conditions.

D. Protect all building elements to remain from damage, including but not limited to siding, windows, doors and trim.

E. Protect existing landscape from damage.

F. Protect areas of work from exposure to inclement weather.

G. Minimize noise and spread of dirt and dust.

H. Protect and support active utilities designated to remain. Post warning signs showing location and type of utility and type of hazard.

I. Remove and legally dispose of waste materials, rubbish and debris off site.

END OF SECTION
PART 1  GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Mortar for masonry.

B. Related Sections:
   1. Division 01: Administrative, procedural, and temporary work requirements.

1.2 REFERENCES

A. ASTM International (ASTM):

B. The Masonry Society (TMS):

1.3 SUBMITTALS

A. Submittals for Review:
   1. Samples: 1/2 x 1/2 inch x 3 inch long colored mortar samples.

B. Quality Control Submittals:
   1. Test reports: Indicating mortar compliance with ASTM C270.
   2. Delivery tickets: If mortar is delivered to site dry and pre-blended, furnish delivery tickets indicating quantity, mortar type, and date of manufacture.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with TMS 402 and 602.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver cement and lime in manufacturer's original, unopened packages or containers.

B. Protect materials from moisture absorption and damage; reject damaged containers.

C. Store aggregate to prevent inclusion of foreign matter.

PART 2  PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers - Cement:
   1. Essroc Cement Corp. (www.essroc.com)
2. LaFarge North America, Inc. (www.lafarge-na.com)
3. Lehigh Cement Co. (www.lehighcement.com)
4. Texas Industries, Inc. (www.txi.com)

B. Acceptable Manufacturers - Lime:
1. Chemical Lime Co. (www.chemicallime.com)
2. Graymont Dolime (OH) Inc. (www.graymont-oh.com)
3. Rockwell Lime Co. (www.rockwelllime.com)

C. Acceptable Manufacturers - Preblended Mortars and Grouts:
1. Quikrete Companies. (www.quikrete.com)

D. Acceptable Manufacturers - Colorants:
1. Arizona Oxides LLC. (www.arizonaoxides.com)
2. Davis Colors. (www.daviscolors.com)

E. Substitutions: Under provisions of Division 01.

2.2 MATERIALS

A. Portland Cement:
1. ASTM C150, Type I.
2. For exposed surfaces, provide cement from one source throughout project.

B. Firebrick Mortar: ASTM C199.

C. Aggregate:
1. ASTM C144, standard masonry type.
2. For exposed surfaces, provide aggregate from one source throughout project.

D. Lime: ASTM C207, Type [S.] [SA.]

E. Colorant: Carbon black.

F. Water: Clean and free from oils, acids, alkalies, organic matter, and other substances in amounts deleterious to mortar or metals in masonry.

2.3 MIXES

A. Mortar Mixes: To be determined by Chemical Analysis. The contractor shall remove sufficient amounts of the existing mortar in the presence of the Architect and have the material chemically analyzed. The cost of this service shall be included in the base bid.

B. For base bid assume type S Mortar

C. Testing Laboratory: Thomson and Licthner (617) 492-2111

D. No masonry work shall commence without the approved mix from the lab

2.4 MIXING

A. Mix mortar in accordance with ASTM C270.

B. Jobsite Proportioning of Mortar:
2. Mix approximately three-quarters of required water, all of cement and lime, and one-half of aggregate for minimum of 2 minutes.
3. Add remainder of water and aggregate; mix for minimum of 3 minutes.

C. Provide uniformity of color in exposed mortar.
D. Thoroughly mix ingredients in quantities needed for immediate use.

E. Discard lumpy, caked, frozen, and hardened mixes.

F. Mortar may be retempered by adding water as required. Use mortar within 1-1/2 hours after initial mixing.

G. Do not add accelerators, retarders, water repellents, antifreeze compounds, or other additives without Architect's approval.

PART 3 EXECUTION

3.1 INSTALLATION

A. Follow requirements specified in referenced sections.

B. Jointing shall be a concave type weathered joint.

C. Pre-dampen masonry surfaces to receive repointing mortar for a minimum of 20 minutes prior to mortar placement. Masonry surfaces should be saturated but free of excess or standing water at time of mortar placement. Fill mortar into joints in 1/4 inch “lifts”. Start by filling deeper sections, compacting each layer, packing it into the rear and corners of the joint.

