



Park Hill School District

Building Successful Futures • Each Student • Every Day

ADDENDUM No. 1

Park Hill School District

2021 Roofing Projects

January 18, 2021

You are instructed to read and note the following described changes, corrections, clarifications, omissions, deletions, additions, approvals and statements pertinent to the Construction Documents.

Addendum No. 1 is a part of the Contract Bid and Construction Documents and shall govern in the performance of the Work.

I. General Information

- A. The Bid Form has been revised and attached. Submit your bids on the Revised Bid Form.

- B. The specification Section 01100 Summary has been revised and attached. The 01100 Revised Summary shall take the place of the original 01100 Summary.

II. Scope of Work Additions and Changes

- A. English Landing Elementary
 - 1. Include in base bid the replacement of 32 square feet of batt insulation behind the metal wall panels.
 - a. New batt insulation shall match the R-value of the existing batt insulation.
 - 2. Contractor shall include in his base bid for Roof F and Metal Wall Panels a 6% allowance increase in metal cost as of March 1, 2021.
 - a. Contractor shall document cost increase to owner and only bill for actual material cost increase.
 - b. Contractor shall have a purchase order to roofing material manufacturer no later than March 10, 2021 to secure the cost of the metal coil needed for this project.

B. Graden Elementary

1. Provide an Alternate Bid on the Revised Bid Form for the gutter and downspout replacement, and covering wood fascia with matching metal on the Southwest corner of Roof M1.
 - a. Follow specification requirement's as stated in the 01100 Revised Summary section.

ACKNOWLEDGEMENT: Each Bidder shall acknowledge receipt of Addendum No. 1 on the Revised Bid Form.

END OF ADDENDUM NO. 1

DOCUMENT 00411 – REVISED BID FORM

Park Hill School District
2021 Roofing Projects

Bidder: _____
(Bidder enter name here)

BASE BID, SINGLE-PRIME (ALL TRADES) CONTRACT

The undersigned Bidder, having carefully examined the Bidding and Contract Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, all as issued by the Owner, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, and allowances as described in the specification documents, necessary to complete the construction with the following exceptions:

- Price includes labor and miscellaneous materials not supplied by the owner.
- Price does not include the attached “Owner Purchased Material List” to be purchased by owner directly.
- All material not listed as purchased by owner shall be the responsibility of this contractor
(See Attachment A forms)

BASE BIDS

1. English Landing Elementary School
 - Roof F and Metal Wall Panels \$ _____
 - Roof D – BUR Roof Replacement \$ _____
 - Combination Bid – Roof D, Roof F, and Metal Wall Panels \$ _____
2. Graden Elementary School
 - Roof C – BUR Roof Replacement \$ _____
3. Hawthorn Elementary School
 - Roofs E, H, I, and J – BUR Roof Restoration \$ _____
4. Park Hill High School
 - Roofs E2 and E1 – BUR Roof Replacement \$ _____
5. Southeast Elementary
 - Roof E – BUR Roof Replacement \$ _____

ALTERNATE BID

1. Graden Elementary School
 - Replace Gutter and Downspouts – SW corner Roof M1 \$ _____

UNIT PRICES

1. Lightweight Concrete Deck Repair \$ _____ per cubic ft.
2. Metal Deck Replacement \$ _____ per sq. ft
3. Metal Deck Repair \$ _____ per sq. ft.

UNIT PRICES - Continued

4.	Tectum Deck Panel Replacement	\$_____per panel 3” x 5’ x 3’
5.	Wood Deck Replacement	\$_____per sq. ft.
6.	Wood Deck Repair	\$_____per sq. ft.
7.	Wood Blocking Replacement	\$_____per board ft.
8.	Drain Bowl Replacement (Case Iron 4”)	\$_____per drain
9.	Drain Clamping Ring Replacement (Cast Iron)	\$_____per ring
10.	Plywood replacement – ¾” thick	\$_____per sq. ft.
11.	Batt Insulation Replacement – Graden Elem.	\$_____per sq. ft.
12.	Blister Repair – (2’ x 2’/each)	\$_____per blister

BONDING

The undersigned Bidder agrees to furnish a Payment & Performance Bond in the amount of 100% of total contract value.

TIME OF COMPLETION

The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified and shall fully complete 100% of the Work no later than August 13, 2021. If work cannot be completed by August 13, 2021, contractor shall pay as Late Fees the sum of \$1,000.00 for each consecutive working day that the work is not completed thereafter.

ACKNOWLEDGEMENT OF ADDENDA

The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

Addendum No. 1, dated _____
Addendum No. 2, dated _____

CONTRACTOR'S LICENSE

The undersigned further states that he is a duly licensed Contractor, for the type of work proposed, in the State of Missouri, and that all fees, permits, etc., pursuant to the submission of this proposal have been paid in full.

SUBMISSION OF BID

Respectfully submitted this ____ day of _____, 2021.

By: _____
(Name of bidding firm or corporation)

Witness:

By: _____
(Signature)

Attest: _____
(Signature)

(Type or print name)

By: _____
(Type or print name)

Title: _____
(Owner/Partner/President/Vice Pres.)

Title: _____
(Corporate Secretary or Assistant Secretary Only)

Address: _____

Phone: _____

License: _____

Federal ID No.: _____

(Affix Corporate Seal Here)

Attachment A

Owner Purchased Material List for - Base Bid 1 English Landing Elementary School – Roof D (BUR Roof Replacement)

The following material list is to be included in the bid form and signed/dated by the Contractor. Failure to provide this information will render your bid unresponsive. The owner is purchasing the following list of material from EducationPlus through a pre-competited national cooperative purchasing organization. Only these materials, in the quantities listed, will be supplied.

The Contractor is responsible for purchasing any additional material directly from the roofing material manufacturer at the contractor's cost. The contractor is also responsible for ALL other items not on this list necessary for the completion of work specified. This includes, but is not limited to, fasteners, wood components, insulation, cants and taper edge, gravel, sheet metal, warranty charges, inspections, maintenance agreements, and other consumable materials.

The unloading of material and the storage of said material in a secure area is the sole responsibility of the contractor. Any unused material will become the property of the contractor at the completion of the project.

<u>Material</u>	<u>Quantity</u>	<u>Container Size</u>
Alumanation 301	5 buckets	5-gallon bucket
Burmastic Supreme Composite Ply	80 rolls	20 rolls per pallet - 2/sq./roll
Burmesh	2 rolls	6" x 300' rolls
ELS Mastic	18 buckets	5-gallon bucket
Premium IV Asphalt	144 cartons	24 cartons per pallet (2,400 lb./ctn.)
TRA Flashing	5 rolls 6 rolls	18" x 50' roll 36" x 50' roll
Thermglass Premium Type VI	50 rolls	25 rolls per pallet – 5/sq./roll
Thermastic Adhesive	11 pallets	9 cartons per pallet (55-lb/ctn.)
TremSeal Pro - Limestone	1 cases	30 tubes per case
TremTred Walkway Panel	5 treads	3' x 4' panel

Bidding Contractor: _____

Contractor Signature: _____

Date: _____

Attachment A

Owner Purchased Material List for - Base Bid 2 Graden Elementary School – Roof C (BUR Roof Replacement)

The following material list is to be included in the bid form and signed/dated by the Contractor. Failure to provide this information will render your bid unresponsive. The owner is purchasing the following list of material from EducationPlus through a pre-competed national cooperative purchasing organization. Only these materials, in the quantities listed, will be supplied.

