INVITATION TO BID

Date: June 29, 2017

To: Invited and interested Roofing Contractors

INVITATION TO BID

You are invited to submit a stipulated sum proposal for the furnishing of all permitting, taxes, documentation, materials, equipment, services, labor and supervision necessary for and/or reasonably incidental to the DPW Roof Replacement Project, Seabrook, NH

A. **PREBID MEETING**

- 1.) A prebid meeting will be held at the project location on Thursday July 20, 2017 at 3 PM. Bidders will meet at the front entrance to the facility.
- 2.) Please confirm your attendance by email to Marc.lehoullier@tridentgrp.com.
- 3.) Questions, attendance or additional information should be directed to the attention of Marc Lehoullier of Trident Building & Properties Group at (603) 898-6110 ext16, or by email Marc.lehoullier@tridentgrp.com.
- 4.) Questions/RFI's shall be taken up to 4 days after the pre-bid meeting.

B. **DISCREPANCIES**

- 1.) Should a Bidder find discrepancies or ambiguities in, or omissions from, the drawings or specifications, or should he be in doubt as to their meaning, he shall at once notify The HL Turner Group here after referred to as the consultant, who will send a written bulletin to all Bidders.
- 2.) Bidders are responsible for all dimensions, building areas, and verifying existing conditions.

C. FORMS

- 1.) All proposals must be submitted on the prepared Bid forms and shall be subject to all requirements of the drawings, the specifications, and any other documents issued in connection with the above including this Invitation to Submit a Proposal.
- 2.) Voluntary alternates are not allowed unless prior approval from Trident & HL Turner.

- 3.) Attention is directed to the fact that the specifications include a set of bidding and contract forms. These are for bidding purposes on this project.
- 4.) A hard copy must be mailed.
- 5.) All blank spaces on forms must be filled in.
- 6.) The signature must be in longhand and executed by a principal duly authorized to make contracts. The Bidder's legal name must be fully stated.

D. **SUBMISSION OF PROPOSALS**

Sealed proposals Marked "DPW ROOF REPLACEMENT" will be received by the Owner no later than 3 PM July 31, 2017:

Ms. Shaylia Marquis, Procurement Manager Town of Seabrook 99 Lafayette Road Seabrook, NH 03874

- 1.) The Owner reserves the right to reject any/all proposals without explanation, to waive all formality in connection with bid opening, and to waive any informality in the proposals.
- 2.) The opening of the bid proposals will be public. Determination will be based upon all pertinent data contained in the proposals.
- 3.) Proposals submitted by the Contractor, as a result of this invitation to submit a Proposal, shall not obligate the Owner in any way.

E. **THE BID**

The bid shall be for the completed job as specified herein.

F. **VALIDITY**

All bids submitted shall remain valid for a period of not less than 45 calendar days from the Not Later Than date indicated above.

INSTRUCTION TO BIDDERS

I. PROJECT: Roof Renovation Projects

DPW Roof Replacement Project

II. PROJECT

DESCRIPTION:

A. Base Bid:

1. The project includes removal of the existing roof components including, roof membrane, insulation, flashings and miscellaneous roof components on the DPW roof. Examination of decking, and repairs, as specified. Installation of roof system, as specified.

III. WORK SCHEDULE:

A. The project is to proceed at an agreed to date with Owner. The project is to be done on a continual day-to-day basis except in the case of inclement weather. The project must be completed as soon as possible. All work is to commence after an approved date from the Owner. Work must be done Monday through Friday during normal work hours.

IV. BID DUE DATE:

٧.

- A. All bids are due by 3 PM on July 31, 2017
- B. Bids must be delivered to the designated person in a timely manner to meet the bid deadline.

VI. BASE BID:

A. The Base Bid is the sum stated in the bid for which the bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for the sums stated in the Alternate Bids.

VII. ALTERNATE BID:

A. As listed on Bid Form.

VIII. <u>UNIT PRICE BID:</u>

A. As listed on bid form.

IX. CONTRACTORS:

A. Each Bidder shall include in his bid an outline of the Work to be performed by the Bidder with his own personnel. Any subcontractor work shall be identified within the Bid Proposal, and is subject to Owner approval.

B. <u>Each bidder must provide with the Bid Form three project references with a minimum five-year history.</u>

X. CLARIFICATIONS

- A. All bidders must conduct their own roof measurements as the roof plan included with the specifications is for reference only.
- B. All requests for clarification or interpretation of the Bidding Documents shall be made to Barry Hoeg, The HL Turner Group BHoeg@hlturner.com with a copy to Marc Lehoullier, Owner's Project Manager to Mlehoullier@tridentgrp.com.

XI. <u>SUBSTITUTIONS AND VOLUNTARY ALTERNATES</u>

- A. The materials, products, and equipment described in the bidding documents establish the standard of required function, dimension, appearance, and quality to be met.
- B. No substitution will be considered prior to receipt of bids unless a written request for approval has been received by the aforementioned people at least three days prior to the date for receipt of bids. The Owners' decision regarding a proposed substitution shall be final.
- C. If a substitution is approved prior to bidding, such approval will be set forth in an Addendum. Bidders shall not rely on approvals made in any other manner.
- D. Voluntary alternates will not be accepted unless prior approval is given by the Owner or the Owner's representative. These may be rejected for any reason.

XII. PREVAILING WAGE

A. None.

XIII. BID FORM:

- A. Your bid must be prepared on the Bid Form included with the Bidding Documents; additional copies may be obtained from Owner.
- B. All blanks on the Bid Form must be completed in ink or type.
- C. Bids by corporations must be executed in the corporate name by the President or Vice President.

D. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

- E. All names must be typed or printed below the signature.
- F. The bid shall contain an acknowledgement of receipt of all Addenda (the numbers must be filled in on the Bid Form).
- G. The physical and e-mail address and telephone number for communications regarding your bid must be shown.

XIV. OPENING OF BID:

A. All Bids received prior to the date and time designated for the Bid opening will be opened publicly by the Awarding Authority.

XV. BID TO REMAIN SUBJECT TO ACCEPTANCE:

A. All bids will remain subject to acceptance for 90 days after the Bid due date.

XVI. AWARD OF CONTRACT:

- A. The Owner reserves the right to reject any or all Bids, if it determines that is in its interest to do so.
- B. The Contract shall be a modified A107, Sample included in Bid Documents
- C. Award means the determination and selection of the lowest, responsible and eligible Bidder, by the Awarding Authority.
- D. The Awarding Authority will award the contract to the lowest responsible and eligible Bidder within thirty (90) days, Saturdays, Sundays, and legal holidays excluded after the opening of bids.
- E. The Awarding Authority reserves the right to waive any informalities in or to reject any or all bids if it be in the public interest to do so.
- F. The Awarding Authority also reserves the right to reject any bid if it determines that such bid does not represent the bid of a person competent to perform the work as specified or if less than three (3) available bids are received.
- G. The term ""lowest responsible and eligible bidder" shall mean the Bidder (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (3) who obtains within ten days of the notification of contract award the security by bond, if required.

XVII. CONTRACT SECURITY:

A. When the Successful Bidder delivers the executed Agreement to owner, it must be accompanied by the required Performance and Payment Bonds. This requirement cannot be waived by Owner if the Contract Price exceeds \$25,000.

II. INSURANCE:

A. When the Successful Bidder delivers the executed Agreement to the Owner, it must be accompanied by the required insurance certificates.

III. SIGNING OF AGREEMENT:

A. When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within five days thereafter Contractor shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner with required Bonds and insurance certificates. Owner shall deliver one fully signed counterpart to the Contractor.

IV. UNIT/ALTERNATE PRICES:

A. Prices by Corresponding Unit Are to Be Included in the Bid Form as Separate Line Items and shall be inclusive of Profit and Overhead.

V. <u>SEALED BIDS marked "SEABROOK DPW ROOF PROJECTS" shall be sent</u> to:

Ms. Shaylia Marquis, Procurement Manager

Town of Seabrook

99 Lafayette Road

Seabrook, NH 03874

VI. ADDITIONAL INFORMATION:

A. If you should need any additional information or have any questions regarding the project or specifications, all questions should be submitted in writing to the attention of Marc Lehoullier by email to Marc.lehoullier@tridentgrp.com

BID FORM

TOWN OF SEABROOK DEPARTMENT OF PUBLIC WORKS BUILDING ROOF REPLACEMENT PROJECT SEABROOK, NEW HAMPSHIRE

TO:	Town of Seabrook 99 Lafayette Road Seabrook, NH 03874		Date:
SUBJECT:	Department of Public V 43 Railroad Avenue Seabrook, New Hamp	Works Building Roof Reshire	eplacement Project
Proposal subn	nitted by <u>(Bidder Nam</u>	e and Address Below)] :
accordance wi	th the provisions of the		ols and equipment in complete dated May 31, 2017 including all .L. Turner Group Inc.
The Bidder ac	knowledges receipt of	and includes the require	ements of the following Addenda:
<u>Number</u>		<u>Date</u>	
			
In submitting t	his Bid, the undersigne	ed agrees:	

- r subtritting this bid, the direct signed agrees.
 - 1. The Bidder shall not have defaulted on, or failed to execute, enter into, or perform a contract for services with the Town of Seabrook, New Hampshire during the past five (5) years.
 - 2. The Bid shall remain in full force and will not be withdrawn for a period of thirty (30) calendar days after the actual date of Bid opening thereof.
 - 3. To enter into and execute a contract, if awarded on the basis of this Bid.
 - 4. To provide a Payment and Performance Bond for the contract amount.
 - 5. To successfully accomplish the work in accordance with the Contract Documents.

- 6. Work to be substantially completed by November 17, 2017 and finally complete by November 30, 2017.
- 7. To provide the Insurances required, as defined in the Summary or Work.
- 8. To **not unbalance** the Bid prices as the Town of Seabrook reserves the right to delete items in the Bid at any time.
- 9. The Bid prices submitted on this project shall include all materials, labor, taxes, fees, permits, disposal, and all freight charges, for a total cost to the Town of Seabrook.
- 10. Bidder is to include with his Bid a short summary of their approach to the work, as well as any variations from the specification in a letter attached to the Bid.
- 11. The Town of Seabrook, New Hampshire reserves the right to accept any and all Bids and to waive any informalities.

Department of Public Works Building Roof Replacement Project

<u>ltem</u>	<u>Description</u>	Bid Price
1.	General Conditions	(L.S.) \$
2.	Bond	(L.S.) \$
3.	Mobilization	(L.S.) \$
4.	Demolition and Disposal	(L.S.) \$
5.	New EPDM Roofing Including All New Insulation, Metal Edging, Flashings, Cover Board, Trim, etc.	(L.S.) \$
6.	New Shingle Roofing Including All Ice Protection Membrane, Underlayment. Metal Drip Edge, Curb, Vent and Stack Flashings, etc.	(L.S.) \$
7.	Demobilization and Clean-Up	(L.S.) \$
	TOTAL BASE BID	(L.S.) \$

The undersigned agrees to complete the work for the Total Lump Sum Price of: (Base Bid includes all work shown in the project documents.)
\$
In words:
Show above amount in both words and numerals. In the event of error, amount in words shall govern.
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
UNIT PRICES
Unit Prices (if needed)
1. It is anticipated that the existing plywood roof sheathing substrate to which the new roofing surfaces is to be applied is in good condition and suitable for application of the new roofing materials. In the event that specific portions or sections of the substrate decking is deteriorated and must be replaced, the Contractor shall provide a unit price for replacement of the substrate with material to match the existing. The Contractor shall provide a unit price for substrate replacement based on a total quantity of 1,200 square feet. The substrate used for replacement of the existing plywood roof sheathing shall be of the same thickness and material specifications as the existing Unit Price for Substrate Replacement: \$ /square foot

Note: The Following Items are Required as Part of the "Bid Form" Submission

Title:_____

1.	Bidder accepts the Town of Seabrook's general terms and conditions as outlined in the forms contained in the Project Manual.			
	a. <u>Circle One (1) of these:</u> <u>Yes</u> <u>No</u>			
	If No is circled, mark-up of acceptable terms must be provided with Bid.			
2.	Provide written short summary of the approach to the work and schedule as part of the Bid Form Submission and include the written short summary with the "Bid Form".			
3.	Complete the information below:			
	Bidder:			
	Business Address:			
	And brained Olympians			
	Authorized Signature:			
	Name (Print Clearly):			

