



HURST-ROSCHE, INC.

PROJECT MANUAL FOR

ROOF REPLACEMENT AND RESTORATION
HILLSBORO JUNIOR HIGH SCHOOL
HILLSBORO C.U.S.D. NO. 3
HILLSBORO, MONTGOMERY COUNTY, ILLINOIS
HR # 150-0651

Prepared for

Hillsboro C.U.S.D. No. 3
1311 Vandalia Road
Hillsboro, Montgomery County, Illinois

March 23, 2021

Bid Package No. _____

HURST – ROSCHE INC.

1400 E. Tremont Street

Hillsboro, Illinois 62049

217 / 532-3959

DOCUMENT 000110 - TABLE OF CONTENTS

ROOF REPLACEMENT AND RESTORATION
HILLSBORO JUNIOR HIGH SCHOOL
HILLSBORO C.U.S.D. NO. 3
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Section Title

PROCUREMENT AND CONTRACTION REQUIREMENTS GROUP
DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS
INTRODUCTORY INFORMATION

000110 Table of Contents.....000110-1-2

PROCUREMENT REQUIREMENTS

001116 Invitation to Bid.....001116-1-2
002114 Instructions to Bidders – AIA.....002114-1-6
004113 Bid Form - Stipulated Sum (Single-Prime Contract).....004113-1-5
004300 Procurement Form Supplements.....004300-1-4

CONTRACTING REQUIREMENTS

005214 Agreement Form - AIA Stipulated Sum (Single-Prime Contract).....005214-1-4
006400 Contractor’s Affidavit for Final Completion006400-1-1
006450 Waiver of Lien.....006450-1-1
006500 Affidavit of Payment to Material Suppliers and Subcontractors006500-1-1
006550 Consent of Surety Company to Final Payment.....006550-1-1
007214 General Conditions - AIA Stipulated Sum (Single-Prime Contract).....007214-1-1
007313 Supplementary Conditions – AIA.....007313-1-6
008250 Prevailing Rate of Wages.....008250-1-4
008600 Drawings, Schedules, and Details.....008600-1-1

SPECIFICATIONS GROUP
GENERAL REQUIREMENTS SUBGROUP
DIVISION 01 - GENERAL REQUIREMENTS

011000 Summary.....011000-1-4
012000 Price and Payment Procedures.....012000-1-5
013000 Administrative Requirements013000-1-4
013300 Submittal Procedures013300-1-5
014000 Quality Requirements014000-1-2
015000 Temporary Facilities and Controls.....015000-1-3
016000 Product Requirements016000-1-3
017000 Execution and Closeout Requirements017000-1-5

FACILITY CONSTRUCTION SUBGROUP

DIVISION 02 – EXISTING CONDITIONS

02 41 19 Selective Structure Demolition 02 41 49-1-4

DIVISION 06 – WOODS AND PLASTICS

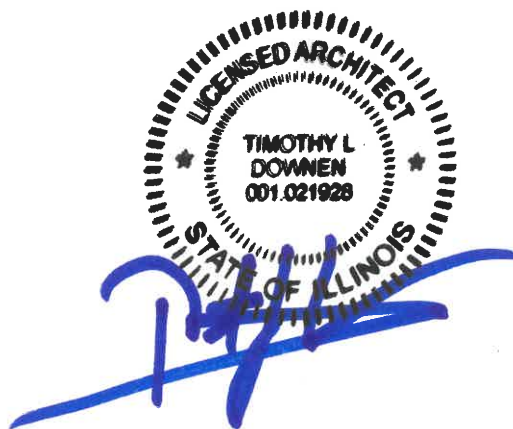
06 10 53 Miscellaneous Rough Carpentry 06 10 53-1-4

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

07 01 50 Preparation for Roof Restoration 07 01 50-1-6
07 01 50.16 Maintenance Cleaning of membrane Roofing..... 07 01 50.16-1-3
07 01 50.74 Rehabilitation of Single Ply Roofing 07 01 50.74-1-12
07 54 16 KEE PVC Roofing – Fully Adhered..... 07 54 16-1-9
07 62 00 Sheet Metal Flashing and Trim 07 62 00-1-4
07 71 00 Roof Specialties 07 71 00-1-3

SPECIFIER:

ARCHITECTURE: Timothy L. Downen, AIA, LEED AP



Date: 3/23/2021
Expires: 11/30/2022

END OF SECTION

DOCUMENT 001116 - INVITATION TO BID

Project: **ROOF REPLACEMENT AND RESTORATION
HILLSBORO JUNIOR HIGH SCHOOL
HILLSBORO C.U.S.D. NO. 3
HILLSBORO, MONTGOMERY COUNTY, ILLINOIS
HR # 150-0651**

Owner: **HILLSBORO C.U.S.D. NO. 3
1311 VANDALIA ROAD
HILLSBORO, ILLINOIS 62049**

Architect/Engineer: **HURST-ROSCHE, INC.
1400 E. TREMONT ST.
HILLSBORO, ILLINOIS 62049**

Date: **March 23, 2021**

The Owner will receive Bids until 2:00 PM local prevailing time on Friday, the 9th day of April 2021, at Hillsboro CUSD No. 3 Unit Office, 1311 Vandalia Road, Hillsboro Illinois for the following work:

Scope of work:

The Base Bid includes removal of approximately 18,500 square feet of existing PIB membrane roof and underlying insulation along with its replacement with new PVC/KEE membrane roofing and polyisocyanurate insulation at Hillsboro Junior High School. Work to gutters, downspouts, vents, exhaust fans and miscellaneous flashing is commensurate with the work.

Alternate Bid #1 includes restoration of approximately 8,600 square feet of existing PIB membrane roof at Hillsboro Junior High School. Work to gutters, downspouts, vents, exhaust fans and miscellaneous flashing is commensurate with the work.

Unit Bid A: Cost Per Square Foot to replace additional areas of existing PIB membrane roofing, including wet substrate insulation, in preparation for rehabilitation.

A Pre-bid Meeting will be held on Wednesday, March 31, 2021, at 2:00 PM, prevailing time, at Hillsboro C.U.S.D. No. 3 Unit Office, 1311 Vandalia Road, Hillsboro, Illinois.

Drawings and specifications may be obtained at the office of Hurst-Rosche, Inc., 1400 E. Tremont St., Hillsboro, Illinois, after March 23, 2021, by paying a non-refundable amount of \$20.00 (\$30.00 if mailed) for each set of drawings and specifications.

Bidding Documents, Drawings and Specifications, may be examined by prospective bidders and material suppliers at the offices of Hurst-Rosche, Inc., 1400 E. Tremont St., Hillsboro, Illinois, and the following Plan Rooms:

Central Illinois Plan Room, 1620 S. 5th Street, Springfield, IL 62703
Greater Peoria Contractors & Suppliers Association, 1811 West Altorfer Drive, Peoria, IL 61615
McGraw Hill Construction, www.dodgeprojects.construction.com
Southern Illinois Builders Association, 1468 Green Mount Road, O'Fallon, IL 62269

Drawings and specifications will be available for viewing on the internet at: www.hurst-rosche.com. The documents are being provided for reference purposes only. Bidders are encouraged to obtain a signed and sealed hard copy set of the bidding documents. At a minimum, bidders must obtain clean copies of bid forms from the offices of Hurst-Rosche Inc. by paying a non-refundable amount of \$10.00 to submit a bid for this project.

The Owner requires the project to be substantially complete by July 30, 2021.

Bidders will be required to provide Bid security of a sum no less than 10 percent of the Bid Sum. The bid security shall be either certified check, cashier's check, bank money order or bid bond issued by surety licensed to conduct business in the State of Illinois. Hereinafter this bid security shall be referred to as the bid bond.

Submit two copies of your Bid on the Bid Form provided. Bidders may supplement this form as appropriate. Equipment providers to submit two copies of pricing break down on company letterhead, acknowledging any issued addenda, signed by authorized officer of company and must include all submittals indicated in the mechanical specifications.

Your Bid or equipment pricing will be required to be submitted under a condition of irrevocability for a period of 30 days after submission.

The Owner reserves the right to accept or reject any or all Bids/Pricing or any part thereof, to waive any informality in bidding, and to accept bids deemed most favorable to the Owner.

HILLSBORO C.U.S.D. NO. 3

MR. DAVID POWELL, SUPERINTENDENT

END OF DOCUMENT

DOCUMENT 002114 - INSTRUCTIONS TO BIDDERS - AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. Instructions to Bidders.
 - 2. Site examination.
 - 3. Prebid conference.
- B. Related Documents:
 - 1. Document 001116 - Invitation To Bid.
 - 2. Document 004113 - Bid Form - Stipulated Sum.
 - 3. Document 007214 - General Conditions – AIA Stipulated Sum.
 - 4. Document 007313 - Supplementary Conditions – AIA.

1.2 INSTRUCTIONS TO BIDDERS

- A. These Instructions to Bidders amend or supplement AIA Document A701-1997 - Instructions to Bidders and other provisions of Bidding Documents and Contract Documents.
- B. To be considered all bids must in accordance with these Instructions to Bidders.
- C. Bidders are encouraged to obtain a signed and sealed hard copy set of the bidding documents by paying a non-refundable amount of \$20.00 (\$30.00 if mailed). At a minimum, bidders must obtain clean copies of bid forms by paying a non-refundable amount of \$10.00 to submit a bid for this project.

1.3 SITE EXAMINATION

- A. Bidders shall carefully examine documents and construction site to obtain first-hand knowledge of existing conditions. Contractors will not be given extra payments for conditions which can be determined by examining site and these documents.
- B. Contact Mr. Fred Butler at the following phone number to arrange date and time to visit Project site:
 - 1. Telephone: (217) 254-8723.
- C. A visit to Project site has been arranged for Bidders following the Pre-Bid Meeting at 2:00 PM on March 31, 2021.

1.4 THE SCHEDULE FOR BIDDING THIS PROJECT IS AS FOLLOWS

- A. **Plans Available:** March 23, 2021
- B. **Pre-Bid Meeting:** March 31, 2021
2:00 PM
1311 Vandalia Rd.
Hillsboro, IL 62049
- C. **Latest Time to Submit Request for Interpretation** April 2, 2021
- D. **Latest Time to Issue an Addendum:** April 6, 2021
- E. **Bid Opening:** April 9, 2021
2:00 PM
1311 Vandalia Rd.
Hillsboro, IL 62049

F. All requests for interpretations shall be in writing via mail or e-mail addressed to the Architect/Engineer. All questions must be submitted on the “Request for Interpretation Pre-Bid Question and Comment Form” included at the end of this section, and questions not submitted in accordance with this form and specified time frame will not be accepted. Any and all interpretations and supplemental instructions will be made by addendum to the Drawings and Specifications and forwarded to all bidders either by mail or e-mail transmittal. All responses by the Architect/Engineer must be in writing to be binding. Any response general in nature or affecting these Instructions to Bidders shall be sent via addendum as previously described. All bidders are required to return the signature page of the addendum signed to the Architect within 24 hours after receipt. Failure of any bidder to receive any such addendum or interpretations shall not relieve such bidder from an obligation under the bid as submitted. All addenda so issued shall become part of the Contract Documents. Oral interpretations, changes or corrections will not be binding and Bidders shall not rely upon such interpretations, changes and corrections. Each Bidder shall ascertain prior to submitting Bid that all addenda issued have been received and shall acknowledge receipt in Bid.

Questions shall be directed to:
e-mail: tdownen@hurst-rosche.com

- G. Bids shall be made on unaltered Bid Forms furnished by the Architect. Fill in all blank spaces and submit two (2) copies. Bids shall be signed with name typed below signature. Where bidder is a corporation, bids must be signed with legal name of corporation followed by name of state of incorporation and legal signature of an officer authorized to bind the corporation to a contract.
- H. Each bidder shall designate on the attached bid form one person who shall serve as the bidder’s contact person for all matters pertaining to the bid. In absence of such designation, the person who signs the bid shall be deemed the bidder contact.

- I. For those projects which are bid on a unit price basis, in the event in which a bidder does not fill out the extension of the unit price, or a math error has occurred in calculation, the unit prices listed shall govern.
- J. Each Bid shall be accompanied by bid security made payable to the Owner, in the amount of ten percent (10%) of the bid sum. Security shall be either certified check, cashier's check, bank money order or bid bond issued by surety licensed to conduct business in the State of Illinois. Successful bidder's security will be retained until he has signed the contract and furnished required payment and performance bonds. Owner reserves the right to retain security of the next two (2) lowest bidders until the lowest bidder enters into contract or until thirty (30) days after bid opening, whichever is shorter. All other bid security will be returned as soon as practicable. If any bidder refuses to enter into a contract, Owner will retain bid security as liquidated damages, but not as a penalty.
- K. All costs associated with the preparation and submission of a bid are the sole responsibility of the bidder. These costs shall not be chargeable to the Owner by any successful or unsuccessful bidder. All bids become the property of the Owner and shall not be returned except in the case of a late submission.
- L. Simultaneously, with delivery of the executed contract, the successful bidder, at its own expense, shall furnish surety in the form of a performance bond and a labor and material payment bond in the amount of one hundred percent (100%) of the contract amount. Surety for such bonds shall be a company duly authorized and licensed in the State of Illinois and acceptable to the Owner. The Attorney-In-Fact who signs bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.
- M. All copies of the bid, bid security and any other documents required to be submitted with bid shall be enclosed in a sealed opaque envelope. Envelope shall be addressed to **Hillsboro C.U.S.D. No. 3, Unit Office, 1311 Vandalia Rd., Hillsboro, Illinois 62049**, and shall be identified with project name, bidder's name and address. Mailed bid envelopes shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof. Oral, telephonic or telegraphic Bids are invalid and will not receive consideration. Bids shall be deposited at the location designated in the Invitation to Bid prior to time and date designated for opening, or any extension thereof made by addendum. Bidder shall assume full responsibility for timely delivery at location designated for receipt of Bids. Bids received after time and date for receipt of bids will be returned unopened.
- N. A Bid may not be modified, withdrawn or canceled during the forty five (45) days immediately following bid opening, and each bidder so agrees in submitting his Bid. Any bidder may withdraw, cancel or modify its bid, at any time prior to scheduled time for opening of bids, by letter or telegram actually received by Owner prior to bid time, or, with proper identification, by personally securing bid submitted; if by telegram, written confirmation over signature of bidder shall be mailed and postmarked on or before date and time of bid opening. Withdrawn bids may be resubmitted up to bid opening time provided that they are in full compliance with these Instructions to Bidders.

- O. Protests
1. Any bidder who submitted a bid and believes the bid was improperly rejected or that the bid selected by the Owner is not in the best interest of the Owner may submit a written notice of intent to protest the bid to the Owner within seven (7) days. The Owner shall consider all protests before execution of a contract. Each protest must specify the reasons supporting the protest. The Owner may require that additional information be provided. Failure to supply such required information shall be cause for dismissal of the protest.
 2. The Owner shall immediately investigate the allegations against the Owners actions and shall issue a written response to the protest.
 3. This provision allowing for the submission of protest shall not confer any right on any bidder but is intended solely to assist the Owner in determining the best responsible bid.
- P. Any complaint or protest of the bidding procedure must be filed by the bidder to the Owner. Within 7 days of bid opening the bidder shall notify the Owner in writing of his intent to protest bidding. The bidder shall perfect this notice of intent within 7 days.
- Q. Owner reserves right to disqualify bids and bidders, before or after opening, upon evidence of collusion with intent to defraud or other illegal practices upon part of bidder, lack of responsibility as evidenced by poor workmanship and progress of past work, incomplete work which, in judgment of Owner, might hinder or prevent prompt completion of additional work if awarded, for being in arrears on existing contracts, in litigation with the Owner, or having defaulted on a previous contract.
- R. Bidder's attention is directed to the fact that all Federal and Illinois State Laws, municipal ordinances and regulations of any and all authority having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full. Successful Bidders shall be required to comply with 775 ILCS 10 concerning equal employment opportunities; comply with 30 ILCS 570 concerning the employment of citizens of the State of Illinois; comply with 820 ILCS 265 concerning substance abuse prevention on public works projects; and comply with 820 ILCS 130 concerning prevailing wages.
- S. Any successful bidder that is a corporation organized in a state other than Illinois shall furnish to the Owner, upon request, a properly certified copy of its current Certificate of Authority to do business in the State of Illinois, such certificate is to remain on file with the Owner.
- T. Any successful bidder that is a corporation organized in the State of Illinois shall furnish at its own cost to the Owner, if requested, a Certificate of Good Standing issued by the Secretary of State, such certificate is to remain on file with the Owner.
- U. Owner is exempt from payment of Federal & Illinois Department of Revenue's Use and Sales Tax on material entering permanently into structure. Retail sales tax shall not be included in the bid amount.
- V. Bids will be opened as announced in Invitation for Bids.

- W. Owner reserves the right to reject any or all bids or any part thereof, to waive any informalities in bidding and to accept bids deemed most favorable to the Owner.
- X. Notwithstanding any delay in preparation and execution of the formal Contract Agreement, each bidder shall be prepared, upon written notice of bid acceptance, to commence work within ten (10) days following receipt of official written Notice to Proceed, or on date stipulated in such notice.
- Y. Any work in providing or preparing to provide the services specified herein that is commenced by the successful bidder prior to execution of a written contract agreement shall be at the bidder's expense.
- Z. Accepted bidder shall assist and cooperate with the Owner in preparing the formal Contract Agreement, and, within fifteen (15) days following its presentation, shall execute same and return it to Owner.
- AA. The first day of construction is June 1, 2021. The Owner requires the project to be substantially complete by July 30, 2021.