D. As soon as the mortar reaches “thumbprint” hardness, apply the next layer at ¼ inch thickness. A minimum of 2 layers are required. When final layer is thumbprint hard, tool to specified profile.

E. Match to adjacent, existing profile or to original profile as instructed. To avoid changing the appearance of the building, it may be necessary to slightly recess the mortar from the masonry surface. Do not flush fill joints in worn masonry if this results in a visually wider joint than the original.

F. Remove excess mortar and smears using a stiff natural bristle brush and wood paddles and clean water before it has set. Remove excess mortar from masonry immediately after set but before it has dried to prevent smearing. Use of muriatic acid or any acid-based masonry cleaners is prohibited.

G. Wet cure tooled joints as required by lightly misting with clean water periodically for up to 3 days following installation. Type K and straight Lime mortars always require a minimum of 3 days wet curing. Types O and N may require shorter wet cure periods, depending on temperature, humidity, wind and suction of the masonry. Misting should be performed every hour or two on the first day, as required to maintain the mortar in a wet condition, and this may be reduced to every three or four hours on subsequent days.

H. Allow mortar to fully cure for a minimum of 28 days before final cleaning. Longer cure times are required in cooler weather. Only low pressure should be used to avoid damaging newly repointed joints.

I. Wash the work area with warm water solution of non-ionic detergent such as Igepal (G.A.F.), Tergitol (Union Carbide), or Triton (Rohm & Haas) using a natural bristle brush. Use wood paddle to dislodge strongly adhered deposits. Rinse with clear water. Use of muriatic acid or any acid-based masonry cleaners is prohibited.

END OF SECTION
SECTION 06 1100
FRAMING AND SHEATHING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Floor and wall framing.
   2. Floor decking.
   3. Wood blocking and furring.

B. Related Sections:
   1. Division 01: Administrative, procedural, and temporary work requirements.

1.2 REFERENCES

A. American Wood Protection Association (AWPA):
   1. M4 - Standard for the Care of Preservative Treated Wood Products.

B. ASTM International (ASTM):

C. Engineered Wood Association (APA) PRP-108 - Performance Standards and Qualification Policy for Structural-Use Panels.

D. Forest Stewardship Council (FSC) STD-40-004 - Chain of Custody Standard.


F. Northeastern Lumber Manufacturers Association (NELMA) - Standard Grading Rules for Northeastern Lumber.

G. National Lumber Grades Authority (NLGA) - Standard Grading Rules for Canadian Lumber.

H. Redwood Inspection Service (RIS) - Standard Specifications for Grades of California Redwood Lumber.

I. Southern Pine Inspection Bureau (SPIB) - Standard Grading Rules for Southern Pine Lumber.

J. West Coast Lumber Inspection Bureau (WCLIB) - Standard Grading Rules for West Coast Lumber.

K. Western Red Cedar Lumber Association (WRCLA) - Grading Rules.

L. Western Wood Products Association (WWPA) G-5 - Western Lumber Grading Rules.

1.3 SUBMITTALS

A. Type / size / manufacturer of framing elements to be used with associated beam schedule.
1.4 QUALITY ASSURANCE

A. Lumber Grading Agency: Certified to NIST PS 20.
B. Identify lumber and sheet products by official grade mark.
C. Fire Retardant Treated Products: Bear label of recognized independent testing laboratory indicating flame spread rating of 25 or less, tested to ASTM E84.

1.5 DELIVERY, STORAGE AND HANDLING

A. Store materials minimum 6 inches above ground on framework or blocking and cover with protective waterproof covering providing for adequate air circulation.
B. Do not store seasoned or treated materials in damp location.
C. Protect edges and corners of sheet materials from damage.

1.6 WARRANTIES

A. Provide manufacturer’s 10 year warranty against rot and termite damage for composite wood.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers - Laminated Veneer Lumber:
   1. Boise Cascade Corporation. (www.bc.com)
   2. Georgia-Pacific Corporation. (www.gp.com)
   3. LP Corp. (www.lpcorp.com)

B. Substitutions: Under provisions of Division 01.

2.2 MATERIALS

A. Dimension Lumber:
   1. Grading rules: WWPA.
   2. Species: SPF
   3. Grade: No. 2 or better
   4. Surfacing: Surfaced four sides (S4S) unless otherwise indicated.
   5. Maximum moisture content: 19 percent.

