CITY OF KIRKLAND
Fire Station 27 Roofing Project
JOB NO. 44-20-CMO
11210 NE 132 St., Kirkland WA 98034

PROJECT MANUAL

October 21, 2020

CITY OF KIRKLAND
CITY MANAGERS OFFICE

Fire Station 27 ROOFING PROJECT
JOB NO. 44-20-CMO

Certificate of Engineer:

The technical portions of the Special Provisions and Plans contained herein have been prepared by or under the direction of the undersigned, Raymond Wetherholt, whose seal as a Professional Engineer licensed to practice in the State of Washington, is affixed below.

RAYMOND C. WETHERHOLT
STATE OF WASHINGTON
20454
REGISTERED
PROFESSIONAL ENGINEER

10/9/2020

Raymond C. Wetherholt. PE
Founder/Consultant

INVITATION FOR BIDS

City of Kirkland
Fire Station 27 Roofing Project
11210 NE 132nd ST, Kirkland WA 98034
JOB # 44-20-CMO

The City of Kirkland invites interested and qualified contractors to submit sealed bids for the following project:

TITLE:	Fire Station 27 Roof Project
ESTIMATED BID AMOUNT:	Approximately $230,000 excluding sales tax Prior to 1:00 P.M. on 18 August 2020.
BID SUBMITTAL TIME/DATE/LOCATION:	November 4, 2020 1:00 P.M. City of Kirkland 123 5th Avenue Kirkland WA 98033 Bids can be mailed, or, Bidders can choose to hand deliver their bids. Please utilize the RING doorbell at the North entrance of City Hall, 123 5th Avenue, Kirkland, WA 98033. A City employee will accept and date/time stamp bid.
PUBLIC BID OPENING	Due to Governor Inslee's Stay Home Stay Healthy proclamation, the public bid opening will be available online at the following link http://kirkland.granicus.com/player/camera/7?publish_id=1308. It will commence the 4th day of November 2020 at approximately 1:00 P.M. A recorded version will be posted online with the bid results.
PRE-BID CONFERENCE	1:00 P.M. on the 26th of October 2020 at 11210 NE 132nd St, Kirkland, WA 98034. Attendance at one pre-bid conference is mandatory. Please check-in upon arrival. Properly fitted masks are required for attendance. Please also maintain social distancing.

BID SUBMITTAL ENVELOPE:
Upon submittal, bids will be recorded by the City of Kirkland as to time and date received, and secured, until the time set for the public bid opening. All bid submittal envelopes must be *plainly marked on the outside* with "Bid Proposal, Fire Station 27 Roof Project, Job # 44-20-CMO." NO PROPOSALS WILL BE ACCEPTED AFTER THE BID SUBMITTAL TIME.

ITEM FOR BID:

The project consists of all work to be performed as indicated in the Project Manual, Drawings, and any posted addenda. The work consists of furnishing all labor, materials, and other incidentals for the construction of a re-cover of the existing roof.

Substantial Completion shall be achieved within ninety (90) calendar days after the Owner's Notice to Proceed and Final Completion shall be achieved within twenty-five (25) calendar days after Substantial Completion.

BID DOCUMENTS:

Free-of-charge access to project bid documents (plans, specifications, addenda, and Bidders List) is provided to Prime Bidders, Subcontractors, and Vendors by going to www.bxwa.com and clicking on "Posted Projects", "Public Works", and "City of Kirkland". This online plan room provides Bidders with fully usable online documents with the ability to: download, view, print, order full/partial plan sets from numerous reprographic sources, and a free online digitizer/take-off tool. It is recommended that Bidders "Register" in order to receive automatic e-mail notification of future addenda and to place themselves on the "Self-Registered Bidders List". Bidders that do not register will not be automatically notified of addenda and will need to periodically check the on-line plan room for addenda issued on this project. Contact Builders Exchange of Washington at (425) 258-1303 should you require assistance with access or registration. The content available through bxwa.com is our property or the property of our licensors and is protected by copyright and other intellectual property laws. Access to project documents is intended for use by bidders (general contractors/prime bidders, subcontractors and suppliers), agency personnel and agency's consultants, as well as for personal, noncommercial, use by the public. You may display or print the content available for these uses only. "Harvesting" (downloading, copying, and transmitting) of any project information and/or project documents for purposes of reselling and/or redistributing information by any other party is not allowed by BXWA.

Questions regarding this project shall be submitted in writing to Chris Dodd (cdodd@kirklandwa.gov) via e-mail with the subject line of "FS27 Roof Project: Bid Question". Questions received via phone or any other method other than e-mail with the appropriate subject line will not be accepted. Bidders shall submit questions no later than 7 calendar days prior to the scheduled bid opening.

CONTRACTOR REGISTRATION:

Pursuant to RCW 39.06, the bidder shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27.

In order to perform public work, the successful bidder and subcontractors, prior to Contract award, shall hold or obtain such licenses and registrations as required by State Statutes and Codes, and Federal and local laws and regulations and a City of Kirkland business license.

BID SECURITY:

Certified check, bank cashier's check or bid bond congruent with the Bid Bond Security Form (Section 00 43 30) as identified in the "Instructions to Bidders" is required to be submitted with each proposal, in the amount equal to five percent (5%) of the total base bid plus additive alternate bids (if applicable). Make bid security payable to the City of Kirkland, furnish bond executed by a licensed bonding agency authorized to do business in the locality of the Project. No bid shall be considered unless accompanied by such bid security.

RIGHT TO ACCEPT OR REJECT:

The Contract will be awarded to the responsible bidder submitting the lowest proposal complying with these contract documents provided the bid is reasonable and in the best interest of the City of Kirkland.

The Owner (City of Kirkland) reserves the right to reject any or all bid proposals and the right to waive any irregularities or informalities in any proposal, subject to the Laws of the State of Washington as pertinent to Public Works and congruent with requirements and policies of City of Kirkland, and as may be deemed in the best interest of the Owner. In particular, the Owner reserves the right to reject a bid which is not accompanied by the documents specified in the Instructions to Bidders and incomplete or irregular bids which may exclude any item(s) as may be required by the Project Manual.

The City of Kirkland in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21 Nondiscrimination in Federally-Assisted Programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this invitation, disadvantaged business enterprises as defined in 49 CFR Part 26 will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.

City of Kirkland is an Equal Opportunity and Affirmative Action Employer.

Small, Minority and Women-Owned firms are encouraged to submit bids.

WITHDRAWAL OF BID:

No bid proposal may be withdrawn after the time set for the opening thereof, unless the Award of the Contract is delayed for a period of sixty (60) calendar days.

NOTICE GIVEN BY ORDER OF THE CITY OF KIRKLAND

Published in the Daily Journal of Commerce: October 21, 2020

END OF SECTION

BIDDER'S CHECKLIST

The omission or deletion of any bid item may be considered non-responsive and may be cause for the rejection of the bid.

1. ☐ Has a bid bond or certified check been enclosed with your bid? Is the amount of the bid guaranty at least 5 percent of the total amount of the bid?
2. ☐ Has the proposal been properly completed and signed? Do written amounts on the proposal agree with the amounts shown in the figures?
3. ☐ Have you bid on all items including, if applicable, all alternates?
4. ☐ Have you acknowledged all addenda, if any, in the Bid Form (Section 00 41 00)
5. ☐ Do not submit any of the forms still attached to the Project Manual. Remove or copy the forms and submit in the sealed envelope as directed.
6. ☐ Are you and all your subcontractors familiar with the schedule of value requirements including but not limited to the required placement of 5% of the bid for work between substantial completion and final completion?
7. ☐ Have you reviewed the Bidder's Qualifications and Bidder Responsibility Criteria forms and understand these obligations if you are selected as the apparent low bidder?
8. The following items must be completed and included with the Bid Form within the sealed envelope:

   A. ☐ **Bid Form (00 41 00)** The bid price must be shown in the space provided. Show price in both words and figures. The bid form must be completed in full, signed, and dated.

   B. ☐ **Bidder's Qualifications Form (00 10 20):** This form must be filled in and signed. The owner reserves the right to check all statements and to judge the adequacy of the bidder's qualifications.

   C. ☐ **Bid Bond Security Form (00 43 30):** A surety issued bid bond must be executed by the bidder and its surety company. The amount of the bid bond shall be not less than five (5%) of the total bid and may be shown in dollars or on a percentage basis. A cashier's check payable to the City of Kirkland and issued for an amount not less than 5% of the total bid may be submitted in lieu of a bid bond.

   D. ☐ **Non-Collusion, Bidder Responsibility, and Minimum Wage Certification Form (00 15 40):** This form must be filled in, signed, and notarized.

   E. ☐ **Subcontractor Listing (00 44 00):** This form must be filled in and signed if the estimated bid amount exceeds $1,000,000 as required by RCW 39.30.060. (One hour after published bid submittal time for HVAC and electrical subcontractors; 48 hours after published bid submittal time for structural steel installation and rebar installation subcontractors.)

9. The following forms are to be executed after the contract is awarded:

   A. ☐ **AGREEMENT FORM (00 52 20):** This agreement to be executed by the successful bidder.

B. ☐ **PERFORMANCE BOND (00 61 40):** One hundred percent of the Contract Price to be executed by the successful bidder and his surety company. The surety on such bonds shall be a duly authorized surety company satisfactory of the Owner.

C. ☐ **LABOR MATERIALS AND TAXES BOND (PAYMENT BOND) (00 61 41):** One hundred percent of the Contract Price to be executed by the successful bidder and his surety company. The surety on such bonds shall be a duly authorized surety company satisfactory of the Owner.

D. ☐ **RETAINAGE INVESTMENT OPTION (00 45 70):** This agreement to be executed by the successful bidder.

J. ☐ **CERTIFICATES OF INSURANCE (00 60 00):** To be executed by the successful bidder and by an acceptable insurance company. The City of Kirkland must be named as an additional insured.

K. ☐ **CONTRACTOR'S CERTIFICATION (00 83 00):** Concerning Labor Standards and Prevailing Wage Requirements. Submit Statement of Intent to Pay Prevailing Wages. (Form F 700-029-000, available at Offices of Washington State Department of Labor and Industries).

10. ☐ Special Note: Prior to commencing work, the Contractor and all subcontractors must have applied and paid for a City of Kirkland Business License.

END OF SECTION

BIDDER'S QUALIFICATIONS

Each bidder submitting a proposal for this Project shall submit, as part of its bid, the following information:

1. Name of Bidder: _____

2. Business Address: _____
   _____
   _____

3. Telephone Number and Area Code: _____

4. IRS Federal Employer's Identification Number: _____

5. Current State Unified Business Identification Number_____

6. Number of years engaged in the contraction business under the present firm Name: _____

7. Total value of contracts in force: _____

8. To qualify for bidding for this project the General Contractor as the legal entity bidding the project shall have constructed one (1) fire station, and one (1) municipal project with a total value of $250,000 or greater, and within the past (4) four years the following:

   A. A demonstrated body of work of similar complexity and similar construction cost.

9. List below project(s) which meet Items A and/or B as outlined above. *(Attach additional project pages if required)*

Project Name: _____
Project Value: _____
Reference Name, phone number and email: _____

Project Name: _____
Project Value: _____
Reference Name, phone number and email: _____

Project Name: _____
Project Value: _____
Reference Name, phone number and email: _____

Project Name: _____
Project Value: _____
Reference Name, phone number and email: _____

Project Name: _____
Project Value: _____
Reference Name, phone number and email: _____

Project Name: _____
Project Value: _____
Reference Name, phone number and email: _____

Project Name: _____
Project Value: _____
Reference Name, phone number and email: _____

Project Name: _____
Project Value: _____
Reference Name, phone number and email: _____

10. Recent significant projects completed by Bidder including owner's name, Approximate cost, and completion date:

    1. _____

    2. _____

    3. _____

    4. _____

11. Washington State Contractor Registration Number: _____

12. Bonding Reference: _____
    _____

13. Bonding Capacity: _____

Bidder:

By: _____ Title: _____ Date: _____

This Form Must Be Submitted with the Bid.

END OF SECTION

BIDDER'S RESPONSIBILITY CRITERIA

Low Responsible Bidder

It is the intent of the Owner to award a contract to the low responsible bidder. The Bidder must meet the minimum project bidding requirements outlined in Section 00 10 20 Bidder's Qualifications Section, Item 8.

In addition, the Owner shall consider an overall accounting of the items listed below which the bidder must meet. The bidder must submit the Non-Collusion, Bidder Responsibility, and Minimum Wage Certification Form (00 15 40) demonstrating that they meet the following criteria:

Bid Procedures and Conditions

Qualifications of Bidder

A. Bidders must meet the minimum qualifications of RCW 39.04.350, as amended:
"Before award of a public works contract, a bidder must meet the following responsibility criteria to be considered a responsible bidder and qualified to be awarded a public works project. The bidder must:
   (a) At the time of bid submittal, have a certificate of registration in compliance with chapter 18.27 RCW;
   (b) Have a current State unified business identifier number;
   (c) If applicable, have industrial insurance coverage for the bidder's employees working in Washington as required in Title 51 RCW; an employment security department number as required in Title 50 RCW; and a State excise tax registration number as required in Title 82 RCW; and
   (d) Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3).
   (e) If bidding on a public works project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the date of the bid solicitation; and
   (f) Have received training on the requirements related to public works and prevailing wage under this chapter and chapter 39.12 RCW. The bidder must designate a person or persons to be trained on these requirements. The training must be provided by the department of labor and industries or by a training provider whose curriculum is approved by the department. The department, in consultation with the prevailing wage advisory committee, must determine the length of the training. Bidders that have completed three or more public works projects and have had a valid business license in Washington for three or more years are exempt from this subsection. The department of labor and industries must keep records of entities that have satisfied the training requirement or are exempt and make the records available on its web site. Responsible parties may rely on the records made available by the department regarding satisfaction of the training requirement or exemption; and

(f) Until December 31, 2013, not have violated RCW 39.04.370 more than one time as determined by the Department Of Labor And Industries.

B. In addition to the bidder responsibility criteria above, the bidder must also meet the following relevant supplemental bidder responsibility criteria applicable to the project:

a. The Bidder shall not currently be debarred or suspended by the Federal government. The Bidder shall not be listed as a current debarred or suspended bidder on the U.S. General Services Administration's "Excluded Parties List System" website. Bidder debarment or suspension status may be verified through this website: http://www.sam.gov/. The Owner may also use other sources of information that may be available to otherwise determine whether the Bidder is in compliance with these supplemental criteria.

b. The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue, without a payment plan approved by the Washington State Department of Revenue. The Bidder shall not be listed on the Washington State Department of Revenue's "Delinquent Taxpayer List", which may be verified at the following website: http://dor.wa.gov/content/fileandpataxes/latefiling/dtlwest.aspx. The Owner may also use other sources of information that may be available to otherwise determine whether the Bidder is in compliance with these supplemental criteria.

c. The Bidder shall not have been convicted of a crime involving bidding on a public works contract within five (5) years prior to the bid submittal deadline. The Bidder shall provide a duly executed sworn statement (on the included form, or on a form otherwise determined to be acceptable by the Owner), that the Bidder has not been convicted of a crime involving bidding on a public works contract. The Owner may also use independent sources of information that may be available to otherwise determine whether the Bidder is in compliance with these supplemental.

d. The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established written procedure which the Bidder uses to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" contractors as defined per RCW 39.06.020. The Owner may also use independent sources of information that may be available to otherwise determine whether the Bidder is in compliance with these supplemental criteria.

e. The Bidder shall not have a record of prevailing wage complaints filed against the Bidder within five (5) years prior to the bid submittal date that demonstrates a pattern of failing to pay workers prevailing wages, unless there are extenuating circumstances that are acceptable to the Owner. The Owner may also use independent sources of information that may be available to otherwise determine whether the Bidder is in compliance with these supplemental criteria.

f. The Bidder shall not have had any public works contract terminated for cause by a government agency during the five (5) year period immediately preceding the bid submittal deadline for the project, unless there are extenuating circumstances acceptable to the Owner. The Bidder shall provide a duly executed sworn statement (on the included form, or in a form otherwise determined to be acceptable by the Owner), that the Bidder has not had any public works contract terminated for cause by a government agency during the five (5) year period immediately preceding the bid submittal deadline for the project. The Owner may also use independent sources of information that may be available to otherwise determine whether the Bidder is in compliance with these supplemental criteria.

g. The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects within three (3) years of the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances which are acceptable to the Owner. The Owner may also use independent sources of information that may be available to otherwise determine whether the Bidder is in compliance with these supplemental criteria.

h. Within two (2) years prior to the bid submittal date the Bidder shall not have had a project construction site shut down due to a safety violation (i.e., WISHA / OSHA written citations) from the Washington State Department Labor & Industries or analogous agency with jurisdiction in the location the work was performed, regardless of whether such willful and/or serious safety violations have been abated or not. The Bidder shall maintain compliance with all safety and health requirements (i.e., WISHA / OSHA) from the Washington State Department Labor & Industries (or analogous agency with jurisdiction in the location the work is performed). The Owner may verify such information provided with the Washington State Department Labor & Industries or analogous agency with jurisdiction in the location the work was performed. The Owner may also use other sources of information that may be available to otherwise determine whether the Bidder is in compliance with these supplemental criteria.

C. If a Bidder fails to supply the required bidder responsibility documentation, information, or materials, then Bidder may be determined by the Owner to be non-responsive, and the bid may be rejected on this basis. If the Owner determines the apparent successful bidder does not meet the bidder responsibility criteria above and is therefore not a responsible bidder, the Owner shall notify the bidder in writing with the reasons for its determination. If the bidder disagrees with this determination, it may appeal the determination within twenty-four (24) hours of receipt of the Owner's determination by presenting additional written information to the Owner. The Owner will consider the additional information before issuing its final determination. If the Owner's final determination affirms that the bidder is not responsible, the Owner will not execute a contract with any other bidder until two (2) business days after the bidder determined to be not responsible has received the final determination. Please note that the above-described information, materials, and documentation requested by the Owner for purposes of determining Bidder responsibility is not necessarily exclusive, and the Owner expressly reserves the right to request additional information, materials, and

documentation as may be determined to be necessary or desirable by the Owner in order to evaluate and determine Bidder's compliance with the above-described bidder responsibility criteria. At all times, the Owner may also use other sources of information that may be available to otherwise determine whether the Bidder is in compliance with the forgoing bidder responsibility criteria.

END OF SECTION

NON-COLLUSION, BIDDER RESPONSIBILITY, AND MINIMUM WAGE CERTIFICATION FORM

In accordance with the Contract Documents and Instructions to Bidder, the Bidder must provide the following sworn statement and certification:

Name of Bidder: _____

Address: _____

Telephone No._____

E-Mail:_____

I, _____ , the undersigned declarant, as the duly authorized representative on behalf of _____ _____ (herein the "Bidder") hereby make this declaration on the basis of facts within the scope of my first hand knowledge and authority to which I am competent to testify:

1. I hereby certify, swear and affirm under penalty of perjury, that the Bidder, as of the date of this declaration (below) meets all of the minimum bidder responsibility qualifications of RCW 39.04.250, as amended.

2. I hereby certify, swear and affirm under penalty of perjury, that the Bidder, as of the date of this declaration (below) meets all of the minimum project bidding requirements outlined in the Bidder's Qualifications Form (Section 00 10 20) Item 8, if any.

3. I hereby certify, swear and affirm under penalty of perjury, that the Bidder, as of the date of this declaration (below) meets all of the supplemental bidder responsibility criteria as set forth in the Bidder's Responsibility Criteria (Section 00 15 30), Section B.

4. I hereby certify, swear and affirm under penalty of perjury, that the undersigned is the person that submitted the bid herewith, that such bid is genuine and not a sham or collusive, or made in the interest of any person not therein named; and he/she further says that said Bidder has not directly or indirectly induced or solicited any Bidder on the above work or supplies to put in a sham bid, or any other person or corporation to refrain from bidding; and that said Bidder has not in any manner sought by collusion to secure to himself or to any other person an advantage over any other Bidder or Bidders.

5. I hereby certify, swear and affirm under penalty of perjury, that in connection with the performance of the work of this Project, if awarded, I will pay each classification of laborer, workman, or mechanic employed in the performance of such work; not less than the prevailing rate of wage or not

less than the minimum rate of wages as specified in the Contract Documents.

Signed under penalty of perjury under the laws of the State of Washington this _____ day of _____ 20__, at _____, Washington.

Name of Bidder/Contractor:_____

Signature: _____
Print Name:_____
Title: _____

STATE OF WASHINGTON
} ss.
COUNTY OF _____

I certify that I know or have satisfactory evidence that _____ is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was duly authorized execute the instrument and acknowledged it as the _____of _____,___ to be the free and voluntary act of such party for the uses and purposes herein mentioned.

DATED this _____ day of _____, 20__.

(SEAL)

_____
Notary Public
Print name:_____
Residing at _____
My commission expires _____

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071

The U.S. Department of Transportation (USDOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., ET. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of USDOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the USDOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

END OF SECTION

INSTRUCTION TO BIDDERS

A. EXAMINATION OF SITE AND CONSTRUCTION DOCUMENTS

1. Before submitting a proposal, the bidder shall:
   a. Carefully examine the drawings and specifications,
   b. Visit the site of the work, (Bidders are required to attend one of the two pre-bid conference meetings on site)
   c. Fully inform itself of existing conditions and limitation, relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of its obligation to furnish all material and labor necessary to carry out the provisions of this contract.
   d. Rely entirely upon its own judgment in making its proposal,
   e. Include in its bid a sum sufficient to cover all items required by the contract including all labor, materials, services, and incidentals necessary to complete this project.

B. ADDENDA AND INTERPRETATIONS

Bidders shall promptly notify the City of Kirkland of any ambiguity, inconsistency or error which they may discover upon examination of the Project Manual, Drawings, and any Addenda or of the site and local conditions.

Bidders requiring clarification or interpretation of the Project Manual, Drawings, and/or any Addenda shall provide a written request to the City of Kirkland at least seven (7) days prior to the date for receipt of Bids.

Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the Project Manual and Drawings. Any interpretation, correction or change of the Project Manual, Drawings, and any Addenda made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.

Failure of any bidder to receive Addenda shall not relieve any such bidder from any obligation under its bid as submitted. All Addenda so issued shall become part of the Contract Documents. Bidders shall acknowledge receipt of all Addenda, if any, on the Bid Form. Failure to do so may result in the bid being declared non-responsive.

No oral statements by Owner, Engineer, Architect, or other representative of the Owner shall, in any way, modify the Project Manual, Drawings, and any Addenda whether made before or after letting the Contract.

Questions regarding this project shall be submitted in writing to Anneke Davis (adavis@kirklandwa.gov) via e-mail with the subject line of “FS24: Bid Question”. Questions received via phone or any other method other than e-mail with the appropriate subject line will not be accepted. Bidders shall submit questions no later than seven (7) calendar days prior to the scheduled bid opening.

C. PRODUCT SUBSTITUTIONS:

1. Substitutions: Bids must be based upon the specific articles and materials named in the Project Manual, Drawings, and any Addenda. Substitution may be made only under the following conditions:
   a. Prior to Bid Opening: Not less than seven (7) calendar days prior to bid opening, prime bidders may submit to the City of Kirkland written requests for approval of articles or materials, accompanied by complete descriptions, technical data and samples. Approval or rejection of the proposed substitutions will be made by addenda issued to all bidders. Submit material/product requests to Chris Dodd (CDodd@kirklandwa.gov) via e-mail with the subject line of "FS27: Substitution Request". Requests received via phone or any other method other than e-mail with the appropriate subject line will not be accepted. Bidders shall submit substitution requests no later than seven (7) calendar days prior to the scheduled bid opening.
   b. After Award of Contract: Approval of substitution will be made only in exceptional cases where the Contractor submits satisfactory evidence to the City of Kirkland that through no fault of its own, specified or otherwise approved items cannot be obtained in time to avoid delay to the work. Approval in such cases shall conform to the other requirements above.

CI. BID FORM (Section 00 41 00)

Bids must be submitted on and according to the Bid Form. Fill in all spaces. Bids shall not contain any recapitulation of work done. State numbers in writing and in figures. Completed form must be without interlineation, alteration or erasure. Signatures shall be in longhand. The bid price (s) for the work as specified in the Project Manual, Drawings, any Addenda and any Alternates must be the total price to cover all items required by the contract including all labor, materials, services, taxes, permits, and incidentals necessary to complete this project.

CII. POWER OF ATTORNEY

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of the power of attorney.

