

IFB21033 – BUILDING D ROOF REHAB

- 1. Bids submitted via email only to: biddocuments@mchenry.edu**
Subject line must read: IFB21033 Building D Roof Rehab
 - 2. Pre-Bid Meeting via Zoom - April 16, 2021 – 8:00AM**
 - 3. Bid Opening via Zoom - April 29, 2021 – 8:00AM**
-

Join Zoom Meeting

<https://mchenrycc.zoom.us/j/7365793246>

Meeting ID: 736 579 3246

One tap mobile

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Dial by your location

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+1 669 900 6833 US (San Jose)

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+1 346 248 7799 US (Houston)

Meeting ID: 736 579 3246

Find your local number: <https://mchenrycc.zoom.us/u/acLznp2JFr>

Project Manual

Client:..... McHenry County College
Date:March 23, 2021
File No.:21-033

Roof Rehabilitation Program Building “D” McHenry County College 8900 US Hwy 14 Crystal Lake, Illinois



I HEREBY CERTIFY THAT
THESE DOCUMENTS HAVE
BEEN PREPARED UNDER MY
SUPERVISION AND TO THE
BEST OF MY KNOWLEDGE
CONFORM WITH ALL
APPLICABLE BUILDING CODES
AND ORDINANCES.

THOMAS F. ZORDAN, AIA
IL Arch Lic. #001-014575
Expires 11-30-2021

Architectural
Consulting
Group,
Ltd.

ACG

422 N. Hough Street – Barrington, IL 60010 ■ 847-277-1900 ■ www.ACG-Ltd.net

PROJECT MANUAL

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PROJECT MANUAL FOR:

Roof Rehabilitation Program

Building "D" McHenry County College
Crystal Lake, IL

Date: November 1, 2019

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PROCUREMENT AND CONTRACTING REQUIREMENTS

00 10 00- Solicitation

The Owner (Agent):

McHenry County College
8900 US Hwy 14
Crystal Lake, IL

The Project:

Roof Rehabilitation Program
Building "D" McHenry County College
Crystal Lake, IL 60012

INVITATION TO BID:

Bids Due: April 28, 2021 @ 12:00PM (Noon) (local time) @ biddocuments@mchenry.edu
for the following work:

PROJECT DESCRIPTION:

McHenry County College Facilities Management is accepting bids for a Roof Rehabilitation Program at Building "D" of the McHenry County College Campus located at 8900 US Hwy 14 in Crystal Lake, IL.

The in place roof system consists of a Rock ballasted single-ply EPDM membrane and flashings system over rigid insulation supported by a gypsum deck.

The Base Bid Program includes complete removal and disposal of the roof surface consisting of rock ballast, roofing and insulation assembly down to the deck and installation of new modified roof system. Alternate bids are also being requested.

SCOPE OF WORK:

Base Bid: Roof D – *[Roof Replacement (20-year NDL warranty) – Roof Removal / Mech. Fastened Base / Fully Adhered Tapered Insulation Assembly / Fully Adhered Cover Board / 2-ply BUR - APP Modified Roofing / Sheet Metal Flashings & Related Metal Work]*

The Base Bid Program includes complete removal and disposal of the roof surface consisting of rock ballast, roofing and insulation assembly down to the gypsum deck and installation of new modified roof system. The entire roof area shall be swept clean of ALL debris and inspected for areas of damaged/deterioration. All areas of damaged/deteriorated gypsum decking shall be repaired under Unit Price provisions.

Install new wood blocking as required at all curbs, penetrations, and perimeter edges to accommodate new insulation and flashings height requirements. Existing roof hatch to be raised, blocked, and reset as required to accommodate new roof and insulation assembly. Clean and paint exterior side.

Install new mechanically fastened nailable base sheet to the existing gypsum deck. Install 2- layers 2.6" insulation board (R-30) total set in 'Duotack' low rise foam. Install new fully adhered multi-layered 1/4" per foot tapered rigid insulation saddles set in Low Rise Foam Adhesive. Install new fully adhered 1/2" cover board set in Low Rise Foam. Provide fully adhered 1/2" per foot tapered insulation crickets at high side of all roof penetrations to divert water. Provide a minimum 4' x 4'; 1/2" per foot tapered sumps at all drain locations. Adjust drain bowl height as required to accommodate new insulation assembly. Install clamping ring assembly with new cast iron domes and new mounting hardware. Install new cant strips, tapered edge strips, saddles, and crickets at perimeter edges and roof penetrations. Assembly to obtain FM-1-300 equivalent wind up lift rating.

Install new 2-ply type VI felts built-up roofing system set in uniformed mopping of hot asphalt and new torch-applied fully adhered granular surfaced "Energy Star" APP Modified Bitumen roofing and flashing assembly. Heat weld all seams and embed additional granules into leading exposed edges/ bleed outs of modified bitumen during installation to create a continuous granular surface. New system shall be installed in accordance with FM 1-300 uplift rating. All seams shall be checked daily for continuity and strength by the contractor.

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 10 00- Solicitation

All rolled material is to be opened and allowed to relax prior to installation – failure to relax rolled material may result in the rejection of the completed work.

Any tar and/or damage to private vehicles or property shall be professionally repaired/cleaned at the expense of the contractor.

Install new treated wood blocking to achieve minimum flashing heights. Install new sheet metal, flashings, counter-flashings, and related metal and miscellaneous work as specified.

Disconnect, raise and reset all vents, ducts and piping as required to accommodate new roof assembly and flashings. All pipes and conduits shall be set on new prefabricated composite pipe supports and rollers. Install an additional ply of roofing membrane under all equipment and pipe supports. Existing roller supports and pads to be raised and reset. Discard wood pipe supports and replace with new roller supports and pads to match existing. Replace deteriorated roller supports as required- field verify.

Clean prime and paint with rust inhibitor paint all exposed remaining sheet metal vents, hoods, drip caps, flues and pipes. Clean and paint horizontal piping 'safety yellow'.

Clean-up roof surface prior to final completion of roof.

Alternate Bids:

Alternate Bid 1: [80 mil TPO or 60mil PVC/KEE reinforced sheet, fully adhered (20-year NDL warranty)]
Remainder of work to remain same.

Alternate Bid 2: [Protective walkway surface membrane]
▪ Provide TPO fully adhered protective walkways and paths at high traffic areas.
Remainder of work to remain same.

GENERAL BUILDING DATA:

The roof area at Building "D" totals approximately 26,367+/- square feet.. Positive slope appears to be present in the underlying gypsum deck and is sloped to the roof drains. There are (7) large roof top units located on the roof. Other penetrations include (1) roof hatch, gas lines set on pipe supports with portals,, soil stacks, flue vents, exhaust vents, (2) gooseneck vents, and miscellaneous penetrations.

According to our test cuts, the low-slope roof system at the roof consists of a rock ballast over BUR roof system over ¾"perlite 2" rigid polyisocyanurate insulation supported by a gypsum deck. The perimeter of the roof area is terminated by sheet coping cap.

BID REQUIREMENTS:

Bids are to be submitted on a lump sum basis, with provisions for additional Unit Price quantities of work. Bids are to be submitted on the forms attached in the Project Manual, in accordance with the requirements set forth in the Instructions to Bidders.

GENERAL BIDDING INFORMATION:

Ricky Sparks
Assistant Vice President Facilities Management
McHenry County College
8900 US Hwy 14
Crystal Lake, IL 60012
P: 815.455.8564
rsparks@mchenry.edu

Deliver bids electronically to: April 28, 2021 12:00 p.m. (Noon) biddocuments@mchenry.edu

PROCUREMENT AND CONTRACTING REQUIREMENTS

00 10 00- Solicitation

Provide electronic copy of the Bid to: (Forward technical questions to this office)

Architectural Consulting Group, Ltd.

c/o: Dave Myszka
422 N. Hough Street
Barrington IL 60010

Phone: 847.277.1900 Fax: 847.277.1300

Email: dmyszka@acg-ltd.net

PRE-BID MEETING: VIRTUAL

A Virtual pre-bid meeting is scheduled for **April 16, 2021 @ 8:00 AM** (local time). Pre Bid Meeting will be virtual.

BID DUE DATE:

Bids will be due on **April 28, 2021 @ 12:00PM NOON** (local time).

Submit bids to biddocuments@mchenry.edu.

BID OPENING DATE:

Bids will be opened on **April 29, 2021 @ 8:00 AM (local time)**

BOARD APPROVAL DATE: May 28, 2021

BIDDER REMINDERS:

- (X) **A 10% Bid Bond is required.**
- () A Bid Bond is not required.
- (X) **Include the cost of a Performance Bond in your Bid.**
- (X) Cost for a Performance Bond shall be shown as a Unit Price extra.

Architectural Consulting Group, Ltd.

Dave Myszka
Project Manager

END OF SOLICITATION SECTION

DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

Section 00 20 00 - Instructions for Procurement

GENERAL:

Proposals entitled for consideration must be prepared and submitted in accordance with the following instructions.

BID METHOD:

Bids shall be made on a stipulated lump-sum basis for the entire project. Fill in all items required for full bid on the Bid Form and submit to Owner and Owner's Representative as required. All prices quoted shall be honored for a period of forty-five (45) calendar days after the bid date.

BONDS:

BID BOND: A Bid Guarantee will be required for each bid submitted, in the form of a bid bond, cashier's check, certified check or money order in the amount of 10% of the Base Bid amount. The Bid Guarantee shall be made out to Ownship and shall be used as a guarantee that the bidder will not withdraw his bid after the date and time set for the bid opening. Bid Guarantees will be returned promptly upon the approved execution of the Contract and Performance Bond.

PERFORMANCE BOND: A performance guarantee will be required of the successful bidder and shall be mailed or delivered to the Owner. Execution of the agreement/contract will be made once Owner receives the Performance Bond. The performance guarantee shall be in the form of a performance and labor/material payment bond(s) in the amount of One Hundred Percent (100%) of the Contract Amount, including alternates as selected by the Owner. The bond shall also guarantee the faithful performance of the Contractor's obligations under the Prevailing Wage Act. The aforementioned bond shall be issued for a 365-day period subsequent to the date of substantial completion, and shall also include the Contract Time, as defined in these Contract Documents. The bond shall be issued by a surety company which is acceptable to the Owner. Upon the Owner's receipt and acceptance of a performance and labor/material payment bond(s), the Owner shall promptly return the Contractor's bid guarantee.

CONDITIONS:

1. The existing building must remain in operation 100 percent of the time. Any demolition required shall proceed only at the direction of the Owner's Representative according to schedules as mutually agreed upon. Exterior and interior protection shall be required at areas of work.
2. Before submitting a Bid, Bidders shall carefully examine the PROJECT MANUAL, visit the site, fully inform themselves as to all existing conditions, and shall include in the Bid a sum to cover the cost of all such items affecting the work.
3. No Bidder to whom a Contract is awarded shall be allowed extra compensation on account of any matter or thing which Bidder could have made him/her aware of prior to Bidding.
4. All cutting, patching and repair for damage resulting from new work is to be the responsibility of the Contractor.
5. All rubbish resulting from work by this Contractor is to be removed from site and legally disposed of. Storage of materials to be in areas designated by the Owner and/or shown on the drawings.
6. Building exteriors, interiors, and grounds must be protected against damage that might result

DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

Section 00 20 00 - Instructions for Procurement

from this work. Any damage caused by the Contractor shall be his responsibility and shall be repaired at his expense.

7. Bids are to be submitted on a lump sum basis, based on estimated quantities listed in the bid form and unit prices provisions by the bidder.
8. Bids are to be submitted on the forms attached in the Project Manual, in accordance with the requirements set forth in the Instructions to Bidders.
9. The Bidder agrees to hold the bid open until 45-calender day after the Bid Opening.
10. If permits are required, contactor to file for permits and provide documentation of payment
11. The Bidder shall include cost in their bid for all required Federal, State and Local taxes with the submission of their bid.
12. The Bidder agrees to work at least five full working days a week, when weather permits.
13. Work shall be conducted during the week between the hours of 8:00 AM to 4:30 PM. No work shall be performed on weekend or Holidays unless prior approval by the Ownership and/or managing agent.

PRE-BID MEETING: VIRTUAL

A virtual pre-bid meeting is scheduled for **April 16, 2021 @ 8:00 a.m.** (local time).

BID DUE DATE:

Electronic copies of Bids will be due on **April 28, 2021 @ 12:00 p.m. (Noon)** (local time) @ biddocuments@mchenry.edu

REQUIREMENTS FOR SIGNING BIDS:

1. Bids which are signed for a partnership shall be signed by all the partners, or by an attorney-in-fact. If signed by an attorney-in-fact, a power of attorney evidencing the authority to sign the Bid, executed by the partners shall be attached with the submitted bid.
2. Bids which are signed for a Corporation shall have the correct corporate name.

PRESENTATION OF BIDS:

All Bids are to be signed in ink, with Bid prices clearly written or typed numerically and in words. In the event of any conflict between figures and words, the worded price will govern. The bids will be opened and reviewed on April 29, 2021 @ 8:00 a.m. The Board will approve successful bid at the May 28, 2021 meeting. Bidding Contractors will be notified of Owner's decision to award a Contract subsequent to bid reviews.

Bidders are required to fill out the attached as part of the bid package:

**MCHENRY COUNTY COLLEGE BUSINESS ENTERPRISE PROGRAM-
MINORITIES, FEMALES, AND PERSONS WITH DISABILITY PARTICIPATION AND UTILIZATION
PLAN**

END OF INSTRUCTIONS FOR PROCUREMENT SECTION

DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

Section 00 41 13 - Bid Form

The Owner:

McHenry County College
8900 US Hwy 14
Crystal Lake, IL

The Project:

Roof Rehabilitation Program
Building "D" McHenry County College
Crystal Lake, IL 60012

Electronic Emailed bids will be due on **April 28, 2021 @ 12:00 p.m. (Noon)** (local time)

Forward electronic bids:

biddocuments@mchenry.edu

Forward Technical Questions & Copies To:

Dave Myszka
Architectural Consulting Group, Ltd
422 N. Hough Street
Barrington, IL 60010
Office: 847-277-1900
dmyszka@acg-ltd.net

Bid From:

(Bidder's Company Name)

(Bidder's Address)

(Bidder's Phone No.)