TOWN OF SEABROOK DEPARTMENT OF PUBLIC WORKS ROOF REPLACEMENT PROJECT



ISSUED FOR BID & CONSTRUCTION

05/31/2017

43 RAILROAD AVE, SEABROOK, NH 03874

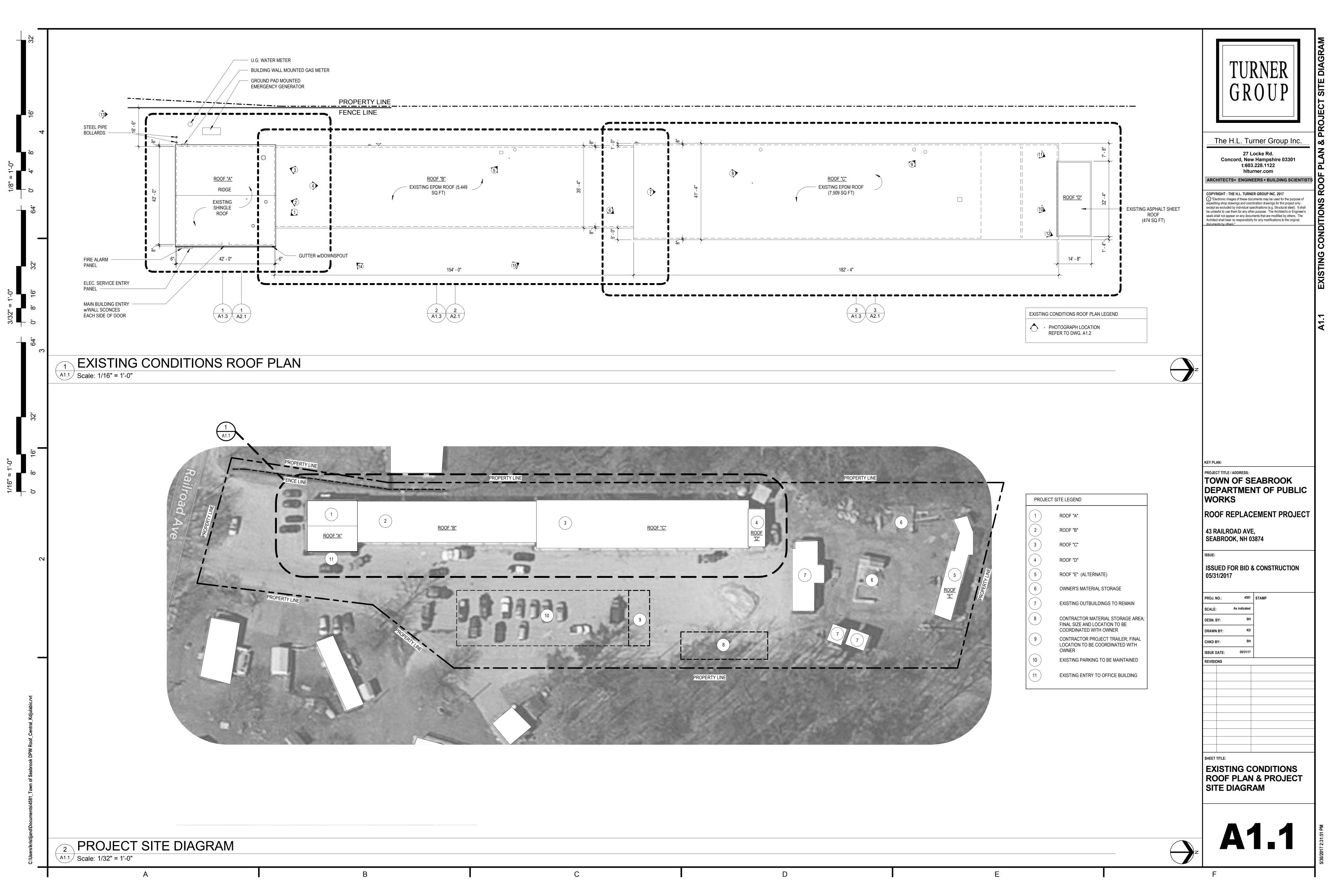
PROJECT NUMBER: 4581

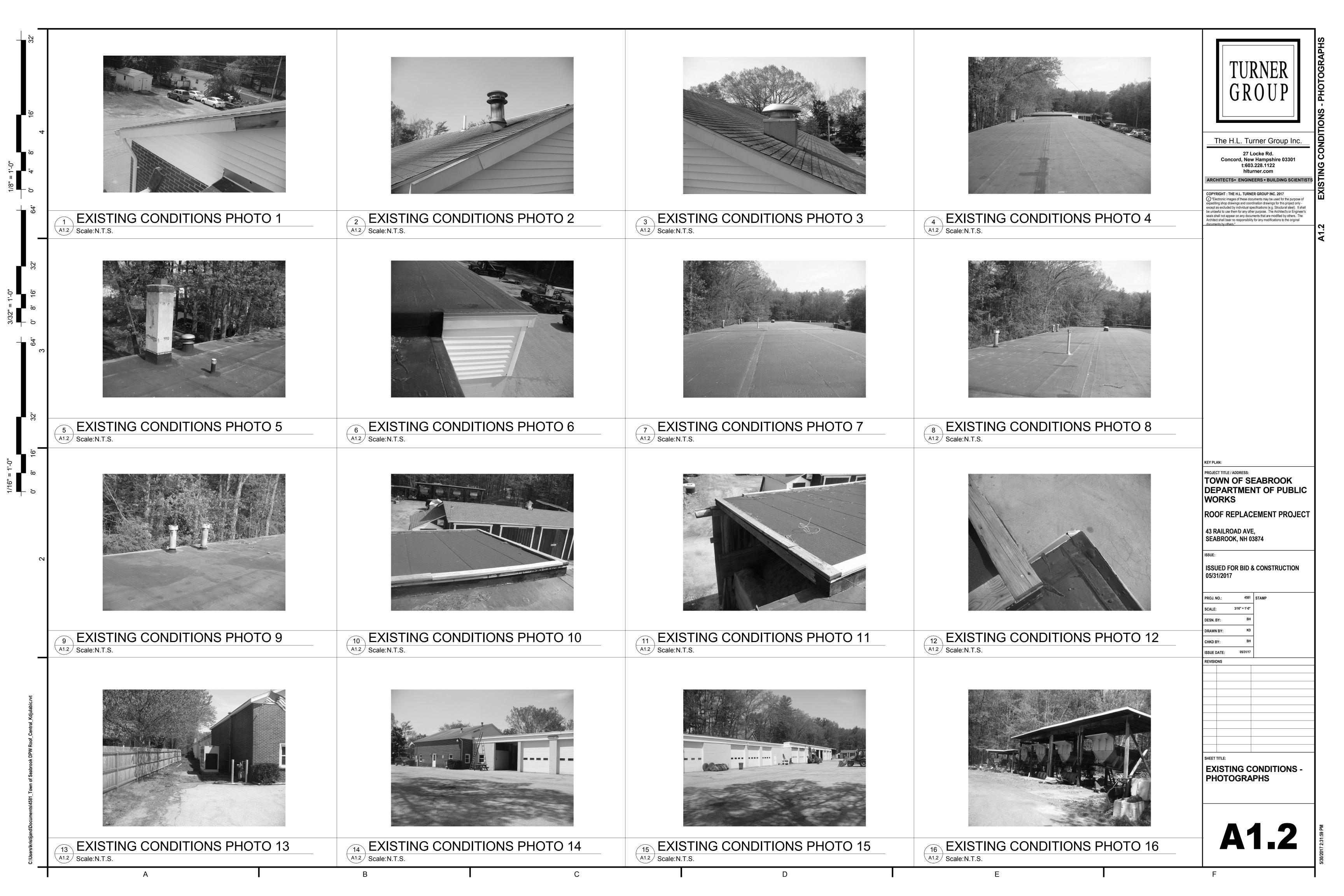
DESIGNED AND ENGINEERED BY: BUILDING DESIGN CRITERIA: LOCUS MAP REPLACEMENT OF EXISTING SLOPED SHINGLE ROOFING SYSTEM WITH NEW SLOPED SHINGLE ROOFING SYSTEM, INCLUDING ALL FLASHINGS. ICE PROTECTION MEMBRANE, DRIP EDGE, RIDGE VENT, AND ALL THE H.L. TURNER GROUP Inc. REPLACEMENT OF EXISTING LOW-SLOPED EPDM ROOFING SYSTEM WITH ARCHITECTS • ENGINEERS CONSTRUCTION MANAGERS • BUILDING SCIENTISTS 27 LOCKE ROAD CONCORD, NEW HAMPSHIRE 03301 T:603.228.1122 / F:603.228.1126 W:www.hlturner.com METAL DRIP EDGE, FLASHINGS, COUNTERFLASHING, P.T. WOOD NAILERS CONCORD NH • HARRISON ME • LYNDONVILLE VT CLAD WOOD FASCIAS & RAKEBOARDS WHERE INDICATED, LITTLETON MA . NEW HAVEN CT AND ALL REQUIRED APPROPRIATE FASTENERS CONSTRUCTED BY: ARCHITECT OF RECORD: CIVIL ENGINEERING STRUCTURAL ENGINEERING ARCHITECTURAL THE HL TURNER GROUP INC. T:603.228.1122 F:603.228.1124 MECHANICAL ENGINEERING PLUMBING ENGINEERING ARCHITECT NAME FIRE PROTECTION ENGINEERING ELECTRICAL ENGINEERING HL TURNER GROUP, INC. EQUIPMENT VENDOR