1.5 REQUIRED CONTRACTOR/SUBCONTRACTOR BACKGROUND SCREENING

- A. Hillsboro C.U.S.D. No. 3 requires background screening to be completed on all contractor/subcontractor employees. All employees must have documentation that a background screening has been completed on them prior to working on any district projects. All costs associated with the background screening are to be the responsibility of the contractor. The background screening must be conducted by a company acceptable to the Hillsboro C.U.S.D. No. 3
- B. All contractor/subcontractor employees working on the school grounds of Hillsboro C.U.S.D. No. 3 are required to submit to background screening. Each employee must complete, sign, and date the Consent and Waiver Release form. These forms will be submitted and the applicant cleared before the applicant may work on any part of the school grounds.
- C. The contractor is responsible for submitting the forms to a company acceptable to the Hillsboro C.U.S.D. No. 3, and for any costs involved in the screening. All information received as a result of a background check will be strictly confidential. A notice of automatic disqualification will be sent to the hiring or using entity. After the screenings, the contractor is also responsible for sending Hillsboro C.U.S.D. No. 3 copies of approved background checks for their records.

END OF DOCUMENT

DOCUMENT 004113 - BID FORM - STIPULATED SUM

To: **HILLSBORO C.U.S.D. NO. 3**
1311 VANDALIA ROAD
HILLSBORO, ILLINOIS 62049

Project: **ROOF REPLACEMENT AND RESTORATION**
HILLSBORO JUNIOR HIGH SCHOOL
HILLSBORO C.U.S.D. NO. 3
HILLSBORO, MONTGOMERY COUNTY, ILLINOIS
HR # 150-0651

Date: _____

Submitted by: _____
(full name)

(full address) _____

Contact Name: _____

1. OFFER

Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Hurst-Rosche, Inc. for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of _____ dollars, (\$ _____), in lawful money of the United States of America.

We have included the bid security as required by the Instruction to Bidders.

All applicable federal taxes are excluded and State of Illinois and City of Hillsboro taxes are excluded from the Bid Sum.

2. REVIEW OF BID DOCUMENTS

The bidder represents that he is skilled and experienced in the use and interpretation of drawings and specifications such as those included in the bid documents for this contract. He has carefully reviewed the drawings, specifications and other bid documents, and has found them free of ambiguities and sufficient for bid purposes. Further, the Bidder has carefully examined the site of the work and, from his own observations, has satisfied himself as to the nature and location of the work; the character, quality and quantity of materials; the difficulties likely to be encountered; and any other items which may affect the performance of the Work. He has based his bid solely on these documents and observations, and has not relied in any way on any explanation or interpretation, oral or written, from any other source.

3. CONTRACTOR'S FEE FOR CHANGES IN WORK

Undersigned herein indicates a single percentage, not to exceed **12%** for own forces and not to exceed **8%** for subcontractors, for overhead and profit to be added to net extra job cost for changes in the work required to be performed by:

a) Own Forces ___% b) Subcontractors ___%

Undersigned herein indicates a single percentage, not less than **10%** for own forces and not less than **5%** for subcontractors, for overhead and profit to be added to net credit for job costs for changes in the work required to be performed by:

a) Own Forces ___% b) Subcontractors ___%

Percentages named above shall not include any items of insurance, bond or taxes since these are considered job cost items in contractor's quotations for changes in the work.

Any percentages indicated which are higher or lower than the maximum or minimum in the typewritten language herewith, shall be disregarded and typewritten figure used.

4. CONTRACT TIME

Undersigned agrees that, if awarded the Contract for Work bid upon herein, work will start on date designated by the Owner and will be completed in accordance with the contract documents, with all phases of work completed and operational and ready for acceptance by the Owner no later than as required by the Contract Agreement.

5. UNIT PRICES

The following are Unit Prices for specific portions of the Work as listed. The following is the list of Unit Prices:

ITEM DESCRIPTION	UNIT QUANTITY	UNIT PRICE
<u>Additional Replacement</u>	<u>Square Foot</u>	\$ _____

6. ADDENDA

The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.

Addendum # _____ Dated _____; Addendum # _____ Dated _____
Addendum # _____ Dated _____; Addendum # _____ Dated _____

7. APPENDICES

The following documents are attached to and made a condition of the Bid:

Bid Surety in the form of _____
Document 004300 - Procurement Form Supplements including:
Appendix A - List of Subcontractors.
Appendix B - List of Unit Prices.

8. EQUAL EMPLOYMENT OPPORTUNITY

During performance of this contract, Contractor agrees as follows:

- a. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
- b. The contractor will in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
- c. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract of understanding, notice advising the labor union or worker's representative of the contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- d. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and by the rules, regulations, and relevant orders of the Secretary of Labor.
- e. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and order of the Secretary of Labor pursuant thereto, and will permit access to his books, records and accounts by the Department of the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- f. In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any such rules, regulations or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies involved as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

- g. The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Department may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with the subcontractor or vendor as a result of such direction by the Department, the contractor may request the United States to enter into such litigation to protect the interest of the United States.

9. NOT BARRED

The contractor by submitting its bid certifies that the Contractor is not barred from bidding on the contract as a result of a conviction for either bid-rigging or bid-rotating. 720 ILCS 5/33/E-11.

10. DRUG FREE WORKPLACE

The Contractor by submitting its bid certifies that it will provide a drug free workplace and that it is in compliance with the requirements of the Drug Free Workplace Act 30 ILCS 580.1 et. seq., and the Substance Abuse Prevention on Public Works Projects Act PA095-0635.

11. SEXUAL HARASSMENT POLICY

The Contractor by submitting its bid certifies that it has a written sexual harassment, (ii) a description of sexual harassment, utilizing examples; (iv) an internal complaint process including penalties (v) the legal resource, investigative and compliant process through the Illinois Department of Human Rights; (vi) directions on how to contact the Department and Commission; and (vii) protection against retaliation for exercising rights under the policy in accordance with 775 ILCS 5/2-105(A)(4).

12. CRIMINAL RECORDS CHECKS

The Contractor by submitting its bid certifies that it will submit to background screening those employees, including subcontract employees, which will be working on any district project. This information is to be provided in accordance with the requirements of 105 ILCS 5/10-21.9. The Contractor by submitting its bid understands that employees found to be in violation of the Illinois School Code will not be permitted to work on school grounds.

13. BID FORM SIGNATURES

The Corporate Seal of

(Bidder - print the full name of your firm)
was hereunto affixed in the presence of:

(Authorized signing officer Title)

(Seal)

(Authorized signing officer Title)

(Seal)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

END OF DOCUMENT

DOCUMENT 004300 - PROCUREMENT FORM SUPPLEMENTS

To: **HILLSBORO C.U.S.D. NO. 3**
1311 VANDALIA ROAD
HILLSBORO, ILLINOIS 62049

Project: **ROOF REPLACEMENT AND RESTORATION**
HILLSBORO JUNIOR HIGH SCHOOL
HILLSBORO C.U.S.D. NO. 3
HILLSBORO, MONTGOMERY COUNTY, ILLINOIS
HR # 150-0651

Date: _____

Submitted by: _____
(full name)

(full address) _____

Contact Name: _____

In accordance with Document 002114 - Instructions to Bidders - AIA and Document 004113 - Bid Form - Stipulated Sum, we include the Appendices to Bid Form Supplements listed below. The information provided shall be considered an integral part of the Bid Form.

The following Appendices are attached to this document:

Appendix A - List of Subcontractors: Include names of all Subcontractors and portions of the Work each Subcontractor will perform.

Appendix B - List of Unit Prices: Include listing of unit prices specifically requested by Contract Documents.

BID FORM SUPPLEMENTS SIGNATURES

The Corporate Seal of

(Bidder - print the full name of your firm)

was hereunto affixed in the presence of:

(Authorized signing officer Title)

(Seal)

(Authorized signing officer Title)

(Seal)

DO NOT COPY

APPENDIX B - LIST OF UNIT PRICES

The following is the list of unit prices referenced in the bid submitted by:

(Bidder) _____

To (Owner) HILLSBORO C.U.S.D. NO. 3

Dated _____ and which is an integral part of the Bid Form.

The following are Unit Prices for specific portions of the Work as listed, and are applicable to authorized variations from the Contract Documents. In the event in which a bidder does not fill out the extension, or a math error has occurred in calculation, the unit prices listed shall govern.

ITEM DESCRIPTION	UNIT	UNIT PRICE
<u>Additional Replacement</u>	<u>Square Foot</u>	_____

END OF DOCUMENT

DOCUMENT 005214 - AGREEMENT FORM - AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. Contract Agreement.
- B. Related Documents:
 - 1. Document 007214 - General Conditions – AIA Stipulated Sum.
 - 2. Document 007313 - Supplementary Conditions - AIA.

1.2 CONTRACT AGREEMENT BETWEEN OWNER AND CONTRACTOR

A. THIS AGREEMENT, made and entered into as of the _____ day of _____ in the year of Two Thousand and _____ by and between _____ hereinafter and in the Contract Documents called "Contractor" and the **HILLSBORO C.U.S.D. NO. 3**, hereinafter and in the Contract Documents called "Owner."

B. WITNESSETH: That for and in consideration of the mutual covenants and agreements, hereinafter stated, Contractor and Owner covenant and agree as follows:

C. THE CONTRACT WORK:

1. Contractor covenants and agrees to furnish all labor, materials, equipment, transportation, construction plant and facilities necessary to perform all Work required by the Contract Documents, for the Project entitled:

- a. ROOF REPLACEMENT AND RESTORATION
HILLSBORO JUNIOR HIGH SCHOOL
HILLSBORO C.U.S.D. NO. 3
HILLSBORO, MONTGOMERY COUNTY, ILLINOIS

as shown on Drawings and described in Specifications prepared by Hurst-Rosche, Inc., Hillsboro, Illinois, acting as, and in these Contract Documents referred to as Architect/Engineer and covenants and agrees to do and perform all acts and things required of Contractor by this Contract and the Contract Documents.

D. TIME OF COMPLETION:

1. First day of construction is approximately June 1, 2021. The Owner requires the project to be substantially complete by July 30, 2021.

E. CONTRACT SUM AND TERMS OF PAYMENT:

1. Contract Sum: The Owner, if Contractor shall faithfully fulfill and perform this Contract, covenants and agrees to pay Contractor in current funds, subject to additions and deductions by Change Order as provided in the Contract Documents, the sum of _____ Dollars (\$ _____), which sum shall constitute the Contract Sum, said Contract Sum being derived from Contractor's Bid dated _____. It is understood and agreed that should there be any increase in wage rates, or in cost of materials or equipment, or in any other of Contractor's costs or should Contractor be compelled to pay premium wages, or for overtime work, during the life of this Contract and/or prior to completion of Contractor's work thereunder, Contractor shall absorb all such increased costs, without addition to the Contract Sum except when otherwise expressly provided in Contract Documents.
2. Payments: Owner shall make payments for work performed under the Contract as provided in Article Nine of the General Conditions and in accordance with other applicable articles of the Supplementary Conditions and Contract Documents.
3. Contractor's Fees for Changes in Work: In accordance with Contractor's bid, it is agreed that the following percentages for overhead and profit shall be applied on work added to or omitted from the Contract by written Change Order approved by Architect and Owner in advance of performance of the work.

Additional Work performed by:

- | | |
|---------------------|-------------------------|
| 1. Own Forces ____% | 2. Subcontractors ____% |
|---------------------|-------------------------|

Omitted Work originally required by:

- | | |
|---------------------|-------------------------|
| 1. Own Forces ____% | 2. Subcontractors ____% |
|---------------------|-------------------------|

Note: Taxes (when applicable) are considered as incidentals, as well as bonds and insurance costs and are not included in the percentages listed above nor should they be added to change orders submitted.

F. CONTRACT DOCUMENTS:

1. Contract Documents include the Contract Agreement, Contractor's Bid as accepted by Owner, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, and all Addenda issued prior to and all Modifications issued after execution of the Contract Agreement.

2. Bidder's attention is directed to the fact that all Federal and Illinois State Laws, municipal ordinances and regulations of any and all authority having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full. Successful Bidders shall be required to comply with 777 ILCS 10 concerning equal employment opportunities; comply with 30 ILCS 570 concerning the employment of citizens of the State of Illinois; comply with 820 ILCS 265 concerning substance abuse prevention on public works projects; and comply with 820 ILCS 130 concerning prevailing wages.

G. ILLINOIS LABOR:

Contractor shall comply with all Illinois statutory requirements regarding labor, including, but not limited to, the following:

1. Illinois Public Act 77-1552 and Chapter 48, Sections 39S-1 through 39S-12 of the Illinois Revised Statutes regulating wages of laborers, mechanics and other workers employed in any public works and known as the "Prevailing Wage Act," which provides in part that all laborers, mechanics and workers performing work under the Contract shall be paid not less than the prevailing rate of wages as determined by the Illinois Department of Labor (820 ILCS 130).
2. Illinois Public Act 83-1472, Article 2 and Chapter 48, Sections 2201 through 2207, 1984 of the Illinois Revised Statutes pertaining to hiring of Illinois labor and known as the "Illinois Preference Act (30 ILCS 570)."
3. "Illinois Human Rights Act of 1980," Chapter 68, Illinois Revised Statutes, and the Rules and Regulations, Title 44, Section 750 of the Illinois Administrative Code, Illinois Department of Human Rights; pertaining to equal employment opportunity (777 ILCS 10).

H. PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND:

1. Within ten (10) days immediately following date of his receipt of this contract, Contractor shall furnish Owner the signed Contract and Performance Bond and Labor and Material Payment Bond as required by and in accordance with the terms of Contract Documents in a penal sum of one hundred percent (100%) of the Contract sum.
2. In the event Contractor fails to furnish Owner such Contract and Bonds within said period, this Contract shall thereupon become null and void at Owner's option, exercised by written registered notice and mailed to Contractor by said Owner within five (5) days thereafter. Owner may then retain and enforce as liquidated damages, bid guarantee heretofore deposited with it in connection with Contractor's proposal for this Contract or the difference between his bid and a subsequent awarded bid, whichever is lesser.

I. IN WITNESS HEREOF, the parties hereto have executed this agreement as of the day and year first written above.

OWNER:

HILLSBORO C.U.S.D. NO. 3

BY _____

TITLE _____

CONTRACTOR:

Attest:

BY _____
Secretary

BY _____

TITLE _____

(Corporate Seal)

END OF DOCUMENT

CONTRACTOR'S AFFIDAVIT FOR FINAL COMPLETION
(To be filed with final request for payment)

STATE OF _____)

COUNTY OF _____)

_____, being
first duly sworn upon oath deposes and says:

That he/she is _____ of _____

hereinafter termed "The Contractor" for all work upon the hereinafter termed "Said Project," work for the HILLSBORO C.U.S.D. NO. 3, under that certain contract between said Contractor and said Owner, bearing date of _____ pertaining to said work.

Affiant further states, of his/her own knowledge, that all bills incurred by the Contractor, for services, labor and material furnished, for work done by the Contractor under said Contract, or in connection with said project have been paid and all subcontractors who have furnished services, labor or materials have no claim or demand against Owner for any services, labor and/or materials furnished and/or work done by them upon said Project.

Affiant further states that this affidavit is made on behalf of the Contractor for the purpose of obtaining payment of the sum of _____ (\$ _____) dollars, which affiant states, upon his/her own knowledge, constitutes the full balance due the Contractor for all services, labor and materials furnished and work done to and upon Said Project by the Contractor whether under and pursuant to provisions of said Contract and all subsequent modifications thereof and changes therein or otherwise; and that payment of the sum to the Contractor will constitute payment in full on everything due for such services, labor, materials and work, and will fully satisfy any and all claims or demands which Contractor may have or assert against said Owner, arising out of anything done or furnished by the Contractor or occurring in connection with said Project and/or Contract.

CONTRACTOR

By _____

Title _____

Subscribed and Sworn to before me the _____ day of _____, 20____.

NOTARY PUBLIC

(PARTIAL) (FINAL)
WAIVER OF LIEN

STATE OF _____)
COUNTY OF _____)SS

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by HILLSBORO C.U.S.D. NO. 3, hereinafter known as the OWNER,

To Furnish: _____

For the project known as: ROOF REPLACEMENT AND RESTORATION

For the premises known as: HILLSBORO JUNIOR HIGH SCHOOL

Address: HILLSBORO C.U.S.D. NO. 3, HILLSBORO, ILLINOIS

THE undersigned, for and in consideration of the dollar amount shown below and other good and valuable considerations, do(es) hereby waive and release under the mechanics' lien statutes of the State where the project premises are located, to the extent of the payment recited below is received by the undersigned and is applicable to lienable labor, services, materials, fixtures, or apparatus, any and all lien or claim or right of lien on the above-described premises and the improvements, fixtures and appurtenances thereon, and on the monies or other considerations due or to become due from the Owner and on all other project-related monies from whatever source, on the account of the above-mentioned labor, services, materials, fixtures, or apparatus furnished by the undersigned for or in connection with the above-described premises.