CIII. ORAL AND TELEGRAPHIC BIDS

Oral and telephonic modifications of bids cannot be considered.

CIV. SUBMISSION OF BID

Enclose bid and bid bond in opaque sealed envelope, as indicated in the Invitation to Bid; Deliver in person or by post. Bidder is responsible for delivery of bid at or before the time set for bid opening. The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified

to carry out the obligation of the contract and to complete the work contemplated therein. Conditional bids will not be accepted. No proposal or bid may be changed after the time set for receiving bids.

H. BID BOND

Each bidder agrees to furnish a certified check, bank cashier's check, or bid bond in the amount equal to five percent (5%) of the total base bid plus addictive alternative bids (if applicable) within its bid proposal. Failure to provide this bid security when required shall render the bid non-responsive. The right is reserved to hold the bid security of the three lowest bidders until the award of the contract or for a period of (60) sixty days, whichever is the shorter time. Bids of all unsuccessful bidders will be returned as soon as feasible after the bid opening.

I. WITHDRAWAL OF BIDS

Any bidder may withdraw its bid either personally or by written request at any time prior to the hour set for the bid opening. No bid may be withdrawn or modified after the time set for opening unless and until the award of the contract is delayed for period exceeding (60) sixty days.

J. TIME OF COMPLETION AND LIQUIDATED DAMAGES

The Owner can issue Notice to Proceed at any time after contract execution. Bidder must agree to commence work within 10 calendar days of receipt of the Notice to Proceed; and Substantially Complete the Work within 90 consecutive calendar days of the date of the Notice to Proceed, and to Finally Complete the Work within 25 consecutive calendar days thereafter. Bidder must agree to pay as liquidated damages the sum of
$250 for each consecutive calendar day that Substantial Completion is delayed and the sum of $250 thereafter for each consecutive calendar day that Final Completion is delayed. Liquidated damages have been established based on the estimated cost that will be incurred by City of Kirkland in the event the Contractor fails to complete the Work in the time stipulated.

K. SECURITY FOR FAITHFUL PERFORMANCE

Simultaneously with its delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of the Contract and for payment of all persons performing labor under the Contract and furnishing material or services in connection with the Contract as described in the Contract Documents. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner, registered in the State of Washington, Insurance Commissioner's Office. List Bonding Agent and address of same.

L. INSURANCE

The Contractor shall obtain such construction insurance as is set forth in Section 00 60 00 "Bonds and Certificates."

M. QUALIFICATIONS OF BIDDERS

Bidder must meet all criteria set forth in the Bidder's Qualifications (Section 00 10 20), Item 8 and the Bidder's responsibility Criteria in Section 00 15 30). The Owner may make such investigations as necessary to determine the ability of a Bidder to perform the work, and the Bidder shall furnish all such information and data as may be requested prior to bidding. The Owner reserves the right to reject any bid if the evidence submitted by, or if investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to perform the obligations of the Contract and to complete the work contemplated therein. Conditional Bids will not be accepted.

N. LAWS AND REGULATIONS

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they shall be deemed to be included in the Contract the same as though written out in full therein. Bidders are advised that if successful, they will be required to meet all applicable federal, state, and local laws pertaining to permits, licenses, fees and taxes, as well as laws pertaining to employment and wages. Bidders are responsible for determining the extent and applicability of such laws.

O. AWARD OF THE CONTRACT/REJECTION OF BIDS

1. The Contract will be awarded to the responsible bidder submitting the lowest proposal complying with the condition of the Invitation for Bid and these contract documents provided the bid is reasonable and in the best interest of The Owner. Items in this bid, approved for contract by City of Kirkland, shall be awarded by the City of Kirkland.
2. City of Kirkland reserves the right to select, or not select, all or individual alternate bid items whichever is determined to be in the best interest of the City of Kirkland. The City of Kirkland has the right to determine the low bidder on the basis of the sum of the Base Bid and Alternates accepted.
3. City of Kirkland reserves the right to reject any and all bids and to waive any informality in bids received whenever such rejection or waiver is in the interest of the Owner.
4. The bidder to whom the award is made will be notified at the earliest practicable date.

P. DISQUALIFICATION OF BIDDERS

Any one or more of the following causes may be considered sufficient for the disqualification of a Bidder and the rejection of its bid or bids:

a. Evidence of collusion among Bidders.
b. Lack of expertise as shown by past work, and judged from the standpoint of workmanship and performance history.
c. Uncompleted work under other contracts which, in the judgment of the City, might hinder or prevent the prompt completion of additional work if awarded.

d. Being in arrears on existing contracts, in litigation with an Owner, or having defaulted on a previous contract.
e. Contractor's naming oneself as a Subcontractor for which they have no expertise and working knowledge directly within the firm.
f. Contractor's inability to meet the Bidder's Qualifications (Section 00 10 20) outlined in item 8.
g. Contractor's inability to meet the Bidder's Responsibility Criteria outlined in Section 00 15 30.
h. Failure to comply with any requirements of the Invitation for Bid or Instructions to Bidders.

END OF SECTION

BID FORM

Bidder's Firm Name:_____ Date:_____

Address:_____

_____

Telephone No.:_____

TO: City of Kirkland
123 5th Avenue
Kirkland, WA 98033

Fire Station 27 Roof Project
11210 NE 132ND ST, Kirkland, WA 98034
JOB NO. 44-20-CMO

GENERAL PROPOSAL

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this proposal are those named herein; that this proposal is in all respects fair and without fraud; that it is made without collusion with any official or employee City of Kirkland; and that the proposal is made without any connection or collusion with any person making another proposal on this contract.

The Bidder further declares that they have carefully examined the contract documents for the construction of the project; that they have personally inspected the site; that they have satisfied themselves as to the quantities involved, including materials and equipment and conditions of work involved, including the fact that the description of the quantities of work materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the contract documents; and that this proposal is made according to the provisions and under the terms of the contract documents, which documents are hereby made a part of this proposal.

The Bidder further agrees that they have exercised their own judgment regarding the interpretation of subsurface information and have utilized all data which they believe is pertinent from the Architect, Owner and other sources in arriving at his/her conclusions.

The Bidder agrees to hold their bid proposal open for sixty (60) days after the actual date of bid opening and to accept the provisions of the Instructions to Bidders regarding disposition of bid bond.

The Bidder agrees that if this bid is accepted through Award of Contract by Council, it will, within ten (10) calendar days after notification of acceptance, execute the contract with the Owner in the form of contract included in the contract documents, and will, at the time of execution of the Contract, deliver to the Owner the Performance and Payment Bonds and all Certificates of Insurance required therein, and will, to the extent of its proposals, furnish all machinery, tools, apparatus, and other means of construction and do the work in the manner, in the time, and according to the requirements as specified in the contract documents and required by the engineer/architect or other project manager designated thereunder.

TIME OF COMPLETION:

The Owner can issue Notice to Proceed at any time after contract execution. The undersigned understands and agrees that Substantial Completion of the work shall be no later than 90 consecutive calendar days

BID FORM

after the Notice to Proceed, and that Final Completion of the work shall be no later than 25 consecutive calendar days after Substantial Completion.

PERMITS, FEES AND INSPECTIONS:

The Contractor will apply for all City issued building permits. The Owner will pay for the permits. The contractor is required to meet the requirements and conditions of any owner-procured permits, to post the permits, and for the scheduling and inspections related to these permits. The Contractor is responsible for all other required permits for the project in their entirety: including, but not limited to, the plumbing, electrical, mechanical, and utility permits. Utility connection fees, if incurred by the contractor to facilitate the work, shall be paid back to the contractor by the Owner within the contact document change order process without markup of any kind. All other City of Kirkland and other State of Washington or local agency permits, and requirements are the financial and administrative responsibility of the Contractor at no cost to the City of Kirkland.

BASE BID:

The Bidder further proposes to accept as full payment for the work proposed herein the amounts computed under the provisions of the contract documents and based upon the bid price for fully completed work as included in the proposal and the Bid Price represents a true measure of the labor, equipment, and materials required to perform and complete the work, including all allowances for overhead and profit for each type of work called for in these contract documents, as well as all use taxes, overhead, profit, bond premiums, insurance premiums and all other miscellaneous and incidental expenses. The amounts shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.

The undersigned bids for complete construction of the Fire Station 27 Roof Project as follows:

For the **Total for Base Bid,** which does not include Washington State sales tax, the sum of:

_____ DOLLARS
(Please print dollar amount in words in space above.)

$_____
(Please write dollar figure in numerals in space above.)

ADDENDA

Receipt of the following Addenda is hereby acknowledged.

Addendum No. _____ dated _____

Addendum No. _____ dated _____

Addendum No. _____ dated _____

Addendum No. _____ dated _____

BID REVIEW MEETING:

BID FORM

The Undersigned agrees that if they are the successful bidder, they will be available for a bid review meeting with the Architect and the Owner at the Owner's office, at a time to be agreed upon.

Within the three-year period immediately preceding the date of the bid solicitation for this Project, bidder has not been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct:

_____
CONTRACTOR (Firm Name)

_____ _____
By (Signature) Printed Name/Title of Signatory

_____
(Indicate whether Contractor is Partnership,

_____ _____
Washington State Contractor's Registration Number Contractor's Industrial Insurance Account Number

Contractor's Address:

_____ _____
Telephone Number

_____ _____
Fax Number

BID FORM TO BE SUBMITTED IN A SEALED ENVELOPE
END OF SECTION

BID DEPOSIT

Herewith find deposit in the form of a cashier's check or certified check in the amount of $_____which amount is not less than five percent (5%) of the total bid.

SIGN HERE_____

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and _____, as Surety, are held and firmly bound unto the City of Kirkland, as Obligee, in the penal sum of _____ _____ dollars, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for

_____ _____
Project Name Job Number

according to the terms of the proposal or bid made by the Principal therefor, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED THIS _____ DAY OF _____, 20_____.

PRINCIPAL:	SURETY:
_____	_____
_____	_____

Note: If a Bid Bond is provided, it must be accompanied by a power of attorney which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this Bid Bond.

RETAINAGE INVESTMENT OPTION

CONTRACTOR:

PROJECT NAME:

DATE:

Pursuant to R.C.W. 60.28.010, as amended, you may choose how your retainage under this contract will be held and invested. Please complete and sign this form indicating your preference. If you fail to do so, the Owner will hold your retainage as described in "Current Expense" option 1 below.

____1. Current Expense: The Owner will retain your money in its Current Expense Fund Account until thirty days following final acceptance of the improvement or work as completed. You will not receive interest earned on this money.

____2. Interest Bearing Account: The Owner will deposit retainage checks in an interest-bearing account in a bank, mutual savings bank, or savings and loan association, not subject to withdrawal until after the final acceptance of the improvement or work as completed or until agreed to by both parties. Interest on the account will be paid to you. Any fees incurred shall be the responsibility of the contractor.

____3. Escrow/Investments: The Owner will place the retainage checks in escrow with a bank or trust company until thirty days following the final acceptance of the improvement or work as completed. When the moneys reserved are to be placed in escrow, the Owner will issue a check representing the sum of the moneys reserve payable to the bank or trust company and you jointly. This check will be converted into bonds and securities chosen by you and approved by the Owner and these bonds and securities will be held in escrow. Interest on these bonds and securities will be paid to you as interest accrues.

The Contractor in choosing option (3) agrees to assume full responsibility to pay all costs which may accrue from escrow services, brokerage charges or both, and further agrees to assume all risks in connection with the investment of the retained percentages in securities.

____4. Bond-in-Lieu: With the consent of the Owner, the contractor may submit a bond for all or any portion of the amount of funds retained by the Owner in a form and from an authorized surety insurer acceptable to the Owner. Such bond and any proceeds therefrom shall be made subject to all claims and liens and in the same manner and priority as set forth for retained percentages in this chapter. The Owner shall release the bonded portion of the retained funds to the contractor within thirty days of accepting the bond from the contractor. Whenever an Owner accepts a bond in lieu of retained funds from a contractor, the contractor shall accept like bonds from any subcontractors or suppliers from which the contractor has retained funds. The

contractor shall then release the funds retained from the subcontractor or supplier to the subcontractor or supplier within thirty days of accepting the bond from the subcontractor or supplier.

Retainage is normally released 30 days after Final Acceptance of the work, or following receipt of Labor and Industries/Department of Revenue clearance, whichever date is the later. Retainage on landscaping work may be retained longer, due to its seasonal nature. State law allows for limited early release in certain circumstances.

CONTRACTOR:

Signature: _____

Print or Type Name: _____

Title: _____

Date: _____

THIS FORM TO BE EXECUTED AFTER CONTRACT IS AWARDED

END OF SECTION

AGREEMENT FORM

THIS AGREEMENT is made and entered into this _____ day of _____, 20___ by and between the City of Kirkland, Washington, a municipal corporation of the State of Washington, hereinafter referred to as "City" and _____, hereinafter referred to as "Contractor" effective as of the date of the first signature on the agreement so long as all other parties' authorized signatories have also executed the Agreement.

In consideration of the mutual covenants and obligations contained herein, the City and Contractor agree as follows:

1. **Agreement.** The "Contract Documents" form the "Contract." The Contract Documents consist of this Agreement, any attached Exhibits, the Project Manual, including the General Conditions; Supplemental Conditions, if any, Special Provisions, if any, the Specifications, Contract Plans, and Amendments to the Specifications; and written modifications, amendments and Change Orders to the Contract issued after execution of this Agreement, the City's Contract Bid Documents for the Project, including but not limited to the Bid package, Instructions to Bidder, Addenda, Proposal Form, Contractor's Proposal and all documents submitted therewith in response to the City's Invitation to Bid, and any additional documents referenced as comprising the Contract and Contract Documents, which are hereby fully incorporated as part of the Contract as if set forth herein.

2. **Project.** Contractor shall fully complete all Work and furnish all labor, tools, materials, and equipment for the project entitled Fire Station 27 Roof Project, Project No. 44-20-CMO, including all changes to the Work, timely and in strict accordance with the Contract Documents.

3. **Payments.** In consideration of full and faithful compliance with the terms and conditions of this agreement and the Contract Documents, the City shall pay Contractor, at the times and in the manner provided in the Contract Documents, the total sum of _____ Dollars ($_____), which sum is subject, however, to increase or decrease in such proportion as the quantities for unit price items set forth in the Bid Proposal Form are so changed as set forth in the Contract Documents or as modified by an approved Change Order or addendum as permitted by the Contract Documents. The payments to Contractor include the costs for all labor, tools, materials, equipment, and subcontracts for the Work.

4. **Contract Sum.** The Contract Sum shall be the bid amount plus anticipated Washington State Sales Tax, subject to addition and deductions as provided in the Contract Documents.

   The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

   _____

   See Section 01 22 00 of the Contract Documents for descriptions of Unit Prices. Sales tax is not included in the unit prices listed below.

5. **Completion Date.** The Contract Time shall be measured from the Notice to Proceed date to the date of Substantial Completion, subject to adjustments of the Contract Time as provided in the Contract Documents. Time is of the essence in completion of the Work. Contractor shall achieve Substantial Completion of the Work by 90 consecutive calendar Days after receipt of the notice to proceed, which shall be sent via e-mail, subject to adjustments of this Contract Time as provided in the Contract Documents, and shall achieve Final Completion not later than twenty-five (25) consecutive calendar Days thereafter. Contractor represents to the City that the Contract Time is adequate for full performance of the Work. Contractor shall also achieve any interim milestones and phasing requirements set forth in the Contract Documents. If the physical Work under this Agreement is not completed within the time specified, Contractor shall pay liquidated damages and all engineering inspection and supervisions costs to the City as specified in the Contract Documents.

1. **Liquidated damages**. The City will assess, and Contractor will be responsible for, liquidated damages in the amount of $250.00 per Day for each Day beyond the Contract Time that Substantial Completion is not timely achieved and $250.00 per Day beyond the Contract Time that Final Completion is not timely achieved. Contractor and the City agree that any liquidated damages established by this Agreement are not penalties and are a reasonable estimation of actual damages to the City, as of this date of Agreement, based on the inherent uncertainty and difficulty in calculating and quantifying damages caused by delays in the construction of the Project. This provision is intended to be in lieu of Contractor's liability for delay damages sustained by Owner by reason of Contractor's delay in reaching Substantial Completion by the date set for Substantial Completion. This provision shall not relieve or release Contractor from liability occasioned by other breaches or defaults under this Contract, nor shall it limit Owner's rights to terminate the Contract for cause pursuant to the General Conditions or to pursue any other remedy under the Contract or otherwise. In addition, Owner may recover its actual damages (including direct architectural, administrative, and other related costs attributable to the Project) as a result of any delay by Contractor in reaching Final Completion within the time required in Paragraph 4 above.

2. **Independent Contractor.** Contractor's employees, while engaged in the performance of any of Contractor's services under this Agreement, shall be considered employees of the Contractor and not employees, agents, representatives of the City and as a result, shall not be entitled to any coverage or benefits from the City. Contractor's relation to the City shall be at all times as an independent contractor. Any and all Workman's Compensation Act claims on behalf of Contractor employees, and any and all claims by third-party as a consequence of any negligent act or omission on the part of Contractor's employees, while engaged in services provided to be rendered under this Agreement, shall be solely Contractor's obligation and responsibility.

7. **Jurisdiction and Venue.** Any lawsuit or legal action brought by any party to enforce or interpret this Agreement or any of its terms or covenants shall be brought in King County Superior Court for the State of Washington.

8. **Contract is complete and integrated agreement**. The Contract represents the entire, complete, and integrated agreement between the parties and supersedes prior negotiations, representations or agreements, either written or oral. No oral representations or other agreements have been made by the parties except as specifically established in the Contract.

9. **Severability.** A court of competent jurisdiction's determination that any provision or part of this Agreement is illegal or unenforceable shall not cancel or invalidate the remainder of this Agreement, which shall remain in full force and effect. In such event a provision is determined void or unenforceable, the parties agree to negotiate a replacement provision to enable that party to receive the benefit as nearly as possible as to what it would have received but for the determination that a provision was illegal or unenforceable.

10. **Disclaimer.** No liability of Contractor shall attach to the City by reason of entering into this Agreement, except as expressly provided in this Agreement.

In witness whereof, the City, as approved by the City Council, and Contractor have executed this agreement by their proper officers or duly authorized agents

Dated: _____	Dated: _____
City of Kirkland	[Contractor Name] (Contractor)
By: _____	By: _____
Its: _____	Its: _____

Attention: If Contractor is a corporation, the name of the corporation should be listed in full and both the President and Secretary must sign the contract. OR, if one signature is permitted by corporation by-laws, a copy of the by-laws shall be furnished to the City and made part of the Contract Documents.

If the business is a partnership, the full name of each partner should be listed followed by d/b/a and the firm or trade name. Any one partner may sign the Contract.

If the business is a limited liability company, an authorized management member or manager must sign followed by his/her title.

(For corporations, LLC's and other legal entities)

STATE OF WASHINGTON)
) SS
COUNTY OF KING)

On this day before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____, to me known to be the _____ of _____, the legal entity that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said legal entity, for the uses and purposes therein set forth, and on oath stated that he/she was authorized to sign said instrument.

Given under my hand and official seal this _____ day of _____, 20___.

_____
Print Name: _____
NOTARY PUBLIC in and for the State of
Washington, residing _____
Commission expires: _____

(For individuals and d/b/a's)

STATE OF WASHINGTON)
) SS
COUNTY OF KING)

On this day before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____ and _____ to me known to be the individual(s) described herein and who executed the foregoing instrument, and acknowledged that he/she/they signed the same as his/her/their free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this _____ day of _____, 20__.

_____
Print Name: _____
NOTARY PUBLIC in and for the State of
Washington, residing _____
Commission expires: _____

END OF SECTION

BONDS AND CERTIFICATES

The bond and insurance requirements set forth on the following pages are required of the successful bidder.

1.01 GENERAL: In addition to the Bid Security, the City of Kirkland requires the Contractor to furnish the following bonds and insurance. The insurance coverage shall be maintained during the life of the Contract and for not less than one year thereafter.

1.02 EVIDENCE OF COMPLIANCE:

A. Performance Bond: Submitted at time of execution of the Contract and attached thereto.

B. Labor, Materials, and Taxes Bond: Submitted at time of execution of the Contract and attached thereto.

B. Insurance: A Certificate of Insurance shall be filed with "City of Kirkland." This Certificate shall be reflective of all Insurance Coverage required by the City's Contract Documents. Any Certificate filed with the City of Kirkland found to be incomplete or not according to Form, will be returned as not satisfactory. Rejected Certificates shall be corrected as necessary and resubmitted to the City of Kirkland.

Certificates of Insurance shall indicate the following to be Additional Named Insureds:

- City of Kirkland; It's officers, elected officials, employees, agents, and volunteers
- Consultants hired by the City of Kirkland to administer the construction
- The Architect/Engineer of Record

In addition to the foregoing, the Certificate of Insurance must include a Cancellation Notification of not less than forty-five (45) days. The Certificate should also contain the Contract Number and a "concise verbal definition" of the Contract to which the Certificate applies.

1.03 INSURANCE GENERALLY: The Contractor shall not commence work under this contract until he has obtained the insurance required hereunder and such insurance has been approved by the City of Kirkland. In like manner, the General Contractor shall not allow any subcontractor to commence work on any subcontract until the subcontractor has submitted to the General Contractor a Certificate of Insurance reflective of the coverage required by the City of Kirkland. The City of Kirkland's approval of insurance shall not relieve or decrease the Contractor's liability hereunder. Each policy shall contain an endorsement stating that the insurance company will not, prior to the completion of the Work or any expiration date shown on the policy and certificate, whichever occurs first, terminate the policy or change any coverage therein without first mailing, by registered mail, written notice of such action

at least thirty (30) days prior to the termination or change, to the City of Kirkland. Certificate shall be issued on an ACORD Form, or a form that meets with the City of Kirkland's approval. The Insuring Company shall have a Best Rating of A, or meet with the City of Kirkland's approval.

The "Cancellation" Block shall be altered to include the wording "Should any of the above described policies be canceled or materially reduced before expiration date thereof, the issuing company will mail 30 days written notice to the certificate holder named to the left."

1.04 CONTRACTOR'S LIABILITY INSURANCE: The insurance required by the City of Kirkland is as specified below and in the amounts indicated:

A. Worker's Compensation and Employer's Liability Insurance: All employees of the Contractor and subcontractors shall be insured under Washington State Industrial Insurance. Employees not subject to the State Act shall be insured under Employer's Liability with a $2,000,000.00 limit of liability. A separate Certificate of Insurance shall be furnished to the City of Kirkland if any of the Contractor' payroll is not reported to the Washington State Industrial Insurance. The contractor shall be responsible for confirming compliance of all subcontractors with the above requirements.

B. Comprehensive General Liability and Comprehensive Automobile Liability Insurance: The Contractor shall obtain and retain Bodily Injury and Property Damage Liability Insurance providing the following:

1. Additional Insured: City of Kirkland, and the Architect/Engineer of Record shall be named as additional insured for liability arising out of the work of this Contract as a result of the negligence, real or alleged, on the part of the contractor and his subcontractors.
2. Limits of Liability: The minimum acceptable General Liability Limit shall be $5,000,000 Aggregate/$2,000,000 Occurrence. Coverage shall include owners & Contractors Protective Liability and Employers Liability (Stop-Gap) Coverage. The minimum acceptable Automobile Liability Limit shall be $2,000,000. The Owner does not represent that the minimum required insurance coverage or limits are adequate to protect Contractor from all liabilities.
3. Coverage: Coverage shall be written on an "Occurrence" Basis, or meet the City of Kirkland's approval. Coverage shall be as is usual to the practice of the Insurance Industry; included but not limited to the following coverages:
   a. Premises and Operations including Explosion, Collapse and Underground Liability;
   b. Products and completed Operations;
   c. Owners and Contractors Protective Liability;
   d. Broad form Property Damage Liability;
   e. Blanket Contractual Liability;
   f. Personal Injury Liability, including coverage's A, B, and C;
   g. Employers "Stop-Gap" Liability;
   h. Automobile Liability for All Owned, Non-Owned, Hired Leased or Borrowed Vehicles. Automobile Coverage shall include "Any Auto" or "Scheduled Autos" and shall include Hired and Non-Owned Auto Liability;
   i. Un-insured and Under-insured Motorist Coverage should also be in effect.

4. Products and Completed Operations Insurance: The minimum acceptable Annual Aggregate for Products and Completed Operations Liability shall be $5,000,000. This coverage must be maintained for a period of not less than three years after the final acceptance of the work performed.
5. Professional Liability: The minimum acceptable coverage for Professional Liability shall be $1,000,000, if applicable.