The Contractor is responsible for purchasing any additional material directly from the roofing material manufacturer at the contractor's cost. The contractor is also responsible for ALL other items not on this list necessary for the completion of work specified. This includes, but is not limited to, fasteners, wood components, insulation, cants and taper edge, gravel, sheet metal, warranty charges, inspections, maintenance agreements, and other consumable materials.

The unloading of material and the storage of said material in a secure area is the sole responsibility of the contractor. Any unused material will become the property of the contractor at the completion of the project.

<u>Material</u>	<u>Quantity</u>	<u>Container Size</u>
Alumanation 301	2 buckets	5-gallon bucket
Burmastic Supreme Composite Ply	40 rolls	20 rolls per pallet - 2/sq./roll
Burmesh	1 rolls	6" x 300' rolls
ELS Mastic	18 buckets	5-gallon bucket
Premium IV Asphalt	144 cartons	24 cartons per pallet (2,400 lb./ctn.)
TRA Flashing	2 rolls 2 rolls	24" x 50' roll 36" x 50' roll
Thermglass Premium Type VI	25 rolls	25 rolls per pallet – 5/sq./roll
Thermastic Adhesive	5 pallets	9 cartons per pallet (55-lb/ctn.)
TremSeal Pro – Bronze	1 cases	30 tubes per case

Bidding Contractor: _____

Contractor Signature: _____

Date: _____

Attachment A

Owner Purchased Material List for - Base Bid 3 Hawthorne Elementary School – Roofs E, H, I, and J (BUR Roof Restoration)

The following material list is to be included in the bid form and signed/dated by the Contractor. Failure to provide this information will render your bid unresponsive. The owner is purchasing the following list of material from EducationPlus through a pre-competed national cooperative purchasing organization. Only these materials, in the quantities listed, will be supplied.

The Contractor is responsible for purchasing any additional material directly from the roofing material manufacturer at the contractor's cost. The contractor is also responsible for ALL other items not on this list necessary for the completion of work specified. This includes, but is not limited to, fasteners, wood components, insulation, cants and taper edge, gravel, sheet metal, warranty charges, inspections, maintenance agreements, and other consumable materials.

The unloading of material and the storage of said material in a secure area is the sole responsibility of the contractor. Any unused material will become the property of the contractor at the completion of the project.

<u>Material</u>	<u>Quantity</u>	<u>Container Size</u>
AlphaGuard Bio Top Coat	290 kits	3.1-gallon kits
AlphaGuard Bio Base Coat	375 kits	4-gallon kits
AlphaGuard WB Primer	5 buckets	5-gallon buckets
Burmastic Adhesive SF	15 buckets	5-gallon buckets
Burmastic Composite Ply HT	20 rolls	2-square rolls
Geogard Primer	4 bucket	5-gallon buckets
Permafab Reinforcement	45 rolls 1 roll	4" x 300' rolls 40" x 324' roll
TremSeal Pro – Aluminum/Stone	2 cases	30 tube cases
TremSeal Pitch Pan Sealer	4 cases	4 cartridge sets/case – 1.5 gal/case

Bidding Contractor: _____

Contractor Signature: _____

Date: _____

Attachment A

Owner Purchased Material List for - Base Bid 4 Park Hill High School – Roofs E1 and E2 (BUR Roof Replacement)

The following material list is to be included in the bid form and signed/dated by the Contractor. Failure to provide this information will render your bid unresponsive. The owner is purchasing the following list of material from EducationPlus through a pre-competed national cooperative purchasing organization. Only these materials, in the quantities listed, will be supplied.

The Contractor is responsible for purchasing any additional material directly from the roofing material manufacturer at the contractor's cost. The contractor is also responsible for ALL other items not on this list necessary for the completion of work specified. This includes, but is not limited to, fasteners, wood components, insulation, cants and taper edge, gravel, sheet metal, warranty charges, inspections, maintenance agreements, and other consumable materials.

The unloading of material and the storage of said material in a secure area is the sole responsibility of the contractor. Any unused material will become the property of the contractor at the completion of the project.

<u>Material</u>	<u>Quantity</u>	<u>Container Size</u>
Alumanation 301	5 buckets	5-gallon bucket
Burmastic Supreme Composite Ply	60 rolls	20 rolls per pallet - 2/sq./roll
Burmesh	2 rolls	6" x 300' rolls
ELS Mastic	36 buckets	5-gallon bucket
Premium IV Asphalt	120 cartons	24 cartons per pallet (2,400 lb./ctn.)
TRA Flashing	9 rolls 5 rolls	18" x 50' roll 24" x 50' roll
Thermglass Premium Type VI	50 rolls	25 rolls per pallet – 5/sq./roll
Thermastic Adhesive	10 pallets	9 cartons per pallet (55-lb/ctn.)
TremSeal Pitch Pocket Sealer	2 cases	1.5 gal per case
TremSeal Pro - White	1 cases	30 tubes per case
TremTread Walkway Panel	7 panels	3' x 4' panel

Bidding Contractor: _____

Contractor Signature: _____

Date: _____

Attachment A

Owner Purchased Material List for - Base Bid 5 Southeast Elementary School – Roof E (BUR Roof Replacement)

The following material list is to be included in the bid form and signed/dated by the Contractor. Failure to provide this information will render your bid unresponsive. The owner is purchasing the following list of material from EducationPlus through a pre-competed national cooperative purchasing organization. Only these materials, in the quantities listed, will be supplied.

The Contractor is responsible for purchasing any additional material directly from the roofing material manufacturer at the contractor's cost. The contractor is also responsible for ALL other items not on this list necessary for the completion of work specified. This includes, but is not limited to, fasteners, wood components, insulation, cants and taper edge, gravel, sheet metal, warranty charges, inspections, maintenance agreements, and other consumable materials.

The unloading of material and the storage of said material in a secure area is the sole responsibility of the contractor. Any unused material will become the property of the contractor at the completion of the project.

<u>Material</u>	<u>Quantity</u>	<u>Container Size</u>
Alumanation 301	4 buckets	5-gallon bucket
Burmastic Supreme Composite Ply	60 rolls	20 rolls per pallet - 2/sq./roll
Burmesh	2 rolls	6" x 300' rolls
ELS Mastic	36 buckets	5-gallon bucket
Premium IV Asphalt	192 cartons	24 cartons per pallet (2,400 lb./ctn.)
TRA Flashing	6 rolls 4 rolls	18" x 50' roll 24" x 50' roll
Thermglass Premium Type VI	75 rolls	25 rolls per pallet – 5/sq./roll
Thermastic Adhesive	12 pallets	9 cartons per pallet (55-lb/ctn.)
TremSeal Pro - White	1 cases	30 tubes per case
TremTread Walkway Panel	5 panels	3' x 4' panel

Bidding Contractor: _____

Contractor Signature: _____

Date: _____

END OF SECTION 00411

SECTION 01100 – REVISED SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents.
 - 2. Type of the Contract.
 - 3. Work phases.
 - 4. Use of premises.
 - 5. Owner's occupancy requirements.
 - 6. Work restrictions.
 - 7. Specification formats and conventions.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification:
 - 1. English Landing Elementary – Roofs F and D – (Roof Replacement)
 - 2. Graden Elementary – Roof C - (Roof Replacement)
 - 3. Hawthorn Elementary School – Roofs E, H, I and J – (Roof Restoration)
 - 4. Park Hill High School – Roofs E1 and E2 – (Roof Replacement)
 - 5. Southeast Elementary – Roof E – (Roof Replacement)
- B. Owner: Park Hill School District
 - 1. Owner's Representative: Jim Rich – Director of Operations.
- C. The Work consists of the following:
 - 1. General conditions and details for all roof areas:
 - a. Contractor shall supply Site Specific Safety Plan and Sheet Metal Submittal drawings prior to start of work.
 - 1) Safety Plan shall show a site plan locating kettle, security fence, roof access points, cranes, dumpsters, ORIs, material storage, and any other equipment being supplied and used by contractor throughout the duration of the project.
 - b. Contractor shall always keep complete roofing specification and approved submittal drawing on the roof during the work.
 - 1) If required paperwork is not present on the roof, the project may be immediately shut down at Districts discretion.
 - a) All cost associate with such shut downs shall be the contractor's responsibility.

