SPECIFICATIONS FOR 2024 ROOF REPLACEMENT PROJECT

Prepared For:	Village of Gurnee
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Project Location: 1151 Kilbourne Rd. Gurnee, IL 60031

Project Work: ROOF REPLACEMENT & RELATED WORK

New Roof System:

EPDM – Ballasted Metal Roof Repairs

Prepared By:



RCL Engineering Group

Engineers, Architects & Building Envelope Specialists



Milwaukee

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<u>Chicago</u>

825 N. Cass Avenue, Suite 107, Westmont, IL 60559 847-965-3366

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12221 Wood Lake Drive Suite 200 Burnsville, MN 55337 612-238-0802

Indianapolis

9465 Counselor's Row Indianapolis, IN 46240 317-584-5440

March 9, 2022 January 4, 2024 rev

Date:



1-800-549-0802

NOTICE TO BIDDERS

ALL SECTIONS OF THIS SET OF SPECIFICATIONS HAVE BEEN UPDATED AS OF JANUARY 4. 2024. ALL BIDDERS MUST READ AND REVIEW ALL SECTIONS THOROUGHLY TO CAPTURE THE INTENT OF THE ENTIRE DOCUMENT. ROOFING CONSULTANTS LTD. DOES NOT HAVE Α TYPICAL SET OF STANDARD SPECIFICATIONS. EACH PROJECT IS DIFFERENT FROM PREVIOUS PROJECTS AND CIRCUMSTANCES REQUIRE THAT SPECIFICATIONS WRITTEN FOR ONE PROJECT SHALL NOT BE USED, IN PART OR IN WHOLE, FOR OTHER PROJECTS.

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> RCL Engineering Group 825 N. Cass Avenue, Suite 107 Westmont, IL 60559

1-800-549-0802

www.RCLeng.com

BID FORM

LOCATION:	1151 Kilbourne Rd. Gurnee, IL 60031
PROJECT WORK:	Roof Replacement: New EPDM Roof System Roof Repairs: Reseal seams and flashing on metal roofs.
PRE-BID MEETING: BIDS CLOSE: BID OPENING:	January 17, 2024 @ 10:00 am January 30, 2024 @10:00 am PUBLIC
MAIL BIDS TO:	GURNEE PUBLIC WORKS 1151 Kilbourne Road Gurnee, IL 60031 c/o Heather Galan

The undersigned acknowledges having carefully examined all sections of the specification booklet and bidding documents. The undersigned attended the pre-bid meeting and is familiar with all aspects, both existing and proposed, of the project work. The undersigned proposes to furnish all labor and materials and provide all equipment and manpower necessary to perform all work, specified and reasonably implied, in the specification documents for the consideration of the monetary amount(s) listed on the following page (BF/2).

Email	FAX:
FEIN:	IL License #:
Signature:	Title:
Name:	Date:
Project Completion Date:	May 30, 2024
Liquidated Damages:	\$1,500/day
Building Permit:	Permit required. Fees will be waived.
Bid Bond:	Required; 5%
Performance/Payment Bond:	Required;
Approved Roof System Manufacturers:	Carlisle – EPDM Roofing JM – EPDM Roofing Holcim Elevate - EPDM Roofing Henry - Coatings

SUMMARY OF PROJECT WORK***

Work Areas:	All low slope and metal roofs
Removal:	All roof flashing materials on the low slope areas. Salvage ballast for reuse.
Membrane:	60 Mil EPDM - Ballasted
Coverboard:	3/8" EPS Fanfold insulation. Attachment: Loose laid
Insulation:	None Attachment:
Air/Vapor Barrier:	None
Deck/Substrate:	Steel
Sheet Metal:	New Perimeter Edge Metal, Counterflashing,
Metal Roof Repairs:	Apply sealant at fasteners, seams, and flashings. Replace damaged gutters.
Wood Work:	Install nailers as required for the added insulation thickness.
Mechanical Work:	Disconnect/Reconnect HVAC equipment by others if required. Replace drain hardware, strainers and clamping rings.
Warranty:	20-year Manufacturer's Total System – EPDM Roof 2-Year Contractor's Workmanship – EPDM and Metal Roof Repairs
***	Refer to Enclosed Specifications & Drawings for complete scope of work

Roofing & Sheet Metal Work:

Roof 1 (Ballasted EPDM): \$ Roof 2 (Metal Roof Repairs): \$				
UNIT PRICING:	Install new concrete pavers at locations not identified on roof plan	\$	_/ ea. 2'x2'	
	Replace wet/deteriorated insulation with new dry isocyanurate insulation to match thickness	\$	/ sq.Ft.	
	Replace Deteriorated steel decking with new	\$	/ sq.ft.	



	Additional river	rock stone ballast per tr	uckload.	\$	/Truck
	(List tons/truckl	oad.)			Tons
Preventative Maintenance Visit: (Per Manufacturer & NRCA Recommend Procedures)				\$	/ Visit
TIME & MATERIAL PRICING:			Per man hour \$ Material Cost Plus __		
Notes: 1) Unit Pricing includes all materials and labor to install the associated item.					
Fauliant Describle Start Dates				(not calendar days)	
Addendum(s):	#:	Date:		Initials:	
	#:				

CONTRACTOR'S REFERENCE LIST

Comparable Projects in General Scope/Size

1.	Project:	
	Size:	
	Location:	
	Contact:	
	Phone #:	Email:
2	Project:	
۷.		
	Size:	
	Location:	
	Contact:	
	Phone #:	Email:
~	- · ·	
3.	Project:	
	Size:	
	Location:	
	Contact:	
	Phone #:	
	Phone #.	Email:
4.	Project:	
	Size:	
	Location:	
	Contact:	
	Phone #:	Email:
5.	Project:	
	Size:	
	Location:	
	Contact:	
	Phone #:	Email:
	Phone #.	Elliali.
6.	Project:	
	Size:	
	Location:	
	Contact:	
	Phone #:	Email:
7.	Project:	
	Size:	
	Location:	
	Contact:	
	Phone #:	Email:
8.	Project:	
	Size:	
	Location:	
	Contact:	
	Phone #:	Email:



CONTRACTOR'S SUB-CONTRACTORS

TRADE: Name: Address: Phone #: Email:	<u>Masonry</u>
TRADE: Name: Address: Phone #: Email:	<u>Sheet Metal</u>
TRADE: Name: Address: Phone #: Email:	Plumbing
TRADE: Name: Address: Phone #: Email:	<u>HVAC</u>
TRADE: Name: Address: Phone #: Email:	<u>Electrical</u>
TRADE: Name: Address: Phone #: Email:	Lightning Protection
TRADE: Name: Address: Phone #: Email:	
TRADE: Name: Address: Phone #: Email:	

RCL Engineering Group Engineers, Architects & Building Envelope Specialists

INSTRUCTIONS TO BIDDERS

PROJECT IDENTIFICATION			
PROJECT OWNER:	Village of Gurnee		
PROJECT NAME:	2024 Roof Replacement Project		
SITE ADDRESS:	1151 Kilbourne Rd.		
	Gurnee, IL 60031		

The Invitation For Bids (IFB) consists of the Notice, this Instructions To Bidders, the Bid Form, the General Conditions of the Construction Contract, the Supplemental General Conditions (if any), the Special Conditions (if any), the Forms to be used, the Scope of Work as described by the Plans and Specifications, other documents listed in the Specifications, and any addenda which may be issued, all of which request qualified bidders to submit competitive prices or bids for providing the described work on the project.

1. CONDITIONS AT SITE OR STRUCTURE:

Bidders shall visit the Project Site and shall be responsible for ascertaining pertinent local conditions such as location, accessibility, general character of the site or building, and the character and extent of existing work within or adjacent to the site. Claims as a result of failure to carry out comprehensive site inspections, will not be considered by the Owner. (See Section 7 of the General Conditions entitled "Conditions at Site.")

2. EXPLANATIONS TO BIDDERS:

No oral explanation in regard to the meaning of drawings and specifications will be made and no oral instructions will be given before the award of the contract. Discrepancies, omissions or doubts as to the meaning of drawings and specifications shall be communicated in writing to the Owner's Representative for interpretation. Bidders must so act to assure that questions reach the Owner's Representative at least six (6) days prior to the time set for the receipt of bids to allow a sufficient time for an addendum to reach them before the submission of their bids. If, however, there are two (2) weeks or less between the first bid advertisement and the time set for receipt of bids, then bidders must submit questions in such a manner that they reach the Owner's Representative no later than three (3) days prior to the time set for receipt of bids. Any interpretation made will be in the form of an addendum to the plans and/or specifications, which will be forwarded to all bidders, and its receipt shall be acknowledged by the bidder on Bid Forms.

3. TIME FOR COMPLETION:

(a) "Time for Completion" shall be designated by the Owner on the Invitation for Bids or other pre-bid documents and shall mean the number of consecutive calendar days following the issuance of the Notice to Proceed which the Contractor has to substantially complete all Work required by the Contract. In some instances, the Time for Completion may be stated in the form of a Contract Completion Date based on a stipulated date of Notice to Proceed.

Unless otherwise specified, the Contractor shall achieve Final Completion within thirty (30) days after the date of Substantial Completion.

- (b) When the Notice to Proceed is issued, it will state a Contract Completion Date, which has been set by the Owner based on date of the Notice to Proceed and the Time for Completion.
- (c) The Contractor, in preparing and submitting his bid, is required to take into consideration normal weather conditions. Normal weather does not mean statistically average weather, but rather means a range of weather patterns, which might be anticipated, based on weather data for the past ten (10) years, (i.e., conditions which are not extremely unusual). Normal weather conditions shall be determined from the public historical records available, such as the U.S. Department of Commerce, local Climatological Data Sheets, National Oceanic and Atmospheric Administration / Environmental Data and Information Service, National Climatic Center or National Weather Service. The data sheets to be used shall be those for the locality or localities closest to the site of the work. No additional compensation will be paid to the Contractor because of adverse weather conditions; however, an extension of time for abnormal weather will be considered by the Owner as indicated in the General Conditions.



(d) If the Owner designates the public historical climatological records to be used, the bidder shall use those records in computing bids. If the Owner requests each bidder to indicate the records used, each bidder may select the public historical climatological records upon which he will rely in computing his bid. In the latter situation, each bidder shall designate in the space provided which of such climatological data records he used when formulating his bid. A bidder's failure to designate climatological records when submitting a bid shall not disqualify his bid, but shall constitute a waiver of the right to claim any extension of time as the result of abnormal weather. In either case, the bid submitted and the time of completion shall be presumed to have been based upon normal weather derived from the climatological records used.

4. PREPARATION AND SUBMISSION OF BIDS:

- (a) Bids shall be submitted on the forms furnished, or copies thereof, and shall be signed in ink. Erasures or other changes in a bid must be explained or noted over the signature of the bidder. Bids containing any conditions, omissions, unexplained erasures, alterations or items not called for in the proposal, or irregularities of any kind, may be rejected by the Owner as being incomplete or non-responsive.
- (b) Each bid must give the complete legal name and full business address of the Bidder and be signed by the Bidder, or the Bidder's authorized representative, with the Bidder's usual signature. Bids by partnerships must be signed in the partnership name by one of the general partners of the partnership or an authorized representative, followed by the designation or title of the person signing, and a list of the partners. Bids by corporations must be signed with the legal name of the corporation followed by the name of the state in which it is incorporated and by the signature and title of the person authorized to bind it in this matter. The name of each person signing shall be typed or printed below the signature. A signature on a bid by a person who identifies his title as "Resident," "Secretary," "Agent" or other designation without disclosing the principal firm, shall be held to be the bid of the individual signing. When requested by the Owner, satisfactory evidence of the authority of the officer signing on behalf of the corporation shall be furnished. Trade or fictitious names may be referenced by using "t/a _____," but bids shall be in the legal name of the person or entity submitting the bid.
- (c) The Bidder must also place his or her Social Security Number (SSN) if an individual, or its Federal Employer Identification Number (FEIN) if a proprietorship, partnership, corporation, Limited Liability Company or other legal entity in the space provided on the Bid Form.

5. BID GUARANTEE:

- (a) Any bid (including the Total Base Bid plus all Additive Bid Items) which exceeds five hundred thousand dollars (\$500,000) shall be accompanied by a Bid Bond payable to the Owner as obligee in an amount equal to five percent (5%) of the amount of the bid, unless waived by the Notice of Invitation for Bids. A Bid Bond is required for this project. The Bid Bond must be issued by a surety company which is legally authorized by the state of the jurisdiction of the Work to do fidelity and surety business in that state. Such Bid Bond shall guarantee that the Bidder will not withdraw his bid during the period of thirty (30) days following the opening of bids, that if his bid is accepted, he will enter into a formal contract with the Owner in accordance with the Contract Between Owner and Contractor, included as a part of the IFB Documents; that he will submit a properly executed and authorized Standard Performance Bond and Standard Labor and Material Payment Bond on the forms included in the IFB documents; and that in the event of the withdrawal of said bid within said period, or failure to enter into said contract and give said bonds within ten (10) days after he has received notice of acceptance of his bid, the Bidder shall be liable to the Owner for the difference between the amount specified in said bid and such larger amount for which the Owner may contract with another party to perform the work covered by said bid, up to the amount of the bid guarantee. This amount represents the damage to the Owner on account of the default of the bidder in any particular hereof.
- (b) The Bid Bonds or other bid security will be returned to all except the three lowest bidders after the formal opening of bids. The remaining Bid Bonds or bid security will be returned to the bidders after the Owner and the accepted bidder have executed the Contract and the Performance Bond and the Payment Bond have been approved by the Owner.
- (c) If the required Contract and bonds have not been executed within thirty (30) days after the date of the opening of the bids, then the bond or other bid security of any bidder will be returned upon his request, provided he has not been notified of the acceptance of his bid prior to the date of such request.



6. WITHDRAWAL OR MODIFICATION OF BIDS:

Bids may be withdrawn or modified by withdrawal or modification may be made by the person signing the bid or by an individual(s) who is authorized by him on the face of the bid. Written modifications may be made on the bid form itself, on the envelope in which the bid is enclosed, or on a separate document. Written modifications, whether the original is delivered or faxed, must be signed by the person making the modification or withdrawal, and fax messages must be sent in the name of said person. Unless otherwise specified by the Bidder, the modification will be applied to the TOTAL BASE BID amount shown on the Bid Form.

7. RECEIPT OF BIDS:

- (a) Bids will be received at or before the date and the hour and at the place stipulated in the Invitation for Bids as may be modified by subsequent Addenda.
- (b) It is the responsibility of the bidder to assure that his bid and any bid modifications are delivered to the place designated for receipt of bids by the date and hour (deadline) set for receipt of bids. No bids or bid modifications submitted or offered after the date and hour designated for receipt of bids will be accepted or considered.
- (c) The Bid Officer is the Owner's representative designated to receive bids at the time and place noted in the IFB and to open the bids received at the appointed time.

8. OPENING OF BIDS:

(a) Bids will be opened on the date and at the time specified in the Invitation for Bids or as modified by subsequent Addenda. The bid opening will be Public and results will be made available on our website shortly thereafter.

9. ERRORS IN BIDS:

A Bidder may withdraw his bid from consideration if the price bid was substantially lower than the other bids due solely

to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn.

The Bidder must submit to the Owner his original work papers, documents and materials used in the preparation of the bid within one day after the date fixed for submission of bids. Such work papers must be submitted in an envelope or package separate and apart from the envelope containing the bid and marked clearly as to the contents and shall be delivered to the Owner by the bidder in person or by registered mail prior to the time fixed for the opening of bids and may not be withdrawn until after the two-hour period (referred to later) has elapsed. The bids shall be opened at the time designated in the IFB, as amended by addendum. Bid opening is usually one day following the time fixed by the Owner for the submission of bids, but no sooner. Once the bids have been opened, the Bidder shall have two (2) hours after the opening of bids within which to claim in writing any mistake as defined herein and withdraw his bid. The Contract shall not be awarded by the Owner until such two-hour period has elapsed. Such mistake shall be proved only from the original work papers, documents and materials delivered to the Owner prior to bid opening. This procedure shall not apply to when the entire bid is required to be submitted on a unit price basis.

Failure of a Bidder to submit his original work papers, documents and materials used in the preparation of his bid on or before the time, date and place required shall constitute a waiver by that Bidder of his right to withdraw his bid due to a mistake.

No bid may be withdrawn under this section when the result would be the awarding of the Contract on another bid of the same Bidder or of another bidder in which the ownership of the withdrawing Bidder is more than five (5%) percent.

No Bidder who is permitted to withdraw a bid shall, for compensation, supply any material or labor to or perform any subcontract or other work agreement for the person or firm to whom the Contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid was submitted. The person or firm to whom the Contract was awarded and the withdrawing Bidder are jointly liable to the Owner in an amount equal to any compensation paid to or for the benefit of the withdrawing Bidder without such approval.

If a bid is withdrawn under authority of this section, the lowest remaining bid shall be deemed to be the low Bidder on the project.

10. REJECTION OF BIDS

The Owner reserves the right to cancel the Invitation For Bids, to reject any and all bids at its sole discretion when such rejection is in the interest of the Owner, or to reject the bid of any bidder who is determined to be not responsive or not responsible.

11. DETERMINATION OF RESPONSIBILITY

Each Bidder shall be prepared, if so requested by the Owner, to present evidence of his experience, qualifications and financial ability to carry out the terms of the Contract

Prior to award of the Contract, an evaluation will be made to determine if the low Bidder has the capability, in all respects, to perform fully the contract requirements and the moral and business integrity and reliability which will assure good faith performance, and who has been prequalified, if required. Factors to be evaluated include, but are not limited to:

- (a) sufficient financial ability to perform the contract as evidenced by the Bidder's ability to obtain payment and performance bonds from an acceptable surety;
- (b) appropriate experience to perform the Work described in the bid documents;
- (c) any judgments entered against the Bidder, or any officers, directors, partners or owners for breach of a contract for construction;
- (d) any substantial noncompliance with the terms and conditions of prior construction contracts with a public body without good cause where the substantial noncompliance is documented; or
- (e) a conviction of the Bidder or any officer, director, partner, project manager, procurement manager, chief financial officer, or owner in the last five years of a crime relating to governmental or nongovernmental construction or contracting; payment and performance bonds an acceptable surety;
- (f) any current debarment of the contractor, any officer, director or owner, from bidding or contracting by any public body of any State, any State agency, or any agency of the Federal government.

The Owner reserves the right to disqualify or refuse to accept the bid of any bidder who has been convicted, or entered a plea of guilty or *nolo contendere*, in any Federal or State court to any charge involving any unlawful, corrupt or collusive practice involving a public contract whether Federal, State, or local, or who has been determined in any judicial proceeding to have violated any antitrust, bid-rigging or collusive practice statute in connection with any public contract, or against whom such formal criminal prosecution or other judicial proceeding has been initiated.

A Bidder who, despite being the apparent low bidder, is determined not to be a responsible bidder shall be notified in writing.