(Payment amount written in long form)

PAYMENT AMOUNT _____

(Company Name)

(Address)

(City/State/Zip)

(Signature of Officer)

Sworn to and subscribed before me this ____ day of _____.

(Notary Public)

My commission expires: _____

AFFIDAVIT OF PAYMENT TO MATERIAL SUPPLIERS AND SUBCONTRACTORS

STATE OF _____

COUNTY OF _____

_____, being first duly sworn upon oath
deposes and says, that he/she entered into a Contract with the HILLSBORO C.U.S.D. NO. 3, known as
the Owner, for furnishing of labor, work services, materials, fixtures, and supplies for ROOF
REPLACEMENT AND RESTORATION at the following described real estate: HILLSBORO JUNIOR
HIGH SCHOOL.

That for the purpose of said Contract, the following persons, firms or corporations have been contracted
with to furnish, have furnished or prepared, or will furnish or prepare labor, services, materials, fixtures,
apparatus, machinery or supplies, or are furnishing and preparing material for said construction; that there
are due or to become due to them respectively, the amounts set opposite their names for said labor,
services, materials, fixtures, apparatus, machinery and supplies as stated; that there are no other
contractors outstanding and there is nothing due or to become due any person, firm, or corporation, for
labor, services, materials, fixtures, machinery, apparatus, or supplies, other than as stated herewith.

MATERIAL SUPPLIER AND/OR SUBCONTRACTOR	CONTRACT ITEM	CONTRACT AMOUNT	AMOUNT PAID TO DATE	AMOUNT DUE OR TO BECOME DUE
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CONTRACTOR

Subscribed and sworn to before me, a Notary Public, this _____ day of _____; A.D.
20____.

NOTARY PUBLIC

CONSENT OF SURETY COMPANY TO FINAL PAYMENT
(To be filed with final request for payment)

PROJECT: ROOF REPLACEMENT AND RESTORATION
HILLSBORO JUNIOR HIGH SCHOOL
HILLSBORO C.U.S.D. NO. 3
HILLSBORO, MONTGOMERY COUNTY, ILLINOIS

TO (Owner): HILLSBORO C.U.S.D. NO. 3
1311 VANDALIA ROAD
HILLSBORO, ILLINOIS 62049

CONTRACTOR:
(Name, address)

CONTRACT DATE:

BOND NO.:

In accordance with the provisions between Owner and Contractor indicated above, _____

_____ SURETY COMPANY, hereby
approves of final payment to Contractor, and agrees that final payment to Contractor shall not relieve
Surety Company of any of its obligations to Owner, as set forth in Surety Company's bond.

IN WITNESS WHEREOF, Surety Company has hereunto set its hand this _____ day of
_____, 20____.

Attest:

Surety Company

(Seal):

Signature of Authorized Representative

Title

DOCUMENT 007214 - GENERAL CONDITIONS – AIA STIPULATED SUM

1.1 SUMMARY

- A. Document Includes:
 - 1. General Conditions.
- B. Related Documents:
 - 1. Document 005214 – Agreement Form – AIA Stipulated Sum.
 - 2. Document 007313 – Supplementary Conditions - AIA.

1.2 GENERAL CONDITIONS

- A. AIA Document A201-2007, General Conditions of the Contract for Construction, is the General Conditions of the Contract.

1.3 SUPPLEMENTARY CONDITIONS

- A. Refer to Document 007313 for modifications to General Conditions.

END OF DOCUMENT

DOCUMENT 007313 - SUPPLEMENTARY CONDITIONS - AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. General Conditions.
 - 2. Supplementary Conditions.

- B. Related Documents:
 - 1. Document 004113 – Bid Form – Stipulated Sum
 - 2. Document 005214 – Agreement Form - AIA

1.2 GENERAL CONDITIONS

- A. The General Conditions of the Contract for Construction, AIA Document A201, Sixteenth Edition, 2007, Articles 1 through 15, is a part of this Contract and is incorporated herein as fully as if here set forth. Copies of the General Conditions are on file and may be reviewed at the offices of the Architect, or may be obtained from the American Institute of Architects, St. Louis Chapter, 911 Washington St., #225, St. Louis, Missouri 63101-1203.

1.3 SUPPLEMENTARY CONDITIONS

- A. The following supplements modify, change, delete from or add to the "General Conditions of the Contract for Construction," AIA Document A201, Sixteenth Edition, 2007. Where any Article of the General Conditions is modified or changed or any Paragraph, Subparagraph or Clause thereof is modified, changed or deleted by these supplements, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

1.4 REFERENCE TO DIVISION 01

- A. Where provisions of General Conditions relate to project administrative or work-related requirements of the Contract, and those provisions differ from those specified in Division 01, provisions outlined in Division 01 shall prevail.

1.5 ARTICLE 1: GENERAL PROVISIONS

- A. 1.5.1 In the second line following the word "Specifications" insert the words "and Project Manual,".

- B. 1.6 TRANSMISSION OF DATA IN DIGITAL FORM: Add new subparagraph 1.6.1:

1.6.1 Electronic drawings provided by the Owner or Architect are for informational purposes only and are not intended for any other use. The paper copies provided are a true representation of the completed design and if discrepancies should exist between the paper copy and the electronic copy, the paper copy shall govern.

- C. Delete Subparagraph 1.1.8 its entirety and substitute the following:

1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2. If the Initial Decision Maker is not specifically identified in the Agreement, the responsibilities of the Initial Decision Maker shall default to the Architect.

- D. DEFINITIONS: Add Paragraph 1.1.9

1.1.9 PROJECT MANUAL

The Project Manual is the collection of documents which includes the bidding requirements, sample forms and, certain Contract Documents such as the Conditions of the Contract and the Specifications.

1.6 ARTICLE 2: OWNER

- A. 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER:

- B. Delete Subparagraphs 2.2.3 and 2.2.5 in their entireties and substitute the following:

2.2.3 The Owner shall, at the request of the Contractor, furnish to Contractor any survey or other similar descriptive information of project site that Owner has in his possession. Upon demonstration of need by Contractor for specific additional survey information, Owner shall obtain and furnish such information to Contractor.

2.2.5 Contractor will be furnished, free of charge, 4 copies of Drawings, Specifications, and Project Manual as set forth in Division 1 of the Specifications. Additional copies will be furnished to Contractor at cost of reproduction, postage and handling.

1.7 ARTICLE 3: CONTRACTOR

- 3.2. REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR: Add Subparagraphs 3.2.5 and 3.2.6:

3.2.5 The Contractor by executing the Contract represents that he has carefully examined the Site of the Work at each location and that he has full knowledge of and fully understands the facilities, site conditions, difficulties and restrictions attending performance of the Work. Contractor further represents that he has taken all required measurements and carefully inspected existing constructions, irregularities and interferences which may affect the Work. No additional compensation will be allowed for conditions increasing Contractor's cost which were not known to or appreciated by him prior to executing the Contract if they could have been discovered by him following the foregoing procedures and thoroughly informing himself of all existing conditions affecting the Work.

3.2.6 Contractor will not, however, be required to excavate, penetrate or demolish any constructions or other work and conditions prior to executing the Contract in order to uncover and/or expose concealed conditions that affect the Work. If, during course of construction, Contractor uncovers conditions that affect the work that could not have been known and understood by the above described careful examination of conditions affecting the Work, he shall promptly notify the Architect, in writing, who will determine if claims for additional costs or extensions of time are justified. If such claims are found to be justified, Contract will be modified in accordance with Article 7 of the General Conditions.

1.8 ARTICLE 4: ARCHITECT

A. 4.1 GENERAL: Delete Subparagraph 4.1.1 in its entirety and substitute the following:

4.1.1 The Owner shall retain an architect or engineer lawfully licensed to practice architecture or engineering or an entity lawfully practicing architecture or engineering in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

1.9 ARTICLE 5: SUBCONTRACTORS

A. 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK: Add new Subparagraph 5.2.1.1.:

5.2.1.1. Within ten (10) days of notification of acceptance of his proposal, Contractor shall submit the names of those to whom he intends to award a Subcontract.

1.10 ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

A. 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS: Delete Subparagraph 6.1.3 in its entirety and substitute the following:

6.1.3 General Contractor shall have responsibility of coordinating efforts of all contractors and to maintain overall direction of job progress. Each Contractor shall coordinate operational methods with other contractors and encourage communications among all trades. All Contractors shall make other contractors aware of any problems, delays in materials shipments or lack of work force, and assist other contractors in maintaining job momentum and direction of overall project.

1.11 ARTICLE 9: PAYMENTS AND COMPLETION

A. 9.3 APPLICATIONS FOR PAYMENT: Add new Subparagraph 9.3.1.3

9.3.1.3.: Until Substantial Completion, the Owner will pay 90 percent of the amount due Contractor on account of approved progress payments.

1.12 ARTICLE 11: INSURANCE AND BONDS

A. 11.1.1 In the first line following the word "maintain," insert the words "in a company or companies licensed to do business in the state in which the project is located and rated 'A' or better by A.M. Best Co.."

B. Add new Subparagraph 11.1.1.9:

11.1.1.9 General Liability Insurance shall be comprehensive, on occurrence, and shall include:

- Premises and Operations.
- Independent Contractors.
- Products and Completed Operations.
- Broad Form Property Damage.
- Personal Injury.
- Explosion, Collapse and Underground damage where the hazard exists.
- Contractual liability.

C. Add the following Sub-Subparagraphs to Subparagraph 11.1.2:

11.1.2.1 The insurance required by Subparagraph 11.1.1 shall be on a project specific basis and written for not less than the following, or greater if required by law:

1. Worker's Compensation:

- a. State: Statutory
- b. Applicable Federal: Statutory
- c. Employer's Liability: \$500,000

2. Comprehensive General Liability:

a. Bodily Injury:

\$1,000,000 Combined Single Limit

b. Property Damage:

\$1,000,000 Combined Singled Limit

Limit Coverage for bodily injury and property damage per occurrence and in the same aggregate limit will be accepted in lieu of the separate limits specified above.

3. Personal Injury:

\$ 1,000,000 Combined single limit including owned non-owned, and hired motor vehicle.

4. Comprehensive Automobile Liability:
 - a. Bodily Injury:

\$1,000,000	Combined single limit including owned, non-owned, and hired motor vehicle.
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 - b. Property Damage:

\$1,000,000	Combined single limit including owned, non-owned, and hired motor vehicle
-------------	---
 - c. \$1,000,000 Combined Single

Limit coverage for bodily injury and property damage per occurrence and in the same aggregate limit will be accepted in lieu of the separate limits specified above.

11.1.2.2 Umbrella Form Liability Coverage:

An Umbrella Form Liability coverage to not less than \$2,000,000 for any one occurrence and subject to the same aggregate over the Employer's Liability, Comprehensive General Liability, and Comprehensive Automobile Liability coverage is required.

- D. Add the following Subparagraph 11.1.3.1:

11.1.3.1 Contractor shall furnish one copy each of Certificates of Insurance herein required for each copy of the Agreement which shall specifically set forth evidence of all coverage required by Paragraph 11.1. The Certificate of Insurance is to be accompanied by AIA Document G715TM-1997 (Supplemental Attachment for ACORD Certificate of Insurance 25-S). Contractor shall furnish to the Owner copies of any endorsements that are subsequently issued amending coverage or limits. The Contractor shall furnish to the Owner notice of any policy cancellation at least 30 days (10 days for non payment of premiums) prior to the effective date of cancellation. The Contractor shall submit copies of subcontractor's Certificates of Insurance prior to the beginning of work.

- E. Add the following Subparagraph 11.1.4.1:

11.1.4.1 The Owner and Architect shall be named as additional insureds on ISO form 20331001 by endorsement for the purpose of coverage only with no liability for premium payments. All policies and coverages shall include a waiver of subrogation in favor of the Owner, Architect, and all subconsultants.

- F. 11.3. PROPERTY INSURANCE: Delete Subparagraph 11.3.1 in its entirety and substitute the following:

11.3.1: The General Contractor shall be responsible to maintain property (builder's risk) insurance upon the completed value of all work at the site under this contract to the full insurable value thereof. This insurance shall include the interests of the Owner, the General Contractor, Subcontractors, and Sub-subcontractors in the work and as their interests may appear in the work, and shall be an all-risk type policy, including theft, subject to the exclusions generally accepted in the insurance industry. This coverage is not intended to, and shall not, provide coverage for tools, equipment, scaffolding, forms, or other devices used by the Contractors or Subcontractors in performing work under this contract.

11.3.1.2 Delete this Paragraph in its entirety.

G. Delete Subparagraphs 11.3.1.3 in its entirety and substitute the following:

11.3.1.3 If the property insurance requires deductibles, the Contractor shall pay costs not covered because of such deductibles.

1.13 ARTICLE 13: MISCELLANEOUS PROVISIONS

A. Add new paragraph 13.8 as follows:

13.8 REFERENCED STANDARDS

13.8.1 No provision of any referenced standard specification, manual or code; whether or not specifically incorporated by reference in the Contract Documents; shall be effective to change the duties and responsibilities of Owner, Contractor or Architect, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Architect, or any of Architect's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Articles 1 through 15.

END OF SECTION

SECTION 008250 - PREVAILING RATE OF WAGES

ARTICLE 25: PREVAILING RATE OF WAGES

25.1 Pursuant to Illinois Compiled Statutes 820 ILCS 130/0.01 et seq., these specifications list on the following pages, the Illinois Department of Labor prevailing rate of wages for the county where the contract is being performed and for each craft or type of worker needed to execute the contract.

Montgomery County Prevailing Wage Rates posted on 3/15/2021

Trade Title	Rg	Type	C	Base	Foreman	M-F Overtime	H/W	Pension	Vac	Trng
ASBESTOS ABT-GEN	All	ALL		27.37	27.87	1.5	7.25	22.50	0.00	0.80
ASBESTOS ABT-MEC	All	BLD		32.00	33.00	1.5	9.00	6.25	0.00	0.50
BOILERMAKER	All	BLD		39.00	41.50	1.5	7.07	24.52	1.50	1.05
BRICK MASON	All	BLD		34.38	36.44	1.5	9.50	14.35	0.00	0.88
CARPENTER	All	BLD		33.36	35.61	1.5	8.90	19.00	0.00	0.70
CARPENTER	All	HWY		35.05	36.80	1.5	8.90	19.00	0.00	0.67
CEMENT MASON	All	ALL		35.55	36.55	1.5	10.15	15.50	0.00	0.50
CERAMIC TILE FINISHER	All	BLD		26.99		1.5	8.00	6.98	0.00	0.81
ELECTRIC PWR EQMT OP	NE	ALL		47.70	56.60	1.5	7.93	13.36	0.00	0.72
ELECTRIC PWR EQMT OP	SW	ALL		49.22	59.33	1.5	6.95	13.79	0.00	0.49
ELECTRIC PWR GRNDMAN	NE	ALL		32.41	56.60	1.5	7.47	9.07	0.00	0.48
ELECTRIC PWR GRNDMAN	SW	ALL		36.74	59.33	1.5	5.19	10.29	0.00	0.37
ELECTRIC PWR LINEMAN	NE	ALL		53.09	56.60	1.5	8.09	14.86	0.00	0.80
ELECTRIC PWR LINEMAN	SW	ALL		56.59	59.33	1.5	7.99	15.85	0.00	0.57
ELECTRIC PWR TRK DRV	NE	ALL		34.02	56.60	1.5	7.52	9.53	0.00	0.51
ELECTRIC PWR TRK DRV	SW	ALL		40.17	59.33	1.5	5.67	11.25	0.00	0.40
ELECTRICIAN	E	BLD		38.88	42.77	1.5	7.53	11.40	0.00	0.58
ELECTRICIAN	NW	BLD		37.64	39.64	1.5	7.81	11.63	0.00	0.70
ELECTRICIAN	SW	ALL		43.04	45.62	1.5	7.99	12.94	0.00	1.19
ELECTRONIC SYSTEM TECH	E	BLD		35.58	37.58	1.5	7.45	8.02	0.00	0.40
ELECTRONIC SYSTEM TECH	NW	BLD		33.30	35.30	1.5	7.25	10.50	0.00	0.40
ELECTRONIC SYSTEM TECH	SW	BLD		35.27	37.27	1.5	4.00	11.07	0.00	0.40
ELEVATOR CONSTRUCTOR	All	BLD		51.73	58.20	2.0	15.72	18.41	4.14	0.63
GLAZIER	All	BLD		36.51	38.51	1.5	6.45	11.45	0.00	0.68
HEAT/FROST INSULATOR	All	BLD		39.38	40.38	1.5	10.79	13.10	0.00	0.80
IRON WORKER	N	BLD		32.77	34.77	1.5	10.57	16.07	0.00	0.80
IRON WORKER	N	HWY		34.14	35.89	1.5	10.57	17.39	0.00	0.80
IRON WORKER	S	ALL		34.50	36.50	1.5	10.46	17.00	0.00	0.42
LABORER	All	ALL		26.87	27.37	1.5	7.25	22.50	0.00	0.80
LATHER	All	BLD		33.36	35.61	1.5	8.90	19.00	0.00	0.70
MACHINIST	All	BLD		49.68	52.18	1.5	7.93	8.95	1.85	1.47