- c. It is always the responsibility of the Prime Contractor to provide 100% supervision of the kettle when hot adhesives are in use.
 - 1) It is the District's requirements that:
 - a) Kettle person have a minimum of 5-years' experience monitoring and regulating the temperature controls on a kettle.
 - b) Project Foreman has a minimum of 5-years installing specified roof system.
 - c) Documentation showing Foreman and Kettle Person work history shall be provided to owner and approved by owner prior to job start.
- d. After receipt of all roofing materials listed on Attachment A Form, contractor shall provide the District a letter stating they have received all materials, which shall be secure and stored on their property.
- e. It is the responsibility of the Prime Contractor to report in writing to the District, any areas of cracks or deterioration to the masonry walls above the roofline.
- f. It is the responsibility of the Prime Contractor for all underside clean up from drippage and debris coming through the roof deck.
- g. It is the responsibility of the Prime Contractor to provide a licensed plumbing contractor to inspect and confirm to the owner that all drains are properly flowing and not leaking prior to start of work and after completion of work.
 - 1) Contractor shall water test all drains using a standard ¾" hose running full on for a minimum of 10-minutes per drain.
 - 2) Contractor shall verify that the primary roof drains, overflow roof drains, and plumbing vents located within the project areas are free of debris and properly functioning. The contractor shall perform a flood test of existing roof drain bowls and connections to piping by temporarily plugging the drain pipe below the existing connection and flooding the drain bowl to its top edge. Notify the Owner immediately if defects are found in the roof drain bowl and/or roof drain assembly components, or if the roof drains and/or plumbing vents are found to be blocked, clogged, or otherwise not properly functioning. Any plumbing work necessary to correct identified defects, and clear existing roof drains and vents shall be performed by a licensed plumber at the direction of the Owner. Prior to start of work, the contractor shall provide a letter to the Owner indicating this work has been completed, detailing the results of this roof drain inspection and testing, and identifying any corrective action needed.
 - 3) After completion of roofing work, the Prime Contractor shall again obtain the services of a licensed plumbing contractor to verify that primary roof drains, overflow roof drains and plumbing vents located within the project area are free of debris and properly functioning. The plumber shall perform a second flood test of existing roof drains located in the project areas. The flood test shall include the same testing as completed prior to the roof work. Continue to flood the roof drain, up and over the installed roof drain flashing. Plumbing work necessary to correct identified defects, and clear existing roof drains and vents shall be performed by a licensed plumber at the direction of the Owner and paid for by the Prime Contractor. After construction completion, the contractor shall provide a second letter to the Owner indicating this work has been completed, detailing the results of this roof drain inspection and testing, and identifying any corrective action needed.
- h. The Prime Contractor shall include in their bid the cost to remove and re-install all drain clamping rings at the end of each day's work.

- i. It is the responsibility of the Prime Contractor to examine the job site and document any damages or issues with pictures and/or video. Any damages found after start of work will be the responsibility of the contractor.
- j. It is the responsibility of the Prime Contractor to add or remove perimeter and projection wood blocking to accommodate new roof system.
 - 1) Metal edge details are only allowed at gutters. All existing metal edge details shall be changed to raised edge details and contractors are responsible for adding new wood blocking per attached detail drawing or approved equal by roofing material manufacturer and owner.
- k. It is the responsibility of the Prime Contractor to clean roofs, drains, gutters, and scuppers of all debris and trash at the end of the project and prior to the expiration of their two-year warranty.
 - 1) Failure to provide this work may end the contractor's approval to bid future work with the owner.
- l. It is the Prime Contractor's responsibility to keep all RTU's clean and free of any roofing material, personal items, or debris.
 - 1) RTU's shall not be used to store tools, lunchbox's, or any items related to the project.
- m. It is the Prime Contractor's responsibility to disconnect and raise all electrical conduit and gas lines and extend plumbing pipes as needed to complete work per specifications and meet all local building codes.
 - 1) All lines shall be supported by new specified supports and hangers.
 - 2) No lines shall be supported directly on outside walls, expansion joints, or other equipment.
 - 3) During work, contractor shall properly support lines with wood blocking as needed to complete work and eliminate any damage to lines.
 - a) Any damage found after project shall be the responsibility of the contractor to repair and/or replace as owner approves.
- n. Contractor shall supply submittal sheet metal drawings on all project details prior to start of work.
 - 1) Owners representative and roofing material manufacturer shall review and approve all completed flashing work prior to the installation of sheet metal.
- o. Drains:
 - 1) Sump all drains a minimum of 48" x 48".
 - 2) Replace all broken or missing drain strainers with new cast iron strainers that will properly fit drain ring.
 - 3) Install 30" x 30" four-pound lead flashing into drain and strip-in with one ply of trilaminate felt and/or 1-ply of granular MB membrane set in cold asphalt mastic, or as required by roofing material manufacturer.
 - a) Adhere lead in a solid application of cold mastic.
 - 4) Replace any broken or missing drain clamping rings, clamps, and/or bolts.
 - 5) Drain plugs shall be installed in all drains prior to roof removal.
 - a) All drain plugs shall be removed, and drains cleared, at the end of each day.
 - b) Any drain or drain pipe joint leaks found after completion of project, and not documented as leaking prior to job start, shall be the responsibility of the contractor to repair and/or replace as approved by owner.
- p. Remove obsolete equipment and projections as indicated by owner during pre-bid meeting.