1.05 PROPERTY INSURANCE: The Contractor shall purchase and maintain property insurance upon the entire Work at the site to 115 percent of the full value thereof. This insurance shall include the interests the City of Kirkland, the Contractor, and all subcontractors in the Work being performed. The coverage shall be written on a "Builder's Risk" basis. All materials which are to be made part of the construction project are to be so insured while being stored at or off the job site(s) and/or while being transported to and from the job site(s). Builders Risk insurance shall be on a special perils policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including flood, earthquake, theft, vandalism, malicious mischief, and collapse. The Builders Risk insurance shall include coverage for temporary buildings, debris removal, and damage to materials in transit or stored off-site. This Builders Risk insurance covering the work will have a deductible of $5,000 for each occurrence, which will be the responsibility of the Contractor. Higher deductibles for flood and earthquake perils may be accepted by the Owner upon written request by the Contractor and written acceptance by the Owner. Any increased deductibles accepted by the Owner will remain the responsibility of the Contractor. The Builders Risk insurance shall be maintained until the Owner has granted substantial completion of the project. Insurance against loss of tools, equipment, construction, or otherwise not to be incorporated into the Work is the responsibility of the Contractor and the cost of such insurance shall not be included in the cost of insurance required herein before.

A. Waiver: City of Kirkland and the Contractor waive all rights against (1) each other and the subcontractors, sub-subcontractors, agents and employees each of the other, and (2) the Owner for damages caused by fire or other perils to the extent covered by insurance obtained pursuant to this Article or any other property insurance applicable to the Work, except such rights as they may have to the proceeds of such insurance held by the City of Kirkland, as trustee.

1.06 BONDS

A. Performance and Payment Bond: Furnish surety bond (Section 00 61 40) in an amount equal to 100 percent of the Contract Sum covering faithful performance of the work and payment of labor and materials. Furnish bonds issued by a bonding company licensed to transact business in the locality of the Work and approved by the Owner. The bond must state that it is provided pursuant to Ch. 39.08 RCW.

END OF SECTION

PERFORMANCE BOND

SURETY TO HAVE AN A.M. BEST RATING OF A:VII OR BETTER.

Bond No. _____

KNOW ALL PERSONS BY THESE PRESENTS, that _____ **(Contractor)**, as Principal, and _____, (insert name of surety), as Surety, a corporation duly organized under the laws of the State of _____, (insert Surety's state of incorporation), and authorized to do business as a surety in the State of Washington, are held and firmly bound unto the City of Kirkland (City) in the sum of _____ dollars **($_____)**, lawful money of the United States of America, plus the total amount of extra orders issued by the City to the Principal pursuant to the terms of the Contract referred to in the next succeeding paragraph hereof, for the payment whereof Principal and Surety bind ourselves, and our heirs, executors, administrators, representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has been awarded, and is about to enter into, a written Contract with the City for **PROJECT NAME: FIRE STATION 27 ROOF PROJECT**, which is hereby made a part of this bond as if fully set forth herein;

NOW, THEREFORE, the condition of this bond is such that:

1. If the Principal shall completely and faithfully perform all of its obligations under the Contract, including any warranties required thereunder, and all modifications, amendments, additions, and alterations thereto, including modifications which increase the contract price or time for completion, with or without notice to the surety;
2. If the Principal shall indemnify and hold the City harmless from any and all losses, liability, damages, claims, judgments, liens, costs, and fees of any type that the City may be subject to because of the failure or default of the Principal (a) in performance of any of the terms, conditions, or obligations of the Contract, including all modifications, amendments, additions, and alterations thereto, and any warranties required thereunder, and/or (b) in the payment for labor, equipment, and materials by satisfying all claims and demands incurred under the Contract, and reimbursing and paying Owner all expenses that Owner may incur in making good any default by the Principal; and
3. If the Principal shall indemnify and hold the City harmless from all claims, liabilities, causes of action, damages and costs, including property damages and personal injuries, resulting from any defect appearing or developing in the material provided or workmanship performed under the Contract;

THEN THIS obligation shall be null and void; otherwise to remain in full force and effect. If the City shall declare Principal to be in default of the Contract, and shall so notify Surety, Surety shall, within a reasonable time which shall not exceed 14 days, except for good cause shown, notify the City in writing of the manner in which surety will satisfy its obligations under this Bond.

Nonpayment of the Bond premium will not invalidate this Bond nor shall the City be obligated for the payment thereof. The Surety hereby waives notice of any modification of the Contract or extension of time made by the City.

Signed this _____ day of _____, 20__.

Principal:	_____	Surety:	_____
By:	_____	By:	_____
Title:	_____	Title:	_____
Address:	_____	Address:	_____
City/Zip:	_____	City/Zip:	_____
Telephone:	( ) _____	Telephone:	( ) _____

Note: A power of attorney must be provided which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this performance bond.

LABOR, MATERIAL, AND TAXES BOND (PAYMENT BOND)

Surety to have an A.M. Best rating of A:VII or better.

Bond No. _____

KNOW ALL PERSONS BY THESE PRESENTS, that, _____ **(Contractor)**, as Principal, and _____, (insert name of surety), as Surety, a corporation duly organized under the laws of the State of _____ (insert Surety's state of incorporation), and authorized to do business as a surety in the State of Washington, are held and firmly bound unto the City of Kirkland (City) for the use and benefit of claimants as hereinafter defined, in the sum of _____ **Dollars ($_____),** lawful money of the United States of America, plus the total amount of any extra orders issued by the City, for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has been awarded, and is about to enter into, a Contract with City of Kirkland for **PROJECT NAME: FIRE STATION 27 ROOF PROJECT**, which contract is by this reference made a part hereof;

WHEREAS, the contract is a public works contract, subject to the provisions of RCW Titles 39 and 60;

NOW, THEREFORE, the conditions of this obligation are such that, if the Principal shall promptly make payment to all claimants as hereinafter defined, for (a) all labor and material used or reasonably required for use in the performance of the contract and (b) all taxes, increases, and penalties incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due, then this obligation shall be void; otherwise, it shall remain in full force and effect, subject, however, to the following conditions: A claimant is defined as and includes (a) a person claiming to have supplied labor or materials for the prosecution of the work provided for in the contract, including any person having direct contractual relationship with the contractor furnishing the bond or direct contractual relationship with any subcontractor, or an assignee of such person, (b) the state with respect to taxes incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due and (c) any other person or entity as allowed or required by law.

1. The Principal and Surety hereby jointly and severally agree with the City that every claimant as herein defined, who has not been paid in full prior to Final Acceptance of the project, or materials were furnished by such claimant, has an action on this bond for such sum or sums as may be justly due claimant, and may have execution thereon. The City shall not be liable for the payment of any costs or expenses of any such suit or action.

(Form continues on next page)

2. No suit or action shall be commenced hereunder by any claimant (except the state with respect to taxes, increases, and penalties incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due) unless the claimant has sent the written notice required under RCW Title 39 to the Principal and to the City's Purchasing Agent by registered or certified mail, or by hand delivery, no later than 30 days after Final Acceptance of the Project.

The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against the improvement, whether or not claim for the amount of such lien be presented under and against this bond.

The Surety hereby waives notice of any modification of the contract or extension of time made by the City.

Signed this _____ day of _____ , 20___

Principal: _____	Surety: _____
By: _____	By: _____
Title: _____	Title: _____
Address: _____	Address: _____
City/Zip: _____	City/Zip: _____
Telephone: ( ) _____	Telephone: ( ) _____

Note: A power of attorney must be provided which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this performance bond.

END OF LABOR, MATERIAL AND TAXES PAYMENT BOND FORM

GENERAL CONDITIONS

PART 1 – GENERAL TERMS

1.1 DEFINITIONS

A. "Application for Payment" means a written request submitted by Contractor to Owner for payment of Work completed in accordance with the Contract Documents and approved Schedule of Values, supported by such substantiating data as Owner may require.

B. "Architect," "Engineer," or "A/E" means a person or entity lawfully entitled to practice architecture or engineering, representing Owner within the limits of its delegated authority.

C. "Award of Contract" refers to City of Kirkland Council's acceptance of the Contractor's Bid. Council Award, or Bid Rejection, will occur within 60 calendar days after Bid opening. If the lowest responsible Bidder and the City of Kirkland agree, this deadline may be extended. If they cannot agree on an extension by the sixty (60) calendar day deadline, the City of Kirkland reserves the right to Award the Contract to the next lowest responsible Bidder or reject all Bids. The City of Kirkland will notify the successful Bidder of the Contract Award in writing.

D. "Change Order" means a written instrument signed by Owner and Contractor stating their agreement upon all of the following: (1) a change in the Work; (2) the amount of the adjustment in the Contract Sum, if any, and (3) the extent of the adjustment in the Contract Time, if any.

E. "Claim" means Contractor's exclusive remedy for resolving disputes with Owner arising out of or relating to the Contract Documents or the breach thereof or requesting an adjustment in the Contract Sum or Contract Time. As used in the Contract Documents, the exclusive meaning of "equitable adjustment" is the ability of Contractor to follow the contractual dispute resolution process as set forth herein, including the requirement for submitting a timely Notice, substantiation, and Claim.

F. "Construction Change Directive" ("CCD") is a written order prepared by Owner that directs Work prior to total agreement on adjustment, if any, in the Contract Sum or Contract Time, or both.

G. The "Contract" is the agreement between Owner and Contractor and is formed by the Contract Documents. The Contract represents the entire and integrated agreement between Owner and Contractor and supersedes prior negotiations, representations or agreements, either written or oral.

H. "Contract Award Amount" is the sum of the Base Bid and any City accepted Alternates, including applicable sales tax at the current rate where the project resides.

I. "Contract Documents" includes the Executed Agreement, General Conditions, modifications to the General Conditions, Supplementary and Special Conditions, Drawings and Specifications, the Project Manual, the Bonds and Insurance Certificate Requirements provided in the Bid Documents, and all addenda and modifications thereof.

J. "Contract Sum" is the total amount payable by Owner to Contractor for performance of the Work in accordance with the Contract Documents, including all taxes imposed by law and properly chargeable to the Work, including applicable sales tax at the current rate where the project resides.

K. "Contract Time" is the number of calendar days allotted in the Contract Documents from the Notice to Proceed for achieving Substantial Completion of the Work.

L. "Contractor" means the person or entity who has agreed with Owner to perform the Work in accordance with the Contract Documents.

M. "Day(s)" means calendar day(s) unless otherwise specified.

N. "Drawings" are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, and may include plans, elevations, sections, details, schedules, and diagrams.

O. "Final Acceptance" means the written acceptance of the Work by Owner, as more fully set forth in Section 6.

P. "Final Completion" means that the Work is fully and finally complete in accordance with the Contract Documents and Contractor has submitted its final Application for Payment, as more fully set forth in Section 6.

Q. "Force Majeure" means those acts entitling Contractor to request an equitable adjustment in the Contract Time, as more fully set forth in Section 3.

R. "Notice" means a written notice which has been delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended or, if delivered or sent by registered or certified mail, to the last business address known to the party giving notice.

S. "Notice to Proceed" means a written Notice from Owner to Contractor that permits pre-construction and construction activities to commence upon specified terms and defines the date on which the Contract Time begins to run.

T. "Owner" means the City of Kirkland, a municipal corporation, which has the authority to enter into, administer, and/or terminate the Work in accordance with the Contract Documents. Owner shall designate in writing a Representative who shall have authority to bind Owner with respect to all matters requiring Owner's approval or authorization. A/E does not have such authority.

U. "Person" means a corporation, partnership, business association of any kind, trust, company, or individual.

V. "Prior Occupancy" means Owner's use of all or parts of the Project before Substantial Completion, as more fully set forth in Section 6.

W. "Project Manual" means all Bid Documents, Contract Documents, General Conditions, Supplementary Conditions, if any, Specifications, Special Provisions, if any, and Addenda, if any.

X. "Progress Schedule" means a schedule of the Work, in a form satisfactory to Owner, as further set forth in Section 3.

Y. "Project" means the total construction of which the Work performed in accordance with the Contract Documents may be the whole or a part and which may include construction by Owner or by separate contractors.

Z. "Schedule of Values" means a written breakdown allocating the total Contract Sum to each principal category of Work, in such detail and format as requested by Owner.

AA. "Specifications" are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services. Specifications are prepared in sections which conform generally with trade practices. These sections are for Owner and Contractor convenience and shall not control Contractor in dividing the Work among the Subcontractors or in establishing the extent of the Work to be performed by any trade.

BB. "Subcontract" means a contract between Contractor and a Subcontractor for the purpose of obtaining supplies, materials, equipment, work or services of any kind for or in connection with the Work.

CC. "Subcontractor" means any Person of any tier, other than Contractor, who agrees to furnish or furnishes by contract with, or through Contractor, any supplies, materials, equipment, or services of any kind in connection with the Work.

DD. "Substantial Completion" means that stage in the progress of the Work (or portion of the Work designated and approved by Owner) when the construction is sufficiently complete, in accordance with the Contract Documents, so that Owner can fully occupy or utilize the Work (or portion designated by Owner) for its intended use, as more fully set forth in Section 6. There may be separate dates of Substantial Completion specified in the Contract Documents for various phases or portions of the Work.

EE. "Work" means the construction and services required by the Contract Documents, and includes, but is not limited to, labor, materials, supplies, equipment, services, permits, and the manufacture and fabrication of components, performed, furnished, or provided in accordance with the Contract Documents.

FF. "Work Site" means the space identified and circumscribed on construction documents. The work site is controlled by the Contractor and the Contractor is responsible for compliance to regulatory requirements within the circumscribed area. Changes to the work site shall be submitted by Contractor and approved by Owner.

1.2 ORDER OF PRECEDENCE

Any conflict or inconsistency in the Contract Documents shall be resolved by giving the documents precedence in the following order, with a revision to a Contract Document having precedence over the original document and a later document having precedence over an earlier document:

1. Executed Agreement, including any Change Orders.

2. Supplementary Conditions.

3. Special Conditions or Modifications to the General Conditions.

4. General Conditions

5. Specifications and Drawings. The Specifications and Drawings are complementary and shall have equal precedence. Thus, anything mentioned in the Specifications but not shown on the Drawings, or shown on the Drawings but not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both. If there is any inconsistency between the Specifications and Drawings, Contractor will make an inquiry to Owner to determine how to proceed. Unless otherwise directed, Contractor will provide the better quality or greater quantity of any Work or materials, as reasonably interpreted by Owner, at no change in the Contract Sum or Contract Time. In case of conflict within the Specifications, provisions in Division 1 shall take precedence over provisions of any other Division. In case of conflict within the Drawings, large scale Drawings shall take precedence over small scale Drawings.

6. Signed and Completed Bid Form

7. Instructions to Bidders

8. Advertisement for Bids

1.3 EXECUTION AND INTENT

<u>Contractor Representations</u>: Contractor makes the following representations to Owner:

1. <u>Contract Sum and Contract Time reasonable</u>: The Contract Sum is reasonable compensation for the Work and the Contract Time is adequate for the performance of the Work, as represented by the Contract Documents;

2. <u>Contractor familiar with Project</u>: Execution of the Contract by Contractor is a representation that Contractor has carefully reviewed the Contract Documents, visited and examined the Project site, become familiar with the local conditions in which the Work is to be performed, and satisfied itself as to the nature, location, character,

quality and quantity of the Work, the labor, weather, materials, equipment, goods, supplies, work, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and subsurface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof; No allowance shall subsequently be made on behalf of Contractor on account of error or negligence on its part or its failure to acquaint itself with the conditions of the site;

3. Contractor financially capable: Contractor is financially solvent, able to pay its debts as they mature, and possesses sufficient working capital to complete the Work and perform Contractor's obligations required by the Contract Documents; and

4. Contractor can complete the Work: Contractor is able to furnish the plant, tools, materials, supplies, equipment and labor required to complete the Work and perform the obligations required by the Contract Documents and has sufficient experience and competence to do so.

PART 2 – INSURANCE AND BONDS

2.1 CONTRACTOR'S LIABILITY INSURANCE

General insurance requirements: Prior to commencement of the Work, Contractor shall obtain all the insurance required by the Contract Documents and provide evidence satisfactory to Owner that such insurance has been procured, including but not limited to (1) Certificates of Insurance, on ACORD Form 27 and/or ACORD Form 25-S, or other forms that are similarly binding on insurers, (2) the actual costs (expressed as a percentage) of Contractor's liability insurance under Section 2.1A.1 below, (3) endorsements, including endorsements for additional insureds as listed in Section 2.1D below, (4) evidence of State Workers' Compensation coverage, and (5) a copy of any builder's risk policy required by the Contract Documents. All policies, endorsements and certificates must be signed copies and shall contain a provision that coverages afforded under the policies cannot be materially altered (i.e. the coverages reduced, the limits decreased or the additional insured removed) allowed to expire, or cancelled without first giving forty-five (45) days prior written Notice by certified mail to Owner. Contractor shall furnish to Owner copies of any subsequently issued endorsements amending, modifying, altering or restricting coverage limits. Review of Contractor's insurance by Owner shall not relieve or decrease the liability of Contractor. Companies writing the insurance to be obtained shall be licensed to do business under Chapter 48 RCW or comply with the Surplus Lines Law of the State of Washington, and shall be acceptable to Owner.

Contractor shall include in the Contract Sum the cost of all insurance and bond costs required for the Work. Insurance carriers providing insurance shall be acceptable to Owner, and its A. M. Best rating shall be indicated on the insurance certificates.

A. Term of insurance coverage: Contractor shall maintain the following insurance coverage during the Work and for three years after Final Acceptance, with the exception of Professional Liability insurance, when required, which shall be maintained for a minimum of three years. Contractor shall also maintain the following insurance coverage during the performance of any corrective Work required by Section 5.

1. General Liability Insurance: Commercial General Liability (CGL) on an Occurrence Form, including personal injury, bodily injury and property damage liability on Contractor's operations, including Subcontractors; on Work Contractor may subcontract or sublet to others; and on the indemnity provisions of this Contract. Coverage shall include, but not be limited to:

   a. Personal injury

   b. Blanket contractual liability;

   c. Completed operations/products liability;

   d. Explosion, collapse, and underground, which applicable to the work being performed; and

   e. Employer's liability coverage.

   Contractor's policy shall be designated primary coverage for both defense and indemnity, and any Owner's policies excess and non-contributory.

2. Automobile Liability Insurance: Automobile liability on an Occurrence Form for owned, non-owned, and hired vehicles.

3. Professional Liability: Required if professional services (e.g., architect, engineering, surveying, legal or medical) are being provided to the Owner and if those professional services are excluded from the General Liability Insurance provided. Coverage may be on a Claims Made basis, if coverage is maintained at least 3-years beyond Final Acceptance.

B. Industrial Insurance compliance: Contractor shall comply with the Washington State Industrial Insurance Act and, if applicable, the Federal Longshoremen's and Harbor Workers' Act and the Jones Act.

C. Insurance to protect for the following: All insurance coverages shall protect against claims for damages for personal and bodily injury or death, as well as claims for property damage, which may arise from operations in connection with the Work whether such operations are by Contractor or any Subcontractor.

D. Owner as Additional Insured: All insurance coverages shall be endorsed to include Owner, its officers, and employees, and any required governmental agencies as additional named insureds for Work performed in accordance with the Contract Documents, and all insurance certificates and endorsements shall evidence such additional insureds.

E. Subcontractor Coverage: Contractor shall ensure and require that Subcontractors have insurance coverage to cover bodily injury and property damage on all operations and all vehicles owned or operated by Subcontractors. Subcontractors shall name Contractor and Owner, any required governmental agencies, and others designated in the Contract Documents as well as their officers and employees, as additional insureds and give at least 30 Days' Notice of cancellation.

2.2 COVERAGE LIMITS

Insurance amounts: The minimum coverage limits shall be as follows for applicable required insurance are specified in the Bonds and Insurance Certificates Section (Section 00 60 00) included with the Bid Documents. To the extent not set forth in the Bonds and Certificates Section or otherwise in the Contract Documents, they are as set forth below:

A. Limits of Liability shall not be less than $2,000,000 Combined Single Limit for Bodily Injury and Property Damage (other than Automobile Liability) Each Occurrence; Personal Injury and Advertising Liability Each Occurrence.

B. $5,000,000 Combined Single Limit Annual General Aggregate.

C. $5,000,000 Annual Aggregate for Products and Completed Operations Liability.

D. $2,000,000 Combined Single Limit for Automobile Bodily Injury and Property Damage Liability, Each Accident or Loss.

E. $1,000,000 for Professional Liability, if applicable.

F. Coverages and Minimums: The Owner does not represent that the minimum required insurance coverage or limits are adequate to protect Contractor from all liabilities.

2.3 INSURANCE COVERAGE CERTIFICATES

A. Certificate required: Prior to commencement of the Work, Contractor shall furnish to Owner a completed certificate of insurance coverage and additional insured endorsements.

B. List Project info: All insurance certificates shall name Owner's Project number and Project title.

C. Cancellation provisions: All insurance certificates shall specifically require 45 Days prior notice to Owner of cancellation or any material change, except 30 Days for surplus line insurance.

2.4 PAYMENT AND PERFORMANCE BONDS

Conditions for bonds: Payment and performance bonds for 100% of the Contract Award Amount, including Washington state sales tax, shall be furnished for the Work, using the City of Kirkland Contract Bond Form provided. Prior to execution of a Change Order, that cumulatively with previous Change Orders, increases the Contract Award Amount by 15% or more, the Contractor shall provide either new payment and performance bonds for the revised Contract Sum, or riders to the existing payment and performance bonds increasing the amount of the bonds. The Contractor shall likewise provide additional bonds or riders when subsequent Change Orders increase the Contract Sum by 15% or more. No payment or performance bond is required if the Contract Sum is $35,000 or less and Contractor agrees that Owner may, in lieu of the bond, retain 50% of the Contract Sum for the period allowed by RCW 39.08.010.

2.5 ALTERNATIVE SURETY

When alternative surety required: Contractor shall promptly furnish payment and performance bonds from an alternative surety to protect Owner and persons supplying labor or materials required by the Contract Documents if (A) Owner has a reasonable objection to the surety; or (B) Any surety fails to furnish reports on its financial condition if required by Owner.

2.6 BUILDER'S RISK

A. Contractor to Buy Builder's Risk Insurance: When the project involves substantial new building construction, as determined by the Owner, Contractor shall purchase and maintain Builder's Risk insurance in the amount of the Contract Sum, including all Change Orders, for the Work on a replacement cost basis until Substantial Completion. For projects not involving new building construction, an "Installation Floater" is an acceptable substitute for the Builder's Risk insurance. The insurance shall cover the interests of Owner, Contractor, and any Subcontractors, as their interests may appear.

B. Losses Covered: Builder's risk insurance shall be placed on an "all risk" basis or equivalent policy form and insure against the perils of fire and extended coverage and physical loss or damage including theft, vandalism, malicious mischief, collapse, false work, flood, wind, temporary buildings, debris removal including demolition, and shall cover reasonable compensation for A/E's services and expenses required as a result of an insured loss.

C. Waiver of Subrogation Rights: Owner and Contractor waive all subrogation rights against each other, any Subcontractors, A/E, A/E's subconsultants, separate contractors, if any, and any of their subcontractors, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this Section or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by Owner as fiduciary. The policies shall provide such waivers of subrogation by endorsement or otherwise. Contractor shall require a similar waiver from its Subcontractors of Subcontractors' subrogation rights against Contractor, Owner, A/E, A/E's subconsultants as part of their Subcontract. A waiver of subrogation shall be effective to a Person or entity even though that Person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the Person or entity had an insurable interest in the property damaged.

PART 3 – TIME AND SCHEDULE

3.1 PROGRESS AND COMPLETION

A. Contractor to meet schedule: Contractor shall diligently prosecute the Work, with adequate forces, achieve Substantial Completion within the Contract Time, and achieve Final Completion within the time period specified in the Contract Documents. If Contractor fails to perform in a timely manner in accordance with the Contract Documents and, through the fault of Contractor or Subcontractor(s), fails to meet the Progress Schedule, Contractor shall be in default and shall take such steps as may be

necessary to immediately improve its progress without change in the Contract Sum or Contract Time.