12. AWARD OF CONTRACT

- (a) Basis for Contract Award: The Contract, if awarded, will be awarded to the lowest responsive and responsible Bidder, if any, provided his bid is reasonable and it is in the best interest of the Owner to accept it and subject to the Owner's right to reject any and all bids and to waive informality in the bids and in the bidding. The Bid Form may contain a multi-part Base Bid and may contain Additive Bid Items. Determination of the lowest responsible Bidder, if any, will be based on the Total Base Bid amount including any properly submitted bid modifications plus as many Additive Bid Items taken in sequence as the Owner in its discretion chooses to Award. In the event that the Total Base Bid from the lowest responsible bidder exceeds available funds, the Owner may negotiate the Total Base Bid amount with the apparent low Bidder to obtain a contract price within available funds.
- (b) **Informalities:** The Owner reserves the right to waive any informality in the bids when such waiver is in the interest of the Owner.
- (c) Negotiation With Lowest Responsible Bidder: If award of a contract to the lowest responsive and responsible Bidder is precluded because of limitations of funds, the Owner reserves the right to negotiate the Total Base Bid amount with the lowest responsive, responsible Bidder to obtain a contract price within the available funds. This may involve changes in either the features or Scope of the work included in the Base Bid. Such negotiations with the apparent low Bidder may include reducing the quantity, quality, or other cost saving mechanisms involving items in the Total Base Bid. Negotiations for Additive Bid Items are excluded. The Owner shall notify the lowest responsive and responsible Bidder that such a situation exists and the Owner and Bidder shall then conduct their negotiations in person, by mail, by telephone or by any means they find convenient. If an acceptable Contract can be negotiated, the



changes to the Invitation for Bid documents agreed upon in the negotiations shall be summarized in a "Post Bid Modification" and included in the Contract. If an acceptable Contract cannot be negotiated, the Owner shall terminate negotiations and reject all bids.

13. CONTRACT SECURITY:

A Standard Performance Bond and a Standard Labor and Material Payment Bond may be required, as specified in the Bid Form. See the General Conditions.

14. BUILDING PERMITS:

The successful Contractor shall apply for all applicable building permits, fees, etc. The cost of all building permits, fees, etc. shall be included in the bid amount listed on the Bid Form.

15. BID DOCUMENTS:

Bid Documents/Specification Booklets are the property of the Owner. A non-refundable fee may be requested to obtain a set of Specifications from the Owner or Owner's Representative. In lieu of paying the non-refundable fee the Contractor may view the Specifications at the Consultants office. A non-refundable shipping charge may be required if stated in the Notice or the Invitation For Bids.

16. GENERAL CONDITIONS:

The General Conditions of the Construction Contract are incorporated in the bid documents. If incorporated by reference, the bidder may obtain a copy of the current edition of the General Conditions of the Construction Contract from the Design Team Lead.

17. PREBID CONFERENCE:

See the Invitation For Bids and/or Bid Form for requirements for a Pre-bid conference and whether such conference is mandatory or optional.

18. INSPECTION OF BID DOCUMENTS:

Copies of the Invitation for Bids documents, including Plans and Specifications and the General Conditions of the Construction Contract will be available for review at the Design Team Lead's office address listed below.

19. OWNER'S REPRESENTATIVE INFORMATION:

FIRM NAME:	Illinois Roof Consulting Associates, Inc.
CONTACT:	James C Gruebnau
ADDRESS:	4302-G W. Crystal Lake Avenue
	McHenry, IL 60050
TELEPHONE:	815-385-6560 x18
FAX:	
E-MAIL:	Jim@irca.com



GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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1. DEFINITIONS

Whenever used in these General Conditions of the Construction Contract ("General Conditions") or in the Contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural and the male and female gender thereat.

Architect, Consultant, Engineer, Consultant or A/E: The term used to designate the Architect, Consultant and/or the Engineer that contracts with the Owner to provide the Architectural, Consulting and Engineering services for the Project. The Consultants are separate contractors and are not agents of the Owner. The term includes any associates or sub-consultants employed by the Owner's Representative.

Change Order: A document issued on or after the effective date of the Contract Between Owner and Contractor which is agreed to by and signed by both the Contractor and the Owner, and which authorizes an addition, deletion or revision in the Work, including any adjustment in the Contract price and/or the Contract Completion Date. The term Change Order shall also include written orders to proceed issued pursuant to Section 31(a)(3). A Change Order, once signed by all parties, is incorporated into and becomes a part of the Contract.

Construction: The term used to include new construction, reconstruction, renovation, remediation, restoration, major repair, demolition and all similar work upon buildings and ancillary facilities, including any draining, dredging, excavation, grading or similar work upon real property.

Consultant: The term used to designate the Owner's Representative(s) retained by the Owner for specialty design and/or contract administration

Contract: The term "Contract" shall be interchangeable with the term "Contract Documents."

Contract Administrator: The Owner, or his representative, may appoint the Contract Administrator to provide site administration of the Contract. This shall include the coordination of all Work, the administration of all meetings and the flow of all paperwork, including Applications for Payment, specified by the Contract. The Scope of Authority of the Contract Administrator shall be detailed in a contract between the Owner and the Contract Administrator. A copy of this Scope shall be provided to the Contractor.

Contract Completion Date: The date by which the Work must be available to the Owner for inspection to determine whether the work has reached Substantial Completion, in accordance with Section 36(a). The Contract Completion Date is customarily established in the Notice To Proceed, based on the Time for Completion provided in the Contract Between Owner and Contractor. In some instances, however, the Contract contains a mandatory Contract Completion Date.

Contract Documents: The Contract Between Owner and Contractor signed by the Owner and the Contractor and any documents expressly incorporated therein. Such incorporated documents customarily include, but are not limited to, the bid submitted by the Contractor, these General Conditions, any Supplemental General Conditions, any Special Conditions, the plans and the specifications, and all modifications, including addenda and subsequent Change Orders.

Contract Price: The total compensation payable to the Contractor for performing the Work, subject to modification by Change Order.

Contractor: The person with whom the Owner has entered into a contractual agreement to do the Work.

Day(s): Calendar day(s) unless otherwise noted.

Defective Work: Work determined to be nonconforming, deficient or defective by Owner's Representative.

Drawing: A page or sheet of the Plans which presents a graphic representation, usually drawn to scale, showing the technical information, design, location, and dimensions of various elements of the Work. The graphic representations include, but are not limited to, plan views, elevations, transverse and longitudinal sections, large and small scale sections and details, isometrics, diagrams, schedules, tables and/or pictures.

Emergency: Any unforeseen situation, combination of circumstances, or a resulting state that poses imminent danger to health, life or property.

Fall Protection Plan: A plan developed by the Contractor or Subcontractor conforming to Federal, State and local codes to protect employees from falling and to protect the general public from falling objects. A copy of the Fall Protection Plan shall be maintained in the Job Log.

Final Completion Date: The date of the Owner's acceptance of the Work from the Contractor upon confirmation from the Owner's Representative and the Contractor that the Work is totally complete in accordance with Section 36(b).

Field Directive: A written order, issued by a member of the Owner's Representative which directs the Contractor to commence reviewing a change in design or amending an allowance incorporated in a Contract Price.

Field Order: A written order issued by a member of the Owner's Representative which clarifies or explains the plans or specifications, or any portion or detail thereof, without changing the design, the Contract Price, the Time for Completion or the Contract Completion Date.

Float: The excess time included in a construction schedule to accommodate such items as inclement weather and associated delays, equipment failures, and other such unscheduled events. It is the contingency time associated with a path or chain of activities and represents the amount of time by which the early finish date of an activity may be delayed without delaying the overall completion of the Project. Any difference in time between the Contractor's approved early completion date and the Contract Completion Date shall be considered a part of the Project Float.

Float, Free: The time (in days) by which an activity may be delayed or lengthened without impacting upon the start day of any activity following in the chain.

Float, Total: The difference (in days) between the maximum time available within which to perform an activity and the duration of an activity. It represents the time by which an activity may be delayed or lengthened without impacting the Time for Completion or the Contract Completion Date.

Job Log: A log of all activities, submittals, meeting minutes, photographs, project documents, signin sheets, weather data, accident reports, Fall Protection Plans, Safety Plans, inspection reports, permits and project notes to be maintained by the contractor on site, two copies of which shall be provided to the Owner at project completion.

Notice: All written notices, including demands, orders, directives, instructions, claims, approvals and disapprovals, required or authorized under the Contract Documents. Any written notice by either party to the Contract shall be sufficiently given by any one or combination of the following, whichever shall first occur (1) delivered by hand to the last known business address of the person to whom the notice is due; (2) delivered by hand to the person's authorized agent, representative or officer wherever they may be found; or (3) enclosed in a postage prepaid envelope addressed to such last known business address and delivered to a United States Postal Service official or mailbox. Notice delivered by hand shall be effective upon such delivery. Notice delivered via United States Postal Service official or mailbox, or upon the actual receipt of the Notice, whichever occurs first. All Notices to the Owner should be directed to the Contract Administrator.

If the Owner and the Contractor agree in writing that Notices transmitted by Facsimile (Fax) are acceptable for the Project, such Notice shall be transmitted to the Fax number listed in the agreement and shall have a designated space

for the Fax Notice recipient to acknowledge his receipt by authorized signature and date. The Fax Notice with authorized signature acknowledging receipt shall be faxed back to the sender. The Faxed Notice shall be effective on the date it is acknowledged by authorized signature. All Faxed Notices shall also be sent by hard copy, which shall be effective upon delivery, as provided herein. Notice shall be effective upon the date of acknowledgment of the Faxed Notice or the date of delivery, whichever occurs first.

Notice to Proceed: A written notice, on RCI Form B004 or an equivalent document, given by the Owner to the Contractor (with a copy to the Owner's Representative) fixing the date on which the Contract time will commence for the Contractor to begin the prosecution of the Work in accordance with the requirements of the Contract Documents. The Notice to Proceed will customarily confirm the Contract Completion Date based upon the requirements of the Contract Between Owner and Contractor (RCI Form B003).

Owner: The persons with whom the Contractor has entered into a contractual agreement and for whom the Work or services is to be provided. The term "Owner," as used herein, shall also include the Owner's Representative, if the Owner appoints one. (See limitations of the Owner's Representative below.)

Owner's Representative: The Owner's Representative as used herein shall be the Owner's designated agent on the Project. The Owner's Representative shall be the person through whom the Owner generally conveys written decisions and notices. All notices due the Owner and all information required to be conveyed to the Owner shall be conveyed to the Owner's Representative. The scope of the Owner's Representative's authority is limited to that authorized by the Owner, who shall provide written information to the Contractor at the Pre-construction meeting defining those limits. In all instances within the limits of such scope, the Owner's Representative shall be considered a fully authorized agent of the Owner's Representative outside the scope of his authority. Nothing herein shall be construed to prevent the Owner from issuing any notice directly to the Contractor. The Owner may change the Owner's Representative from time to time and may, in the event that the Owner's Representative is absent, disabled or otherwise temporarily unable to fulfill his duties, appoint an interim Owner's Representative.

Person: This term includes any individual, corporation, partnership, association, company, business, trust, joint venture, or other legal entity.

Plans: The term used to describe the group or set of project-specific drawings which are included in the Contract Documents.

Project: The term used instead of the specific or proper assigned title of the entire undertaking which includes, but is not limited to, the Work described by the Contract Documents.

Project Observer: One or more persons employed by the Owner or Contract Administrator to inspect the Work on behalf of the Owner and to document and maintain records of activities at the Site to the extent required by the Owner. The Owner shall notify the Contractor in writing of the appointment of such Project Observer(s). The scope of the Project Observer's authority with respect to the Contractor is limited to that indicated in Section 13(e) and (f) and as supplemented by the Owner in writing to the Project Observer, which shall be copied to the Contractor.

Provide: Shall mean furnish and install ready for its intended use.

Safety Plan: A plan developed by the Contractor or Subcontractor in compliance with Federal, State and local codes to provide safe working conditions on site and to protect the general public from the ongoing work. A copy of the Safety Plan shall be maintained in the Job Log.

Site: Shall mean the location at which the Work is performed or is to be performed.

Specifications: That part of the Contract Documents containing the written administrative requirements and the technical descriptions of materials, equipment, construction systems, standards, and workmanship which describe the proposed Work in sufficient detail for the Contractor to perform the Work. (The General Conditions, any Supplemental General Conditions, various bidding information and instructions, and blank copies of various forms to be used during the execution of the Work shall be bound with the Specifications.)

Subcontractor: A person having a direct contract with the Contractor or with any other Subcontractor for the performance of the Work. Subcontractor includes any person who provides on-site labor but does not include any person who only furnishes or supplies materials for the Project Submittals: All shop, fabrication, setting and installation drawings, diagrams, illustrations, schedules, samples, and other data required by the Contract Documents which are specifically prepared by or for the Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by the Contractor to illustrate material or equipment conformance of some portion of the Work with the requirements of the Contract Documents.

Substantial Completion: The condition when the Owner agrees that the Work, or a specific portion thereof, is sufficiently complete, in accordance with the Contract Documents, so that it can be utilized by the Owner for the purposes for which it was intended. The Owner at its sole discretion may take Beneficial Occupancy at this time or choose to wait to occupy until after Final Completion is achieved.

Supplemental General Conditions: That part of the Contract Documents which amends or supplements the General Conditions.

Supplier: A manufacturer, fabricator, distributor, material man or vendor who provides material for the Project but does not provide on-site labor.

Time for Completion: The number of consecutive calendar days following the issuance of the Notice to Proceed which the Contractor has to substantially complete all Work required by the Contract. When the Notice to Proceed is issued, it states a Contract Completion Date, which has been set by the Owner based on the Time for Completion.

Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which are or have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Work: The services performed under this Contract including, but not limited to, furnishing labor, and furnishing and incorporating materials and equipment into the construction. The Work also includes the entire completed construction, or the various separately identifiable parts thereof, required to be furnished under the Contract Documents.

2. CONTRACT DOCUMENTS

- (a) The Contract Between Owner and Contractor, the Workers' Compensation Certificate of Coverage, the Standard Performance Bond (when required), the Standard Labor and Material Payment Bond (when required), the Schedule of Values and Certificate for Payment, the Contractor's Certificate of Substantial Completion, and the Contractor's Certificate of Completion are forms incorporated in these General Conditions by reference and are made a part hereof to the same extent as though fully set forth herein. The Contractor must use them for their respective purposes.
- (b) All time limits stated in the Contract Documents, including but not limited to the Time for Completion of the Work, are of the essence of the Contract.
- (c) The Contract Between Owner and Contractor shall be signed by the Owner and the Contractor in as many original counterparts as may be mutually agreed upon, each of which shall be considered an original.
- (d) Anything called for by one of the Contract Documents and not called for by the others shall be of like effect as if required or called for by all, except that a provision clearly designed to negate or alter a provision contained in one or more of the other Contract Documents shall have the intended effect. In the

event of conflicts among the Contract Documents, the Contract Documents shall take precedence in the following order: the Supplemental General Conditions; the Contract Between Owner and Contractor; the General Conditions (this document); the Special Conditions; the specifications with attachments; and the plans.

- (e) If any provision of this Contract shall be held invalid by any court of competent jurisdiction, such holding shall not invalidate any other provision.
- (f) All correspondence, invoices, memoranda, submittals and other documents related to this Project whether generated by the Owner, Owner's Representative, the Contractor or others should be identified at the beginning of the document by the Project Number. Additional identification such as a job number, purchase order number or such may also be shown at the generator's option.

3. LAWS AND REGULATIONS

- (a) The Contractor shall comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work and shall give all notices required thereby.
- (b) This Contract and all other contracts and subcontracts are subject to the provisions of applicable laws within the jurisdiction of the Work relating to labor unions and the "right to work." The Contractor and its Subcontractors, whether residents or nonresidents of the jurisdiction, who perform any Work related to the Project shall comply with all of the said provisions.
- (c) IMMIGRATION REFORM AND CONTROL ACT OF 1986: By signing this Contract, the Contractor certifies that it does not and will not during the performance of this Contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.
- (d) The provisions of all rules and regulations governing safety in the jurisdiction of the Work shall apply to all Work under this Contract. Federal, State and local inspectors shall be granted access to the Work for inspection without first obtaining a search or administrative warrant
- (e) Building Permit: The Contractor shall be responsible for obtaining all permits required by the local building authority or such authority that has jurisdiction over the construction of the Work.
- (f) The Contractor shall include in each of its subcontracts a provision requiring each Subcontractor to include or otherwise be subject to the same payment and interest requirements in Subsections (a), (b), and (c) of Section 30 of these General Conditions with respect to each lower-tier Subcontractor and Supplier.
- (g) The Contractor, if not licensed as an asbestos abatement contractor within the jurisdiction of the work, shall have all asbestos-related Work performed by subcontractors who are duly licensed as asbestos contractors as appropriate for the Work required.
- (h) If the Contractor violates laws or regulations that govern the Project, the Contractor shall defend and indemnify the Owner against any fines and/or penalties that result from such violation. To the extent that such violation is the result of negligence or other actionable conduct of the Contractor, the Contractor shall indemnify and hold the Owner harmless against any third party claims, suits, awards, actions, causes of action or judgments, including but not limited to attorney's fees and costs incurred thereunder that result from such violation.

4. NONDISCRIMINATION

- (a) During the performance of this Contract, the Contractor agrees as follows:
 - (1) The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin, except where religion, sex, or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

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- (2) The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor will state that such Contractor is an equal opportunity employer.
- (3) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

The Contractor will include the provisions of the foregoing paragraphs (1), (2) and (3) in every subcontract or purchase order of over ten thousand dollars (\$10,000), so that the provisions will be binding upon each Subcontractor or vendor.

(b) Where applicable, the Federal Americans with Disabilities Act shall apply to the Contractor and all Subcontractors.

5. PROHIBITION OF ALCOHOL AND OTHER DRUGS

- (a) The Contractor shall establish, maintain and enforce policies which prohibit the following acts by all Contractor, Subcontractor and Supplier personnel at the Site:
 - (1) The manufacture, distribution, dispensation, possession, or use of alcohol or other drugs, except possession and medically prescribed use of prescription drugs; and
 - (2) The impairment of judgment or physical abilities due to the use of alcohol or other drugs, including impairment from prescription drugs.
- (b) Smoking shall not be allowed on the work site.

6. TIME FOR COMPLETION

- (a) The Time for Completion shall be as established in the Contract Documents. The Work must be substantially completed by the Contract Completion Date. Unless otherwise specified in the Supplemental General Conditions, the Contractor shall achieve Final Completion within thirty (30) days after the date of Substantial Completion. Contractor has satisfied for itself, and agrees that the time for completion established herein is reasonable and achievable.
- (b) The Time for Completion shall be stated in the Contract Between Owner and Contractor and shall become a binding part of the Contract upon which the Owner may rely in planning the use of the facilities to be constructed and for all other purposes. If the Contractor fails to substantially complete the Work within the Contract Completion Date, he shall be subject to payment of actual damages incurred by the Owner.
- (c) The Contractor, in submitting his bid, acknowledges that he has taken into consideration normal weather conditions. Normal weather does not mean statistically average weather, but rather means a range of weather patterns, which might be anticipated, based on weather data for the past ten (10) years, (i.e., conditions which are not extremely unusual). Normal weather conditions shall be determined from the public historical records available, such as the U.S. Department of Commerce, local Climatological Data Sheets, National Oceanic and Atmospheric Administration / Environmental Data and Information Service, National Climatic Center or National Weather Service. The data sheets to be used shall be those for the locality or localities closest to the site of the work. No additional compensation will be paid to the Contractor because of adverse weather conditions; however, an extension of time for abnormal weather will be considered by the Owner under the following conditions:
 - (1) The request for additional time shall be further substantiated by weather data collected during the period of delay at the Site. Said data must demonstrate that an actual departure from normal weather occurred at the Site during the dates in question.
 - (2) The extension requested must be accompanied by a bar graph schedule detailing the time required to complete the project.
 - (3) All of the evidence and data supporting the request (including both historical data and the recordings at the Site during the time of delay) must be furnished to the Owner before any consideration will be given to the request.

- (d) The Contractor represents and agrees that he has taken into account in his bid the requirements of the bid documents, local conditions, availability of materials, equipment, and labor, and any other factors which may affect the performance of the Work. The Contractor agrees and warrants that he will achieve Substantial Completion of the Work to allow the Owner to have Beneficial Occupancy by the Time for Completion or Contract Completion Date.
- (e) The Contractor agrees and warrants that he will achieve Final Completion of the Work (the entire completion of all Work, including "punch list" items), not later than thirty (30) days after achieving Substantial Completion.