- 1) Cover voids in decks with minimum 16-gauge flat metal panels or matching metal deck.
 - a) Provide additional structural support on underside as required by local codes.
- q. As needed, raise and extend projection curbs and pipes, expansion/control joints, and perimeters to accommodate new insulation height and provide a minimum eight-inch flashing height.
 - 1) Add or remove wood blocking as needed to accommodate new tapered insulation at perimeter and projection details.
- r. Replace deteriorated wood blocking at perimeters and projections as needed.
 - 1) Provide unit cost per board foot.
 - 2) New wood blocking shall not be installed on ends.
 - 3) All blocking shall be securely fastened and approved by owner and roofing material manufacturer.
- s. Repair deck as needed. (Provide unit cost)
 - 1) Owner and/or roofing manufacturer representative shall be notified and allowed to verify deck repair and/or replacement.
- t. Adhere fiberboard cant at all projection base flashing locations as required by roofing material manufacture.
- u. Adhere fiberboard cricket on high side of projections to eliminate any ponding water.
 - 1) Adhere as required by roofing material manufacturer.
- v. At all perimeter and projection base flashing:
 - 1) Prime masonry walls prior to installing any base flashing.
 - 2) Adhere 2-ply flashing in Type IV asphalt for Hot BUR systems.
 - a) Trilaminate base ply.
 - b) Adhere TRA flashing in hot elastomeric adhesive.
- w. Base Flashing:
 - 1) Install bar termination at the top edge of all base flashing where the flashing is not wrapped over a curb, wall, or expansion joint.
 - a) Install 3-course reinforcement over all termination bars with asphalt mastic, reinforcement, and asphalt mastic.
 - 2) Base flashing height shall be a minimum of eight-inches and shall not exceed twelve-inches.
 - 3) Flashing over twelve-inches shall be bar terminated and another flashing membrane wrapped over the above wall or projection and extended down past the bar termination a minimum of four-inches, or install metal wall panels above base flashing.
 - 4) Adhere fiberboard cant at all base flashing with hot Type IV asphalt.
 - 5) Provide a 3-course strip-in at all vertical flashing laps, horizontal edges, and corners of flashing with elastomeric asphalt mastic unless otherwise specified.
 - 6) Install specified counterflashing over termination bar. Termination bar shall always be covered with metal counterflashing a minimum of four-inches.
 - 7) All brick walls shall require new 22-gauge pre-finished reglet joint counterflashing.
 - a) Width shall be sufficient to extend down over bar termination a minimum of four-inches.
 - 8) New 22-gauge metal end covers and 90-degree corners shall be installed to properly terminate ends of all sheet metal details.

- x. Install fiberboard tapered edge strips as needed along perimeters and around projections to provide positive drainage.
 - 1) Adhere tapered edge strips with hot Type IV asphalt.
- y. Install new 22-gauge pre-finished metal counterflashing skirt to all mechanical equipment curbs and vents.
 - 1) The new skirt can be mechanically fastened or riveted to the existing curb flange with no back-water laps, and shall extend down over the bar termination a minimum of four-inches.
- z. All new coping shall be 22-gauge pre-finished and approved by owner and roofing manufacturer. (District to select color)
 - 1) Outside and inside fascia width shall exceed and extend down past the existing fascia width unless otherwise specified.
 - 2) Install proper end closures and trims, approved by the roofing manufacturer, where terminating into concrete, brick, stucco, and/or metal walls.
 - 3) Provide a new 20-gauge continuous cleat on all copings.
 - 4) Slope the new coping to the inside by installing a treated wood at the outside edge and covering top with treated 5/8" or thicker plywood.
 - 5) Any fascia over 6" shall have horizontal stiffening ribs every 6" o.c.
 - 6) Walls shall be completely wrapped (inside and outside) with new flashing or trilaminate base sheet prior to installing new coping.
 - a) Flashing or base sheet shall be back-nailed on the outside face of wood nailer to completely encapsulate and cover all wood.
- aa. Install new 22-gauge pre-finished gutters and downspouts as specified.
 - 1) Gutter and downspout size shall be based on drainage area and shall follow local code requirements.
 - a) Minimum 6" gutters and 4" x 5" downspouts.
 - 2) Inside upper flange of gutter shall extend up over membrane covering perimeter felt and wood blocking.
 - 3) Downspouts draining into underground lines shall be solid and provide appropriate metal transition connections at tie-in.
 - 4) Provide new concrete splash blocks under each downspout.
 - a) If downspout is located on another roof, splash blocks shall have protection treads installed under them.
 - 5) Any substrate behind gutter shall be wrapped with new 22-gauge pre-finished metal prior to installing new gutters.
 - a) Fascia wrap shall be approved by owner and roofing material manufacture and detail drawings shall be included in submittal package.
 - b) Any fascia over 6" shall have horizontal stiffening ribs every 6" on center.
- bb. Install new 22-gauge pre-finished metal edge with gravel stop at all gutter edges.
 - 1) Set primed metal edge in solid bed of asphalt mastic over wood nailer.
 - 2) Mechanically fasten flange into wood blocking with approved fasteners every four inches on-center, two rows staggered.
 - 3) Strip in flange with two ply flashing system.
 - 4) Outside fascia shall extend down into gutter a minimum of four inches.
- cc. Install new 22-gauge pre-finished raised edge caps at all outside perimeters unless otherwise specified. (Metal-edge/gravel-stop details are only allowed at gutters unless otherwise specified)
 - 1) Outside fascia width shall extend down past the existing fascia width a minimum of one inch unless otherwise specified.

- a) Any fascia over 6” shall have horizontal stiffening ribs every 6” on center.
- 2) Install proper end closures and trims, approved by the roofing manufacturer, where terminating into concrete, brick, stucco, and/or metal walls.
- 3) Provide a new 20-gauge continuous cleat on all copings.
- 4) Fasten on inside slope of new metal with approved grommeted screws.
- dd. Install new 22-gauge pre-finished surface-mount counterflashing to all specified walls.
 - 1) Fasten to substrate 8” o.c. minimum with approved fasteners.
 - 2) Top edge shall provide a caulking lip.
 - a) Prime metal and wall prior to installing sealant
 - b) Install sealant compatible to roof system and components.
 - c) Sealant shall be tooled to eliminate any voids and shed water.
- ee. Install new four-pound lead flashing sleeves over plumbing pipes and strip-in with two plies of trilaminate felt set in cold asphalt mastic.
 - 1) Adhere lead in solid application of asphalt mastic.
 - 2) Plumbing pipe shall extend above finished roof a minimum of eight-inches or more as required by local building codes.
- ff. Install new 24-gauge pitch pans and hoods around all electrical conduits, cooling pipes, equipment supports, and miscellaneous projections.
 - 1) Strip-in with two-plies of trilaminate felt set in cold asphalt mastic or as required by roofing material manufacturer.
 - 2) Fill pans with dual component, solvent free, roofing sealant.
 - 3) Install 24-gauge sloped hoods over pans with sealant around projection.
 - 4) Install gooseneck hoods over pitch pans with multiple pipes.
- gg. Install new jacks and storm collars at all round vent stacks.
 - 1) Secure storm collar and seal with approved sealant.
 - 2) Strip-in with two plies of trilaminate felt set in cold asphalt mastic.
- hh. At all scuppers, install new 24-gauge stainless steel scupper sleeves.
 - 1) Insulation around all scuppers shall be sumped 48” x 48”.
 - 2) Scupper sleeves shall be primed and set in a bed of elastomeric mastic.
 - 3) Secure interior flanges at top, bottom, and sides.
 - 4) Strip-in with two plies of trilaminate felt set in cold elastomeric mastic.
 - 5) Install new 22-gauge pre-finished scupper heads and downspouts.
 - a) Match size and shape of exiting scupper heads and downspouts unless otherwise specified or required larger by local building codes.
 - i) All scupper heads shall have a half-moon overflow opening in the outside face.
 - b) Install new scupper heads and downspouts at all drain line pipes extending out vertical walls.
 - c) New downspouts shall be 4” x 5” or match existing, whichever is bigger.
 - d) Size of heads and downspouts shall meet building codes and owner’s requirements.
 - 6) Provide new concrete splash blocks under each downspout.
- ii. At metal edge and gravel stop perimeters not changed to raised metal edge details, remove existing and install new 22-gauge pre-finished metal.
 - 1) Install 20-gauge continuous cleat.
 - 2) Outside fascia shall exceed the existing width and/or extend down over current termination point by a minimum of one inch.
 - 3) Inside horizontal flange shall be primed, set in a bed of asphalt mastic,