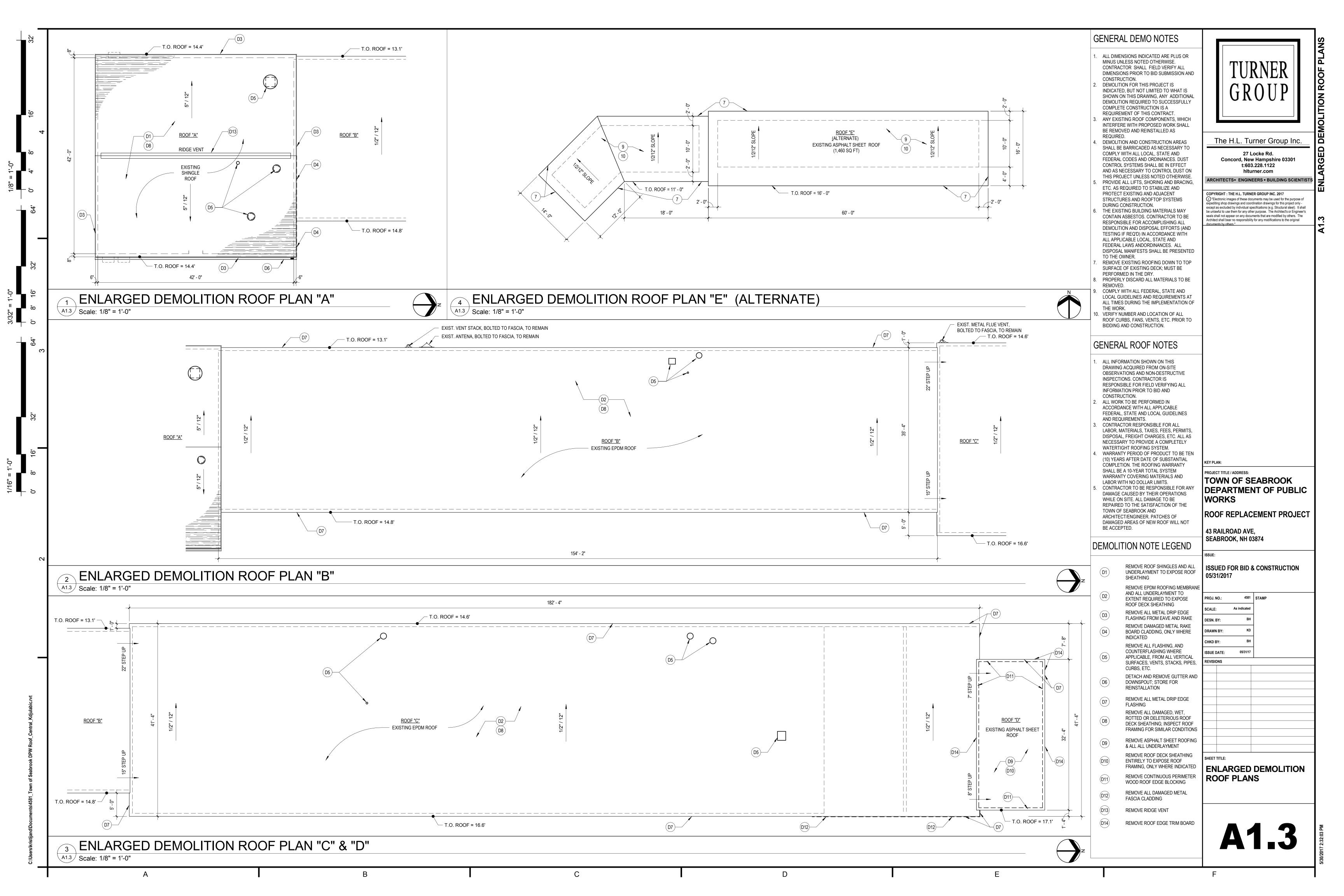
DRAWING LIST

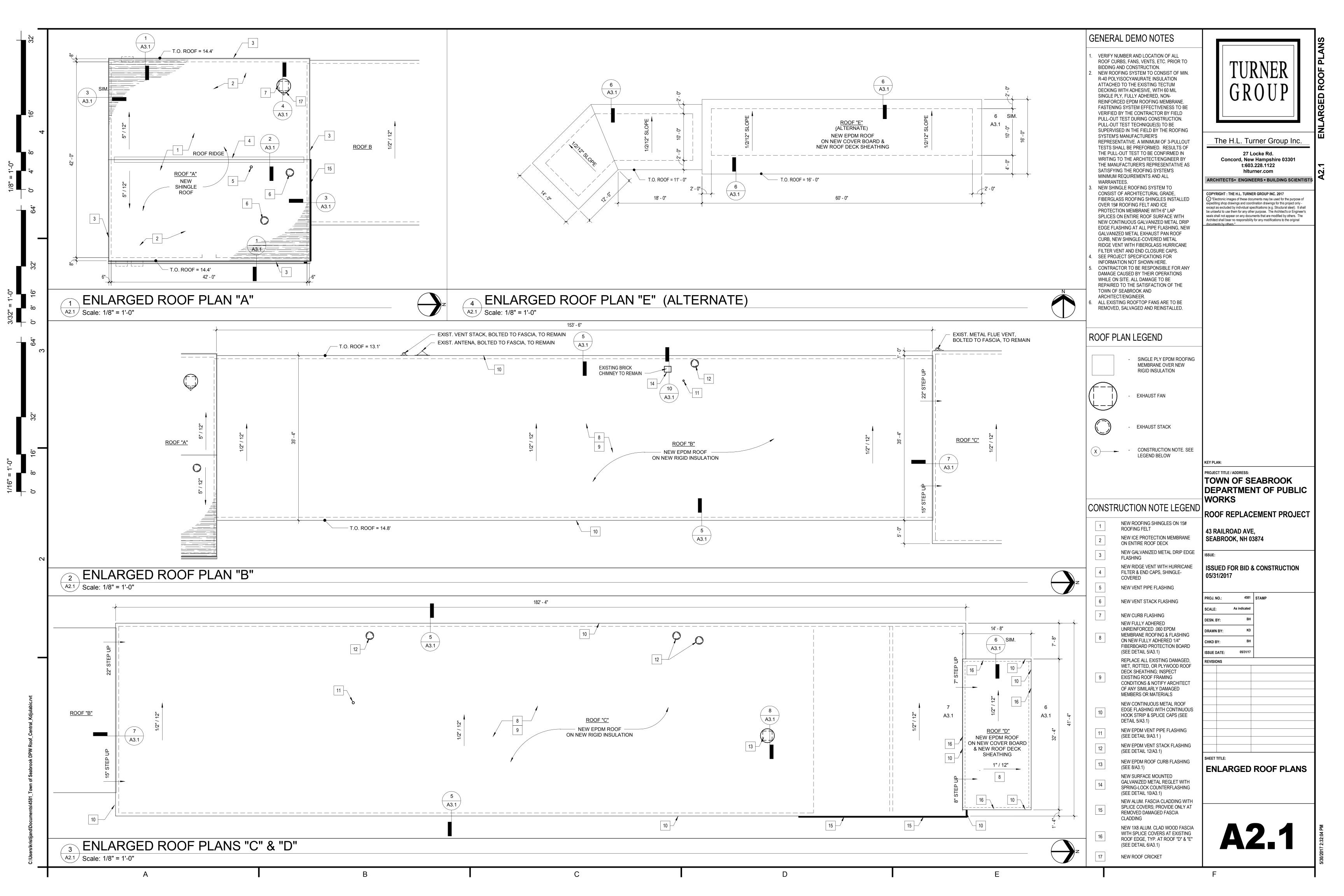
SHEET
NUMBER
DRAWING TITLE

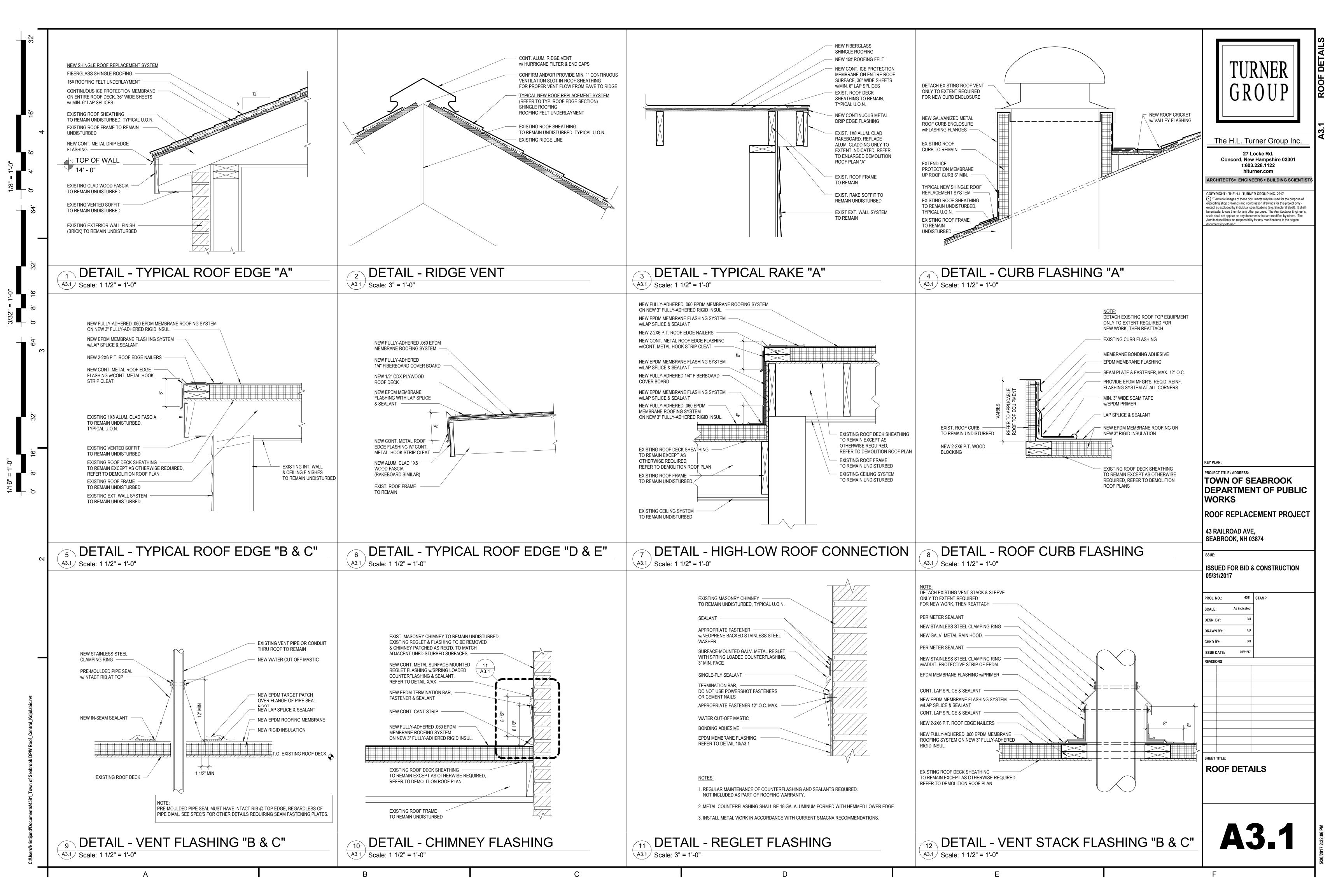
ARCHITECTURAL
A1.1
EXISTING CONDITIONS ROOF PLAN & PROJECT SITE DIAGRAM
A1.2
EXISTING CONDITIONS - PHOTOGRAPHS
A1.3
ENLARGED DEMOLITION ROOF PLANS
A2.1
ENLARGED ROOF PLANS
A3.1
ROOF DETAILS











PROJECT MANUAL TECHNICAL SPECIFICATIONS

TOWN OF SEABROOK DEPARTMENT OF PUBLIC WORKS BUILDING ROOF REPLACEMENT PROJECT

43 RAILROAD AVENUE SEABROOK, NEW HAMPSHIRE

FOR BID AND CONSTRUCTION

TTG PROJECT No. 4581

May 31, 2017

The H.L. Turner Group Inc.

TOWN OF SEABROOK DEPARTMENT OF PUBLIC WORKS BUILDING ROOF REPLACEMENT PROJECT TECHNICAL SPECIFICATIONS

TABLE OF CONTENTS

DIVISION 1 - GENERAL REQUIREMENTS

01010	SUMMARY OF WORK
01340	SUBMITTALS
01620	STORAGE AND PROTECTION
01732	SELECTIVE DEMOLITION
	NOTIFICATION OF DEMOLITION AND RENOVATION

DIVISIONS 2 - 5

NOT USED

DIVISION 6 - WOOD, PLASTICS, AND COMPOSITES

06160 SHEATHING

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

07210	SHINGLED ROOFING SYSTEM AND ACCESSORIES
07530	MEMBRANE ROOFING SYSTEM AND ACCESSORIES
07565	PREPARATION FOR ROOFING REPLACEMENT AND REPAIRS

DIVISIONS 8 - 16

NOT USED

CONSTRUCTION DRAWINGS ISSUED

COVER SHEET

ARCHITECTURAL

COVER SHEET

A1.1	EXISTING CONDITIONS ROOF PLAN & PROJECT SITE DIAGRAM
A1.2	EXISTING CONDITIONS – PHOTOGRAPHS
A1.3	ENLARGED DEMOLITION ROOF PLANS
A2.1	ENLARGED ROOF PLANS
A3.1	ROOF DETAILS

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 PROJECT IDENTIFICATION

- A. The name of the project is "Town of Seabrook Department of Public Works Building Roof Replacement Project".
- B. The project is located at 43 Railroad Avenue, Seabrook, New Hampshire.
- C. The Contract Documents for this project, prepared by The H.L. Turner Group Inc., 27 Locke Road, Concord, New Hampshire, are dated **May 31, 2017.**
- D. The Owner of the project is the Town of Seabrook, 99 Lafayette Road, Seabrook, New Hampshire 03874; Telephone: 603-474-3252, Fax: 603-474-8007.
- E. The Architect/Engineer for this project is The H.L. Turner Group Inc., 27 Locke Road, Concord, New Hampshire 03301; Telephone: 603-228-1122, Fax: 603-228-1126.

1.2 DESCRIPTION OF WORK

- A. This project consists of, but is not limited to:
 - 1. Construction activities for the Roof Replacement to the Town of Seabrook Department of Public Works Building as enumerated in the Contract Documents and the Project Manual.
 - a. Provide all required permits and approvals.
 - Complete removal of existing sloped shingle roofing system and replacement with new sloped shingle roofing system.
 - Complete removal of existing low-sloping EPDM membrane roofing system and replacement with new, fully-adhered EPDM roofing system.
 - d. New sloped shingle roofing system to consist of all new ice protection membrane on entire existing roof deck surface, new 15# roofing felt, and new asphalt fiberglass roof shingles including all eave and rake drip edge flashings, vent flashing, vent stack flashings, curb flashing, ridge vent, and all appropriate fasteners required.

- e. New EPDM roofing system to consist of new fully adhered membrane protection board installed on existing plywood roof deck sheathing, new ¼" fiberboard cover board only where indicated, new fully adhered EPDM roofing membrane including all drip edge, blocking, membrane seams, termination strips, flashings, counterflashings, and all appropriate fasteners required.
- f. Covering all landscaping, lawns, etc. around entire perimeter of the building during construction.
- g. Protection of all roof-top and fixed ground-installed equipment, meters, panels, service entries, mounted on or otherwise located adjacent to the building in the area of new work.
- h. Final clean-up and restoration of damaged items (if any).
- i. Replacement of all deteriorated or rotted substrates or underlayment, if necessary.
- j. Final clean-up and restoration of damaged items (if any).
- B. Since the Department of Public Works Building will be occupied during the implementation of the project:
 - Dust and noise control, as well as keeping all building contents dry, will be a major requirement for this project. It is explicitly understood that this requirement will be the sole responsibility of the Contractor.
 - 2. The use of foul language, smoking anywhere on the project site, operation of loud radios, consumption of alcohol or illegal drugs, etc., is strictly prohibited and will be cause for immediate removal of those responsible from the project.
- C. The Contractor is responsible for all aspects of work on this project. All damages to any portions of the existing buildings, and/or to the existing adjacent properties, are to be repaired at no cost to the Town of Seabrook and to the satisfaction of the Town of Seabrook and the Architect/Engineer.
- D. The Contractor is to be responsible for:
 - 1. Proper disposal of all materials and debris.
 - 2. The maintenance and protection of personnel and vehicular traffic at all times during the implementation of this work.
 - 3. The protection of the persons using the building during the performance of this work.

E. Refer to project drawings as well as these project specifications for additional descriptions of work to be performed.

1.3 COORDINATION OF WORK EFFORTS

A. The Contractor shall coordinate its work efforts with the Town of Seabrook during all phases of work.

1.4 CONSTRUCTION SAFETY/HEALTH

A. The Contractor, in all cases, shall be responsible for the safety of all persons involved on this project, and shall comply with OSHA, EPA, and all other applicable local, state, and federal agencies, laws and requirements.

1.5 POTABLE WATER

A. The Contractor shall provide all potable water necessary to accomplish the work on this project.

1.6 PERMITTING

A. The Contractor shall be responsible for obtaining all permits necessary to accomplish the work on this project.

1.7 SANITARY FACILITIES

A. Portable sanitary facilities shall be provided by the Contractor in numbers adequate for the work force on-site, all according to OSHA Standard 29 CFR, in a location approved by the Owner.

1.8 FIRE PROTECTION

A. The Contractor shall provide fire extinguishers on-site in adequate numbers for protection of materials and equipment. The Contractor shall take all precautions necessary for the protection of all existing materials, furnishings, etc. as necessary during the implementation of the work.

1.9 INSTALLATION

A. All work shall conform to the Contract Documents, and applicable local, state, and federal requirements. Unless specified herein, contract work shall conform to manufacturer's recommendations.

1.10 ELECTRICAL USE

A. The Contractor shall be responsible for providing electrical power if necessary to accomplish the work. Electrical power to be acquired from the Owner as may be available. The Owner will determine locations where power is available. If required, the Contractor is responsible for providing and installing all panels, subpanels, breakers, etc., all in

accordance with governing codes and regulations. Coordinate location(s) with the Owner.

1.11 TESTING

A. Except as herein provided, all testing shall be paid for by the Contractor. All special testing called for by the Owner's Representative to confirm quality of installation, which results in confirmation of work not meeting the specifications of the contract, shall be paid for by the Contractor.

1.12 RESTORATION

A. All structures, facilities, finishes, utilities, etc., or landscaped or paved areas damaged during the duration of the work shall be restored by the Contractor to a condition acceptable to the Owner prior to final payment.

1.13 PROTECTION

A. Contractor to be responsible for the protection of all existing roadway components, utilities, fencing, concrete pads, building finishes, building components, hydrants, trees, shrubs, grassed areas, etc., during all phases of the work.

1.14 BOND

A. The Contractor shall provide a Payment and Performance Bond for this project.

1.15 INSURANCES

A. The Contractor shall, at its sole expense, obtain and maintain in force, and shall require any Subconsultant or assignee to obtain and maintain in force, for the benefit of the Town of Seabrook, the following insurance:

Minimum insurance requirements will be as follows:

1. Comprehensive General Commercial Liability per occurrence:

a.	General Aggregate:	\$2,000,000.
b.	Products - Comp/OP Agg:	\$2,000,000.
C.	Personal & Adv. Injury:	\$2,000,000.
d.	Each Occurrence:	\$2,000,000.
e.	Fire:	\$2,000,000.