7. CONDITIONS AT SITE

- (a) The Contractor shall have visited the Site prior to bidding and is totally responsible for having ascertained pertinent local conditions such as location, accessibility and general character of the Site, and the character and extent of existing improvements and work within or adjacent to the Site. Claims, which result from the Contractor's failure to do so, will be deemed waived.
- (b) If, in the performance of the Contract, hidden physical conditions of a building being modified are exposed revealing unusual or materially different conditions from those ordinarily encountered or inherent in work of this nature, or if subsurface or latent conditions at the Site are found which are materially different from those frequently present in the locality or from those indicated in the Contract Documents, the Contractor must report such conditions to the Owner and to the Owner's Representative before the conditions, the Owner's Representative shall promptly propose such changes in the Contract Documents as he finds necessary to conform to the different conditions.
- (c) If the Contractor, during the course of the Work, observes the existence of any material, which he knows, should know, or has reason to believe is hazardous to human health, the Contractor shall promptly notify the Owner. The Owner will provide the Contractor with instructions regarding the disposition of the material. The Contractor shall not perform any Work involving the material or any Work causing the material to be less accessible prior to receipt of special instructions from the Owner.

8. SUBCONTRACTS

- (a) The Contractor shall, as soon as practicable after the signing of the Contract, notify the Owner and Owner's Representative in writing of the names of all Subcontractors proposed for the principal parts of the Work and of such others as the Owner's Representative may direct. Where the Scope of Work or specifications establish qualifications or criteria for Subcontractors, manufacturers, or individuals performing Work on the project, the Contractor shall be responsible for ascertaining that those proposed meet the criteria or qualifications. The Contractor shall not employ any Subcontractor that the Owner may, within a reasonable time, object to as unsuitable. Neither the Owner nor the Owner's Representative shall direct the Contractor to contract with any particular Subcontractor unless provided in the Contract Documents.
- (b) The Owner may select a particular Subcontractor for a certain part of the Work and designate in the Contract Documents or Supplemental General Conditions that the Subcontractor shall be used for the part of the Work indicated and that the Subcontractor has agreed to perform the Work for the subcontract amount stipulated in writing. The Contractor shall include the stipulated amount plus his Contractor markups in the final Contract Sum. In such case, the Contractor shall be responsible for that Subcontractor and its work and the Subcontractor shall be responsible to the Contractor for its work just as if the Contractor had selected the Subcontractor.
- (c) The Owner shall, on request, furnish to any Subcontractor, if practicable, the amounts of payments made to the Contractor, the Schedule of Values and Requests for Payment submitted by the Contractor and any other documentation submitted by the Contractor which would tend to show what amounts are due and payable by the Contractor to the Subcontractor.
- (d) The Contractor shall be fully responsible to the Owner for all acts and omissions of his agents and employees and all succeeding tiers of Subcontractors and Suppliers performing or furnishing any of the

Work. Nothing in the Contract Documents shall create any contractual relationship between Owner or Owner's Representative and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of Owner or Owner's Representative to pay for or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization, except as may otherwise be required by law.

- (e) The Contractor shall be fully responsible for his invitees at the Site and for those of his Subcontractors, Suppliers, and their employees, including any acts or omissions of such invitees. All invitees shall signin at the Job Log.
- (f) The Contractor agrees that he alone is responsible for all dealings with his Subcontractors and Suppliers, and their subcontractors, employees and invitees, including, but not limited to, the Subcontractors' or Suppliers' claims, demands, actions, disputes and similar matters unless specifically provided otherwise by the Contract or by statute.
- (g) Contingent Assignment of Subcontracts. Each subcontract, purchase order or agreement for a portion of the work is assigned by the Contractor to the Owner provided that: (i) assignment is effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 34, and only for those subcontracts, purchase orders or similar agreements which the Owner accepts by notifying the Subcontractor(s) and Contractor in writing; and, (ii) this assignment includes, without limitations, the Contractor's rights under the Subcontractor's bonds, if any; provided (iii) the assignment is subject to prior rights of the surety, if any, that is obligated under the bond relating to the Contract.

9. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE

- (a) The Contractor shall not commence Work under this Contract until he has obtained all the insurance required hereunder from an insurer authorized to do business in the jurisdiction of the Work and such insurance has been approved by the Owner, nor shall the Contractor allow any Subcontractor to commence Work on his subcontract until the same types of insurance in an appropriate amount have been obtained by the Subcontractor and approved by the Contractor. Approval of insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder. Prior to commencement of the Work, Contractor shall deliver to Owner a certificate of insurance evidencing all of the following coverages and naming Owner and its officers, board members, employees and agents as additional insured's. All insurance shall be occurrence based; claims-made policies are not permitted.
- (b) The Contractor shall take out and shall maintain at all times during the performance of the Work Workers' Compensation and Employers' Liability Insurance for all of his employees engaged in the Work in an amount not less than the minimum required by the State in which the Work is performed, and, in case any of the Work is sublet, the Contractor shall require each Subcontractor similarly to provide Workers' Compensation and Employers' Liability Insurance for all of the latter's employees to be engaged in the Work. The Contractor shall submit on the form provided by the Owner a Certificate of Coverage verifying Workers' Compensation coverage prior to award of the Contract. The Contractor shall likewise obtain a Certificate of Coverage for Workers' Compensation coverage from each Subcontractor prior to awarding the subcontract and shall provide a copy to the Owner.
- (c) During the performance of the Work under this Contract, the Contractor shall maintain commercial general liability insurance to include Premises/Operations Liability, Products and Completed Operations Coverage, Independent Contractor's Liability, Owner's and Contractor's Protective Liability, and Personal Injury Liability, which shall insure him against claims of personal injury, including death, as well as against claims for property damage which may arise from operations under this Contract, whether such operations be by himself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amounts of general liability insurance shall be not less than \$1,000,000 per occurrence and \$2,000,000 aggregate combined limit. The Owner, its officers, employees and agents, shall be named as an additional insured with respect to the Work being procured.
- (d) During the performance of the Work under this Contract, the Contractor shall maintain automobile liability insurance which shall insure him against claims of personal injury, including death, as well as against claims for properly damage, which may arise from operations under this Contract, whether such operations be by himself or by any Subcontractor, or by anyone directly or indirectly employed by either

of them. The amounts of automobile insurance shall be not less than \$1,000,000 combined limit for bodily injury and property damage per occurrence.

- (e) The Asbestos Contractor or Subcontractor, as the case may be, shall provide occurrence-based liability insurance with asbestos coverages in an amount not less than \$1,000,000 and shall name the following as additional insureds: The Owner; all members of the Owner's Representative (if not the Asbestos Project Designer); and the Contractor (where the asbestos work is being performed by the Asbestos Subcontractor).
- (f) Contingent Assignment of Subcontracts. Each subcontract, purchase order or agreement for a portion of the work is assigned by the Contractor to the Owner provided that: (i) assignment is effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 34, and only for those subcontracts, purchase orders or similar agreements which the Owner accepts by notifying the subcontractor (s) and Contractor in writing; and, (ii) this assignment includes, without limitations, the Contractor's rights under the subcontractor's bonds, if any; provided (iii) the assignment is subject to prior rights of the surety, if any, that is obligated under the bond relating to the Contract.

10. TAXES AND FEES

Owner is exempt from sales and excise taxes. Documentation of this status will be provided to Contractor upon the Effective Date of the Agreement.

11. PATENTS

The Contractor shall obtain all licenses necessary to use any invention, article, appliance, process or technique of whatever kind used in the performance of the Contract and shall pay all royalties and license fees. The Contractor shall hold the Owner, its officers, agents and employees harmless against any loss or liability for or on account of the infringement of any patent rights in connection with any invention, process, technique, article or appliance manufactured or used in the performance of the Contract, including its use by the Owner, unless such invention, process, technique, article or appliance is specifically named in the specifications or plans as acceptable for use in carrying out the Work. If, before using any invention, process, technique, article or appliance specifically named in the specifications or plans as acceptable for use in carrying out the Work. If, before using any invention, process, technique, article or appliance specifically named in the specifications or plans as acceptable for use in carrying out the Work. If, before using any invention, process, technique, article or appliance specifically named in the specifications or plans as acceptable for use in carrying out the Work. If, before using any invention, process, technique, article or appliance specifically named in the specifications or plans as acceptable for use in carrying out the Work, the Contractor has or acquires information that the same is covered by letters of patent making it necessary to secure the permission of the patentee, or other, for the use of the same, he shall promptly advise the Owner and the Owner's Representative. The Owner may direct that some other invention, process, technique, article or appliance so specified is an infringement of a patent, and fail to inform the Owner and the Owner's Representative, he shall be responsible for any loss or liability due to the infringement.

12. OWNER'S REPRESENTATIVE STATUS

- (a) The Owner's Representative shall have authority to endeavor to secure the faithful performance by Owner and Contractor of the Work under the Contract. The Owner's Representative shall review the Contractor's Submittals for conformance to the requirements of the Contract Documents and return copies to the Contractor with appropriate notations. He shall interpret the requirements of the plans and specifications and issue Field Orders and Directives to the Contractor as may be required. He shall recommend to the Owner suspension of the Work (in whole or in part) whenever such suspension may be necessary to ensure the proper execution of the Contract. He shall have authority to reject, in writing, Work, including material, installation or workmanship, which does not conform to the requirements of the plans and specifications. He shall determine the progress and quality of the Work, subject to the right of the Owner to make an overriding decision to the contrary. Upon request by the Contractor, the Owner's Representative shall confirm, in writing within seven (7) days, any oral order or determination made by him.
- (b) The Owner's Representative shall have no authority to approve or order changes in the Work which alters the design concept or which call for an extension of time or a change in the Contract Price.

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- (c) Although the Owner is bound by the terms of the Contract with the Contractor, including the plans and specifications, the Owner shall have the right, but not the duty, to countermand any decision of the Owner's Representative and to follow or reject the advice of the Owner's Representative, including but not limited to, acceptance of the Work, as it deems best. In those instances where the Owner's Representative has been given authority to act, the Owner's Representative shall promptly do so, but in the case of disagreement between the Owner's Representative and the Owner, the decision of the Owner shall be final. The Contractor shall not be bound by any determination, interpretation, or decision of the Owner's Representative if it is later determined that the same is not in accord with the Contract Documents. The party taking issue with the determination, interpretation or decision of the Owner's Representative shall give the other party written notice of such fact within ten (10) days after the determination, interpretation or decision is communicated by the Owner's Representative. In the actual performance of the Work, however, the Contractor shall, in the first instance, proceed in accordance with instructions given by the Owner's Representative unless the Owner and the Contractor mutually agree that the Contractor will proceed otherwise.
- (d) All orders from the Owner to the Contractor shall be transmitted through the Owner's Representative.
- (e) The Owner's Representative shall not be responsible for construction means, methods, techniques, sequences or procedures (other than those expressly specified in Contract Documents), or for safety and fall protection precautions and programs in connection with the Work, and they shall not be responsible for the Contractor's failure to carry out the Contractor's own responsibilities.
- (f) The provisions of this section are included as information only to describe the relationship between the Owner, Owner's Representative, and Contractor. No failure of the Owner's Representative to act in accordance with this section shall relieve the Contractor from his obligations under the Contract or create any rights in favor of the Contractor.

13. INSPECTION/OBSERVATION

- (a) All material and workmanship shall be subject to observation, examination and testing by the Owner, the Owner's Representative, the Owner's Representative, the Project Observer, authorized inspectors and authorized independent testing entities at any and all times during manufacture and construction. The Owner's Representative and the Owner shall have authority to reject defective material and workmanship and require its correction. Defective workmanship shall be satisfactorily corrected and defective material shall be satisfactorily replaced with proper material without charge therefore, and the Contractor shall promptly segregate and remove the defective material from the Site. If the Contractor fails to proceed at within a reasonable time with replacement of defective material and/or the correction of defective workmanship, the Owner may, after 7 days notice with opportunity to cure, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost to the Contractor to proceed as provided in Section 34 of these General Conditions, the Contractor being liable for any damage to the same extent as provided in Section 34 for termination thereunder.
- (b) Site inspections, tests conducted on Site or tests of materials gathered on Site, which the Contract requires to be performed by independent testing entities shall be contracted and paid for by the Owner. The Contractor shall promptly furnish, without additional charge, all reasonable facilities, labor and materials necessary and convenient for making such tests. Except as provided in (d) below, whenever such examination and testing finds defective materials, equipment or workmanship, the Contractor shall reimburse the Owner for the cost of re-examination and retesting. Although conducted by independent testing entities, the Owner will not contract and pay for tests or certifications of materials, manufactured products or assemblies which the Contract, codes standards, etc., require to be tested and/or certified for compliance with industry standards such as Underwriters Laboratories, Factory Mutual or current ASTM protocols. If fees are charged for such tests and Certifications, they shall be paid by the Contractor. The Contractor shall also pay for all inspections, tests, and certifications which the Contract specifically requires him to perform or to pay, together with any inspections and tests which he chooses to perform for his own purposes, but are not required by the Contract.
- (c) Where Work is found to be related to or dependent on Defective Work, the Contractor shall stop such related or dependent Work until the Defective Work or deficiency is corrected or an alternative solution

is presented that is satisfactory to the Owner. Where Work is rejected because of defective material or workmanship, the Contractor shall stop like Work in other areas or locations on the Project until the matter is resolved and the Owner has approved corrective measures.

- (d) The Project Observer has the authority to recommend to the Owner's Representative and the Owner that the Work be suspended when in his judgment the Contract Documents are not being followed. Any such suspension shall be continued only until the matter in question is resolved to the satisfaction of the Owner. The cost of any such Work stoppage shall be borne by the Contractor unless it is later determined that no fault existed in the Contractor's Work.
- (e) The Project Observer has the right and the authority to:
 - (1) Observe all construction materials, equipment, and supplies for quality and for compliance with the Contract Documents and/or approved shop drawings and Submittals.
 - (2) Observe workmanship for compliance with the standards described in the Contract Documents.
 - (3) Observe and report on all tests and inspections performed by the Contractor.
 - (4) Recommend to the Owner's Representative rejection of Work which does not conform to requirements of the Contract Documents.
 - (5) Keep a record of construction activities, tests, inspections, and reports and append these to the Contractor's Job Log.
 - (6) Attend all joint site construction meetings and inspections held by the Owner and/or the Owner's Representative with the Contractor.
 - (7) Check materials and equipment, together with documentation related thereto, delivered for conformance with approved Submittals and the Contract.
 - (8) Check installations for proper workmanship and conformance with shop drawing and installation instructions and report the findings to the Owner's Representative.
 - (9) Assist in the review and verification of the Schedule of Values and Certificate for Payment, submitted by the Contractor each month.
 - (10) Do all things for or on behalf of the Owner as the Owner may subsequently direct in writing.
- (f) The Project Observer has no authority to:
 - (1) authorize deviations from the Contract Documents,
 - (2) enter into the area of responsibility of the Contractor's superintendent,
 - (3) issue directions relative to any aspect of construction means, methods, techniques, sequences or procedures, or in regard to safety precautions and programs in connection with the Work,
 - (4) authorize or suggest that the Owner occupy the Project, in whole or in part,
 - (5) issue a certificate for payment, or
 - (6) institute any safety or fall protection procedures.
- (g) The duties of the Project Observer are for the benefit of the Owner only and not for the Contractor. The Contractor may not rely upon any act, statement, or failure to act on the part of the Project Observer, nor shall the failure of the Project Observer to properly perform his duties in any way excuse Defective Work or otherwise improper performance of the Contract by the Contractor.

14. SUPERINTENDENCE BY CONTRACTOR

- (a) The Contractor shall have a competent foreman or superintendent, satisfactory to the Owner's Representative and the Owner, on the Site at all times during the progress of the Work. The superintendent or foreman shall be familiar with and be able to read and understand the plans and specifications, and be capable of communicating orally and in writing with the Owner's inspectors and the Contractor's workers. The Contractor shall be responsible for all construction means, methods, techniques, sequences and procedures, for coordinating all portions of the Work under the Contract except where otherwise specified in the Contract Documents, and for all safety and worker health programs and practices. The Contractor shall notify the Owner and Owner's Representative, in writing, of any proposed change in superintendent, including the reason therefore, prior to making such change. Contractor shall make a change in its Superintendent only upon approval by Owner's Representative and Owner.
- (b) The Contractor shall, at all times, enforce strict discipline and good order among the workers on the Project, and shall not employ on the Work, or contract with, any unfit person, anyone not skilled in the Work assigned to him, or anyone who will not work in harmony with those employed by the Contractor, the Subcontractors, the Owner or the Owner's separate contractors and their subcontractors.
- (c) The Owner may, in writing, require the Contractor to remove from the Site any employee or Subcontractor's employee the Owner deems to be incompetent, careless, not working in harmony with others on the Site, or otherwise objectionable, but the Owner shall have no obligation to do so.

15. CONSTRUCTION SUPERVISION, METHODS AND PROCEDURES

(a) The Contractor shall be solely responsible for supervising and directing the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction and for coordinating all portions of the Work under the Contract, except where otherwise specified in the Contract Documents. However, the Contractor shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract. The Contractor is solely responsible to the Owner that the finished Work complies with the Contract Documents.

The Contractor shall be solely responsible for health and safety precautions and programs for workers and others in connection with the Work. No inspection by, knowledge on the part of, or acquiescence by the Owner's Representative, the Project Observer, the Owner, the Owner's employees and agents, or any other entity whatever shall relieve the Contractor from its sole responsibility for compliance with the requirements of the Contract or its sole responsibility for health and safety programs and precautions.

- (b) The Contractor shall develop and implement a written Fall Protection work plan including each area of the work place where the employees are assigned and where fall hazards greater than 6 feet, or otherwise defined in applicable safety regulations, exist. The Fall Protection Plan shall:
 - (1) Identify all fall hazards in the work area.

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- (2) Describe the correct procedures for the assembly, maintenance, inspection, and disassembly of the fall protection system to be used.
- (3) Describe the correct procedures for the handling, storage, and securing of tools and materials.
- (4) Describe the method of providing overhead protection for workers who may be in, or pass through, the area below the work site.
- (5) Describe the method for prompt, safe removal of injured workers.
- (c) Prior to permitting employees into areas where fall hazards exist the Contractor shall:

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- (1) Ensure that employees are trained and instructed in the items described above.
- (2) Inspect fall protection devices and systems to ensure compliance with local, state and federal requirements applicable to the project.
- (d) Training of employees:
 - (1) The Contractor shall ensure that employees are trained for the relevant job designation. Training shall be documented and shall be available on the job site.
 - (2) "Retraining." When the Contractor has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by Section 15 (b) of this document, the Contractor shall retrain each such employee. Circumstances where retraining is required include, but are not limited to, situations where:
 - Changes in the workplace render previous training obsolete; or
 - Changes in the type of fall protection systems or equipment to be used render previous training obsolete.
 - Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill.
- (di) If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, the Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the Owner's Representative, subject to the Owner's right to disapprove.

16. SCHEDULE OF THE WORK

(a) **General:** The Contractor is responsible for the scheduling and sequencing of the Work, for coordinating the Work, for monitoring the progress of the Work, and for taking appropriate action to keep the Work on schedule. Extensions of time pursuant to Sections 31, 32, and 35, damages for delay, and all other matters between the Owner and the Contractor will be determined using the contractually required Substantial Completion date, not an early Contract Completion. Within a reasonable time after the Contractor signs the Contract Between Owner and Contractor, unless otherwise extended by the Owner at the time of the signing, the Contractor shall prepare and submit to the Owner, with a copy to the Owner's Representative, a preliminary bar graph schedule for accomplishing the Work based upon the Time for Completion stated in the Contract. The preliminary bar graph schedule shall be in sufficient detail to show the sequencing of the various trades for each floor level, wing or work area. The Owner will notify the Contractor of its acceptance of or objections to the preliminary schedule within seven (7) days of receipt by the Owner. The Owner's failure to reject or its acceptance of any schedule, graph, chart, updated schedule, plan of action, etc., shall not constitute a representation or warranty by the Owner, including but not limited to a representation or warranty that the schedule is feasible or practical nor shall any such acceptance or failure to reject relieve the Contractor from sole responsibility for completing the Work within the time allowed.