B. Progress Schedule: Promptly, but in no event later than fourteen (14) days after issuance of the Notice to Proceed, Contractor shall prepare and submit a preliminary network diagram in the form of a critical path method analysis ("Progress Schedule"). See Section 01 32 00 for specific requirements for the Contractor's Construction Schedule ("Progress Schedule"). The Progress Schedule shall be related to the entire Project and fully consistent with the Contract Documents. The Progress Schedule shall not exceed time limits specified by the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work, and shall show the sequence in which Contractor and the dates on which Contractor plans to start and finish major portions of the Work, including dates for submission of Submittals, which shall be coordinated with the Progress Schedule and identify dates for Owner review, and for acquiring materials and equipment. The Owner shall not be obligated to accept any Early Completion Schedule suggested by the Contractor. If the Contractor feels that the Work can be completed in less than the specified Contract Time, then the Surplus Time shall be considered Project Float. This Float shall be shown on the Project Schedule. It shall be available to accommodate changes in the work and unforeseen conditions. Neither the Contractor not the Owner have exclusive right to this Float Time. It belongs to the Project.

C. Monthly Updates: With each Application for payment submitted by Contractor other than the final Application for Payment, Contractor shall submit to the Owner a current Progress Schedule revised to indicate the portion of the Work executed during the time period covered by the Application for Payment, all progress slippages occurring during the previously covered time period, and the corrective actions taken for the slippage carryover into the time period covered by the Application for Payment, the anticipated delays or difficulties, and all other information required to adequately present the actual status of the progress of the Work as of the date of the Application for Payment as may be further required by the Owner.

D. Compliance with Progress Schedule: In the event the Contractor falls behind the Progress Schedule to such an extent that the Owner in good faith determines that the Contractor will be unable to achieve Substantial Completion by the date set forth in the Progress Schedule, as such date may be extended as provided in the Contract Documents, the Contractor shall within two (2) working days following the Owner's demand therefor, provide to the Owner, in writing, a detailed explanation of the measures the Contractor will take in order to recover from the delays so that the progress of the Work complies with the Progress Schedule. If, in the Owner's good faith business judgment, the Contractor's intended recovery measures will not cause the Contractor to recover from the delay (provided such delay arises from a cause which is the Contractor's or its Subcontractor's responsibility) so as to achieve Substantial Completion on schedule, the Owner may direct the Contractor to accelerate the progress of the Work, at the Contractor's sole cost, which acceleration costs shall not cause an adjustment to the Contract Sum.

E. Contractor to notify Owner of delays: Contractor shall perform the Work in accordance with the most recent Progress Schedule submitted to Owner. Contractor shall promptly notify Owner in writing of any actual or anticipated event, interference, or that is delaying

or could delay achievement of any milestone, performance of any critical path activity of the Work, or delay in the Substantial Completion date. Contractor shall indicate the expected duration of the delay, the anticipated effect of the delay on the Progress Schedule, and the action being or to be taken to correct the problem. Provision of such Notice does not relieve Contractor of its obligation to complete the Work within the Contract Time.

3.2 DELAY

A. Force Majeure Events: Acts of Force Majeure include, but are not limited to: acts of God or the public enemy; acts or omissions of any government entity not the fault of Owner or Contractor; fire or other casualty for which Contractor is not responsible; quarantine or epidemic; industry-wide strike or defensive lockout; unusually severe weather conditions which could not have been reasonably anticipated; and unusual delay in receipt of supplies or products which were ordered and expedited and for which no substitute reasonably acceptable to Owner was available. "Unusually severe weather" shall mean weather conditions that are abnormal for the period of time for which Force Majeure is claimed, that could not reasonably have been anticipated or avoided, and that had an adverse effect on the Progress Schedule.

B. Contract Time adjustment for Force Majeure: Contractor shall be entitled to an equitable adjustment in the Contract Time for changes in the time of performance directly attributable to an act of Force Majeure, provided it submits Notice and a Claim in strict compliance with the requirements of Section 8. Contractor shall not be entitled to an adjustment in the Contract Sum resulting from an act of Force Majeure.

C. Contract Time or Contract Sum adjustment if Owner at fault: Contractor shall be entitled to an equitable adjustment in Contract Time, and may be entitled to an equitable adjustment in Contract Sum, if the cost or time of Contractor's performance is changed due to the fault or negligence of Owner, provided the Contractor submits Notice and a Claim in strict compliance with the requirements of Section 8.

D. No Contract Time or Contract Sum adjustment if Contractor at fault: Contractor shall not be entitled to an adjustment in Contract Time or in the Contract Sum for any delay or failure of performance to the extent such delay or failure was caused by Contractor or anyone for whose acts Contractor is responsible.

E. Contract Time adjustment only for concurrent fault: To the extent any delay or failure of performance was concurrently caused by the Owner and Contractor, Contractor may be entitled to an adjustment in the Contract Time only for that portion of the delay or failure of performance that was concurrently caused, provided it submits Notice and a Claim in strict compliance with the requirements of Section 8, but shall not be entitled to an adjustment in Contract Sum.

F. Contractor to mitigate delay impacts: Contractor shall make all reasonable efforts to prevent and mitigate the effects of any delay, whether occasioned by an act of Force Majeure or otherwise. Contractor shall not recover damages, an equitable adjustment or an increase in the Contract Sum or Contract Time from Owner where Contractor could have reasonably avoided the delay by the exercise of due diligence.

G. Types of damages permitted: If Contractor and its Subcontractors are entitled to a change in the Contract Sum, the amount of the change shall be the actual costs incurred by the Contractor and Subcontractors directly related to the change calculated in accordance with Section 7 and provided Contractor has complied with Section 8. Failure of Contractor to comply with Section 8 shall result in waiver of Contractor's Claim. Contractor and its Subcontractors shall not be entitled to damages arising out of actual or alleged loss of efficiency; morale, fatigue, attitude, or labor rhythm; constructive acceleration; home office overhead; expectant underrun; trade stacking; reassignment of workers; rescheduling of Work, concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended overhead; profit upon damages for delay; impact damages including cumulative impacts; or similar damages.

H. Contractor to notify Owner of labor disputes: If Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay timely performance in accordance with the Contract Documents, Contractor shall immediately give notice, including all relevant information, to Owner.

I. Pass through notification provisions to Subcontractors: Contractor agrees to insert a provision in its Subcontracts and to require insertion in all sub-subcontracts, that in the event timely performance of any such contract is delayed or threatened by delay by any actual or potential labor dispute, the Subcontractor or Sub-subcontractor shall immediately notify the next higher tier Subcontractor or Contractor, as the case may be, of all relevant information concerning the dispute.

3.3 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION

A. Liquidated Damages:

1. Reason for Liquidated Damages: Timely performance and completion of the Work is essential to Owner and time limits stated in the Contract Documents are of the essence. Owner will incur serious and substantial damages if Substantial Completion of the Work does not occur within the Contract Time. However, it would be difficult if not impossible to determine the exact amount of such damages. Consequently, provisions for liquidated damages are included in the Contract Documents.

2. Calculation of Liquidated Damages amount: The liquidated damage amounts set forth in the Contract Documents will be assessed not as a penalty, but as liquidated damages for breach of the Contract Documents. This amount is fixed and agreed upon by and between the Contractor and Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain. This amount shall be construed as the actual amount of damages sustained by the Owner, and may be retained by the Owner and deducted from periodic payments to the Contractor.

3. Contractor responsible even if Liquidated Damages assessed: Assessment of liquidated damages shall not release Contractor from any obligations or liabilities

pursuant to the Contract Documents. If Contractor substantially fails to perform in a timely manner in accordance with the Contract Documents and, through the fault of Contractor or Subcontractor(s), fails to achieve Substantial Completion within the Contract Time, Contractor shall be in default.

B. Actual Damages: If no liquidated damages are set forth in the Contract Documents, actual damages may be assessed for failure to achieve both Substantial Completion and Final Completion within the time provided. Actual damages will be calculated on the basis of direct, architectural, administrative, and any other related costs attributable to the Project from the date when Substantial and/or Final Completion should have been achieved, as applicable. Owner may offset these costs against any payment due Contractor.

PART 4 – SPECIFICATIONS AND CONTRACT DOCUMENT REVIEW

4.1 DISCREPANCIES AND CONTRACT DOCUMENT REVIEW

A. Specifications and Drawings are basis of the Work: The intent of the Specifications and Drawings is to describe a complete Project to be constructed in accordance with the Contract Documents. Contractor shall furnish all labor, materials, equipment, tools, transportation, permits, and supplies, and perform the Work required in accordance with the Drawings, Specifications, and other provisions of the Contract Documents.

B. Parts of the Contract Documents are complementary: The Contract Documents are complementary. What is required by one part of the Contract Documents shall be binding as if required by all. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.

C. Contractor to report discrepancies in Contract Documents: Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Owner. If, during the performance of the Work, Contractor finds a conflict, error, inconsistency, or omission in the Contract Documents, it shall promptly and before proceeding with the Work affected thereby, report such conflict, error, inconsistency, or omission to A/E in writing.

D. Contractor knowledge of discrepancy in documents – responsibility: Contractor shall do no Work without applicable Drawings, Specifications, and, where required, accepted shop drawings and other Submittals, unless instructed to do so in writing by Owner. If Contractor performs any construction activity, and it knows or reasonably should have known that any of the Contract Documents contain a conflict, error, inconsistency, or omission, Contractor shall be responsible for the performance and shall bear the cost for its correction.

E. Contractor to perform Work implied by Contract Documents: Contractor shall provide any work or materials the provision of which is clearly implied and is within the scope of the Contract Documents even if the Contract Documents do not mention them specifically.

F. Interpretation questions referred to A/E: Questions regarding interpretation of the requirements of the Contract Documents shall be referred to the A/E.

4.2 SUBMITTALS

A. Definition of Submittals: "Submittals" means documents and other information required to be submitted to A/E by Contractor pursuant to the Contract Documents, showing in detail: the proposed fabrication and assembly of structural elements; and the installation (i.e. form, fit, and attachment details) of materials and equipment. Submittals can include, but are not limited to, shop drawings, product data, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, samples, and similar materials furnished by Contractor to explain in detail specific portions of the Work required by the Contract Documents. For materials and equipment to be incorporated into the Work, Contractor submittal shall include the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the item. When directed, Contractor shall submit all samples at its own expense. Owner may duplicate, use, and disclose Submittals provided in accordance with the Contract Documents. Submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require Submittals.

B. Approval of Submittals by Contractor and A/E: Contractor shall coordinate all Submittals with the Progress Schedule, shall review them for accuracy, completeness, and compliance with the Contract Documents, and shall indicate its approval thereon as evidence of such coordination and review. Where required by law, Submittals shall be stamped by an appropriate professional licensed by the state of Washington. Submittals submitted to A/E without evidence of Contractor's approval shall be returned for resubmission. Contractor shall review, approve, and submit Submittals with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of Owner or separate contractors. Contractor's Submittal schedule shall allow a reasonable time for A/E review. A/E will review, approve, or take other appropriate action on the Submittals. Contractor shall perform no portion of the Work requiring submittal and review of Submittals until the respective submittal has been reviewed and the A/E has approved or taken other appropriate action. Owner and A/E shall respond to Submittal with reasonable promptness. Any Work by Contractor shall be in accordance with reviewed Submittals. Submittals made by Contractor which are not required by the Contract Documents may be returned without action.

C. Contractor not relieved of responsibility when Submittals approved: Approval, or other appropriate action with regard to Submittals, by Owner or A/E shall not relieve Contractor of responsibility for any errors or omissions in such Submittals, nor from responsibility for compliance with the requirements of the Contract Documents. Unless specified in the Contract Documents, review by Owner or A/E shall not constitute an approval of the safety precautions employed by Contractor during construction, or constitute an approval of Contractor's means or methods of construction. If Contractor fails to obtain approval before installation and the item or work is subsequently rejected, Contractor shall be responsible for all costs of correction.

D. Variations between Submittals and Contract Documents: If Submittals vary from the requirements of the Contract Documents, Contractor shall in detail describe such variations in writing, separate from the Submittals, at the time it submits the Submittals containing such variations. If Owner approves any such variation, an appropriate Change Order will be issued. If the variation is minor and does not involve an adjustment in the Contract Sum or Contract Time, a Change Order need not be issued; however, the modification shall be approved by Owner in writing. Approval for substitutions shall not be sought and shall not be approved through the submission of Submittals.

4.3 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS

A. The City/Owner not Contractor, owns Copyright of Drawings and Specifications: The Drawings, Specifications, and other documents prepared by A/E are instruments of A/E's contracted service to the City through which the Work to be executed by Contractor is described. Neither Contractor nor any Subcontractor shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by A/E, and A/E shall be deemed the author of them and will, along with any rights of Owner, retain all common law, statutory, and other reserved rights, in addition to the copyright. All copies of these documents, except Contractor's set, shall be returned or suitably accounted for to A/E, on request, upon completion of the Work.

B. Drawings and Specifications to be used only for this Project: The Drawings, Specifications, and other documents prepared by the A/E, and copies thereof furnished to Contractor, are for use solely with respect to this Project. They are not to be used by Contractor or any Subcontractor on other projects or for additions to this Project outside the scope of the Work without the specific written consent of Owner and A/E. Contractor and Subcontractors are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications, and other documents prepared by A/E appropriate to and for use in the execution of their Work.

C. License granted to Owner: Contractor and all Subcontractors grant a non-exclusive license to Owner, without additional cost or royalty, to use for its own purposes (including reproduction) all Submittals, together with the information and diagrams contained therein, prepared by Contractor or any Subcontractor. In providing Submittals, Contractor and all Subcontractors warrant that they have authority to grant to Owner a license to use the Submittals, and that such license is not in violation of any copyright or other intellectual property right. Contractor agrees to defend and indemnify Owner pursuant to the indemnity provisions in Section 5 from any violations of copyright or other intellectual property rights arising out of Owner's use of the Submittals hereunder, or to secure for Owner, at Contractor's own cost, licenses in conformity with this Section.

PART 5 – PERFORMANCE

5.1 CONTRACTOR CONTROL AND SUPERVISION

A. Contractor responsible for Means and Methods of construction: Contractor shall supervise and direct the Work, using its best skill and attention, and shall perform the Work in a skillful manner. Contractor shall be solely responsible for and have control over

construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work, unless the Contract Documents give other specific instructions concerning these matters. Contractor shall disclose its means and methods of construction when requested by Owner. The Contractor shall be responsible to the Owner for acts and omissions of Contractor, Contractor's employees, Subcontractors, and their agents and employees, and other person or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

B. Competent superintendent required: Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Contractor, as soon as practicable after award of the Contract, shall furnish in writing to Owner the name and qualifications of its proposed superintendent. Within 14 days of receipt of the information, Owner may reply to Contractor in writing stating (1) whether Owner has reasonable objection to the proposed superintendent or (2) that Owner requires additional time to review. The superintendent must be satisfactory to Owner and shall not be changed without the prior written consent of Owner. Owner may require Contractor to remove the superintendent from the Work or Project site, if Owner reasonably deems the superintendent incompetent, careless, or otherwise objectionable, provided Owner has first notified Contractor in writing and allowed a reasonable period for transition.

C. Contractor to employ competent and disciplined workforce: Contractor shall enforce strict discipline and good order among all of the Contractor's employees and other persons performing the Work. Contractor shall not permit employment of persons not skilled in tasks assigned to them. Contractor's employees shall at all times conduct business in a manner which assures fair, equal, and nondiscriminatory treatment of all persons. Owner may, by written notice, request Contractor to remove from the Work or Project site any employee Owner reasonably deems incompetent, careless, or otherwise objectionable.

D. Contractor to keep Project documents on site: Contractor shall keep on the Project site a copy of the Drawings, Specifications, addenda, reviewed Submittals, and permits and permit drawings.

E. Contractor to comply with ethical standards: Contractor shall ensure that its owner(s) and employees, and those of its Subcontractors, comply with the Ethics in Public Service Act RCW 42.52, which, among other things, prohibits state employees from having an economic interest in any public works contract that was made by, or supervised by, that employee. Contractor shall remove, at its sole cost and expense, any of its, or its Subcontractors' employees, if they are in violation of this act.

F. Daily Reports: Contractor shall provide a Daily Report to the Owner for each work day during the Contract Time. The Daily Report shall be completed on a form subject to the approval of the Owner and Architect. The Daily Report shall include any disputed, delayed, or disrupted Work as well as any changed or additional Work requested or identified. The Daily Report shall not serve as a substitute for, or relieve Contractor of its obligations to provide formal written notice to Contractor as required by the Contract Documents, including but not limited to Section 7 and Section 8.

5.2 PERMITS, TAXES, PATENTS AND ROYALTIES

A. Permits: Owner will obtain and pay for the Land Use Permit, General Building Permit, Civil Construction Permit, and Signage permit. All other permits and fees required to execute the work shall be obtained and paid for by the Contractor. Prior to Final Acceptance, the approved, signed permits shall be delivered to the Owner.

B. Contractor to comply with all applicable laws: Contractor shall comply with and give notices required by all federal, state, and local laws, ordinances, rules, regulations, and lawful orders of public authorities applicable to performance of the Work. No person shall, on the grounds, of age, race, creed, color, sec, sexual oriental, religion, national origin, marital status, honorably discharged veteran or military status, or disability (physical, mental, or sensory) be denied the benefits of, or otherwise be subjected to discrimination under any project, program, or activity funded in whole or in part under this Agreement.

C. Taxes: Contractor shall pay sales, consumer, use, business and occupation, income and similar taxes for the Work that are legally enacted when the initial Contract Sum is agreed.

D. Patents and Royalties: Contractor is responsible for, and shall pay, all royalties and license fees. Contractor shall defend, indemnify, and hold Owner harmless from any costs, expenses, and liabilities arising out of the infringement by Contractor of any patent, copyright, or other intellectual property right used in the Work; however, provided that Contractor gives prompt notice, Contractor shall not be responsible for such defense or indemnity when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents. If Contractor has reason to believe that use of the required design, process, or product constitutes an infringement of a patent or copyright, it shall promptly notify Owner of such potential infringement.

5.3 PREVAILING WAGES

A. Contractor to pay Prevailing Wages: Contractor shall pay the prevailing rate of wages to all workers, laborers, or mechanics employed in the performance of any part of the Work in accordance with RCW 39.12 and the rules and regulations of the Department of Labor and Industries. The schedule of prevailing wage rates for the locality or localities of the Work, is determined by the Industrial Statistician of the Department of Labor and Industries. It is the Contractor's responsibility to verify the applicable prevailing wage rate.

B. Statement of Intent to Pay Prevailing Wages: Before payment is made by the Owner to the Contractor for any work performed by the Contractor and subcontractors whose work is included in the application for payment, the Contractor shall submit, or shall have previously submitted to the Owner for the Project, a Statement of Intent to Pay Prevailing Wages, approved by the Department of Labor and Industries, certifying the rate of hourly wage paid and to be paid each classification of laborers, workers, or mechanics employed upon the Work by Contractor and Subcontractors. Such rates of hourly wage shall not be less than the prevailing wage rate.

C. Affidavit of Wages Paid: Prior to release of retainage, the Contractor shall submit to the Owner an Affidavit of Wages Paid, certified by the Department of Labor and Industries, for the Contractor and each and every Subcontractor that performed work on the Project. Contractor's compliance with this paragraph and RCW 60.28 is a condition precedent to the release of retainage to Contractor.

D. Disputes: Disputes regarding prevailing wage rates shall be referred for arbitration to the Director of the Department of Labor and Industries. The arbitration decision shall be final and conclusive and binding on all parties involved in the dispute as provided for by RCW 39.12.060.

E. Statement with pay application; Post Statements of Intent at job site: Each Application for Payment submitted by Contractor shall state that prevailing wages have been paid in accordance with the prefiled statement(s) of intent, as approved. Copies of the approved intent statement(s) shall be posted on the job site with the address and telephone number of the Industrial Statistician of the Department of Labor and Industries where a complaint or inquiry concerning prevailing wages may be made.

F. Contractor to pay for Statements of Intent and Affidavits: In compliance with chapter 296-127 WAC, Contractor shall pay to the Department of Labor and Industries the currently established fee(s) for each statement of intent and/or affidavit of wages paid submitted to the Department of Labor and Industries for certification.

G. Certified Payrolls: Consistent with WAC 296-127-320, the Contractor and any subcontractor shall submit a certified copy of payroll records if requested.

5.4 SAFETY AND CLEAN-UP

A. Contractor responsible for safety: Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work. Contractor shall be solely and completely responsible for conditions of the Project site, including safety of all persons and property, during performance of the Work. Contractor shall maintain the Project site and perform the Work in a manner that meets statutory and common-law requirements for the provision of a safe place to work. This requirement shall apply continuously and not be limited to working hours. Any review by Owner or A/E of Contractor's performance shall not be construed to include a review of the adequacy of Contractor's safety measures in, on or near the site of the Work.

B. Contractor safety responsibilities: In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the Work and other persons who may be affected by the Work; prevent damage to materials, supplies, and equipment whether on site or stored off-site; and prevent damage to other property at the site or adjacent thereto. Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss; shall erect and maintain all necessary safeguards for such safety and

protection; and shall notify owners of adjacent property and utilities when prosecution of the Work may affect them.

C. Contractor to maintain safety records: Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to Owner. Owner shall, at all times, have a right of access to all records of exposure.

D. Contractor to provide HazMat training: Contractor shall provide all persons working on the Project site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area. At a minimum, Contractor shall inform persons working on the Project site of the requirements of chapter 296-62 WAC, General Occupational Health Standards, any operations in their work area where hazardous chemicals are present; and the location and availability of written hazard communication programs, including the required list(s) of hazardous chemicals and material safety data sheets required by chapter 296-62 WAC. Contractor shall also provide training for persons working on the Project site which includes Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area, the physical and health hazards of the chemicals in the work area; the measures such persons can take to protect themselves from these hazards, the details of the hazard communications program developed by Contractor, or its Subcontractors, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.

E. Hazardous, toxic or harmful substances and Notice: Contractor shall not keep, use, dispose, transport, generate, or sell on or about the Project site, any substances now or hereafter designated as, or which are subject to regulation as, hazardous, toxic, dangerous, or harmful by any federal, state or local law, regulation, statute or ordinance (hereinafter collectively referred to as “hazardous substances”), in violation of any such law, regulation, statute, or ordinance, but in no case shall any such hazardous substance be stored more than 90 Days on the Project site. Contractor shall promptly notify Owner of all spills or releases of any hazardous substances which are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify Owner of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project site.

F. Public safety and traffic: All Work shall be performed with due regard for the safety of the public. Contractor shall perform the Work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians. All arrangements to care for such traffic shall be Contractor’s responsibilities. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.

G. Contractor to act in an emergency: In an emergency affecting the safety of life or the Work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if so authorized or instructed.

H. No duty of safety by Owner or A/E: Nothing provided in this Section shall relieve Contractor of sole and complete responsibility for safety at the Project site, for sole and complete responsibility for any violation of safety or property protection requirements or the correction thereof, or impose any duty upon Owner or A/E with regard to, or as constituting any express or implied assumption of control or responsibility over, any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public. Any Notice Owner or A/E gives to Contractor of a safety or property protection violation will not: (1) relieve Contractor of sole and complete responsibility for the violation and the correction thereof, or for sole liability for the consequences of said violation; (2) impose any obligation upon Owner or A/E to inspect or review Contractor's safety program or precautions or to enforce Contractor's compliance with the requirements of this Section; or (3) impose any continuing obligation upon Owner or A/E to provide such Notice to Contractor or any other persons or entity.

I. Contractor to keep site clean and leave it clean: Contractor shall at all times keep the Project site, including hauling routes, infrastructures, utilities, and storage areas, free from accumulations of waste materials. Before completing the Work, Contractor shall remove from the premises its rubbish, tools, scaffolding, equipment, and materials. Upon completing the Work, Contractor shall leave the Project site in a clean, neat, and orderly condition satisfactory to Owner. If Contractor fails to clean up as provided herein, and after reasonable notice from Owner, Owner may do so and the cost thereof shall be charged to Contractor.

5.5 OPERATIONS, MATERIAL HANDLING, AND STORAGE AREAS

A. Limited storage areas: Contractor shall confine all operations, including storage of materials, to Owner-approved areas.

B. Temporary buildings and utilities at Contractor expense: Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be provided by Contractor only with the consent of Owner and without expense to Owner. The temporary buildings and utilities shall be removed by Contractor at its expense upon completion of the Work.

C. Roads and vehicle loads: Contractor shall use only established roadways or temporary roadways authorized by Owner. When materials are transported in prosecuting the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by federal, state, or local law or regulation.