- fastened 8” staggered o.c., and striped in with 2-ply of trilaminate felt and cold asphalt mastic or as required by roofing material manufacturer.
- jj. Install metal gravel dams around all roof drains, scuppers, gutters, and overflows.
 - 1) Approximate gravel dam size 4’ x 4’ at drains, overflows, and scuppers.
 - 2) At gutters install approximately 12” from gutter edge.
 - 3) Adhere flange of dams in asphalt mastic.
 - 4) Do not attach or strip in flange of dams.
 - 5) V-cuts in metal dams shall extend to roof level.
 - 6) Cover sump areas with specified flood coat and specified surfacing.
 - kk. Install hanger supports under gas and conduit lines that are 4” or wider. (Provide Owner with the hanger design prior to installation)
 - 1) Install rubber triangular support blocks at gas line supports and electrical conduit smaller than 4”.
 - a) Install treated wood blocking to adjust height.
 - 2) Install protection treads under wood blocking supports, rubber blocks, and hanger support legs.
 - 3) Hanger supports shall meet or exceed PS-1-2 by PHP Systems & Design.
 - 4) All wood blocking supports for gas and electrical conduit shall be replaced with new rubber pipe blocks or hangers.
 - 5) Spacing for all new supports shall be eight foot on center.
 - ll. Repair and replace all PVC condensate lines on RTU’s.
 - 1) Any broken or missing PVC components, including pee-traps, shall be replaced.
 - 2) Extend all PVC drain lines out past RTU’s a minimum of four feet towards the closest drainage point.
 - a) Attach PVC lines to wood blocking with u-clamps every 6’ o.c.
 - mm. All wood supports shall be replaced with new treated wood with protection treads underneath, unless being replaced by other supports mentioned in specification.
 - 1) New wood shall not be installed on ends unless approved by owner and roofing material manufacture.
 - nn. Install protection treads outside the access panels to all RTU’s, mechanical equipment, roof hatches, roof ladders, and roof access doors.
 - oo. Paint all base flashing, soil stacks, gas lines, drain strainers, drain sumps, and rusted equipment or sheet metal with two coats of aluminum reflective coating unless otherwise specified.
 - 1) Do not paint the unit or equipment registration plate.
 - a) If plate is painted, Contractor shall be responsible for hiring mechanical contractor to replace registration plate.
 - pp. Contractor shall provide Owner’s Representative and roofing material manufacturer a completed Pre-Final Inspection Form prior to installing, flood coat and gravel, modified bitumen cap sheet, and/or any restoration coating material.
 - 1) After receipt of the Form, a meeting shall be scheduled to walk completed roof work.
 - 2) Only after the roof walk and approval by the Owner and roofing material manufacturer shall the contractor install the appropriate surfacing’s and/or membranes.
 - 3) If the Form is not received and no roof walk is completed, the project will be rejected.
 - a) The contractor shall be responsible for all cost to remove surfacing’s and/or membranes as needed for inspection of the underlying roof system.

2. **English Landing Elementary**
6500 NW Klamm Drive
K.C., MO 64151

Base Bid #1 - Roof D – (Roof Replacement)

- a. Remove all roofing, insulation, and flashing down to tectum deck.
 - 1) Remove all perimeter metal coping and metal counterflashing at brick walls.
 - 2) Do not remove reglet joint receiver at brick walls.
- b. Replace tectum deck panels as needed. (Provide unit cost)
- c. Replace deteriorated wood blocking at perimeters and projections as needed. (Provide unit cost)
- d. Fill in any voids between tectum deck and outside or inside walls with polyisocyanurate insulation.
- e. Install peel-n-stick over deck to wall transition at all perimeter walls.
 - 1) Peel-n-Stick shall be a minimum of 18” wide and the deck and walls shall be primed prior to installation.
- f. Mechanically fasten trillaminate base sheet over tectum deck.
 - 1) Space fasteners 9” on-center along the side laps and 9” on center in two rows equally staggered down the longitudinal center of the sheet.
 - a) Increase perimeter edge fastening by 50% and corner fastening by 75%.
- g. Adhere 2-layers of 2.0” polyisocyanurate insulation, over nailed base sheet with hot Type IV asphalt.
- h. Adhere ½” polyisocyanurate insulation crickets between drains, and between drains and perimeter walls with hot Type IV asphalt.
- i. Adhere ½” polyisocyanurate insulation cricket between south RTU and south wall with hot Type IV asphalt.
- j. Adhere ¼” gypsum coverboard with hot Type IV asphalt.
- k. Adhere one ply of trillaminate base sheet over insulation with hot Type IV asphalt.
- l. Adhere three plies of Type VI fiberglass felt over adhered base sheet with hot Type IV asphalt.
- m. Fully adhere 2-ply perimeter and projection base flashing with modified elastomeric hot asphalt.
 - 1) Two-ply flashing shall consist of a trillaminate base ply and TRA top membrane.
- n. Install new 24-gauge pre-finished metal coping along all outside perimeter walls. (Match color of existing metal)
 - 1) Outside fascia width shall exceed the existing fascia width by a minimum of one inch.
 - 2) Install proper end closures and trims, approved by the roofing manufacturer, where terminating into brick walls.
 - 3) Provide a new 22-gauge continuous cleat on all copings.
 - a) Slope the new coping to the inside by installing a treated 1” x 1” at the outside edge and covering top with treated ½” plywood.
 - 4) Install new 24-gauge pre-finished skirt flashing below inside fascia of coping.
 - a) New metal skirt shall be a minimum of 12” wide.
 - b) New metal skirt shall have a minimum of one stiffing rib.
 - c) New metal skirt shall be mechanically attached to wall prior to installing new coping.
 - d) New metal skirt shall extend over flashing bar termination a minimum of four inches.

- o. Install a new 24-gauge pre-finished wall expansion joint detail into the existing reglet receiver at all brick walls.
 - 1) Install new end caps and corner closures to provide watertight detail.
- p. Install new 22-gauge gravel dams around all drains. Dams must be outside of sumps.
 - 1) Coat membrane between gravel dams and drains with two coats of aluminum reflective coating.
- q. Install flood coat of modified elastomeric hot asphalt and Kunshek gravel.
- r. Install two coats of aluminum reflective coating to all base flashing, plumbing pipes, drain sumps and strainers, and rusted equipment.
- s. Install protection treads at RTU access points.