No progress payments will be payable to the Contractor until after it has submitted a preliminary schedule which is acceptable to the Owner and which is compliance with the Contract Completion Date. Nor shall subsequent progress payments be payable to the Contractor unless and until he maintains the monthly bar graphs or status reports required by Section 16(c) herein or unless and until he provides any recovery schedule pursuant to Section 16(d) herein.

Failure to provide a satisfactory preliminary or fully complete Project Schedule within the time limits stated above shall be a breach of contract for which the Owner may terminate the Contract in the manner provided in Section 34 of these General Conditions.

(b) Bar Graph Schedule: Where a bar graph schedule is required, it shall be time-scaled in weekly increments, shall indicate the estimated starting and completion dates for each major element of the Work by trade and by area, level, or zone, and shall schedule dates for all salient features, including but not limited to the placing of orders for materials, submission of shop drawings and other Submittals for approval, approval of shop drawings by Owner's Representative, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment, and all Work activities to be performed by the Contractor.

The Contractor shall allow sufficient time in his schedule for the Owner's Representative to conduct whatever associated reviews or inspections as may be required under the Owner's Representative's contract with the Owner. If the Owner's Representative and the Contractor are unable to agree as to what constitutes sufficient time, the Owner shall determine the appropriate duration for such Owner's Representative activities. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

A copy of the Bar Graph Schedule shall be maintained in the Job Log. The bar graph schedule shall include required relocation dates for the occupants of each unit, as applicable. Contractor shall perform its Work in a manner that minimizes the need for and length of time for temporary relocations by Unit Owners. Contractor shall perform its Work in substantial adherence to such relocation schedule as approved by Owner. Contractor shall schedule its work with the Construction Administrator to coordinate relocation schedules.

- (c) Monthly Project Reports: The Contractor shall review progress not less than each month, but as often as necessary to properly manage the Project and stay on schedule. The Contractor shall collect and preserve information on Change Orders, including extensions of time. The Contractor shall evaluate this information and update the latest accepted schedule as often as necessary to finish within the Contract Time for Completion or before the Contract Completion Date. The Contractor shall submit to the Owner's Representative along with his monthly request for payment a copy of the bar graph schedule annotated to show the current progress. The bar graph schedule submitted with each periodic request for payment shall show the Work completed to date in comparison with the Work scheduled for completion, including but not limited to the dates for the beginning and completion of the placing of orders; and the installation of materials. The form shall be approved by the Owner's Representative and the Owner; however, a bar graph marked, colored or annotated to reflect the above will usually satisfy this requirement. If any elements of the Work are behind schedule, regardless of whether they may prevent the Work from being completed on time, the Contractor must indicate in writing in the report what measures he is taking and plans to take to bring each such element back on schedule and to ensure that the Time for Completion or Contract Completion Date is not exceeded. Copies of all documents shall be maintained in the Job Log.
- (d) Progress Delay: Should any of the following conditions exist, the Owner may require the Contractor to prepare, at no extra cost to the Owner, a plan of action and a recovery schedule for completing the Work by the Contract Time for Completion or the Contract Completion Date:
 - (1) The Contractor's monthly progress report indicates delays that are, in the opinion of the Owner's Representative or the Owner, of sufficient magnitude that the Contractor's ability to complete the Work by the scheduled Time for Completion or the Contract Completion Date is brought into question.
 - (2) The Contractor desires to make changes in the logic (sequencing of Work) or the planned duration of future activities of the Schedule, which, in the opinion of the Owner's Representative or the Owner, are of a major nature.

The plan of action and recovery schedule, when required, shall explain and display how the Contractor intends to regain compliance with its schedule.

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The plan of action, when required, shall be submitted to the Owner for review within two (2) business days of the Contractor receiving the Owner's written demand. The recovery schedule, when required, shall be submitted to the Owner within five (5) calendar days of the Contractor's receiving the Owner's written demand.

17. SCHEDULE OF VALUES AND CERTIFICATE FOR PAYMENT

- (a) Before submittal of the first partial payment request under the Contract, the Contractor shall prepare for review and approval of the Owner's Representative and the Owner, a schedule of the estimated values listed by trades or by specification sections of the Work, totaling the Contract Price. Where the total project has multiple parts or phases, the Contractor shall prepare appropriate schedules of values to facilitate reviews and justifications for payments.
- (b) All requests for payment shall be made on a Pre-Approved Schedule of Values and Certificate for Payment Form. Where a computerized spreadsheet is used, one copy of the entire Schedule of Values shall be provided to the Owner via an agreed format of electronic media (e-mail, diskette, CD-ROM, etc.) in a spreadsheet format with the initial request for payment.
- (c) Payment will not typically be made for materials stored on-site but not yet installed. However, if deemed acceptable to the Owner, and if the contractor intends to request, payment for materials stored in an approved and secure manner, the Schedule of Values must indicate the amount for labor and the amount for materials, and in a supplement thereto must include an itemized list of materials for that trade or Work section. The material breakdown shall be in sufficient detail to allow verification of the quantities required for the project, the quantities delivered, the Work completed, and the quantities stored on or off site. No payment shall be made for offsite materials.
- (d) Every submitted Schedule of Values and Certificate for Payment shall have the "Value of Work Completed" portion completed, the Contractor's certification completed and signed, and the appropriate substantiating material attached. Such substantiating material includes, but is not limited to, invoices for materials, delivery tickets, time sheets, payroll records, daily job logs/records, and similar materials which, in the opinion of the Owner and the Owner's Representative, are necessary or sufficient to justify payment of the amount requested.
- (e) Should Work included in previous submittals, and for which payment has been made, subsequently be identified, by tests, inspection, or other means, as not acceptable or not conforming to Contract requirements, the "Value of Work Completed" portion of the first form submitted after such identification shall be modified to reduce the "completed" value of that Work by deleting the value of that which has been identified as not acceptable or nonconforming.

18. ACCESS TO WORK

The Owner's Representative, the Owner, the Contract Administrator, the Owner's observers and other testing personnel, inspectors from State and local agencies, and others authorized by the Owner, shall have access to the Work at all times. The Contractor shall provide proper facilities for access and inspection. All parties visiting the site shall sign in at the Job Log.

19. PLANS AND SPECIFICATIONS

(a) The general character and scope of the Work are illustrated by the plans and the specifications. If the Contractor deems additional detail or information to be needed, he may request the same in writing from the Owner's Representative to clarify intent conveyed in the Scope of Work or plans and specifications. His request shall precisely state the detail or information needed and shall explain why it is needed. The Contractor shall also indicate a date when the requested information is required. The Owner's Representative shall provide by Field Order such further detail and information as is necessary by the date required so long as the date indicated is reasonable. Any additional drawings and instructions supplied to the Contractor shall be consistent with the Contract Documents, shall be true developments thereof, and shall be so prepared that they can be reasonably interpreted as a part thereof. The Contractor shall carry out the Work in accordance with the additional detail drawings and instructions.

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- (b) Contractor shall perform a review of the Contract documents and identify any conflicts, errors, and discrepancies such as to avoid delays to the work. If the Contractor finds a conflict, error, or other discrepancy in the plans or specifications, he shall notify the Owner's Representative in writing as soon as reasonably possible, but before proceeding with the affected Work. The Owner's Representative shall issue a clarification by Field Order to the Contractor stating the correct requirements. If the Contractor deems the Field Order requires additional Work, he shall notify the Owner's Representative of such prior to proceeding with that Work and he shall submit a request for Change Order along with a detailed substantiating cost proposal through the Owner's Representative to the Owner within ten (10) calendar days.
- (c) In case of differences between small and large-scale drawings, the large-scale drawings shall govern. Where on any of the drawings a portion of the Work is drawn out and the remainder is indicated in outline, the parts drawn out shall apply also to all other like portions of the Work.
- (d) Where the word "similar" appears on the drawings or Scope of Work, it shall be interpreted in its general sense and not as meaning identical, and all details shall be worked out in relation to their location and their connection with other parts of the Work.
- (e) The specifications are divided into several parts, or sections, for convenience only, since the entire specifications must be considered as a whole. The divisions of the specifications are not intended to control the Contractor in dividing the Work among Subcontractors or to limit the Work performed by any trade. The Contractor shall be solely responsible for the coordination of the trades, Subcontractors and vendors engaged in the Work.
- (f) Measurements or dimensions shown on the drawings for Site features, utilities and structures shall be verified at the Site by the Contractor. The Contractor shall not scale measurements or dimensions from the drawings. If there are discrepancies, the Owner's Representative shall be consulted. If new Work is to connect to, match with or be provided in existing Work, the Contractor shall verify the actual existing conditions and necessary dimensions prior to ordering or fabrication.

20. SUBMITTALS

- (a) The Contractor shall submit a listing of all Submittals required by the Owner's Representative or which the Contractor identifies as necessary, fixing the dates for the submission of shop or setting drawings, samples and product data. The listing shall be in a format acceptable to the Owner's Representative. The Contractor shall identify all Submittals with the Project Code Number as established by the Owner and the Contract Administrator.
- (b) Submittals shall be forwarded to the Owner's Representative for approval if required by the specifications or Scope of Work or if requested by the Owner's Representative or the Owner. No part of the Work dealt with by a Submittal shall be fabricated by the Contractor, save at his own risk, until such approval has been given.
- (c) Submittals shall be accompanied by a letter of transmittal which shall list the Project Number, the Submittals included, the specification section number applicable to each, and the date shown on each Submittal. Submittals shall be complete in every respect and bound in sets. Each Submittal shall be clearly marked to show each item, component and/or optional feature proposed to be incorporated into the Project and cross-referenced to the plans or specifications as needed to identify the use for which the item or component is intended.
- (d) The Contractor shall check the Submittals for compliance with the requirements of the Contract Documents. The Contractor shall clearly note in writing any and all items which deviate from the requirements of the Contract Documents. Reasons for deviation shall be included with the Submittal. The Contractor shall be solely responsible for checking all dimensions and coordinating all materials and trades to ensure that the components or products proposed, individually or in combination, will fit in the space available and that they will be compatible with other components or products provided.
- (e) The Contractor shall forward all Submittals sufficiently in advance of construction requirements to allow reasonable time for checking, correcting, resubmitting and rechecking so as not to delay the work.

- (f) If a Submittal indicates a departure from the Contract requirements, the Owner's Representative may reject the Submittal or, if he deems it to have merit, may recommend it to the Owner, who shall approve or reject it as the Owner, in its sole discretion, sees fit. The departure from the Contract requirements shall be further authorized by a Change Order, if a reduction or increase in the Contract Price is appropriate. Approval of a submittal shall not be deemed a Change Order or approval of any deviation from the Contract Documents, unless the deviation is specifically identified in the submittal and is specifically authorized in writing as an approved deviation by the Owner's Representative.
- (g) The Work shall be in accordance with approved Submittals and the Contract Documents. Approval of the Contractor's Submittals by the Owner's Representative does not relieve the Contractor from responsibility of complying with the Contract and all drawings and specifications, except as changed by Change Order.
- (h) Additional Submittal requirements are shown in the specifications.

21. FEES, SERVICES AND FACILITIES

- (a) The Contractor shall obtain all permits, and pay for all fees and charges necessary for temporary access and public right-of-way blockage or use, for temporary connections to utilities and for the use of property (other than the Site) for storage of materials and other purposes unless otherwise specifically stated in the Contract Documents. However, the Owner accepts all responsibility for any delays in obtaining permits not the sole fault of the contractor, including but not limited to delays caused by the issuing agency.
- (b) It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor, either directly or through his Subcontractors, shall provide and pay for all material, labor, tools, equipment, water, light, power, telephone and other services or facilities of any nature whatsoever necessary to execute the Work completely and deliver the Work within the Contract Time for Completion or before the Contract Completion Date.

22. EQUALS

- (a) Substitute materials, equipment or assemblies: The Contractor may propose to substitute a material, product, equipment, or assembly which deviates from the requirements of the Contract Documents but which the Contractor deems will perform the same function and have equal capabilities, service life, economy of operations, and suitability for the intended purpose. The proposal must include any cost differentials proposed. The Owner will have the Owner's Representative provide an initial evaluation of such proposed substitutes and provide a recommendation on acceptability and indicate the Consultant's redesign fee to incorporate the substitution in the design. If the proposed substitute is acceptable to the Owner, a Substitution Request Approval form will be issued to all known bidders prior to bid, or a Change Order will be proposed to the Contractor to accept the substitute and to deduct the cost of the Owner's Representative redesign fee and the proposed cost savings from the Contract Price. The Owner shall have the right to limit or reject substitutions at its sole discretion.
- (b) The Contractor shall be responsible for making all changes in the Work necessary to adapt and accommodate any equal or substitute product which it uses. The necessary changes shall be made at the Contractor's expense.
- (c) The Scope of Work or Specification documents shall address timing of submission for alternates or substitutes, including response time to Contractor requests. Notwithstanding such letter, other than substitutions through Change Directives issued by Owner's Representative, Contractor itself warrants that such components shall be compatible and further warrants (and shall procure manufacturers' warranties for) all substitutions to the same extent as the required warranty for the original item.

The Contractor shall be responsible for review and confirming compatibility of all components in the event of a substitution. Letters from the relevant material Suppliers confirming compatibility shall be sufficient evidence of compatibility.

23. CONTRACTOR'S TITLE TO MATERIALS

No materials or supplies for the Work shall be purchased by the Contractor, or by any Subcontractor or Supplier, subject to any security interest, installment or sales contract or any other agreement or lien by which an interest is retained by the seller or is given to a secured party. The Contractor warrants that he has clear and good title to all materials and supplies which he uses in the Work or for which he accepts payment in whole or in part.

24. STANDARDS FOR MATERIALS INSTALLATION & WORKMANSHIP

- (a) Unless otherwise specifically provided in the Contract, all equipment, material, and accessories incorporated in the Work are to be new.
- (b) Unless specifically approved by the Owner or required by the Contract, the Contractor shall not incorporate into the Work any materials containing asbestos or any material known by the industry to be hazardous to the health of building construction workers, maintenance workers, or occupants. If the Contractor becomes aware that a material required by the Contract contains asbestos or other hazardous materials, he shall notify the Owner and the Owner's Representative immediately and shall take no further steps to acquire or install any such material without first obtaining Owner approval.
- (c) All workmanship shall be of the highest quality found in the building industry in every respect. All items of Work shall be done by craftsmen or tradesmen skilled in the particular task or activity to which they are assigned. In the acceptance or rejection of Work, no allowance will be made for lack of skill on the part of workmen. Poor or inferior workmanship (as determined by the Owner's Representative, the Owner or other observing authorities) shall be removed and replaced at Contractor's expense such that the Work conforms to the highest quality standards of the trades concerned, or otherwise corrected to the satisfaction of the Owner's Representative, the Owner, or other inspecting authority, as applicable.

25. WARRANTY OF MATERIALS AND WORKMANSHIP

- (a) The Contractor warrants that, unless otherwise specified, all materials and equipment incorporated in the Work under the Contract shall be new and in compliance with the Submittals and the Contract Documents. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with best industry practices and the Contract Documents and shall be performed by persons qualified at their respective trades.
- (b) Work not conforming to these warranties shall be considered Defective.
- (c) This warranty of materials and workmanship is separate and independent from and in addition to any of the Contractor's and system manufacturer's other guarantees or obligations in the Contract or under relevant State law.

26. USE OF SITE AND REMOVAL OF DEBRIS

- (a) The Contractor shall:
 - (1) Perform the Work in such a manner as not to interrupt or interfere with the operation of any existing activity on, or in proximity to, the Site or with the Work of any other separate contract, as agreed and set forth in the pre-construction meeting.
 - (2) Store his apparatus, materials, supplies and equipment in such orderly fashion at the Site of the Work as will not unduly interfere with the progress of his Work or the work of any other separate contractor.
 - (3) Place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work. Prior to performance of the Work, contractor shall identify and obtain the Owner's Representative's approval of all staging and storage areas, and shall limit



its staging and storage to such areas. Contractor shall leave the site in a clean and safe condition on a daily basis with tools and equipment properly stored.

27. PROTECTION OF PERSONS AND PROPERTY

- (a) The Contractor expressly undertakes, both directly and through his Subcontractors, to take every reasonable precaution at all times for the protection of all persons and property which may come on the Site or be affected by the Contractor's Work.
- (b) The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.
- (c) The provisions of all Federal, State and local rules and regulations governing health and safety as adopted by the relevant authority, shall apply to all Work under this Contract
- (d) The Contractor shall continuously maintain adequate protection of all his Work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except as may be directly and solely due to errors in the Contract Documents or caused by agents or employees of the Owner. The Contractor shall adequately protect adjacent property to prevent any damage to it or loss of use and enjoyment by its owners. The Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for protection as required by State or local authority, local conditions, or the Contract.

28. CLIMATIC CONDITIONS

The Contractor shall suspend activity on and protect any portion of the Work that may be subject to damage by climatic conditions. As specified in Section 6(c), the Contract period may be extended due to loss of time due to unfavorable climatic conditions not anticipated after evaluation of historical conditions.

29. PAYMENTS TO CONTRACTOR

Lien Waivers

As a condition to final payment, Contractor shall deliver conditional and unconditional lien waivers from the Contractor and all Subcontractors and Suppliers with contracts over \$5000, without exceptions.

- (a) Unless otherwise provided in the Contract, the Owner will make partial payments to the Contractor on the basis of a duly certified and approved Schedule of Values and Certificate for Payment showing the estimate of the Work performed during the preceding calendar month or work period, as recommended by the Owner's Representative. When evaluating the Contractor's Certificate for Payment, the Owner's Representative will consider the value of the Work in place, the value of approved and properly stored materials, the status of the Work on the critical path with regard to the Time for Completion, and the estimated value of the Work necessary to achieve Final Completion. The Owner's Representative will review the Payment Request no earlier than the 25th day of the month, but not later than the 5th day of the following month. The Contractor will submit his monthly estimate of Work completed on so that it is received by the Owner's Representative and the Owner's Contract Administrator at least one work day prior to the date scheduled by the Owner's Representative. Work done shall be taken into consideration, if properly documented as required by Section 17 of these General Conditions.
- (b) No payment shall be made to the Contractor until the Contractor furnishes to the Owner his Social Security Number (SSN) if an individual, or its Federal Employer Identification Number (FEIN) if a proprietorship, partnership, corporation, Limited Liability Company or other legal entity. No payment shall be made to the Contractor until Certificates of Insurance or other satisfactory evidence of compliance by the Contractor with all the requirements of Section 9 of these General Conditions have been delivered to the Owner. Further, no payments on the basis of Work performed by a Subcontractor shall be paid by the Owner until copies of any certificates of insurance required of the Subcontractor under Section 9 have been delivered to the Owner.