D. Ownership and reporting by Contractor of demolished materials: Ownership and control of all materials or facility components to be demolished or removed from the Project site by Contractor shall immediately vest in Contractor upon severance of the component from the facility or severance of the material from the Project site. Contractor shall be responsible for compliance with all laws governing the storage and ultimate disposal. Contractor shall provide Owner with a copy of all manifests and receipts evidencing proper disposal when required by Owner or applicable law.

E. Contractor responsible for care of materials and equipment on-site: Contractor shall be responsible for the proper care and protection of its materials and equipment delivered to

the Project site. Materials and equipment may be stored on the premises subject to approval of Owner. When Contractor uses any portion of the Project site as a shop, Contractor shall be responsible for any repairs, patching, or cleaning arising from such use.

F. Contractor responsible for loss of materials and equipment: Contractor shall protect and be responsible for any damage or loss to the Work, or to the materials or equipment until the date of Substantial Completion, and shall repair or replace without cost to Owner any damage or loss that may occur, except damages or loss caused by the acts or omissions of Owner. Contractor shall also protect and be responsible for any damage or loss to the Work, or to the materials or equipment, after the date of Substantial Completion, and shall repair or replace without cost to Owner any such damage or loss that might occur, to the extent such damages or loss are caused by the acts or omissions of Contractor, or any Subcontractor.

5.6 UNFORESEEN PHYSICAL CONDITIONS

A. Notice requirement for concealed or unknown conditions: If Contractor encounters conditions at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then Contractor shall give written notice to Owner promptly and in no event later than 7 Days after the first observance of the conditions. Conditions shall not be disturbed prior to such notice.

B. Adjustment in Contract Time and Contract Sum: If such conditions differ materially and cause a change in Contractor's cost of, or time required for, performance of any part of the Work, the Contractor may be entitled to an equitable adjustment in the Contract Time or Contract Sum, or both, provided it makes a request therefore as provided in Section 7 and Section 8. Failure to provide notice as required by this Section, Section 7 and Section 8 shall result in waiver of Contractor's right to any adjustment in the Contract Time and Contract Sum.

5.7 MATERIAL, EQUIPMENT, TESTS, AND INSPECTION

A. Contractor to provide new and equivalent equipment and materials: All equipment, material, and articles incorporated into the Work shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in the Contract Documents. References in the Specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard quality and shall not be construed as limiting competition. Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of A/E and after submittal and approval of a substitute request, is equal to that named in the Specifications, unless otherwise specifically provided in the Contract Documents.

B. Contractor responsible for fitting parts together: Contractor shall do all cutting, fitting, or patching that may be required to complete the Work or to make its several parts fit together properly, or receive or be received by work of others set forth in, or reasonably

implied by, the Contract Documents. Contractor shall not damage or endanger any work of Owner or separate contractors by cutting, excavating, or otherwise altering the Work and shall not cut or alter the work of any other contractor unless approved in advance by Owner. Contractor shall restore all areas requiring cutting, fitting and patching to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

C. Owner may reject defective Work and non-conforming materials: Should any of the Work and/or materials be found defective, or in any way not in accordance with the Contract Documents, this Work, in whatever stage of completion, may be rejected by Owner. However, neither this authority of Owner nor a decision made either to exercise or not to exercise such authority shall give rise to a duty or responsibility of Owner or its representatives to Contractor, Subcontractors, their agents or employees, or other persons or entities performing portions of the Work. Work or materials condemned by the Owner or Architect/Engineer as failing to conform to Contract Documents, including but not limited to the quality of such materials, shall, upon notice from Owner or Architect/Engineer, be immediately removed by Subcontractor. Failure of Owner to immediately condemn any Work or materials as installed shall not in any way waive Owner's right to object thereto at any subsequent time.

D. Contractor to provide for all testing and inspection of Work: Contractor shall maintain an adequate testing and inspection program and perform such tests and inspections as are necessary or required to ensure that the Work conforms to the requirements of the Contract Documents. Contractor shall be responsible for inspection and quality surveillance of all its Work and all Work performed by any Subcontractor. Unless otherwise provided, Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. Contractor shall give Owner timely notice of when and where tests and inspections are to be made. Contractor shall maintain complete inspection records and make them available to Owner.

E. Owner may conduct tests and inspections: Owner may, at any reasonable time, conduct such inspections and tests as it deems necessary to ensure that the Work is in accordance with the Contract Documents. Owner shall promptly notify Contractor if an inspection or test reveals that the Work is not in accordance with the Contract Documents. Unless the subject items are expressly accepted by Owner, such Owner inspection and tests are for the sole benefit of Owner and do not: constitute or imply acceptance; relieve Contractor of responsibility for providing adequate quality control measures; relieve Contractor of responsibility for risk of loss or damage to the Work, materials, or equipment; relieve Contractor of its responsibility to comply with the requirements of the Contract Documents; or impair Owner's right to reject defective or nonconforming items, or to avail itself of any other remedy to which it may be entitled.

F. Inspections or inspectors do not modify Contract Documents: Neither observations by an inspector retained by Owner, the presence or absence of such inspector on the site, nor inspections, tests, or approvals by others, shall relieve Contractor from any requirement of the Contract Documents, nor is any such inspector authorized to change any term or condition of the Contract Documents.

G. Contractor responsibilities on inspections: Contractor shall promptly furnish, without additional charge, all facilities, labor, material and equipment reasonably needed for performing such safe and convenient inspections and tests as may be required by Owner. Owner may charge Contractor any additional cost of inspection or testing when Work is not ready at the time specified by Contractor for inspection or testing, or when prior rejection makes reinspection or retest necessary. Owner shall perform its inspections and tests in a manner that will cause no undue delay in the Work.

5.8 CORRECTION OF NONCONFORMING WORK

A. Work covered by Contractor without inspection: If a portion of the Work is covered contrary to the request of Owner or the requirements in the Contract Documents or a governmental authority having jurisdiction, it must, if required in writing by Owner, be uncovered for Owner's observation and be replaced at Contractor's expense and without change in the Contract Sum or Contract Time.

B. Payment provisions for uncovering covered Work: If, at any time prior to Final Completion, Owner desires to examine the Work, or any portion of it, which has been covered, Owner may request to see such Work and it shall be uncovered by Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an adjustment in the Contract Sum for the costs of uncovering and replacement, and, if completion of the Work is thereby delayed, an adjustment in the Contract Time, provided it makes such a request as provided in Section 7. If such Work is not in accordance with the Contract Documents, the Contractor shall pay the costs of examination and reconstruction.

C. Contractor to correct and pay for non-conforming Work: Contractor shall promptly correct Work found by Owner not to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed, or completed. Contractor shall bear all costs of correcting such nonconforming Work, including additional testing and inspections.

D. Contractor's compliance with correction and warranty provisions: If, within one year after the date of Substantial Completion of the Work or designated portion thereof, or within one year after the date for commencement of any system warranties established, or within the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, Contractor shall correct it promptly after receipt of written Notice from Owner to do so. Owner shall give such Notice promptly after discovery of the condition. This period of one year shall be extended, with respect to portions of Work first performed after Substantial Completion, by the period of time between Substantial Completion and the actual performance of the Work. Contractor's duty to correct with respect to Work repaired or replaced shall run for one year from the date of repair or replacement. Obligations under this Section shall survive Final Acceptance and are in addition to other warranties provided by contract or law.

E. Contractor to remove non-conforming Work: Contractor shall remove from the Project site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by Contractor nor accepted by Owner.

F. Owner may charge Contractor for non-conforming Work: If Contractor fails to correct nonconforming Work within a reasonable time after written notice to do so, Owner may replace, correct, or remove the nonconforming Work and charge the cost thereof to the Contractor.

G. Contractor to pay for damaged Work during correction: Contractor shall bear the cost of correcting destroyed or damaged Work, whether completed or partially completed, caused by Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

H. No Period of limitation on other requirements: Nothing contained in this Section shall be construed to establish a period of limitation with respect to other obligations which Contractor might have according to the Contract Documents. Establishment of the time period of one year as described in this Section relates only to the specific obligation of Contractor to correct the Work, and has no relationship to the time within which the Contractor's obligation to comply with the Contract Documents may be sought to be enforced, including the time within which such proceedings may be commenced and damages for failure to comply with the Contract Documents may be sought.

I. Owner may accept non-conforming Work and charge Contractor: If Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, Owner may do so instead of requiring its removal and correction, in which case the Contract Sum may be reduced as appropriate and equitable.

5.9 SUBCONTRACTORS AND SUPPLIERS

A. Subcontractor Responsibility: The Contractor shall include the language of this paragraph in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this Section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the Contractor shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this paragraph apply to all subcontractors regardless of tier. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:

1. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;

2. Have a current Washington Unified Business Identifier (UBI) number;

3. If applicable, have: Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW; a Washington Employment Security Department number, as required in Title 50

RCW; a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW; An electrical contractor license, if required by Chapter 19.28 RCW; an elevator contractor license, if required by Chapter 70.87 RCW, not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3), on a project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the date of the Owner's first advertisement of the project, and meet all supplemental responsibility criteria set forth in the Contract Documents.

B. Provide names of Subcontractors and use qualified firms: Before submitting the first Application for Payment, Contractor shall furnish in writing to Owner the names, addresses, and telephone numbers of all Subcontractors, as well as suppliers providing materials in excess of $2,500. Contractor shall utilize Subcontractors and suppliers which are experienced and qualified, and meet the requirements of the Contract Documents, if any. Contractor shall not utilize any Subcontractor or supplier to whom Owner has a reasonable objection, and shall obtain Owner's written consent before making any substitutions or additions.

C. Coordination of Subcontractors; Contractor responsible for Work: Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors. No Subcontracting of any of the Work shall relieve Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents or any other obligations of the Contract Documents.

D. Automatic assignment of subcontracts: Each subcontract agreement for a portion of the Work is hereby assigned by Contractor to Owner provided that (1) the assignment is effective only after termination by Owner for cause pursuant to Section 9 and only for those Subcontracts which Owner accepts by notifying the Subcontractor in writing; (2) after the assignment is effective, Owner will assume all future duties and obligations toward the Subcontractor which Contractor assumed in the Subcontract; and (3) the assignment is subject to the prior rights of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.

E. Owner may award other contracts; Contractor to cooperate: Owner may undertake or award other contracts for additional work at or near the Project site. Owner shall help coordinate the activities of Owner's own forces and of each separate contractor engaged by Owner with the Work of Contractor, who shall reasonably cooperate and coordinate with the other contractors and with Owner's employees and shall carefully adapt scheduling and perform the Work in accordance with these Contract Documents to reasonably accommodate the other work.

5.10 WARRANTY

A. Contractor warranty of Work: In addition to any special warranties provided elsewhere in the Contract Documents, Contractor warrants that all Work conforms to the requirements

of the Contract Documents and is free of any defect in equipment, material, or design furnished, or workmanship performed by Contractor.

B. Contractor responsibilities: With respect to all warranties, express or implied, for Work performed or materials furnished according to the Contract Documents, Contractor shall:

1. Obtain warranties: Obtain, assign if requested, and furnish directly to Owner, all warranties that would be given in normal commercial practice or that are required by the Contract Documents, first executed by the applicable Subcontractor and those suppliers and manufacturers furnishing materials for the Work, and subsequently countersigned by Contractor, which shall extend to Owner all rights, claims, benefits and interests that Contractor may have under express or implied warranties or guarantees against the Subcontractor, supplier or manufacturer for defective or non-conforming Work;

2. Warranties for benefit of Owner: Require all warranties to be executed, in writing, for the benefit of Owner;

3. Enforcement of warranties: Enforce all warranties for the benefit of Owner, if directed by Owner; and

4. Contractor responsibility for Subcontractor warranties: Be responsible to enforce any Subcontractor's, manufacturer's, or supplier's warranties should they extend beyond the period specified in the Contract Documents.

C. Warranties beyond Final Acceptance: The obligations under this Section shall survive Final Acceptance.

5.11 INDEMNIFICATION

A. Contractor to indemnify Owner: To the fullest extent permitted by law, Contractor shall defend, indemnify, and hold Owner and A/E, their consultants, and agents and employees, directors, elected officials, officers, lenders, successors and assigns of any of them (collectively, the "Indemnified Parties"), harmless from and against all claims, demands, losses, damages, or costs, including but not limited to damages arising out of bodily injury or death to persons and damage to property, direct and indirect, or consequential (including but not limited to costs and attorneys' fees incurred on such claims or in proving the right to indemnification), arising out of, caused by or resulting from performance of the Work. Contractor's indemnity and defense obligations do not extend to liability resulting from: the sole negligence or willful misconduct of the Indemnified Parties. Contractor's duty to indemnify and defend Owner for liability for damages arising out of bodily injury to persons or damage to property caused by or resulting from the concurrent negligence of (a) the Indemnified Parties; and (b) Contractor or its agents, employees, and Subcontractors and suppliers of any tier, shall apply only to the extent of the negligence of Contractor, its agents, employees, and Subcontractors and suppliers of any tier. This indemnification obligation shall include, but is not limited to, all Claims against the Owner by an employee or former employee of the Contractor or any Subcontractor.

B. Obligations: The obligations of Contractor under this Section shall survive completion, acceptance, final payment and termination of the Contract and shall not be construed to negate, abridge, or otherwise reduce any other right or obligations of indemnity that would otherwise exist as to any party or person described in this Section. To the extent the wording of this Section would reduce or eliminate the insurance coverage of Owner or Contractor, this Section shall be considered modified to the extent that such insurance coverage is not affected. To the extent that any portion of this Section is stricken by a court or arbitrator for any reason, all remaining provisions shall retain their vitality and effect.

C. RCW Title 51: Employee action and RCW Title 51: In any action against Owner and any other entity indemnified in accordance with this section, by any employee of Contractor, its Subcontractors, Sub-subcontractors, agents, or anyone directly or indirectly employed by any of them, the indemnification obligation of this section shall not be limited by a limit on the amount or type of damages, compensation, or benefits payable by or for Contractor or any Subcontractor under RCW Title 51, the Industrial Insurance Act, or any other employee benefit acts. **In addition, Contractor waives immunity as to Owner and A/E only, in accordance with RCW Title 51.**

D. Defense Costs. Defense cost recovery shall include all fees (of attorneys and experts), in costs and expenses incurred in good faith. In addition, Owner shall be entitled to recover compensation for all of its expenses (including materials and labor) consumed in its defense.

PART 6 – PAYMENTS AND COMPLETION

6.1 CONTRACT SUM AND APPLICATION FOR PAYMENTS

A. Owner shall pay Contract Sum: Owner shall pay Contractor the Contract Sum for performance of the Work, in accordance with the Contract Documents.

B. Contractor to submit Schedule of Values: At least 7 Days prior to submitting its first Application for Payment, Contractor shall submit to Owner for approval a breakdown allocating the total Contract Sum to each principal category of work, in such detail as requested by Owner ("Schedule of Values"), but including a minimum of 30 line items. The approved Schedule of Values shall allocate appropriate amounts, not less than 5% of the total bid, to that portion of the Work between Substantial Completion and Final Completion to recognize not-yet-earned costs for demobilization, O&M manuals, and any other requirements for Project closeout and in advancing the Work from Substantial Completion to Final Completion. The approved Schedule of Values shall be used by Owner as a basis for reviewing progress payments. Payment for Work shall be made only for and in accordance with those items included in the Schedule of Values.

C. Monthly Application for Payment with substantiation: At monthly intervals, unless determined otherwise by Owner, Contractor shall submit to Owner an itemized Application for Payment for Work completed in accordance with the Contract Documents and the approved Schedule of Values. Each application shall be supported by such substantiating data as Owner may require.

D. Contractor certifies Subcontractors paid: By submitting an Application for Payment, Contractor is certifying that all Subcontractors have been paid, less earned retainage in accordance with RCW 60.28.011, as their interests appeared in the last preceding Application for Payment. By submitting an Application for Payment, Contractor is recertifying that the representations set forth in Section 1.3 are true and correct, to the best of Contractor's knowledge, as of the date of the Application for Payment. Owner has the right to request written evidence from Contractor that Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by Owner to Contractor for subcontracted Work. Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Owner shall not have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

E. Reconciliation of Work with Progress Schedule: At the time it submits an Application for Payment, Contractor shall analyze and reconcile, to the satisfaction of Owner, the actual progress of the Work with the Progress Schedule. The submission of an Application for Payment constitutes a certification that the Work is current on the Progress Schedule.

F. Payment for material delivered to site or stored off-site: If authorized by Owner, the Application for Payment may include request for payment for material delivered to the Project site and suitably stored, or for completed preparatory work. Payment may similarly be requested for material stored off the Project site, provided Contractor complies with or furnishes satisfactory evidence of the following:

1. Suitable facility or location within 10 miles of the Project: The material will be placed in a facility or location that is within a 10-mile radius of the Project, structurally sound, secure (continuously under lock and key), dry, lighted and suitable for the materials to be stored or otherwise approved by Owner;

2. Insurance provided on materials in facility or location: Contractor furnishes Owner a certificate of insurance extending Contractor's insurance coverage for damage, fire, and theft to cover the full value of all materials stored, or in transit;

3. Owner right of access to facility or location: Owner shall at all times have the right of access to the Project site;

4. Contractor assumes total responsibility for stored materials: Contractor and its surety assume total responsibility for the stored materials; and

5. Contractor provides documentation and Notice when materials moved to site: Contractor furnishes to Owner certified lists of materials stored, bills of lading, invoices, and other information as may be required, and shall also furnish Notice to Owner when materials are moved from storage to the Project site.

6.2 PROGRESS PAYMENTS

A. Owner to pay within 30 Days: Owner shall make progress payments, in such amounts as Owner determines are properly due, within 30 Days after receipt of a properly executed Application for Payment. Owner shall notify Contractor in accordance with chapter 39.76

RCW if the Application for Payment does not comply with the requirements of the Contract Documents.

B. Withholding retainage; Options for retainage: Owner shall retain 5% of the amount of each progress payment until 45 Days after Final Acceptance and receipt of all documents required by law or the Contract Documents, including, at Owner's request, consent of surety to release of the retainage. In accordance with chapter 60.28 RCW, Contractor may request that monies reserved be retained in a fund by Owner, deposited by Owner in a bank or savings and loan, or placed in escrow with a bank or trust company to be converted into bonds and securities to be held in escrow with interest to be paid to Contractor. Owner may permit Contractor to provide an appropriate bond in lieu of the retained funds.

C. Title passes to Owner upon payment: Title to all Work and materials covered by a progress payment shall pass to Owner at the time of such payment free and clear of all liens, claims, security interests, and encumbrances. Passage of title shall not, however, relieve Contractor from any of its duties and responsibilities for the Work or materials, or waive any rights of Owner to insist on full compliance by Contractor with the Contract Documents. A progress payment, or partial or entire use or occupancy of the Project by Owner, shall not constitute acceptance of Work.

6.3 PAYMENTS WITHHELD

A. Owner's right to withhold payment: Owner may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any payment to such extent as may be necessary to protect Owner from loss or damage for reasons including but not limited to: (1) Work not in accordance with the Contract Documents; (2) Reasonable evidence that the Work required by the Contract Documents cannot be completed for the unpaid balance of the Contract Sum; (3) Work by Owner to correct defective Work or complete the Work in accordance with Section 5; (4) Claims (except where an insurer has unconditionally accepted coverage) filed or reasonable evidence indicating probable filing of such claims unless Contractor provides security acceptable to Owner; (5) The failure of Contractor to make payments to Subcontractors for labor, materials or equipment; (6) Damage to Owner or a separate contractor (except where an insurer has unconditionally accepted coverage); (7) Failure to submit affidavits pertaining to wages paid or certified payrolls as requested or otherwise required by statute; (8) Contractor's failure otherwise to perform in accordance with the Contract Documents; or (9) Contractor's negligent acts or omissions: Cost or liability that may occur to Owner as the result of Contractor's fault or negligent acts or omissions.

B. Owner to notify Contractor of withholding for unsatisfactory performance: In any case where part or all of a payment is going to be withheld for unsatisfactory performance, Owner shall notify Contractor in accordance with chapter 39.76 RCW.

6.4 RETAINAGE, BOND CLAIM RIGHTS, AND LIENS

A. Chapters 39.08 RCW and 60.28 RCW incorporated by reference: Chapters 39.08 RCW and 60.28 RCW, concerning the rights and responsibilities of Contractor and Owner with

regard to the performance and payment bonds and retainage, are made a part of the Contract Documents by reference as though fully set forth herein.

B. Liens: Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials or other items in connection with the performance of the Work (including, but not limited to, any Subcontractors) to the extent that Owner has paid Contractor for this Work. Owner may, at its option, withhold payment, in whole or in part, to Contractor until lien and claim releases are furnished. Contractor may provide other security acceptable to Owner, such as a bond, in lieu of paying disputed liens or claims. Contractor shall defend, indemnify, and hold harmless Owner from any liens, including all expenses and attorneys' fees, except to the extent a lien has been recorded because of a failure of payment by Owner for the Work implicated in any such lien.

6.5 SUBSTANTIAL COMPLETION

A. Substantial Completion defined: Substantial Completion is the stage in the progress of the Work (or portion thereof designated and approved by Owner) when the construction is sufficiently complete, in accordance with the Contract Documents, so Owner has full and unrestricted use and benefit of the facilities (or portion thereof designated and approved by Owner) for the use for which it is intended. All Work other than incidental corrective or punch list work shall be completed. Substantial Completion shall not have been achieved if the Work cannot achieve Final Completion within the time specified in the Agreement, if all systems and parts are not functional, if utilities are not connected and operating normally, if all required occupancy permits have not been issued, or if the Work is not accessible by normal vehicular and pedestrian traffic routes. The date Substantial Completion is achieved shall be established in writing by Owner. Contractor may request an early date of Substantial Completion which must be approved by Change Order. Owner's occupancy of the Work or designated portion thereof does not necessarily indicate that Substantial Completion has been achieved.

B. Owner to determine if Work is complete: Upon receipt of Contractor's list, Owner will make an inspection to determine whether the Work or designated portion thereof has achieved Substantial Completion. If Owner's inspection discloses any item, whether or not included on Contractor's list, that is not sufficiently complete in accordance with the Contract Documents so that Owner can occupy or utilize the Work or designated portion thereof for its intended use, Contractor shall, before the occurrence of Substantial Completion, complete or correct the item upon notification by Owner, and Contractor shall then submit a request for another inspection by Owner to determine Substantial Completion. If Owner determines that the Work or designated portion has not achieved Substantial Completion, Contractor shall expeditiously complete the Work or designated portion, again request an inspection, and pay the costs associated with the re-inspection.

C. Contractor to complete punch list in timely manner: Contractor shall prepare, continue to monitor, and cause to be completed, all punch lists with respect to the activity of each Subcontractor and report weekly to Owner on outstanding punch list items.

6.6 PRIOR OCCUPANCY

A. Prior Occupancy defined; Restrictions: Owner may, when legally permissible to do so and upon written Notice to Contractor, take possession of or use any completed or partially completed portion of the Work ("Prior Occupancy") at any time prior to Substantial Completion, and Contractor shall cooperate with such occupancy and use and the establishment of a punch list. Unless otherwise agreed in writing, Prior Occupancy shall not: be deemed an acceptance of any portion of the Work; accelerate the time for any payment to Contractor; prejudice any rights of Owner provided by any insurance, bond, guaranty, or the Contract Documents; relieve Contractor of the risk of loss or any of the obligations established by the Contract Documents; establish a date of Substantial or Final Completion; establish a date for termination or partial termination of the assessment of liquidated damages; or constitute a waiver of claims.

B. Damage; Duty to repair and warranties: Notwithstanding anything in the preceding paragraph, Owner shall be responsible for loss of or damage to the Work resulting from Prior Occupancy. Contractor's one year duty to repair any system warranties shall begin on building systems activated and used by Owner as agreed in writing by Owner and Contractor.

6.7 FINAL COMPLETION, ACCEPTANCE, AND PAYMENT

A. Final Completion defined: Final Completion shall be achieved when the Work is fully and finally complete in accordance with the Contract Documents. The date Final Completion is achieved shall be established by Owner in writing, but in no case shall it constitute Final Acceptance, which is a subsequent, separate, and distinct action.