- 2. Automobile Liability:
 - a. Combined Single Limit: \$1,000,000.
- 3. Worker's Compensation and Employer's Legal Liability:
 - a. New Hampshire Statutory.

b. Each Accident: \$1,000,000.

c. Disease Policy – Limit: \$1,000,000.

d. Disease Each Employee: \$1,000,000.

- B. The policies described above shall be the standard form employed in the State of New Hampshire, issued by underwriters acceptable to the State, and authorized to do business in the State of New Hampshire.
- C. With the exception of Workers Compensation coverage, a statement that a Waiver of Subrogation is included with respect to applicable coverages must be included.
- D. Each such policy or certificate therefore issued by the insurer shall contain an agreement by the insurer that such policy shall not be cancelled without at least sixty (60) days prior written notice by registered mail to the Owner.
- E. The Contractor shall either (a) require each of its Subcontractors to procure and to maintain during the life of his subcontract the type and amounts of insurance specified above or (b) insure the activities of its Subcontractor in the Contractor's policy.
- F. A Certificate of Insurance indicating above coverages must be submitted prior to commencement of work. The Certificate Holder is to be: Town of Seabrook, 99 LaFayette Road, Seabrook, New Hampshire.

1.16 TIME FOR COMPLETION

- A. The work to be performed under the General Contract shall be finally complete on or before <u>October 30, 2017.</u>
- B. It is expressly understood and agreed, by the Contractor and the Owner, that the time for completion of the work stated is reasonable for the completion of this project.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 During the performance of this work, the Contractor shall inspect all substrates and underlayments to which the new products will be attached. It is anticipated that all such substrates and underlayments are in good condition and that no repairs or remedial work will be necessary. If the Contractor determines that the substrates and/or underlayments are unsuitable for the proper performance of the work, he shall notify the Architect immediately.

END OF SECTION 01010

SECTION 01340

SUBMITTALS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Each Trade Contractor shall prepare and submit Shop Drawings, Product Data and Samples required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.

PART 2 PRODUCTS

2.1 PRODUCT SUBMISSION

- A. Products shall be submitted from the items listed in the specifications and drawings.
- B. Other suppliers or manufacturers may qualify as equals only when the Architect agrees to waive the specifications based upon the suppliers or the manufacturers' ability to prove that their product is equal for the purpose of a particular product.
- C. The Owner must approve all substitutions to insure the ability to obtain service and stock replacement parts.
- When three or more products are specified, no substitutions therefore will be considered.
- E. Otherwise, the Owner and Architect will consider a formal request for the substitution of a product specified, only under the following conditions:
 - Requests for substitutions when forwarded by the Trade Contractor to the Architect are understood to mean that the Trade Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified. The burden of proof of equality or superiority of any proposed substitution is totally the responsibility of the Trade Contractor.
 - a. The Trade Contractor will provide the same warranty for the substitution that would have been provided for that specified.
 - b. Certifies that the cost data presented is complete and includes all related costs under the Trade Contract, and that the Trade Contractor waives all claims for additional costs related to the substitution which subsequently becomes apparent.

- c. The Trade Contractor will coordinate the installation of the accepted substitute, making such changes as may be required for the work to be complete in all respects for all trades.
- F. The decision of the Architect relative to substitutions shall be final.

2.2 SUBMISSION REQUIREMENTS

- A. Submittals shall be accompanied with a multi-copy Contractor Transmittal Form containing the following information:
 - 1. Submittal date.
 - 2. Project title and number.
 - 3. Trade Contractor's name and address.
 - 4. Number of each drawing and a description of material submitted.
 - 5. Notification of deviations from Contract Documents.

B. Submittals shall include:

- 1. Respective project drawing numbers.
- 2. Relation to adjacent structure or materials.
- 3. Field dimensions, clearly identified as such.
- 4. Applicable specification section numbers.
- 5. Applicable standards, such as ASTM or federal specification number.
- 6. Identification of known deviations from the project drawings and specification sections.
- 7. Manufacturers' installation instructions.
- 8. Trade Contractor's stamp, initialed or signed, certifying:
 - a. Verification of field measurements.
 - b. Review of submittals for compliance with all contract requirements except those specifically indicated.
 - c. Compatibility of the work shown with that of all affected trades.

C. Changes in those products for which shop drawings have been accepted will not be permitted unless those changes have been accepted in writing by the Architect.

D. Shop Drawings:

1. Shop drawings may be submitted in electronic or paper format.

E. Product Data:

- 1. Edit product data to identify pertinent products or models and submit an electronic copy or a minimum of five (5) bound hard copies of brochures of related materials and/or equipment.
- 2. The electronic document will be reviewed and returned to the General Contractor and the Owner. The five (5) hard copies shall be returned as follows: one (1) for the Architect, three (3) for the General Contractor, and one (1) for the Owner.

F. Submission of Samples:

- 1. Samples will be provided to the General Contractor for the Architect's review and approval, and stored on-site through the construction of work.
- 2. All samples shall be delivered to the General Contractor with a sample identification tag attached and properly filled in.
- 3. Three (3) specimens of each sample requested shall be submitted, unless otherwise specified in the individual sections of the specifications.

G. Supplementary Drawings:

1. As work progresses, in addition to the shop drawings required, drawings shall be prepared by the Trade Contractor at a suitable scale not less than 1/4" = 1'-0" for changes in the work, where an approved substitution for equipment requires such changes.

2.3 RESUBMISSION REQUIREMENTS

A. Resubmittals shall be submitted in a time which will avoid delaying the project. Changes which are made, other than those suggested by the Architect, shall be indicated. If the General Contractor considers any alteration to shop drawings suggested by the Architect to constitute a change to the Contract Documents, the Trade Contractor shall submit to the General Contractor notice as required in the General Conditions.

PART 3 EXECUTION

3.1 COORDINATION OF SUBMITTALS

A. General:

Prior to submittal for approval, use all means necessary to fully coordinate all material including, but not necessarily limited to:

- 1. Determine and verify all interface conditions, catalog numbers and similar data.
- 2. Coordinate with other trades as required.
- 3. Clearly indicate all deviations from the requirements of the Contract Documents.

B. Grouping of Submittals:

 Unless otherwise specified, make all submittals in groups containing all associated items to ensure that information is available for checking each item when it is received. Partial submittals may be rejected as not complying with the provisions of the Contract Documents, and the Contractor shall be strictly liable for all delays so occasioned.

3.2 TIMING OF SUBMITTALS

A. General:

 Make all submittals far enough in advance of scheduled dates for installation to provide all time required for reviews, for securing necessary approvals, for possible revisions and resubmittals, and for placing orders and securing delivery.

B. Architect Review Time:

- 1. In scheduling, <u>allow at least 14 calendar days for review</u> by the Architect following the receipt of the submittal, except in the case of structural submittals.
- C. Structural submittals review will begin within seven (7) days of receipt, and continue until completion in recognition of the Trade Contractors' need to submit a complete coordinated set of documents.
- D. The Architect reserves the right to review submissions in a proper sequence reflecting the logical sequence and relative priority of the construction components, so as to insure the preparation of a properly coordinated set of drawings. The Architect further reserves the right to keep related samples that have been submitted.

E. Delays:

1. Delays caused by tardiness in receipt of submittals will not be an acceptable basis for extension of the contract completion date.

3.3 ARCHITECT'S REVIEW ACTION

- A. The Architect will take one of the following actions on each submission.
 - 1. "Action 1 No Exceptions Taken". This action means the fabrication, manufacture or construction may proceed providing submittal complies with Contract Documents.
 - 2. "Action 2 Make Corrections Noted. Resubmission for Record Only". This action means that fabrication, manufacture or construction may proceed provided submittal complies with the Architect notations and the Contract Documents. If for any reason the Contractor cannot comply with the notations, Contractor shall resubmit as described for submittals stamped 3.
 - 3. "Action 3 Revise and Resubmit". This action means that submittal does not comply with the Contract Documents, and that fabrication, manufacture or construction shall not proceed.
 - 4. "Action 4 Rejected". This action means that the submittal is not in conformance with the Contract Documents or is incomplete or inadequate.

3.4 DISTRIBUTION OF SUBMITTALS AFTER REVIEW

- A. After review by the Architect, shop drawings and product data bearing the Architect's stamp and signature will be distributed to the General Contractor.
- B. General Contractor shall distribute to concerned Trade Contractors, suppliers, vendors and to the Owner.

END OF SECTION 01340

SECTION 01620

STORAGE AND PROTECTION

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Provide secure storage and protection for products to be incorporated into the work, and maintenance and protection for products after installation and until completion of the work.

1.2 STORAGE

- A. Store products immediately on delivery, and protect until installed in the work.
 - 1. Store in accordance with manufacturer's instructions, with seals and labels intact and legible.
- B. Store products subject to damage by elements in substantial weathertight enclosures.
 - 1. Maintain temperatures within ranges required by manufacturer's instructions.
 - 2. Provide humidity control for sensitive products as required by manufacturer's instructions.
 - 3. Store unpacked products on shelves, in bins or in neat piles, accessible for inspection.

C. Exterior Storage:

- 1. Provide platforms, blocking or skids to support fabricated products above ground; prevent soiling or staining.
 - a. Cover products, subject to discoloration or deterioration from exposure to the elements, with impervious sheet coverings. Provide adequate ventilation to avoid condensation.
- D. Arrange storage in manner to provide easy access for inspection.
- E. Off-site storage of materials designated for use on this project will be allowed provided that the following are provided:
 - 1. Certificate of Insurance indicating specific materials.
 - 2. Affidavit of Certificate of Title to specific materials and right of free access.

3. Request for Payment must be accompanied with above.

1.3 MAINTENANCE OF STORAGE

- A. Maintain periodic system of inspection of stored products on scheduled basis to assure that:
 - 1. State of storage facilities is adequate to provide required conditions.
 - 2. Required environmental conditions are maintained on continuing basis.
 - 3. Surfaces of products exposed to elements are not adversely affected.
 - a. Any weathering of products, coatings and finishes is acceptable under requirements of Contract Documents.
- B. Mechanical and electrical equipment which requires servicing during long-term storage shall have complete manufacturer's instructions for servicing accompanying each item, with notice of enclosed instructions shown on exterior of package.
 - 1. Comply with manufacturer's instructions on scheduled basis.
 - 2. Space heaters which are part of electrical equipment shall be connected and operated continuously until equipment is placed in service.

1.4 PROTECTION AFTER INSTALLATION

- A. Provide protection of installed products to prevent damage from subsequent operations. Remove when no longer needed, prior to completion of work.
- B. Control traffic to prevent damage to equipment and surfaces.
- C. Provide coverings to protect finished surfaces from damage.
 - 1. Cover projections, wall corners and jambs, sills and soffits of openings, in areas used for traffic and for passage of products in subsequent work.
 - 2. Protect finished floors and stairs from dirt and damage:
 - a. In areas subject to foot traffic, secure heavy paper, sheet goods, or other materials in place.
 - b. For movement of heavy products, lay planking or similar materials in place.

- c. For storage of products, lay tight wood sheathing in place.
- d. Cover walls and floor of elevator cars and surfaces of elevator car doors used by construction personnel.
- D. Waterproofed and Roofing Surfaces:
 - 1. Prohibit use of surfaces for traffic of any kind, and for storage of any products.
 - 2. When some activity must take place in order to carry out the contract, obtain recommendations of Installer for protection of surface.
 - a. Install recommended protection; remove on completion of that activity.
 - b. Restrict use of adjacent unprotected areas.
- E. Lawns and Landscaping:
 - 1. Protect traffic of any kind across planted lawn and landscaped areas.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION 01620

SECTION 01732

SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Demolition and removal of the roofing, flashing and metal trim.
 - 2. Repair procedures for selective demolition operations.
- B. Related Sections include the following:
 - 1. All project sections in these specifications for use of the premises and phasing requirements.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- C. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.5 SUBMITTALS

- A. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.
- B. Proposed Dust-Control and Noise-Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate.
- C. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's onsite operations are uninterrupted.
 - 2. Interruption of utility services, if any.
 - 3. Coordination for shut-off, capping, and continuation of utility services, as applicable.
 - 4. Coordination of Owner's continuing occupancy of of existing building.
- D. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.
- E. Pre-Demolition Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.
- F. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.6 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.
- D. Pre-Demolition Conference: Conduct conference at Project site to comply with requirements in Division 1. Review methods and procedures related to selective demolition including, but not limited to, the following:
 - Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review structural load limitations of existing structure.
 - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

1.7 PROJECT CONDITIONS

- A. Maintain access to existing driveways, parking areas, walkways, and other adjacent occupied or used facilities.
 - 1. Do not close or obstruct driveways, parking areas, walkways, or other occupied or used facilities without written permission from authorities having jurisdiction.
- B. Owner assumes no responsibility for condition of areas to be selectively demolished.
- C. The existing building materials may contain asbestos. Contractor to be responsible for accomplishing all demolition and disposal efforts (and testing, if required) in accordance with all applicable local, state and federal laws and ordinances. The Contractor will be required to file a notification form with the EPA for any project that includes demolition (see sample form attached). This usually requires a 10-day notice before demolition can begin.
- D. Storage or sale of removed items or materials on-site will not be permitted.
- E. Utility Service: Maintain all existing utilities required to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

1.8 WARRANTY

- A. Existing Warranties: Remove, replace, patch, repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.
 - If possible, retain original Installer or Fabricator to patch the exposed Work listed below that is damaged during selective demolition. If it is impossible to engage original Installer or Fabricator, engage another recognized, experienced and specialized firm.

PART 2 PRODUCTS

2.1 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.
 - 1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 2. Use materials whose installed performance equal or surpass that of existing materials.
- B. Comply with material and installation requirements specified in individual specification sections.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

3.2 UTILITY SERVICES

A. Existing Utilities: Maintain services required to remain and protect them against damage during selective demolition operations.