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- (c) In making such partial payments, ten percent (10%) of each payment to the Contractor shall be retained until Final Completion and acceptance of all Work covered by the Contract, unless otherwise provided by any law, regulation or program of state or federal government. Such retainage shall be held to assure faithful performance of the Contract and may also be used as a fund to deduct amounts due to or claimed by the Owner, including, but not limited to, payment to the Owner of all moneys due for deductive change orders, credits, uncorrected Defective Work, interest, damages, and the like.
- (d) All material and Work for which partial payments are made shall thereupon become the sole property of the Owner, but this provision shall not relieve the Contractor from the sole responsibility for all materials and Work, including those for which payment has been made, or for the restoration of any damaged materials or Work. Nor shall this provision serve as a waiver of the right of the Owner to require the fulfillment of all of the terms and conditions of the Contract.
- (e) The final payment, which shall include the retainage and less any amounts due to or claimed by the Owner, shall not become due until the Owner's Representative and the Owner agree that Final Completion has been achieved and until the Contractor delivers to the Owner through the Owner's Representative a Certificate of Completion by the Contractor and an Affidavit of Payment of Claims stating that all Subcontractors and Suppliers of labor and/or materials have been paid all sums claimed by them for Work performed or materials furnished in connection with this Project less retainage. Amounts due the Owner which may be withheld from the final payment may include, but are not limited to, amounts due pursuant to Section 3(h), Section 13(a)-(d), costs incurred to repair or replace defective work, costs incurred as a result of the Contractor's negligent acts or omissions or omissions of those for whom the Contractor is responsible and any liquidated (if applicable) or actual damages. If all Subcontractors and Suppliers of labor and materials have not been paid the full amount claimed by them, the Contractor shall list each to which an agreed amount of money is due or which has a claim in dispute. With respect to all such Subcontractors and Suppliers, the Contractor shall provide to the Owner, along with the Affidavit of Payment of Claims an affidavit from each such Subcontractor and Supplier stating the amount of their subcontract or supply contract, the percentage of completion, the amounts paid to them by the Contractor and the dates of payment, the amount of money still due if any, any interest due the Subcontractor or, Supplier pursuant to Section 30(b) below, and whether satisfactory arrangements have been made for the payment of said amounts. If no agreement can be reached between the Contractor and one or more Subcontractors or Suppliers as to the amounts owed to the Subcontractors or Suppliers, the Owner may, in its discretion, pay such portion of the moneys due to the Contractor which is claimed by the Subcontractor or Supplier into a State or Federal Court sitting in the State of the Work, in the manner provided by law. Said payment into court shall be deemed a payment to the Contractor. Nothing in this Section shall be construed as creating any obligation or contractual relationship between the Owner and any Subcontractor or Supplier, and the Owner shall not be liable to any Subcontractor or Supplier on account of any failure or delay of the Owner in complying with the terms hereof. Owner shall have the right to withhold the amount of any payment required by a Subcontractor to submit a lien waiver or remove a lien that is in excess of the amount otherwise due Contractor. In the event any construction lien is filed against the Project, then provided Owner has paid the amounts then due Contractor under this Contract, Contractor shall pay the amount of such lien or bond over such lien within 15 days of its filing.
- (f) Upon successful completion of the final inspection and all Work required by the Contract, including but not limited to the delivery of equipment manuals, written warranties, acceptance of the Work by the Owner and the delivery of the affidavits required in Section 29(e) of these General Conditions, the Owner's Representative shall deliver the written Certificate of Completion to the Owner, with a copy to the Contractor, stating the entire amount of Work performed and compensation earned by the Contractor, including extra work and compensation therefore. The Owner may accept the Work for occupancy or use while asserting claims against the Contractor; disputing the amount of compensation due to the Contractor; disputing the quality of the Work, its completion, or its compliance with the Contract Documents; or any other reason.
- (g) Unless there is a dispute about (i) the compensation due to the Contractor, (ii) Defective Work, (iii) quality of the Work, (iv) compliance with the Contract Documents, (v) completion itself, (vi) claims by the Owner, (vii) or other matters in contention between the parties, within thirty (30) days after receipt and acceptance of the Schedule of Values and Certificate for Payment in proper form by the Owner's Representative, the Owner shall pay to the Contractor the amount approved by the Owner's Representative, less all prior payments and advances whatsoever to or for the amount of the Contractor. In the case of final payment, the completed

Affidavit of Payment of Claims, the Certificate of Completion by the Contractor, and the Certificate of Completion by the Owner's Representative shall accompany the final Schedule of Values and Certificate for Payment which is forwarded to the Owner for payment. The date on which payment is due shall be referred to as the Payment Date. In the event of disputes, payment shall be mailed on or before the Payment Date for amounts and Work not in dispute.

- (h) Per the terms of the contract, interest may accrue on all amounts owed by the Owner to the Contractor which remain unpaid thirty (30) days following the Payment Date. Interest rate as stated in the Contract.
- (i) The acceptance by the Contractor of the final payment shall be and operate as a release to the Owner of all claims by the Contractor, its Subcontractors and Suppliers, and of all liability to the Contractor whatever, including liability for all things done or furnished in connection with this Work.
- (j) No Certificate for Payment issued by the Owner's Representative, and no payment, final or otherwise, no Certificate of Completion, nor partial or entire use or occupancy of the Work by the Owner, shall be an acceptance of any Work or materials not in accordance with the Contract, nor shall the same relieve the Contractor of responsibility for faulty materials or Defective Work.

30. PAYMENTS BY CONTRACTOR

The Contractor is obligated to:

- (a) Within seven (7) days after receipt of amounts paid to the Contractor by the Owner for Work performed by the Subcontractor or Supplier under this Contract:
 - (1) Pay the Subcontractor or Supplier for the proportionate share of the total payment received from the Owner attributable to the Work performed by the Subcontractor or the materials furnished by the Supplier under this Contract; or
 - (2) Notify the Subcontractor or Supplier, in writing, of his intention to withhold all or a part of the Subcontractor or Supplier's payment with the reason for nonpayment. If the Contractor withholds any portion of a payment to any Subcontractor that was previously paid to Contractor, then if the Contract Administrator so determines it appropriate, Owner shall receive a credit for that withheld amount on the next monthly certificate for payment.
- (b) Pay interest to the Subcontractor or Supplier on all amounts owed by the Contractor that remain unpaid after seven (7) days following receipt by the Contractor of payment from the Owner for Work performed by the Subcontractor or materials furnished by the Supplier under this contract, except for amounts withheld as allowed under subsection (a)(2) of this Section.
- (c) Include in each of his subcontracts a provision requiring each Subcontractor to include in each of its subcontracts a provision requiring each Subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower tier subcontractor. Each Subcontractor shall include with its invoice to, or request for payment from, the Contractor, a certification that that Subcontractor has paid each of its suppliers and lower tier subcontractors their proportionate share of previous payments received from the Contractor attributable to the Work performed or the materials furnished by it under this Contract.

The Contractor's obligation to pay interest to the Subcontractor or Supplier pursuant to subsection (b) of this Section is not an obligation of the Owner. A modification to this Contract shall not be made for the purpose of providing reimbursement for such interest charge. A Contractor's cost reimbursement claim shall not include any amount for reimbursement of such interest charge.

31. CHANGES IN THE WORK

(a) The Owner may at any time, by written order utilizing a Contract Change Order, make changes in the Work which are within the general scope of the Contract. At the time of the Pre-construction Meeting described in Section 40(b), the Contractor and the Owner shall advise each other in writing of their

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designees authorized to accept and/or approve changes to the Contract Price and of any limits to each designee's authority. Should any designee or limits of authority change during the time this Contract is in effect, the Contractor or Owner shall give written notice to the other within seven (7) calendar days, utilizing the procedures set forth in these General Conditions.

In making any change, the charge or credit for the change shall be determined by mutual agreement. The Owner agrees the Owner's Representative has authority to issue Change Orders. The Owner agrees that the Contractor is not responsible for delays caused by either the Owner's or Consultant's failure to approve Change Orders or authorize the commencement of the work in writing. Changes shall be determined by one of the following methods:

- (1) By a mutually agreed fixed amount change to the Contract Price and/or time allowed for completion of the Work. The Change Order shall be substantiated by documentation itemizing the estimated quantities and costs of all labor, materials, and equipment required as well as any mark-up used. The price change shall include the Contractor's overhead and profit.
- (2) By using unit prices and calculating the number of net units of Work in each part of the Work which is changed, either as the Work progresses or before Work on the change commences, and by then multiplying the calculated number of units by the applicable unit price set forth in the Contract or multiplying by a mutually agreed unit price if none was provided in the Contract. No additional percentage markup for overhead or profit shall be added to the unit prices.
- (3) By ordering the Contractor, by Change Order citing this subsection, to proceed with the change to the Work to keep in a form acceptable to the Owner, an accurate, itemized account of the cost of the change in the Work, including, but not limited to, the costs of labor, materials, equipment, and supplies; and to annotate a copy of the Project schedule to accurately show the status of the Work at the time this initial change order is issued, to show the start and finish of the changed Work, and the status of the Work when the changed Work is completed. A Change Order citing this subsection shall describe the parameters of the change in the Work, describe the cost items to be itemized and verified for payment, address the impact on the schedule for Substantial Completion, and state that a subsequent Change order will be issued to incorporate the cost of the changed Work into the Contract Price and any change in the Contract Time for Completion or Contract Completion Date. The Contractor's signature on each initial Change Order authorizing Work and citing this Subsection as the method for determining the cost of the Work shall not constitute the Contractor's agreement on the cost or time impact of the changed Work.

Within fourteen (14) days of the conclusion of such ordered Work, the Contractor and the Owner shall arrive at a cost for the Change Order, based on the records kept and the Contractor's allowance for overhead and profit and such costs shall be incorporated into a Change Order which references the Change Order ordering the Work. If agreement on the cost of the changed Work cannot be reached within the fourteen (14) days allotted, the Contractor may file a claim for the disputed amount as provided for in Section 39.

(b) The Contractor shall review any Owner requested or directed change and shall respond in writing within fourteen (14) calendar days after receipt of the proposed change (or such other reasonable time as the Owner may direct), stating the effect of the proposed change upon his Work, including any increase or decrease in the Contract time and Price. The Contractor shall furnish to the Owner an itemized breakdown of the quantities and prices used in computing the proposed change in Contract Price. A Change Order must be issued before the Contractor is authorized to proceed with any change work. Contractor shall be entitled to no additional compensation for any work performed prior to issuance of a Change Order.
32. EXTRAS

If the Contractor claims that any instructions given to him by the Owner's Representative or by the Owner, by drawings or otherwise, involve extra Work which increases the scope of the Contract, then, except in emergencies endangering life or property, he shall give the Owner's Representative and the Owner written notice thereof before proceeding to execute the Work. Said notice shall be given promptly enough to avoid delaying the Work and in no instance later than 48 hours after the receipt of such instructions. Should it not be immediately clear to the Contractor that the change involves extra Work outside the scope of the Contract, written notice shall be sufficient if given as soon as possible after such realization, but in no event later than 48 hours after the start of such Work. If the Owner agrees, a Change Order shall be determined by one of the three (3) methods provided in said Section 31, as selected by the Owner. Except as otherwise specifically provided, no claims for extra Work shall be allowed unless timely notice, as required by this section, is given by the Contractor and unless such Work is performed pursuant to written Change Order as provided in Section 31. The Change Order shall designate which of the three methods for computing charges and credits set forth in said Section 31(a) shall be used.

Contractor agrees that the intent of this Agreement is that all work required for building repairs and related remediation is included in the basic scope of work. Accordingly, the only work that constitutes and qualifies as a change (under Paragraph 31 herein) or extra, in the event there are any changes or extras, is "betterment" to the premises which are the subject of this Agreement.

A Change Order must be issued before the Contractor is authorized to proceed with any change work. Contractor shall be entitled to no additional compensation for any work performed prior to issuance of a Change Order therefore.

33. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

If the Work should be stopped under an order of any court or other public authority for a period of ninety (90) days through no fault of the Contractor or anyone employed by him, or if the Owner should fail to pay to the Contractor within thirty (30) days any sum certified by the Owner's Representative when no dispute exists as to the sum due or any provision of the Contract, then the Contractor may, upon seven (7) calendar days written notice to the Owner and the Owner's Representative, stop Work or terminate the Contract and recover from the Owner payment for the cost of the Work actually performed, together with overhead and profit thereon, but profit on the Work performed shall be recovered only to the extent that the Contractor can demonstrate that he would have had profit on the entire Contract if he had completed the Work. The Contractor may not receive profit or any other type of compensation for parts of the Work not performed. The Contractor may recover the reasonable cost of physically closing down the Site, but no other costs of termination. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor including, but not limited to, recovery of damages for breach of contract.

34. OWNER'S RIGHT TO TERMINATE THE CONTRACT FOR CAUSE

- (a) If the Contractor should be adjudged as bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, the Owner may terminate the Contract. If the Contractor should refuse or should repeatedly fail to complete work except in cases for which extension of time is provided, to supply enough properly skilled workmen or provide materials and equipment, or if he should fail to make prompt payment to Subcontractors or Suppliers of material or labor, or if he should disregard laws, ordinances or the written instructions of the Owner's Representative or the Owner, or otherwise be in substantial violation of any provision of the Contract, then the Owner may terminate the Contract.
- (b) Prior to termination of the Contract, the Owner shall give the Contractor seven (7) calendar days' written notice pursuant to Section 1 ("Notice") of these General Conditions, during which the Contractor may rectify the basis for the notice. If rectified to the satisfaction of the Owner within said seven (7) days, the Owner may rescind its notice of termination. If not, the termination for cause shall become effective at the end of the seven (7) day notice period. In the alternative, the Owner may, in writing, postpone the effective date of the termination for cause, at its sole discretion, if it should receive reassurances from the Contractor that the basis for the termination will be remedied in a time and manner

which the Owner finds acceptable. If at any time after such postponement, the Owner determines that Contractor has not or is not likely to rectify the causes of termination in an acceptable manner or within the time allowed, then the Owner may immediately terminate the Contract for cause, without the necessity of further seven (7) day notice, by notifying the Contractor in writing of the termination.

- (c) Upon termination of the Contract for cause, the Owner shall take possession of the Site and of all materials thereon and finish the Work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment unless the expense of finishing the Work, including compensation for additional managerial and administrative services is less than the unpaid balance of the correct price. If the cost to complete the work exceeds the contract price, then the Contractor shall pay the difference to the Owner, together with any other expenses of terminating the Contract and having it completed by others. At Owner's sole election, the Contractor shall assign, in whole or in part, its subcontracts, purchase orders, and documents evidencing other such sub tier relationships consistent with the assignment provisions stated in Paragraph 8 (g) of this Contract.
- (d) Termination of the Contract under this Section is without prejudice to any other right or remedy of the Owner.

35. DAMAGES FOR DELAYS; EXTENSION OF TIME

- (a) If the Contractor is delayed at any time in the progress of the Work by any act or omission of the Owner, its agents or employees or any separate independent contractor of the Owner, and the act or omission is the result of or is necessitated by causes outside the Owner's control; or if the Contractor is delayed by strikes, fires, unusual delays in transportation or unavoidable casualties, or other causes outside the Owner's or Contractor's control, the Contractor shall give the Owner and the Owner's Representative written notice within (five) 5 calendar days of the inception of the delay. The Owner shall extend the time for Substantial Completion or Final Completion, as the case may be, for the length of time that the Substantial Completion or Final Completion of the Work was actually delayed thereby, and the Contractor shall not be charged with liquidated or actual damages for delay during the period of such extension nor shall the Contractor be due compensation or damages of any kind, under any theory of law, as a result of such delay, the impact of such delay, or acceleration of Work as a result of such delay.
- (b) The Contractor shall not be entitled to an extension of the Time for Completion or Contract Completion Date or to any additional compensation for delays caused by acts or omissions of the Contractor due to causes within his control, including, but not limited to, delays resulting from Defective Work including workmanship and/or materials, from rejected work which must be corrected before dependent work can proceed, from Defective Work or rejected work for which corrective action must be determined before like work can proceed, or from incomplete, incorrect or unacceptable Submittals or samples.

36. INSPECTION FOR SUBSTANTIAL COMPLETION & FINAL COMPLETION

(a) The Contractor shall notify the Owner, in writing on a Certificate of Partial or Substantial Completion by the Contractor Form, of the date when the Work or designated portion thereof, will be, in his opinion, substantially complete and ready for inspection and testing to determine if it has reached Substantial Completion. The notice shall be given at least five (5) days in advance of said date and shall be forwarded through the Owner's Representative, who will attach his written endorsement as to whether or not he concurs with the Contractor's statement that the Work will be ready for inspection and testing on the date given. The Consultant's endorsement is a convenience to the Owner only and shall not relieve the Contractor of his responsibility in the matter nor shall the Consultant's endorsement be deemed to be evidence that the Work was substantially complete and ready for inspection and testing. Inspection and testing shall take place at a time(s) mutually agreeable to the Contractor, Owner and Owner's Representative. The Contractor shall furnish access for the inspection and testing as provided in Section 18 of these General Conditions. The inspection and testing shall determine whether Substantial Completion has been accomplished and shall result in a written list of unfinished Work and Defective Work, commonly referred to as a "punch list," which must be finished and corrected to obtain Final Completion.

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After successful completion of the inspection and the Owner's Representative determines that, in its opinion, the Work, either in whole or in part, is substantially complete, the Owner's Representative shall notify the Owner, in writing on a Certificate of Partial or Substantial Completion by the Owner's Representative Form, that the Work, or a specified portion thereof, is recommended to be declared substantially complete. The Owner shall notify the Contractor, in writing, of the date the Owner accepts the Work, or the specified portion thereof, as substantially complete or the Owner shall notify the Contractor of the deficiencies to be corrected or completed before such Work will be accepted as substantially complete. Punchlists shall be prepared both upon Substantial Completion of the Work on each unit, and upon Substantial completion of the entire Project. Unit punchlist work shall be finally completed within 30 days after Substantial Completion of the Unit Work.

- (b) The Contractor shall notify the Owner, in writing on a Certificate of Completion by the Contractor Form, of the date when the Work has reached or will reach Final Completion and will be ready for final inspection and testing. The notice shall be given at least five (5) days in advance of said date and shall be forwarded through the Owner's Representative, who will attach his endorsement as to whether or not he concurs in the Contractor's statement that the Work will be ready for inspection and testing on the date given. That inspection and any necessary testing shall be conducted in the same manner as the inspection for Substantial Completion. When the Work is finally and totally complete, including the elimination of all defects, the Work shall be finally accepted by the Owner and final payment shall be made in accordance with Section 29 of these General Conditions.
- (c) The Owner's Representative shall conduct the inspections. The Owner may elect to have other persons of its choosing also participate in the inspections.

37. GUARANTEE OF WORK

- (a) Except as otherwise specified, all Work shall be, and is hereby, guaranteed by the Contractor against defects resulting from the use of materials, equipment or workmanship, which are defective, inferior, or not in accordance with the terms of the Contract, for two (2) years from the date of Final Completion of the Work and any related work (whether performed by Contractor or not), and acceptance of the Work and any related work by the Owner. Where the Owner agrees to take Beneficial Occupancy of a portion or phase of the Work which has been determined to be substantially complete before the entire Work is finally completed, the guarantees for the materials, equipment and workmanship in that portion or phase shall begin on the date that the Owner takes Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions, Special Conditions, or by separate agreement.
- (b) The Owner (or any Unit Owner) shall be entitled to make emergency warranty repairs (e.g. for water intrusion) if Owner is not able to reach Contractor to make such emergency repairs on Owner's first attempt to do so, or if contractor does not immediately take steps to commence such repairs upon Owner contacting Contractor, in which case Contractor shall reimburse Owner the reasonable cost of repair within ten days after request. If, within any guarantee period, Work which is not in accordance with the Contract, Defective Work, or inferior material, equipment or workmanship is noted by the Owner or Owner's Representative which requires or renders necessary repairs or changes in connection with the guaranteed Work, the Contractor shall, promptly upon receipt of notice from the Owner, such notice being given not later than two weeks after the guarantee period expires, and without expense to the Owner:
 - (1) Place in satisfactory condition in every particular all of such guaranteed Work and correct all defects, inferior materials, equipment or workmanship therein;
 - (2) Make good all damage to the structure or Site or equipment or contents thereof, which, in the opinion of the Owner or the Owner's Representative, is the result of the use of materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the Contract, and
 - (3) Make good any Work or materials or the equipment and contents of structures and/or Site disturbances that result from fulfilling the provisions of this Section.
- (c) In any case, when in fulfilling the requirements of the Contract and this guarantee or by other guarantee or warranty, the Contractor disturbs any work performed by a separate contractor, he shall restore such work to a condition satisfactory to the Owner's Representative and Owner and guarantee such restored work to the same extent as if it was guaranteed under this Contract.