Date: _____, 20____

(City, State)

(Month, Day)

(E-mail Address)

THE UNDERSIGNED:

1. Acknowledges Receipt Of:

a. PROJECT MANUAL:

Roof Replacement Program
Building "D" McHenry County College
Crystal Lake, IL
ACG File No.: 21-033

c. ADDENDA:

No. _____ Dated _____, 21 _____

No. _____ Dated _____, 21 _____

No. _____ Dated _____, 21 _____

2. Has examined the PROJECT MANUAL and DRAWINGS and all field conditions and herein agrees to:

- a. To hold this bid open for a period of Forty-five (45) calendar days after bid opening.
- b. To enter into and execute a contract with the Owner, which will be awarded on the basis of this bid and connection therewith to furnish all bonds and insurance required in the PROJECT MANUAL within fourteen days after notice to proceed.
- c. To Obtain any and all permits required to perform the work and to accomplish the work in accordance with the Contract.
- d. To accomplish the work in accordance with the Contract Documents for the sum of money as outlined herein and completed the work within the proposed time frame after notice to proceed.

DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

Section 00 41 13 - Bid Form

PROJECT DESCRIPTION AND SCOPE OF WORK:

Refer to Section 00 10 00 - Solicitation, for this information.

BIDDER REMINDERS:

- (X) **A 10% Bid Bond is required.**
 () A Bid Bond is not required.
 (X) **Include the cost of a Performance Bond in your Bid.**
 () Cost for a Performance Bond shall be shown as a Unit Price extra.

BASE BID:**Low-Slope Roof Replacement – Building ‘D’ Fully Adhered APP modified**

A [Roof Replacement (20-year NDL warranty) – Roof Removal / Mech. Fastened Base / Fully Adhered Tapered Insulation Assembly / Fully Adhered Cover Board / 2-ply BUR - APP Modified Roofing / Sheet Metal Flashings & Related Metal Work]

ITEM	DESCRIPTION	EST. QTY	LUMP SUM
1)	Mobilization, General Provisions, Overhead, Profit, Permits	100%	\$ _____
2)	Building “D” – Low Slope Roof Replacement	100%	\$ _____
3)	Tapered Insulation Saddles	100%	\$ _____

Total Base Bid: The bidder agrees to complete all Base Bid (items 1 thru 3 work inclusive of all labor and materials required in order to perform for the **TOTAL** sum of:

\$ _____

Written Dollar Amount: _____

Alternate Bid 1: In Lieu of APP Modified

[80 mil TPO or 60mil PVC/KEE reinforced sheet, (20-year NDL warranty)]

All other work to remain

	Total Alternate Bid 1: The bidder agrees to completed all Alternate Bid 1 work inclusive of all labor and materials required for the <u>ADDITIONAL</u> sum of:	[ADD] \$
	Written Dollar Amount: _____	

Alternate Bid 2: [New protective walkway for TPO]

	Total Alternate Bid 2: The bidder agrees to completed all Alternate Bid 2 work inclusive of all labor and materials required for the <u>ADDITIONAL</u> sum of:	[ADD] \$
	Written Dollar Amount: _____	

DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

Section 00 41 13 - Bid Form

UNIT PRICES:

For additional work found to become necessary during the course of the work, inclusive of labor/installation, as identified in the Specifications:

Item	Description	Unit Area	Unit Cost
A	Gypsum Deck Repair	per 4' x 4' sheet	\$
B	Replace Treated Wood Framing		\$
	a. 2" x 4" x 8'	per board	\$
	b. 2" x 6" x 8'	per board	\$
	c. 2" x 8" x 8'	per board	\$
C	Metal prefinished coping	Per linear foot	\$
D	Replace Drain Assembly	per unit	\$
E	For Misc. Work Over Contract:		
	d. Roofer	per man hour	\$
	e. Sheet Metal Mech.	per man hour	\$
	f. Mason	per man hour	\$
	g. Laborer	per man hour	\$
	h. Electrician	per man hour	\$
	i. Certified HVAC Technician	per man hour	\$
H	Additional Material Cost – "mark-up" Over Cost	material cost plus...	%
I	Performance and Payment Bond	percentage of total Contract	%

PROJECT TIME:

If awarded this Contract, we will substantially complete all work as described within the time frame listed below:

BASE BID:

Start Date: _____ Completion Date: _____

Aprox. Number of Working Days Required: _____

DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

Section 00 41 13 - Bid Form

SUBCONTRACTOR LIST:

If portions of the work will be performed by Contractors other than the Bidder endorsing this Bid Form, list all Subcontractors below:

_____	:	_____
(Type of work)		(Subcontractor name)
_____	:	_____
(Type of work)		(Subcontractor name)
_____	:	_____
(Type of work)		(Subcontractor name)

FIRM NAME: _____

ADDRESS: _____

(street address) (city) (state)

TELEPHONE: () _____ Fax: () _____

EMAIL: _____

SUBMITTED BY: _____ TITLE: _____

(print name)

AUTHORIZED SIGNATURE: _____

Corporate Seal

IN SUBMITTING THIS BID, IT IS UNDERSTOOD THAT THE OWNER RESERVES THE RIGHT TO REJECT ANY AND ALL BIDS, AND IT IS AGREED THAT THIS BID MAY NOT BE WITHDRAWN FOR A PERIOD OF FORTY-FIVE (45) DAYS FROM THE BID OPENING DATE.

MCHENRY COUNTY COLLEGE

BUSINESS ENTERPRISE PROGRAM

MINORITIES, FEMALES, AND PERSONS WITH DISABILITY

PARTICIPATION AND UTILIZATION PLAN

The Business Enterprise Program for Minorities, Females, and Persons with Disabilities Act (BEP) establishes certain goals for community colleges contracting with businesses that are owned and controlled by persons who are minorities (MBE), female (FBE), or persons with disabilities (DBE) (collectively, BEP certified vendor(s)).

Contract Goal to be Achieved by Vendor: This solicitation includes a specific BEP participation goal of 20 % of the total dollar amount of the contract.

The BEP participation goal is applicable to all bids or offers. McHenry County College (College) will award this contract to a Vendor that meets the goal or makes good faith efforts to meet the goal. This goal is also applicable to change orders and allowances within the scope of work provided by the BEP certified vendor. If Vendor is a BEP certified vendor, the entire goal is met and no subcontracting with a BEP certified vendor is required; however, Vendor must submit a Utilization Plan indicating that the goal will be met by self-performance. Failure to complete a Utilization Plan or provide good faith effort documentation shall render the bid or offer non-responsive or not responsible and subject to rejection and/or disqualification in the College's sole discretion.

The following are guidelines for Vendor's completion of the Utilization Plan. **Please read the guidelines carefully.** A format for the Utilization Plan is included in this section. Vendor should include any additional information that will add clarity to Vendor's proposed utilization of certified BEP vendors to meet the targeted goal. The Utilization Plan must demonstrate that Vendor has either: (1) met the entire contract goal or (2) made good faith efforts towards meeting the goal. Any submission of good faith efforts by Vendor shall be considered as a request for a full or partial waiver.

To meet the College's BEP participation goals, Vendor, or Vendor's proposed Subcontractor(s), must be certified with the Business Enterprise Council as a BEP certified vendor. If Vendor or Vendor's proposed Subcontractor(s) are not BEP certified vendors but do meet the definition of MBE, FBE, or DBE companies as set forth in 30 ILCS 575/2, Vendor shall have the burden of submitting sufficient evidence of the company's ownership. The College shall have the sole discretion of whether to accept non-BEP certified vendors and applying said contracts towards its BEP participation goals.

1. If applicable where there is more than one prime vendor, the Utilization Plan should include an executed Joint Venture Agreement specifying the terms and conditions of the relationship between the parties and their relationship and responsibilities to the contract. The Joint Venture Agreement must clearly evidence that the BEP certified vendor will be responsible for a clearly defined portion of the work and that its responsibilities, risks, profits and contributions of capital, and personnel are proportionate to its ownership percentage. It must include specific details related to the parties' contributions of capital, personnel, and equipment and share of the costs of insurance and other items; the scopes to be performed by the BEP certified vendor under its supervision; and the commitment of management, supervisory personnel, and operative personnel employed by

the BEP certified vendor to be dedicated to the performance of the contract. Established Joint Venture Agreements will only be credited toward BEP goal achievements for specific work performed by the BEP certified vendor. **Each party to the Joint Venture Agreement must execute the bid or offer prior to submission of the bid or offer to the College.** The contract will not be awarded to Vendor unless the College approves the Vendor's Utilization Plan and Joint Venture Agreement, if applicable.

2. **Calculating BEP Certified Vendor Participation:** The Utilization Plan documents work anticipated to be performed, or goods/equipment provided, by all BEP certified vendors and paid for upon satisfactory completion/delivery. Only the value of payments made for the work actually performed by BEP certified vendors is counted toward the contract goal. Applicable guidelines for counting payments attributable to contract goals are summarized below:
 - 2.1. The value of the work actually performed or goods/equipment provided by the BEP certified vendor shall be counted towards the goal. The entire amount of that portion of the contract that is performed by the BEP certified vendor, including supplies purchased or equipment leased by the BEP certified vendor shall be counted, except supplies purchased and equipment rented from the Prime Vendor submitting this bid or offer.
 - 2.2. A vendor shall count the portion of the total dollar value of the BEP contract equal to the distinct, clearly defined portion of the work of the contract that the BEP certified vendor performs toward the goal. A vendor shall also count the dollar value of work subcontracted to other BEP certified vendors. Work performed by the non-BEP certified party shall not be counted toward the goal. **Work that a BEP certified vendor subcontracts to a non-BEP certified vendor will not count towards the goal.**
 - 2.3. A Vendor shall count toward the goal 100% of its expenditures for materials and supplies required under the contract and obtained from BEP certified vendor manufacturers, regular dealers, or suppliers. A Vendor shall count toward the goal the following expenditures to BEP certified vendors that are not manufacturers, regular dealers, or suppliers:
 - 2.3.1. The fees or commissions charged for providing a bona fide service, such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for performance of the contract, provided that the fee or commission is determined by the College to be reasonable and not excessive as compared with fees customarily allowed for similar services.
 - 2.3.2. The fees charged for delivery of materials and supplies required by the contract (but not the cost of the materials and supplies themselves) when the hauler, trucker, or delivery service is not also the manufacturer or a supplier of the materials and supplies being procured, provided that the fee is determined by the College to be reasonable and not excessive as compared with fees customarily allowed for similar services. The BEP certified vendor's trucking firm must be responsible for the management and supervision of the entire trucking operation for which it is responsible on the contract, and must itself own and operate at least one fully licensed, insured and operational truck used on the contract.
 - 2.3.3. The fees or commissions charged for providing any bonds or insurance specifically required for the performance of the contract, provided that the fee or commission is determined by the College to be reasonable and not excessive as compared with fees customarily allowed for similar services.
 - 2.4. BEP certified vendors who are performing the contract as second tier subcontractors may be counted in meeting the established BEP goal for this contract as long as the Prime Vendor can provide documentation indicating the utilization of these vendors.
 - 2.5. A Vendor shall count towards the goal only expenditures to firms that perform a commercially useful

function in the work of the contract. A Vendor shall not count towards the goal expenditures that are not direct, necessary and related to the work of the contract. Only the amount of services or goods that are directly attributable to the performance of the contract shall be counted. Ineligible expenditures include general office overhead or other Vendor support activities.

3. **Good Faith Effort Procedures:** Enclosed and sealed with the Vendor's bid documents, the Vendor must submit a: (1) Utilization Plan and (2) either Letters of Intent or subcontract documents that meet or exceed the published goal. If Vendor cannot meet the stated goal, Vendor must submit documents to support the good faith efforts it undertook to meet the goal. The College has the right to reject Vendor's bid as not-responsible and/or not responsive if the College or the Business Enterprise Council determine, in either of their sole discretion, that Vendor failed to make a good faith effort to meet the MBE goals. The College may also accept and enter into a contract with a Vendor that can provide sufficient evidence of MBE, FBE or DBE status of Vendor or its proposed subcontractors and/or sub-vendors in compliance with the Illinois Business Enterprise for Minorities, Females, and Persons with Disabilities Act. If the College or the Council determine that Vendor has made good faith efforts to meet the goal, the College may award the contract provided that Vendor is otherwise eligible for award.
4. **Contract Compliance:** Compliance with this section is an essential part of the contract. The following administrative procedures and remedies govern Vendor's compliance with the contractual obligations established by the Utilization Plan. **After approval of the Utilization Plan and award of the contract, the Utilization Plan becomes part of the contract.**
 - 4.1. The Utilization Plan may not be amended after contract execution without the College's prior written approval. Vendor may not make changes to its contractual BEP certified vendor commitments or substitute BEP certified vendors without the College's prior written approval. The Vendor's request to substitute BEP certified vendors must state the specific reasons for the change or substitutions. Unauthorized changes or substitutions, including performing the work designated for a BEP certified vendor with Vendor's own forces, shall be a violation of the Utilization Plan and a breach of the contract, and shall be cause to terminate the contract, and/or seek other contract remedies or sanctions.
 - 4.2. Vendor shall maintain a record of all relevant data with respect to the utilization of BEP certified vendors, including but without limitation, payroll records, invoices, canceled checks and books of account for a period of at least three years after the completion of the contract. The College shall have the right to access to these records upon 48 hours written demand. The College shall have the right to obtain from Vendor any additional data reasonably related or necessary to verify any representations by Vendor.
 - 4.3. The College reserves the right to withhold payment to Vendor to enforce these provisions and Vendor's contractual commitments. Final payment shall not be made pursuant to the contract until Vendor submits sufficient documentation demonstrating compliance with its Utilization Plan.

UTILIZATION PLAN

The Utilization Plan and Letter of Intent must be sealed and submitted with Vendor's Bid Documents.

_____(Vendor) submits the following Utilization Plan as part of our bid or offer in accordance with the requirements of the BEP Program Status and Participation section of the solicitation for McHenry County College's _____ (Project Name).

Vendor submits the following statement:

- ☐ Vendor is a BEP certified firm and plans to fully meet the goal through self-performance.
- ☐ Vendor has identified BEP certified subcontractor(s) to fully meet the established goal and submits the attached executed Letter(s) of Intent; or
- ☐ Vendor has made good faith efforts towards meeting the entire goal, or a portion of the goal, and hereby requests a waiver (complete checklist below).