Montgomery County Prevailing Wage Rates posted on 3/15/2021

MARBLE FINISHER	All	BLD		26.99		1.5	8.00	6.98	0.00	0.81
MILLWRIGHT	All	BLD		33.06	35.31	1.5	8.90	19.76	0.00	0.70
MILLWRIGHT	All	HWY		36.40	38.15	1.5	8.90	20.52	0.00	0.67
OPERATING ENGINEER	All	BLD	1	39.85	42.85	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	BLD	2	38.72	42.85	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	BLD	3	34.24	42.85	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	BLD	4	34.30	42.85	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	BLD	5	33.97	42.85	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	BLD	6	42.40	42.85	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	BLD	7	42.70	42.85	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	BLD	8	42.98	42.85	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	BLD	9	40.85	42.85	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	HWY	1	38.35	41.35	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	HWY	2	37.22	41.35	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	HWY	3	32.74	41.35	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	HWY	4	32.80	41.35	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	HWY	5	32.47	41.35	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	HWY	6	40.90	41.35	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	HWY	7	41.20	41.35	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	HWY	8	41.48	41.35	1.5	13.55	18.65	0.00	1.25
OPERATING ENGINEER	All	HWY	9	39.35	41.35	1.5	13.55	18.65	0.00	1.25
PAINTER	All	BLD		31.95	33.45	1.5	6.45	12.42	0.00	0.70
PAINTER	All	HWY		33.15	34.65	1.5	6.45	12.42	0.00	0.70
PAINTER OVER 30 FT.	All	BLD		32.95	34.45	1.5	6.45	12.42	0.00	0.70
PAINTER PWR EQMT	All	BLD		32.95	34.45	1.5	6.45	12.42	0.00	0.70
PAINTER PWR EQMT	All	HWY		34.15	35.65	1.5	6.45	12.42	0.00	0.70
PILEDRIVER	All	BLD		34.36	36.61	1.5	8.90	19.00	0.00	0.70
PILEDRIVER	All	HWY		35.05	36.80	1.5	8.90	19.00	0.00	0.67
PIPEFITTER	NE	BLD		43.29	47.29	1.5	7.75	11.11	0.00	1.30
PIPEFITTER	SW	BLD		45.21	47.47	1.5	5.00	10.40	0.00	0.60
PLASTERER	All	BLD		34.00	35.50	1.5	10.15	10.55	0.00	0.50
PLUMBER	NE	BLD		43.29	47.29	1.5	7.75	11.11	0.00	1.30
PLUMBER	SW	BLD		45.21	47.47	1.5	5.00	10.40	0.00	0.60
ROOFER	All	BLD		31.86	34.71	1.5	10.40	10.41	0.00	0.56

Montgomery County Prevailing Wage Rates posted on 3/15/2021

SPRINKLER FITTER	All	BLD		41.97	44.72	1.5	10.23	14.02	0.00	0.52
SHEETMETAL WORKER	All	ALL		36.57	38.07	1.5	10.65	9.29	2.19	0.71
TERRAZZO FINISHER	All	BLD		26.99		1.5	8.00	6.98	0.00	0.81
TERRAZZO MASON	All	BLD		32.47	33.97	1.5	8.00	8.00	0.00	0.90
TRUCK DRIVER	All	ALL	1	39.04	43.28	1.5	13.52	6.86	0.00	0.25
TRUCK DRIVER	All	ALL	2	39.60	43.28	1.5	13.52	6.86	0.00	0.25
TRUCK DRIVER	All	ALL	3	39.91	43.28	1.5	13.52	6.86	0.00	0.25
TRUCK DRIVER	All	ALL	4	40.25	43.28	1.5	13.52	6.86	0.00	0.25
TRUCK DRIVER	All	ALL	5	41.33	43.28	1.5	13.52	6.86	0.00	0.25
TRUCK DRIVER	All	O&C	1	31.23	34.62	1.5	13.52	6.86	0.00	0.25
TRUCK DRIVER	All	O&C	2	31.68	34.62	1.5	13.52	6.86	0.00	0.25
TRUCK DRIVER	All	O&C	3	31.93	34.62	1.5	13.52	6.86	0.00	0.25
TRUCK DRIVER	All	O&C	4	32.20	34.62	1.5	13.52	6.86	0.00	0.25
TRUCK DRIVER	All	O&C	5	33.06	34.62	1.5	13.52	6.86	0.00	0.25

END OF SECTION

BIDDING & CONTRACT REQUIREMENTS
Document 008600 - Drawings, Schedules and Details

<u>DRAWING NO.</u>	<u>TITLE</u>
G-101	COVER SHEET
A-101	ROOF PLAN
A-102	DETAILS

All drawings dated March 23, 2021.

END 008600.

SECTION 01 10 00 - SUMMARY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Contract description.
- B. Owner supplied products.
- C. Contractor's use of site and premises.
- D. Owner occupancy.
- E. Specification Conventions.
- F. Contractor's Duties
- G. Contract Documents

1.2 CONTRACT DESCRIPTION

- A. Scope of Work: The Base Bid includes removal of approximately 18,500 square feet of existing PIB membrane roof and underlying insulation along with its replacement with new PVC/KEE membrane roofing and polyisocyanurate insulation at Hillsboro Junior High School. Work to gutters, downspouts, vents, exhaust fans and miscellaneous flashing is commensurate with the work.
- B. Alternate Bid #1 includes restoration of approximately 8,600 square feet of existing PIB membrane roof at Hillsboro Junior High School. Work to gutters, downspouts, vents, exhaust fans and miscellaneous flashing is commensurate with the work.
- C. Unit Bid A: Cost Per Square Foot to replace additional areas of existing PIB membrane roofing, including wet substrate insulation, in preparation for rehabilitation.

1.3 OWNER SUPPLIED PRODUCTS

- A. Owner's Responsibilities:
 - 1. Arrange for and deliver Owner-reviewed Shop Drawings, Product Data, and Samples, to Contractor.
 - 2. Arrange and pay for delivery to site.
 - 3. On delivery, inspect products jointly with Contractor.
 - 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 - 5. Arrange for manufacturers' warranties, inspections, and service.

- B. Contractor's Responsibilities:
 - 1. Review Owner-reviewed Shop Drawings, Product Data, and Samples.
 - 2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
 - 3. Handle, store, install and finish products.
 - 4. Repair or replace items damaged after receipt.
- C. Items furnished by Owner for installation by Contractor:
 - 1. As indicated on drawings.

1.4 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Limit use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Use of site and premises by the public.
- B. Construction Operations: Limited to areas noted on Drawings.
- C. Allow for public use of all adjoining streets and sidewalks.
- D. Light duty vehicle parking is permitted. All parking lots and sidewalks are to be restored to their original condition.

1.5 OWNER OCCUPANCY

- A. The Owner will occupy the site during the entire period of construction for the conduct of normal operations.
- B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

1.6 SPECIFICATION CONVENTIONS

- A. These specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

1.7 CONTRACTOR'S DUTIES

- A. Except as specifically noted, Contractor shall provide and pay for:
 - 1. All labor, materials, and equipment used for construction of and/or incorporated into the project.
 - 2. All tools, construction equipment and machinery.
 - 3. Required building permits, and all inspection fees by governmental authorities.
 - 4. Other facilities and services necessary for proper execution and complete of work.

- B. Owner is exempt from sales tax on product permanently incorporated in work.
 - 1. Obtain sales tax exemption certificate number from Owner.
 - 2. Place exemption certificate number on invoices for materials incorporated in work.
 - 3. Upon completion of work, file with Owner a notarized statement that all purchases made under exemption certificate were entitled to be exempt and furnish copies of invoice to Owner.
 - 4. Pay legally assessed penalties for improper use of exemption certificate number.
- C. Comply with codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on performance of work.
- D. Promptly submit written notice to Architect/Engineer of observed variance of contract documents from legal requirements.
 - 1. It is not the Contractor's responsibility to make certain that drawings and specifications comply with codes and regulations.
 - a. Appropriate modifications to contract documents will account for/reflect necessary changes.
 - b. Assume responsibility for work known to be contrary to such requirements if written notice is not provided by the Contractor to the Architect.
- E. Enforce strict discipline and good order among employees.
- F. Do not unreasonably encumber site with materials or equipment.
- G. Do not load structure with weight that will endanger structure.
- H. Assume full responsibility for protection and safe-keeping of products stored on premises.
- I. Move any stored products which interfere with operations of Owner or other Contractors.
- J. Obtain and pay for use of additional storage or work areas needed for operations.
- K. The School Board shall prohibit the use of tobacco on school property when the property is being used for any school purposes. Tobacco shall mean cigarette, cigar, pipe or tobacco in any other form including smokeless tobacco which is any loose, cut, shredded, ground, powdered, compressed or leaf tobacco that is intended to be placed in the mouth without being smoked. All members of work crews must remain fully clothed and refrain from using obscene or profane language during these same time parameters. School purposes include, but are not limited to, all interscholastic or extracurricular athletic, academic, or other events sponsored by the School Board or in which students of the District participate.
- L. Contractor shall maintain building free from entrance of water at all times during construction.

M. Contractor shall furnish, erect and maintain temporary ladders, ramps, or hoists as may be required for performance of his work.

1. All such equipment shall be substantially designed, constructed, and maintained in accordance with applicable federal, state, and local laws, ordinances, and regulations, and shall be promptly removed when no longer needed.

N. Contractor shall design, furnish, erect, maintain, and move all ladders and scaffolding required for this work.

1. All ladders and scaffolding shall be designed, constructed, and maintained in accordance with applicable federal, state, and local law, ordinances, and regulations, and shall be promptly removed when no longer needed.

1.8 CONTRACT DOCUMENTS

A. Contractor will be furnished free of charge two (2) copies of drawings and specifications.

B. On request, additional copies will be furnished to Contractor at cost of reproduction, postage and handling.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 20 00 - PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Schedule of values.
- B. Applications for payment.
- C. Change procedures.
- D. Defect assessment.
- E. Unit prices.

1.2 SCHEDULE OF VALUES

- A. Submit printed schedule on AIA Form G703 - Continuation Sheet for G702.
- B. Submit Schedule of Values in duplicate within 15 days after date established in Notice to Proceed.
- C. Format: Utilize Table of Contents of this Project Manual. Identify each line item with number and title of major specification Section. Identify site mobilization, bonds and insurance.
- D. Include separately from each line item, direct proportional amount of Contractor's overhead and profit.
- E. Revise schedule to list approved Change Orders, with each Application For Payment.

1.3 APPLICATIONS FOR PAYMENT

- A. Submit three copies of each application on AIA Form G702-Application and Certificate for Payment.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Submit updated construction schedule with each Application for Payment.
- D. Payment Period: Submit applications for payment to Architect/Engineer for processing no later than 10 days prior to date established for progress payment meeting.
- E. Submit with transmittal letter as specified for Submittals in Section 01 33 00.
- F. Submit lien waivers.

- G. Substantiating Data: When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question. Include the following with Application for Payment:
1. Current construction photographs.
 2. Partial release of liens from major subcontractors and vendors.
 3. Affidavits attesting to off-site stored products.
- H. Application for Progress Payment No. 1 shall be accompanied by a notarized statement on Contractor's letterhead as follows:
1. I certify that the funds requested for the accompanying Pay Request No. 1 will be used to pay all just and lawful bills against the undersigned and his subcontractors for labor, material and equipment employed in the performance of the work. I further certify that such bills will be paid no later than ten (10) calendar days from date of receipt of the Owner's disbursement.
 2. Execute statement with signature of a responsible officer of contracting firm.
- I. Each subsequent application for progress payment shall be accompanied by the following supporting documents:
1. Partial or final waivers of lien in monetary amount from Contractor, each material supplier and/or subcontractor reflecting amounts incorporated into preceding request for progress payment.
 2. A notarized Affidavit of Payment to Material Suppliers and Subcontractors.
 - a. Affidavit shall be submitted in exact text as exhibit furnished by Architect/Engineers, signed by Contractor or Subcontractor.
 - b. Include unit item, actual amount of contract without overhead or profit, amount paid to date, and amount to become due (balance of account).
- J. Progress payments will be made for materials and equipment not incorporated in the work provided that:
1. Such materials and equipment have been delivered to and suitable stored at site or some other location approved in writing by Owner and Architect/Engineer. All such materials stored off-site shall be marked or tagged with identification of project to which they are assigned.
 2. Contractor submits evidence of title to such materials and equipment.
 3. Care and custody of such materials and equipment and all costs incurred for movement and storage shall be responsibility of Contractor.
 4. Such materials and equipment are suitably insured by Contractor. Contractor shall submit a certificate of insurance showing the Owner as an additional insured and showing amount of insurance overage of suitable proof that material and equipment are stored in a bonded warehouse.
- K. Refer to section 01 70 00 for submittal requirements for application for final payment and related closeout procedures.

1.4 CHANGE PROCEDURES

- A. Submittals: Submit name of individual authorized to receive change documents and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. The Architect/Engineer will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions in writing.
- C. The Architect/Engineer may issue a Proposal Request including a detailed description of proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. Contractor will prepare and submit estimate within seven days.
- D. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation.
- E. Architect/Engineer may issue directive, on Hurst-Rosche Change Order form signed by Owner, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.
- F. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract. Architect/Engineer will determine change allowable in Contract Sum/Price and Contract Time as provided in Contract Documents.
- G. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- H. Document each quotation for change in cost or time with sufficient data to allow evaluation of quotation.
- I. Execution of Change Orders: Architect/Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.
- J. Correlation Of Contractor Submittals:
 - 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
 - 2. Promptly revise progress schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
 - 3. Promptly enter changes in Project Record Documents.

1.5 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the Architect/Engineer, it is not practical to remove and replace the Work, the Architect/Engineer will direct appropriate remedy or adjust payment.
- C. The defective Work may remain, but unit sum/price will be adjusted to new sum/price at discretion of Architect/Engineer.
- D. Defective Work will be partially repaired to instructions of Architect/Engineer, and unit sum/price will be adjusted to new sum/price at discretion of Architect/Engineer.
- E. Authority of Architect/Engineer to assess defects and identify payment adjustments, is final.
- F. Non-Payment For Rejected Products: Payment will not be made for rejected products for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from transporting vehicle.
 - 4. Products placed beyond lines and levels of required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected products.

1.6 UNIT PRICES

- A. Authority: Measurement methods are delineated in individual specification sections.
- B. Measurement methods delineated in individual specification sections complement criteria of this section. In event of conflict, requirements of individual specification section govern.
- C. Take measurements and compute quantities. Architect/Engineer will verify measurements and quantities.
- D. Unit Quantities: Quantities and measurements indicated in Bid Documents are for contract purposes only. Actual quantities provided shall determine payment.
 - 1. When actual Work requires more or fewer quantities than those quantities indicated, provide required quantities at unit sum/prices contracted.
 - 2. When actual Work requires 100 percent or greater change in quantity than those quantities indicated, Owner or Contractor may claim for Contract Price adjustment.
- E. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application or installation of item of the Work; overhead and profit.

- F. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities accepted by Architect/Engineer multiplied by unit sum/price for Work incorporated in or made necessary by the Work.

- G. Measurement Of Quantities:
 - 1. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.
 - 2. Measurement by Area: Measured by square dimension using mean length and width or radius.
 - 3. Linear Measurement: Measured by linear dimension, at item centerline or mean chord.
 - 4. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as completed item or unit of the Work.

- H. Unit Price Schedule: (Unit prices may be used to add or deduct work from the contract.)
 - 1. Unit Price "A": Cost Per Square Foot to replace area of PIB membrane roofing, including wet substrate insulation in preparation for rehabilitation.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Coordination and project conditions.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Cutting and patching.
- E. Special procedures.

1.2 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of various sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's occupancy.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION MEETING

- A. Architect/Engineer will schedule meeting after Notice of Award.
- B. Attendance Required: Owner, Architect/Engineer, and Contractor.

- C. Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of Subcontractors, list of products, schedule of values, and progress schedule.
 - 5. Designation of personnel representing parties in Contract and Architect/Engineer.
 - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 7. Scheduling.
- D. Architect/Engineer will record minutes and distribute copies with reasonable promptness after meeting to participants, with copies to Owner, and those affected by decisions made.

1.4 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
- B. Architect/Engineer will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required: Job superintendent, major subcontractors and suppliers, Owner, Architect/Engineer, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems impeding planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of off-site fabrication and delivery schedules.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.
 - 10. Coordination of projected progress.
 - 11. Maintenance of quality and work standards.
 - 12. Effect of proposed changes on progress schedule and coordination.
 - 13. Other business relating to Work.
- E. Architect/Engineer will record minutes and distribute copies with reasonable promptness after meeting to participants, with copies to Owner, and those affected by decisions made.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements affecting:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety of element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching including excavation and fill, to complete Work, and to:
 - 1. Fit the several parts together, to integrate with other Work.
 - 2. Uncover Work to install or correct ill-timed Work.
 - 3. Remove and replace defective and non-conforming Work.
 - 4. Remove samples of installed Work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
- D. Execute work by methods to avoid damage to other Work, and to provide proper surfaces to receive patching and finishing.
- E. Cut masonry and concrete materials using masonry saw or core drill.
- F. Restore Work with new products in accordance with requirements of Contract Documents.
- G. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- I. Refinish or restore surfaces and finished to match existing finishes. For continuous surfaces, refinish to nearest intersection; for assembly, refinish entire unit.
- J. Identify hazardous substances or conditions exposed during the Work to Architect/Engineer for decision or remedy.