- (d) If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee as set forth in this Section, the Owner may have the defects or inferior materials, equipment or workmanship corrected and the Contractor and his Surety shall be liable for all expense incurred.
- (e) The guarantee of this Section shall be in addition to and not in lieu of all other warranties, express or implied, applicable to or arising from this Contract, the Contract Documents, or by law.
- (f) Nothing contained in this Section shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including liability for Defective Work under Section 25. This Section relates only to the specific obligation of the Contractor as set forth in this Section to correct the Work and does not limit the time within which his obligation to comply with the Contract Documents may be sought to be enforced, nor the time within which proceedings may be commenced to establish the Contractor's liability with respect to his other obligations under the Contract Documents.

Within ten (10) working days of the Contract Completion Date, which will be determined when the Notice to Proceed is issued, Contractor will supply the following closeout documentation to the Owner's Representative.

- Certificate of Completion from the Contractor
- > Warranties (Labor and/or Material) from the Contractor and its Subcontractors
- Product Data and/or Brochures for all materials used on this project (originals only)
- > Final Lien Releases from the Contractor and its Subcontractors

38. ASSIGNMENTS

Neither party to the Contract shall assign the Contract in whole or any part without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the prior written consent of the Owner. Consent to assignment shall not be unreasonably withheld. No assignment shall relieve any party from its obligations under the Contract.

39. CONTRACTUAL DISPUTES

Contractual claims, whether for money or for other relief, shall be submitted, in writing, no later than sixty (60) days after final payment; however, written notice of the Contractor's intention to file such claim must be given within a reasonable time of the occurrence or beginning of the event upon which the claim is based. The filing of a timely notice is a prerequisite to recovery under this Section. All claims shall be submitted along with all practically available supporting evidence and documentation.

The decision of the Owner on the Contract shall be final and conclusive unless the Contractor, within six (6) months of the date of the final decision on a claim, initiates legal action as provided by local, state and Federal statutes or in such other forum as may be agreed to in the Supplementary General Conditions. Failure of the Owner to render a decision within 90 days shall not result in the Contractor being awarded the relief claimed nor shall it result in any other relief or penalty.

40. PROJECT MEETINGS

- (a) The intention of this Section is that the Contractor, the Owner and the Owner's Representative have timely exchange of information and cooperate to accomplish the Work as required by the Contract Documents. The Contractor is responsible for managing the Work, obtaining approvals and requesting clarifications on a timely, reasonable basis. The Owner and its Owner's Representative are responsible for making a reasonable effort to provide timely responses to the Contractor.
- (b) Pre-construction Meeting:

Prior to the start of construction, a "Pre-construction" meeting shall be held with attendees to include the Owner's Contract Administrator and Project Observer, the Owner's Representative, the Contractor's superintendent (and scheduler, if Contractor desires), and representatives of the Contractor's major Subcontractors. The purpose of the meeting is to clarify and discuss the specifics related to, but not limited to, the following:

- (1) Persons involved from each entity and their chain of authority including the names of persons authorized to sign Change Orders and any limits to their authority.
- (2) Names, addresses, telephone numbers, fax numbers and email addresses to be used for Requests for Information (RFI), Field Directives, Requests for Proposals (RFP), shop drawings, Submittals, and notices.
- (3) Contractor's proposed construction schedule and Owner's sequencing requirements, if any.
- (4) Schedule of Values and Certificate for Payment Form requirements and procedures.
- (5) Procedures for shop drawings, product data and Submittals.
- (6) Procedures for handling Construction Field Directives and Contract Change Orders.
- (7) Procedures for Contractor's request for time extension, if any.
- (8) Construction Site requirements, procedures and clarifications to include:
 - Manner of conducting the Work
 - Site specialties such as dust and erosion control, storm water management, project signs, clean up and housekeeping, temporary facilities, utilities, security and traffic
 - Safety
 - Fall Protection
 - Layout of the Work
 - Quality control, testing, inspections and notices required
 - Site visits by the Owner's Representative and others
 - Owner's Project Observer duties
 - Running Punch List
 - As-Built Drawings
- (9) Procedures and documentation of differing or unforeseen Site conditions.
- (10) Monthly Pay Meeting.
- (11) Project Close-Out requirements and procedures.
- (12) Project records.
- (c) Other Meetings:
 - (1) Regular Meetings between the Owner, the Contractor, Subcontractors, and the Owner's Representative shall take place at times and locations as decided in the Pre-construction Meeting. The Owner, the Contractor or the Owner's representative may call additional meetings, on condition that they have provided a minimum of five (5) days notice. Notice shall be provided on the Notice of Meeting form and will indicate the date, time and location of the meeting, as well as a list of the expected attendees and a summary agenda.
 - (2) Requirements for other meetings, such as progress meetings, coordination meetings, pre-installation meetings and/or partnering meetings, may be included in the Contract Documents.

* * * END OF GENERAL CONDITIONS * * *

SUPPLEMENTARY CONDITIONS

A. GENERAL

- **1.** These Supplementary Conditions further describe, modify or supplement those set forth in the General Conditions section of these specifications.
- **2.** In the event that there is a contradiction between the General Conditions and these Supplementary Conditions, the Supplementary Conditions take precedent.
- **3.** Interpretations of all Conditions, Specifications, Drawings and Contract related to the project are the sole responsibility of the Owner's Representative. Consultant's decision will be final.

B. CONTRACT

- **1.** Upon award of the project a Contract will be prepared by the Owner. The Contract will represent an agreement between the Owner and the successful bidding Contractor.
- **2.** The Specifications of which these Supplementary Conditions are a part will be an attachment to the Contract.
- **3.** The Contract will be a document designed to correspond with the enclosed General Conditions.
- 4. A copy of the Contract may be provided in advance upon request.

C. PROGRESS PAYMENTS

- **1.** The Contractor will not require an advance payment or deposit prior to commencement of the project.
- **2.** Progress Payment Applications will be submitted monthly, on a date designated in the Contract.
- **3.** Progress Payment Applications will represent a percentage of the completed project, plus any approved extra expenses, less previous payments made and less 10% retainage.
- **4.** Lien waivers must be submitted with all pay applications.

D. CONTRACTOR RESPONSIBILITIES

1. General Execution:

- a. The Contractor will plan and ensure smooth and orderly performance of the work.
- b. The Contractor is required to produce a finished product that conforms to the Consultant's Specifications. However, it is the Contractor's responsibility to determine the appropriate means and methods by which that will be accomplished.
- c. The Contractor will not proceed with any work that will result in additional expense to the Owner without first receiving approval from the Owner's Representative or Owner.

2. Schedule

- a. The Contractor will provide the Owner and Owner's Representative with a detailed schedule of operations and anticipated sequence of trades.
- b. Once the project commences, the Contractor will maintain steady and consistent daily progress. Work days will not be lost except to bad weather. The Contractor will not remove the crew(s) or halt the project for any reason other than at the request of the Owner.
- c. Work days will not be lost except to bad weather. Excessively bad weather will be taken into account within reason if the completion date is not met.



d. The Contractor will coordinate removal activities with the Owner's Representative. Owner's representative will be inspecting conditions as they are uncovered for documentation

3. Supervision:

- a. The Contractor will provide a Foreman experienced in the industry and familiar with the specifications.
- b. The Foreman will be present daily throughout the course of the project work through completion. He will not be replaced without consent from the Owner's Representative.
- c. The Foreman shall have full authority to act on behalf of the Contractor and to receive direction from the Owner's Representative.
- d. The Foreman will not take direction from anyone other than the Owner's Representative.
- e. The Foreman will promptly report to the Owner's Representative any unforeseen conditions, delays or items that may warrant additional costs to the Owner.
- f. If the Owner or Owner's Representative expresses dissatisfaction with the Foreman for any reason, the Contractor will replace the Foreman.

4. Specifications:

a. The Contractor will have at least one hardcopy of the Consultant's Specifications including all addendum's and change orders on site for review at all times.

5. Access:

- a. The Contractor will provide the Owner's Representative safe access to the project site for the purposes of inspecting site conditions and completed work.
- b. The Owner's Representative may access the project site at days and times when the Contractor is not present.

E. CONSULTANT'S RESPONSIBILITIES

- **1.** Quality Assurance Site Inspections:
 - **a.** The Owner's Representative will conduct intermittent site inspections. Days and times will vary.
 - **b.** Inspections will not be conducted full time.
 - **c.** The Owner's Representative will promptly inform the Contractor of any completed work that does not comply with the specifications so that it may be corrected.
 - **d.** The Owner's Representative will have the authority to enforce the specifications and to halt the project if work does not comply with the specifications.
- 2. Final Inspection
 - a. Upon substantial completion of the work the Owner's Representative will conduct a final inspection of all completed work.
 - b. Any incorrectly installed or incomplete items will be documented in a punch list and provided to the Contractor for completion
 - c. Upon notification from the Contractor that punch list items have been completed a final inspection will be performed of those items.
 - d. If an additional inspection(s) is required due to improper notification of completed punch list items the cost of that inspection will be the responsibility of the Contractor.
- **3.** Approval of Extra Expenses
 - a. The Contractor will make the Owner's Representative aware of unforeseen conditions that will result in extra expenses.



- b. The Owner's Representative will confirm the accuracy of the assessment of those conditions.
- c. Approval will be provided in writing to the Contractor for work that falls within the Contingency Fund.
- d. Extra expenses that result in the Contingency Fund being exceeded will warrant a Change Order to the Contract, which will be issued by the Owner's Representative, with approval from the Owner.
- 4. Pay Application Approval
 - a. The Contractor will submit all pay applications to the Owner's Representative for review and approval.
 - b. The Owner's Representative will review the pay applications for accuracy and will confirm that they correspond with work completed in the field.
 - c. The Owner's Representative will approve the pay applications, or will return the pay applications to the Contractor for revision, within one (1) week of receiving the applications.

F. HOURS OF WORK

- 1. Normal working hours will be from 7:00 AM until 7:00 PM.
- 2. Set up and preparation work may take place prior, but activities that create any noise and/or disturbance must wait until 7:00 AM.
- 3. Work may take place on Saturdays with prior approval from the Owner.
- 4. Work may not take place on Sundays or Holidays.

G. PARKING

- 1. Construction vehicles will be parked so as not to impede traffic on the public roads or block access to driveways or otherwise obstruct building operations without prior approval.
- 2. Construction personnel private vehicles will be parked in designated areas indicated by the Property Manager.
- **3.** Overnight parking will not be permitted.

H. UNIT OWNER'S UTILITIES

1. Water:

Contractor may utilize water supply of occupant.

2. Electricity

Contractor may utilize electric supply of occupant.

I. SAFETY

4.

- 1. All work shall adhere to the applicable requirements of the following:
 - a. Occupational Safe & Health Association (OSHA)
 - b. American Standard Safety Code
 - c. ANSI A10.2
 - d. Local building codes and ordinances.
- **2.** Fire Extinguishers shall be present on site in adequate number and distribution for the scope of work taking place.
- **3.** Lighting of fires will not be permitted
 - Equipment: All scaffolds, ladders, platforms, ramps, etc. shall be in sound, well maintained and in good working condition



Engineers, Architects & Building Envelope Specialists

5. Tarpaulins:

New, fire & weather resistance duck tarpaulins with UL label

- 6. The Contractor will provide first aid kits for each crew working on the project.
- 7. The Owner's Representative and Owner will be notified of all safety accidents or safety violations within 24 hours.

J. TOILET FACILITIES

- **1.** The Contractor shall provide his personnel with temporary, portable, sanitation facilities.
- 2. Under no circumstances may Contractor personnel use unit owner's interior facilities.
- **3.** Portable facilities will be serviced regularly.
- 4. Portable facilities will be locked during non-work hours.

K. MISCELLANEOUS PROVISIONS

- **1.** The Contractor shall be responsible for all clean-up work required as a result of the execution of the contract work.
- **2.** The Contractor shall be responsible for the replacement of any damaged lawn and/or landscaping resulting from the execution of the contract work.
- **3.** The Contractor shall be responsible for the replacement of any damaged sidewalk driveway or other pavement resulting from the execution of the contract work.
- **4.** The Contractor shall be responsible for all damages and consequential damages resulting from any activity connected with the execution of the contract work.

L. INSURANCE

1. The Contractor will maintain the following insurance limits:

a.	Worker's Compensation	State Mandated Limits
b.	General Liability	\$2,000,000 per occurrence \$5,000,000 aggregate
C.	Automobile	\$2,000,000

- **2.** The Contractor will provide a Certificate of Insurance to The Owner, which will become a part of the Contract.
- **3.** The Certificate of Insurance will name the Owner, Property Manager, and Owner's Representative as additional insureds on the policy. Specific language will be provided to the Contractor for that purpose.
- **4.** It is the responsibility of the Contractor to ensure that all of his Sub-Contractors maintain the same insurance coverage.

M. PROGRESS MEETINGS

- **1.** Pre-construction conference:
 - a. Convened by Owner's Representative and Contractor.
 - b. Schedule: Upon or before material loading.
 - c. Participants:
 - i. Contractor's Project Manager
 - ii. Contractor's Field Superintendent
 - iii. Contractor's Crew Foreman
 - iv. Owner's Representative
- 2. Progress Meetings



- a. Convened by Owner's Representative and Contractor.
- b. Schedule: Weekly or every five days of production.
- c. Participants:
 - i. Contractor's Project Manager
 - ii. Owner's Representative
 - iii. Manufacturer's technical rep at 25%, 50%, 75%, and 100% completions.
 - 1. Contractor to coordinate with Manufacturer's technical representative for meeting attendance.
 - 2. Contractor to provide access as needed for Manufacturer's technical representative to access the roof.
 - Contractor to provide Owner's Representative the Manufacturer's progress report within 5 days of Manufacturer's site visit.

N. SUBMITALS

- 1. Submittal Requirements:
 - a. Transmit each submittal with transmittal letter indicating: date, project title, project number, Contractor's name and address and description of content.
 - b. Format of submittals shall be either one hard copy or one electronic file in Portable Document Format (.pdf) format. Submittals provided in any other format may be returned to the Contractor without being reviewed.
 - c. Delays caused by tardiness in receipt of submittals or caused by not providing submittals in the specified format, will not be an acceptable basis for extension of the contract completion date.
 - d. Review by the Owner's Representative will not be construed as a complete check but only that the general method of construction and detailing is satisfactory. Review will not relieve the Contractor from responsibility for errors that may exist.
 - e. The Owner reserves the right to delay the project start and/or withhold payment until pre-job submittals are complete and reviewed.
 - f. Contractor shall make each submittal allowing the Owner's Representative 14 calendar days of review time. All submittals shall be made far enough in advance of scheduled dates for installation to provide all time required for reviews, for possible revisions and resubmittals, and for placing orders and securing delivery.
- 2. Shop Drawings and Coordination Drawings
 - a. Any proposed deviations from project drawings (submittal does not constitute approval). Clearly mark all such deviations as "proposed change to Contract Documents."
 - b. Sheet metal fabrication, metal type and gauge, joining methods, fastener types, fastener placement, and sealant joint installation.
 - c. Tapered insulation layout.
 - d. As required elsewhere in the Contract Documents.
 - e. Shop drawings shall show dimensions of fabricated items, joining methods, fastener type and frequency, and relationships of building components.
 - f. Shop drawings shall show more detail, not less, than the Contract Documents.
- 3. Manufacturer's Literature



- a. A sample of the manufacturer's Membrane System Warranty.
- b. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system.
- c. Manufacturer's data sheets for each product to be provided.
- d. Manufacturer job specific approved fastening pattern for membrane/insulation.
- e. Job specific ANSI/SPRI/FM-4435/ES-1 wind uplift tests for perimeter edge metals.
- f. Color charts of sheet metal materials or whenever a choice is available in a specified product.
- 4. Notice of Award/Guarantee Application/Manufacturer's Inspections
 - a. Submit copy of notice of award or guarantee application to the roof system Manufacturer.
 - b. When available, submit Manufacturer's written approval of notice of award or guarantee application.
 - c. Upon completion of the installed work, submit copies of the manufacturer's final inspection to the Owner's Representative prior to the issuance of the manufacturer's warranty.
- 5. Contact/Subcontractor List
 - a. Project manager
 - b. Field supervisor
 - c. Safety manager
 - d. Telephone/mobile numbers
 - e. Email addresses
 - f. Two 24-hour emergency contact phone numbers.
- 6. Building Permit
 - a. The Contractor shall secure a building permit and arrange for all applicable third party services and inspections required by authorities having jurisdiction. The Contractor shall deliver to the Owner a copy of the final approval of the permit.
 - b. If a building permit is not necessary, the Contractor shall provide a letter of explanation with the project submittals, with supporting documentation from authorities having jurisdiction.
- 7. Contractor documents
 - a. Executed Owner / Contractor Agreement.
 - b. Payment and performance bonds.
 - c. Certificate of insurance listing Owner and as holder and Owner and Property Manager as additional insureds.
 - d. Contractor's State Roofing License.
 - i. If the state in which the project is located does not license Contractors, the Contractor shall provide a letter of explanation with documentation.



0. CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

- **1.** Mobilization and set-up
 - a. Owner will designate adequate space for hoisting, loading, and unloading of materials.
 - b. Owner will designate parking space for the Contractor's personnel and equipment.
 - c. Interior access will be provided for the daily access to the roof via onsite personnel.
- 2. Protection
 - a. Personal safety
 - i. Exercise due care to prevent debris and material from falling from the roof to the ground.
 - ii. Coordinate and provide the closing, distribution of personal safety equipment, erection and maintenance of barricades, and the restricting of access to areas in and around the building in order that Work shall present no danger to the health, well being, or safety of person and persons.
 - b. Property Protection
 - i. Provide necessary equipment, temporary enclosures, devices, and coverings to prevent damage to property including, but not limited to: walls; structures; equipment; windows; driveways; landscaping; areas scheduled for, but not immediately subject to, the Work; areas adjacent to, but not part of, the Work.
 - c. Security
 - i. Provide protection against theft of materials and equipment which are part of the Work
 - ii. Provide security to prevent the use of ladders, scaffolding, stair towers and equipment between work periods.
 - d. Sanitary Facilities: Contractor shall provide and Owner will designate location.
 - e. Construction debris
 - i. Clean site daily
 - ii. Owner will have the right to salvage any abandoned equipment and scrap materials
 - iii. Remove debris from roof daily.

P. MATERIALS AND EQUIPMENT

- 1. Delivery of manufacturer's products
 - a. Original sealed containers and wrappers
 - b. Original intact manufacturer's labels listing brand, weight, and references
- 2. Delivery of bulk materials:
 - a. Identified by manufacturers' or suppliers' manifests or bills of lading containing the manufacturers' specifications issued.
 - b. Verification of certification shall be presented upon delivery to the Owner's Project Representative.
- 3. Delivery of shop fabricated goods: Exempt from requirements of Paragraphs 1 and 2 of this Article.
- 4. Storage of materials:
 - a. Ground storage will not be acceptable unless approved in advance by the Owner and the Owner's Representative.
 - b. Storage inside the structure will not be acceptable unless approved in advance by the Owner and Owner's Representative.