- B. Do not interrupt existing utilities serving occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to authorities having jurisdiction.
 - 1. Provide at least 72 hours' notice to Owner if shutdown of any service is required.
- C. Utility Requirements: Locate, identify, disconnect, and seal or cap-off indicated utilities serving areas to be selectively demolished.
 - 1. Owner will arrange to shut-off indicated utilities when requested by Contractor.
 - 2. Arrange to shut-off indicated utilities with utility companies.
 - 3. If utility services are required to be removed, relocated, or abandoned, before proceeding with selective demolition, provide temporary utilities that bypass area of selective demolition and that maintain continuity of service to other parts of building.
 - 4. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after by-passing.

3.3 PREPARATION

- A. Dangerous Materials: Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with selective demolition operations.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
 - 2. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
 - 3. Protect existing site improvements, appurtenances, and landscaping to remain.

- 4. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
- C. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - Provide protection to ensure safe passage of people around selective demolition area, and to and from occupied portions of building.
 - Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain, or that are exposed during selective demolition operations.
 - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
- D. Temporary Enclosures: Provide temporary enclosures for protection of existing building and construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - Where heating or cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures.
 Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
- E. Temporary Partitions: Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise.
- F. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.

3.4 POLLUTION CONTROLS

- A. Dust Control: Use water mist, temporary enclosures, and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations.
 - 1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
 - 2. Wet mop floors to eliminate trackable dirt and wipe down walls and doors of demolition enclosure. Vacuum carpeted areas.
- B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas and in accordance with all local, state, federal laws and guidelines.
 - Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- C. Cleaning: Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.5 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

- 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
- 5. Maintain adequate ventilation when using cutting torches.
- 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
- 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
- 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- 9. Dispose of demolished items and materials promptly.
- 10. Return elements of construction and surfaces that are to remain to condition existing before selective demolition operations began.
- B. Existing Facilities: Comply with Building Manager's requirements for using and protecting building entries and other building facilities during selective demolition operations.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.
- D. Roofing: Remove no more existing roofing than can be covered in one day by new roofing. Refer to applicable Division 7 Section for new roofing requirements.

3.6 PATCHING AND REPAIRS

- A. General: Promptly repair damage to adjacent construction caused by selective demolition operations.
- B. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
- C. Finishes: Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials in accordance with all applicable local, state, federal laws and ordinances. Do not allow demolished materials to accumulate on-site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials and dispose of at designated legal locations in accordance with all local, state, federal laws and ordinances.

3.8 SELECTIVE DEMOLITION

- A. See Construction Documents.
- B. Existing Items to be Removed and Reinstalled: See Construction Documents.
- C. Existing Items to Remain: See Construction Documents.

END OF SECTION 01732

SECTION 06105

MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Wood blocking, cants, and nailers.
- 2. Wood sleepers.

B. Related Requirements:

- 1. Section 061600 "Sheathing."
- 2. Section 061753 "Shop-Fabricated Wood Trusses."
- 3. Section 062013 "Exterior Finish Carpentry" for nonstructural carpentry items exposed to view and not specified in another Section.
- 4. Section 313116 "Termite Control" for site application of borate treatment to wood framing.

1.3 DEFINITIONS

- A. Dimension Lumber: Lumber of 2 inches nominal or greater, but less than 5 inches nominal in least dimension.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. NHLA: National Hardwood Lumber Association.
 - 2. SPIB: The Southern Pine Inspection Bureau.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with

- requirements. Indicate type of preservative used and net amount of preservative retained.
- 2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
- 3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Certified Wood: Lumber and plywood shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."
- B. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.
 - 3. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 - 4. Provide dressed lumber, S4S, unless otherwise indicated.
- C. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.
 - 2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

2.3 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 - 1. Blocking.
 - 2. Nailers.
 - 3. Rooftop equipment bases and support curbs.
 - 4. Cants.
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber and the following species:
 - 1. Mixed southern pine; SPIB.
- C. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.
- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.
- E. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.4 PLYWOOD BACKING PANELS

A. Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, in thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.

2.5 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 - 1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity; provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Wood Screws: ASME B18.6.1.
- D. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts, and where indicated, flat washers.

2.6 MISCELLANEOUS MATERIALS

A. Adhesives for Gluing Furring and Sleepers to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by adhesive manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- C. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- D. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels.
- E. Do not splice structural members between supports unless otherwise indicated.
- F. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

- 1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c.
- G. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- H. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
 - 1. Use inorganic boron for items that are continuously protected from liquid water.
 - 2. Use copper naphthenate for items not continuously protected from liquid water.
- I. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
 - 2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One and Two-Family Dwellings.
- J. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug, but do not countersink nail heads unless otherwise indicated.

3.2 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA registered borate treatment. Apply borate solution by spraying to comply with EPA registered label.
- B. Protect miscellaneous rough carpentry from weather. If, despite protection, miscellaneous rough carpentry becomes wet, apply EPA registered borate treatment. Apply borate solution by spraying to comply with EPA registered label.

END OF SECTION 06105

SECTION 06160

SHEATHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Roof sheathing.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Indicate type of preservative used and net amount of preservative retained.
 - 2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
 - 3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.4 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For following products, from ICC-ES:
 - Preservative-treated plywood.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS

- A. Emissions: Products shall meet the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- B. Certified Wood: For the following wood products, provide materials produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship".
 - 1. Plywood.
- C. Plywood: DOC PS 1.
- D. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.
- E. Factory mark panels to indicate compliance with applicable standard.

2.2 ROOF SHEATHING

- A. Plywood Sheathing: Exposure 1 sheathing.
 - 1. Span Rating: Not less than 32/16.
 - 2. Nominal Thickness: Not less than ½-inch.

2.3 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
 - For roof sheathing panels, provide screws in type and length recommended by sheathing manufacturer for thickness of sheathing to be attached, with organicpolymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B 117. Provide washers or plates if recommended by sheathing manufacturer.

2.4 MISCELLANEOUS MATERIALS

A. Adhesives for Field Gluing Panels to Framing: Formulation complying with ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

- 1. Adhesives shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- 2. Adhesives shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.
- C. Securely attach to framing by fastening as indicated, complying with the following:
 - 1. NES NER-272 for power-driven fasteners.
 - 2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."
- D. Coordinate sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.
- F. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

END OF SECTION 06160

SECTION 07210

SHINGLED ROOFING SYSTEM AND ACCESSORIES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Architectural roof shingles to replace existing roof shingles.
 - 2. Roofing felt underlayment to be installed continuously on the entire roof
 - 3. Ice and water membrane to be installed continuously on the entire roof including drip edges, rakes and ridges.
 - 4. Aluminum drip edge flashings to be installed continuously along all eaves and rakes.
 - 5. Ridge vent in the location shown on the project drawings.
 - 6. Galvanized metal roof curb flashing.
 - 7. Galvanized metal vent pipe flashing with neoprene collar.
 - 8. Galvanized metal stack pipe vent flashing with collar and rain hood.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated provide catalogue cuts of all materials to be utilized including fasteners.
- B. Samples for Verification: Provide full-size samples and/or units for each type of miscellaneous building materials to be utilized on the project.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of building insulation through one source from a single manufacturer.

- B. Fire-Test-Response Characteristics: Provide all materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
 - 1. Surface-Burning Characteristics: ASTM E 84.
 - 2. Fire-Resistance Ratings: ASTM E 119.
 - 3. Combustion Characteristics: ASTM E 136.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store Products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials and materials used with solvent based materials, in accordance with requirements of local authorities having jurisdiction.
- C. Deliver shingles to site in manufacturer's unopened labeled bundles. Promptly verify quantities and conditions. Immediately remove damaged products from site.

1.6 PROJECT CONDITIONS

A. Anticipate and observe environmental conditions (temperature, humidity and moisture) within limits recommended by manufacturer for optimum results. Do not install products under environment conditions outside manufacturer's absolute limits

1.7 WARRANTY

- A. Manufacturer's Warranty: Furnish shingle manufacturer's warranty for the product listed below:
 - 1. CertainTeed Independence: Lifetime limited warranty, with adjustments for commercial applications.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Products or Manufacturers: Subject to compliance with requirements, provide one of the products or manufacturers specified.

2.2 ASPHALT FIBERGLASS ROOF SHINGLES

- A. Three layer laminated fiberglass roofing shingles, UL Class A rated, meeting the requirements of ASTM D3462, D3018 Type 1 Self-Sealing, D3162, Class F 110 mph wind resistance, glass fiber mat base; ceramically colored/UV resistant mineral surface granules across entire face; algae-resistant shingles.
 - 1. Basis of Design: "Independence" by CertainTeed weight 250 lbs per square.
- B. Color to be selected by Owner and Architect from manufacturer's standards.

2.3 ROOFING FELT UNDERLAYMENT

A. Asphalt saturated felt, non-perforated; ASTM D 226.

2.4 ICE AND WATER MEMBRANE

- A. Reinforced, self-adhering waterproofing membrane impregnated and coated with SBS-modified asphalt complying with ASTM D1970, D2523, D903, D4073, E96 and UL 790. Minimum 40 mil thickness, slip resistant.
 - Manufacturers:
 - a. W.R. Grace
 - b. CertainTeed
 - c. IKO

2.5 ALUMINUM FLASHINGS

A. Sheet Flashing: ASTM B 209; 6" x 0.025 thick aluminum drip edge; finish to match existing aluminum fascia color.

2.6 RIDGE VENT

A. Filtered Ridge Vent, 12" wide, with external baffles to deflect the wind, 18 sq.in. of net free area per linear foot, able to accommodate roof pitches from 3:12 to 16:12, wind driven rain resistant design to 110 mph, capable of being cap shingled and constructed with polypropylene resins capable of passing ASTM G155 advanced weathering test with less than 10% variance.

- GAF Timberline
- 2. IKO Cambridge

2.7 GALVANIZED METAL FLASHINGS

- A. Sheet Flashing: ASTM A 361/A361M; 26 Gauge (0.45 mm) steel with minimum G115/Z350 galvanized coating.
- B. Bituminous Paint: Acid and alkali resistant type; black color.
- C. Tinner's Paint: Color as selected by Architect to coordinate with shingle color.

2.8 FASTENERS

- A. Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for roofing with penetration a minimum of ½" projection through the bottom of the sheathing.
- B. Exposed fasteners to be ring shank aluminum color to match existing.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with the manufacturer's requirements in which substrates and related work are specified and for other conditions affecting performance.
 - 1. Proceed with installation only after all unsatisfactory conditions have been corrected.
 - In the event unsuitable substrates such as rotted or deteriorated underlayment are discovered after the removal of the existing roofing, the Contractor shall notify the Architect prior to proceeding.

3.2 PREPARATION

- A. Clean substrates of substances harmful to insulation or vapor retarders, including removing projections capable of puncturing vapor retarders or of interfering with insulation attachment.
- B. Broom clean deck surfaces under eave protection and underlayments prior to the installation of roofing materials.

3.3 INSTALLATION, GENERAL

- A. Comply with Manufacturer's written instructions applicable to all products and applications indicated.
- B. See project drawings for information not identified in these specifications.

3.4 FLASHING FABRICATION

- A. Form flashing to profiles indicated on Drawings and to protect roofing materials from physical damage and shed water.
- B. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.

3.5 PROTECTION

A. Protect all materials from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 07210

SECTION 07530

MEMBRANE ROOFING SYSTEMS AND ACCESSORIES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of contract including General and Supplementary Conditions and Division 1 specifications apply to work of this section. See Section 07565 for Preparation for Re-Roofing and Repairs.

1.2 DESCRIPTION OF WORK

- A. Provide all labor, materials, tools, equipment, and supervision necessary to complete the installation of a new .060-inch thick, non-reinforced, EPDM membrane Fully Adhered Roofing System, including flashings and accessories as specified herein including, but not limited to, the following:
 - 1. Complete removal of the existing EPDM membrane roof system, including EPDM membrane flashing, vapor barrier (if any), rigid insulation and perimeter metal edging and blocking.
 - 2. Provide a new fully adhered EPDM membrane roofing and flashing system, including new rigid insulation installed over the existing plywood roof deck, per enclosed drawings, adhered with insulation adhesive and pre-finished metal edging per enclosed specifications.
 - 3. The Roofing Contractor shall be fully knowledgeable of all requirements of the Contract Documents and shall make themselves aware of all job site conditions that will affect their work.
 - 4. The Roofing Contractor shall confirm all given information and advise the Building Owner, prior to Bid, of any conflicts that will affect their cost proposal.
 - 5. Any Contractor who intends to submit a Bid using a roofing system other than the approved manufacturer must submit for prequalification in writing fourteen (14) days prior to the Bid date. Any Contractor who fails to submit all information as requested will be subject to rejection. Bids stating "as per plans and specs" will be unacceptable.
- B. Extent of EPDM, fully adhered, non-reinforced, flexible sheet roofing (FSR) is shown on drawings and is hereby defined to include non-traffic bearing sheet membrane system intended for weather exposure as primary roofing.
- C. Location of this type of roofing is at portions of the existing roof surfaces as shown on the project drawings.

- D. Types of flexible sheet roofing specified in this section include the following:
 - 1. Fully adhered elastomeric EPDM (Ethylene Propylene Diene Terpolymer Membrane) sheet.

E. Roof Accessories including:

- 1. Curb flashing, pipe flashing, vent stack flashing, surface-mounted reglet with counterflashing.
- 2. Pressure treated wood nailers and blocking.
- 3. Rigid Insulation Polyisocyanurate, thickness to match existing roof deck insulation, +/- 3 inches.
- 4. Cover board/underlayment, 1/4" thick where required.
- Stainless steel screws and fasteners.
- F. Demolition of existing roofing as shown on the project drawings.