Vendor's designee responsible for compliance with this BEP goal:

Name:

Title:

Telephone:

Email:

BEP Utilization Plan

The following firms will be utilized to meet the goals of the BEP Program:

Name of Firm	Contract Value	Description of Work	% of Goal
Total			

DEMONSTRATION OF GOOD FAITH EFFORTS TO ACHIEVE GOAL AND REQUEST FOR WAIVER

If the BEP participation goal was not achieved, Vendors must provide documented evidence of good faith efforts to achieve the goal.

Below is a checklist of actions that will be used to evaluate a Vendor's Demonstration of Good Faith Efforts and Request for Waiver. **Please check the actions which you completed.** If any of the following actions are not completed, please attach a detailed written explanation indicating why such action was not completed. If any other efforts were made to obtain BEP participation in addition to the items listed below, attach a detailed description of such efforts. The College reserves the right to review and audit the results of the Vendor's good faith efforts.

- ☐ Utilize the Sell2Illinois website: www2.illinois.gov/cms/business to identify BEP certified vendors within the respective commodity/service codes denoted above and at a minimum email all listed vendors and solicit quotes from all vendors who express an interest via follow-up emails or telephone calls.
- ☐ Solicit through all reasonable and available means (e.g., attendance at a vendor conference, advertising and/or written notices) the interest of BEP certified vendors that have the capability to perform the work of the contract. Vendor must solicit this interest within sufficient time to allow the BEP certified vendors to respond to the solicitation. Vendor must determine with certainty if the BEP certified vendors are interested by taking appropriate steps to follow up initial solicitations and encourage them to submit a bid or proposal. Vendor must provide interested BEP certified vendors with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding promptly to the solicitation.
- ☐ Select portions of the work to be performed by BEP certified vendors in order to increase the likelihood that the goal will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate BEP certified vendor participation, even when Vendor might otherwise prefer to perform these work items with its own forces.
- ☐ Make a portion of the work available to BEP certified vendors and selecting those portions of the work or material needs consistent with their availability, so as to facilitate BEP certified vendor participation.
- ☐ Negotiate in good faith with interested BEP certified vendors. Evidence of such negotiation must include the names, addresses, email addresses, and telephone numbers of BEP certified vendors that were considered and an explanation as to why an agreement could not be reached.
- ☐ Thoroughly investigate the capabilities of BEP certified vendors and not reject them as unqualified without documented reasons.
- ☐ Make efforts to assist interested BEP certified vendors in obtaining lines of credit or insurance as required by the College.
- ☐ Make efforts to assist interested BEP certified vendors in obtaining necessary equipment, supplies, materials, or related assistance or services.

GOOD FAITH EFFORTS CONTACT LOG

Use this Log to document all contacts and responses (telephone, e-mail, fax, etc.) regarding the solicitation of BEP certified vendors within the specific scope of work selected. It is not necessary to show contacts with BEP certified vendors who are identified on the Letter(s) of Intent. Keep and submit copies of all emails sent and received from prospective BEP vendors. Include a copy of the commodity list or scope of work you solicited prospective BEP vendors to perform. Duplicate this log as necessary; do not limit your contacts to the number of spaces shown.

Name of Certified BEP Vendor	Date	Method of Contact	Scope of Work Solicited	Reason Agreement Was Not Reached

DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

Section 00 72 13 - General Conditions of Contract

1. GENERAL CONDITIONS

- A] The "General Conditions of the Contract for Construction" latest edition AIA Document A201, 2007 edition is hereby incorporated into the Contract Documents by reference in the same force and effect as if repeated herein. Division I - General Requirements, Section 1.1 - Supplementary General Conditions and Summary of Work is hereby incorporated by reference in the same force and effect as if repeated herein, as amended by the Supplementary Conditions.

2. SUPPLEMENTARY CONDITIONS

A] **PROJECT MANUAL**

Should any error or inconsistency appear in the PROJECT MANUAL, the Contractor must make mention of the same to the Architect for proper adjustment, and in no case proceed ahead with the work in question.

Should a real or alleged conflict or ambiguity be discovered after submission of the Bids, the Contractor shall be deemed to have estimated the work on the provisions and interpretations as directed by the Architect. This provision shall not require the performance of any work unless such work is covered within the PROJECT MANUAL or is reasonably inferable therefrom as being necessary to produce the intended results.

If the language of the PROJECT MANUAL contains real or alleged unclear, ambiguous or conflicting words, phrases or sentences, they shall be interpreted by the Architect based upon complimentary provisions, the context of the item in question and the intent of the procedure.

B] **PAYMENTS TO CONTRACTOR**

Once each month, the Owner shall make partial payment to the Contractor on the basis of an approved estimate of work performed under this Contract. The Owner shall retain ten (10) percent of the amount of each estimate until final completion. Payment will be made only for materials incorporated into the work to be performed under this Contract. A Waiver of Lien from each Subcontractor and Contractor's Affidavit shall accompany each request for payment.

C] **CERTIFICATION OF RETAINAGE**

Amounts to be retained will be as follows:

--Ten (10) percent of the Contract will be retained until substantial completion of the project. Upon completion of the work, approval by the Architect, and acceptance by the Owner, final payment will be made, including retained percentages, within thirty (30) days.

DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

Section 00 72 13 - General Conditions of Contract

D] TEMPORARY UTILITIES / FACILITIES

Only water and electrical power will be available from the existing building. Prior arrangements with Owner by the Contractor shall be secured for installation of all temporary utilities. The building area included in the Contract is occupied at all times.

E] PROTECTION OF EXISTING STRUCTURE AND LANDSCAPING

During performance of the work as required by these specifications, the Contractor shall take precautions as necessary to avoid damaging the building's exterior walls, glass, paving, shrubbery, trees, sidewalks, etc. adjacent to the buildings. It is the Contractor's responsibility to provide a pre-construction survey of all damages prior to the start of all work. Damage to any area of the building, its roof, structure, or its surroundings shall be restored at the expenses of the Contractor. The Contractor shall include temporary protection at all driveways, public sidewalks and streets where required by the Village/City.

F] FORM OF CONTRACT

The Successful Bidder will sign a completed AIA A101, 2007 edition; Contract Agreement between Owner and Contractor and an additional contract provided by Owner (*Refer to Attachment at the end of this Section*).

G] CONTRACTOR'S ACCESS AND USE OF THE SITE

All operations are restricted to the designated Base Bid area of work. All activity, traffic, material storage, etc. is to take place only in areas designated by the owner.

Work Hours: Monday – Friday 8:00 am to 4:30 pm
Saturday/Sunday & Holidays – Work upon Prior Written Approval by Management.

Contractor set-up areas shall be restricted to the areas as determined by the Owner/Management.

H] INTERIOR DOCUMENTATION

Existing interior conditions shall be available for review and documented prior to the start of any construction. Documentation will be the responsibility of the Contractor and performed in cooperation with the Owner.

I] Protective Canopy: Canopy Protection shall be the responsibility of the Contractor to provide and maintain protection per current Village/City requirements during the construction period.

J] Scaffolding Operators: Contractor's representative (2- Stage Operators and 1 ground crew) shall have good communication skill and must be present on the stage 100% of the time during the examination of work by the Architect and/or Engineer.

END OF GENERAL CONDITIONS OF CONTRACT SECTION

DIVISION 1 - GENERAL REQUIREMENTS

Section 01 11 13 - Work Covered by Contract Documents

1.01 WORK INCLUDED

A. Contractor's Duties:

1. Except as specifically noted, provide and pay for:
 - a. Labor, materials and equipment.
 - b. Other facilities and services necessary for proper execution and completion of the work.
2. Pay all required consumer sales and use taxes.
3. Purchase and secure as required and necessary for proper execution and completion of the work.
 - a. Permits as required by the local governing public authority and paid by the Contractor.
4. Comply with codes, ordinances, rules, regulations, orders and other legal requirements of public authorities, which bear upon the performance of the work.
5. Enforce strict disciplines and good order among employees. Do not employ for this work:
 - a. unfit or un-qualified persons.
 - b. persons not skilled in assigned tasks.

B. Base Bid Work:

1. The Contractor shall provide all materials and labor necessary to complete the project as specified and detailed throughout the Project Manual and Detail Drawings as indicated.
2. The Contractor shall have skilled workers knowledgeable in the tasks at hand to provide a professional finish product upon completion.

C. Scope of Alternate Work:

1. Refer to Section 01 26 33 for more information.

1.02 RELATED REQUIREMENTS

1. 00 10 00 - Solicitation
2. 00 20 00 - Instructions for Procurement
3. 00 41 13 - Bid Form
4. 00 72 13 - General Conditions of Contract
5. 01 22 13 - Unit Price Measurement and Payment
6. 01 26 63 - Change Order Procedures
7. 01 29 73 - Payment Procedures and Schedule of Values
8. 01 33 23 - Submittals, Shop Drawings, Product Data and Samples
9. 01 40 00 - Quality Requirements and Inspections
10. 01 51 00 - Temporary Facilities and Protection
11. 01 77 13 - Project Closeout Procedures and Submittals
12. 01 78 36 - Product Warranties
13. 02 41 19 - Selective Demolition and Debris Removal
14. 07 22 00 - Insulation
15. 07 52 13 - Modified Bituminous Membrane Roofing
16. 07 53 00 - Single Ply Roofing (Alternate)

1.03 WORK OF OWNER

1. Assist in obtaining access for Contractor personnel.
2. Coordinate schedule with Contractor.

DIVISION 1 - GENERAL REQUIREMENTS

Section 01 11 13 - Work Covered by Contract Documents

1.04 WORK BY OTHERS

- A. Owner's Representative: The Owner's Representative will act as Observer for the project.
 - 1. Perform on-site observation of construction operations.
 - 2. Notify the Owner regarding Contractor's conformance with the Contract Documents.

1.05 WORK SEQUENCE

- A. Perform work to accommodate the Owner's use of the premises during the construction period. Coordinate the construction sequence schedule and operations with the Owner.

1.06 CONTRACTOR'S USE OF PREMISES

- A. Contractor shall limit his use of the premises for work and for storage to allow for:
 - 1. Owner occupancy
 - 2. Public use
- B. Coordinate the use of the premises under the direction of the Owner and/or the Architect. Obtain full knowledge of all site rules and regulations affecting work.
- C. Assume full responsibility for the protection and safekeeping of products and materials stored on the site for use under this Contract.
- D. Move any stored product or materials, under this Contractor's control, which interferes with the operations of the Owner.
- E. Obtain at no additional cost to the Owner, additional storage or work areas needed for the repair operations.
- F. DO NOT OVERLOAD THE STRUCTURE.
- G. Assume full responsibility for protection and safekeeping of products stored on premises.

1.07 OWNER OCCUPANCY

- A. The Owner will occupy the premises during the entire period of construction for the conduct of normal operations. Cooperate with all construction operations to minimize conflict and to facilitate the Owner's usage.
- B. Contractor shall at all times conduct his operations as to insure the least inconvenience to general public.

END OF WORK COVERED BY CONTRACT DOCUMENT SECTION

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 22 13 - Unit Price Measurement and Payment

PART I – GENERAL

1.01 DESCRIPTION

A. Related requirements specified elsewhere:

1. 00 10 00 - Solicitation
2. 00 20 00 - Instructions for Procurement
3. 00 41 13 - Bid Form
4. 00 72 13 - General Conditions of Contract
5. 01 22 13 - Unit Price Measurement and Payment
6. 01 26 63 - Change Order Procedures
7. 01 29 73 - Payment Procedures and Schedule of Values
8. 01 33 23 - Submittals, Shop Drawings, Product Data and Samples
9. 01 40 00 - Quality Requirements and Inspections
10. 01 51 00 - Temporary Facilities and Protection
11. 01 77 13 - Project Closeout Procedures and Submittals
12. 01 78 36 - Product Warranties
13. 02 41 19 - Selective Demolition and Debris Removal
14. 07 22 00 - Insulation
15. 07 52 13 – APP Modified Roofing
16. 07 53 00 - Single Ply Roofing (Alternate)

B. Definition: Unit price means a fixed price, including all overhead, profit and all other costs of whatever nature and character, for a specified unit of work. Unit prices as such will not be used to determine the lowest responsible bidder. The Owner may reject or negotiate any unit price which it considers excessive or unreasonable. The Owner may at any time order an increase or decrease in the number of units of work.

C. Unit Pricing will be used to apply to those estimated quantities which are deemed under and over the scope of the defined work. If the quantity of Base Bid Work is decreased from the estimated quantities provided, the Owner will be subject to a "Credit" of the remaining Work, not performed by the Contractor. Likewise, if the Base Bid Work proves to be increased from the estimated quantities provided, then the Contractor is subject to "additional payment" under the Unit Price Provisions and will follow Section 01 26 63, Change Order Procedures to apply for such additional work provided. The Architect/Engineer shall verify all performed Work and maintain records of quantities of work performed by the Contractor.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. As specified in the respective specifications sections.

PART 3 - EXECUTION

3.01 APPLICATION

A. Enter unit prices for each unit of work in Bid Form.
Omission may result in rejection of bid.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 22 13 - Unit Price Measurement and Payment

3.02 UNIT PRICES REQUIRED

A. Description of Work:

- A. Provide a Unit Price for the removal and replacement of additional areas of damaged or deteriorated gypsum decking. Unit Pricing shall be based on a per 16 sq. ft. (4' x 4') basis.
- B. Provide a unit price for providing and installing new treated wood blocking as required to replace existing components. Unit Pricing to be based on a 2x4, 2x6, 2x8 per 8' foot board basis.
- C. Provide a Unit Price for the installation of metal prefinished coping on a per linear foot basis.
- D. Provide a Unit Price for the removal and replacement of existing drain head assemblies inclusive of all required modifications/replacement of drain piping as well as all required accessories and components. Unit Pricing to be based on a per drain head (unit) basis.
- E. In the event that additional work items must be referenced to actual expended time, submit labor rate charges for such work.
- F. Identify the cost "mark-up" for additional materials incorporated into the work.
- G. Identify the cost of providing a Performance Bond based upon the total cost of the Bid.

END OF UNIT PRICE MEASUREMENT AND PAYMENT SECTION

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01 23 00 - Alternates

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: A price proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The total cost or credit for each alternate is the net total cost resulting from value of work deleted and value of work added, including all added mark-up, taxes, shipping, and work of all trades, in addition to or deducted from the Contract Sum to incorporate alternate into the Work.
 - 2. Alternates will be accepted or rejected by the Owner in the order in ascending numerical order.