- c. Rooftop storage and ground storage will not be acceptable unless:
 - i. Weight shall be distributed in accord with the capacity of the structural deck
 - ii. All materials are to be tarped and stored in accord with manufacturer requirements
 - iii. All materials are secured from being blown off of the roof.
- d. Handling: Prevent damage in handling and storage.

P. CONTRACT CLOSEOUT

- 1. Final Cleaning
 - a. Restore property damaged during the Work to its original condition at no cost to the Owner.
 - b. Remove equipment, debris, and materials from the site.
- 2. Closeout Submittals
 - a. Final material and labor Waiver of Lien.
 - b. Final billing
 - c. Final Contractor's inspection and Workmanship Guarantee Agreement.
 - d. Required prior to final payment to Contractor.

ROOFING, SHEET METAL & RELATED WORK

CONTENTS

- A. Scope of Work
- B. Examination of Project Site
- C. General Design Criteria
- D. Approved Manufacturers
- E. Approved Materials
- F. Installation Procedures
- G. Miscellaneous Provisions
- H. Clean-Up
- I. Warranties/Guarantees

A. Scope of Work

1. **Project Location:** 1151 Kilbourne Rd. Gurnee, IL 60031

Roof Areas: 1 & 2

2. Project Summary:

- a. New Roof System:
 - 1) Roof Área 1: Ballasted EPDM
 - 2) Roof Area 2: Metal roof repairs
- b. Roof Area 1
 - 1) Surfacing
 - a) Temporarily move or remove ballast for reuse.
 - 2) Remove and dispose of flashings and sheet metal items.
 - 3) Leave insulation in place. Replace wet or damaged boards.
 - 4) Add additional insulation 1 layers 3/8" Fanfold EPS
 - 5) Loose lay new field membrane and adhered flashing membrane:
 - a) Base Bid: 60 mil EPDM
 6) Cover completed membrane with protection mat.
 - 7) Surfacing
 - a) Install pavers at locations identified on drawings.
 - b) Redistribute stone ballast.
 - 8) New sheet metal items as called for in specifications and drawings.
- c. Roof Area 2
 - 1) Clean, prime and apply seam sealant at field seams, ridge cap seams, top closures, rake edges, penetrations, and curbs.
 - 2) Replace damaged gutter with new.
 - 3) Clean, prime with rust inhibiting primer and apply acrylic roof coating at locations with corrosion on the metal panels.
- ci. New roofing work shall include all detail and related work as described in these specifications, required per applicable building codes, mandated by the roof system manufacturer and reasonably implied to result in a complete finished, approved and warranted roof system.
- 3. **Completion:** May 30, 2024



4. Liquidated Damages:

Failure to be substantially complete by stated completion date will result in liquidated damages in the amount of \$1,500.00 per day. Consideration will be given, within reason, to work days lost to excessively severe weather.

5. Building Status:

The building will be operational during the course of the project work. The contractor shall take precautions to protect employees, customers and vendors.

6. **Contractor Qualification:**

The contractor shall certify that his firm, and all personnel assigned to the project are adequately trained in the procedures required to carry out the project work; and that his firm is an approved applicator of at least one of the specified roof system manufacturer(s).

B. Examination of Project Site

- 1. All contractors must visit the project site and familiarize themselves with all conditions under which they will be expected to perform the project work.
- 2. **Mandatory Pre-Bid Meeting:** 1/17/2024 at 10:00AM at Gurnee Public Works All contractors must attend this meeting to inspect the project site and receive explanation/clarification of the project work. Contractors will meet on site in the Public Works Conference Room.

C. General Design Criteria

- 1. The new roof assembly shall comply with the State of Illinois, Lake County, and village of Gurnee and building codes, ordinances, rules and regulations.
- 2. All materials and installation procedures will conform to the roof membrane Manufacturer's installation instructions and requirements. If the Contractor determines that any requirement in this specification booklet does not conform with the Manufacturer's requirements it will be his responsibility to bring the discrepancy to the attention of the Owner's Representative.
- 3. All materials furnished and installed shall meet or exceed the listed ASTM or Federal Specifications listed in the materials section below.

4. Wind Uplift Resistance

a. Roof Assembly:

Roof Area 1: ANSI/SPRI RP-4 2022; Conventional Ballasted Single-Ply System 1

Roof Areas 2: None

Perimeters & Corners = 8' 6"

b. Roof Edge Systems:

ANSI/SPRI/FM 4435/ ES-1 2022 FM 1-49

6. Fire Resistance Classification

Roof Assembly: (UL) Class "A"



D. **Approved Manufacturers**

1. Roofing Materials (Membrane, Insulation, Fasteners, Accessories) shall be manufactured or supplied by one of the following manufacturers:

Carlisle Syntec Systems	Johns Manville	Henry	Holcim Elevate
P.O. Box 7000	PO Box 5108	336 Cold Stream Rd.	26 Century Blvd
Carlisle, PA 17013	Denver, CO 80217	Kimberton, PA 19460	Nashville, TN 37214
1-800-479-6832	303-978-2000	1-800-523-0268	1-800-428-4442
www.carlislesyntec.com	<u>www.jm.com</u>	www.henry.com	www.holcimelevate.com

- Substitutions for any of the above manufacturers must be demonstrated to be a. equivalent and must be presented prior to the submission of bids.
- b. Roofing Contractors must demonstrate that they are an approved applicator of at least one of the above-referenced material manufacturers.
- Other miscellaneous material manufacturer's as listed below. 2.

Ε. **Approved Materials**

e.

1. Membrane for Area 1

- System: Ballasted Single Ply – Thermoset a.
- Material: EPDM (Ethylene, Propylene, Diene Monomer), Cured, elastomer b.
- C. Thickness:
 - Base: 60 Mil, Non-Reinforced 1)
- d. Color: Black
 - Attachment: Loose Laid
- f. Physical Properties – Base Bid
 - 1) Sheet Width
 - 10' Min. 2) Weight .39 lbs/sq.ft. a) Base Bid – 60 Mil 3) Tensile Strength: 1305 psi ASTM D412 15 lbf/in 4) Tear Strength ASTM D624 5) Elongation: 300% ASTM D412 6) Ultra-Violet Resistance: No Cracks/No Crazing ASTM D46
- Seaming: g.
 - 1) Seam Tape
 - a) Pre-Applied to sheets in Factory for Primary Side laps.

.030"

- b) Field-applied for end laps and cut laps.
- c) Width: Factory Applied Tape: 3"; Field applied: 6"
- d) Thickness:
- e) Base: Synthetic Rubber
- 2) Mating surfaces properly cleaned and primed per manufacturer's requirements.
- 3) Ends lapped 1".
- Strip in all seams on other areas where there is a threat of ponding water 4) with 6" pressure sensitive EPDM flashing ply.
- Utilize uncured 60 mil EPDM patches to reinforce all "T" intersections. 5)
- At locations where a salvage ply of the existing flashing is to lap over the 6) new flashing it will be sealed with 3" splice tape.
- Flashing: h.
 - 1) EPDM – Continuation of Field Membrane / Fully Adhered



- 2) 6" Wide, 45 mil, Reinforced securement strip with pre-applied 3" splice tape installed at all vertical transitions.
- 3) Attach securement strip with fasteners & 2" seam plates @ 12" o.c.
- Wherever possible securement strip will be anchored into the vertical plane. 4)
- 5) Utilize 6" wide, pressure-sensitive, cured, EPDM flashing ply to strip in metal items.
- 6) Refer to section details.
- Specialty Membrane
 - Uncured EPDM 1)
 - 2) Nominal 60 mils thick
 - For T-joints, inside/outside corners, field wraps and flashing transitions. 3)
- Membrane Adhesives, Splicing Cements, Cleaners, Solvents, Etc. j.
 - Supplied and/or approved by the membrane manufacturer. 1)
 - 2) Applied according to the manufacturer's installation instructions.
 - Store between 40°F and 90°F a)
 - b) Do not install during sub-freezing temperatures.

2. **Roof Insulation:**

i.

- Separator board: a.
 - **EPS** Fanfold 1)
 - 2) Manufacturer's Product
 - 3) **Board Size**
 - 4) Thickness

b)

- 5) **Physical Properties**
 - a) **R-Value**
 - Compressive Strength Minimum

3/8"

- b. New Insulation (For wet or damaged replacement only): Polyisocyanurate
 - Supplied and/or approved by manufacturer. 6)
 - 7) Surfacing: Fiber-reinforced facer
 - 8) Thickness:
 - 2 Layers 1.5" or a Single Layer of 3" insulation (For damaged or wet replacement) a)

2 pcf

4' x 50' fanfold boards

- 9) **Physical Properties**
 - Board Size Area 1 4' x 8' a)
 - Minimum R-value (LTTR) 5.7/inch b) Minimum Compressive Strength 20 psi
 - c)
 - Minimum Densitv d) e)
 - Flame Spread (ASTM E84) 25.0
 - f) Maximum Moisture Absorption 1%
- Edge Strips C.
 - Wood Fiberboard 1)
 - 2) Thickness, width and placement as required to properly sump drains, drip edges and create transitions at perimeters.
- d. Placement:
 - 1) Stagger all insulation board joints of separate layers.
 - 2) Offset joints of boards within the same layer.
 - There shall be no gaps between insulation boards, or boards and perimeter 3) edges greater than $\frac{1}{4}$ "
- Installation: e.
 - Loose Laid 1)
- Storage Prior to Use f.
 - 1) On raised pallets,
 - 2) Slice shrink-wrap in which insulation was delivered to alleviate condensation.
 - 3) Cover with a waterproof tarp.
 - Broken or damp insulation may not be used. 4)



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- 4.17/inch

R-Tech Fanfold Type II or approved equal

20 psi

ASTM E84

ASTM C209

- 3. Mechanical Fasteners:
 - a. Concrete Fasteners:
 - 1) As required for attachment of wood blocking, termination bars and metal items.
 - 2) Nail-ins
 - 3) Zamac alloy w/ zinc plated steel drive pin.
 - 4) Size: 3/16", Mushroom Head
 - 5) Length to achieve minimum of 1" embedment.
 - 6) Driven into pre-drilled holes.
 - b. Wood Blocking:
 - 1) Threaded screws Nails will not be acceptable
 - 2) Size: #10 Diameter
 - 3) Length to achieve minimum of 1" embedment (or) length to penetrate through plywood a minimum of 1/4".
 - c. Stress Plates
 - 1) Used in conjunction with fasteners for insulation.
 - 2) Approved/supplied by membrane manufacturer
 - 3) 3" diameter corrosion-resistant metal plates.
 - d. Fastening Plates
 - 1) Used as part of horizontal-vertical base securement with fasteners
 - 2) 2 3/8" diameter metal plates.
 - 3) Barbed
 - e. Sheet Metal Screws
 - 1) Size, type and length for application and substrate encountered.
 - 2) Exposed screw heads, such as at coping caps, must incorporate sealing washers.

5. Wood Blocking:

- a. May be required to replace deteriorated wood blocking at perimeter edges, on top of parapet walls, or at curbs.
- b. May be required at roof edge locations to accommodate increased roof surface height.
- c. May be required to raise curb heights where necessary to achieve flashing height.
- d. 2"x wood blocking or CD-X plywood.
- e. Southern Pine or Fir Species

6. Sheet Metal Items:

- a. Termination Bars:
 - 1) 1 3/4" Deep x 1/8" thick extruded aluminum.
 - 2) Pre-punched & fastened 6" o. c.
 - 3) Lip to receive caulk.
 - 4) Installed across the top edge of all flashings terminated on the vertical plane.
 - 5) Leave $\frac{1}{4}$ gap between adjoining sections of bars to allow for expansion.
- b. Perimeter edge metal:
 - 1) Match existing size and color.
 - 2) 24 Ga. pre-finished steel.
 - 3) Metal Era Perma-Tite (Or Approved Equivalent)
 - 4) ANSI/SPRI ES-1 2022 Approved
 - 5) 10' wide sections.
 - 6) 10' wide, 22 Ga. galvanized steel concealed continuous cleat.
 - 7) 8" wide concealed splice plates with double bead of sealant on either side or factory applied caulk tape.
 - 8) Incorporate pre-fabricated miters, end caps and transition pieces.



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- c. Counterflashing
 - 1) 1-piece slip-mounted design at curbs with non-removable equipment.
 - 2) 1-piece surface mounted design at masonry wall to metal wall panels transition.
 - 3) 24 Ga. pre-finished steel
 - 4) 4" face
 - 5) 10' lengths lapped 2"
 - 6) Fasten 12" O.C.
 - 7) Caulk top edge and tool to shed water.
- d. Gutters

1)Match existing size and color.

- 2)24 Ga. Pre-finished steel
- 3)Concealed hidden hangers spaced 18" O.C. and within 12" from ends and miters.
- 4)Fasten to bottom side of metal roof panels.

8. Stone Ballast

- a. Base Bid: Reuse existing.
 - 1) Rounded Water-worn Gravel without fines
 - 2) ~ 1 ¹/₂" Diameter #4 Gradation Size
 - 3) Meeting ASTM D448 & D7655
 - 4) Meeting membrane manufacturer's requirements

9. Miscellaneous:

- a. Protection Fabric
 - 1) Installed over completed membrane/below ballast & pavers
 - 2) Carlisle CCW 200V (or approved equivalent)
 - 3) Polypropylene non-woven fabric
 - 4) Stabilized to resist soil chemicals, mildew, acids and alkalis
 - 5) Non-biodegradable
 - 6) 40" wide x 200' long rolls
 - 7) Physical Properties

a)	Weight	12 oz/sq.yd		
b)	Thickness	90 mils	(ASTM D5199)	
c)	Puncture Resistance	130 lb	(ASTM D4833)	
d)	Mullen Burst	400 psi	(ASTM D3786)	

- Mullen Burst Elongation
- 50% (ASTM D4682)
- 8) Lap all sides & ends a minimum of 6".
- b. Concrete Pavers

e)

- 1) Size: 24" x 24" x 1 7/8"
- 2) Weight: 23 lbs./sq.ft.
- 3) Color: Natural
- 4) Finish: Diamond
- c. Sealer Pocket Flashing
 - 1) Supplied by membrane manufacturer and compatible with membrane system.
 - 2) 2-piece, EPDM compatible, injection-molded, interlocking, pre-fabricated sealer pockets with rigid sides and flanges.
 - 3) Used for penetrations where flashing boot is not an option.
 - 4) Filled with one part, thermoplastic, moisture-curing pourable sealer.
 - 5) Minimum of 1" clearance between edge of pocket and penetration.
 - 6) Self-Adhered to membrane and flashed into roof system per manufacturer's requirements.



- 7) Sealer pockets larger than 6" x 6" to be fastened into wood blocking, attached to deck.
- d. Caulk Gun Grade
 - 1) Applied to metal and/or masonry transitions where required.
 - 2) Polyurethane
 - 3) NP-1 (or approved equivalent)
- e. Liquid-Applied Flashing
 - 1) May be required for low flashing conditions, and/or to flash irregularly shaped penetrations.
 - 2) Supplied/Approved by membrane manufacturer.
 - 3) 2-component polyurethane based liquid flashing material
 - 4) Color: Black
 - 5) Used in conjunction with embedded fleece.
 - 6) Substrate properly prepared and primed prior to application.
 - 7) All installation procedures per manufacturer's requirements.
- f. Drain strainers and clamping rings.
 - 1) Match existing drain bowl manufacturer.
 - 2) Replace all strainers with cast iron strainers.
 - 3) Replace all clamping rings with new clamps and bolts.
 - 4) As part of base bid.
- g. Couplings
 - 1) As required to extend the height of pipe stacks to meet required flashing height 8" above finished roof surface.
 - 2) Fernco (*or approved equivalent*)
 - 3) Flexible PVC
 - 4) Chemical & UV resistant
 - 5) Stainless steel clamping bands.
 - 6) Sized to match pipe being extended

10. Primer and Sealant for Metal Roof Repairs

- a. Rust Inhibitor Primer
 - 1) Trade name: MetalShield #112 or approved equal.
 - 2) Color: White
 - 3) Coverage: .5 to 1 gal./100 sq.ft.
 - 4) Use: For locations where corrosion is present as a general primer over properly prepared substrate.
- b. Metal Seam Sealer
 - 1) Trade name: Metal Seam Sealer HE295
 - 2) Color: White
 - 3) Coverage: 1/2" bead: 75 ln. ft./gal.; 4" wide: 20 ln.ft.; 6" wide: 13 ln.ft./gal.
 - 4) Use: For fasteners, seams, and flashings sealing.
 - 5) Incorporate polyester reinforcement when gaps are greater than 1/8"
- c. Polyester Fabric
 - 1) Trade name: Polyester Fabric HE195
 - 2) Color: White
 - 3) Size: 6" x 300' roll.
 - 4) Use: For reinforcing sealant on seams greater than 1/8".
- d. Elastomeric Roof Coating
 - 1) Trade name: Pro-Grade 280
 - 2) Color: White
 - 3) Coverage: 2 coats at 1.5 gal./100 sq.ft. for total of 3 gal./100 sq.ft.
 - 4) Use: For locations where corrosion is present on steel roof panels.



F. Installation Procedures

1. General

- a. Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, job site considerations and weather restrictions.
- a. Write Owner's Representative to notify of defects and conditions which may adversely influence performance or completion of work.
- b. Absence of written notice will constitute the Contractor's acceptance of site.

2. Examination

- a. Verify deck is dry, sound and smooth, free of depressions or projections.
- b. Verify deck weight limits prior to material loading.
- c. Verify existence and locations of above ground utility lines, underground utilities, water and gas lines, fire sprinkler systems, pavement heating devices, above and below deck conduit and tubing, ceiling suspension systems, and lawn sprinkling systems.

3. Protection

- a. Protect building surfaces against damage from roofing work.
- b. Where work must continue over finished roof membrane, protect surfaces with insulation and plywood.
- c. Demolish only roofing which shall be replaced to the completed roof assembly by the stop of work each day.
- d. Provide water cut-off to the existing roof system to prevent moisture from entering into and under the Work.

4. Removal, Disposal, Preparation

- a. Traffic paths over adjoining roof areas, which are not a part of the project work must be avoided. Materials and equipment must not be stored on non-work areas.
- b. On a daily basis the contractor shall familiarize himself with the areas below which will be working and take note of any special conditions that need to be addressed.
- c. Temporarily remove HVAC units, electrical conduits, etc. They will be reinstalled upon completion of the work. All mechanical / electrical work must be coordinated with management and must be performed by a licensed and skilled tradesman. Disconnect/reconnects when required will be performed by Owner's mechanical contractor.
- d. Remove and dispose of all sheet metal flashings and vertical roof flashing materials down to the structural substrate. Remove all existing ballast river rock and set aside for reuse. Dispose of refuse materials as required by Federal, State and Local ordinances and codes.
- e. Slice existing field membrane on 10' centers, to remain in place.