3.2 SPECIAL PROCEDURES

- A. Materials: As specified in product sections; match existing with new products and salvaged products for patching and extending work.
- B. Employ skilled and experienced installer to perform alteration work.
- C. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.

- D. Remove unsuitable material not marked for salvage, including rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- E. Remove debris and abandoned items from area and from concealed spaces.
- F. Prepare surface and remove surface finishes to permit installation of new work and finishes.
- G. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- H. Remove, cut, and patch Work in manner to minimize damage and to permit restoring products and finishes to original or specified condition.
- I. Refinish existing visible surfaces to remain to specified condition for each material, with neat transition to adjacent finishes.
- J. Where new Work abuts or aligns with existing, provide smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- K. When finished surfaces are cut so that smooth transition with new Work is not possible, terminate existing surface along straight line at natural line of division and submit recommendation to Architect/Engineer for review.
- L. Where change of plane of 1/4 inch or more occurs, submit recommendation for providing smooth transition; to Architect/Engineer for review.
- M. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- N. Finish surfaces as specified in individual product sections.

END OF SECTION

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Proposed products list.
- D. Product data.
- E. Shop drawings.
- F. Design data.
- G. Manufacturer's instructions.

1.2 SUBMITTAL PROCEDURES

- A. **Transmit each submittal with shop drawing submittal form found at the end of this section. A copy of submittal form must be attached to each copy of the submittal; if not, the submittal will be rejected and returned to the Contractor.**
- B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.
- C. Identify Project, Contractor, subcontractor and supplier; pertinent drawing and detail number, and specification section number, appropriate to submittal.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite Project, and deliver to Architect/Engineer at business address. Coordinate submission of related items.
- F. For each submittal for review, allow 15 days excluding delivery time to and from Contractor.
- G. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of completed Work.
- H. Allow space on submittals for Contractor and Architect/Engineer review stamps.
- I. When revised for resubmission, identify changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.

- K. Submittals not requested will not be recognized or processed.

1.3 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial schedules within 15 days after date of Owner-Contractor Agreement. After review, resubmit required revised data within ten days.
- B. Submit revised Progress Schedules with each Application for Payment.
- C. Distribute copies of reviewed schedules to Project site file, subcontractors, suppliers, and other concerned parties.
- D. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.
- E. Submit computer generated horizontal bar chart with separate line for each major portion of Work or operation, identifying first work day of each week.
- F. Submit separate schedule of submittal dates for shop drawings, product data, and samples, including Owner furnished products and dates reviewed submittals will be required from Architect/Engineer. Indicate decision dates for selection of finishes.
- G. Revisions To Schedules:
 - 1. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
 - 2. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
 - 3. Prepare narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect including effect of changes on schedules of separate contractors.

1.4 PROPOSED PRODUCTS LIST

- A. Within 15 days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 PRODUCT DATA

- A. Product Data: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Submit number of copies Contractor requires, plus 3 copies Architect/Engineer will retain.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents described in Section 01 70 00.

1.6 SHOP DRAWINGS

- A. Shop Drawings: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. When required by individual specification sections, provide shop drawings signed and sealed by professional engineer responsible for designing components shown on shop drawings.
 - 1. Include signed and sealed calculations to support design.
 - 2. Submit drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
 - 3. Make revisions and provide additional information when required by authorities having jurisdiction.
- D. Submit number of opaque reproductions Contractor requires, plus 3 copies Architect/Engineer will retain.
- E. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents described in Section 01 70 00.

1.7 DESIGN DATA

- A. Submit for Architect/Engineer's knowledge as contract administrator or for Owner.
- B. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.8 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, to Architect/Engineer for delivery to Owner in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION



HURST-ROSCHE, INC.

SHOP DRAWING SUBMITTAL

PROJECT: Roof Replacement and Restoration
Hillsboro Junior High School
Hillsboro Community School District No. 3
Hillsboro, Montgomery County, Illinois

DATE: _____

A/E PROJECT NO: 150-0651

CONTRACTOR: _____

PRESENTED BY:
(Subcontractor/Supplier)

Company Name

Address

Phone/Fax

Contact Person

ITEM: _____

SPEC SECTION: _____

By approving and submitting these shop drawings, product data and samples, we represent that we have determined and verified all materials, field measurements and field construction criteria related thereto, or will do so, and that we have checked and coordinated information contained within submittal with requirements of the work and contract documents.

Contractor's Signature

Date

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality control and control of installation.
- B. Tolerances.
- C. References.
- D. Examination.
- E. Preparation.

1.2 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. When manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify field measurements are as indicated on Shop Drawings or as instructed by manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.3 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, except where specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. When specified reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- E. Neither contractual relationships, duties, nor responsibilities of parties in Contract nor those of Architect/Engineer shall be altered from Contract Documents by mention or inference otherwise in reference documents.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 EXAMINATION

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

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

END OF SECTION

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities.
 - 1. Temporary electricity.
 - 2. Temporary water service.
 - 3. Temporary sanitary facilities.
- B. Construction Facilities:
 - 1. Vehicular access.
 - 2. Parking.
 - 3. Progress cleaning and waste removal.
- C. Temporary Controls:
 - 1. Barriers.
 - 2. Dust control.
 - 3. Noise control.
 - 4. Pollution control.
- D. Removal of utilities, facilities, and controls.

1.2 TEMPORARY ELECTRICITY

- A. Owner will pay cost of energy used. Exercise measures to conserve energy.
- B. Permanent convenience receptacles may be utilized during construction.

1.3 TEMPORARY WATER SERVICE

- A. Owner will pay cost of temporary water. Exercise measures to conserve energy. Utilize Owner's existing water system when available, extend and supplement with temporary devices as needed to maintain specified conditions for construction operations.
- B. Extend branch piping with outlets located so water is available by hoses with threaded connections.

1.4 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Existing facility use is not permitted. Provide facilities at time of project mobilization.

1.5 VEHICULAR ACCESS

- A. Provide and maintain access to fire hydrants and control valves free of obstructions.
- B. Use existing on-site roads for construction traffic.

1.6 PARKING

- A. Use of designated existing on-site streets and driveways used for construction traffic is permitted as directed by the Owner. Tracked vehicles not allowed on paved areas.
- B. Use of designated areas of existing parking facilities used by construction personnel is permitted.
- C. Do not allow heavy vehicles or construction equipment in parking areas.
- D. Maintenance:
 - 1. Maintain traffic and parking areas in sound condition free of excavated material, construction equipment, products, mud, snow, and ice.
 - 2. Maintain existing and permanent paved areas used for construction; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.
- E. Removal, Repair:
 - 1. Repair existing facilities damaged by use, to original condition.

1.7 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing spaces.
- C. Collect and remove waste materials, debris, and rubbish from site periodically and dispose off-site.

1.8 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas to allow for Owner's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.9 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

1.10 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise produced by construction operations.

1.11 POLLUTION CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.
- B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.12 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing and permanent facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.
- E. Product substitution procedures.
- F. Equipment electrical characteristics and components.

1.2 PRODUCTS

- A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.
- C. Furnish interchangeable components from same manufacturer for components being replaced.

1.3 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.

- E. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- H. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit request for substitution for any manufacturer not named in accordance with the following article.

1.6 PRODUCT SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for Substitutions during bidding period to requirements specified in this section.
- B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that Contractor:
 1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
 2. Will provide same warranty for Substitution as for specified product.
 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 4. Waives claims for additional costs or time extension which may subsequently become apparent.
 5. Will reimburse Owner and Architect/Engineer for review or redesign services associated with re-approval by authorities having jurisdiction.
- E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals, without separate written request, or when acceptance will require revision to Contract Documents.

- F. Substitution Submittal Procedure:
1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
 2. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
 3. Architect/Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS

2.1 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Wiring Terminations: Furnish terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Include lugs for terminal box.
- B. Cord and Plug: Furnish minimum 6 foot cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is specified in individual specification sections.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Demonstration and instructions.
- D. Protecting installed construction.
- E. Project record documents.
- F. Operation and maintenance data.
- G. Product warranties and product bonds.

1.2 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect/Engineer's review.
- B. Provide submittals to Architect/Engineer required by authorities having jurisdiction.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Provide a notarized Affidavit for Final Completion in exact text as exhibit furnished by Architect/Engineer, signed by Contractor.
- E. Owner will occupy all portions of building as specified in Section 01 10 00.

1.3 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Clean equipment and fixtures to sanitary condition with cleaning materials appropriate to surface and material being cleaned.
- D. Replace filters of operating equipment.
- E. Clean debris from roofs, gutters, downspouts, and drainage systems.

- F. Clean site; sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste and surplus materials, rubbish, and construction facilities from site.

1.4 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.
- B. Demonstrate Project equipment and instruction in classroom environment located at site and instructed by qualified manufacturer's representative who is knowledgeable about the Project.
- C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time at equipment location.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- G. Required instruction time for each item of equipment and system is specified in individual sections.

1.5 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

1.6 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, Product Data, and Samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 3. Field changes of dimension and detail.
 - 4. Details not on original Contract drawings.
- G. Submit documents to Architect/Engineer with claim for final Application for Payment.

1.7 OPERATION AND MAINTENANCE DATA

- A. Submit data bound in 8-1/2 x 11 inch (A4) text pages, three D side ring binders with durable plastic covers.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
- C. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

- E. Contents: Prepare Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Shop drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. Photocopies of warranties and bonds.

1.8 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
- B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
- C. Verify documents are in proper form, contain full information, and are notarized.
- D. Co-execute submittals when required.
- E. Include Table of Contents and assemble in three D side ring binder with durable plastic cover.
- F. Submit prior to final Application for Payment.
- G. Time Of Submittals:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
 - 2. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty or bond period.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 02 41 19

SELECTIVE STRUCTURE DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Demolishing designated construction.
 - 2. Protecting items designated to remain.
 - 3. Removing demolished materials.

1.2 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Demolition Schedule: Indicate overall schedule and interruptions required for utility and building services.
- C. Shop Drawings:
 - 1. Indicate demolition and removal sequence.
 - 2. Indicate location and construction of temporary work.

1.3 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
- B. Project Record Documents: Accurately record actual locations of capped utilities, concealed utilities discovered during demolition, and subsurface obstructions.
- C. Operation and Maintenance Data: Submit description of system, inspection data, and parts lists.

1.4 QUALITY ASSURANCE

- A. Obtain required permits from authorities having jurisdiction.
- B. Perform Work in accordance with State of Illinois standards.

1.5 PRE-INSTALLATION MEETINGS

- A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.
- B. Convene minimum one week prior to commencing work of this section.

1.6 SEQUENCING

- A. Section 01 10 00 - Summary: Requirements for sequencing.
- B. Sequence activities in the following order:
 - 1. Owner to remove items.
 - 2. Contractor to terminate all utilities.
 - 3. Protect all adjacent items surrounding the Work.
 - 4. Commence demolition Work.
- C. Owner will conduct salvage operations before demolition begins to remove materials Owner chooses to retain.

1.7 SCHEDULING

- A. Section 01 30 00 - Administrative Requirements.
- B. Schedule Work to coincide with new construction.
- C. Cooperate with Owner in scheduling noisy operations and waste removal that may impact Owners operation and in adjoining spaces and during scheduled events.
- D. Coordinate utility and building service interruptions with Owner.
 - 1. Schedule tie-ins to existing systems to minimize disruption.

1.8 PROJECT CONDITIONS

- A. Conduct demolition to minimize interference with adjacent areas.
- B. Cease operations immediately if structure appears to be in danger and notify Architect/Engineer. Do not resume operations until directed.

PART 2 EXECUTION

2.1 PREPARATION

- A. Notify affected utility companies before starting Work and comply with their requirements.
- B. Mark location and termination of utilities.
- C. Erect, and maintain temporary barriers and security devices, including warning signs and lights, and similar measures, for protection of the public, Owner, and existing improvements indicated to remain.
- D. Prevent movement of structure; provide temporary bracing and shoring required to ensure safety of existing structure.
- E. Provide appropriate temporary signage.

2.2 SALVAGE REQUIREMENTS

- A. Coordinate with Owner to identify components and equipment required to be removed and delivered to Owner.
- B. Tag components and equipment Owner designates for salvage.
- C. Protect designated salvage items from demolition operations until items can be removed.
- D. Carefully remove components and equipment indicated to be salvaged.
- E. Disassemble as required to permit removal.
- F. Package small and loose parts to avoid loss.
- G. Mark equipment and packaged parts to permit identification and consolidation of components of each salvaged item.
- H. Prepare assembly instructions consistent with disassembled parts. Package assembly instructions in protective envelope and securely attach to each disassembled salvaged item.
- I. Deliver salvaged items to Owner. Obtain signed receipt from Owner.

2.3 DEMOLITION

- A. Conduct demolition to minimize interference with adjacent areas.
- B. Maintain protected egress from and access to adjacent areas at all times.
- C. Do not close or obstruct roadways and sidewalks without permits.
- D. Cease operations immediately when structure appears to be in danger and notify Architect/Engineer.
- E. Disconnect and remove designated utilities within demolition areas.
- F. Cap and identify abandoned utilities at termination points when utility is not completely removed. Annotate Record Drawings indicating location and type of service for capped utilities remaining after demolition.
- G. Demolish in orderly and careful manner. Protect existing improvements, and supporting structural members.
- H. Carefully remove components indicated to be reused.
 - 1. Disassemble components as required to permit removal.
 - 2. Package small and loose parts to avoid loss.
 - 3. Mark components and packaged parts to permit reinstallation.
 - 4. Store components, protected from construction operations, until reinstalled.

- I. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials on site.
- J. Remove materials as Work progresses. Upon completion of Work, leave areas in clean condition.
- K. Remove temporary Work.

END OF SECTION

SECTION 06 10 53

MISCELLANEOUS ROUGH CARPENTRY

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes roof curbs, cants, and perimeter nailers; and preservative treatment of wood.
- B. Related Sections:
 - 1. Section 07 54 16 – KEE PVC Roofing – Fully Adhered

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI A208.1 - Mat-Formed Wood Particleboard.
- B. American Wood-Preservers' Association:
 - 1. AWWPA C1 - All Timber Products - Preservative Treatment by Pressure Process.
 - 2. AWWPA C20 - Structural Lumber - Fire-Retardant Treatment by Pressure Processes.
- C. ASTM International:
 - 1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- D. National Fire Protection Association:
 - 1. NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials.
- E. The Redwood Inspection Service:
 - 1. RIS - Standard Specifications for Grades of California Redwood Lumber.
- F. Southern Pine Inspection Bureau:
 - 1. SPIB - Standard Grading Rules for Southern Pine Lumber.
- G. Underwriters Laboratories Inc.:
 - 1. UL 723 - Tests for Surface Burning Characteristics of Building Materials.
- H. U. S Department of Commerce National Institute of Standards and Technology:
 - 1. DOC PS 1 - Construction and Industrial Plywood.
 - 2. DOC PS 2 - Performance Standard for Wood-Based Structural-Use Panels.
 - 3. DOC PS 20 - American Softwood Lumber Standard.

- I. West Coast Lumber Inspection Bureau:
 - 1. WCLIB - Standard Grading Rules for West Coast Lumber.

- J. Western Wood Products Association:
 - 1. WWPA G-5 - Western Lumber Grading Rules.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit technical data on wood preservative and fire retardant treatment materials and application instructions.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with the following:
 - 1. Lumber Grading Agency: Certified by DOC PS 20.
 - 2. Wood Structural Panel Grading Agency: Certified by EWA - The Engineered Wood Association.
 - 3. Lumber: DOC PS 20.
 - 4. Wood Structural Panels: DOC PS 1 or DOC PS 2.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Lumber Grading Rules: AP&PA. SPIB. WCLIB.
- B. Miscellaneous Framing: Stress Group D, S/P/F, species, grade 19 percent maximum moisture content after treatment, pressure preservative treat.
- C. Plywood: APA/EWA Rated Sheathing Structural I, Grade C-D; Exposure Durability 2; unsanded.

2.2 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Fasteners: Hot dipped galvanized steel for high humidity and treated wood locations, unfinished steel elsewhere.
 - 2. Nails and Staples: ASTM F1667.
 - 3. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolt or ballistic fastener for anchorages to steel.

2.3 FACTORY WOOD TREATMENT

- A. Wood Preservative (Pressure Treatment): AWPAC1 using water borne preservative with 0.25 percent retainage.
- B. Moisture Content After Treatment:
 - 1. Lumber: Maximum 19 percent.
 - 2. Structural Panels: Maximum 15 percent.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify substrate conditions are ready to receive blocking, curbing and framing.

3.2 PREPARATION

- A. Coordinate placement of blocking, curbing and framing items.

3.3 INSTALLATION

- A. Set members level and plumb, in correct position.
- B. Place horizontal members, crown side up.
- C. Construct curb members of solid wood sections.
- D. Curb roof openings except where prefabricated curbs are provided. Form corners by alternating lapping side members.
- E. Coordinate curb installation with installation of decking and support of deck openings, and parapet construction.
- F. Space framing and furring 16 inches on center.
- G. Secure sheathing to framing members with ends over firm bearing and staggered.

3.4 SITE APPLIED WOOD TREATMENT

- A. Apply preservative treatment.
- B. Brush apply two coats of preservative treatment on wood in contact with cementitious materials, roofing and related metal flashings and treat site-sawn cuts.
- C. Allow preservative to dry prior to erecting members.