B. Laminated Veneer Lumber:
   1. Fabricated by laminating wood veneers under pressure using exterior type adhesive with grain of veneers parallel with length.
   2. Veneer: Douglas Fir
   3. Beam Schedule

          | Size                        |
      ---|-----------------------------|
    1  | (2) 3 1/2" x 11 7/8" LVLs   |
    2  | 3 1/2" x 11 7/8" LVL        |
    3  | (2) 3 7/8" x 10" LVL        |
    4  | 3 1/2" x 11 7/8" LVL        |

C. Panel Products:
   1. Type: APA Plywood.
   2. Panel grade:
a. Floor and wall sheathing: APA Rated Sheathing, CDX

3. Exposure:
   a. Interior applications: Exposure 1.

2.3 ACCESSORIES

A. Anchor Bolts: ASTM F1554.

B. Fasteners:
   1. Type and size: As required by conditions of use.
   3. Other interior locations: Plain steel.

C. Joist Hangers:
   2. Size and shape: To suit framing conditions in accordance with beam schedule.
   3. The following schedule is based on Simpson Strong Tie, Substitutions under provisions of division 01
      a. 2x12 Floor Joists to P.T. Ledger: Simpson Strong Tie HUS 210 Joist Hanger, or equal.
      b. Beam 1 to Beam 4: Simpson Strong Tie EG9 Beam Hanger, or equal.

D. Subflooring Adhesive:
   1. Waterproof, water based, air cure type, in cartridge dispensers.

E. Sill Gasket: 1/4 inch thick, plate width, closed cell polyethylene or urethane foam from continuous rolls.

2.4 FABRICATION

A. Preservative Treatment:
   1. Treat wood in following locations:
      a. Where in contact with roofing and related flashings.
      b. Where in contact with masonry cementitious materials.
      c. Where in contact with ground.
   2. Lumber: Treat in accordance with AWPA C1 with retention of [0.25 to 0.40] [0.40] [0.60] PCF.
   3. Panel products: Treat in accordance with AWPA C9, with retention of 0.25 to 0.40 PCF.

PART 3 EXECUTION

3.1 INSTALLATION

A. Set members level, plumb, and rigid.

B. Make provisions for erection loads, and for temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing.

C. Place beams, joists, and rafters with crown edge up.

D. Construct load bearing framing members full length without splices.

E. Joist Framing:
   1. Provide minimum 1-1/2 inches of bearing.
   2. Lap members framing from opposite sides minimum 4 inches.
3. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists. Frame rigidly into joists.
4. Bridge joists at mid span for spans in excess of 8 feet.

F. Stud Framing:
1. Provide single bottom plate and double top plates for load bearing partitions.
2. Provide single bottom and top plates for non load bearing partitions.
3. Triple studs at corners and partition intersections.
4. Anchor studs abutting masonry or concrete with toggle or expansion bolts.
5. Frame openings with double studs and headers. Space short studs over and under opening to stud spacing.
6. At corners, provide diagonal 1 x 4 inch bracing; notch studs to fit.

G. Beams:
1. Provide minimum end bearing of 4 inches.
2. Nail built-up members with two rows of nails spaced 6 inches on center maximum.

H. Wall Sheathing:
1. Place panels perpendicular to framing members, with ends over firm bearing and staggered.
2. If diagonal corner braces are not installed, at corners, place sheathing for a horizontal distance of 48 inches.
3. Leave 1/8 inch expansion space at panel ends and edges.
4. Secure to supports with nails spaced maximum 6 inches on center along edges and maximum 12 inches on center in field of panels.

I. Subflooring:
1. Install flooring underlayment after dust and dirt generating activities have ceased and prior to application of finished flooring.
2. Apply perpendicular to decking; stagger joints of underlayment in adjacent rows.
3. Leave 1/8 inch expansion space at panel ends and edges.
4. Secure to supports with adhesive and nails spaced maximum 6 inches on center along edges and maximum 12 inches on center in field of panels.

J. Provide blocking, nailers, grounds, furring, and other similar items required to receive and support work.

K. Treat field cuts and holes in members providing structural support in accordance with AWPA M4.

3.2 TOLERANCES
A. Framing Members: 1/4 inch from true position, maximum.

B. Surface Flatness of Floor: 1/4 inch in 10 feet maximum.

END OF SECTION