- f. Inspect the condition of the steel decking where exposed. If any section of decking is deteriorated, damaged, compromised or will in some way hinder the installation of the roof system, it must be brought to the attention of the Owner's Representative for proper repair methods.
- g. Remove curbs determined by management to be obsolete. Fill in the deck with new steel decking to match the existing.
- h. Detail disconnections and attachment.
 - 1) Ductwork, vent hoods, mechanical elements, and other rooftop fixtures which are disconnected, moved or altered during construction shall be installed and fastened in a manner commensurate with original attachment.
 - 2) Nails shall be unacceptable as exposed fasteners.
 - 3) As a portion of lump sum work.
- i. Increase the height of the HVAC unit curbs/rails to a minimum height of eight inches (8") above the finished elevation of the new roof assembly. Use 2"x wood blocking attached to existing substrate to raise curbs. All mechanical/electrical work must be performed by MK Industries (847) 815-0484 (Contact Name: JR).
- j. Extend the existing soil stack pipes to a minimum height of eight inches (8") above the finished elevation of the new roof assembly. Use cast iron pipe, or PVC pipe (as required to match existing) and FernCo type couplings to provide mechanical attachment to the existing vent pipes.
- k. Seal all rain collars and flashings of existing B-Vents, and chimney stacks with urethane sealant.
- I. Inspect the wood blocking at perimeter edges. Replace any deteriorated or damaged blocking. Replacement of existing blocking will be handled on a contingency basis according to T&M pricing.
- m. Add wood blocking as required to accommodate the new roof assembly height. Fasten wood blocking 12" o.c. staggered along perimeters and 6" o.c. at corners.
- n. Incidental damage to property:
 - 1) At no cost to Owner, immediately restore and repair any interrupted system and condition whose existence was:
 - i. Verifiable and unconcealed
 - ii. Verifiable and concealed
 - iii. Unverified and unconcealed.
 - 2) In accord with the Time and Material Bid, immediately restore and repair any interrupted system and condition whose existence was unknown, unverifiable, and concealed.
 - 3) At no cost to Owner, replace and repair any elements specified for reuse and damaged during removal.
- o. Debris:
 - 1) Remove all debris from roof top daily.
 - 2) Sweep clean sidewalks and driveways daily.
- p. Provide new work on suitable substrate and conditions.
 - 1) Free of debris and residue
 - 2) Smooth



- 3) Uniform
- 4) Dry
- 5) Structurally sound.
- q. Wood nailers and blocking
 - 1) Inspect nailers at walls, edges, joints, vents, curbs, boxes:
 - 2) Repair as approved by Owner's Representative
 - i. Enhance fastening as approved by Owner's Representative by Time and Material bid.
 - ii. Remove deteriorated material and provide replacement for demolished materials as approved by Owner's Representative by Time and Material bid.
 - 3) Provide nailers and blocking to achieve elevations and transitions in accord with specified construction as a portion of lump sum work.
 - 4) Inspect blocking and elevations of joints, vents, curbs, boxes:
 - 5) Repair as approved by Owner's Representative
 - i. Enhance fastening as approved by Owner's Representative by Time and Material bid.
 - ii. Remove rotted and deteriorated material and provide replacement for demolished materials as approved by Owner's Representative by Time and Material bid.
 - 6) Raise as required to achieve minimum 8" flashings height above finished roof surface as portion of lump sum bid.

5. <u>Roof Drains</u>

- a. Inspect all drain heads to ensure function.
- b. Absence of written notice from Contractor to Owner's Representative will constitute Contractor's verification that no drain or accessory is broken or malfunctioning.
- c. Protection: Block drains to prevent debris and materials from entry. Clear blocking before the stop of work each day.
- d. As part of the base bid replace all drain bolts, clamping rings and hardware.
- e. As part of base bid work replace all drain strainers with new cast iron strainers to match size and style of drain head.

6. Insulation

- a. Install boards butted to each other and adjacent materials over the existing properly prepared field membrane.
 - i. Gaps in excess of ¹/₄" not acceptable.
 - ii. Fill voids and gaps with insulation trimmed to fit.
- b. Score and cut insulation to conform to substrate variations.
- c. Install insulation with long joints in a continuous straight line with end joint staggered between rows, abutting edges and ends between boards.
- d. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict the flow of water.



7. Field Membrane

- a. Install roofing membrane over area to receive roofing according to membrane roofing system manufacturer's written instructions.
- b. Unroll roofing membrane and allow to relax before installing.
- c. Accurately align roofing membrane and maintain uniform side and end laps of minimum dimensions required by manufacturer.
- d. Mechanically fasten roofing membrane securely at terminations, penetrations, perimeter and corners of roof according to requirements in ANSI/SPRI RP-4 2022 and according to roofing system manufacturer's instructions.
- e. Apply roofing membrane with side laps shingled with slope of roof deck where possible.
- f. EPDM Seams
 - 1) Minimize the number of seams. All seams in the field of the roof shall be situated down slope or parallel to the slope. Avoid seams within 4' of drains.
 - 2) Adhere side laps with pre-applied 3" splice tape or 6" field applied splice tape.
 - 3) Adhere end laps and other cut laps with field-applied 6" splice tape.
 - 4) Roll seams following mating.
 - 5) At any location where there is a threat of ponding water, Contractor will strip in the seams with a 6" wide ply of pressure sensitive EPDM flashing. The decision regarding the need to strip in a seam will be made by the Owner's Representative.
 - 6) Leave exposed and do not cover with ballast until approved by both Manufacturer's technical rep and Owner's Representative.
- g. Every attempt must be made to avoid wrinkles and voids particularly at seam locations. If the Owner's Representative determines that any section of membrane is excessively wrinkled the Contractor will be required to replace that section.
- h. Reinforce all T-joints with EPDM reinforcement patches per manufacturer's requirements.
- i. Where membrane cannot be extended completely up the vertical transition of curbs, turn the EPDM membrane up the vertical plane at walls and perimeter curbs 3". Secure with fasteners and 2" seam plates into the vertical plane @ 12" o.c.

8. Flashing Membrane

- a. Install reinforced securement strips at the base of all vertical transitions. Fasten securement strips 12" o.c. with fasteners & 2" seam plates. Wherever possible fasten into vertical plane.
- b. Extend field membrane over securement strips and up vertical transitions in a fully adhered application.
- c. Extend over and down past wood blocking at edge fascia locations.
- d. Extend EPDM to the top of curbs where the units have been lifted.



- e. At unit curbs and rail supports where extension of field membrane was not possible incorporate a separate flashing ply of EPDM. If unit was lifted extend to the top of the curb. Seal to field membrane on horizontal plane with 6" splice tape.
- f. Incorporate all required uncured EPDM inside and outside reinforcement patches. Caulk edges with lap sealant.
- g. Secure the top edge of flashings on vertical planes with a termination bar. Incorporate water cut-off mastic behind the top edge of the flashing. Fasten the termination bars 6" o.c. Caulk top edge.
- h. Any exposed vertical edges of flashing shall also receive a termination bar fastened 6" o.c. and water cut-off mastic behind the membrane. Caulk both edges of termination bar.

9. <u>Penetrations</u>

- a. Install the membrane tightly around pipe penetrations. Fasten the membrane if required at the base of the penetrations with a minimum of 4 fasteners and 2" seam plates.
- b. Flash all vent stacks and round penetrations (*where feasible*) with pre-fabricated flashing boots. Adhere base of boots to cleaned field membrane. Secure top edge of boots with metal clamp and caulk. If a field seam runs through the location of the flashing boot a target patch must be installed over the membrane prior to the installation of the boot.
- c. In lieu of a pre-fabricated boot a field wrap utilizing uncured EPDM will be acceptable upon approval from the Owner's Representative.
- d. For other round or irregular penetrations such as equipment screen support posts, where the use of a boot is not feasible or practical, install 2-piece, interlocking, pre-fabricated pocket. Clean and prime the penetration. Cleaned surface and primer must extend above level of the sealant. Adhere base flange to cleaned field membrane. Fill pocket with flexible pourable sealer in manor to shed water. Caulk edge of pocket with sealant as required. Edges of sealant pockets must have a minimum clearance of 1" from penetrations on all sides. If pocket is greater than 6" x 6" attach to wood blocking, fastened to the structural deck.
- e. Spread water cut-off mastic over deck drain flange and secure membrane in place with clamping ring. Utilize minimum 1 tube of mastic per drain. Existing drain bowl flange to be cleaned of debris and surface rust with steel wire brush.

10. <u>Sheet Metal Flashings</u>

- a. Perimeter edge metal
 - 1) Water dam style with continuous galvanized steel cleat and concealed seam plates with secondary fascia extender.
 - 2) Attach fascia extender and cleat through membrane into wood blocking with 1.5" ring shank fasteners @ 6" O.C.
 - 3) Attach water dam style continuous cleat through membrane into wood blocking with 1.5" ring shank fasteners @ 6" O.C.
 - 4) Install stripping ply of EPDM membrane over the water dam and seam into the field membrane.



- 5) Install water dam style fascia cover over the stripping ply of EPDM membrane.
- 6) Incorporate hidden splice plates with double bead of sealant on both sides.
- 7) Incorporate all necessary miters, end pieces and transition pieces.
- b. Counterflashing Non-Removable Curbs
 - 1) Install 1-piece, slip-mounted 24 ga., pre-finished steel counterflashing over the top edge of the new membrane flashings slipped behind existing metal vertical flange.
 - 2) Incorporate water block and termination bar securement.
 - 3) Install behind the existing sheet metal and fasten 12" o.c. Fasteners to be evenly spaced.
 - 4) Lap adjoining sections 1".
 - 5) Incorporate necessary end caps and miters.
- c. Counter flashing Masonry Wall
 - 1) Install 1-piece, surface mount 24ga. pre-finished steel counterflashing.
 - 2) Remove any existing coating or other adhesives and pollutants from concrete walls at all areas to receive sealant using a concrete disk grinder.
 - 6) Incorporate water block and termination bar securement.
 - 3) Install behind the vertical flange of the existing "Z" flashing of the metal wall panels.
 - 4) Fasten 12" o.c. Fasteners to be evenly spaced.
 - 5) Lap adjoining sections 1"
 - 7) Incorporate necessary end caps and miters.
- d. Gutters
 - 1) Fasten to bottom side of the existing metal roof panels.
 - 2) Install concealed gutter hangers 18" O.C. and within 12" from ends and miters.
 - 3) Match existing color, size, and profile.

11. Ballast

- a. Install protection fabric over the completed field membrane. Lap seams 6".
- b. Install concrete pavers over protection fabric at locations identified on roof plan.
- c. Re-distribute stored ballast over protection fabric at a rate required by membrane manufacturer, but not less than 15lb/sq.ft corners, 15lb/sq.ft at perimeters and 13lb/sq.ft in the field. Lay ballast as roofing membrane is installed, leaving roof membrane ballasted at the end of the workday.
- d. Protection fabric should be trimmed so as to not be exposed at perimeters and flashing locations.

12. <u>Metal Roof Repairs</u>

- a. Clean all surfaces to receive the sealant repairs by pressure washing with minimum 5000PSI. Wire brush any loose sealant and surface rust.
- b. Apply rust inhibiting primer to rusted surfaces.
- c. Apply seam sealer to all field seams, ridge cap seams, top closures, rake edges, penetrations, and curb flashings.
- d. Incorporate polyester reinforcement when seams exceed 1/8" width.
- e. Apply roof coating to areas coated with rust inhibiting primer.
- f. Mask off areas that may be visible to the ground to provide crisp lines for the sealants.



13. <u>Finishing</u>

- a. Re-install all roof top units, HVAC units, ventilators, conduits, etc. which had previously been removed.
- b. All free-standing items and equipment supports on the roof will be set on protective walkway pad material supplied by membrane manufacturer.
- c. Apply polyurethane sealant where required at sheet metal/concrete/masonry transitions to create finished, watertight flashings. Caulk will be applied in an aesthetically pleasing manner by experienced applicator.
- d. Clean field surface, walls, fascia and other areas of any excessive adhesive spills, etc.
- e. At the end of each workday ensure that the new membrane is adequately tied off to prevent water infiltration. Situate all loose field edges down slope. Temporarily adhere to existing adjoining membrane with flexible pourable sealer. Thoroughly embed membrane and check that continuous contact is made. On the next workday, peel open seam and trim off section where the sealer was applied

G. Miscellaneous Provisions

- 1. The Roofing Contractor must keep two (2) sets of complete specifications and plans at the jobsite at all times. The resident foreman shall be well versed in the operating specifications for the roofing work.
- 2. Ground staging area shall be separated from employees and visitors to the property with orange snow fencing or some other approved barricade.
- 3. Access to the roof area shall be achieved through Contractor own ladders or lift equipment.
- 4. Roof top equipment will require removal from their respective setting curbs during the roofing operations. Removal and reinstallation shall be done by workmen skilled in the required trades. Roofers may not engage in HVAC or Electrical work. Conduits running across roof must remain operational during roofing work.
- 5. Traffic paths over non-work roof areas must be avoided if possible. Traffic over previously completed roof sections must be minimized and, if possible, avoided altogether. Materials and equipment may not be stored on non-work areas or previously completed roof sections.
- 6. The Roofing Contractor shall provide portable toilet facilities for his employees. Employees shall not use interior building facilities. A minimum of one (1) toilet unit shall be provided.
- 7. The Roofing Contractor shall be responsible for all clean-up work required as a result of the execution of the contract work.
- 8. The Roofing Contractor shall be responsible for the replacement of any damaged lawn and/or landscaping resulting from the execution of the contract work.
- 9. The Roofing Contractor shall be responsible for the replacement of any damaged pavement resulting from the execution of the contract work.
- 10. The Roofing Contractor shall be responsible for all damages and consequential damages resulting from any activity connected with the execution of the contract work.
- 11. At the start of each workday, the end of each work day, and periodically during each work day, the contractor must inspect the interior spaces below which he will be working to familiarize himself with the conditions and to ensure, to the best of his ability, that any necessary precautions are taken to prevent disturbing/damaging the interior space.

H. Clean-Up of the Job Site

1. The Roofing Contractor shall remove all rubbish and refuse from the job site on a daily basis and at the completion of the work. No refuse materials will be left at the job site overnight unless in Contractor's dumpsters.



- 2. Particular attention must be paid during each day's work to ensure that debris is not blown off of the rooftop during the project work.
- 3. The Roofing Contractor must inspect the surrounding grounds at the end of each workday and remove any miscellaneous roofing project related debris.
- 4. The Roofing Contractor shall remove all stains from the interior and exterior surfaces of the building that are the result of the work operations. It is the responsibility of the Roofing Contractor to document all prior existing damaged surfaces before beginning the contract work.

I. Guarantees and Warranties

- 1. The Roofing Contractor shall correct, at his own expense, any damages resulting from the roofing operations or execution of the project work. The Roofing Contractor shall correct all consequential damages as part of his guarantee.
- 2. The Roofing Contractor shall guarantee his workmanship and materials for a period of two years (2 yrs) from the date of completion of the project work and acceptance of the same by the OWNER. The Roofing Contractor shall guarantee the water tightness of the roof as it is related to the specified work performed and will respond, within a twenty-four hour (24 hrs) period to any written notice served by the OWNER, of a leak in the roof. The Roofing Contractor will repair any leak in the roof system not caused by malicious damage, subsequent installation of items by other trades, and act of God, as part of his guarantee. Leak repair work includes all work necessary to restore the roof system to its condition prior to the leak (wet insulation, etc.).
- 3. The Roofing Contractor shall secure the membrane manufacturer's 20-year total system, transferable warranty covering all materials and labor used in the project. The manufacturer's technical representative will conduct an inspection of the completed work and approve the installation prior to issuance of a warranty.

TWO-YEAR CONTRACTOR WARRANTY AGREEMENT

As part of the contract obligations and in consideration of receipt of payment for work covered by the contract for roofing work executed between <u>Village of Gurnee</u>, its beneficiaries and assigns, known as the OWNER; and

Known as the Contractor. The **Contractor agrees to the following:**

- 1. The CONTRACTOR shall guarantee his workmanship and materials for a period of **two (2) years** from the date of completion of the project work and acceptance of the same, as done according to specifications, by the OWNER.
- The CONTRACTOR shall guarantee the workmanship of the roof work and will address any installation deficiencies discovered by the Owner and will respond within 7 days to any nonemergency issues upon notice served by the OWNER.
- 3. The CONTRACTOR will repair any failure(s), not caused by malicious damage, subsequent installation of items by other trades, and act of God, as part of his contract guarantee/warranty. In addition to repairing failure, replacement of all damaged materials shall be completed.

2024 Roof Replacement	
Roof Repair Project	Building (s)
1151 Kilbourne Rd. Gurnee, IL 60031	
Project Location	Total Square Footage
Contractor	Authorized Agent
Address	Telephone
CERTIFIC	CATE OF NOTARY
State of	_)
County of)
appeared, know, and know to me, to b	, in the year of 2043, before me personally came be the individual who executed the foregoing instrument he exrectuted the same for the purpose therein contained.

In witness whereof, I hereunto set my hand office seal.

(Notary Public)

My commission expires:

2024 ROOF REPLACEMENT & REPAIR PROJECT 1151 KILBOURNE RD. GURNEE, IL 60031

PROJECT LOCATION



BUILDING OVERVIEW



PROJECT INFO

BUILDING LOCATION: 1151 KILBOURNE RD. **GURNEE IL**

OWNER REPRESENTATIVE: VILLAGE OF GURNEE

PLANS PREPARED BY: RCL ENGINEERING GROUP 825 N. CASS AVENUE, STE 107 WESTMONT, IL 60059

PERSON OF CONTACT: Dewey Perry 847-867-7093

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DRAWING INDEX

SHEET TITLE TITLE SHEET ROOF PLAN: 1 ROOF PLAN: 2 ROOF 1: DETAILS ROOF 2: DETAILS



PROJECT SUMMARY

1. ROOFING-BALLASTED

- WITH NEW.
- C.
 - LOOSE LAY 60 MIL EPDM OVER THE EPS INSULATION.
 - REINSTALL THE EXISTING BALLAST OVER THE NEW PROTECTION MAT.
 - INSTALL ADHERED EPDM MEMBRANE FLASHINGS. G H.
 - SEALANT.

2. SHEET METAL-BALLASTED

3. METAL ROOF REPAIRS

- AND CURBS.
- B. REPLACE DAMAGED GUTTER AND HANGERS WITH NEW. PANELS.

BUILDING OVERVIEW



A. REMOVE EXISTING BALLAST AND SET ASIDE FOR REUSE. ANY BALLAST REMOVED WITH VACUUM WILL NEED TO BE REPLACED

B. PROPERLY PREPARE THE EXISITING ROOF FOR A RECOVER. REMOVAL AND DISPOSAL OF THE EXISTING ROOFING MEMBRANE FLASHING MATERIALS AND DISABLE THE EXISTING ROOF MEMBRANE. INSTALL LOOSE LAID 3/8" EPS FANFOLD INSULATION OVER THE EXISTING ROOF SURFACE.

INSTALL BALLAST PROTECTION MAT OVER THE COMPLEDED ROOF SURFACE.

TERMINATE ALL MEMBRANE FLASHINGS WITH ALUMINUM TERMINATION BAR, WATER BLOCK AND

REPLACE DRAIN HARDWARE, CAST IRON STRAINERS AND CLAMPING RINGS. INSTALL NEW CONCRETE PAVERS AT AREAS IDENTIFIED ON ROOF PLAN.

A. INSTALL FASCIA AND WATER DAM AT PERIMETER EDGE. B. INSTALL SLIP MOUNTED COUNTER FLASHINGS AT NON-REMOVABLE CURBS. C. INSTALL SURFACE MOUNTED COUNTER FLASHINGS AT WALL FLASHINGS.

A. CLEAN, PRIME AND APPLY SEAM SEALANT AT FIELD SEAMS, RIDGE CAP SEAMS, TOP CLOSURES, RAKE EDGES, PENETRATIONS,

C. CLEAN, PRIME WITH RUST INHIBITING PRIMER AND APPLY ACRYLIC ROOF COATING AT LOCATIONS WITH CORROSION ON THE













ROOF PLAN: 2

SCALE: 3/32"=1'-0"









- APPLY SEALANT TO FASTENERS AND SEAMS

APPLY SEALANT TO FASTENERS, — HORIZONTAL SEAM, AND VERTICAL SEAM



SCALE: NTS



- APPLY MASKING TAPE DURING REPAIRS TO PREVENT SEALANT ON VERTICAL SURFACE

- APPLY SEALANT TO FASTENERS AND HORIZONTAL SEAM

APPLY SEALANT TO FASTENERS – AND HORIZONTAL SEAM



RAKE EDGES





GUTTER REPAIR SCALE: NTS