3.5 SCHEDULES

- A. Roof Blocking and Nailers: S/P/F species, 19 percent maximum moisture content, pressure preservative treatment.

END OF SECTION

SECTION 07 01 50

PREPARATION FOR ROOF RESTORATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Partial roof tear-off, and repair prior to roof restoration.
- B. Related Requirements:
 - 1. Section 07 01 50.16 – Maintenance Cleaning of Membrane Roofing
 - 2. Section 07 01 50.74 – Rehabilitation of Single Ply Roofing

1.2 MATERIALS OWNERSHIP

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

1.3 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Existing Membrane Roofing System: Roofing membrane, roof insulation, surfacing, and components and accessories between deck and roofing membrane.
- C. Partial Roof Tear-Off: Removal of a portion of existing membrane roofing system from deck or removal of selected components and accessories from existing membrane roofing system.
- D. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.
- E. Existing to Remain: Existing items of construction that are not indicated to be removed.

1.4 ACTION SUBMITTALS

- A. Section 01 33 00 – Submittal Procedures: Submittal procedures.
- B. Product Data: For each type of product indicated.

1.5 INFORMATIONAL SUBMITTALS

- A. Section 01 33 00 – Submittal Procedures: Submittal procedures.
- B. Qualification Data: For Installer is approved by warrantor of existing roofing system.
- C. Fastener pull-out test report.
- D. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces that might be misconstrued as having been damaged by reroofing operations. Submit before Work begins.
- E. Landfill Records: Indicate receipt and acceptance of hazardous wastes, such as asbestos-containing material, by a landfill facility licensed to accept hazardous wastes.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Installer of new membrane roofing system approved by warrantor of existing roofing system to work on existing roofing.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning membrane roofing removal. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Reroofing Conference: Conduct conference at Project site.
 - 1. Meet with Owner; Owner's insurer if applicable; testing and inspecting agency representative; roofing system manufacturer's representative; deck Installer; roofing Installer including project manager, superintendent, and foreman; and installers whose work interfaces with or affects reroofing including installers of roof accessories and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing system tear-off and replacement including, but not limited to, the following:
 - a. Reroofing preparation, including membrane roofing system manufacturer's written instructions.
 - b. Temporary protection requirements for existing roofing system that is to remain during and after installation.
 - c. Existing roof drains and roof drainage during each stage of reroofing, and roof drain plugging and plug removal requirements.
 - d. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - e. Condition and acceptance of existing roof deck and base flashing substrate for reuse.
 - f. Structural loading limitations of deck during reroofing.
 - g. Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect reroofing.
 - h. HVAC shutdown and sealing of air intakes.
 - i. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
 - j. Asbestos removal and discovery of asbestos-containing materials.

- k. Governing regulations and requirements for insurance and certificates if applicable.
- l. Existing conditions that may require notification of Architect / Engineer before proceeding.

1.7 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately below reroofing area. Conduct reroofing so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
 - 1. Coordinate work activities daily with Owner so Owner can place protective dust or water leakage covers over sensitive equipment or furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below the work area.
 - 2. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below the affected area. Verify that occupants below the work area have been evacuated before proceeding with work over the impaired deck area.
- B. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- D. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
 - 1. A roof moisture survey of existing membrane roofing system is available for Contractor's reference.
 - 2. The results of an analysis of test cores from existing membrane roofing system are available for Contractor's reference.
- E. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.
- F. Hazardous Materials: It is not expected that hazardous materials such as asbestos-containing materials will be encountered in the Work.
 - 1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect / Engineer and Owner.

1.8 WARRANTY

- A. Section 01 70 00 – Execution and Closeout Requirements: Requirements for warranties.

PART 2 - PRODUCTS

2.1 INFILL MATERIALS

- A. Use infill materials matching existing membrane roofing system materials unless otherwise indicated.
- B. Infill roof membrane materials are to be compatible with the existing roof system.
- C. Infill insulation is to match existing material, thickness, R-value, and slope.
- D. Infill cover board is to match existing

2.2 AUXILIARY REROOFING MATERIALS

- A. General: Auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new membrane roofing system.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect existing membrane roofing system that is indicated not to be reroofed.
 - 1. Loosely lay 1-inch minimum thick, molded expanded polystyrene (MEPS) insulation over the roofing membrane in areas indicated. Loosely lay 15/32-inch plywood or OSB panels over MEPS. Extend MEPS past edges of plywood or OSB panels a minimum of 1 inch.
 - 2. Limit traffic and material storage to areas of existing roofing membrane that have been protected.
 - 3. Maintain temporary protection and leave in place until replacement roofing has been completed. Remove temporary protection on completion of reroofing.
- B. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- C. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.

- D. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
 - 1. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new membrane roofing system, provide alternative drainage method to remove water and eliminate ponding. Do not permit water to enter into or under existing membrane roofing system components that are to remain.
- E. Verify that rooftop utilities and service piping have been shut off before beginning the Work.

3.2 ROOF TEAR-OFF

- A. General: Notify Owner each day of extent of roof tear-off proposed for that day.
- B. Partial Roof Tear-Off: Remove existing roofing membrane and immediately check for presence of moisture by visually observing cover boards and roof insulation that will remain.
 - 1. Coordinate with Owner's inspector to schedule times for tests and inspections immediately after membrane removal.
 - 2. With an electrical capacitance moisture-detection meter, spot check cover boards, and roof insulation that will remain.
 - 3. Remove wet or damp boards and roof insulation.
 - 4. Remove fasteners from deck or cut fasteners off slightly above deck surface.

3.3 DECK PREPARATION

- A. Inspect deck after partial tear-off of membrane roofing system.
- B. If broken or loose fasteners that secure deck panels to one another or to structure are observed or if deck appears or feels inadequately attached, immediately notify Architect / Engineer. Do not proceed with installation until directed by Architect / Engineer.
- C. If deck surface is not suitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect / Engineer. Do not proceed with installation until directed by Architect / Engineer.

3.4 INFILL MATERIALS INSTALLATION

- A. Immediately after removal of selected portions of existing membrane roofing system, and inspection and repair, if needed, of deck, fill in the tear-off areas to match existing membrane roofing system construction.
 - 1. Install new roofing membrane patch over roof infill area. If new roofing membrane is installed the same day tear-off is made, roofing membrane patch is not required.

3.5 DISPOSAL

- A. Collect demolished materials and place in containers. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
 - 1. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off Owner's property.

END OF SECTION

SECTION 07 01 50.16

MAINTENANCE CLEANING OF MEMBRANE ROOFING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Pressure washing of roof membrane including membrane flashings, with full water reclamation.
- B. Related Requirements:
 - 1. Section 07 01 50 – Preparation for Roof Restoration
 - 2. Section 07 01 50.74 – Rehabilitation of Single Ply Roofing

1.2 ACTION SUBMITTALS

- A. Section 01 33 00 – Submittal Procedures: Submittal procedures.
- B. Product Data: For cleaning compounds.

1.3 INFORMATIONAL SUBMITTALS

- A. Section 01 33 00 – Submittal Procedures: Submittal procedures.
- B. Work Plan: For maintenance cleaning, including description of means and methods for water reclamation.

1.4 QUALITY ASSURANCE

- A. Operator Qualifications: Trained and approved by manufacturer of cleaning equipment, with a record of successful roofing membrane cleaning.
- B. Regulatory Requirements: Comply with governing EPA regulations. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.5 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately below roof area to be maintained. Conduct operations so Owner's operations are not disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
- B. Protect building to be cleaned, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from maintenance operations.

- C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

PART 2 - PRODUCTS

2.1 CLEANING SYSTEM OPERATORS

- A. Source Limitations: Engage a qualified roofing maintenance cleaning firm to perform cleaning of membrane roofing.
- B. Approved Operators: Tremco, Inc., RoofTec Cleaning Systems, Beachwood OH, (800) 562-2728, www.tremcoroofing.com/services/rooftec-roof-cleaning-system.

2.2 PERFORMANCE REQUIREMENTS

- A. Water Reclamation: Provide maintenance cleaning of membrane roofing that provides 100 percent reclamation of cleaning water and complies with applicable provisions of the US EPA National Pollutant Discharge Elimination System (NPDES) program and requirements of local authorities having jurisdiction.

2.3 MATERIALS

- A. Precleaning Treatment: Detergent-free.
- B. Pressure Wash Cleaning Solution: VOC, detergent, phosphate, and surfactant free.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Comply with warranty requirements of existing roof membrane manufacturer.
- B. Shut off rooftop utilities and service piping before beginning the Work.
- C. Test existing roof drains to verify that they are not blocked or restricted. Immediately notify Owner of any blockages or restrictions.
- D. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work. Cover air-intake louvers before proceeding with maintenance cleaning work that could affect indoor air quality or activate smoke detectors in the ductwork.
- E. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors.

3.2 MAINTENANCE CLEANING OF ROOF MEMBRANE

- A. Pretreat membrane and flashings when recommended by cleaning equipment manufacturer based upon site assessment of membrane condition.
- B. Apply pressure wash cleaning solution onto membrane and flashing surfaces.
- C. Pressure wash membrane and flashings using equipment and methods recommended in writing by cleaning equipment manufacturer for specific application. Utilize rotating wash head equipment operated at not less than 2,000 pounds per square inch. Use equipment utilizing vacuum removal of wash water and residues.

3.3 DISPOSAL

- A. Collect cleaning water, associated cleaning compounds, any residual material and process to meet US EPA and local environmental requirements for legal discharge.

END OF SECTION

SECTION 07 01 50.74

REHABILITATION OF SINGLE PLY ROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Roof membrane coating preparation.
 - 2. Application of reinforced fluid-applied roof membrane and flashings over existing fully adhered PIB membrane roof.
- B. Related Requirements:
 - 1. Section 07 01 50 – Preparation for Roof Restoration
 - 2. Section 07 01 50.16 – Maintenance Cleaning of Membrane Roofing
- C. Unit Prices: Refer to Division 01 Section "Unit Prices" for description of Work in this Section affected by unit prices.

1.2 ROOFING CONFERENCES

- A. Roofing Rehabilitation Preinstallation Conference: Conduct conference at Project site. Review methods and procedures related to roofing system.
 - 1. Meet with Owner; roofing coating materials manufacturer's representative; roofing rehabilitation Installer including project manager and foreman; and installers whose work interfaces with or affects rehabilitation including installers of roof accessories and roof-mounted equipment requiring removal and replacement as part of the Work.
 - 2. Review temporary protection requirements for existing roofing system that is to remain uncoated, during and after installation.
 - 3. Review methods and procedures related to re-coating preparation, including coating manufacturer's written instructions.
 - 4. Review roof drainage during each stage of coating and review roof drain plugging and plug removal procedures.
 - 5. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 6. Review base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect coating.
 - 7. Review HVAC shutdown and sealing of air intakes.
 - 8. Review shutdown of fire-suppression, -protection, and -alarm and -detection systems.

9. Review procedures for asbestos removal or unexpected discovery of asbestos-containing materials.
10. Review governing regulations and requirements for insurance and certificates if applicable.
11. Review existing conditions that may require notification of Owner before proceeding.

1.3 MATERIALS OWNERSHIP

- A. Demolished materials shall become Contractor's property and shall be removed from Project site.

1.4 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Roofing Coating Preparation: Existing roofing that is to remain and be prepared to accept restorative coating application.
- C. Patching: Removal of a portion of existing membrane roofing system from deck or removal of selected components and accessories from existing membrane roofing system and replacement with similar materials.
- D. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.
- E. Existing to Remain: Existing items of construction that are not indicated to be removed.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product specified.
- B. Sustainable Design Submittals:
 1. Product Test Reports: For roof coating, indicating that coated roof will comply with solar reflectance index requirement.

1.6 INFORMATIONAL SUBMITTALS

- A. Contractor's Product Certificate: Submit notarized certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.
- B. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing rehabilitation system.

- C. Qualification Data: For Installer, Manufacturer, and Roofing Inspector.
 - 1. Letter written for this Project indicating manufacturer approval of Installer to apply specified products and provide specified warranty.
- D. Warranties: Unexecuted sample copies of special warranties.
- E. Photographs or Video Recordings: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, which might be misconstrued as having been damaged by rehabilitation operations. Submit before Work begins.
- F. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, and for dust control. Indicate proposed locations and construction of barriers.
- G. Inspection Reports: Daily reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions required and carried out.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: To include in maintenance manuals.
- B. Warranties: Executed copies of approved warranty forms.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of three years' experience installing products similar to those specified, able to communicate verbally with Contractor, Architect, and employees, and the following:
 - 1. Qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. Manufacturer Qualifications: Approved manufacturer listed in this Section, with minimum five years' experience in manufacture of specified products in successful use in similar applications.
 - 1. Approval of Other Manufacturers and Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:
 - a. Product data, including certified independent test data indicating compliance with requirements.
 - b. Samples of each component.
 - c. Sample submittal from similar project.
 - d. Project references: Minimum of five installations of specified products not less than five years old, with Owner and Architect contact information.
 - e. Sample warranty.

- C. Roofing Inspector Qualifications: A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:
 - 1. An authorized full-time technical employee of the manufacturer.
 - 2. An independent party certified as a Registered Roof Observer by the International Institute of Building Enclosure Consultants (IIBEC) formerly RCI, Inc, retained by the Contractor or the Manufacturer and approved by the Manufacturer.

1.9 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with rehabilitation work only when existing and forecasted weather conditions permit Work to proceed without water entering into existing roofing system or building.
 - 1. Store all materials prior to application at temperatures recommended by manufacturer.
 - 2. Apply coatings within range of ambient and substrate temperatures recommended by manufacturer.
 - 3. Do not apply roofing in snow, rain, fog, or mist.
- B. Protect building to be rehabilitated, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from rehabilitation operations.
- C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- D. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
- E. Owner will occupy portions of building immediately below re-coating area. Conduct re-coating so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.

1.10 WARRANTY

- A. Manufacturer: Manufacturer's standard warranty form, covering work of this Section, in which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period.
 - 1. Warranty Period: 20 years from date of completion.
- B. Installer Warranty: Installer's warranty signed by Installer, covering the Work of this Section, on form acceptable to Roofing Manufacturer and Owner.
 - 1. Warranty Period: 2 years from date of completion.

- C. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
 - 1. Inspections to occur in following years: 2, 5, 10, 15 following completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Manufacturer/Product: The roof system specified in this Section is based upon products of Tremco, Inc., Beachwood, OH, (800) 562-2728, www.tremcoroofing.com, that are named in other Part 2 articles. Provide specified products.
 - 1. Subject to compliance with requirements, approved alternate manufacturers are:
 - a. Siplast; Paraflex.
 - b. Kemper; Kemperol.
 - c. Sika; Sikalastic.

2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Rehabilitated roofing shall withstand exposure to weather without failure or leaks due to defective manufacture or installation.
 - 1. Accelerated Weathering: Roofing system shall withstand 5000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.
- C. Exterior Fire-Test Exposure: Roofing system exterior fire-test exposure performance following application of rehabilitation coating shall not be less than that of the prerehabilitated roof performance when tested in accordance with ASTM E 108, based upon manufacturer's tests of identical applications.
- D. Energy Performance: Provide roof coating that is listed on the U.S. Department of Energy's ENERGY STAR Roof Products Qualified Product List for low-slope roof products.
- E. Energy Performance: Provide rehabilitated roofing with an initial solar reflectance index of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

2.3 MATERIALS, GENERAL

- A. General: Rehabilitation materials recommended by roofing system manufacturer for intended use and compatible with components of existing membrane roofing system.
- B. Infill Materials: Where required to replace test cores and to patch existing roofing, use infill materials matching existing membrane roofing system materials, unless otherwise indicated.

- C. Temporary Roof Drainage: Design and selection of materials for temporary roof drainage are responsibilities of the Contractor.

2.4 FLUID-APPLIED ROOFING MEMBRANE COATING

- A. Polyurethane Elastomeric Fluid-Applied System: Two-coat fluid-applied roofing membrane formulated for application over prepared existing roofing substrate.
 - 1. Polyurethane roof coating system base coat, bio-based, low-odor low-VOC two-part, for use with a compatible top coat.
 - a. Basis of design product: Tremco, AlphaGuard BIO Base Coat.
 - b. Combustion Characteristics, UL 790: Class A, for two-coat system.
 - c. Volatile Organic Compounds (VOC), maximum, ASTM D 3960: 1 g/L.
 - d. Accelerated Weathering, 5000 hours, ASTM G 154: Pass.
 - e. Hardness, Shore A, minimum, ASTM D 2240: 88.
 - f. Solids, by volume, ASTM D 2697: 100 percent.
 - g. Minimum Thickness, Base Coat reinforced over Smooth BUR, MB, Concrete, Single-Ply: 48 wet mils.
 - 2. Polyurethane roof coating system top coat, bio-based low-odor low-VOC two-part, for application over compatible base coat.
 - a. Basis of design product: Tremco, AlphaGuard BIO Top Coat.
 - b. Combustion Characteristics, UL 790: Class A, for two-coat system.
 - c. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 6 g/L.
 - d. Solar Reflectance Index (SRI), ASTM E 1980: For white, not less than 103.
 - e. Accelerated Weathering, 5000 hours, ASTM G 154: Pass.
 - f. Hardness, Shore A, minimum, ASTM D 2240: 82.
 - g. Solids, by volume, ASTM D 2697: 85 percent.
 - h. Bio-Based Content, Minimum: 60 percent.
 - i. Minimum Thickness, reinforced system: 32 wet mils.
 - j. Minimum Thickness, Slip-Resistant Coat: 24 wet mils.
 - k. Color: White.
 - 3. Primer for Asphaltic and Single-Ply Membranes: Water-based, polymer-modified quick-dry low odor primer.
 - a. Basis of design product: Tremco, AlphaGuard WB Primer.
 - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 1 g/L.
 - c. Solids, by weight: 70 percent.
 - 4. Primer for Masonry Surfaces: Two-part high-solids epoxy-penetrating low-odor primer for masonry and concrete surfaces.
 - a. Basis of design product: Tremco, AlphaGuard C-Prime.
 - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 0 g/L.
 - c. Solids, by weight: 100 percent.
 - 5. Primer for Non-Porous Surfaces: Single-part, water based primer to promote adhesion of urethanes to metals and other non-porous surfaces.
 - a. Basis of design product: Tremco, AlphaGuard M-Prime.
 - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 22 g/L.
 - c. Nonvolatile Content, minimum, ASTM D1644: 5 percent.