Base Bid #1 - Roof F and Lower Wall Panels – (Metal Roof and Wall Panel Replacement)

- a. Tear off existing metal roof panels, gutters, and the lower vertical exterior wall panels on all four elevations.
 - 1) Remove existing insulation under metal roof panels and replace with polyisocyanurate insulation to match exiting shape and size.
- b. Replace deteriorated plywood on vertical walls as needed. (Include two (2) ¾" sheets of plywood, 4' x 8' in base bids.)
 - 1) Replace any deteriorated batt insulation with new insulation and match existing thickness and R-value. (Include 32 sq. ft. of batt insulation in base bids.)
 - a) Any voids in the existing batt insulation behind the plywood will be filled in with matching batt insulation.
- c. Install self-adhering modified bitumen (MB) membrane over existing deck, outside fascia, and vertical wall exteriors.
 - 1) Wrap self-adhering membrane over outside walls and continue down vertical walls to lower transitions and terminations.
- d. Install lower trim terminations for vertical wall panels on top of the existing low-slope roof wall counterflashing details and around the tops and sides of the blonde bricks.
 - 1) Strip-in terminations with self-adhering MB membrane.
 - 2) Set interior and exterior flanges and end terminations in two-sided butyl tape.
- e. Install new 24-gauge pre-finished gutters and downspouts on north and south perimeters.
 - 1) Set interior and exterior horizontal flanges and end terminations in two-sided butyl tape.
 - 2) Strip in gutter flange with self-adhering MB membrane.
 - 3) Extend downspouts to low slope roofs and install concrete splash-blocks with protection treads.
- f. Install new 24-gauge, pre-finished, standing seam metal roof system with 2-3/8" seams and 16" wide panels.
 - 1) Install per roofing material manufacturers requirements.
- g. Install new rake edge details at the east and west perimeters.
- h. Install new ridge detail per roofing material manufactures requirements.
- i. Install new matching eave transition into gutters at north and south perimeters.
- j. Install new matching flush seam wall panels at vertical walls below the roofline on all four perimeters.
 - 1) Install top trim transitioning behind gutters and rake edges.

- 2) Install new sill trim to terminate bottom edge of flush seam panels.
- 3) Install new end closures to terminate into blonde bricks at all four elevations.

3. **Graden Elementary**
8804 NW 45 Highway
Parkville, MO 64152

Base Bid #2 - Roof C – (Roof Replacement)

- a. Remove all roofing and flashing down to lightweight concrete deck.
 - 1) Remove all perimeter metal including all two- and three-piece metal fascia around outside perimeters below gutters, and all gutters and downspouts.
 - 2) Remove east perimeter control joint cover and install new.
 - 3) Remove south perimeter shingles three courses up from bottom.
- b. Provide repairs to metal deck as needed. (Provide unit cost)
- c. Replace deteriorated wood blocking at perimeters and projections as needed. (Provide unit cost)
- d. Mechanically fasten trilaminate base sheet over lightweight concrete deck.
- e. Adhere one ply of trilaminate base sheet over nailed base sheet with hot Type IV asphalt.
 - 1) Extend base sheet up sloped south roof a minimum of 36” and tuck under shingles base sheet.
 - 2) Extend base sheet over the east and north perimeters and down onto the brick below.
- f. Adhere three plies of Type VI fiberglass felt over adhered base sheet with hot Type IV asphalt.
- g. Fully adhere 2-ply perimeter and projection base flashing with modified elastomeric hot asphalt.
 - 1) Two-ply flashing shall consist of a trilaminate base ply and TRA top membrane.
- h. Install new 24-gauge, pre-finished, fascia metal along north and east perimeters prior to installing new gutters.
 - 1) Metal shall completely encapsulate all exposed wood and extend down past existing a minimum of one inch.
 - a) New metal shall be installed over the new base sheet and the base sheet must be trimmed as needed only after the metal is installed.
- i. Install new 24-gauge, pre-finished, gutter and downspouts along the north and east perimeters.
 - 1) Match existing size and shape.
- j. Install new 24-gauge, pre-finished, gravel stop metal edge detail along the west perimeter of Roof E2.
 - 1) Strip-in with 2-ply of trilaminate base sheet adhered with elastomeric adhesive.
 - 2) New fascia shall extend down over gutter fascia a minimum of three inches.
 - 3) Install matching metal to cover lower vertical wood fascia, bend 90-degrees tight against brick, and turn down onto brick a minimum of one inch.
- k. Install a new 24-gauge, pre-finished, control joint cap detail along the east perimeter.
 - 1) Install new end caps to provide watertight detail.
- l. Install new 24-gauge, pre-finished, skirt flashing along the north wall extending up to Roof N1.
- m. Install new 22-gauge, gravel dams along all gutter edges.

- 1) Hold back from edge approximately 8”.
 - 2) Coat membrane between gravel dams and gutters with two coats of aluminum reflective coating.
 - n. Install flood coat of modified elastomeric hot adhesive and Kunshek gravel.
 - o. Install three rows of new shingles along south perimeter.
 - 1) Shingles shall match existing style and color.
 - p. Install two coats of aluminum reflective coating to all base flashing, plumbing pipes, rusted equipment, and gutter edge between gravel dams and gutter.
 - q. Install new triangular pipe support blocks under gas line in the northeast corner.
4. **Graden Elementary – Alternate Bid**
- a. At the southwest corner of Roof M1, remove and replace existing gutter and two downspouts with new 24-gauge gutter and three downspouts.
 - 1) Cover existing wood fascia behind gutter with matching 24-gauge pre-finished metal.
 - a) New metal shall completely encapsulate the wood fascia and turn down onto the brick wall a minimum of one inch.
 - 2) Follow specification requirements under Item 1.3., C., 1., aa. on Page 5 for installing new gutter and downspouts.
 - 3) Additional downspout shall be installed at solid brick wall between windows.
5. **Hawthorn Elementary**
8200 Chariton
Kansas City, MO 64152
Base Bid #3 – Roofs E, H, I and J – MB Roof Restoration
- a. Removed and replace wrinkled wall flashing as designated during the pre-bid roof walk.
 - 1) Repair with similar membrane and trilaminate base sheet adhered in solvent free elastomeric mastic.
 - 2) Include 60 lineal feet of wall flashing replacement in your base bid.
 - a) Wall height 24”.
 - b) Remove and replace coping after flashings are replaced.
 - c) Replace with 2-ply flashing consisting of one trilaminate base ply and one granular MB membrane adhered with solvent free elastomeric adhesive.
 - b. Remove blisters, ridges, buckles and other substrate irregularities from existing roofing membrane that would inhibit application of uniform, waterproofing coating.
 - 1) Repair membrane at locations where irregularities have been removed with equal number of trilaminate base plies and solvent free adhesive.
 - 2) Include 175 repair areas averaging 2’ x 2’ in your base bid.
 - c. Install three plies of trilaminate felt in solvent-free elastomeric mastic over areas where cores were removed.
 - d. Repair flashings, gravel stops, copings, and other roof-related sheet metal and trim elements.
 - 1) Remove and replace all sealant at all metal joints, replace loose or missing fasteners, and replace components where required to leave in a watertight condition.
 - e. Resecure any loose or missing metal details.
 - f. Fill all pitch pans and install pitch pan covers where missing.
 - g. Replace any broken, missing, or plastic drain strainers with new cast iron strainers.