1.3 QUALITY ASSURANCE

A. Manufacturer:

 Obtain primary flexible sheet roofing from a single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials.

B. UL/FM Listing:

1. Provide labeled materials, which have been tested and listed by UL for application indicated, with the Class "A" rating and/or FM I-90 rating.

C. Inspection:

1. A factory representative must be present at the start of the work, at least twice during the work, and at the completion of the work. The Architect shall be notified of each inspection.

D. Installation:

- 1. Unless otherwise noted in this specification, the Roofing Contractor must strictly comply with the manufacturer's current specifications and details.
- 2. The roofing system must be installed by an applicator authorized and trained by the manufacturer in compliance with shop drawings as approved by the manufacturer. The roofing applicator shall be thoroughly experienced and, upon request, be able to provide evidence of having at least five (5) years successful experience installing single-ply EPDM roofing systems and having installed at least one (1) roofing application or several similar systems of equal or greater size within one (1) year.
- 3. Provide adequate number of experienced workmen regularly engaged in this type of work who are skilled in the application techniques of the materials specified. Provide at least one thoroughly trained and experienced Superintendent on the job at all times roofing work is in progress.
- 4. There shall be no deviations made from this specification or the approved shop drawings without the prior written approval of the Architect. Any deviation from the manufacturer's installation procedures must be supported by a written certification on the manufacturer's letterhead and presented for the specifier's consideration.
- 5. Upon completion of the installation, the applicator shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer in order to determine whether or not corrective work will be required before the warranty will be issued. Notify the Building Owner seventy-two (72) hours prior to the manufacturer's final inspection.

1.4 SUBMITTALS

A. Product Data:

- Submit specifications, installation instructions, and general recommendations from manufacturers of flexible sheet roofing system materials for types of roofing required. Include data substantiating that materials comply with requirements.
- 2. Submit a sample of manufacturer's Membrane System Warranty.

B. Shop Drawings:

1. Submit complete shop drawings showing roof configuration and sheet layout, details at perimeter and special conditions.

- Submit a letter of certification from the manufacturer which certifies the Roofing Contractor is authorized to install the manufacturer's roofing system and lists foremen who have received training from the manufacturer, along with the dates training was received.
- 3. Certification of the manufacturer's warranty reserve.
- C. Upon completion of the installed work, submit copies of the manufacturer's final inspection to the specifier prior to the issuance of the manufacturer's warranty.

1.5 JOB CONDITIONS

A. Weather:

1. Proceed with roofing work only when existing and forecasted weather conditions will permit work to be performed in accordance with manufacturer's recommendations and warranty requirements. All materials shall be within the temperature range of 60°F-80°F at time of installation.

1.6 SPECIAL PROJECT WARRANTY

- A. Provide written warranty, signed by Contractor, Installer and Manufacturer of primary roofing materials, agreeing to replace/repair defective materials and workmanship, including significant leakage of water, abnormal aging or deterioration of materials, and other failures of sheet roofing, to perform as required within warranty period. Repairs and replacements required because of acts of God and other events beyond Contractor's/Installer's/manufacturer's control (and which exceed performance requirements) shall be completed by Contractor/Installer and paid for by Owner at prevailing rates.
- B. Warranty period of product to be ten (10) years after date of substantial completion. The roofing warranty shall be a 10-year Total System Warranty covering materials and labor with no dollar limits.

1.7 JOB CONDITIONS, CAUTIONS, AND WARNINGS

Refer to Manufacturer's Fully Adhered Roofing System specification.

- A. Material Safety Data Sheets (MSDS) must be on location at all times during the transportation, storage, and application of materials. Copies of all MSDS sheets shall be presented to the Owner.
- B. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent intrusion of water.

- C. When loading materials onto the roof, the Authorized Roofing Applicator must comply with the requirements of the Building Owner to prevent overloading and possible disturbance to the building structure.
- D. Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.
- E. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.
- F. Provide protection, such as 3/4-inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.
- G. The surface on which the roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of, or be incompatible with, the new installation, such as fins, sharp edges, foreign materials, oil and grease.
- H. New roofing shall be complete and weather-tight at the end of the work-day.
- I. Contaminants such as grease, fats, and oils shall not be allowed to come in direct contact with the roofing membrane.

PART 2 PRODUCTS

2.1 GENERAL

A. Compatibility:

 Provide products that are recommended by manufacturers to be fully compatible with indicated substrates, or provide separation materials as required to eliminate contact between incompatible materials. All materials must be covered by the warranty.

2.2 MEMBRANE

A. Non-reinforced elastomeric sheet material (EPDM), manufacturer's standard thickness, but not less than 60 mils, Shore A hardness of 60-80, 1,400 psi minimum tensile strength, 250% elongation, vapor permeable, ultraviolet and ozone resistant, low temperature brittleness of -40°F (-40°C), standard color. Material to be suitable for direct exposure and for adherence to substrate. Membrane to conform to the minimum requirements of ASTM D4637 and provided in the largest sheets possible. The Contractor shall supply prefabricated corners. EPDM shall be supplied in 16-foot minimum width rolls.

B. Products/Manufacturers:

Provide one of the following:

- 1. Carlisle Tire and Rubber Co.
- 2. Goodyear.
- Versico.
- 4. Firestone.

2.3 UNDERLAYMENT

- A. A uniform composition of fiber-reinforced with no facer for use as a cover board where indicated or otherwise required, 1/4 inch minimum thickness, 4' x 4' or 4' x 8' board sizes.
- B. Basis of Design: Securock Cover Board by Carlisle.

2.4 MISCELLANEOUS MATERIALS

- A. Sheet Seaming System:
 - 1. Manufacturer's standard materials for "plastic welding" of lapped joints to create seams of strength equal to sheet strength, and including edge sealer to cover exposed sheet edges and eliminate loose edges and fishmouths.
- B. Cant Strips, Expansion Joints, and Flashing:
 - 1. Types recommended by manufacturer provided at locations indicated and at locations recommended by manufacturer, and including adhesive tapes, flashing cements, and sealants.
- C. Flashings, Sealants, and Adhesives:
 - 1. Products as recommended by the manufacturer to provide compatibility with the membrane, with minimum properties similar to membrane.
- D. Prefabricated EPDM corners.

2.5 MISCELLANEOUS INSULATION MATERIALS

- A. Adhesive for Bonding Insulation:
 - 1. Type recommended by insulation manufacturer and complying with fire resistance requirements.

B. Mastic Sealer:

1. Type recommended by insulation manufacturer for bonding edge joints and filling voids.

2.6 MISCELLANEOUS ROOFING ACCESSORIES

A. Nailers:

1. Pressure treated wood blocking with .040-lbs/cu.ft. retention capable of 20-year water submersion without rotting.

B. Drip Edge:

Provide shop fabricated metal drip edge system.

- 1. Metal drip edge flashing to be .032 inch thick aluminum, mill finish aluminum finish, with continuous anchor cleat fabricated of 22 or 24 gauge galvanized metal.
- C. Fascia, where required to be replaced:
 - 1. Metal fascia to be fabricated of .032 inch thick aluminum, color to match existing remaining fascia.
 - 2. Provision for expansion and contraction.
 - 3. Concealed splice plates.
 - 4. Prefabricated corners.

PART 3 EXECUTION

3.1 INSPECTION

A. Installer of FSR system must examine substrate and conditions under which roofing work is to be performed, and must notify Contractor in writing of unsatisfactory conditions. Do not proceed with roofing work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

3.2 PREPARATION OF SUBSTRATE

- A. Comply with manufacturers' instructions for preparation of substrate to receive PSR system.
- B. Clean substrate of dust, debris, and other substances detrimental to FSR system work. Remove any sharp projections.

- C. Install cant strips, flashings, and similar accessory items as shown, and as recommended by manufacturer even though not shown.
- D. Prevent compounds from entering concealed spaces and from spilling or migrating onto surfaces of other work.
- E. Fill all gaps in substrate greater than 1/8" and level all surfaces of substrate with height differential greater than 1/8".

3.3 INSTALLATION

A. General:

1. The roof system installation shall meet the requirements of FM-I90 and shall be suitable for minimum wind speeds of 72 miles per hour. Certification is required with Bid submittal indicating the manufacturer has received and agreed to the wind speed design.

B. Membrane Installation:

- 1. General: Start installation only in presence of manufacturer's technical representative.
 - a. Install underlayment over the existing substrate with sheets butted tightly together with no joints or gaps greater than 1/8-inch.
 - Secure underlayment to the substrate with the specified adhesive in accordance with the manufacturer's instructions.
- 2. Cut sheets to maximum size possible in order to minimize seams.
- 3. Install membrane by unrolling over prepared underlayment, nailing only at perimeter, and at roofing penetrations. Apply adhesive to underlayment and membrane, and lap adjoining sheets at a minimum of 12" and bond with adhesive, as recommended by manufacturer; covering top edges of each sheet at seams with uniform fillet of special sealant. Install flashings or counterflashings as shown and as recommended by manufacturer.
- 4. Membrane Placement and Bonding:
 - a. Unroll and position membrane without stretching. Allow the membrane to relax for approximately one half hour before bonding. Fold the sheet back onto itself so half the underside of the membrane is exposed.
 - Apply the bonding adhesive in accordance with the manufacturer's published instructions, to both the underside of the membrane and the underlayment. Allow the adhesive

to dry until it is tacky, but will not string or stick to a dry finger touch.

- Roll the coated membrane into the coated underlayment while avoiding wrinkles. Brush down the bonded half of the membrane sheet with a soft bristle push broom to achieve maximum contact.
- ii. Fold back the unbonded half of the membrane sheet and repeat the bonding procedure.
- c. Install adjoining membrane sheets in the same manner, overlapping edges approximately 12 inches. Do not apply bonding adhesive to the splice area.
- 5. Membrane Splicing (Adhesive Splice):
 - a. Fold the top sheet back and clean the dry splice area (minimum 6 to 7 inches wide) of both membrane sheets by scrubbing with clean natural fiber rags saturated with splice cleaner or primer.
 - b. Apply Splicing Cement and In-Seam Sealant in accordance with the manufacturer's specifications and roll the top sheet onto the mating surface.
 - c. Roll the splice with a 2-inch wide steel roller and wait at least 2 hours before applying Lap Sealant to the splice edge following the manufacturer's requirements.
 - d. Field splices without In-Seam Sealant must be overlaid with uncured flashing.
- 6. Membrane Splicing (Tape Splice):
 - a. Overlap adjacent sheets and mark a line ½-inch out from the top sheet.
 - b. Fold the tape sheet back and clean the dry splice area (minimum 6 inches wide) of both membrane sheets with Primer as required by the membrane manufacturer.
 - c. Apply Splice Tape to bottom sheet with the edge of the release film along the marked line. Press tape onto the sheet using hand pressure. Overlap tape roll ends a minimum of 1-inch.
 - d. Remove the release film and press the top sheet onto the tape using hand pressure.

- e. Roll the seam toward the splice edge with a 2-inch wide steel roller. Apply steady, even pressure.
- f. Install a 6-inch wide section of Pressure-Sensitive Flashing or Elastoform Flashing over all field splice intersections and seal edges of flashing with Lap Sealant.
- g. The use of Lap Sealant with tape splices is optional except at tape overlaps and cut edges of reinforced membrane where Lap Sealant is required.

C. Edge Strips, Expansion Joints, and Flashings:

1. Coordinate with framing at deck below. Anchor to wood blocking. Install flashings to cover all sides and terminate at inner side of top edges or at interior of curbs or boxes.

2. Flashing:

- a. Wall and curb flashing shall be cured EPDM membrane.

 Continue the deck membrane at wall flashing where practicable.
- b. Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing, including metal edging/coping, and roof drain applications.

3. Daily Seal:

- a. On phased roofing, when the completion of flashings and terminations is not achieved by the end of the workday, a daily seal must be performed to temporarily close the membrane to prevent water infiltration.
- Use Sure-Seal Pourable Sealer or other acceptable membrane seal in accordance with the manufacturer's requirements.

4. Clean-Up:

- Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner.
- b. Prior to the manufacturer's inspection for warranty, the applicator must perform a pre-inspection to review all work and to verify all flashing has been completed, as well as the application of all caulking.

END OF SECTION 07530

SECTION 07565

PREPARATION FOR RE-ROOFING AND REPAIRS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Preparation of existing roofing system for a new roof membrane system and for repairs of existing roofing systems.

1.2 RELATED SECTIONS

A. Division 7, Section 07530, Membrane Roofing System and Accessories.

1.3 SYSTEM DESCRIPTION

A. All roof areas as indicated: Remove and dispose of existing roofing membrane, perimeter metal flashings, metal counter flashings, and accessories. Clean existing plywood roof deck.

1.4 QUALIFICATIONS

A. Materials Removal Firm: Company specializing in performing the work of this section with minimum three (3) years documented experience.

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Do not remove existing materials when weather conditions threaten the integrity of the building contents or intended continued occupancy.
- B. Maintain continuous temporary protection prior to, and during, installation of new roofing system.
- C. Existing roofing and/or flashing system materials may contain asbestos. Contractor responsible for proper removal and disposal in compliance with all federal, state, and local guidelines and requirements.

1.6 SCHEDULING

- A. Schedule work to coincide with commencement of installation of new roofing system.
- B. Remove only existing roofing materials that can be replaced with new materials the same day as the weather will permit.

1.7 COORDINATION

A. Coordinate the work with other affected mechanical and electrical work associated with roof penetrations.

PART 2 PRODUCTS

2.1 MATERIALS

A. Temporary Protection: Sheet fiber reinforced plastic; provide weights to retain sheeting in position.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that existing Roof Deck surface is clear and ready for work of this section. Examine Roof Deck for broken or damaged panels. See Section 01732, Selective Demolition

3.2 PREPARATION

A. Sweep roof surface clean of loose material and debris. Remove all loose refuse and properly dispose off-site. Vacuum clean Roof Deck before applying adhesives.