1.4 PROCEDURES

- A. Coordination: Perform all modifications, deletions and additions to the work, including any required alterations to adjacent or interfacing components or systems, which are necessary by reason of acceptance of any Alternate. Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project. All work performed for accepted Alternates shall be in accordance with the requirements of the Contract Documents.
 - 1. Include as part of each alternate miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Alternate prices shall be held without revision for a period of One Hundred and Twenty (120) consecutive calendar days from the date of the Contract or the Notice to Proceed, whichever ever is sooner.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: The Schedule of Alternates is included at the end of this Section. Alternate prices are required in accordance with the abbreviated descriptions set forth below. Refer to the Drawings and Specifications for additional details of the work.

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01 23 00 - Alternates

PART 2 - PRODUCTS (Refer to specific Specification Sections in this Project Manual for more information)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES (Include Alternate Prices in Bid Form where indicated).

Alternate Bid 1 Scope of Work: [80 mil TPO or 45mil PVC/KEE reinforced sheet, (20-year NDL warranty)]

- In lieu of 60 mil TPO / 45mil PVC/KEE membrane install new 80 mil TPO or 60mil PVC/KEE membrane. Remainder of work to remain same.

Alternate Bid 2 Scope of Work: [Protective walkway membrane for TPO roof]

- Remainder of work to remain same.

END OF ALTERNATES SECTION

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 25 13 - Product Substitution Procedures

PART 1 - GENERAL

1.01 REQUIREMENTS

- A. Furnish and install products specified, under options and conditions for substitutions stated in this section.

1.02 RELATED REQUIREMENTS

- A. Instructions for Procurement
B. Bid Form - Proposed Product Substitutions List
C. Section 01 33 23: Submittals

1.03 PRODUCTS LIST

- A. Before Bid Due Date, submit (4) copies of the complete list of major products which are proposed for substitution. Tabulate products by specification section number and title. For products specified only by reference standards, list for each such products:
1. Name and address of manufacturer
 2. Trade name
 3. Model or catalog designation
 4. Manufacturer's data:
 - a. Referenced standards
 - b. Performance test data

1.04 CONTRACTOR'S OPTION

- A. For products specified only by reference standard, select product meeting that, or those, standard(s), by any manufacturer.
- B. For products specified by naming several products of manufacturers, select any one of the products and manufacturers named which complies with the product specifications.
- C. For products specified by naming one or more products or manufacturers and stating "or equal", submit a request as for substitutions, for any product or manufacturer which is not specifically named.
- D. For products specified by naming only one product and manufacturer, there is no option and no substitution allowed.

1.05 SUBSTITUTIONS

- A. Prior to the Bid Due Date, the Architect will consider formal requests from the Contractor for substitution of products in place of those specified.
1. After the end of that period, requests will be considered only in the case of product unavailability or other conditions beyond the control of the Contractor.
- B. Submit separate request for each substitution on the form following this section. Support each request with complete data substantiating the feasibility of using any proposed substitution.
- C. Substitute products shall not be ordered or installed without written acceptance from the Architect.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 25 13 - Product Substitution Procedures

The Architect will determine acceptability of proposed substitutions.

1.06 CONTRACTOR'S REPRESENTATION

A. In making formal request for substitution Contractor represents that:

1. He has investigated proposed product and has determined that it is equal to or superior in all respects to that specified, and that he will provide identical warranties or bonds for substitution as for product specified.
2. He will coordinate the installation of the accepted substitution into the work and will make all changes as may be required for the work to be completed in all respects.
3. He waives all claims for additional costs caused by the substitution which may subsequently become apparent.
4. Data is complete and includes related costs under his Contract, but not:
 - a. Costs under separate contracts.
 - b. Architects costs for redesign or revision of Contract Documents.

(See Attached "Material Substitution Request" form immediately following this Section)

END OF PRODUCT SUBSTITUTION PROCEDURS SECTION

MATERIAL SUBSTITUTION REQUEST

Project: _____
To: _____
Re: _____

Substitution Request Number: _____
From: _____
Date: _____
A/E Project Number: _____
Contract For: _____

Specification Title: _____
Section: _____ Page: _____

Description: _____
Article/Paragraph: _____

Proposed Substitution:

Manufacturer: _____ Address: _____ Phone: _____

Trade Name: _____ Model No.: _____

Installer: _____ Address: _____ Phone: _____

History: ☐ ☐ ☐ ☐

New Product 2-5 Years Old 5-10 Years Old More Than 10 Years Old

Differences between proposed substitution and specified product:

☒ Point-By-Point comparative data sheet attached – REQUIRED BY A/E FOR THIS REQUEST.

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request, applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

Proposed substitution has been fully investigated and determined to be equal or superior in all respects to the specified products performance. Same warranty will be furnished for proposed substitution as for specified product.

Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.

Proposed substitution does not affect dimensions and Functional Performance Values.

Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

Telephone: _____

A/E's REVIEW AND ACTION (DO NOT WRITE IN THIS BOX - FOR A/E ONLY)

☐ Substitution approved - Substitution approved as noted - Make submittals in accordance with Specification Section

☐ 01 33 23. Substitution rejected - Use specified materials.

☐ Substitution Request received too late - Use specified materials.

Signed by: _____

Date: _____

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ Other

DIVISION 1 – GENERAL REQUIREMENTS
SECTION 01 26 63 - Change Order Procedures

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Change Order procedures.

1.2 RELATED DOCUMENTS

- A. SECTION 00 72 13 - General Conditions of Contract
- B. SECTION 01 33 23 - Submittals - Shop Drawings, Product Data and Samples

1.3 CHANGE ORDER REQUESTS

- A. Architect-Initiated Change Orders: Architect/Engineer will issue a Request for Change Proposal (AIA Document, G709 Form) to the Contractor which includes a detailed description of requested changes in the Work that may require adjustment to the Contract Price or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Contract Price estimate developed in accordance with Section 00 72 13 "General Conditions of Contract", in a format as provided by the Architect/Engineer.
 - 2. Within 10 days after receipt of Request of Change Proposal, the Contractor shall submit a proposal estimating cost adjustments to the Contract Price and the Contract Time necessary to execute the change. Requests shall include, but not limited to the following:
 - a. Contractor shall submit estimate developed in accordance with Section 00 72 13 in the format of AIA Document, G701 Form with required break-down of pricing, if required by Architect.
 - b. Accompanying the Change Order shall be a fragment of the Contractor's construction schedule outlining the scheduled sequence of the requested changes, including the predecessor and successor activities, with activity IDs, that indicate the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship.
 - c. Documentation of contract values for each Subcontractor is also required.
 - 3. Change Orders will be reviewed by Architect/Engineer and executed in accordance with the General Conditions of the Contract.
 - 4. In situations where the Architect and Contractor cannot agree to a lumps sum price adjustment for performed extra Work, or where the exact scope of the extra Work is unpredictable or the cost indeterminate in nature, Architect may direct Contractor to proceed with the Work. Adjustment of Contract Price and Contract Time will be made in accordance with the General Conditions of Contract Section of the Contract.
- B. Contractor-Initiated Change Orders: Contractor may request changes by submitting a Request for Change Order form to Architect. The request shall be submitted in accordance

DIVISION 1 – GENERAL REQUIRMENTS
SECTION 01 26 63 - Change Order Procedures

with the General Conditions of the Contract and Section 01 33 23 "Submittals- Shop Drawings, Product Data and Samples. A separate Request for Change Order form shall be submitted for each proposed change.

Cost and schedule documentation described above shall be submitted by Contractor as port of the Request for Change Order.

1.4 CHANGE ORDER PROCEDURES

- A. The Architect/Engineer reviews the submitted Request of Change Order and negotiates with the Contractor on behalf of the Owner/Management. If resolution cannot be reached, dispute resolution shall be in accordance with the General Conditions of the Contract.
- B. Upon approval of the Request for Change Order, the Contractor shall submit a formal Change Order, AIA Document, G709 Form (three copies, signed by the Contractor), for review and execution by Architect/Engineer. The Architect will then forward the forms to the Owner/Management for final approval and final execution.
- C. Contractor shall proceed with Work ONLY when all signatures are finalized and returned full executed copies have been distributed by Owner/Management to Contractor and Architect/Engineer.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF CHANGE ORDER PROCEDURES SECTION

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 29 73 – Payment Procedures, Unit Pricing and Schedule of Values

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Comply with all measurement and payment criteria applicable to the work performed under a unit price payment as described herein.

1.2 RELATED SECTIONS

- A. Specified Elsewhere:
 - 1. SECTION 00 20 00 - Instructions for Procurement
 - 2. SECTION 00 41 13 - Bid Form
 - 3. SECTION 00 72 13 - General Conditions of Contract
 - 4. SECTION 01 11 13 - Work Covered by Contract Documents
 - 5. SECTION 01 77 13 - Project Close-out Procedures

1.3 MEASUREMENT AUTHORITY

- A. Measurement of the Work shall be determined by the A/E in the presence of the Contractor.
- B. Measurement of metal deck and/or insulation repair areas shall be made upon completion of preparatory work and prior to placement of repair material.
- C. Provide the necessary equipment and qualified personnel to assist the A/E in the measurement of the Work.

1.4 UNIT QUANTITIES/PRICING

- A. Quantities and measurements indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements supplied or placed in the Work and verified by the A/E, shall determine the payment and final adjustment to the Contract Amount.
- B. The required quantities shall be provided at the unit price contracted.
- C. The intention of the unit prices is to provide a complete, functioning unit which may include Work from several Specification Sections.

1.5 MEASUREMENT OF QUANTITIES

- A. SF Area: Measured along the finished surface by square dimension using mean length times mean width, to the nearest one-half (0.5) square feet.
- B. LF Length: Measured along the finished surface by mean length at the item center line, to the nearest one-half (0.5) linear foot.
- C. Architect/Engineer will quantify all work completed and provide updated quantity measurements throughout the project, typically on a monthly basis. This, in most cases, shall be used for the basis of measurement of the progress of the work by the Contractor.

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 29 73 – Payment Procedures, Unit Pricing and Schedule of Values

PART 2 - BID FORMAT

2.1 SCHEDULE OF BID ITEMS

A. Refer to Summary of Work and General Requirements, Section 01010, for the general scope of work covered by bid items not listed herein. See Drawings and Specifications for complete scope of work of bid items.

B. Item No. 1 - Mobilization and General Provisions.

Costs not directly attributed to a particular work item, including:

1. Mobilization and demobilization.
2. Site protection.
3. Scaffold rigging and shifting.
4. Equipment delivery, set-up and maintenance.
5. Construction and removal of temporary facilities.
6. Insurance and permit fees.
7. Supervision.
8. Scaffold time for A/E observations.
9. Quality assurance testing.
10. Rubbish removal and periodic clean-up.

C. Total Base Bid/s and Alternates:

1. Include all labor, material, equipment, services, taxes, fees, royalties, patents overhead and profit to perform the Work, excluding alternates, as described in the Bid Documents.
2. The Base Bid/alternate work is separated out into individual line items which identifies estimated quantities of work for each task

PART 3 - ADMINISTRATION OF THE CONTRACT

3.1 SCHEDULE OF VALUES

A. Submit to the A/E for review, 3 copies of the Schedule of Values, within 10 days after receipt of Notice to Proceed.

1. If the A/E's review indicates that revisions are necessary, revise Schedule of Values and resubmit.

B. Schedule of Values shall list a separate line item cost for:

1. Performance and payment bond.
2. Mobilization.
3. General provisions.
4. Each portion of the Work at each wall, scaffold drop, or other logically grouped entity.

C. For each line item, list Subcontractor's and/or Supplier's name as applicable.

D. Total costs of all items listed as Schedule of Values shall equal the Total Contract Sum.

DIVISION 1 – GENRAL REQUIREMENTS

Section 01 29 73 – Payment Procedures, Unit Pricing and Schedule of Values

3.2 APPLICATION FOR PAYMENT

- A. Submit Applications for Payment in accord with provisions established by the conditions of Contract and Agreement Between Owner and Contractor.
- B. Format and Data Required
 - 1. AIA document G702 and G703.
 - 2. List itemized costs as they appear in the Schedule of Values accepted by the A/E.
 - 3. Fill in required information including Change Orders executed prior to date of submittal of application.
 - 4. Each copy shall be signed by the person legally authorized to represent the Construction Firm.
- C. Substantiating Data
 - 1. When requested by A/E or Owner, submit substantiating data with cover letter including:
 - a. Project name and number.
 - b. Application no. and date.
 - c. List of enclosures.
 - d. Itemization of stored materials, if applicable.
- D. Material Stored Off-Site
 - 1. Provide access to stored material for A/E's examination and verification.
 - 2. Contractor shall be responsible for costs incurred by the A/E for personnel and transportation unless otherwise provided for by the Agreement Between Owner and Contractor.
 - 3. Submit a list with the description and quantity for each stored item.
 - 4. All material stored off-site shall be clearly tagged and labeled with the name of the Project.
 - 5. Submit Certificate of Insurance as evidence that the Owner's interest is protected with respect to loss of the stored materials.
 - 6. Submit the Bill of Sale that establishes the Owner's title to such material.
- E. Retainage
 - 1. The cumulative total of the progress payments shall not exceed ninety percent (90%) of the total work completed at the end of the preceding month. The same retainage shall apply to payment request for stored material and equipment.
 - 2. The unpaid percentage of the Contract sum shall be retained by the Owner as partial security for the faithful performance of the contractual obligations of the Contractor, and shall not be paid to the Contractor until and after the Owner has accepted the Entire Work in writing as satisfactory, and after the Contractor has furnished to the Owner all close out submitted.

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 29 73 – Payment Procedures, Unit Pricing and Schedule of Values

F. Waivers of Lien

1. The first Application for Payment shall be accompanied by the General Contractor's partial waiver of lien for the full amount of payment due.
2. Each subsequent Application for Payment shall be accompanied by the General Contractor's partial waiver of lien, plus the partial waivers of lien of Subcontractors and Suppliers, who were included in the immediately preceding Application for Payment to the extent of that payment.
3. The final Application for Payment must be accompanied by final waivers of lien for the full amount of Contracts from the General Contractor, Subcontractors, and Suppliers, including those who have not previously furnished such final waivers.

3.3 PAYMENT WITHHELD

- A. The A/E may decline to approve any Application for Payment and may withhold the same in whole or in part to the extent reasonably necessary to protect the Owner, if in the opinion of the A/E and as a result of discovery of evidence, that the Contractor was responsible for the following:
 1. Failure to remedy defective work.
 2. Failure to supply the Waivers of Lien required.
 3. Damage to existing property.
 4. Failure to perform work in accord with Contract Requirements and Schedule.