- h. Replace all wood blocking supports with new Dura-Blok DB-10 supports or a product approved equal by Owner.
 - 1) If blocking is supporting gas line or conduits 4” or larger refer to the general conditions section above.
- i. Repair all open flashing laps, splits, and holes with elastomeric solvent-free mastic and reinforcing mesh.
- j. Reinforce all vertical and corner flashing laps with restoration mastic and reinforcing mesh.
- k. At all metal substrates, rusted or oxidized areas must be ground to a bright metal surface.
 - 1) At drains, use a grinder to sand/grind metal surfaces down to clean, bare, metal; removing all asphalt residue.
 - 2) Prime substrates with restoration metal primer.
- l. At all drains, remove buckled membrane back from drain bowl approximately eight inches.
 - 1) Install new 2-ply strip-in with trilaminate base sheet and granular MB membrane. Overlap onto existing MB a minimum of 18”.
 - 2) Adhere with solvent-free MB adhesive.
- m. Power-wash and wet vacuum roof areas clean of all dirt, dust, debris, oil, grease, and all loose granules.
 - 1) Power-wash with a minimum of 3,000 psi.
 - 2) Roofing material manufacturer shall inspect and approve the cleanliness of the field membrane prior to installation of any restoration products.
 - 3) Power brooms shall not be allowed.
- n. At all vertical metal or lead penetrations and substrates:
 - 1) Install painters tape approximately eight inches up flashing to provide a straight clean line.
 - 2) Prime all metal substrates with restoration metal primer.
 - 3) Apply restoration base coat and fully embed the reinforcement.
 - 4) The field base coat and reinforcement should extend over the toe of the flashing and onto the field of the roof approximately three inches.
- o. At all perimeter and base flashing and field membrane side and end laps, install 3-course reinforcement of restoration base coat, polyester reinforcement, and restoration base coat.
 - 1) The base coat shall only be applied to the area intended for reinforcement embedment.
 - 2) Using a roller or brush, fully embed polyester reinforcement.
 - 3) The polyester reinforcement on base flashing shall extend a minimum of four inches onto the roof substrate, allowing for an adequate surface for the top coat to lap.
 - 4) When encountering a corner, the reinforcement must wrap 3-4” and be fully embedded into the base coat.
 - 5) Using a brush, work the reinforcement into the corner. It may be necessary to make relief cuts to form tightly.
 - 6) Inspect the walls and corners for pinholes or unsaturated areas. If any areas exist, re-apply a small amount of base coat until areas are fully saturated.
 - 7) Install top coat layer of base coat over polyester.
- p. On round penetrations, cut reinforcing restoration membrane to sizes that are manageable and tear the bottom edge, 2-3” from bottom edge. This will allow the reinforcement to conform to the pipe.
 - 1) Apply restoration base coat and fully embed the reinforcement.

- 2) The field base coat and reinforcement should extend over the toe of the flashing and onto the field of the roof approximately three inches.
- q. On square penetrations, cut restoration membrane to sizes that are manageable.
 - 1) Cut the pieces to extend a minimum of 8” above the field of the roof and minimum of 4” onto the field of the roof.
- r. At drains, the field base coat and reinforcement should be extended into the drain past where the ring meets the bowl.
 - 1) A target reinforcement sheet of 40” x 40” polyester shall be installed at all drains adhered with restoration base coat.
 - 2) Reinstall the drain bowl ring and basket once all material is completely cured.
- s. Install restoration base coat onto approved MB flashing and field membrane.
 - 1) Base flashing membrane shall be coated prior to field membrane.
 - 2) Spread coating evenly according to material manufacturers written instructions.
 - 3) Back roll to achieve a minimum wet mil thickness of 4 to 5 gallons per square. Weathered surfaces may require additional material.
 - 4) Coverage rates of base coat shall be continuously verified for proper wet film thickness with a wet mil gauge.
 - 5) MB membrane shall be primed prior to installation of any coating as required by roofing material manufacturer.
- t. After base coat is installed, and before the top coat is installed, a thorough inspection of the surface must be conducted by the manufacturer’s technical representative.
 - 1) Priming of the base coat is required if top coat is not applied within 72 hours of the base coat application.
 - 2) The base coat shall be lightly primed with manufacturers recommended primer after 72 hours between coats.
- u. Install restoration top coat on flashing prior to field of roof.
 - 1) Extend coating up vertical surfaces to completely cover base coat and reinforcement.
 - 2) Extend out onto horizontal surfaces a minimum of 8”.
- v. Install restoration top coat over field of roof at a rate of 2.5 to 3 gallons per square.
 - 1) Back roll to achieve a minimum wet mil thickness of 32 mils.
- w. Install polyurethane anti-skid walkway and roof access landings at designated areas determined during the pre-bid roof walk.
 - 1) Include in your base bid enough lineal feet of walkways 3’ wide to cover existing walkways.
 - 2) Include in your base bid 100 square feet of roof access landings at 6 RTU’s.
 - 3) Walkways and landings will consist of:
 - a) Masking off perimeter edges with painters tape, which will need to be removed immediately after adhesive has been installed.
 - b) Priming the existing coating.
 - c) An additional polyurethane top coat at 1 gallon per square.
 - d) Imbedding a 50/50 mixture of silica sand and 3M colored granules. Color selected by owner.
 - e) Back-rolling aggregate into polyurethane top coat.
 - f) Vacuuming up all loose granules after coating has cured.
- x. Before the restoration coatings cure, clean all surfaces and equipment with mineral spirits.

- y. Repair and replace all broken and or missing PVC condensate pipe off the RTU's.
 - 1) Install wood blocking supports and U-clamps every ten feet on center.
- z. Avoid foot traffic on new restoration membrane for a minimum of 24 hours.
- aa. At all pitch pans with insulated mechanical lines:
 - 1) Cut all insulation back from pitch pans to properly fill pans and install new hoods.
- bb. At all lead plumbing stacks:
 - 1) Remove and reinstall all soil stack caps.
 - 2) Install liquid membrane system up and into the interior of the pipe to completely encapsulate the lead.
 - 3) Install polyester reinforcement around 100% of the lead.
- cc. Paint all gas lines on all roof levels, A through J, with aluminum reflective coating.
- dd. Replace all metal downspout splash-blocks with new 24-gauge stainless steel splash-blocks.
 - 1) Attach to downspouts to secure in place.

6. **Park Hill High School**
7701 NW Barry Road
K.C., MO 64153

Base Bid #4 - Roofs E1 and E2 – (Roof Replacement)

- a. Remove all roofing, insulation, and flashing down to metal deck.
 - 1) Remove all perimeter metal including gutter and downspouts.
 - 2) Remove north and east perimeter skirt counterflashing and install new.
 - 3) Remove west perimeter expansion joint cover and install new.
 - 4) Remove east perimeter raised edge detail and install new.
 - 5) Remove south perimeter surface mount counterflashing.
- b. Provide repairs to metal deck as needed. (Provide unit cost)
- c. Replace deteriorated wood blocking at perimeters and projections as needed. (Provide unit cost)
- d. Install a minimum of two (2) new wood blocking layers along the east outside perimeter to accommodate new insulation and raised edge detail. (Provide detail drawing prior to start of work)
- e. Install new wood blocking east to west along connection of Roof E1 and E2.
 - 1) Blocking shall be flush with new insulation height.
- f. Mechanically fasten 2.5" polyisocyanurate insulation over metal deck.
 - 1) Install one fastener every two square feet; increase pattern 50% at perimeters and 75% at corners.
- g. Adhere 1/4" gypsum coverboard with hot Type IV asphalt.
- h. Adhere one ply of trilaminate base sheet over insulation and roof connections with hot Type IV asphalt.
- i. Adhere three plies of Type VI fiberglass felt over adhered base sheet with hot Type IV asphalt.
- j. Fully adhere 2-ply perimeter and projection base flashing with modified elastomeric hot asphalt.
 - 1) Two-ply flashing shall consist of a trilaminate base ply and TRA top ply.
- k. Install new 22-gauge, pre-finished, raised edge detail along east outside perimeter or Roof E2. (District to select color)
 - 1) Outside fascia width shall match or exceed the existing fascia width and kick into building at lowest point.
 - 2) Install proper end closures and trims, approved by the roofing manufacturer, where terminating into brick walls.