3.3 MATERIALS REMOVAL

- A. Remove all metal counter flashings, flashings, blocking, fasteners, etc.
- B. Vacuum existing roof deck and carefully scrape membrane from surface, without causing damage to roof deck substrate.
- C. Remove metal perimeter flashings, flashings around roof protrusions, pitch pans and pockets.

3.4 TEMPORARY PROTECTION

- A. Protect finished work.
- B. Provide temporary protective sheeting over uncovered deck surfaces.
- C. Turn sheeting up and over curbing. Retain sheeting in position with weights.
- D. Provide for surface drainage from sheeting.
- E. Do not permit traffic over unprotected or repaired deck surface.
- F. Do not permit materials to be stored or delivered to the finished roof.

PART 4 HAZARDOUS MATERIALS

4.1 ASBESTOS (IF ENCOUNTERED)

- A. Contractor to follow all federal, state, and local regulations and shall post all OSHA required signage.
- B. Persons not involved in the removal shall be excluded from the roof.
- C. Workers are recommended to wear protective clothing and respirators.
- D. The roofing materials shall be wetted down with water and shall be maintained in damp condition throughout the removal and disposal process.

 Roof cutters are not allowed to remove the roof.
- E. The roofing materials must be cut with hand tools to minimize fiber release.
- F. Material and/or bagged material shall not be dropped from the roof.
- G. All hazardous materials to be properly disposed of by Contractor in strict accordance with all federal, state, and local regulations. Copies of all disposal manifests shall be presented to the Owner.

END OF SECTION 07565

PRAFT AIA® Document A107™ - 2007

Standard Form of Agreement Between Owner and Contractor for a Project of Limited Scope

AGREEMENT made as of the day of in the year Two Thousand Seventeen		
(In words, indicate day, month and year.)		
BETWEEN the Owner: (Name, legal status, address and other information)	ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion.	
Town of Seabrook 99 Lafayette Road Seabrook, NH	The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as	
and the Contractor: (Name, legal status, address and other information)	revisions to the standard form text is available from the author and should be reviewed.	
	This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion	
for the following Project: (Name, location and detailed description)	or modification.	
DPW ROOF REPLACEMENT		
The Owner's Project Manager (OPM): (Name, legal status, address and other information)		
Trident Building, LLC 155 North Broadway Salem, NH 03079		
The Owner's Design Consultant is:		
The HL Turner Group, Inc. 27 Locke Road Concord, NH 03301		
The Owner and Contractor agree as follows.		

ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

TABLE OF ARTICLES

- 1 THE WORK OF THIS CONTRACT
- 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 3 CONTRACT SUM
- 4 PAYMENT
- 5 DISPUTE RESOLUTION
- 6 ENUMERATION OF CONTRACT DOCUMENTS
- 7 GENERAL PROVISIONS
- 8 OWNER
- 9 CONTRACTOR
- 10 DESIGN CONSULTANT OR OPM
- 11 SUBCONTRACTORS
- 12 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
- 13 CHANGES IN THE WORK
- 14 TIME
- 15 PAYMENTS AND COMPLETION
- 16 PROTECTION OF PERSONS AND PROPERTY
- 17 INSURANCE & BONDS
- 18 CORRECTION OF WORK
- 19 MISCELLANEOUS PROVISIONS
- 20 TERMINATION OF THE CONTRACT
- 21 CLAIMS AND DISPUTES

ARTICLE 1 THE WORK OF THIS CONTRACT

The Contractor shall execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner. (Insert the date of commencement, if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)

Within 7 (seven) days from contract date.

§ 2.2 The Contract Time shall be measured from the date of commencement.

§ 2.3 The Contractor shall achieve Substantial Completion of the entire Work not later than August 30, 2014

Portion	of Work	Substantial Completion D	ate
Insert provision	stments of this Contract Time as provas, if any, for liquidated damages relator for early completion of the Work.)		nments. Substantial Completion on time or for
iquidated Dam	ages shall be assessed at the rate of S	\$200/day beyond December	er 7, 2017.
	shall pay the Contractor the Contractontract Sum shall be one of the follo		the Contractor's performance of the
[X]	Stipulated Sum, in accordance with	h Section 3.2 below	
[]	Cost of the Work plus the Contract	tor's Fee, in accordance w	ith Section 3.3 below
[]	Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 3.4 below		
Based on the se	election above, complete Section 3.2,	3.3 or 3.4 below.)	
3.2 The Stipula	ated Sum shall be (), subject to a	additions and deductions a	s provided in the Contract
Documents and State the number Owner to accept	alated Sum is based upon the following are hereby accepted by the Owner: ers or other identification of accepted to the alternates subsequent to the eight the amount for each and the date	d alternates. If the bidding execution of this Agreemen	or proposal documents permit the t, attach a schedule of such other
3.2.2 Unit price Identify and sta	•	ity limitations, if any, to w	hich the unit price will be applicable.)
	e/Repair Decking Rate for additional services	Units and Limitations	Price Per Unit (\$0.00)
	tes included in the stipulated sum, if ance and state exclusions, if any, from		nces
Item		Allowance	
	HE WORK PLUS CONTRACTOR'S FE of the Work is as defined in Exhibit		Cost of the Work.

§ 3.3.2 The Contractor's Fee:

3

(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)

		RACTOR'S FEE WITH A GUARANTEED ined in Exhibit A, Determination of the	
§ 3.4.2 ∃	The Contractor's Fee:		
		of the Work or other provision for de	termining the Contractor's Fee and the
	of adjustment to the Fee for ch		
§ 3.4.3.1 » (\$ «→), subject to additions and dec	ork and the Contractor's Fee is guarar	nteed by the Contractor not to exceed « ovided in the Contract Documents. Such Aaximum Price, Costs which would
cause th	e Guaranteed Maximum Price	to be exceeded shall be paid by the C	ontractor without reimbursement by the
Owner. (Insert	specific provisions if the Contro	ractor is to participate in any savings.)	
	The Guaranteed Maximum Pr t Documents and are hereby ac	rice is based on the following alternate ecepted by the Owner:	es, if any, which are described in the
« 			
•	Unit Prices, if any: y and state the unit price, and s		which the unit price will be applicable.)
	Item	Units and Limitations	Price Per Unit (\$0.00)
83131	Allowaneas included in the G	Suaranteed Maximum Price, if any:	
•		allowances, and state whether they in	clude labor materials or both
(racrity.	t and state the amounts of any	anovances, and state whether they in	citac tabor, materials, or bottes
	ltem .	Allowance	
§ 3.4.3.5	Assumptions, if any, on which	h the Guaranteed Maximum Price is b	ased:
«			
§ 4.1 PR § 4.1.1 I Certific account	ates for Payment issued by the of the Contract Sum to the Co	ayment submitted to the Design Consultant or OPM, the Owrontractor as provided below and elsewhold the contractor as provided below as provided by the contractor as pro	ner shall make progress payments on there in the Contract Documents.
	The period covered by each Aparth, or as follows:	plication for Payment shall be one cal	endar month ending on the last day of
tne mor	itii, or as follows.		
tne mor	idi, of as follows.		

4

§ 4.1.3 Provided that an Application for Payment is received by the Design Consultant or OPM not later than the 5th day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the 5th day of the following month. If an Application for Payment is received by the Design Consultant or OPM after the date fixed above, payment shall be made by the Owner not later than Thirty (30) days after the Design Consultant or OPM receives the Application for Payment. (Federal, state or local laws may require payment within a certain period of time.)						
§ 4.1.4 Retainage, if any, shall be withheld as follows:						
10%						
§ 4.1.5 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located. (Insert rate of interest agreed upon, if any.)						
% »						
 § 4.2 FINAL PAYMENT § 4.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 18.2, and to satisfy other requirements, if any, which extend beyond final payment; .2 the contractor has submitted a final accounting for the Cost of the Work, where payment is on the basis of the Cost of the Work with or without a guaranteed maximum price; and .3 a final Certificate for Payment has been issued by the Design Consultant or OPM. § 4.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Design Consultant or OPM 's final Certificate for Payment, or as follows: 						
ARTICLE 5 DISPUTE RESOLUTION § 5.1 BINDING DISPUTE RESOLUTION For any claim subject to, but not resolved by, mediation pursuant to Section 21.3, the method of binding dispute resolution shall be as follows: (Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, claims will be resolved in a court of competent jurisdiction.)						
[] Arbitration pursuant to Section 21.4 of this Agreement						
[X] Litigation in a court of competent jurisdiction						
[] Other (Specify)						
ARTICLE 6 ENUMERATION OF CONTRACT DOCUMENTS § 6.1 The Contract Documents are defined in Article 7 and, except for Modifications issued after execution of this Agreement, are enumerated in the sections below. § 6.1.1 The Agreement is this executed AIA Document A107–2007, Standard Form of Agreement Between Owner						

and Contractor for a Project of Limited Scope.

§ 6.1.2 The Supplementary and other Conditions of the Contract: There are no Supplementary Conditions

	Document	litie		Date		Pages	
8613T	he Specifications:						
		or refer to an exhibit	t attachø	ed to this Agreeme	nt)		
(Either list the Specifications here or refer to an exhibit attached to this Agreement.) Attached as Exhibit B							
	Section	Title		Date		Pages	
							-
§ 6.1.4 The Drawings:							
(Either list the Drawings here or refer to an exhibit attached to this Agreement.)							
Attached as Exhibit B							
	Number	Ti	itle		Date		
§ 6.1.5 The Addenda, if any:							
•	•						
	Number	D	ate		Pages		
					_		-

Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are enumerated in this Article 6.

§ 6.1.6 Additional documents, if any, forming part of the Contract Documents:

There are no Additional Documents

.3 Other documents:

(List here any additional documents that are intended to form part of the Contract Documents.)

None

ARTICLE 7 GENERAL PROVISIONS § 7.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in Article 6 and consist of this Agreement (including, if applicable, Supplementary and other Conditions of the Contract), Drawings, Specifications, Addenda issued prior to the execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Design Consultant or OPM. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 7.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons or entities other than the Owner and the Contractor.

§ 7.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 7.4 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Design Consultant or OPM and the Design Consultant or OPM's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 7.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 7.5.1 The Design Consultant or OPM and the Design Consultant or OPM 's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and \$pecifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Design Consultant or OPM 's or Design Consultant or OPM 's consultants' reserved rights.

§ 7.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Design Consultant or OPM and the Design Consultant or OPM 's consultants.

§ 7.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmission, unless otherwise provided in the Agreement or in the Contract Documents.

ARTICLE 8 OWNER

§ 8.1 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 8.1.1 The Owner shall furnish all necessary surveys and a legal description of the site.

§ 8.1.2 The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 8.1.3 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 9.6.1, the Owner shall secure and pay for other necessary approvals, easements, assessments and charges required for the construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 8.2 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents, or repeatedly fails to carry out the Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order is eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

§ 8.3 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner, without prejudice to any other remedy the Owner may have, may correct such deficiencies and may deduct the reasonable cost thereof, including Owner's expenses and

compensation for the Owner's Representative 's services made necessary thereby, from the payment then or thereafter due the Contractor.

ARTICLE 9 CONTRACTOR

§ 9.1 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 9.1.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 9.1.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 8.1.1, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Design Consultant or OPM any errors, inconsistencies, or omissions discovered by or made known to the Contractor as a request for information in such form as the Design Consultant or OPM may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents.

§ 9.1.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Design Consultant or OPM any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Design Consultant or OPM may require.

§ 9.2 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 9.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters.

§ 9.2.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

§ 9.3 LABOR AND MATERIALS

§ 9.3.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 9.3.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

§ 9.3.3 The Contractor may make a substitution only with the consent of the Owner, after evaluation by the Design Consultant or OPM and in accordance with a Modification.

§ 9.4 WARRANTY

The Contractor warrants to the Owner and Design Consultant or OPM that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation or normal wear and tear under normal usage.

R

§ 9.5 TAXES

The Contractor shall pay sales, consumer, use and other similar taxes that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 9.6 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS

§ 9.6.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as other permits, fees, licenses and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 9.6.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 9.7 ALLOWANCES

The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. The Owner shall select materials and equipment under allowances with reasonable promptness. Allowance amounts shall include the costs to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Allowance amounts shall not include the Contractor's costs for unloading and handling at the site, labor, installation, overhead, and profit.

§ 9.8 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 9.8.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Design Consultant or OPM 's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 9.8.2 The Contractor shall perform the Work in general accordance with the most recent schedule submitted to the Owner and Design Consultant or OPM.

§ 9.9 SUBMITTALS

§ 9.9.1 The Contractor shall review for compliance with the Contract Documents and submit to the Design Consultant Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in coordination with the Contractor's construction schedule and in such sequence as to allow the Design Consultant reasonable time for review. By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Design Consultant that the Contractor has (1) reviewed and approved them; (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so; and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. The Work shall be in accordance with approved submittals.

§ 9.9.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents.

§ 9.10 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 9.11 CUTTING AND PATCHING

The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

§ 9.12 CLEANING UP

The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus material from and about the Project.

§ 9.13 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Design Consultant and OPM harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Design Consultant or OPM . However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Design Consultant.

§ 9.14 ACCESS TO WORK

The Contractor shall provide the Owner and Design Consultant or OPM access to the Work in preparation and progress wherever located.

§ 9.15 INDEMNIFICATION

§ 9.15.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Design Consultant and OPM, Design Consultant and OPM 's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 9.15.1.