3.4 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the A/E, the defective work is repairable, and it is not practical to remove and replace the Work, the A/E will direct one of the following remedies:
 1. The defective work may remain, but the unit sum/price will be adjusted to new sum/price at the discretion of the Architect/Engineer.
 2. The defective work will be repaired as requested by the A/E, and the unit sum/price will be adjusted a new sum/price at the discretion of the A/E.
- C. The authority of the A/E to assess the defect and identify payment adjustment is final.

3.5 APPLICATION PROCEDURE

- A. At monthly intervals, submit Applications for Payment to the A/E.
- B. Number of Copies: 3 (three).
- C. When the A/E finds the Application properly completed, it will be transmitted to the Owner with a copy to the Contractor.
- D. Final Payment for Work governed by unit prices will be made on the basis of actual measurements and quantities, determined by the A/E, multiplied by the unit price for the Work which is incorporated in or made necessary by the Work.

END OF PAYMENT PROCEDURES, UNIT PRICING AND SCHEDULE OF VALUES SECTION

DIVISION 1 - GENERAL REQUIREMENTS

Section 01 33 23 - Submittals- Shop Drawings, Product Data and Samples

PART 1 - GENERAL

1.01 SAMPLES AND SHOP DRAWINGS

- A. Shop drawings are drawings, diagrams, and other data that are prepared by the Contractor or any Subcontractor, Manufacturer, Supplier, or Distributor, and which illustrate some portion of the work. Samples are physical examples furnished by the Contractor to illustrate materials, equipment or workmanship, and establish standards by which the work will be judged.
- B. The Contractor shall review, stamp with his approval, and submit all shop drawings and samples required by the Contract Documents or subsequently by the Owner's Representative as a result of project modifications. Shop drawings and samples shall be properly identified as specified or as the Owner's Representative may require. At the time of submission, the Contractor shall inform the Owner's Representative in writing of any deviation in the shop drawings or samples from the requirements of the Contract Documents.
- C. By approving and submitting shop drawings or samples, the Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers, and that he has checked and coordinated each shop drawing and sample with the requirements of the work of the Contract Documents.
- D. Each drawing and sample shall bear the project title, Contractor, date, and revision dates. Shop drawing details shall be identified by references to Specifications or to specific details as shown in the Project Manual. Manufacturer's brochures, performance charts and similar data shall be original copies. The Owner's Representative shall review the shop drawings and samples to determine compliance with the Specifications for the project and return them to the Contractor.
- E. The Contractor shall resubmit corrected copies of shop drawings or new samples until no exceptions are taken. The Owner Representative's review of shop drawings and samples is for general conformance with the design concept and with the Contract Documents. "Review" does not relieve the Contractor's responsibility for any deviation from the requirements of the Contract Documents. The Contractor remains responsible for details and confirmation of all quantities and dimensions, for techniques of assembly, errors or omissions in the shop drawings or samples, and for performing his work in a safe manner. No portion of the work requiring a submittal shall be commenced until the submission has been reviewed by the Owner's Representative.

PART 2 - REQUIRED SUBMITTALS

2.01 SHOP DRAWINGS

- A. Sheet Metal Fabrications
- B. Tapered Saddles/ Crickets

2.02 SAMPLES

- A. Sheet Metal and Color
- B. Sealant Colors

2.03 PRODUCT DATA

- A. Roofing Materials
- B. Sealant
- C. Material Safety Data Sheets

2.04 FIELD "MOCK-UPS"

- A. Two (2) full-size sheet metal mock-ups, 12" wide minimum are required for each metal profile.

END OF SUBMITTALS- SHOP DRAWINGS, PRODUCT DATA AND SAMPLES SECTION

DIVISION 1 – GENERAL REQUIRMENTS
SECTION 01 40 00 - Quality Requirements and Inspections

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for the Contractor for quality control of Work and inspections of such Work.
- B. Quality control includes inspections performed by Owner's Representative, third party testing agencies, and governing authorities for Work performed under this Contract by the Contractor.
- C. Inspections by the Owner's Representative will verify and quantify the Work performed by the Contractor for compliance with requirements specified or indicated here within.
- D. The Contractor shall perform all Work indicated with trained and qualified workers to perform the specified work and will time to time contact the Manufacturer's Representative of the material used to perform quality control inspections and preparation review of the Contractor's work. The Architect/Engineer shall be notified ahead of time of such meetings. The Contractor shall procure a written inspection letter from the Manufacturer's Representative in a timely manner outlining his/her site visit and observations and recommendations, if any.

1.2 RESPONSIBILITIES

- A. Contractor Responsibilities:
 - 1. The Contractor shall perform all repairs per the Manufacturer's Guidelines and Recommendations for the materials used.
 - 2. The Contractor shall provide full access to the building for inspections of all Work including, but not limited to, demolition tasks, preparation of repair area tasks (and final inspection of Work.
 - 3. The Contractor shall coordinate all Work under the General Conditions of the Contract. The Owners Representative may reject any Work performed by the Contractor which does not meet the standard performance requirements.
 - a. All repair work shall be coordinated by the Contractor.
 - b. Any work which is rejected shall be fully removed and replaced by the Contractor without additional compensation.

1.3 QUALITY ASSURANCE

- A. The Contractor must assure quality Work at all times. Work to be performed by qualified employees trained in respected tasks to complete the Work.
- B. The Owners Representative shall inspect Work from time-to-time for conformance and quality assurance of such materials specified and installed by the Contractor.

DIVISION 1 – GENERAL REQUIREMENTS
SECTION 01 40 00 - Quality Requirements and Inspections

1.4 TRADESMEN AND WORKMANSHIP

- A. The Contractor shall ensure that tradesmen performing the Work at the site are skilled and knowledgeable in methods and craftsmanship needed to produce required quality levels for workmanship in completed Work. Remove and replace work which does not comply with workmanship standards and specified and as recognized in the construction industry for applications indicated. Remove and replace other work damaged or deteriorated by faulty workmanship or its replacement.

1.5 COORDINATION

- A. The Contractor shall coordinate construction activities including under various Section of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.
 - 1. Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.
 - 2. Make adequate provisions to accommodate items scheduled for later installation.

1.6 REPAIR AND PROTECTION

- A. General: Upon completion of testing, sample taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Documents requirements, Section 02 41 19 "Selective Demolition and Construction Debris Removal".
- B. Protect Work exposed by or for quality control and or testing services from inclement weather.
- C. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for testing and similar services.

1.7 GENERAL INSTALLATION PROVISIONS

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
- C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items. Do Not install damaged or bad materials.
- D. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.
- E. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

DIVISION 1 – GENERAL REQUIRMENTS

SECTION 01 40 00 - Quality Requirements and Inspections

- F. Recheck measurements and dimensions, before starting each installation.
- G. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
- H. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovered completed construction for that purpose.

1.8 REPLACEMENT OF WORK

- A. Within 24 hours after rejection of Work pursuant to the General Conditions, remove all materials and equipment so rejected and immediately replace work at the Contractor's cost to the satisfaction of the Architect/Engineer. Should the Work of the Owner or other Contractors be damaged by such removal or replacement, the Contractor shall reimburse the Owner or other Contractors for all costs incurred for correcting the damage.

END OF QUALITY REQUIREMENTS AND INSPECTIONS SECTION

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 51 00 – Temporary Facilities and Protection

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Contractor to provide all temporary services, facilities, construction aids and equipment required for the proper and expeditious execution of the Work including:
 - 1. First aid facilities.
 - 2. Fire protection.
 - 3. Protective coverings for existing structure against damage from work area and/or unfavorable weather conditions.
 - 4. Contractor shall provide a sidewalk canopy (where applicable) and shall maintain it and pay Village Permit fee.
 - 4. Shoring, pinning, and bracing.
 - 5. Enclosures.
 - 6. Barriers.
 - 7. Installation of receptacles or other electrical modifications and final connection to the available power sources as required for the execution of the Work.
 - 8. Valves, fittings and lines necessary for the distribution of water.
 - 9. Lighting for construction operations.
 - 10. Protective coverings for air conditioner units, decks, and other rooftop structures in the area where work is being performed.
 - 11. Protection of all mechanical equipment intakes and exhausts from continuous use for the duration of the project.
 - 12. Cleaning material residue from sills, belt courses, windows and other areas of the building and site following completion of the work at each area.
 - 13. Temporary Portable bathroom facilities.
- B. Owner will provide:
 - 1. Electrical power from existing on-site power supplies.
 - 2. Access to and use of building's potable water will be provided.
 - 3. Limited (maximum of 6 vehicles) on-site parking will be provided for Contractor on a daily basis during the construction period.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials for temporary facilities may be new or used. Comply with specified codes and standards.

PART 3 - EXECUTION

3.1 CONSTRUCTION AIDS

- A. Provide temporary weather-tight closures of openings in the exterior surface to provide acceptable working conditions and protection of existing and installed work.
- B. Provide temporary ladders, ramps, and runways as may be required for general use during the performance of the Work. All such facilities shall be constructed and maintained in accordance with the applicable codes and regulations.
- C. Completely remove temporary facilities upon completion of construction and repair damages caused by installation.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 51 00 – Temporary Facilities and Protection

3.2 PROTECTIVE COVERINGS AND CANOPIES

A. Canopies (where required):

1. Canopy Protection shall be the responsibility of the Contractor to provide and maintain protection inclusive of permits per the Village during the duration of the construction period.
2. Contractor is to maintain all canopies, barricades, and equipment in good working condition and pay the Village Permit fees. Scaffolding shall be based on current Village Codes and Ordinances. Any pricing increased as a result of modifications to the codes and/or Ordinance shall be directly reimbursable to the Owner.
3. All canopies, barricades, and equipment exposed to public view shall be neat and clean in appearance and be illuminated per Village standards.
4. The Contractor shall be fully responsible for all injuries and property damage that occurs due to debris falling from the areas of the building within the limits of the Work, or the scaffolding work platforms, during the entire course of the project.
5. All damage to private property of the Owner from the work shall be repaired or compensated to the satisfaction of the Owner, by the Contractor, at no cost to the Owner.

B. Protection:

1. Protect roof surfaces, adjacent wall areas to remain, utilities, and other building components from damage due to the Work with appropriate coverings.
2. Protect parapets from damage from cables and hooks with appropriate coverings.
3. Document roof conditions prior to start of the project. Report any damages to building management prior to mobilization of equipment.
4. Protect all areas of raked mortar joinery from unfavorable weather conditions such as rain, snow and/or cold weather conditions when work cannot be completed over a period of extending to two (2) or more consecutive days or if heavy rain is predicted overnight. Plastic tarps shall be used and secured properly as not to flap or come loose during protection period(s).

3.3 SHORING

- A. Provide temporary shoring and bracing required for removal operations or for the installation of new work.
- B. The cost of proper repair of all damage resulting from failure of shoring, bracing and from improper support shall be borne by the Contractor.
- C. Remove temporary shoring and bracing upon completion of permanent supports.

3.4 CLEANING DURING CONSTRUCTION

- A. Control accumulation of waste materials and rubbish. Periodically dispose of off-site.
- B. Remove debris that falls to ground around building at end of each work-day.
- C. Keep roof free from debris. Contractor to be responsible for any damages incurred due to roof drains being clogged or blocked by Contractor's material or equipment.

3.5 REMOVAL

- A. Remove temporary materials, equipment, and construction at completion of the Work.
- B. Clean and repair damage caused by installation or use of temporary facilities.
- C. Restore existing facilities to specified or original condition.

END OF TEMPORARY FACILITIES AND PROTECTION SECTION

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 77 13 – Project Closeout Procedures and Submittals

PART 1 - GENERAL

1.01 SUMMARY

- A. Work includes declarations, inspections, and submittals necessary to obtain final acceptance of the Work on this project.
- B. Related requirements specified elsewhere:
 - 1. Section 00 72 13 - General Conditions of Contract
 - 2. Section 01 11 13 – Work Covered by Contract
 - 3. Section 01 29 73 – Payment Procedures, Unit Prices and Schedule of Values
 - 4. Section 01 33 23 - Submittals- Shop Drawings, Product Data and Samples

1.02 SUBSTANTIAL COMPLETION

- A. Contractor:
 - 1. Submit written declaration to Architect/Engineer that project, or designated portion of project, is substantially complete.
 - 2. Submit list of items to be completed or corrected in form of "Contractor's Preliminary Substantial Completion Punchlist".
- B. Owner and/or Owners Representative will make preliminary inspections within seven days after receipt of Contractor's declaration.
- C. Should Owner and Owners Representative consider that work is substantially complete:
 - 1. Owners Representative will prepare a formal "Punchlist" of items to be completed or corrected, as determined by the inspection.
 - 2. Owners Representative will prepare and issue a Certificate of Substantial Completion, containing:
 - a. Date of Substantial Completion.
 - b. Punchlist of items to be completed or corrected.
 - c. The time within which Contractor shall complete or correct Work of listed items.
 - d. Date of time Owner will assume possession of Work or designated portion thereof.
 - e. Responsibilities of Owner and Contractor for:
 - 1) Insurance
 - 2) Utilities
 - 3) Operation of mechanical, electrical and other systems
 - 4) Maintenance and cleaning
 - 5) Security
 - 3. Contractor: Complete Work listed for completion or correction, within designated time.
- D. At time of inspection, should substantial completion not be certified, complete the Work and resubmit declaration in accordance with 1.02A.

DIVISION 1 - GENERAL REQUIREMENTS

Section 01 77 13 – Project Closeout Procedures and Submittals

1.03 FINAL INSPECTION

- A. Contractor shall submit written declaration to Owner that:
 - 1. All aspects of Contract Documents have been complied with.
 - 2. All items on substantial completion Punchlist have been completed.
 - 3. All tools, construction equipment and surplus materials have been removed from site.
- B. Contractor with Owner and Architect/Engineer will make final inspection to ensure completion of all contract requirements.
- D. When Owner and Architect/Engineer consider that work is finally complete in accordance with Contract Document requirements, the Contractor will prepare and process closeout documents.