B. Final Acceptance defined: Unless otherwise determined by Owner, Final Acceptance shall be achieved after Contractor has completed all the requirements of the Contract Documents. The date Final Acceptance is achieved shall be established by Owner in writing. Pursuant to RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," completion of the Contract Work shall occur upon Final Acceptance. Neither Final Acceptance nor final payment shall release Contractor or its sureties from any obligations of these Contract Documents or the payment and performance bonds, or constitute a waiver of any claims by Owner arising from Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Final payment waives Claim rights: Acceptance of final payment by Contractor or any Subcontractor shall constitute a waiver and release to Owner of all claims by Contractor or any such Subcontractor for an increase in the Contract Sum or the Contract Time, and for every act or omission of Owner relating to or arising out of the Work, except for those Claims made in accordance with the procedures, including the time limits, set forth in Section 8.

PART 7 – CHANGES

7.1 CHANGE IN THE WORK

A. Changes in the Work: Changes in the Work may be accomplished after execution of the Contract without invalidating the Contract. Changes in the Work are recognized and

incorporated into the Contract solely by Change Order and are subject to the limitations stated in this Part 7 and elsewhere in the Contract Documents. A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone. Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

B. Change Order: A Change Order is a written instrument signed by the Owner, Contractor, and Architect that modifies or amends the Contract Documents by setting forth: (1) a change in the Work, (2) the amount of any adjustment in the Contract Sum, and (3) the extent of any adjustment in the Contract Time. The Change Order shall constitute full payment and final settlement of all claims for time and direct, indirect, and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the Change Order.

C. Change Order Proposal from Contractor: If Contractor at any time believes that a change in the Work has occurred that involves a change in the Contract Sum and/or Contract Time, Contractor shall provide written Notice to Owner in accordance with Section 8. Contractor's failure strictly to follow the procedure set forth in the Contract Documents shall waive any right of Contractor to a change in the Contract Sum or Contract Time on account of any such change in the Work.

D. Owner-Initiated Changes: For an Owner-initiated change or directive, Owner may

1. Request a written Change Order Proposal (COP) from Contractor. Contractor shall submit a COP within 14 Days of the request from Owner, or within such other period as mutually agreed. Contractor's COP shall be full compensation for implementing the proposed change in the Work, including any adjustment in the Contract Sum or Contract Time, and including compensation for all delays in connection with such change in the Work and for any expense or inconvenience, disruption of schedule, or loss of efficiency or productivity occasioned by the change in the Work. Upon receipt of the COP, Owner may accept the proposal and incorporate it into Change Order, reject the proposal, request further documentation, or negotiate acceptable terms with Contractor.

2. Issue a Construction Change Directive (CCD). Pending execution of a Change Order, Owner may issue a CCD directing Contractor to proceed immediately with the Work. A CCD is a written order prepared by Owner that directs Contractor to perform Work prior to total agreement on an adjustment, if any, in the Contract Sum and/or Contract Time. Owner may direct Contractor through a CCD, at any time and without invalidating the Contract, to proceed with a change in the Work or to perform Work that Contractor contends to be a change in the Work, with or without the agreement of Contractor and prior to agreement of the basis for adjustment, if any, to the Contract. Owner's use of a CCD does not constitute agreement that the directive constitutes a change in the Work, the Contract Sum or the Contract Time.

All Work done pursuant to an Owner-directed change in the Work shall be executed in accordance with the Contract Documents. Upon receipt of a CCD, Contractor shall promptly commence and proceed diligently with performance of the directed Work. Within 7 Days of its receipt of a CCD, Contractor shall notify Owner in writing either (a) of its acceptance of its terms, in which case the terms will become effective, and the CCD will be incorporated into a Change Order, or (b) of Contractor's rejection of the terms, in which case Contractor must submit a written Rejection within 14 Days after Contractor delivered written Notice to Owner as noted above. The written Rejection must fully explain the reasons for rejecting the CCD and include all necessary supporting documentation. Failure to submit written Notice within 7 Days of Contractor's receipt of a CCD or a written Rejection with 14 Days after delivery of written Notice shall constitute Contractor's acceptance of the terms of the CCD. Contractor's Rejection of a CCD shall not relieve Contractor of its obligation to comply promptly with the CCD.

E. Contractor fault or negligence alleged as basis for change in Contract Sum: No change in the Contract Sum shall be allowed to the extent Contractor's changed cost of performance is due to the fault or negligence of Contractor or anyone for whose acts Contractor is responsible; or to the extent Contractor is responsible for change concurrently caused by Contractor and Owner; or to the extent the change is caused by an act of Force Majeure as defined in this Agreement.

7.2 CHANGE IN THE CONTRACT SUM

A. Contract Sum changes only by Change Order: The Contract Sum shall only be changed by a Change Order. Contractor shall include any request for a change in the Contract Sum in its COP.

B. Allowances: Any Allowances stated in the Contract Documents shall be included in the Contract Sum. Items covered by Allowances shall be supplied for such amounts and by such persons or entities as Owner may direct, but Contractor shall not be required to employ persons or entities to whom Contractor has made reasonable and timely objection. Owner shall select materials and equipment under an Allowance with reasonable promptness. Allowances shall cover the net cost to Contractor of materials and equipment delivered and/or installed at the site, as identified in the Allowance, and all required taxes, less applicable trade discounts. Whenever actual costs are more than or less than Allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect the difference between actual, reasonable costs and the Allowances.

C. Methods for Calculating Change Order Pricing: The value of any Work covered by a Change Order or any adjustment to the Contract Sum shall be determined by fixed price, unless otherwise agreed to by Owner. The following procedures shall apply with respect to pricing:

a. Breakdown and itemization of details on COP: Contractor's COP shall be accompanied by a complete itemization of the costs, including labor, material, subcontractor costs, and overhead and profit. The costs shall be itemized in the manner set forth below, and shall be submitted on breakdown sheets in a form

approved by Owner. If the total cost of the change in the Work does not exceed $2,000, Contractor shall not be required to submit a breakdown if the description of the change in the Work is sufficiently definitive for Owner to determine fair value.

b. Use of industry standards in calculating costs: All costs shall be calculated based upon appropriate industry standard methods of calculating labor, material quantities, and equipment costs such as R.S. Means or other standards acceptable to the Owner and Contractor.

c. Markups on additive and deductive Work: The cost of any additive or deductive changes in the Work shall be calculated as set forth below. Where a change in the Work involves additive and deductive work by the same Contractor or Subcontractor, small tools, overhead, profit, bond and insurance markups will apply to the net difference.

d. Components of Increased Costs: Any request for an adjustment of the Contract Sum shall include only the following

i. Craft labor costs: These are the labor costs determined by multiplying the estimated or actual additional number of craft hours needed to perform the change in the Work by the hourly labor costs. Craft hours should cover direct labor, as well as indirect labor due to trade inefficiencies. The hourly costs shall be based on the following:

1. Basic wages and benefits: Hourly rates and benefits as stated on the Department of Labor and Industries approved "statement of intent to pay prevailing wages" or a higher amount if approved by the Owner. Direct supervision shall be a reasonable percentage not to exceed 15% of the cost of direct labor. No supervision markup shall be allowed for a working supervisor's hours.
2. Federal insurance: Direct contributions required by the Federal Insurance Compensation Act; Federal Unemployment Tax Act; and the State Unemployment Compensation.
3. Travel allowance: Travel allowance and/or subsistence, if applicable, not exceeding those allowances established by regional labor union agreements, which are itemized and identified separately.
4. Safety: Cost incurred due to the Washington Industrial Safety and Health Act, which shall be a reasonable percentage not to exceed 2% of the sum of the amounts calculated in (1), (2), and (3) above.

ii. Material costs: This is an itemization of the quantity and cost of materials needed to perform the change in the Work. Material costs shall be developed first from actual known costs, second from supplier quotations or if these are not available, from standard industry pricing guides. Material costs shall consider all available discounts. Freight costs, express charges, or special delivery charges, shall be itemized.

iii. Equipment costs: This is an itemization of the type of equipment and the estimated or actual length of time the construction equipment appropriate for the Work is or will be used on the change in the Work. Costs will be allowed for construction equipment only if used solely for the changed Work, or for additional rental costs actually incurred by the Contractor. Equipment charges shall be computed on the basis of actual invoice costs or if owned, from the current edition of one of the following sources:

1. The Equipment Watch Fleet Manager Estimator Package (digital). The maximum rate for standby equipment shall not exceed that shown in the Associated General Contractors Washington State Department of Transportation (AGC WSDOT) Equipment Rental Agreement, current edition on the Contract execution date.
2. The National Electrical Contractors Association for equipment used on electrical work.
3. The Mechanical Contractors Association of America for equipment used on mechanical work.

The Equipment Watch Rental Rate Blue Book shall be used as a basis for establishing rental rates of equipment not listed in the above sources. The maximum rate for standby equipment shall not exceed that shown in the AGC WSDOT Equipment Rental Agreement, current edition on the Contract execution date.

iv. Allowance for small tools, expendables & consumable supplies: Small tools consist of tools which cost $250 or less and are normally furnished by the performing contractor. The maximum rate for small tools shall not exceed the following:

1. 3% for Contractor: For Contractor, 3% of direct labor costs.
2. 5% for Subcontractors: For Subcontractors, 5% of direct labor costs.

Expendables and consumables supplies directly associated with the change in Work must be itemized.

v. Allowance for overhead and profit: This is defined as costs of any kind attributable to direct and indirect delay, acceleration, or impact, added to the total cost to Owner of any change in the Contract Sum. This allowance shall compensate Contractor for all non-craft labor, temporary construction facilities, field engineering, schedule updating, as-built drawings, home office cost, B&O taxes, office engineering, estimating costs, additional overhead because of extended time, profit, and any other cost incidental to the change in the Work. It shall be strictly limited in all cases to a reasonable amount, mutually acceptable, not to exceed the rates below:

1. Additive or Deductive Change Orders Performed by Contractor: 7 percent overhead and profit
2. Additive or Deductive Change Order for Work performed by Subcontractor(s): 5 percent overhead and profit for Contractor and 10 percent overhead and profit for Subcontractor(s).

vi. Insurance and bond premiums: Cost of change in insurance or bond premium, which shall be added after overhead and profit are calculated in accordance with paragraph (v) above: This is defined as:

1. Contractor's liability insurance: The cost of any changes in Contractor's liability insurance arising directly from execution of the Change Order; and
2. Payment and Performance Bond: The cost of the additional premium for Contractor's bond arising directly from the changed Work.

D. Deductive Change or Credit: The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

7.3 CHANGE IN THE CONTRACT TIME

A. Changes in Contract Time: The Contract Time shall only be changed by a Change Order. Claims relating to time shall be made in accordance with Section 8.

B. Time extension permitted only if delay is not Contractor's fault: If Contractor is delayed at any time in the commencement or progress of the Work (1) by an act or neglect of Owner or anyone for whose acts Owner is responsible; or (2) by changes ordered by Owner in the Work; or (3) by Force Majeure; or (4) by delay authorized by Owner pending dispute resolution; or (5) by other causes that Owner determines may justify delay, then Contractor shall reasonably attempt to mitigate the delay, and the Contract Time shall be extended by Change Order for such reasonable time as Owner may reasonably determine consistent with the provisions of the Contract Documents. No adjustment in the Contract Time shall be allowed to the extent Contractor's changed time of performance is due to the fault or negligence of Contractor or anyone for whose acts Contractor is responsible.

C. Contractor must demonstrate impact on critical path of schedule: Any change in the Contract Time covered by a Change Order or Claim shall be limited to the change in the critical path of the Work attributable to the change or event(s) giving rise to the Change Order or Claim. Contractor shall be responsible for showing clearly on the Progress Schedule that the change or event had a specific impact on the critical path and, except in case of concurrent delay, was the sole cause of such impact, and could not have been avoided by resequencing of the Work or other reasonable alternatives.

D. Cost arising from change in Contract Time: Provided Contractor has strictly complied with the procedures set forth in Section 7 and Section 8, Contractor is entitled to compensation for the cost of a change in Contract Time only if all the following conditions are met:

1. Must be solely fault of Owner: The change in Contract Time must solely be caused by the fault or negligence of Owner or others for whom Owner is responsible;

2. Demonstrate impact on critical path: Contractor must establish the extent of the change in Contract Time in accordance with Section 7.3C. Owner is not obligated directly or indirectly for damages or an increase in the Contract Sum for any delay suffered by a Subcontractor that does not increase the Contract Time; and

3. Limitations on Costs: Neither Contractor nor a Subcontractor of any tier is entitled to payment for costs arising out of actual or alleged loss of efficiency; morale, fatigue, attitude, or labor rhythm; home office overhead; expectant underrun; trade stacking; reassignment of workers; rescheduling of work; concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended overhead; profit upon damages for delay; impact damages, including cumulative impact; or similar damages.

PART 8 – CLAIMS AND DISPUTE RESOLUTION

8.1 CLAIMS

A. Definition: A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of the Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract Documents. The term “Claim” also includes other disputes and matters in question between Owner and Contractor arising out of or relating to the Contract Documents. Claims must be initiated in writing and be made in accordance with the Contract Documents.

B. Continuing Contract performance: Pending final resolution of a Claim, including the dispute resolution process, and except as otherwise agreed in writing or in the Contract Documents, Contractor shall proceed diligently with performance of the Work and maintain the Progress Schedule, and Owner shall continue to make payments of undisputed amounts in accordance with the Contract Documents.

C. Claims for additional cost: If Contractor wishes to make a Claim for an increase in the Contract Sum, written Notice as provided herein shall be given before proceeding to execute the Work, and written Notice and a written Claim must be made in accordance with this Part 8, or it will be waived.

D. Claims for additional time: If Contractor wishes to make a Claim for an increase in the Contract Time, written Notice as provided herein shall be given, and a written Claim must be made in accordance with this Part 8, or it will be waived.

E. Claims for consequential damages: Contractor and Owner waive certain Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes damages incurred by Owner for income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and damages incurred by Contractor for principal and home office overhead and expenses including but not limited to the compensation of personnel

stationed there, for loss of financing, business and/or reputation, for losses on other projects, for loss of profit, and for interest or financing costs. This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination. Nothing contained in this subparagraph, however, shall be deemed to preclude an award of Owner's liquidated or other Owner delay damages, when applicable, in accordance with the Contract Documents, or to preclude or limit Contractor's obligation to indemnify Owner for damages, including direct, indirect or consequential damages, alleged by a third party.

8.2 CLAIMS PROCESS

A. Notice and Claims: Contractor shall provide Notice of any Claim within 14 Days of the event giving rise to the Claim. Contractor shall then provide its Claim, with substantiation as required in Paragraph B herein, no later than 20 Days after Contractor's submittal of its Notice of Claim. Any Notice and any Claim of Contractor, whether under the Contract or otherwise, must be made pursuant to and in strict accordance with the applicable provisions of the Contract Documents. No act, omission, or knowledge, actual or constructive, of Owner or anyone for whose acts Owner is responsible shall in any way be deemed to be a waiver of the requirement for timely written Notice and a timely written Claim unless Owner and Contractor sign an explicit, unequivocal written waiver. The fact that Owner and Contractor may consider, discuss, or negotiate a Claim that has or may have been procedurally or substantively defective or untimely under the Contract shall not constitute a waiver of the provisions of the Contract Documents unless Owner and Contractor sign an explicit, unequivocal written waiver. Contractor acknowledges and agrees that Contractor's failure to timely submit required Notices and/or timely submit Claims has a substantial impact upon and prejudices Owner, including but not limited to its inability to fully investigate or verify the Claim, mitigate damages, choose alternative options, adjust the budget, delete or modify the impacted Work, and/or monitor time, cost and quantities, and shall result in waiver of Contractor's Claim.

B. Claim must cover all costs and be documented: A Claim shall be deemed to cover all changes in cost and time (including direct, indirect, impact, and consequential) to which Contractor (and Subcontractors) may be entitled and may not contain reservations of rights without Owner's written approval; any such unapproved reservations of rights shall be without effect. At a minimum, a Claim shall contain the following information:

1. Factual statement of Claim: A detailed factual statement of the Claim for additional compensation and/or time, if any, providing all necessary dates, locations, and items of Work affected by the Claim and confirming the damages asserted (time and cost) are actually caused by and/or a result of the act, event, or condition complained of;

2. Dates: The date on which event(s) arose which gave rise to the Claim;

3. Individuals knowledgeable about Claim: The name of each individual, including but not limited to employees of Contractor, Subcontractors, Owner and/or A/E believed to be knowledgeable about the Claim;

4. Support from Contract Documents: The specific provisions of the Contract Documents that support the Claim;

5. Identification of other supporting information: The identification of any documents and the substance of any oral communications that support the Claim;

6. Copies of supporting documentation: Data and copies of any identified documents, other than the Contract Documents, that support the Claim;

7. Details on Claim for Contract Time: If an adjustment in the Contract Time is sought, the specific days and dates for which it is sought; the specific reasons Contractor believes an extension in the Contract Time should be granted, and Contractor's analysis of its Progress Schedule to demonstrate the reason for the extension in Contract Time.

8. Details on Claim for adjustment of Contract Sum: If an adjustment in the Contract Sum is sought, the exact amount sought and a breakdown of that amount into the categories and with the detail required by Section 7; and

9. Statement certifying Claim: A statement certifying, under penalty of perjury, that the Claim is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor's knowledge and belief, that the Claim is fully supported by the accompanying data, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes Owner is liable.

C. Waiver of rights: Any Claim of Contractor against Owner shall be conclusively deemed to have been waived by Contractor unless made in accordance with the requirements of Part 8.

D. Owner may investigate: To assist in the review of a Claim, Owner may at any time visit the Project site, communicate directly with Subcontractors, or request additional information (including requesting an audit as authorized below) in order to fully evaluate the issues raised by the Claim.

E. Owner may audit Claims: All Claims filed against Owner shall be subject to audit at any time following the filing of the Claim. Failure of Contractor or Subcontractors of any tier to permit Owner access to the books and records of Contractor or Subcontractors of any tier, or to maintain and retain sufficient records to allow Owner to verify all or a portion of the Claim, shall constitute a waiver of the Claim and shall bar any recovery. The audit may be performed by employees or representatives of Owner. Contractor and its Subcontractors shall provide adequate facilities acceptable to Owner for the audit during normal business hours. Contractor and all Subcontractors shall make a good faith effort to cooperate with Owner's auditors.

F. Reciprocal RCW 42.56 rights: Contractor agrees, on behalf of itself and Subcontractors, that any invocation of RCW 42.56 at any time by Contractor or a Subcontractor, or their respective representatives, shall initiate an equivalent right to disclosures from Contractor and Subcontractors for the benefit of Owner. Failure to fully comply with these

requirements shall constitute a material breach of the Contract and shall constitute a waiver of all Claims by Contractor and any Subcontractor that does not fully comply.

8.3 FORMAL RESOLUTION OF CLAIMS

A. Mediation Required: To the extent a Claim is not resolved by Owner and Contractor, Claims, disputes, or other matters in controversy arising out of or related to the Contract shall be subject to mediation as a condition precedent to the initiation of binding dispute resolution. This requirement cannot be waived except by an explicit written waiver signed by both Owner and Contractor. Unless Owner and Contractor mutually agree in writing otherwise, all unresolved Claims shall be considered at a single mediation session that shall occur after Substantial Completion and prior to Final Acceptance by Owner. A request for mediation shall be delivered in writing to the other party to the Contract, and the parties shall promptly attempt to mutually agree on a mediator. If the parties do not agree on a mediator within 30 Days of a party's demand, the mediation, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. Mediation shall proceed in advance of binding dispute resolution proceedings. The parties to the mediation shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction.

B. Litigation: Contractor may not commence litigation on a Claim unless the Claim has been raised and considered in accordance with the procedures of this Part 8, including mandatory mediation. Contractor shall have the burden to demonstrate in any litigation that it has complied with all requirements of this Part 8. All unresolved Claims of Contractor shall be waived and released unless Contractor has complied with the time limits of the Contract Documents, and litigation is served and filed within 180 Days after the Date of Substantial Completion approved in writing by Owner. This requirement cannot be waived except by an explicit, written waiver signed by Owner and Contractor. The pendency of a mediation, which shall mean the time period between a party's receipt of a written mediation demand and the date of the initial mediation session, shall stay this deadline for serving and filing a lawsuit. The deadline may also be stayed for an additional period by agreement of the parties or court order. Neither Contractor nor a Subcontractor, whether claiming under a bond or lien statute or otherwise, shall be entitled to attorneys' fees directly or indirectly from Owner (but may recover attorneys' fees from the bond or statutory retainage fund itself to the extent allowable under law).

PART 9 – TERMINATION OF THE WORK

9.1 TERMINATION BY OWNER FOR CAUSE

A. Notice to Terminate for Cause: Owner may, upon 7 Days written notice to Contractor and to its surety, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for cause upon the occurrence of any one or more of the following events:

1. Contractor repeatedly refuses or fails to prosecute the Work or any portion thereof with sufficient diligence to ensure Substantial Completion of the Work within the Contract Time;

2. Contractor is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency;

3. Contractor repeatedly refuses or fails in a material way to replace or correct Work not in conformance with the Contract Documents;

4. Contractor repeatedly refuses or fails to supply skilled workers or proper materials or equipment;

5. Contractor repeatedly refuses or fails to make prompt payment due to Subcontractors or for labor;

6. Contractor materially disregards or fails to comply with laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction; or

7. Contractor is otherwise in material breach of any provision of the Contract Documents.

B. Owner's actions upon termination: Upon termination, Owner may at its option:

1. Exclude the Contractor from the Site and/or take possession of the Project site and take possession of or use all materials, equipment, tools, and construction equipment and machinery thereon owned by Contractor to maintain the orderly progress of, and to finish, the Work;

2. Accept assignment of subcontracts pursuant to Section 5; and

3. Finish the Work by whatever other reasonable method it deems expedient.

C. Payment upon Termination: If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for A/E's services and expenses made necessary thereby and any other extra costs or damages incurred by Owner in completing the Work, or as a result of Contractor's actions, or any other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall survive termination of the Contract.

D. Contractor and Surety still responsible for Work performed: Termination of the Work in accordance with this section shall not relieve Contractor or its surety of any responsibilities for Work performed.

E. Conversion of "Termination for Cause" to "Termination for Convenience": If Owner terminates Contractor for cause and it is later determined that none of the circumstances

set forth in paragraph 9.01A exist, then such termination shall be deemed a termination for convenience pursuant to Section 9.

9.2 SUSPENSION OR TERMINATION BY OWNER FOR CONVENIENCE

A. Owner Notice of Suspension or Termination for Convenience: Owner may, upon written notice, suspend or terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for the convenience of Owner.

B. Contractor Response to Termination Notice: Unless Owner directs otherwise, after receipt of a written notice of suspension or termination for either cause or convenience, Contractor shall promptly:

1. Stop performing Work on the date and as specified in the notice of suspension or termination;

2. Place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of such portion of the Work as is not suspended or terminated;

3. For Work terminated, cancel all orders and subcontracts, upon terms acceptable to Owner, to the extent that they relate to the performance of Work terminated;

4. For Work terminated, assign to Owner all of the right, title, and interest of Contractor in all orders and subcontracts to the extent that they relate to the performance of Work terminated;

5. Take such action as may be necessary or as directed by Owner to preserve and protect the Work, Project site, and any other property related to this Project in the possession of Contractor in which Owner has an interest; and

6. Continue performance only to the extent not terminated or suspended.

C. Terms of adjustment in Contract Sum if Contract terminated or suspended: If Owner terminates or suspends the Work or any portion thereof for convenience, Contractor shall be entitled to make a request for an equitable adjustment for its reasonable direct costs incurred during the period of suspension or prior to the effective date of the termination, plus reasonable allowance for overhead and profit on Work performed prior to termination, plus the reasonable administrative costs of the termination, but shall not be entitled to any other costs or damages, whatsoever, provided however, the total sum payable upon termination shall not exceed the Contract Sum reduced by prior payments. Contractor shall be required to make its request in accordance with the provisions of Part 7. Failure of Contractor to comply with the requirements of Part 7 shall result in waiver of Contractor's claim.

D. Owner to determine whether to adjust Contract Time: If Owner terminates the Work or any portion thereof for convenience, the Contract Time shall be adjusted as determined by Owner.

9.3 TERMINATION BY CONTRACTOR FOR CAUSE

A. Contractor termination: Except as provided by RCW 60.28.080, Contractor may terminate the Contract for any of the following reasons:

1. Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped permanently;

2. An act of government, such as a declaration of national emergency, that requires all Work to be stopped permanently; or

3. The Work is stopped for a period of 60 consecutive Days through no act or fault of Contractor, a Subcontractor, or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with Contractor.