6. Primer for Intercoat and Substrate Adhesion: Single-part, quick-drying primer to promote adhesion of urethane products to previous urethane coats and to other approved surfaces.
 - a. Basis of design product: Tremco, Geogard Primer.
 - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 5 g/L.
 - c. Application Rate: 4 wet mils.

B. Fluid-Applied Roofing Reinforcing Fabric:

1. Polyester Reinforcing and Protection Fabric: 100 percent stitch-bonded mildew-resistant polyester fabric intended for reinforcement of compatible fluid-applied membranes and flashings and as a protection layer under pavers or stone aggregates.
 - a. Basis of design product: Tremco, Permafab.
 - b. Tensile Strength, Minimum, ASTM D1682: 50 lbf (222 N).
 - c. Elongation, Minimum, ASTM D1682: 60 percent.
 - d. Tear Strength, Minimum, ASTM D1117: 16 lbf (70 N).
 - e. Weight: 3 oz./sq. yd (102 g/sq. m).

2.5 AUXILIARY ROOFING REHABILITATION MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with existing roofing system and roofing coating system.
- B. Seam Sealer Mastic: Waterproof seam and patching material compatible with applied coating.
 1. Elastomeric Seam Sealer: White, single-component high solids moisture curing aliphatic polyurethane sealant formulated for compatibility and use with specified roofing substrates.
 - a. Basis of design product: Tremco, GEOGARD Seam Sealer.
 - b. Volatile Organic Compounds (VOC), maximum, ASTM D 3960: 189 g/L.
 - c. Tensile Strength, ASTM D 412: 270 psi.
 - d. Tear Strength, ASTM D 412: 35 pli.
 - e. Elongation, ASTM D 412: 220 percent.
- C. Joint Sealant: Elastomeric joint sealant compatible with applied coating, with movement capability appropriate for application.
 1. Joint Sealant, Polyurethane: ASTM C 920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
 - a. Basis of design product: Tremco, TremSEAL Pro.
 - b. Volatile Organic Compounds (VOC), maximum, ASTM D 3960: 40 g/L.
 - c. Hardness, Shore A, ASTM C 661: 40.
 - d. Adhesion to Concrete, ASTM C 794: 35 pli.
 - e. Tensile Strength, ASTM D 412: 350 psi.
 - f. Color: Closest match to substrate.
- D. Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer.

2.6 WALKWAYS

A. Slip Resistant Product for Fluid-Applied Walkways:

1. Granular Roofing Surfacing: Ceramic-coated roofing granules, No. 11 screen size with 100 percent passing No. 8 (2.36-mm) sieve and 98 percent of mass retained on No. 40 (0.425-mm) sieve.
 - a. Basis of design product: Granular Roofing Surfacing, Colored.
 - b. Color: As selected by Architect from manufacturer's standard colors.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine existing roofing substrates, with Installer present, for compliance with requirements and for other conditions affecting application and performance of roof coatings

1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance.
2. Verify compatibility with and suitability of substrates.
3. Verify that substrates are visibly dry and free of moisture.
4. Verify that roofing membrane surfaces have adequately aged to enable proper bond with base coat.
5. Verify that roofing membrane is free of blisters, splits, open laps, indications of shrinkage, and puncture damage or other indications of impending roof system failure.
6. Commencing application of coatings indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Protect existing roofing system that is indicated not to be rehabilitated, and adjacent portions of building and building equipment.

1. Mask surfaces to be protected. Seal joints subject to infiltration by coating materials.
2. Limit traffic and material storage to areas of existing roofing membrane that have been protected.
3. Maintain temporary protection and leave in place until replacement roofing has been completed.

B. Shut down air intake equipment in the vicinity of the Work in coordination with the Owner. Cover air intake louvers before proceeding with coating work that could affect indoor air quality or activate smoke detectors in the ductwork.

1. Verify that rooftop utilities and service piping affected by the Work have been shut off before commencing Work.

- C. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
 - 1. Do not permit water to enter into or under existing membrane roofing system components that are to remain.

3.3 ROOFING COATING PREPARATION

- A. Removal of Wet Insulation: Remove portions of roofing membrane with underlying wet insulation. Remove wet insulation, fill in tear-off areas to match existing insulation and membrane, and prepare patched membrane for application of roof coating as specified below.
- B. Repair of Ponding Areas: Repair areas indicated as ponding areas or areas of inadequate drainage by removing roof membrane, adding additional insulation as required to provide minimum slopes to drain required by roofing rehabilitation coating manufacturer, and replace membrane with material matching existing. Submit photographic report indicating compliance.
- C. Membrane Surface Preparation:
 - 1. Remove walkway pads and pavers from roofing membrane. Discard damaged pavers.
 - 2. Remove blisters, ridges, buckles, roofing membrane fastener buttons projecting above the membrane, and other substrate irregularities from existing roofing membrane that would inhibit application of uniform, waterproof coating.
 - 3. Broom clean existing substrate.
 - 4. Substrate Cleaning: Clean substrate of contaminants such as dirt, debris, oil, and grease that can affect adhesion of coating by power washing at maximum 2,000 psi.
 - a. Dispose of waste water in accordance with requirements of authorities having jurisdiction.
 - 5. Verify that existing substrate is dry before proceeding with application of coating. Spot check substrates with an electrical capacitance moisture-detection meter.
 - 6. Verify adhesion of new products.
- D. Existing Flashing and Detail Preparation: Repair flashings, gravel stops, copings, and other roof-related sheet metal and trim elements. Reseal joints, replace loose or missing fasteners, and replace components where required to leave in a watertight condition.
 - 1. Do not damage metal counterflashings that are to remain. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish.
 - 2. Roof Drains: Remove drain strainer and clamping ring. Grind metal surfaces down to clean, bare, metal.

- E. Surface Priming: Prime surfaces to receive fluid-applied coating using coating manufacturer's recommended product for surface material. Apply at application rate recommended by manufacturer.
 - 1. Ensure primer does not puddle and substrate has complete coverage.
 - 2. Allow to cure completely prior to application of coating.
- F. Membrane Repair: Repair membrane at locations with irregularities using seam sealer mastic and reinforcing fabric.

3.4 FLUID-APPLIED FLASHING APPLICATION

- A. Fluid-Applied Flashing and Detail Base Coat Application: Complete base coat and fabric reinforcement at parapets, curbs, penetrations, and drains prior to application of field of fluid-applied membrane. Apply base coat in accordance with manufacturer's written instructions.
 - 1. Apply base coat on prepared and primed surfaces and spread coating evenly. Extend coating minimum of 8 inches up vertical surfaces and 4 inches onto horizontal surfaces.
 - 2. Back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 - 3. Reinforcing Fabric: Embed fabric reinforcement into wet base coat. Lap adjacent flashing pieces of fabric minimum 3 inches along edges and 6 inches at end laps.
 - a. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.
 - 4. Roof Drains: Install base coat onto surrounding membrane surface and metal drain bowl flange. Install target piece of fabric reinforcement immediately into wet base coat and roll to fully embed and saturate fabric. Reinstall clamping ring and strainer following application of top coat. Replace broken drain ring clamping bolts.

3.5 FLUID-APPLIED MEMBRANE APPLICATION

- A. Fluid-Applied Membrane Base Coat: Apply base coat to field of membrane in accordance with manufacturer's written instructions.
 - 1. Apply base coat on prepared and primed surfaces and spread coating evenly.
 - 2. Back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 - 3. Fabric Reinforcement: Embed fabric reinforcement into wet base coat. Lap adjacent pieces of fabric minimum 3 inches (75 mm) along edges and 6 inches (150 mm) at end laps.
 - a. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.

- B. Fluid-Applied Membrane Top Coat: Apply top coat to field of membrane and flashings uniformly in a complete, continuous installation.
1. Allow base coat to cure prior to application of top coat.
 2. Following curing of base coat and prior to application of top coat, sand raised or exposed edges of fabric reinforcement.
 3. Prime base coat prior to application of top coat if top coat is not applied within 72 hours of the base coat application, using manufacturer's recommended primer.
 4. Apply top coat extending coating up vertical surfaces and out onto horizontal surfaces. Install top coat over field base coat and spread coating evenly.
 5. Back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 6. Avoid foot traffic on new fluid-applied membrane for a minimum of 24 hours.
- C. Slip-Resistant Walkway Topcoat: Apply walkway second topcoat following application and curing of top coat. Locate as indicated on Drawings.
1. Mask walkway location with tape.
 2. Prime first top coat prior to application of walkway top coat if walkway top coat is not applied within 72 hours of the first top coat application, using manufacturer's recommended primer.
 3. Apply walkway topcoat and back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 4. Broadcast Slip-Resistant Top Coat Aggregate in wet top coat at rate indicated in Part 2 product listing or as otherwise recommended by coating manufacturer.
 - a. Back roll sand and top coat creating even dispersal of sand. Remove masking immediately.

3.6 FIELD QUALITY CONTROL

- A. Roof Inspection: Contractor shall engage roofing system manufacturer's technical personnel to inspect roofing installation and submit report to the Architect and Owner. Notify Architect and Owner 48 hours in advance of dates and times of inspections. Inspect work as follows:
1. Upon completion of preparation of first component of work, prior to application of re-coating materials.
 2. Following application of re-coating to flashings and application of base coat to field of roof.
 3. Upon completion of re-coating but prior to re-installation of other roofing components.

- B. Repair fluid-applied membrane where test inspections indicate that they do not comply with specified requirements.
- C. Arrange for additional inspections, at Contractor's expense, to verify compliance of replaced or additional work with specified requirements.

3.7 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period.
- B. Correct deficiencies in or remove coating that does not comply with requirements, repair substrates, and reapply coating.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION

SECTION 07 54 16

KEE PVC ROOFING - FULLY ADHERED

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes fully adhered KEE PVC roofing; field membrane, flashings, insulation, base sheet, fasteners, adhesives, related components, and accessories.
- B. Related Sections:
 - 1. Section 02 41 19 – Selective Structure Demolition.
 - 2. Section 06 10 53 - Miscellaneous Rough Carpentry.
 - 3. Section 07 62 00 - Sheet Metal Flashing and Trim.
 - 4. Section 07 71 00 – Roof Specialties.

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM C1278 – Standard Specification for Fiber-Reinforced Gypsum Panel.
 - 2. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
 - 3. ASTM C1303 - Standard Test Method for Predicting Long-Term Thermal Resistance of Closed-Cell Foam Insulation.
 - 4. ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
 - 5. ASTM D570 - Standard Test Method for Water Absorption of Plastics.
 - 6. ASTM D638 – Standard Test Method for Tensile Properties of Plastics.
 - 7. ASTM D746 - Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact.
 - 8. ASTM D751 – Standard Test Methods for Coated Fabrics.
 - 9. ASTM D1149 - Standard Test Methods for Rubber Deterioration-Cracking in an Ozone Controlled Environment.
 - 10. ASTM D1204 - Standard Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature.
 - 11. ASTM D2136 – Standard Test Method for Coated Fabrics Low Temperature Bend Test.
 - 12. ASTM D3045 – Standard Practice for Heat Aging of Plastics Without Load.
 - 13. ASTM D4434 - Standard Specification for Poly (Vinyl Chloride) Sheet Roofing.
 - 14. ASTM D4601 – Standard Specification for Asphalt Coated Glass Fiber Base Sheet Used in Roofing.
 - 15. ASTM D6754 – Standard Specification for Ketone Ethylene Ester Based Sheet Roofing.
 - 16. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 17. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials.
 - 18. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings.
 - 19. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

- B. National Roofing Contractors Association:
 - 1. NRCA - The NRCA Roofing and Waterproofing Manual.
- C. Single Ply Roofing Institute:
 - 1. SPRI ES-1 - Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.
- D. Underwriters Laboratories Inc.:
 - 1. UL - Fire Resistance Directory.
 - 2. UL 790 - Tests for Fire Resistance of Roof Covering Materials.
 - 3. UL 1256 - Fire Test of Roof Deck Construction.
 - 4. UL 1897 - Uplift Tests for Roof Covering Systems.
- E. U.S. Environmental Protection Agency:
 - 1. ENERGY STAR - ENERGY STAR Voluntary Labeling Program.

1.3 SYSTEM DESCRIPTION

- A. Roofing Membrane: white single-ply fleece-backed thermoplastic; KEE PVC membrane comprised of PolyVinyl Chloride (PVC) and Ketone Ethylene Ester (KEE) reinforced with a internal fabric and complete with a wick resistant non-woven polyester fleece backing; meeting ASTM D6754 or ASTM D4434 Type III; fully adhered with cold-adhesive.

1.4 DESIGN REQUIREMENTS

- A. Low Slope Membrane Roof Edge Securement: Conform to SPRI ES-1 for wind speeds determined from applicable code.

1.5 PERFORMANCE REQUIREMENTS

- A. Roof Assembly Classifications:
 - 1. Windstorm Classification: UL Class 90.
 - 2. Exterior Fire Test Exposure: ASTM E 108 or UL 790, Class A; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1.6 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Indicate technical acceptance / approval by the roof system manufacturer. Indicate joint, termination, and penetration detail conditions and flashings, and conditions of interface with other materials. Indicate membrane layout and seam locations.
- C. Product Data: Submit product data for all roof system components and accessories.
- D. Manufacturer's installation instructions including special precautions required for seaming membrane.

- E. Manufacturer's Certificates
 - 1. Submit written certification that products meet or exceed specified requirements.
 - 2. Submit written certification that the roof system manufacturer has reviewed the Drawings and Specification for this project and that the specified roof system warranty shall be issued upon successful completion of the roof system installation by an authorized applicator in accordance with the drawing, specifications, Manufacturer's approved shop drawings and published installation instructions.
 - 3. Submit with bid written certification that the contractor is an authorized applicator of the specified roof system.
- F. Sample Warranties:
 - 1. Submit a sample copy of the specified Manufacturer's roof system warranty.
 - 2. Submit a sample copy of the specified Installer's guarantee.
- G. Product Test Reports: Based on the evaluation of comprehensive ASTM testing procedures conducted by an independent testing agency of the specified roofing Products.
- H. Manufacturer's Field Reports: Indicate procedures followed, ambient temperatures, humidity, wind velocity during application.

1.7 QUALITY ASSURANCE

- A. Perform Work in accordance with NRCA Roofing and Waterproofing Manual.
- B. Provide periodic inspections and approval performed by roofing manufacturer's technical representative during the installation of roofing materials at intervals not exceeding each 30 percent of the total roof system installation. Written inspection report must be submitted to Architect/Engineer within 72 hours of inspection.

1.8 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the specified roof system with minimum five years documented experience.
- B. Applicator: Company specializing in performing Work of this section with minimum five years documented experience, and approved by manufacturer.
 - 1. Be certified by the State of Illinois in accordance with the Illinois Roofing Industry Licensing Act, Senate Bill IL64, as amended.

1.9 PRE-INSTALLATION REQUIREMENTS

- A. Section 01 30 00 - Administrative Requirements: Pre-installation meetings.
- B. Convene minimum one week prior to commencing Work of this section.
- C. Review preparation and installation procedures and coordinating and scheduling required with related Work.

- D. Roofing contractor's job site foreman is required to attend a full day on-site training session conducted by an authorized technical representative of the roof system manufacturer. Manufacturer's representative shall review preparation, installation, and detailing procedures required to obtain the specified roof system warranty.
- E. Mandatory startup technical service provided by manufacturer's representative must be completed prior to installation of new roof system.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- C. Store products in weather protected environment, clear of ground and moisture.
- D. Protect foam insulation from direct exposure to sunlight.
- E. Store adhesives and solvent-based liquids away from excessive heat, sparks, and open flame.
- F. Store adhesives and sealants at temperature above 40° F.
- G. Store Products on roof in a manner to prevent deformation of deck and overloading the structure. Properly secure to prevent movement due to wind or other forces.

1.11 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.
- B. Do not apply roofing membrane during inclement weather. Comply with manufacturer's recommendations for minimum and maximum temperatures and humidity during application.
- C. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.

1.12 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Coordinate Work with installation of associated roof penetrations and metal flashings, as Work of this section proceeds.
- C. Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.