1.04 CLOSEOUT SUBMITTALS REQUIREMENTS

- A. Deliver evidence of compliance with requirements of governing authorities:
 - 1. Certificate of Substantial Completion.
 - 2. Manufacturer Product Warranties- ALL products specified here within.
 - 3. Contractor Workmanship Warranty; Minimum 2-years from date of Substantial Completion.
- B. Deliver evidence of compliance with requirements of governing authorities.
 - 1. Certificates of Inspection- if required by Village

1.05 FINAL APPLICATION FOR PAYMENT

- A. Contractor shall submit the final application for payment in accordance with Contract Documents.

END OF PROJECT CLOSEOUT PROCEDURES AND SUBMITTALS SECTION

DIVISION 1 - GENERAL REQUIREMENTS

Section 01 78 36 - Product Warranties

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. General administrative and procedural requirements for manufacturers' standard or special warranties on products as specified.
- B. Warranty Requirements.

1.2 RELATED SECTIONS

- 1. 01 77 13 - Project Closeout Procedures and Submittals

1.3 DISCLAIMERS and LIMITATIONS

- A. Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work incorporating the products, nor does it relieve suppliers, manufacturers, or subcontractors required to countersign special warranties with the Contractor.

1.4 DEFINITIONS

- A. Refer to Section 01 77 13 - Project Closeout Procedures and Submittals

1.5 WARRANTY REQUIREMENTS

- A. Workmanship Warranty: The contractor shall provide a written two (2) year warranty against poor workmanship and faulty installation due to its workers and/or subcontractors work.
- B. Manufacturer's Warranty: The contractor shall provide all manufacturer's warranties to cover all installed equipment and materials inclusive of labor for this project under a no-dollar-limit (NDL) for a period of 20-years unless otherwise noted.
- C. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work damaged because of such failure or that shall be removed and replaced to provide access for correction of warranted Work, at no cost to the Owner.
 - 1. Correction of work shall include shipping, labor, supervision, and related work involved in replacing defective parts or materials provided by manufacturers under their warranties.
- D. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- E. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Construction Documents.
- F. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights, and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce other duties, obligations, rights, or remedies.
 - 1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Construction Documents.
- G. Warranties made by subcontractors to the Contractor are a part of the Contractor's responsibility to the Owner.
- H. The Owner reserves the right to refuse acceptance of Work where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments have done so.

1.6 SUBMITTALS (Refer to Section 01 77 13 - Project Closeout Procedures and Submittals)

PART 2 PRODUCTS-Not Used

PART 3 EXECUTION-Not Used

END OF PRODUCT WARRANTIES SECTION

DIVISION 02 – SITE WORK

02 41 19 Selective Demolition and Debris Removal

1.01 DESCRIPTION

- A. Requirement of Information for Bidders, "General Conditions" and "Supplementary General Conditions" from a part of the following specifications and Contractor shall consult them in detail for instructions pertaining to the work.
- B. Related requirements specified elsewhere:
1. 00 10 00 - Solicitation
 2. 00 20 00 - Instructions for Procurement
 3. 00 41 13 - Bid Form
 4. 00 72 13 - General Conditions of Contract
 5. 01 22 13 - Unit Price Measurement and Payment
 6. 01 26 63 - Change Order Procedures
 7. 01 29 73 - Payment Procedures and Schedule of Values
 8. 01 33 23 - Submittals, Shop Drawings, Product Data and Samples
 9. 01 40 00 - Quality Requirements and Inspections
 10. 01 51 00 - Temporary Facilities and Protection
 11. 01 77 13 - Project Closeout Procedures and Submittals
 12. 01 78 36 - Product Warranties
 13. 02 41 19 - Selective Demolition and Debris Removal
 14. 07 22 00 - Insulation
 15. 07 52 00 – APP Modified Roofing
 16. 07 53 00 - Single Ply Roofing (Alternate)
- C. Work Included: **Base Bid and Alternate Bid:**
1. The extent of demolition work is shown on the Drawings and is specified in the Project Manual under the Base Bid and Alternate Bid work.
 2. The Safely disconnect and raise exhaust vents, flues, a/c condensers, satellites, and RTUs unless otherwise noted. Testing of units may be performed at contractor's discretion. Protect and store equipment as required to complete roof work. Modify gas lines and conduit as required to accommodate new insulation and HVAC equipment height.
 3. The removal of rock ballast and replacement of deteriorated insulation. Roof area to be inspected for any irregularities, blistering, or deterioration and repaired accordingly. Existing membrane flashings shall also be removed at the perimeter parapet walls.
 4. Complete removal of all sheet metal inclusive of gravel stop edge, coping caps, and counter flashings.

1.02 JOB CONDITIONS

- A. Traffic: Conduct demolition operations and removal of debris to ensure minimum interference with roads, walks, and other adjacent buildings, structures, other facilities and other adjacent occupied or used facilities.
- B. Projections: Ensure the safe passage of persons around the area of demolition. Conduct operations to prevent injury to adjacent buildings, structures, other facilities and persons.
- C. Damages: Promptly repair damages caused to adjacent facilities by demolition and removal operations at no cost to the owner.
- D. Utility Services: Maintain existing utilities. Keep in service and protect against damage during demolition operations.

DIVISION 02 – SITE WORK

02 41 19 Selective Demolition and Debris Removal

PART 2 - EXECUTION

2.01 DEMOLITION

- A. Pollution Controls:
 - 1. Limit the amount of dust and dirt rising and scattering in the air. Comply with governing regulations pertaining to environmental protection.
 - 2. Clean adjacent construction and improvements of dust, dirt, and debris caused by demolition operations, as directed by the Owner's Representative. Return adjacent areas to condition existing prior to the start of the work.

2.02 DISPOSAL OF DEMOLISHED MATERIALS

- A. All material loading and debris removal shall be formed in a controlled fashion.
- B. Chutes, walkways, wall panels and debris enclosures shall be erected to limit the dust and debris
- C. Remove from the site and legally dispose of debris, rubbish and other materials resulting from demolition operations.
- D. When applicable all debris and materials shall be separated for recycling and delivered to locally licensed recycling facilities at no additional cost to the Owner.
- E. Comply with all applicable Environmental Protection Agency (EPA) requirements with regard to the handling and disposal of all roofing materials.
- F. All materials and debris handling is to be performed in a strictly controlled fashion. Chutes, hoists, crane lifts, dust enclosures, etc. are adequately braced to insure that handling procedures pose no threat to either the building or its users.
- G. Interior hallways, freight elevators, and all interior spaces effected by demolition activities shall be swept and cleaned on a daily basis.
- H. All exterior areas used for debris removal set-up/staging and other operations shall be cleaned and secured at the end of each workday. The building site and adjacent sites shall be monitored for debris and shall be promptly cleaned and cleared of all pedestrian and vehicular hazards.

END OF SECTION 02 41 19

DIVISION 7 - THERMAL & MOISTURE PROTECTION

Section 07 22 00 - Roof Insulation

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included (BASE BID and ALTERNATE):

1. Remove existing roofing system and insulation in its entirety, down to the existing structural deck. Sweep existing deck clean of debris.
2. Inspect roof area for any damaged/deteriorated roof deck. Remove and replace areas of damaged deck. Quantities to be charged under unit price provisions. Photo document all deteriorated decking and report replacement quantities to A/E and Owner on a daily basis.
3. Remove and discard existing flashings, counter-flashings, and related metal work.
4. Sweep existing deck clean of ALL debris
5. Install new nailed base sheet anchored to deck gypsum over entire roof area.
6. Install new fully adhered rigid insulation.
7. Install new fully adhered taper saddles, crickets, cover board insulation and tapered edge strips
8. Install new treated wood blocking as required at all roof curbs/penetrations and perimeter edge to insure proper flashing heights.
9. Adjust drain assemblies as required to accommodate new roofing insulation heights.

D. Related Items:

1. Section 02220 – Selective Demolition
2. Section 07 52 13 – Modified Bituminous Membrane Roofing
3. Section 07350 – Single Ply Roofing

1.02 QUALITY ASSURANCE

- A. Reference Standards: Except as modified by the project specifications, cited reference standards govern the work.
- B. Qualifications: The Contractor shall have experience in the installation of specified materials, and shall be an approved installer of the same by the material manufacturer. The Contractor shall also have installations of specified materials in the local area in use for a minimum of five (5) years.

1.03 ENVIRONMENTAL CONDITIONS

- A. Perform all work under the temperature and climatic conditions recommended by the materials manufacturers.

1.04 WORK SEQUENCE

- A. Removals and installations of new materials specified in this Section shall be closely coordinated with the work specified in Sections 02220 and 07550.

1.05 PROTECTION

- A. Store all insulation materials on pallets or raised platforms. Protect stored materials with weather protective coverings. Tarpaulin coverings are preferred. If Visqueen coverings are used as shipped from the factory, venting must be provided to control condensation within each insulation bundle. Improperly stored materials will be rejected. Monitor insulation load coverings daily. Repair covering deficiencies.

DIVISION 7 - THERMAL & MOISTURE PROTECTION

Section 07 22 00 - Roof Insulation

- B. Notify the Owner's Representative of areas targeted for work in advance of "tear-off" operations. Immediately notify Owner's Representative of any existing construction anomalies, such as defective roof decking, adjacent wall deficiencies, etc. prior to proceeding with the work.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Vapor Barrier/Base Membrane:
- Glass Base Sheet: PRS Glass Base fiberglass saturated base felt and nail/anchors for nailable roof decks as manufactured by Derbigum of America, or approved equal. New felt and anchors shall obtain FM 1-300 uplift ratings requirements.
 - Mechanical Fasteners; Perlock Dual Fasteners & Plates as manufactured by Derbigum of America or approved equal
 -
- B. Rigid Roof Insulation:
- Tapered Saddles: Closed-cell rigid polyisocyanurate insulation (1/2" per 1'-0" starting at 0") with non-asphalitic fiber reinforced felt facers and meeting or exceeding FM Standard 4450/4470 and UL Standard 790 Classification and having a flame spread rating of 25 per ASTM E 84. System shall meet FM-I-300 for wind uplift
 - 2 layers : Fully Adhered (asphalt) Closed-cell rigid polyisocyanurate insulation-2.6" thickness (R-30) with non-asphalitic fiber reinforced felt facers and meeting or exceeding FM Standard 4450/4470 and UL Standard 790 Classification and having a flame spread rating of 25 per ASTM E 84. System shall meet FM-I-300 for wind uplift
 - Cant Strips: Rigid high density laminated high tensile strength fiber and expanded perlite composite 45 degree cant. Cant Strip shall have a minimum recycled material content of 35% by weight.
 - Cover Board: Fiberglass Mat Faced Gypsum Board (1/2" thickness) conforming with ASTM C 473 and having a minimum Density of 10 pcf per ASTM C303 Dens-Deck Prime or approved equal.
 - Drain Sump (4'x4' around drains): Closed-cell rigid polyisocyanurate insulation with non-asphalitic fiber reinforced felt facers 1/2" per 1' – 0" tapered starting at minimum of 0" and meeting or exceeding FM Standard 4450/4470 and UL Standard 790 Classification and having a flame spread rating of 25 per ASTM E 84. System shall meet FM-I-300 for wind uplift.
- C. Insulation/ Cover Board Adhesive:
- Duotack SPF Adhesive or Manufacturer's approved equal: A two component (Part A and B) low-rise polyurethane foam used to attach insulation to approved compatible substrates. Adhesive is applied with in bands 12 in. on center. Application rates are typically one gallon per square. Additional adhesive may be required for rougher surfaces. Consult Product Data Sheets for additional information. Not recommended for use with insulation boards larger than 4' x 4'. Place insulation board into the adhesive shortly after it has reached its maximum rise (typically within 2 minutes) and walk into place.
 - Job site conditions may affect performance. Adhesive shall not be used if surface and/or ambient temperatures are below 45°F (7°C) during application or subsequent curing time.
 - Minimum product temperature before entering the dispenser should be 72°F (22°C).
 - Store between 45°F (7°C) and 95°F (35°C).
 - Protect from freezing, any product that does freeze must be removed from the job site and disposed of per State and Federal regulations.
 - Adhesive shall not be used during inclement weather.
 - Adhesive shall not be applied to wet or damp surfaces.
 - Ribbon spacing to be applied to achieve minimum FM-1-300 wind uplift ratings.
12" o.c. spacing at field, 8" spacing at edge, and 6" spacing at corners. Contractor to verify ribbon spacing achieves minimum FM-1-300 wind uplift ratings

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D. Fasteners/Plates

- a. [Gypsum Deck]: Perlock 1.75 Split shank hammer-in steel fasteners with factory applied corrosion resistant coating meeting FM-4470 as manufactured by Derbigum of America or approved equal. Fasteners shall meet Dade County approval for pull-out and wind up-lift. Fasteners to meet and or exceed FM 1-300 uplift ratings.
- b. Asphalt: Low Fume homogenous Type III asphalt conforming to ASTM D 312, free from water, having a softening point between 195 and 205 degrees Fahrenheit, and a flash point of 525 degrees Fahrenheit.
- c. Wood Blocking: Treated No. 2 "Wolmanized."
- d. Primer: Asphalt primer conforming to ASTI D-41 or Federal Specification SS-A-701.
- e. Flashing Cement: Asphalt based mastic reinforced with non-asbestos fiber and conforming to ASTM D 4586, Type I with a minimum solids content of 75-78% by weight.
- f. Permastic: Low VOC emitting (180grams/L) with a flash point of 114 degrees Fahrenheit.
- g. Roof Drain: New "Zurn" Z-100 Cast Iron Drain Assembly with clamping ring and cast iron drain dome to match existing size configuration or approved equal. Include all accessories and insulation as required for installation.

2.02 MANUFACTURERS

- A. Insulation Board:
 1. Derbiboard
 2. Approved Equal

PART 3 - EXECUTION

3.01 COORDINATION

- A. Coordinate the installation of insulation with specified removal and new membrane work. See Specification Sections 02220, 07530 and 07550.

3.02 REMOVALS

- A. Remove the existing rock ballast from roof surface and clean/seep existing debris down to membrane surface.
- B. Remove the existing roof flashings and related metal work

3.03 ROOF INSTALLATION PROCEDURES (BASE BID)

- A. Disconnect and raise all existing roof top equipment to appropriate height as required by material manufacturer to accommodate flashings.
- B. Sweep existing surface clean. Repair/replace all areas of damaged and/or deteriorated insulation and metal decking at all roof areas.
- C. Cut membrane field into 3' x 3' square
- D. Install new prefabricated equipment rails, if elected, to match existing equipment locations.
- E. Install new mechanically fastened recovery board fastened to the structural metal deck in accordance

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with manufacturer's requirements. Stagger all insulation board joints, inclusive of multiple layer areas to insure that vertical board joints do not occur in a continuous manner. Small voids and/or gaps in the recovery shall be filled. New recovery board shall be installed in accordance with Factory Mutual (FM) 1-90 and in accordance with manufacturer's recommendations.