B. Contractor termination procedure: If one of the above reasons exists, Contractor may, upon seven (7) Days' written Notice to Owner (during which period Owner has the opportunity to cure), terminate the Contract and recover from Owner payment for Work executed in accordance with the Contract Documents, including reasonable overhead and profit on Work executed and costs incurred by reason of such termination. The total recovery of Contractor shall not exceed the unpaid balance of the Contract Sum.

9.4 OWNER'S RIGHT TO STOP AND/OR CARRY OUT THE WORK FOR CAUSE

A. Owner may stop Work for Contractor's failure to perform: If Contractor fails or refuses to perform its obligations in accordance with the Contract Documents, Owner may order Contractor, in writing, to stop the Work, or any portion thereof, until Owner has accepted satisfactory corrective action.

B. Owner may carry out the Work after Contractor's failure to perform: If Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a 14- Day period after receipt of written Notice from Owner to commence and continue to make reasonable progress toward the correction of such default or neglect with diligence and promptness, Owner may, without prejudice to other remedies Owner may have, correct such deficiencies, and an appropriate Change Order shall be issued deducting from payments then or thereafter due Contractor the reasonable cost of correcting the deficiencies, including Owner's expenses and compensation for A/E's additional services made necessary by the default, neglect or failure. If payments then or thereafter due Contractor are not sufficient to cover such amounts, Contractor shall pay the difference to Owner.

C. No equitable adjustment for Contractor's failure to perform: Contractor shall not be entitled to an equitable adjustment in the Contract Time or Contract Sum for any increased cost or time of performance attributable to Contractor's failure or refusal to perform or from any reasonable remedial action taken by Owner based upon such failure.

PART 10 – MISCELLANEOUS PROVISIONS

10.1 MISCELLANEOUS PROVISIONS

A. Applicable law and venue: The Contract Documents and the rights of the parties herein shall be governed by the laws of the state of Washington and the City of Kirkland, without regard to its choice-of-law provisions. Venue shall be in King County.

B. Bound to successors; Assignment of Contract: Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to the partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party shall assign the Contract without written consent of the other, except that Contractor may assign the Work for security purposes to a bank or lending institution authorized to do business in the state of Washington and City of Kirkland. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations set forth in the Contract Documents.

C. Meaning of words used in Contract Documents: Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Reference to standard Specifications, manuals, or codes of any technical society, organization, or association, or to the code of any governmental authority, whether such reference is specific or by implication, shall be to the latest standard specification, manual, or code in effect on the date for submission of bids, except as may be otherwise specifically stated. Wherever in the Drawings and Specifications an article, device, or piece of equipment is referred to in the singular manner, such reference shall apply to as many such items as are shown on the Drawings, or required to complete the installation.

D. No waiver of rights: Waiver of any provisions of the Contract Documents must be in writing and authorized by Owner. No other waiver is valid on behalf of Owner. No action, delay in acting, or failure to act by Owner or A/E shall constitute a waiver of a right or duty afforded under the Contract Documents, nor shall action, delay in acting, or failure to act constitute approval or an acquiescence in a breach therein, or otherwise prejudice the right of Owner to enforce a right or remedy at any subsequent time, except as may be specifically agreed in writing.

E. Rights under Contract do not limit other rights: Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

F. Severability: If any portion of this Contract is held to be void or unenforceable, the remainder of the Contract shall be enforceable without such portion.

G. Contractor must be registered and licensed: Pursuant to RCW 39.06, Contractor shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27. Contractor shall also have a current state unified business identifier number; have industrial insurance coverage for Contractor's employees working in Washington as required in Title 51 RCW; have an employment security department

number as required in Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW; and not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).

H. Employer contributions: Pursuant to RCW 50.24, "Contributions by Employers," in general and RCW 50.24.130 in particular, Contractor shall pay contributions for wages for personal services performed under this Contract or arrange for a bond acceptable to the Commissioner.

I. Apprenticeship requirements: If the Contract Sum for the Project exceeds one million dollars, Contractor shall comply with all applicable apprenticeship requirements, including but not limited to RCW 39.04.320. For each Project that has apprenticeship requirements, the Contractor shall submit a “Statement of Apprentice and Journeyman Participation” in a format approved by the City with every request for progress payment. The Contractor shall submit consolidated and cumulative data collected by the Contractor and collected from all subcontractors by the Contractor.

J. Computing time: When computing any period of time, the day of the event from which the period of time begins shall not be counted. The last day is counted unless it falls on a weekend or legal holiday, in which event the period runs until the end of the next day that is not a weekend or holiday. When the period of time allowed is less than 7 days, intermediate Saturdays, Sundays, and legal holidays are excluded from the computation.

K. Six year records retention period: The wage, payroll, and cost records of Contractor, and its Subcontractors, and all records subject to audit, shall be retained for a period of not less than 6 years after the date of Final Acceptance. The Contractor agrees to provide access to and copies of any records related to this Agreement as required by the City to audit expenditures and charges and/or to comply with the Washington State Public Records Act.

L. No third party relationships created: The Contract Documents shall not be construed to create a contractual relationship of any kind between: A/E and Contractor; Owner and any Subcontractor; or any persons other than Owner and Contractor.

M. Contractor assigns overcharge amounts to Owner: Owner and Contractor recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, Contractor hereby assigns to Owner any and all claims for such overcharges as to goods, materials, and equipment purchased in connection with the Work performed in accordance with the Contract Documents, except as to overcharges which result from antitrust violations commencing after the Contract Sum is established and which are not passed on to Owner under a Change Order. Contractor shall put a similar clause in its Subcontracts, and require a similar clause in its sub- Subcontracts, such that all claims for such overcharges on the Work are passed to Owner by Contractor.

N. Headings for convenience only: All headings and captions used in these General Conditions are only for convenience of reference, and shall not be used in any way in connection with the meaning, effect, interpretation, construction, or enforcement of the

General Conditions, and do not define the limit or describe the scope or intent of any provision of these General Conditions.

O. Contractor is independent contractor: Contractor shall be and operate as an independent contractor in the performance of the Work and shall have complete control over and responsibility for all personnel performing the Work. Contractor is not authorized to enter into any agreements or undertakings for or on behalf of Owner or to act as or be an agent or employee of Owner.

P. Owner's role is limited. Owner will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely Contractor's responsibility under the Contract Documents. The presence of Owner at the Project site shall not in any manner be construed as assurance that the Work is being completed in compliance with the Contract Documents, nor as evidence that any requirement of the Contract Documents of any kind, including Notice, has been met or waived. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Owner will not have control over or charge of and will not be responsible for acts or omissions of Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

END OF SECTION

SUPPLEMENTAL CONDITIONS

UNLESS EXPRESSLY OTHERWISE INDICATED, THE FOLLOWING REQUIREMENTS SUPPLEMENT THE REFERENCED ARTICLES OF THE "GENERAL CONDITIONS" SECTION 00 70 00 AND SUPERCEDE THEM WHERE THEY CONTRADICT THE SAME.

1.1 COVID-19 Health and Safety Plan (CHSP)

The Contractor shall prepare a project specific COVID-19 health and safety plan (CHSP). The CHSP shall be prepared and submitted prior to beginning physical Work. The CHSP shall be based on and in compliance with the most current State and Federal requirements and applicable guidelines. If the State or Federal requirements are revised, the CHSP shall be promptly updated as necessary to conform to the current requirements. Contractor is responsible for staying informed of applicable State and Federal updates regarding COVID-19 requirements.

The Contractor shall update and resubmit the CHSP as the work progresses and new activities appear on the Progress Schedules. If the conditions change on the project, or for a particular activity, the Contractor shall update and resubmit the CHSP. Work on any activity shall cease if conditions prevent full compliance with the CHSP.

The CHSP shall address the health and safety of all people associated with the project including Owner, workers in the field, Contractor personnel, consultants, project staff, subcontractors, suppliers and anyone on the project site, staging areas, or yards.

The CHSP shall address all applicable state and federal regulation requirements and at a minimum contain the following information before Work begins:

1. Identify Designated Representative (Title and/or Name) Responsible for Compliance
    a. Identify Designated Representative's responsibilities
    b. Identify procedure which the designated representative will implement to screen employees for potential COVID-19 exposure.
2. Employee Responsibilities: Company policy addressing employee hygiene, illness or COVID-19 exposure.
3. Social Distancing
4. Jobsite/Office Best Practices
    a. Project site cleaning protocol.
    b. Operation specific protocols as needed to comply with federal and state regulations and applicable guidelines.
5. Managing Sick Employees
    a. Process addressing employees that develop potential COVID-19 symptoms while at work (fever, cough, shortness of breath).
    b. Process for managing employees before returning to work.
    c. Process for response to employee notifying employer of positive test result for COVID-19.
6. Material Deliveries and Anyone Entering the Jobsite: Process to assure all outside vendors, suppliers and subcontractors comply with CHSP

7. Training, Education, and Communication: Process to inform and educate all employees of information contained in the CHSP.

COVID-19 Health and Safety Plan (CHSP) Inspection

The Contractor shall grant full and unrestricted access to the Owner for CHSP Inspections. The Owner (or designee) will conduct periodic compliance inspections on the project site, staging areas, or yards to verify that any ongoing work activity is following the CHSP plan.

If the Owner becomes aware of a noncompliance incident either through a site inspection or other means, the Contractor will be notified immediately. The Contractor shall immediately remedy the noncompliance incident or suspend all or part of the associated work activity. The Contractor shall satisfy the Owner that the noncompliance incident has been corrected before the suspension will end.

END OF SECTION

CONTRACTOR'S AFFIDAVIT OF RELEASE OF CLAIMS AND LIENS

To OWNER: City of Kirkland
123 5th Avenue
Kirkland, WA 98033

Project Name: _____

Project Number: _____

From CONTRACTOR: [Contractor Name]
[Address]
[City, State, Zip Code]

CONDITIONAL RELEASE

The undersigned does hereby acknowledge and certify that upon receipt by the undersigned of a check from _____, in the sum of $_____ and when the check has been properly endorsed and has been paid by the bank upon which it was drawn, this document shall become effective to release any and all claims for compensation, impacts, additional time, costs, and rights of Claim or lien which the undersigned has on the above referenced Project for labor, services, equipment, materials furnished and/or claims through (Date:) _____ except it does not cover any retention or items furnished thereafter. Before any recipient of this document relies on it, said party should verify evidence of payment to the undersigned. Items and Claims not waived and released by this Instrument:

I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF WASHINGTON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT.

Signature:
_____
(Authorized Corporate Officer/Partner/Owner)

Printed Name: _____

Title: _____

DATED:_____20___ at _____

_____
(City, State)

UNCONDITIONAL RELEASE

The undersigned does hereby acknowledge and certify that the undersigned has been paid and has received progress payments in the sum of $_____ for labor, services, equipment or materials furnished to the above referenced Project and does hereby release any and all claims for compensation, impacts, additional time, costs and rights of Claim or lien which the undersigned has on the above referenced Project, any state or federal statutory bond right and private bond right, any claim for payment. This release covers all payment for labor services, equipment, materials furnished and/or claims on the above referenced Project through (Date:) _____ only and does not cover any retention or items furnished after that date. Items and Claims not waived and released by this Instrument:

NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.

I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF WASHINGTON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT.

Signature:
_____
(Authorized Corporate Officer/Partner/Owner)

Printed Name: _____

Title: _____

DATED:_____ 20___ at _____

_____
(City, State)

END OF SECTION

DEPARTMENT OF LABOR WAGE RATES

PART 1 - GENERAL

1.1 SUMMARY

A. Prevailing wage rates for the locality or localities of the Work, as described by the Industrial Statistician of the Department of Labor and Industries, are required for this contract. Contractor remains solely responsible for verifying that the rates are accurate, current, and inclusive for all parts of this Work. Any off-site prefabrication may also require prevailing wages and the Contractor should contact the Department of Labor and Industries to ascertain those rates.

B. Contractor to provide the "Notice of Intent to Pay Prevailing Wage Rates", as required by RCW 39.04, 39.12, 43.19, and 49.28 as amended. All paperwork regarding "Notice of Intent to Pay Prevailing Wage Rates" shall be sent directly to the Owner. The rules and regulations of the Department of Labor and Industries and the schedule of prevailing wage rates for the locality or localities where this Contract will be performed as determined by the Industrial Statistician of the Department of Labor and Industries, are by reference made a part of this Contract as though fully set forth herein.

Current prevailing wage rates for King County will apply to this project.
Current prevailing wage data are available online or at the following:

ADDRESS: Department of Labor and Industries
Prevailing Wage Section
P.O. Box 44540
Olympia, Washington 98504-4540

http://www.lni.wa.gov/TradesLicensing/PrevailingWage/RateDatabase/default.asp

The General Contractor and his sub-contractors are to pay for all filing fees for Statements of Intent to Pay Prevailing Wages and Affidavits . Pay for any change in rate during the course of construction.

Submit forms to: Department of Labor and Industries
Prevailing Wage Section
P.O. Box 44540
Olympia, Washington 98504-4540

END OF SECTION

SECTION 02050

DEMOLITION

PART 1 GENERAL

1.01 DESCRIPTION

A. Work shall include all demolition work as required to complete reroofing work as described in the contract documents.

1. Carefully remove and legally discard of the existing roofing membrane (‘skin-off’) and associated flashings to expose the existing rigid board insulation, parapet and curbs on the Main Bay Apparatus Bay, East and West Wing Roofs.
   a. NOTE: Asbestos Containing Materials (ACM) were detected in the reflective aluminum coating that will require proper abatement.
2. Carefully remove and legally dispose of the palletized wood decking, existing roofing assembly (complete tear-off) and associated flashings to expose the concrete deck, masonry parapet and curbs on the Hose Tower Roof.
3. Remove areas of damaged, deteriorated or moisture infiltrated insulation down to the existing deck substrate.
4. Remove areas of damaged or deteriorated plywood roof sheathing and T&G decking.
5. Cut back concrete scuppers, except where already performed along west elevation, to extend 1 to 3-inches from the face of the brick walls.
6. Remove abandoned curbs and penetrations, upon approval and direction from owner, and infill roof area as required to provide a solid and structurally sound substrate to receive the new roofing assembly.

B. Contractor is fully responsible to protect all adjacent surfaces from damage, including but not limited to the adjacent roof surfaces, exterior finishes, windows, and doors on the exterior walls. All damages to adjacent surfaces and materials shall be restored at the Contractor’s expense back to pre-work conditions.

C. Allow no debris to accumulate in or on building, on grounds, streets, or walks. Remove debris from site as demolition work progresses. Legally dispose of debris at Contractor's expense.

D. Provide for public protection as required by law. Keep streets and walks clean and free from obstruction. Furnish, install, and maintain for the duration of work all required scaffolds, chutes, tarpaulins, barricades, canopies, warning signs, platforms, and any other temporary construction necessary for proper completion of the work in compliance with all pertinent safety and other regulations.

E. Provide additional protection/filters at mechanical intakes and interior ceiling penetrations to minimize dust and debris infiltration as required.

F. Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations. Provide services for effective air and water pollution controls as required by Federal as well as local authorities having jurisdiction.

G. Any structural damage caused by water leakage found during the work shall be reported immediately to the Roofing Consultant and Owner. Repairs agreed upon will be on a unit cost basis.

H. Coordinate demolition work with other trades as required to maintain watertight conditions on a daily basis.

1.02 RELATED SECTIONS

A. Related work specified elsewhere:
1. 01010 General Requirements (to be provided by Owner)
2. 06100 Rough Carpentry and Sheathing
3. 07520 Modified Bituminous Membrane Roofing
4. 07550 Modified Bituminous Protected Membrane Roofing
5. 07620 Flashing and Sheet Metal
6. 08620 Unit Skylights

1.03 SUBMITTALS

A. Submit under provisions of Division 01 Section – General Requirements as provided by Owner.

1.04 QUALITY ASSURANCE

A. Comply with requirements of applicable codes, rules and regulations referenced in Division 01 – Section General Requirements provided by Owner.

B. Obtain and pay for required permits.

C. Do not close or obstruct roadways or sidewalks without permits.

D. Maintain building and room egress and access at all times. Do not reduce required egress widths to exits.

E. Minimize interference with corridors, exits, sidewalks, roadways and public access.

F. Conform to WISHA and Puget Sound Clean Air Agency (PSCAA) regulations if hazardous materials are reported, discovered or suspected.

1.05 PROJECT CONDITIONS

A. Existing Conditions:
1. Existing Main Apparatus Bay, East and West Wing Roof assemblies consists of, from top to bottom; reflective coating with ACM, torch adhered smooth surfaced capsheet, mechanically fastened basesheet with screws and plates through ~3-inches of polyisocyanurate insulation into the wood deck. Wood deck is comprised of 3/8-inch plywood sheathing (to be field verified) and T&G decking.
2. Existing Hose Tower Roof assembly consists of, from top to bottom; palletized wood deck, torch adhered smooth surface capsheet overlay, previously existing built-up roofing (BUR), ~3-inches of polyisocyanurate insulation, temp. roof/vapor retarder, and concrete over steel pan decking.

B. Limited Asbestos Survey
1. Per attached NVL Bulk Asbestos Fiber Analysis document, dated May 18, 2020, asbestos containing materials (ACM) were detected in the 'silver paint', aka reflective aluminum coating. **ACM will require removal by a Certified Asbestos Contractor in compliance with local, state, and federal health and safety regulations.**

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Inspect and verify the existing conditions and become familiar with the extent of the Work.

B. Examine the site to determine proper access within the limitations of the Contract. Coordinate and conduct operations so as not to interfere with adjacent roads, driveways, walks, buildings, corridors, means of access and egress, work areas and Owner operations.

C. Prior to commencement of selective demolition work, inspect areas in which work will be performed. Document existing conditions of structure surfaces, equipment or to surrounding properties which could be misconstrued as damage resulting from selective demolition work; file with Owner's Representative prior to starting work.

3.02 PREPARATION

A. Coordinate extent of demolition work with limits of new work and existing work to remain, and with demolition and modification requirements shown on the Drawings.

B. Protection:
   1. Protect existing materials, appurtenances and equipment which are not to be demolished. Existing materials, appurtenances and equipment, building exterior and interior, and landscaping altered or damaged during demolition work shall be repaired or replaced by the Contractor to match existing undisturbed conditions at no additional cost to the Owner.
   2. Provide and maintain temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces and installation of new construction to ensure that no water leakage or damage, or wind damage occurs to structure or interior areas of existing building.

3.03 EXECUTION

A. Minimize interference with adjacent and occupied building areas, materials and equipment, and as required to allow Owners continued use of the building.

B. Investigate and measure the nature and extent of unanticipated items that conflict with intended function or design. Submit written report with accurate detailed information to Owner. While awaiting instructions from Owner, rearrange selective demolition schedule as necessary to continue overall job progress without delay.

C. Stop work and notify Owner immediately if structure or other items to remain appear to be endangered. Do not resume work until directed by Owner.

3.04 DISPOSAL AND CLEANUP

A. Material removed under this Contract which is not to be salvaged or reused in the Project shall become the property of the Contractor and shall be promptly removed from the site at end of each work day. Do not store or permit debris to accumulate at the site.

B. Unless indicated otherwise, immediately remove demolished material from site. Dispose of materials legally off site.

C. Upon completion, clean the entire area of demolition residue satisfactory for the continuation of the Work. Remove temporary work.

END OF SECTION 02050

SECTION 07520

MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 00 and 01 Specification Sections, provided by Owner, apply to this Section.

B. Section Includes:
1. Preparation of existing substrates.
2. Polyisocyanurate rigid foam insulation.
3. Coverboard: Over rigid foam insulation and on vertical surfaces as needed.
4. Self adhered basesheet with hot-air welded laps.
5. Heat welded styrene-butadiene-styrene (SBS) modified bituminous interply and mineral granule surfacing capsheet.
6. Heat welded SBS modified bituminous capsheet membrane flashing surface sheet and self-adhered flashing ply sheet.
7. Primer and Mastic
8. Lead Flashings
9. Reinforced Fluid-Applied Flashing Membrane
10. Walkpad

1.02 SUMMARY DESCRIPTION

A. Base Bid Scope
1. Main Apparatus Bay Roof, East and West Wing Roofs
   a. Demolish and legally discard the existing torch down and mechanically fastened basesheet (skin-off), related flashings and accessories, and install new tapered insulation crickets per drawings, coverboard and SBS-modified bituminous membrane roofing system secured to a prepared substrate including new flashings and other components over the existing rigid foam insulation to provide a complete and watertight roof system.
2. Hose Tower Roof
   a. Demolish and legally discard the existing wood deck pallets, existing built up asphalt roofing assembly (complete tear-off), related flashings and accessories, and install a new protected roof membrane (PRM) assembly secured to a prepared substrate including new flashings, drainage mat and XPS/concrete composite pavers to provide a complete and watertight roof system.
3. Generator Shed

a. Prepare existing smooth surface modified bitumen membrane to receive a new capsheet installation, baseflashing ply and sheet metal counterflashing.

B. Alternate Bid #1 Scope
1. Main Apparatus Bay Roof, East and West Wing Roofs
a. Install a layer of 3-inch polyisocyanurate rigid foam insulation over the existing rigid foam insulation in addition to the specified Base Bid roof assembly.
2. Hose Tower Roof
a. Install a layer of 3-inch extruded polystyrene (XPS) rigid foam insulation over the new drainage mat in addition to the specified Base Bid PRM assembly.

C. Unit Costs
1. Provide unit cost for each 3-inch by 4-foot by 4-foot replacement of damaged/wet insulation in addition to the assumed allowance of 438 square feet to include total cost for removal, disposal and replacement of existing mechanically fastened to T&G deck.
2. Provide a unit cost for replacement of deteriorated plywood roof sheathing and T&G decking with new, matching existing, on a per 4X8 board and linear foot basis, including the cost for labor and materials. Verify the dimensions and thickness of the existing plywood sheathing and T&G board prior to submitting bids.

1.03 RELATED SECTION

A. Related work specified elsewhere:
1. 01010 General Requirements (to be provided by Owner)
2. 02050 Demolition
3. 06100 Rough Carpentry
4. 07550 Modified Bituminous Protected Membrane Roofing
5. 07620 Flashing and Sheet Metal
6. 08620 Unit Skylights

1.04 REFERENCES

A. General
1. The following documents form part of the Specifications. Where differences exist, the most stringent shall apply.
2. Unless otherwise stated, the referenced standard edition is the current one at the time of commencement of the Work.
3. Refer to Division 01 Section “General Requirements” for the list of applicable regulatory requirements.

B. ASTM D41 – Asphalt Primer Used in Roofing.

C. ASTM D6164 – Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.

D. ASTM D6163 - Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.

E. ASTM E108 -Test Methods for Fire Tests of Roof Coverings.

F. ANSI/SPRI/FM 4435/ES-1 Wind Design Standard for Edge System Used with Low Slope Roofing System.

G. ANSI/SPRI FX-1 2016, Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners

H. ANSI/FM 4474- American National Standard for Evaluating the Simulated Wind Resistance of Roof Assemblies Using Static Positive and/or Negative Differential Pressures

I. National Roofing Contractors Association (NRCA) Current Edition.

J. Sheet Metal and Air-Conditioning Contractors National Association, Inc. (SMACNA)

K. Underwriters Laboratory (UL) – Fire Hazard Classifications.

L. Certified Roofing Torch Applicator Program (CERTA) – Guidelines for torch applicators.

1.05 DEFINITIONS

A. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The Roofing and Waterproofing Manual" apply to this Section.

1.06 PERFORMANCE REQUIRMENTS

A. General: Provide installed roofing membrane, membrane baseflashings and sheet metal flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure for a period of not less than 20 years.

B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.

C. Wind Uplift Resistance: Provide modified bituminous membrane, base flashings,

and component materials that meet requirements of ASCE 7-16.

1. Roofing system shall comply with the following:
   i. Fasten roofing assembly to meet ASCE 7-16 for field with perimeter, additional edge and "L" shaped corner enhancement based on the mean roof height.

D. Fire Classification: UL Class A; complying with ASTM E 108, for application and slopes indicated.

E. Thermal Value:
   a. Base Bid - Existing insulation above deck to remain with estimated thermal value resistance of R-16.8, not including coverboard and plies.
   b. Alternate Bid #1 – Additional layer of insulation over existing to provide estimated thermal value resistance of R-33.6 not including coverboard and plies.

F. Roof Slope: Finished roof slope for SBS modified bitumen surfaces shall be ¼ inch per foot (2 percent) minimum for roof drainage, provided by roof deck with new ½ inch per foot tapered insulation crickets as indicated in drawings.