§ 9.15.2 In claims against any person or entity indemnified under this Section 9.15 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 9.15.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE 10 DESIGN CONSULTANT OR OPM

§ 10.1 The Design Consultant or OPM will provide administration of the Contract and will be an Owner's representative during construction, until the date the Design Consultant or OPM issues the final Certificate for Payment. The Design Consultant or OPM will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

§ 10.2 The Design Consultant or OPM will visit the site at intervals appropriate to the stage of the construction to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Design Consultant or OPM will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Design Consultant or OPM will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 10.3 On the basis of the site visits, the Design Consultant or OPM will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Design Consultant or OPM will not be responsible for the Contractor's

failure to perform the Work in accordance with the requirements of the Contract Documents. The Design Consultant or OPM will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

- § 10.4 Based on the Design Consultant & OPM's evaluations of the Work and of the Contractor's Applications for Payment, the Design Consultant & OPM will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.
- § 10.5 The Design Consultant or OPM has authority to reject Work that does not conform to the Contract Documents and to require inspection or testing of the Work.
- § 10.6 The Design Consultant will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.
- § 10.7 The Design Consultant will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Design Consultant will make initial decisions on all claims, disputes and other matters in question between the Owner and Contractor but will not be liable for results of any interpretations or decisions rendered in good faith.
- § 10.8 The Design Consultant's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.
- § 10.9 Duties, responsibilities and limitations of authority of the Design Consultant as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Design Consultant & OPM. Consent shall not be unreasonably withheld.

ARTICLE 11 SUBCONTRACTORS

- § 11.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site.
- § 11.2 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Design Consultant & OPM the names of the Subcontractors or suppliers for each of the principal portions of the Work. The Contractor shall not contract with any Subcontractor or supplier to whom the Owner or Design Consultant or OPM has made reasonable written objection within ten days after receipt of the Contractor's list of Subcontractors and suppliers. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.
- § 11.3 Contracts between the Contractor and Subcontractors shall (1) require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by the Contract Documents, assumes toward the Owner and Design Consultant or OPM, and (2) allow the Subcontractor the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Contract Documents, has against the Owner.

ARTICLE 12 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 12.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under conditions of the contract identical or substantially similar to these, including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such claim as provided in Article 21.

- § 12.2 The Contractor shall afford the Owner and separate contractor's reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's activities with theirs as required by the Contract Documents.
- § 12.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities, damage to the Work or defective construction of a separate contractor.

ARTICLE 13 CHANGES IN THE WORK

- § 13.1 By appropriate Modification, changes in the Work may be accomplished after execution of the Contract. The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, with the Contract Sum and Contract Time being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Owner, Contractor and Design Consultant, or by written Construction Change Directive signed by the Owner and Design Consultant or OPM.
- § 13.2 Adjustments in the Contract Sum and Contract Time resulting from a change in the Work shall be determined by mutual agreement of the parties or, in the case of a Construction Change Directive signed only by the Owner and Design Consultant & OPM, by the Contractor's cost of labor, material, equipment, and reasonable overhead and profit, unless the parties agree on another method for determining the cost or credit. Pending final determination of the total cost of a Construction Change Directive, the Contractor may request payment for Work completed pursuant to the Construction Change Directive. The Design Consultant or OPM will make an interim determination of the amount of payment due for purposes of certifying the Contractor's monthly Application for Payment. When the Owner and Contractor agree on adjustments to the Contract Sum and Contract Time arising from a Construction Change Directive, the Design Consultant or OPM will prepare a Change Order.
- § 13.3 The Design Consultant or OPM will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.
- § 13.4 If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be equitably adjusted as mutually agreed between the Owner and Contractor; provided that the Contractor provides notice to the Owner and Design Consultant & OPM promptly and before conditions are disturbed.

ARTICLE 14 TIME

- § 14.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.
- § 14.2 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.
- § 14.3 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.
- § 14.4 The date of Substantial Completion is the date certified by the Design Consultant in accordance with Section 15.4.3.
- § 14.5 If the Contractor is delayed at any time in the commencement or progress of the Work by changes ordered in the Work, by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably anticipatable, unavoidable casualties or any causes beyond the Contractor's control, or by other causes which the Design Consultant & OPM determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Design Consultant & OPM may determine, subject to the provisions of Article 21.

ARTICLE 15 PAYMENTS AND COMPLETION § 15.1 APPLICATIONS FOR PAYMENT

§ 15.1.1 Where the Contract is based on a Stipulated Sum or the Cost of the Work with a Guaranteed Maximum Price, the Contractor shall submit to the Design Consultant & OPM, before the first Application for Payment, a schedule of values, allocating the entire Contract Sum to the various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Design Consultant & OPM may require. This schedule, unless objected to by the Design Consultant or OPM, shall be used in reviewing the Contractor's Applications for Payment.

§ 15.1.2 With each Application for Payment where the Contract Sum is based upon the Cost of the Work, or the Cost of the Work with a Guaranteed Maximum Price, the Contractor shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner to demonstrate that cash disbursements already made by the Contractor on account of the Cost of the Work equal or exceed (1) progress payments already received by the Contractor, less (2) that portion of those payments attributable to the Contractor's Fee; plus (3) payrolls for the period covered by the present Application for Payment.

§ 15.1.3 Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

§ 15.1.4 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or other encumbrances adverse to the Owner's interests.

§ 15.2 CERTIFICATES FOR PAYMENT

§ 15.2.1 The Design Consultant & OPM will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Design Consultant & OPM determines is properly due, or notify the Contractor and Owner in writing of the Design Consultant or OPM's reasons for withholding certification in whole or in part as provided in Section 15.2.3.

§ 15.2.2 The issuance of a Certificate for Payment will constitute a representation by the Design Consultant to the Owner, based on the Design Consultant & OPM's evaluations of the Work and the data comprising the Application for Payment, that, to the best of the Design Consultant's knowledge, information and belief, the Work-has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Design Consultant or OPM. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Design Consultant or OPM has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 15.2.3 The Design Consultant or OPM may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Design Consultant or OPM 's opinion the representations to the Owner required by Section 15.2.2 cannot be made. If the Design Consultant or OPM is unable to certify payment in the amount of the Application, the Design Consultant or OPM will notify the Contractor and Owner as provided in Section 15.2.1. If the Contractor and the Design Consultant or OPM cannot agree on a revised amount, the Design Consultant or OPM will promptly issue a Certificate for Payment for the amount for which the Design Consultant or OPM is able to make such representations to the Owner. The Design Consultant or OPM may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Design Consultant or OPM's

opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 9.2.2, because of

- .1 defective Work not remedied:
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 15.2.4 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 15.3 PROGRESS PAYMENTS

§ 15.3.1 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to sub-subcontractors in similar manner.

§ 15.3.2 Neither the Owner nor Design Consultant or OPM shall have an obligation to pay or see to the payment of money to a Subcontractor except as may otherwise be required by law.

§ 15.3.3 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 15.4 SUBSTANTIAL COMPLETION

§ 15.4.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 15.4.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Design Consultant & OPM a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 15.4.3 Upon receipt of the Contractor's list, the Design Consultant will make an inspection to determine whether the Work or designated portion thereof is substantially complete. When the Design Consultant determines that the Work or designated portion thereof is substantially complete, the Design Consultant will issue a Certificate of Substantial Completion which shall establish the date of Substantial Completion, establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 15.4.4 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 15.5 FINAL COMPLETION AND FINAL PAYMENT

§ 15.5.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Design Consultant will promptly make such inspection and,

when the Design Consultant finds the Work acceptable under the Contract Documents and the Contract fully performed, the Design Consultant will promptly issue a final Certificate for Payment stating that to the best of the Design Consultant's knowledge, information and belief, and on the basis of the Design Consultant's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Design Consultant's final Certificate for Payment will constitute a further representation that conditions stated in Section 15.5.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 15.5.2 Final payment shall not become due until the Contractor has delivered to the Owner a complete release of all liens arising out of this Contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including costs and reasonable attorneys' fees.

§ 15.5.3 The making of final payment shall constitute a waiver of claims by the Owner except those arising from

- .1 liens, claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

§ 15.5.4 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 16 PROTECTION OF PERSONS AND PROPERTY § 16.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Subsubcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons and property and their protection from damage, injury or loss. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, a Subcontractor, a sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 16.1.2 and 16.1.3, except for damage or loss attributable to acts or omissions of the Owner or Design Consultant or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 9.15.

§ 16.2 HAZARDOUS MATERIALS

§ 16.2.1 The Contractor is responsible for compliance with the requirements of the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents, and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Design Consultant in writing. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shutdown, delay and startup.

§ 16.2.2 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Design Consultant & OPM, Design Consultant & OPM 's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area, if in fact, the material or substance presents the risk of bodily injury or death as described in Section 16.2.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

§ 16.2.3 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

ARTICLE 17 INSURANCE AND BONDS

§ 17.1 The Contractor shall purchase from, and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, insurance for protection from claims under workers' compensation acts and other employee benefit acts which are applicable, claims for damages because of bodily injury, including death, and claims for damages, other than to the Work itself, to property which may arise out of or result from the Contractor's operations and completed operations under the Contract, whether such operations be by the Contractor or by a Subcontractor or anyone directly or indirectly employed by any of them. This insurance shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater, and shall include contractual liability insurance applicable to the Contractor's obligations under Section 9.15. Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. Each policy shall contain a provision that the policy will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. The Contractor shall cause the commercial liability coverage required by the Contract Documents to include: (1) the Owner, the Design Consultant & OPM and the Design Consultant & OPM 's Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 17.2 OWNER'S LIABILITY INSURANCE

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 17.3 PROPERTY INSURANCE

§ 17.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance on an "all-risk" or equivalent policy form, including builder's risk, in the amount of the initial Contract Sum, plus the value of subsequent modifications and cost of materials supplied and installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 15.5 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 17.3.1 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and sub-subcontractors in the Project.

§ 17.3.2 The Owner shall file a copy of each policy with the Contractor before an exposure to loss may occur. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

§ 17.3.3 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, subsubcontractors, agents and employees, each of the other, and (2) the Design Consultant & OPM, Design Consultant & OPM is consultants, separate contractors described in Article 12, if any, and any of their subcontractors, subsubcontractors, agents and employees for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to Section 17.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as

appropriate, shall require of the Design Consultant & OPM, Design Consultant & OPM 's consultants, separate contractors described in Article 12, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 17.3.4 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their sub-subcontractors in similar manner.

§ 17.4 PERFORMANCE BOND AND PAYMENT BOND

§ 17.4.1 The Owner shall require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

§ 17.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 18 CORRECTION OF WORK

§ 18.1 The Contractor shall promptly correct Work rejected by the Design Consultant or OPM or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Design Consultant or OPM 's services and expenses made necessary thereby, shall be at the Contractor's expense, unless compensable under Section A.2.7.3 in Exhibit A, Determination of the Cost of the Work.

§ 18.2 In addition to the Contractor's obligations under Section 9.4, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 15.4.3, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty.

§ 18.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 8.3.

§ 18.4 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 18.5 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Article 18.

ARTICLE 19 MISCELLANEOUS PROVISIONS § 19.1 ASSIGNMENT OF CONTRACT

Neither party to the Contract shall assign the Contract without written consent of the other, except that the Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 19.2 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located, except, that if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 21.4.

§ 19.3 TESTS AND INSPECTIONS

Tests, inspections and approvals of portions of the Work required by the Contract Documents or by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Design Consultant & OPM timely notice of when and where tests and inspections are to be made so that the Design Consultant & OPM may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating the costs to the Contractor.

§ 19.4 COMMENCEMENT OF STATUTORY LIMITATION PERIOD

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 19.4.

ARTICLE 20 TERMINATION OF THE CONTRACT § 20.1 TERMINATION BY THE CONTRACTOR

If the Design Consultant fails to certify payment as provided in Section 15.2.1 for a period of 30 days through no fault of the Contractor, or if the Owner fails to make payment as provided in Section 4.1.3 for a period of 30 days, the Contractor may, upon seven additional days' written notice to the Owner and the Design Consultant, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 20.2 TERMINATION BY THE OWNER FOR CAUSE

§ 20.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 20.2.2 When any of the above reasons exists, the Owner, upon certification by the Design Consultant or OPM that sufficient cause exists to justify such action, may, without prejudice to any other remedy the Owner may have and after giving the Contractor seven days' written notice, terminate the Contract and take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 20.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 20.2.1 the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 20.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Design Consultant & OPM 's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or

Owner, as the case may be, shall be certified by the Design Consultant, upon application, and this obligation for payment shall survive termination of the Contract.

§ 20.3 TERMINATION BY THE OWNER FOR CONVENIENCE

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

ARTICLE 21 CLAIMS AND DISPUTES

- § 21.1 Claims, disputes and other matters in question arising out of or relating to this Contract, including those alleging an error or omission by the Design Consultant but excluding those arising under Section 16.2, shall be referred initially to the Design Consultant & OPM for decision. Such matters, except those waived as provided for in Section 21.8 and Sections 15.5.3 and 15.5.4, shall, after initial decision by the Design Consultant or OPM or 30 days after submission of the matter to the Design Consultant or OPM, be subject to mediation as a condition precedent to binding dispute resolution.
- § 21.2 If a claim, dispute or other matter in question relates to or is the subject of a mechanic's lien, the party asserting such matter may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.
- § 21.3 The parties shall endeavor to resolve their disputes by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with their Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the mediation. The request may be made concurrently with the binding dispute resolution but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.
- § 21.4 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any claim, subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association, in accordance with the Construction Industry Arbitration Rules in effect on the date of this Agreement. Demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.
- § 21.5 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation; (2) the arbitrations to be consolidated substantially involve common questions of law or fact; and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).
- § 21.6 Any party to an arbitration may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim not described in the written Consent.
- § 21.7 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 21.8 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

except anticipated profit arising directly from the Work.					
This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 20. Nothing contained in this Section 21.8 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents. This Agreement entered into as of the day and year first written above.					
OWNER (Signature)	CONTRACTOR (Signature)				
Town of Seabrook, NH					
(Printed name and title)	(Printed name and title)				