- D. Do not disrupt activities in occupied spaces.
- E. Before beginning work, the roofing contractor must secure approval from the building owner's representative for the following:
 - 1. Areas permitted for personnel parking.
 - 2. Access to the site.
 - 3. Areas permitted for storage of materials and debris.
 - 4. Areas permitted for the location of cranes, hoists and chutes for loading and unloading materials to and from the roof.

1.13 SAFETY

- A. The contractor shall be solely responsible for all means and methods as they relate to safety and shall comply with all applicable local, state and federal requirements. All related personnel shall be instructed daily of the full time requirement to maintain a safe environment for the contractors personnel and facility's occupants.

1.14 WARRANTY

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for warranties.
- B. Manufacturer's Warranty: Provide manufacturer's written Total System Warranty including coverage of materials and installation and resulting damage to building resulting from failure to resist penetration of moisture. Warranty shall be transferable with no dollar amount limitation and a minimum 72 miles per hour wind speed coverage, for the following warranty period:
 - 1. Warranty Period: Twenty (20) years from date of Substantial Completion.
- C. Installer's Guarantee: Submit roofing Installer's written warranty, signed by Installer/Applicator, covering all work of this section to be free of defect or otherwise not in accordance with the contract documents, including all components of roofing system, for the following warranty period:
 - 1. Warranty Period: Two (2) years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 TRI-POLYMER ALLOY ROOFING (TPA) - FULLY ADHERED

- A. Manufacturers:
 - 1. Tremco; TPA FB 60 mil.
 - 2. Versico; Versifleece KEE HP 60 mil (115)
 - 3. FiberTite; SM-FB 60 mil.
 - 4. Johns Manville; PVC-60 FB.
 - 5. Carlisle; Sure-Flex KEE HP 60 mil (115).
 - 6. Siplast; Parasolo PVC KEE FB 60 mil.
 - 7. Substitutions: Section 01 60 00 – Product Requirements.

2.2 COMPONENTS

- A. All components of the roof system shall be manufactured, supplied, or accepted in writing by the roof system manufacturer.
- B. Membrane: ASTM D6754 or D4434 Type III; White single-ply fleece-backed thermoplastic membrane comprised of PVC that contains KEE (Elvaloy), with internal fabric reinforcement and a wick resistant non-woven polyester fleece backing; conforming to the following minimum physical properties:

Properties	Test	Results
Thickness over Fleece	ASTM D4637	.059 inch
Thickness over Scrim	ASTM D4434	.02 inch
Breaking Strength	ASTM D751, MD	320 pounds
Seam Strength	ASTM D638	90 percent
Low Temperature Bend	ASTM D2135	PASS (-40°)
Solar Reflective index (SRI)	ASTM E1980	102

- C. Flexible Flashings: Same material, color and thickness as roof membrane for all curbs, walls, and penetrations. Provide prefabricated pipe boots, inside corners and outside corners as recommended by the roof system manufacturer.
- D. Seaming Materials: All membrane laps shall be heat welded. Provide all materials and equipment as recommended by membrane manufacturer. All field seams exceeding 10 feet in length shall be welded with an approved automatic welder.
- E. Adhesive Materials:
1. Field Membrane and Flashing Adhesive:
 - a. Cold-applied synthetic polymer bonding adhesive as recommended by membrane manufacturer.
 - b. Low-rise, two component polyurethane adhesive as recommended and approved by the roof system manufacturer.
 2. Insulation Adhesive:
 - a. Low-rise, two component polyurethane adhesive as recommended and approved by the roof system manufacturer.
 3. Primer, Thinner and Cleaner: As recommended by adhesive manufacturer, compatible with sheet membrane.
- F. Insulation: ASTM C1289, Type II, Class I, Grade 2, faced rigid cellular polyisocyanurate roof insulation, with the following characteristics:
1. Board Density: 2.0 pounds per cubic foot nominal.
 2. Compressive Strength: 20 pounds per square inch minimum (Grade 2).

3. Board Thickness:
 - a. Tapered Panels: 1/4 inch per foot as indicated on Drawings.
 - b. Tapered crickets: Tapered 1/2 inch per foot with 1/2 inch starting thickness.
 4. Thermal Resistance: Long Term Thermal Resistance (LTTR) R-Value: 5.7 per inch minimum.
- G. Base Sheet: SBS-modified asphalt base sheet meeting ASTM D6163 Type 1, Grade S for SBS-modified bituminous sheet materials using glass fiber reinforcements.
1. Mechanically attach to existing Tectum decking.

2.3 ACCESSORIES

- A. Membrane Coated Metal Accessories:
1. Fabricated from coated laminate metal by the roof system manufacturer: .020 inch thick membrane laminated to 24 gauge G-90 galvanized steel with acrylic backwash coating.
- B. Base Sheet Fasteners: Appropriate mechanical fasteners for purpose intended and approved by Factory Mutual and system manufacturer; length required for thickness of material.
- C. Sealants and water cut-off mastic: As recommended by membrane manufacturer.
- D. Surface Mounted Termination: Extruded aluminum termination bar and related fasteners by roof system manufacturer.
- E. Joint Filler: Extruded closed-cell polyethylene foam or polyethylene jacketed polyurethane foam, non-bleeding, non-staining, oversized 30 to 50 percent.
- F. Miscellaneous Accessories: Provide preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, primer, adhesives, fasteners and other accessories as recommended and approved by the roof system manufacturer.
- G. Roof Traffic Pads / Walk Pads: Prefabricated walk pad rolls by roof system manufacturer with textured surface. Walk pads shall be adhered to roof surface using bonding adhesive or heat welded as recommended by the roof system manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify surfaces and site conditions are ready to receive Work.
- C. Verify substrate is supported and secure.
- D. Verify substrate is clean and smooth, free of depressions, waves, or projections, properly sloped to drains, valleys, or eaves, and suitable for installation of roof system.

- E. Verify substrate surfaces are dry and free of moisture.
- F. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, and reglets are in place.

3.2 PREPARATION

- A. All existing roof membrane, base flashing, substrate materials to the existing deck and roof edge flashings shall be removed in areas to receive roof replacement. Remove only that amount of roofing and flashing that can be made watertight with new materials during a one day period before the onset of inclement weather.
- B. Remove all loose debris from the substrate surface.
- C. Follow the roof system manufacturer's published instructions for the preparation of an approved substrate.

3.3 INSTALLATION

- A. Insulation Application:
 - 1. Lay boards with edges in moderate contact without forcing. Cut to fit neatly to perimeter blocking and around penetrations through roof with no joints or gaps greater than 1/4 inch. Stagger joints horizontally and vertically if multiple layers are provided.
 - 2. Secure all layers of insulation with low-rise adhesive in accordance with the manufacturer's published specifications.
 - 3. Apply no more than can be covered in the same day.
- B. Membrane Application:
 - 1. Membrane placement shall comply with the manufacturer's published installation instructions.
 - a. Begin installation of roofing membrane in the presence of roof system manufacturer's technical personnel.
 - b. Attach membrane with full coverage of cold adhesive to properly installed and prepared substrate in accordance with the roof manufacturer's published installation instructions. The surface shall be clean, dry, smooth, and free from contamination.
 - c. The membrane shall be cut to fit neatly around all penetrations and roof projections.
 - d. The membrane shall be unrolled and positioned with a minimum overlap as specified by the manufacturer. Laps shall be shingled with, or run parallel to, the slope of the roof.
 - e. Membrane Seaming: Clean seam areas, overlap membrane, and hot-air weld all membrane seams with approved welding equipment in accordance with the manufacturer's published instructions to ensure a watertight seam installation.
 - 1) Probe test all membrane seams to verify weld continuity.
 - 2) All membrane splice intersections shall be overlaid with T Joint Covers as recommended by the manufacturer.

- C. Flashings And Accessories:
 - 1. Provide all flashings & accessories as required to provide a complete & warranted system.
 - 2. Apply flexible flashings to seal membrane to vertical elements.
 - 3. Vertical flashings shall be fully-adhered to a dry, smooth solvent-resistant and compatible substrate using approved bonding adhesive.
 - 4. The top of installed flashings shall be fastened under metal counterflashing, metal roof edge, or metal reglet. The maximum distance between fasteners shall be 12-inches unless otherwise noted or required by roof system manufacturer.
 - 5. Flashings shall not be applied over thru-wall flashings or weep holes. All vertical flashings shall extend a minimum of 8-inches above roof level unless previously accepted by the Architect/Engineer and the roof manufacturer's technical department.
 - 6. Coordinate installation of all roof drainage components, roof edges and related flashings.
 - 7. Seal flashings and flanges of items penetrating membrane.
 - 8. Install walkway pads in accordance with the manufacturer's published instructions. Space pad joints to permit drainage.
- D. Execute work by methods to avoid damage to other work, and which will provide appropriate surfaces to receive patching and finishing.
- E. Fit work water-tight to all pipes, sleeves, ducts, conduit, and other penetrations through roof surfaces.

3.4 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements.
- B. Require site attendance of roofing materials' manufacturers during installation of the Work.

3.5 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Final cleaning.
- B. In areas where finished surfaces are soiled by Work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.
- C. Repair or replace defaced or disfigured finishes caused by Work of this section prior to substantial completion.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 01 70 00 - Execution and Closeout Requirements: Protecting installed construction.
- B. The contractor must take all precautions necessary to protect the finished roof surface and adjacent building surfaces from being soiled by work of this section.
- C. Protect building surfaces against damage from roofing Work. Where traffic must continue over finished roof membrane, protect surfaces.

END OF SECTION

SECTION 07 62 00

SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes fabricated sheet metal items.
- B. Related Sections:
 - 1. Section 07 54 16 – KEE PVC Roofing – Fully Adhered
 - 2. Section 07 01 50.74 – Rehabilitation of Single Ply Roofing

1.2 REFERENCES

- A. American Architectural Manufacturers Association:
 - 1. AAMA 2604 - Voluntary specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
 - 2. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
- B. ASTM International:
 - 1. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 2. ASTM A924/A924M - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
 - 3. ASTM B32 - Standard Specification for Solder Metal.
 - 4. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - 5. ASTM D226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
 - 6. ASTM D4397 - Standard Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications.
 - 7. ASTM D4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
- C. Federal Specification Unit:
 - 1. FS TT-C-494 - Coating Compound, Bituminous, Solvent Type, Acid Resistant.
- D. Sheet Metal and Air Conditioning Contractors:
 - 1. SMACNA - Architectural Sheet Metal Manual.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- C. Product Data: Submit data on manufactured components metal types, finishes, and characteristics.

1.4 QUALIFICATIONS

- A. Fabricator and Installer: Company specializing in sheet metal work with minimum five years experience.

1.5 PRE-INSTALLATION MEETINGS

- A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.
- B. Convene minimum one week prior to commencing work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.
- B. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- C. Prevent contact with materials causing discoloration or staining.

PART 2 PRODUCTS

2.1 SHEET METAL FLASHING AND TRIM

- A. Materials:
 - 1. Galvalume:
 - a. Aluminized Steel: Type 2, base metal is steel tested in accordance with ASTM-A-446 to meet or exceed a minimum yield point of 48,000 pounds per square inch. Coated by the continuous hot-dip method uniformly on both sides with commercially pure aluminum. The coating shall be saturated with iron but contains no silicon. Minimum weight of coating, by triple-spot test is 0.60 ounce determined in accordance with Military Specification MIL-S-4174-A.
 - b. Finish: Factory applied 2 coat oven cured Fluoropon coating with minimum 70 percent solids content for Kynar resin over a primer in accordance with the manufacturer's written procedures. Color shall be as selected by the Architect/Engineer from the manufacturer's full color selection.

2.2 ACCESSORIES

- A. Fasteners: Same material and finish as flashing metal, with soft neoprene washers.

2.3 FABRICATION

- A. Form sections shape indicated on Drawings, accurate in size, square, and free from distortion or defects.
- B. Fabricate cleats of same material as sheet metal, interlocking with sheet.
- C. Form pieces in longest possible lengths. in single length sheets.
- D. Hem exposed edges on underside 1/2 inch; miter and seam corners.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify roofing termination and base flashings are in place, sealed, and secure.
- C. Before starting work, verify governing dimensions at building; examine, clean and repair, if necessary, any adjoining work on which this work is in any way dependent for its proper installation.

3.2 INSTALLATION

- A. Install clear sealant at all locations shown on details and where required.
- B. Secure flashings in place using concealed fasteners. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- C. Slope gutters to drain to downspouts a minimum of 1/16 inch per foot.
- D. Terminate downspouts with 45 degree discharge elbow.
- E. Seal all metal joints watertight.

3.3 FIELD QUALITY CONTROL

- A. Section 01 70 00 – Execution and Closeout Requirements.
- B. Inspection will involve surveillance of Work during installation to ascertain compliance with specified requirements.

3.4 SCHEDULE

- A. Gutters:
 - 1. Material: Galvalume.
 - 2. Thickness: 22 gauge.
 - 3. Finish: Kynar 500, factory applied 2 coat oven cured Fluoropon coating with minimum 70 percent solids content for Kynar resin over a primer in accordance with the manufacturer's written procedures. Color shall be as selected by the Architect/Engineer from the manufacturer's full color selection.

- B. Fascia Wrap, Downspouts, Parapet Cap, Counter Flashing and Misc. Sheet Metal Items:
 - 1. Material: Galvalume.
 - 2. Thickness: 24 gauge.
 - 3. Finish: Kynar 500, factory applied 2 coat oven cured Fluoropon coating with minimum 70 percent solids content for Kynar resin over a primer in accordance with the manufacturer's written procedures. Color shall be as selected by the Architect/Engineer from the manufacturer's full color selection.

END OF SECTION

SECTION 07 71 00

ROOF SPECIALTIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes factory fabricated and finished metal roof edge system.

1.2 REFERENCES

- A. National Roofing Contractors Association:
 - 1. NRCA - The NRCA Roofing and Waterproofing Manual.
- B. Sheet Metal and Air Conditioning Contractors:
 - 1. SMACNA - Architectural Sheet Metal Manual.
- C. Single Ply Roofing Institute:
 - 1. SPRI ES-1 - Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected work.
- C. Product Data: Submit data on shape of components, materials and finishes, anchor types and locations.
- D. Manufacturer's Installation Instructions: Submit instructions for special procedures and perimeter conditions requiring special attention.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with SMACNA and NRCA details.
- B. Roof edge shall be CERTIFIED by the manufacturer to comply with ANSI/SPRI Standard ES-1. Roof edge shall meet performance design criteria according to the following test standards:
 - 1. ANSI/SPRI ES-1 Test Method RE-1 Test for Roof Edge Termination of Single-ply Roofing Membranes: The fascia system shall be tested to secure the membrane in accord with the ANSI/SPRI ES-1 Test Method RE-1. Use the current edition of ANSI/SPRI ES-1 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.

2. ANSI/SPRI ES-1 Test Method RE-2 Pull-Off Test for Fascia: The fascia system shall be tested in accord with the ANSI/SPRI ES-1 Test Method RE-2. Use the current edition of ANSI/SPRI ES-1 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.
3. The roof edge product shall be UL Classified by Underwriters Laboratories, Inc.® or other 3rd party verification of compliance with the ANSI/SPRI ES-1 Wind Design Standard.

1.5 WARRANTY

- A. Section 01 70 00 - Execution and Closeout Requirements: Product warranties and product bonds.
- B. Manufacturer's Standard Warranty: Warranted materials shall be free of defects in material and workmanship for five years after shipment.
- C. Provide a 20 year warranty for painted finish covering color fade, chalk and film integrity.
- D. When offered by the roof system manufacturer, specified components shall be privately labeled and included in the roof manufacturer's roof system warranty.

PART 2 PRODUCTS

2.1 MANUFACTURED ROOF SPECIALTIES

- A. Manufacturers:
 1. OMG Roofing Products.
 2. MetalEra, Inc.
 3. Substitutions: Section 01 60 00 - Product Requirements.

2.2 COMPONENTS

- A. Roof Edge System: A two-part assembly with spring cleat and decorative snap-on fascia cover for single-ply roofs. The system shall have all concealed fasteners with no penetration on horizontal roof surface.
 1. Install with field-applied waterproof sealant by roofing membrane manufacturer.
 2. Exterior Fascia Covers: 24 gauge galvanized steel in 10 to 12 foot lengths for all sizes with concealed, matching joint splice plates.
 3. Fasteners: Stainless steel hex head screw type provided by the manufacturer.
 4. Exterior Fascia Finishes: Kynar-500, color as selected by the Architect/Engineer from the manufacturer's full color line.

2.3 ACCESSORIES

- A. Corners, end caps, tees, transitions and other accessories shall be fabricated by the roof edging manufacturer. Factory fabricated mitered corners shall have 12 inch minimum leg lengths.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify deck, curbs, roof membrane, base flashing, and other items affecting Work of this section are in place and positioned correctly.
- C. Verify that installation will not disrupt other trades. Verify that the substrate is dry, clean and free of foreign matter. Report and correct defects prior to installation.

3.2 INSTALLATION

- A. Coordinate installation of components of this section with installation of roofing membrane and base flashings.
- B. Coordinate installation of sealants and roofing cement with Work of this section to ensure water tightness.
- C. Installer shall use stainless steel screw type fasteners, provided by edge manufacturer to assure minimum 240 pound pull-out resistance is achieved.

END OF SECTION