- F. The entire surface of the insulation shall be swept clean of all debris prior to the application of the roofing membrane.

END OF SECTION 07 22 00

DIVISION 7 – MEMBRANE ROOFING
Section 07 52 13 – APP Modified Roofing

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Includes:

1. Base Bid: Install new 2-ply Built-Up-Roofing (BUR) and flashing assembly set in hot asphalt.
2. Install new torch applied modified bitumen membrane and flashings.
3. Install new sheet metal flashings, counter-flashings, and related components.
4. Install new Pipe Supports w/ extra layer of roofing beneath support pads
5. Clean-up

B. Related Items:

1. Instructions to Bidders
2. 01025 – Measure and Payment
3. 01151 – Unit Prices
4. 01340 – Submittals
5. 01500 – Barriers and Enclosures
6. 01630 – Substitutions and Product Options
7. 01700 – Contract Closeout
8. 01710 – Cleaning
9. 02070 – Selective Demolition
10. 07220 – Insulation
11. 075213 – APP Modified Roofing

1.02 QUALITY ASSURANCE

- A. Reference Standards: Except as modified by the project specifications, cited reference standards shall govern work.
- B. Qualifications: The Contractor shall have experience in the installation of the specified materials, and shall be an approved installer of the same by the material manufacturer.
- C. Thermostatically controlled kettles are to be used for heating all bituminous materials. A functional, and clearly visible, thermometer must be present to monitor bitumen temperatures.
- D. Environmental Conditions: Perform all work under the temperature and climatic conditions recommended by the material manufacturers. Follow local, state, and federal regulations, safety standards and codes.

1.03 WORK SEQUENCE

- A. Do not conduct roofing operations when inclement weather is forecasted. Install only as much insulation and roofing as can be accomplished completely by the end of each workday.

1.04 SUBMITTALS

A. Exhibit requirements include:

1. Most recent product data on specified membrane.
2. Manufacturer's most recent printed installation instructions.
3. Mock-ups: Submit full size samples of sheet metal counterflashings and gravel stop/facia as detailed on drawings prior to fabrications.

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1.05 PROTECTION

- A. Water cut-offs shall be provided at the close of each day's work. When a danger exists that water caused by precipitation may get beneath new roofing, water cut-offs shall be installed while other roofing operations are in progress. All water cut-offs are temporary, and shall be removed prior to proceeding with the work.
- B. Materials stored on roofs shall be limited to safe loading on installed materials, decking, and structural framing.
- C. Bitumen kettles shall not be located on roof decks. Locate away from flammable materials. Observe all fire safety, and pollution regulations of the locally governing authorities.
- D. Protect paving and all work in-place from bitumen splashing and other damage resulting from the storage, preparation, and handling of material.
- E. Store all materials on raised platforms with weather protective coverings. Store all rolled goods on-end. MATERIALS STORAGE PROCEDURES WILL BE CLOSELY MONITORED AND STRICTLY ENFORCED.

1.06 GUARANTEES

- A. Roofing Contractor to Owner:
 - 1. Time period: Five (5) years after date of completion and acceptance by the Owner.
 - 2. Terms: Include all labor and materials, tools, equipment and services necessary for proper repair, restoration or replacement of the newly installed/repared components resulting from:
 - a. Defects, imperfections or faults in insulation, mechanical fasteners, membranes, flashing, sheet metal.
 - b. Workmanship.
 - 3. Corrections of defects during the guarantee period shall not relieve the Contractor from his responsibility for additional corrective work during the full guarantee period.
- B. Material Manufacturer to Owner:
 - 1. Time Period:
 - a. Twenty (20) year "No Dollar Limit" System Warranty after date of completion and acceptance by the Owner.
 - 2. Terms: [Standard from Performance Products "Derbigum" guarantee document -"NDL" provisions] Include all labor and materials, tools, equipment and services necessary for proper repair, restoration or replacement of the new roofing system to insure that the roof remains watertight throughout the guarantee period

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Roofing Membrane: (UL Class A / FM I-300)
 - 1. Base Membrane/Flashing:
 - a. Base Bid: Two (2) plies of asphalt coated fiberglass ply felts conforming to ASTM D 2178, Glass Ply, Type VI inorganic fiberglass ply sheets and having a minimum breaking strength of 60.0 lbf/in. in all directions and a minimum Bituminous Saturant (Asphalt) content of 3.0 lbs./100 sq. ft.
 - 2. Extended Vertical Membrane Flashing:
Derbigum GP Dual Reinforced APP Modified Bitumen Membrane conforming to ASTM D

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5147 and having a minimum thickness 160mil as manufactured by Derbigum Americas, Inc or approved equal.

3. Cap Sheet/Flashings:
 - a. Top Ply: Derbicolor XPS-FR-CR (2N2X - FR DC-CR) – White granular surfaced (Energy Star Approved) Fire retardant triple reinforced APP Modified Bitumen sheet with fiberglass and polyester composite matting and coated granular surfacing with a minimum overall sheet thickness of (180 mil) and having a minimum Tensile Strength at 0 degrees Fahrenheit of 230 lbs. force/in. in all directions and a tear resistance at 71 degrees Fahrenheit of 200 lbs. force/in. in all directions per ASTM and as manufactured by Derbigum Americas, Inc or approved equal. Testing shall conform with ASTM D 6223-02.
- B. Roofing Asphalt: Low Fume homogenous Type III asphalt conforming to ASTM D 312, free from water, having a softening point between 195 and 205 degrees Fahrenheit, and a flash point of 525 degrees Fahrenheit.
- C. Fasteners/Plates:
 1. Nails: Fasteners and roofing nails used to secure flashing shall be galvanized metal with a head diameter of not less than 5/8 inch. Fastener length when penetrating into wood blocking to be no less than 3/4 inch.
 2. Sheet Metal Fasteners: Non-corrosive and equipped with neoprene washers in all cases.
- D. Roofing Cement & Membrane Sealant: "PerFlash" roofing cement – ASTM 4536. as manufactured by Derbigum Americas, Inc or approved equal.
- E. Roof Mastic Adhesive Cement: PerMastic roof adhesive cement as manufactured by Derbigum Americas, Inc or approved equal.
- F. Liquid Applied Reinforced Flashing System: "DerbiFlash" two-component fluid applied polyester reinforced flashing membrane as manufactured by DerbiGum, Kansas City, MO or approved equal.
- G. Primer: Asphalt based primer conforming with ASTM D 41 or Federal Specification SS-A-701 with an average coverage rate of 100 sq. ft. per 1 gallon.
- H. Lead Flashing: ASTI B 29, Standard 0.062" thick lead sheet weighing four (4) pounds per square foot.
- I. Sealant: "NP 1" Sealant: "Sonolastic NP-1" single-component high performance sealant as manufactured by Sonneborn – ChemRex, Inc Shakopee, MN. or approved equal. flashings and two (2) part self-leveling at pitch pans per details - Fed Spec. TT-S-001657 Type I.
- J. Wood Blocking: Treated No. 2 "Wolmanized."
- K. Sheet Metals:
 1. Hoods, umbrellas, pitch pans, counter-flashings, reglet flashings, slip flashings, pipe sleeves, scupper sleeves and misc. metal: 24 gauge stainless steel 302/304 alloy with 2B finish. All joints to be soldered.
 2. Perimeter Edge Metal; Derbigum One Flash-Through Drip Edge pre-manufactured, Kynar-500 pre-finished color metal edge as manufactured by DerbiGum, Kansas City,

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MO or approved equal.

- L. Primer/Paint: Exterior grade primer/paint appropriate for underlying material as recommended by material manufacturer. Color to be selected by Owner from manufacturer's standard line.
- M. Pipe Supports: Single Gas Line Supports: "Roller Type" pillow block pipe stand and straps as manufactured by Miro Industries, Heber City, UT or approved equal. Set pillow block at 4' on center.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Examine the surface condition of the substrate and the conditions under which roofing work is to be performed. Do not proceed with the work until unsatisfactory conditions have been corrected. Clean existing substrate to remove all dirt and debris from the surface
- B. Remove and disconnect any roof mounted equipment to accommodate new flashing installations as detailed. Raise any existing curbs to meet flashing specifications.
- C. Prior to job start, the OWNER shall be responsible for the disconnection of all satellite, antenna, and communication equipment. The CONTRACTOR shall be responsible for the safe relocation and storage of all disconnected satellite, antenna, and communication equipment.
- D. Install new pitch pans with cementitious fill and self leveling sealant at all identified locations.
- E. Prime existing metal surfaces at a rate of 1 gallon per 100 square feet. Allow drying. Do not dilute primer materials.
- F. In all instances, the new completed roofing assembly shall have a total system rating of UL Class A and meet a minimum FM I-300 uplift rating.

3.02 MEMBRANE INSTALLATION

- A. Install a new 2-ply Type VI fiberglass felt in uniform moppings of hot asphalt at a rate of 25 lbs. per 100 sq. ft. The felts sheet shall be broom applied to insure full adhesion at the entire roof area and to insure that the system is free from voids, bubbles, and/or wrinkles
- B. Install new torch applied granular surfaced APP modified bitumen roofing membrane and flashing system and heat-weld the membrane seams following manufacturers specifications. Heat-weld the membrane in strict accordance with manufactures specifications. Embed additional granules at all seams. All roofing membrane, and materials stored in a rolled form shall be opened and allowed to relax as recommended by the material manufacturer prior to final installation. Failure to properly relax rolled material may result in the rejection of the job for non-compliance.
- C. Bitumen heating temperatures will be limited to the manufacturer's recommended equiviscous temperature range (EVT) plus or minus 25 degrees F.
- D. Roofing asphalt is to be applied in uniform moppings with an application rate of 23-25 lbs. / 100 sq. ft.
- E. Exercise due caution during membrane torching operations to protect the underlying materials from fire.

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- F. Install new roof top supports. Support legs shall be set on minimum 18" x 18" membrane target sheets on top of the finished surface of the roof.

3.03 SHEET METAL INSTALLATIONS

- A. Prior to fabrication, submit full size mock-ups to the Architect for approval. Form all sections as detailed on drawings. Lines, arises and angles shall be sharp and true. Plain surfaces shall be free from waves of buckles. All sections to have hemmed edges of 3/8 inch minimum.
- B. Form, fabricate, and install to adequately provide for expansion and contraction; finish water and weather tight throughout.
- C. Shop fabricated metal shall comply with profiles and sizes shown, and in compliance with industry standards as shown by SMACNA in the "Architectural Sheet Metal Manual".
- D. Where necessary, fit new sheet metal work prior to soldering to minimize the extent of vertical soldering work.
- E. Install new sheet metal flashings, counter-flashings, gravel stops, and misc. metal components as indicated on the plans.
- F. Install new membrane flashing plies and continuous membrane sealant beads.

3.04 METAL WORK CLEAN - UP

- A. Perform in accordance with the General Conditions and Division I specification requirements. Exercise the utmost caution during roof surfacing operations to insure that new metal is not damaged or defaced.
- B. Clean all exposed metal vents stacks, pipes, collars, duct hoods and misc metal. Prime metal surface and apply new aluminum rust inhibitor paint

3.05 MISC WORK

- A. Provide additional ply of fully adhered granular surface modified membrane under all roof mounted equipment supports.
- B. Install new pillow blocks set at 4' on center under all pipes. Provide pipe rollers pillow blocks under all gas piping.
- C. Raise and reset existing coping caps in new bed of mortar. Replace damaged caps on a unit price provision.

3.06 CLEAN-UP / CLOSE-OUT

- A. Follow procedures identified in the General and Supplementary Conditions of the Contract.

END OF SECTION 07 52 13

DIVISION 7 - THERMAL & MOISTURE PROTECTION

Section 07 53 00 – Single-Ply

PART 1 – GENERAL (ALTERNATE BID)

1.01 DESCRIPTION

- A. Work Included:
 - 1. Install new fully adhered single-ply TPO roofing membrane and flashings system or KEE Thermoplastic Roofing System meeting FM1-90 uplift rating and following all manufacturer guidelines.
 - 2. Install new sheet-metal flashings, counter-flashings, coping caps and related components with sheet metal cover tape where applicable.
 - 3. Clean-up.
- B. Related Items:
 - 1. Section 02 41 19 – Selective Demolition & Construction Debris removal
 - 2. Section 07 22 00 – Insulation

1.02 QUALITY ASSURANCE

- A. Reference Standards: Except as modified by the project specifications, cited reference standards shall govern work.
- B. Qualifications: The Contractor shall have experience in the installation of the specified materials, and shall be an approved installer of the same by the material manufacturer.
- C. Environmental Conditions: Perform all work under the temperature and climatic conditions recommended by the material manufacturers. Follow local, state, and federal regulations, safety standards and codes.

1.03 WORK SEQUENCE

- A. Do not conduct roofing operations when inclement weather is forecasted. Remove only as much roofing as can be replaced completely by the end of each workday.

1.04 SUBMITTALS

- A. Exhibit requirements include:
 - 1. Most recent product data on specified membrane.
 - 2. Manufacturer's most recent printed installation instructions.
 - 3. Mock-ups: Submit full size samples of sheet metal counterflashings and copings as detailed on drawings prior to fabrications.

1.05 PROTECTION

- A. Water cut-offs shall be provided at the close of each day's work. When a danger exists that water caused by precipitation may get beneath new roofing, water cut-offs shall be installed while other roofing operations are in progress. All water cut-offs are temporary, and shall be removed prior to proceeding with the work.
- B. Materials stored on roofs shall be limited to safe loading on installed materials, decking, and structural framing.
- C. Protect paving and all work in-place from adhesive splashing and other damage resulting from the storage, preparation, and handling of material.

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Section 07 53 00 – Single-Ply

- D. Store all materials on raised platforms with weather protective coverings. Store all rolled goods on-end. MATERIALS STORAGE PROCEDURES WILL BE CLOSELY MONITORED AND STRICTLY ENFORCED.