- 3) Provide a new 20-gauge continuous cleat on all raised edge metal.
 - l. Install a new 24-gauge, pre-finished, expansion joint cap detail along the west inside perimeters of both roofs.
 - 1) Install new end caps and corner closures to provide watertight detail.
 - m. Install new 24-gauge, pre-finished, skirt counterflashing along the north and east inside perimeters of both roofs.
 - n. Install new 24-gauge, pre-finished, reglet counterflashing along the south brick wall of Roof E1.
 - 1) Install new end caps to provide a watertight detail.
 - o. Install new 24-gauge, pre-finished, gutter and downspouts along the west perimeter of Roof E2.
 - 1) Match existing size and shape.
 - p. Install new 24-gauge, pre-finished, gravel stop metal edge detail along the west perimeter of Roof E2.
 - 1) Strip-in with 2-ply of trillaminate base sheet adhered with elastomeric adhesive.
 - 2) New fascia shall extend down over gutter fascia a minimum of three inches.
 - 3) Install matching metal to cover lower vertical wood fascia, bend 90-degrees tight against brick and turn down onto brick a minimum of one inch.
 - q. Install new 22-gauge, gravel dams along gutter edge on Roof E2.
 - 1) Hold back from edge approximately 8”.
 - 2) Coat membrane between gravel dams and gutters with two coats of aluminum reflective coating.
 - r. At connection from Roof E1 to E2, install a minimum 4” round backer rod running east to west over connection point.
 - 1) Cover backer rod with 24” wide TPA membrane adhering only the outside 8” at each edge of the membrane with solvent-free elastomeric asphalt mastic.
 - 2) Terminate ends to extend under the east and west base flashing membrane.
 - 3) Strip-in outside edges with 3-course reinforcement of solvent-free elastomeric asphalt mastic.
 - s. At pitch pan with insulated mechanical lines on Roof E1:
 - 1) Cut all insulation back to properly fill pans and install new gooseneck hood.
 - t. Install flood coat of modified elastomeric hot adhesive and Kunshek gravel.
 - u. Install new gas line hanger supports to meet or exceed PS-1-2 by PHP Systems & Design on gas line running north and south across both roofs.
 - 1) Supports shall be no more than eight foot on-center.
 - 2) Install protection treads under all support feet.
7. **Southeast Elementary**
5704 NW Northwood Rd.
K.C., MO 64151
Base Bid #5 - Roof E – (Roof Replacement)
- a. Remove all roofing, insulation, and flashing down to metal deck.
 - 1) Remove all perimeter metal including all two- and three-piece metal fascia around outside perimeters below the roof line.
 - 2) Remove east perimeter expansion joint cover and install new.
 - 3) Remove north perimeter expansion joint cover and reuse.
 - b. Provide licensed mechanical contractor to raise the drip leg on the north RTU.
 - 1) Drip leg shall be 1” minimum above new gravel surface.
 - c. Provide licensed electrical contractor to remove and reinstall electrical conduit running horizontally over the east, west, and south outside metal fascia.

- 1) Reinstall conduit to extend behind all downspouts and not over them.
- 2) Exterior lights shall be removed and reinstalled in areas where they are attached over the existing metal fascia to be replaced.
 - a) New conduit may be placed on roof surface supported by Dura-Blok supports or approved equal.
- d. Provide repairs to metal deck as needed. (Provide unit cost)
- e. Replace deteriorated wood blocking at perimeters and projections as needed. (Provide unit cost)
- f. Install new wood blocking along the outside perimeters to accommodate new insulation and raised edge detail. (Provide detail drawing prior to start of work)
- g. Mechanically fasten 1.5” polyisocyanurate insulation over metal deck.
 - 1) Install one fastener every two square feet; increase pattern 50% at perimeters and 75% at corners.
- h. Adhere tapered polyisocyanurate insulation over base insulation.
 - 1) Starting Height: ½”
 - 2) Slope: ¼” per foot
- i. Adhere ¼” gypsum coverboard with hot Type IV asphalt.
- j. Adhere one ply of trilaminate base sheet over insulation with hot Type IV asphalt.
- k. Adhere three plies of Type VI fiberglass felt over adhered base sheet with hot Type IV asphalt.
- l. Adhere 2-ply perimeter and projection base flashing with modified elastomeric hot asphalt.
 - 1) Two-ply flashing shall consist of a trilaminate base ply and TRA top ply.
- m. Install new 22-gauge pre-finished raised edge detail along all exterior perimeters. (District to select color)
 - 1) Outside fascia width shall match or exceed the existing fascia width and kick into building at lowest point.
 - a) Install horizontal pencil ribs every 6” on-center on exterior metal fascia.
 - 2) Install proper end closures and trims, approved by the roofing manufacturer, where terminating into brick walls.
 - 3) Provide a new 20-gauge continuous cleat on all raised edge metal.
- n. Install new 24-gauge stainless steel scupper sleeves and strip-in with two plies of trilaminate base sheet set in elastomeric adhesive.
 - 1) Install 40” x 40” sump around all scuppers.
 - 2) Install 22-gauge pre-finished scupper heads and downspouts.
 - 3) Install new concrete splash blocks under each downspout.
- o. Install a new 24-gauge pre-finished expansion joint cap detail along the east wall.
 - 1) Install new end caps and corner closures to provide watertight detail.
- p. Reinstall expansion joint cap along the north wall.
 - 1) Install new end caps and corner closures to provide a watertight detail.
- q. Install new 22-gauge gravel dams around all scuppers and drains. Dams must be outside of drain sumps and eight inches from gutter edge.
 - 1) Coat membrane between gravel dams and drains and gutters with two coats of aluminum reflective coating.
- r. Install flood coat of modified elastomeric hot adhesive and Kunshek gravel.
- s. Install two coats of aluminum reflective coating to all base flashing, plumbing pipes, drain strainers and sumps, and rusted equipment.
 - 1) Install two coats of aluminum reflective coating to all base flashing, plumbing pipes, drain sumps, rusted equipment, and drain strainers.

1.4 TYPE OF CONTRACT

- A. Project will be constructed under a single prime contract.

1.5 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of project site beyond areas in which the Work is indicated.
 - 1. Driveways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- B. Use of Existing Building: Maintain existing building in a watertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.
- C. Security: Comply with Owner's requirements related to security.
- D. Safety: Comply with all OSHA regulations and guidelines that apply to project.
- E. No smoking on Owner's property.
- F. No changing into or from work clothes on site.
- G. Use of adjacent roofs not related to the project is prohibited unless provided written approval by Owner.

1.6 OWNER'S OCCUPANCY REQUIREMENTS

- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits, unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
 - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- B. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
 - 1. Before partial Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of building.

1.7 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, except otherwise indicated.
 - 1. Weekend Hours: As approved by Owner.
 - 2. Early Morning Hours: As approved by Owner.
 - 3. Hours for Utility Shutdowns: Coordinated with and approved by Owner.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Owner's written permission.

1.8 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSI/CSC's "Master Format" numbering system.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred, as the sense requires. Singular words shall be interpreted as plural and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01100