1.06 WARRANTIES

- A. Manufacturer's 20-Year System No Dollar Limited Warranty: Upon successful completion of the work to Manufacturer's satisfaction and receipt of final payment, the Manufacturer's 20 Year No Dollar Limit System Warranty shall be issued. A minimum 90 mph wind warranty coverage is required for Base Bid work. A minimum 75 mph wind and minimum $\frac{3}{4}$ " hail warranty coverage is required.
1. Terms: Include all labor and materials, tools, equipment and services necessary for proper repair, restoration or replacement of the new roofing system resulting from:
 - a. Defects, imperfections or faults in insulation, mechanical fasteners, membranes, flashing, sheet metal.
 - b. Workmanship.
 2. Corrections of defects during the guarantee period shall not relieve the Contractor from his responsibility for additional corrective work during the full guarantee period
- B. Applicator/Roofing Contractor 2-Year Warranty: The Applicator shall supply the Owner with a separate 2 year workmanship warranty. In the event any work related to roofing, flashing, or metal is found to be within the Applicator warranty term, defective or otherwise not in accordance with the Contract Documents, the Applicator shall repair that defect at no cost to the Owner. The Applicator's warranty obligation shall run directly to the Owner, and a copy shall be sent to The Manufacturer.
- C. Owner Responsibility: Owner shall notify both The Manufacturer and the Applicator of any leaks as they occur during the time period when both warranties are in effect.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Roof Membrane:

Base Bid:

- a. 60 mil scrim-reinforced TPO (Thermoplastic Polyolefin) as manufactured by Johns Manville or approved equal. Membrane shall conform to the minimum ASTM D 6878
<OR>
- b. 45-mil ketone ethylene ester (KEE) membrane, reinforced with a 5.0-oz yd² knitted polyester fabric "FiberTite" as manufactured by Seaman Corporation, under the trade name FiberTite or approved equal. Membrane color shall be DC196 Off-White.

Alternate 1:

- a. 80 mil scrim-reinforced TPO (Thermoplastic Polyolefin) as manufactured by Johns Manville or approved equal. Membrane shall conform to the minimum ASTM D 6878
<OR>
- b. 60-mil ketone ethylene ester (KEE) membrane, reinforced with a 5.0-oz yd² knitted polyester fabric "FiberTite" as manufactured by Seaman Corporation, under the trade name FiberTite or approved equal. Membrane color shall be DC196 Off-White.

- B. Flashing Accessories:

- a. TPO: As required and manufactured by Johns Manville or approved equal
- b. KEE: DC196 Off-White Nominal 60-mil FiberTite membrane shall be used for all flashing requirements to match the field membrane and warranty expectations selected for the roofing system. FTR-Pre-Molded Flashing(s); injection molded vent stack and inside/outside corner flashing using FiberTite KEE compound.
- c. Use prefabricated flashing components and accessories appropriate for membrane material as provided by the membrane manufacturer.

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- C. Bonding Adhesive:
 - a. TPO: “MBR Bonding Adhesive” as manufactured by Johns Manville or approved equal.
 - b. KEE: FTR-190e Bonding Adhesive - A VOC compliant solvent borne, contact (two sided) bonding adhesive, designed for bonding non-fleece back FiberTite membranes to properly prepared and pre-authorized horizontal and vertical substrates.
- D. Primer: “JM TPO Membrane Primer” as manufactured by Johns Manville or approved equal.
- E. Cleaning Solvent: “JM TPO Membrane Cleaner” as manufactured by Johns Manville or approved equal.
- F. Exposed edge sealant: “JM TPO Edge Sealant” as manufactured by Johns Manville or approved equal.
- G. External seam sealant: “JM Single Ply Sealing Mastic” (multi-purpose gun grade construction sealant) as manufactured by Johns Manville or approved equal.
- H. Misc. Components and Accessories: Use only system components and accessories appropriate for the membrane material (TPO) as provided by or approved for use by the membrane manufacturer.
- I. Fasteners / Plates:

(Plywood Deck): “High Load Fasteners and Metal Plates as manufactured by Johns Manville, Denver, CO or approved equal. Length to penetrate deck a min. 3/4” or per manufacturer requirements.
- J. Wood Blocking: Treated No, 2 "Wolmanized.
- K. Nails: Fasteners and roofing nails used to secure flashing shall be galvanized metal with a head diameter of not less than 5/8 inch. Fastener length when penetrating into wood blocking to be no less than 3/4 inch.
- L. Sealant: "NP 1" Sealant: “Sonolastic NP-1” single-component high performance sealant as manufactured by Sonneborn – ChemRex, Inc Shakopee, MN. or approved equal.
- M. Sheet Metal Fasteners: Non-corrosive and equipped with neoprene washers in all cases.
- N. Sheet Metals:
 - 1. TPO and KEE: Cleats, coping caps, counterflashings: 24 gauge galvanized steel with factory coated fluropan finish as manufactured by Peterson Aluminum Corp., Elk Grove Village, IL. or approved equal. Color to be selected by Owner from manufacturers standard color line.
 - i. TPO Cover Tape: “JM TPO Cover Tape” as manufactured by Johns Manville or approved equal.
 - 3. KEE: Fiber Clad Metal; 24 gauge hot dipped G-90 steel, laminated with a 0.020 mil polymeric coating or approved equal
- O. Sheet Metal Cover Tape: “JM TPO Cover Tape” as manufactured by Johns Manville Denver, CO.
- P. Peelstop Bar: An extruded aluminum, low profile bar used with certain fasteners to attach to the roof deck or to walls/curbs at terminations, penetrations and at incline changes of the substrate. Peel stop is a 1 inch (25 mm) wide, flat aluminum bar 1/8 inch (3 mm) thick that has predrilled holes every 6 inches (152 mm) on center
- R. Singe Gas Line Supports: “Roller Type” pillow block pipe stand and straps as manufactured by Miro Industries, Heber City, UT or approved equal. Set pillow block at 4' on center.
- T: (Alternate 2) Walkwaypad: JM TPO Safety Walkpa as manufactured by Johns Manville or approved equal.

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2.02 MISCELLANEOUS ACCESSORIES

- A. Aluminum Tape: A 2 inch (50 mm) wide pressure-sensitive aluminum tape used as a separation layer between small areas of asphalt contamination and the membrane and as a bond-breaker under the coverstrip at clad joints.
- B. Sealing Tape Strip: Compressible foam with pressure-sensitive adhesive on one side. Used with metal flashings as a preventive measure against air and wind blown moisture entry.
- C. Multi-Purpose Tape: A high performance sealant tape used with metal flashings as a preventive measure against air and wind blown moisture entry.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Surfaces scheduled to receive new membrane roofing shall be free of any standing water, dew, ice, loose debris or any other contaminate that could impair the quality of the installation.
- B. Substrate shall be smooth, clean and free of sharp edges and or projections and obvious depressions that would interfere with the installation of the roof membrane.
- C. Examine all the areas and conditions whereby work in this section is to be installed. Correct any and all conditions detrimental to the proper and timely execution of the work. Do not proceed until such conditions have been corrected to the satisfaction of the owner / owner's representative.
- D. Remove all loose aggregate and debris by power broom, manual labor, and/or vacuum.
- E. Remove and replace all wet or deteriorated wood blocking and insulation.
- F. Clean all exposed metal surfaces such as pipes, pipe sleeves, drains, duct work, etc., by removing loose paint, rust and any asphalt of any kind. Remove and discard lead sleeves at soil stacks.
- G. In all instances, the new completed roofing assembly shall have a total system rating of UL Class A and meet a minimum FM 1-90 uplift rating.
- H. Remove all irregularities from the existing roof system to provide a clean smooth substrate. Remove all flashings at the walls and copings.

3.02 TPO/KEE MEMBRANE INSTALLATION

- A. Outside ambient air temperatures must be 40°F and rising during the use of any and all adhesives/pimers.
- B. Install new fully adhered single ply roofing and flashing system following all manufacturers' specifications and recommendations to achieve a 20-year system warranty and meet FM 1-90 uplift ratings. The membrane shall be rolled into place to insure full continuous adhesion of the membrane in all instances. Heat-weld all seams using a hot air leister robotic welder.
- A. The surface of the substrate shall be inspected prior to installation of the roof membrane. The substrate shall be clean, dry, free from debris and smooth with no surface roughness or contamination. Broken, delaminated, wet or damaged insulation boards shall be removed and replaced.

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Section 07 53 00 – Single-Ply

- B. Solvent Based Adhesive: Over the properly installed and prepared substrate surface, adhesive shall be applied using solvent-resistant $\frac{3}{4}$ inch nap paint rollers. The adhesive shall be applied to the substrate at a rate according to manufacture's requirements. The adhesive shall be applied in smooth, even coating with no gaps, globs, puddles or similar inconsistencies. Only an area which can be completely covered in the same day's operations shall be coated with adhesive.
1. The Applicator shall count the amount of pails of adhesive used per area per day to verify conformance to the specified adhesive rate.
 2. No adhesive shall be applied in seam areas. All membrane shall be applied in the same manner.
- C. Water Based Adhesive: Over the properly installed and prepared substrate, adhesive shall be poured out of the pail and spread using notched $\frac{1}{4}$ inch x $\frac{1}{4}$ inch x $\frac{1}{4}$ inch (6 mm x 6 mm x 6 mm) squeegees. The adhesive shall be applied at a rate according to manufactures requirements (no adhesive is placed on back of the membrane). The formation of a film on the surface of the adhesive shall not be allowed to occur. The membrane shall be carefully unrolled into the wet adhesive while the edges are overlapped 3 inches (75 mm). The membrane shall be pressed firmly into the adhesive layer with a water-filled, foam-covered lawn roller by frequent rolling in two directions.
1. Water based adhesive shall not be used if temperatures below 40° F (5° C) are expected during application or subsequent drying time.
 2. No adhesive shall be applied in seam areas. All membrane shall be applied in the same manner.
 3. Water based adhesive shall not be used on vertical surfaces or sloped surfaces greater than a 2 inch (50 mm) rise per 1 horizontal foot (0.3 m).
- D. Broom the adhered portion of the membrane to ensure full contact and complete the bonding process by firmly pressing the bonded membrane into place with a weighted, foam-covered, lawn roller.
- E. No adhesive shall be applied to the lap seam areas of the membrane. Contaminated areas will inhibit proper welding of the seams requiring a membrane patch or strip.
- F. Install perimeter bars on top of roof membrane along entire perimeter of roof 4 ft. (1.2 m) from the roof edge. Fasten bar to the structural deck according to manufacturer's written instructions or at min. 12 in. (305 mm) o.c. Hot air weld membrane cover strips over perimeter bars.
- G. Install new prefabricated penetration flashings, inside corners, outside corners, and misc. components and accessories per manufacture specifications. Install new sheet metal flashings and misc. metal work. All flashing components are to be secured using new stainless steel fasteners, clamping rings, etc. and shall have gasketed washers where applicable. Provide cover tape between all metal and membrane surfaces as required.
- H. HOT AIR WELDING
1. All field seams exceeding 10 feet in length shall be welded with an approved automatic welder.
 2. All field seams must be clean and dry prior to initiating any field welding.
 3. All welding shall be performed only by qualified personnel to ensure the quality and continuity of the weld.
 4. Hand Welding:
 - a. The lap or seam area of the membrane should be intermittently tack welded to hold the membrane in place.
 - b. Properly hand welded seams shall utilize a 1-1/2 inch wide nozzle, to create a homogeneous weld, a nominal 1-1/2 inches in width.

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5. Automatic Machine Welding
 - a. Follow all manufacturers' instructions for the safe operation of the automatic welder.
 - b. Follow local code requirements for electric supply, grounding and surge protection.
 - c. Properly Automatic Machine welded seams shall utilize a 1-1/2 inch wide nozzle, to create a homogeneous weld, a nominal 1-1/2 inches in width.

I. INSPECTION

- a. The job foreman and/or supervisor shall initiate daily inspections of all completed work which shall include, but is not limited to the probing of all field welding with a dull pointed instrument to assure the quality of the application and ensure that any equipment or operator deficiencies are immediately resolved.
- b. Ensure that all aspects of the installation (sheet layout, attachment, welding, flashing details, etc.) are in strict accordance with the most current MRSM Specifications and Details.
- c. Excessive patching of field seams because of inexperienced or poor workmanship will not be accepted at time of FINAL INSPECTION FOR WARRANTY ACCEPTANCE.

J. FLASHING

- a. Clean all vents, pipes, conduits, tubes, walls, and stacks to bare metal. All protrusions must be properly secured to the roof deck with approved fasteners.
- b. Flash all curbs, parapets and interior walls in strict accordance with approved MRSM details.
- c. The base flange of all membrane flashing shall extend out on to the plane of the deck, beyond the wood nailers to a maximum width of 8 inches.
- d. Vertical flashing shall be terminated no less than 8 inch above the plane of the deck with approved termination bar and counter-flashing or metal cap flashing.
- e. Complete all inside and outside corner flashing details with MRSM pre-formed corners or an approved field fabrication detail.
- f. Probe all seams with a dull, pointed probe to ensure the weld has created a homogeneous bond.

K. METAL FLASHING

- a. All perimeter edge details are to be fabricated from Polymeric-Clad Metal or utilize a prefabricated Fascia System.
- b. Fasten all metal flashing to wood nailers or approved substrate with approved fasteners 8 inches on center.
- c. Install metal flashing in accordance with MRSM Published Specifications and Construction Details.

L. ROOF DRAINS

- a. Flash all roof drains in accordance with MRSM roof drain details.
- b. Minimum 60-mil non-reinforced membrane shall be used for flashing the drain assembly.
- c. The drain target sheet should be sized and installed to provide for a minimum of 12 inch of exposed 60-mil on all sides of the drain

3.04 SHEET METAL INSTALLATIONS

- A. Prior to fabrication, submit full size mock-ups to the Architect for approval. Form all sections as detailed on drawings. Lines, arises and angles shall be sharp and true. Plain surfaces shall be free from waves or buckles. All sections to have hemmed edges of 3/8 inch minimum.
- B. Form, fabricate, and install to adequately provide for expansion and contraction; finish water and weather-tight throughout.
- C. Shop fabricated metal shall comply with profiles and sizes shown, and in compliance with

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industry standards as shown by SMACNA in the "Architectural Sheet Metal Manual".

- D. Where necessary, fit new sheet metal work prior to soldering to minimize the extent of vertical soldering work.

3.05 CLEAN - UP

- A. Perform in accordance with the General Conditions and Division I specification requirements. Exercise the utmost caution during roof surfacing operations to ensure that new metal and other new (or existing) construction is not damaged or defaced.

END OF SECTION