G. Products provided under the work of this Section shall be 100% asbestos-free.

1.07 BIDDING REQUIREMENTS

A. Pre-Bid Meeting: A pre-bid meeting shall be held with the Owner's Representative and involved trades to discuss all aspects of the project. Procedures to avoid rooftop damage by other trades shall be determined.

B. Site visit: Bidders shall visit the site and carefully examine the areas in question as to conditions that may affect proper execution of the work. All dimensions and quantities shall be determined or verified by the contractor. No claims for extra costs will be allowed because of lack of full knowledge of the existing conditions unless agreed to in advance with the Owner or Owner's Representative

1.08 SUBMITTALS

A. Product data, Roofing System: Submit the name of the manufacturer and specification numbers and product names of all materials proposed for use in the work. Include in submittal installation instructions and general recommendations for each principal roofing system product required. Include data substantiating that the materials comply with requirements, including certificates and delivery logs for bulk materials. Include volatile organic compounds (VOC's) in grams per liter (g/l) for all adhesives, sealants and solvents. Explicitly identify in writing the differences between manufacturer's instructions and the requirements specified herein, with manufacturer's approval of project modifications.

B. Manufacturers: Provide primary products, including each component of the new roof assembly, and flashings, as specified from one manufacturer. Provide secondary products which are acceptable to, and approved by, the manufacturer of the primary products.

C. Shop Drawings: Include plans, sections, details, and attachments to other work, for the following:
   1. Base flashings and membrane terminations.

D. Tear Off: Submit tear-off work plan. Submit copies of dump receipts prior to completion of the job.

E. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install specified roofing system and is eligible to receive the specified roofing manufacturer's warranty. **Submit Manufacturer's certifications with bid proposals.**

F. Submit emergency phone numbers of personnel capable of responding to a roof related emergency after normal working hours. Answering service phone numbers are not acceptable for this purpose.

G. Warranty: Sample copy of specified roofing manufacturer's warranty stating obligations, remedies, limitations, and exclusions of warranty.

H. Manufacturers approved fastener layout patterns, meeting project performance requirements.

I. Maintenance Data: For roofing system to include in the maintenance manuals.

1.09 CODE REQUIREMENTS

A. The applicator shall submit evidence that the proposed roof system meets the requirements of the local building code and has been tested and approved or listed by the following test organizations. These requirements are minimum standards and no roofing work shall commence without written documentation of the system's compliance, as required in the "Submittals" section of this specification.
   1. American Society of Civil Engineers Standard ASCE 7
   2. Underwriters Laboratories, Inc. - Northbrook, IL
      i. Class A fire rated assembly
   3. Building permit
      i. Any permits required by the City of Kirkland that are needed to complete the work will be the responsibility of the contractor. Any costs associated with obtaining permits shall be included in the bid.

1.10 WARRANTIES

A. Furnish the modified bitumen sheet manufacturer's guaranty to include the following for the roofing system. The guaranty shall cover all costs associated with the repair and/or replacement of all defective areas of the roof system. The guaranty shall be issued directly to the Owner. In no event shall the guaranty period be less than twenty (20) years from the date of the Owner's acceptance of the work. The guaranty shall provide that if within the guaranty period the roofing system including membrane, membrane flashing and accessories, becomes non-watertight, splits, tears, separates at the seams, or shows any other symptoms of failure because of defective materials or workmanship, the repair or replacement of defective materials and correction of defective workmanship shall be the responsibility of the manufacturer. If the manufacturer or their approved applicator fail to perform repairs within 72 hours of notification, emergency repairs performed by others shall not void the guaranty, and shall be billed to the manufacturer issuing the guaranty. The guaranty shall be issued to the Owner within 60 days following the acceptance by the Owner of the completed roofing system.

1. Manufacturer: Shall provide Owner with twenty (20) year NDL product and roofing system guaranty which shall cover: leaks from deterioration of membrane and its associated flashings for the duration of guaranty period and that the roof membrane and flashings will remain in watertight condition for guaranty period. The guaranty shall cover both workmanship and material defect in the roofing system, and shall not be prorated. Such guaranty shall be appropriately amended to include the following:
   i. Manufacturer shall pay all authorized costs to replace or restore to its original condition all sheathing, insulation and drywall that becomes moisture saturated due to leaks resulting from faulty materials or workmanship.
   ii. Manufacturer shall pay all authorized costs associated with replacement of rusted or otherwise defective "approved" fasteners.
   iii. The guaranty shall cover full (100%) replacement cost.
   iv. The guaranty shall be transferable.
   v. There shall be no penal sum associated with this guaranty.
   vi. The Owner shall be able to make temporary repairs without voiding the guaranty.
   vii. Copies of the roof plan, details and specifications shall be attached to the guaranty.
   viii. Manufacturer shall inspect the project prior, during and after roof system is installed.

B. Applicator / Roofing Contractor: The Applicator shall supply the Owner with a separate 2-year workmanship warranty. In the event any work related to roofing, flashing, or metal work is found to be defective or otherwise not in accordance with the Contract Documents and Manufacturer’s requirements and installation instructions within the Applicator’s warranty term, 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 Wetherholt & Associates Inc., and the manufacturer. Blistering, buckling shall also be covered by this warranty.

C. All warranties shall be submitted for approval and shall have been accepted at time of contract award.

SUBMIT FORM OF GUARANTIES REQUIRED TO OWNER WITH BID

1.11 QUALITY ASSURANCE

A. Single Installer Responsibility: A single installer (contractor) shall perform the work, including sheet metal work, as required by this specification; and shall be a firm specializing in roofing system work **who has been in business under the same name and ownership for at least 5 years**, capable of showing successful installations similar to the work required for this project.
   1. Roofing system shall be installed only by a roofing contractor authorized by and in good standing order with the roof membrane manufacturer prior to the bid.
   2. All work pertaining to the installation of roof membrane and flashings shall only be completed by applicator personnel trained and authorized by the roof membrane manufacturer in those procedures.
   3. There shall be no deviation made from the Project Specification or the approved shop drawings without prior written approval by the Owner, the Roofing Consultant, and the roof membrane manufacturer.
   4. Contractor shall provide full time, on-site superintendent or foreman experienced with the specified roofing from beginning through satisfactory project completion.
   5. Contractor shall maintain a daily record, on-site, documenting material installation and related project conditions.
   6. Contractor shall maintain a copy of all submittal documents, specification and plans on-site, available at all times for reference.

B. Owner: Notify Owner and Roofing Consultant 24 hours (one full working day) prior to commencement of work. The owner may provide special inspection of the roofing application. Such inspection will not relieve the contractor of responsibility for proper completion of the work.

C. Manufacturer: Install in accordance with primary products manufacturer, including each type of roofing, and flashings, as specified from one manufacturer. Install secondary products which are acceptable to, and approved by, the manufacturer of the primary products.
   1. Upon completion of installation and delivery to the roof membrane manufacturer by the Applicator of a certification that all work has been done in strict accordance with the contract specifications and manufacturer's requirements, an inspection shall be made by a Technical Representative of the roof membrane manufacturer to review the installed roof system.

2. Manufacturer shall have 20 years of manufacturing experience.
3. Manufacturer shall have trained technical service representatives employed by the manufacturer, independent of sales.
4. Manufacturer shall provide site visit reports in a timely manner.

D. Pre-roofing conference: Prior to the commencement of reroofing work, meet at the project site with the roofing contractor, the Owner, Roofing Consultant, and other entities interested in the performance of the roofing system. Review the requirements (contract documents), submittals, proposed installation schedule, location and storage of materials, requirements for inspections and testing or certifications, forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing, governing regulations, insurance requirements, proposed installation procedures, access and any other items that may be required for completion of the project. If meeting ends with substantial disagreement between parties, determine how disagreement will be resolved and set date for reconvened meeting.

1.12 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Delivery: Material shall be delivered in the manufacturer's original sealed and labeled containers and in quantities sufficient to allow continuity of application. Handle all materials to prevent damage. Mark and remove wet materials from the site.

B. Storage: Obtain permission of the structural engineer for roof top storage. If roof top storage of materials is used, do not exceed the allowable load for the structure. Materials shall be stored out of direct exposure to the elements. Roll goods shall be stored on end and on pallets. Material shall be protected against moisture so as not to allow moisture to penetrate the cover or condensation to occur beneath the cover. Completely cover roll materials permitted to be stored outdoors, on and off roof, with waterproof canvas protective covering. Do not use polyethylene sheet as a covering.
1. As a general rule all adhesives shall be stored at temperatures between 40º F (5º C) and 80º F (27º C). Read instructions contained on adhesive canister for specific storage instructions.
2. All flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow precautions outlined on containers or supplied by material manufacturer/supplier.

C. Handling: Material shall be handled in such a manner as to preclude damage and contamination with moisture or foreign matter.

D. Do not leave unused felts and other sheet materials on the roof overnight or when roofing work is not in progress unless protected from weather and moisture and unless maintained at a temperature exceeding 50 deg F (10 deg C).

E. Properly dispose of all product wrappers, pallets, cardboard tubes, scrap, waste, and debris.

F. Protect insulation and roofing materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store materials in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

G. All materials determined by the Owner, Roofing Consultant, or roof membrane manufacturer representative to be damaged are to be removed from job site and replaced with new, suitable materials at no cost to Owner.

H. Protection of the roof and all adjacent surfaces and structure shall be provided and maintained throughout the project, and any damage repaired to pre-work condition at the expense of the Contractor.

1.13 SITE CONDITIONS

A. Safety: The contractor shall be responsible for complying with all project-related safety and environmental requirements.
   1. Heat-welding shall include heating the specified membrane ply using propane roof torches or electric hot-air welding equipment. The contractor shall determine when and where conditions are appropriate to utilize heat-welding equipment. When conditions are determined by the contractor to be unsafe to proceed, equivalent SBS-modified bitumen materials and methods shall be utilized to accommodate requirements and conditions.
   2. The contractor shall review project conditions and determine when and where conditions are appropriate to utilize the specified liquid-applied, or semi-solid roofing materials. When conditions are determined by the contractor to be unsafe or undesirable to proceed, measures shall be taken to prevent or eliminate the unsafe or undesirable exposures and conditions, or equivalent approved materials and methods shall be utilized to accommodate requirements and conditions.
   3. The contractor shall refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.

B. Environmental Conditions:
   1. Monitor substrate temperature and material temperature, as well as all environmental conditions such as ambient temperature, moisture, sun, cloud cover, wind, humidity, and shade. Ensure conditions are satisfactory to begin work and ensure conditions remain satisfactory during the installation of specified materials. Materials and methods shall be adjusted as necessary to accommodate varying project conditions. Materials shall not be installed when conditions are unacceptable to achieve the specified results.

2. Precipitation and dew point: Monitor weather to ensure the project environment is dry before, and will remain dry, during the application of roofing materials. Ensure all roofing materials and substrates remain above the dew point temperature as required to prevent condensation and maintain dry conditions.
3. Self-adhesive membrane application: During cold weather, store the specified self-adhesive membrane and primer materials in heated storage areas to ensure materials remain no less than 70°F (21°C) during application. Ensure conditions allow primer to remain tacky, but not wet so that primer will not transfer to finger when touched. Self-adhesive primer shall not fully dry and lose tack before applying the self-adhesive membrane. Ensure conditions remain satisfactory to achieve membrane adhesion as specified.
4. Heat-Welding Application: Take all necessary precautions and measures to monitor conditions to ensure all environmental conditions are safe to use roof torches and hot-air welding equipment. Combustibles, flammable liquids and solvent vapors that represent a hazard shall be eliminated. Flammable primers and cleaners shall be fully dry before proceeding with heat-welding operations. Prevent or protect wood, paper, plastics and other such combustible materials from direct exposure to open flames from roof torches. Refer to NRCA CERTA recommendations.

C. Contractor shall provide a scaffold stair for access to the roof during construction, or as coordinated with Site Contact. Location of the scaffold stair to be coordinated with the Site Contact.

D. At ambient temperatures of 40° or less, including wind chill, precautions must be taken to ensure that hot asphalt, cements, and adhesives maintain the minimum acceptable temperature at the point of application as recommended by the roofing materials manufacturer.

E. Protection against staining and mechanical damage shall be provided for adjacent surfaces as required during application of roofing.

F. All surfaces to receive new membrane or flashings shall be clean and dry before any roofing work proceeds. Roofing shall not proceed during precipitation, nor when moisture from dew is present, or if precipitation or other moisture source is expected. Should surface moisture occur, provide the necessary equipment to dry the surface prior to application.

G. Be prepared to immediately protect incomplete installations from damage by inclement weather which may occur unexpectedly.

H. Roofer shall remove or begin installation of no more roofing than can be completely installed through the interply the same day, including all flashing and detail work.
1. All work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather. The existing building will

be occupied and its contents shall be protected against all risks.

I. Uninterrupted water stops shall be installed at the end of each day's work to prevent moisture entering interior of structure and the new roof assembly, and shall be completely removed before proceeding with the next day's work. Water stops shall not emit dangerous or unsafe fumes and shall not remain in contact with the finished roof as the installation progresses.

J. Prior to and during application, all dirt, debris and dust shall be removed from surfaces either by vacumming, sweeping, blowing with low-pressure air and/or similar methods.

K. All new and temporary construction, including equipment and accessories, shall be secured in such a manner as to preclude wind blow-off and subsequent roof or equipment damage. Protection against staining, mechanical damage, and live loads shall be provided for adjacent surfaces as required during application of roofing.

L. All roofing, flashings and metal work (including new roofing waste materials) removed during construction shall be taken off site on a daily basis to a legal dumping area authorized to receive such materials. Hazardous materials, such as materials containing asbestos, are to be removed and disposed of in strict accordance with applicable City, State and Federal requirements.

M. Verify that all roof drain lines are functioning correctly (not clogged or blocked) before starting work. Applicator shall report any such blockages in writing to the Owner's Representative (letter copy to Roofing Consultant) for corrective action prior to commencement of roof work.

N. Site cleanup, including both interior and exterior building areas that have been affected by reroofing, shall be completed to the Owner's satisfaction. All landscaped areas damaged by construction activities shall be repaired at no cost to the Owner.

O. Precautions shall be taken when using adhesives and/or fluid-applied flashings at or near rooftop vents or air intakes. Adhesive and/or fluid-applied flashings odors could enter the building. Coordinate the operation of vents and air intakes in such a manner as to avoid the intake of adhesive and fluid-applied flashings odor while ventilating the building. Keep lids on unused cans at all times.

P. Existing Conditions:
   1. The existing roof membrane was tested by NVL Labs and detected to contain Asbestos Containing Materials in the 'silver coat' (reflective aluminum coating) applied on the surface of the Main Apparatus Bay, East and West Wing Roofs.
   2. Should hazardous materials be suspected, notify Project Manager. Do not proceed with work in suspect area until advised by Project Manager that safe conditions exist. Comply with applicable rules and regulations.

Q. It is the contractor's responsibility to observe all fire prevention policies and practices during the installation of the roof system. It is the contractor's responsibility to train, instruct and warn employees on the use and handling of propane torching equipment, including CERTA training

PART 2 PRODUCTS

2.01 ROOFING ASSEMBLY

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following options.

B. BASE BID - Low-Slope Modified Bituminous Roofing (Reskin over New Coverboard): Main Apparatus Bay, East and West Wing Roofs

	Option #1: Siplast	**Option #2: Soprema**
Substrate	T&G wood decking and plywood sheathing (per plans provided by City of Kirkland). Replace where damaged/deteriorated on a negotiated time and materials basis.	same
Existing Insulation	Flat stock 3" rigid polyisocyanurate foam insulation. Remove and replace with new where wet or damaged to meet flush and butt tightly with surrounding dry insulation, mechanically fastened.	same
Existing Basesheet	Basesheet mechanically fastened with screws and plates through insulation into deck, completely remove to expose insulation except under fastener plates, leave existing plates and fasteners in-place.	same
Tapered Insulation (at cricket locations indicated on roof plan)	Tapered polyisocyanurate insulation at cricket locations to provide a minimum ½" per foot finished slope for positive drainage, 48" x 96", mechanically fastened in conjunction with coverboard. Maximum board thickness of any one layer of 3 inches, all layers staggered. *Note: Primary roof slopes are provided by the structural roof deck.*	same

Roof Coverboard	**Georgia Pacific DensDeck Prime Roof Board (1/4" x 4' x 4')** high density gypsum core with mechanically bonded fiberglass mats on front and back, mechanically fastened with manufacturers approved fasteners with enhancements at perimeters and corners consistent with wind uplift resistance performance requirements.	same
Basesheet	**Paradiene 20 SA**, SBS modified 102 mils base sheet, glass reinforced, self-adhered.	**Sopralene Flam Stick**, SBS modified 98 mils ply sheet, polyester reinforced, self adhered.
Interply	**Paradiene 20 TG**, SBS modified 114 mils ply sheet, glass reinforced, torch adhered.	**Sopralene Flam 180**, SBS modified 120 mils ply sheet, polyester reinforced, torch adhered.
Capsheet	**Paradiene 30 FR TG,** SBS modified 138 mils granulated capsheet, UV resistant, fire rated, glass reinforced, torch applied. Color white or gray.	**Sopralene Flam 180 FR GR,** SBS modified 157 mils granulated capsheet, UV resistant, fire rated, polyester reinforced, torch applied. Color white or gray.
Flashing Ply Sheet	**Siplast Paradiene 20 SA**, SBS modified 102 mils ply sheet adhered to substrate, primed with TA-119 high tack primer.	**Sopralene Flam Stick**, SBS modified 98 mils ply sheet, polyester reinforced, self adhered
Flashing Surface Sheet	**Siplast Parafor 30 TG,** SBS 161 mils granulated capsheet, UV resistant with polyester/fiberglass composite reinforcing, torch adhered. Color white or gray.	**Sopralene Flam 180 FR GR,** SBS modified 157 mils granulated capsheet, UV resistant, fire rated, polyester reinforced, torch applied.

C. ALTERNATE BID #1 - Low-Slope Modified Bituminous Roofing (Reskin over Additional 3" Insulation Layer and New Coverboard): Main Apparatus Bay, East and West Wing Roofs

	Option #1: Siplast	**Option #2: Soprema**
Substrate	T&G wood decking and plywood sheathing (per plans provided by City of Kirkland). Replace where damaged/deteriorated on a negotiated time and materials basis.	same
Existing Insulation	Flat stock 3" rigid polyisocyanurate foam insulation. Remove and replace with new where wet or damaged to meet flush and butt tightly with surrounding dry insulation, mechanically fastened.	same

Existing Basesheet	Basesheet mechanically fastened with screws and plates through insulation into deck, completely remove to expose insulation except under fastener plates, leave existing plates and fasteners in-place.	same
Insulation	Flat stock 3” x 4’ x 8’ rigid polyisocyanurate foam insulation, 20 psi, mechanically fastened with enhancements at perimeters and corners consistent with wind uplift resistance performance requirements.	same
Tapered Insulation (at cricket locations indicated on roof plan)	Tapered polyisocyanurate insulation at cricket locations to provide a minimum ½” per foot finished slope for positive drainage, 48” x 96”, mechanically fastened in conjunction with flat stock insulation layer. Maximum board thickness of any one layer of 3 inches, all layers staggered. *Note: Primary roof slopes are provided by the structural roof deck.*	same
Roof Coverboard	**Georgia Pacific DensDeck Prime Roof Board (1/4” x 4’ x 4’)** high density gypsum core with mechanically bonded fiberglass mats on front and back, adhesively attached with enhancements at perimeters and corners consistent with wind uplift resistance performance requirements.	same
Basesheet	**Paradiene 20 SA**, SBS modified 102 mils base sheet, glass reinforced, self-adhered.	**Sopralene Flam Stick**, SBS modified 98 mils ply sheet, polyester reinforced, self adhered.
Interply	**Paradiene 20 TG**, SBS modified 114 mils ply sheet, glass reinforced, torch adhered.	**Sopralene Flam 180**, SBS modified 120 mils ply sheet, polyester reinforced, torch adhered.
Capsheet	**Paradiene 30 FR TG,** SBS modified 138 mils granulated capsheet, UV resistant, fire rated, glass reinforced, torch applied. Color white or gray.	**Sopralene Flam 180 FR GR,** SBS modified 157 mils granulated capsheet, UV resistant, fire rated, polyester reinforced, torch applied. Color white or gray.
Flashing Ply Sheet	**Siplast Paradiene 20 SA**, SBS modified 102 mils ply sheet adhered to substrate, primed with TA-119 high tack primer.	**Sopralene Flam Stick**, SBS modified 98 mils ply sheet, polyester reinforced, self adhered

Flashing Surface Sheet	**Siplast Parafor 30 TG,** SBS 161 mils granulated capsheet, UV resistant with polyester/fiberglass composite reinforcing, torch adhered. Color white or gray.	**Sopralene Flam 180 FR GR,** SBS modified 157 mils granulated capsheet, UV resistant, fire rated, polyester reinforced, torch applied.

2.02 COVERBOARD

A. Horizontal and Vertical Surfaces: ASTM C 1177, glass-mat, water-resistant gypsum substrate, (.025) ¼-inch thick.
   1. Product: Subject to compliance with requirements
      i. "DensDeck Prime" by Georgia Pacific Corporation, no substitutions.

2.03 RIGID POLYISOCYANURATE INSULATION

A. Approved manufacturers:
   1. Soprema Sopra-ISO Plus
   2. Siplast Paratherm CG
   3. or equivalent as approved by manufacturer.

B. Flat Stock Roof Insulation **(for use as additional layer per Alt. Bid #1 and for infill panels at areas of replacement):** Rigid closed cell polyisocyanurate foam insulation with premium performance coated glass facers, 48" x 96" x 3" (max thickness). NO ORGANIC OR PAPER FACERS ALLOWED. ASTM C 1289, Type II, Class 2, Grade 2, (20 psi).
   1. Verify insulation required by membrane manufacturer for system warranty applications.
   2. Install insulation in multiple layers to meet flush with height of thickest point in insulation layout in field.
   3. Primary roof slopes are provided by the structural roof framing.

C. Tapered Insulation **(for use at crickets per drawings):** Preformed tapered rigid closed cell polyisocyanurate foam insulation with premium performance coated glass facers, 48" x 48" x slope to provide a minimum ½" per foot <u>finished</u> slope at roof with zero edge start. NO ORGANIC OR PAPER FACERS ALLOWED. Minimum edge thickness of tapered insulation shall be one-half inch (½"). ASTM C 1289, Type II, Class 2, Grade 2, (20 psi).
   1. Verify insulation required by manufacturer for system warranty applications.
   2. Contractor to field verify cricket locations and provide taper plan.

2.04 FLUID-APPLIED FLASHING

A. Fully reinforced PMMA fluid applied flashing membrane (at locations shown on the drawings):
   1. Primer: As recommended by the manufacturer.
   2. Membrane/Resin: Siplast Parapro 123 or Soprema Alsan RS.

3. Reinforcing Fleece: As recommended by the manufacturer. All systems are to have reinforcing fleece.

2.04 WALKWAY/ROOF PROTECTION PAD

A. Roof protection pad material to be composed of polyester reinforced SBS modified bitumen walkway protection with a granule surface and sanded underside.
   1. Soprema SopraWalk, thickness 200 mils, 39.4 inch width, color black.
   2. Siplast Paratread, thickness 217 mils, 30 inch width, color stone gray.
   3. Install at locations shown on roof plan.

2.05 CAPSHEET MEMBRANE OVERLAY FOR GENERATOR SHED ROOF

A. Siplast Paradiene 30 FR TG.
B. Soprema Sopralene Flam 180 FR GR.

2.06 ACCESSORIES

A. Asphalt Primer: For coating metal and concrete surfaces to receive roofing membranes: Primer should be a roofing system manufacturers standard asphalt based blend, type as approved by manufacturer:
   1. Soprema Elastocol 500 Primer.
   2. Siplast PA-1125 Primer.

B. Solvent Based Primer: For the preparation of membrane substrates for self-adhesive SBS membrane and self-adhered SBS flashing applications.
   1. Soprema Elastocol Stick Primer.
   2. Siplast TA-119 Primer.

C. Roofing Cement/Mastic: SBS-modified general purpose roofing cement for low-slope roofing used for setting metal flashings, sealing membrane T-joints and membrane edges along terminations, transitions and at roof penetrations
   1. Soprema SopraMastic.
   2. Siplast PA-1021.

D. Sealant: General purpose, paintable, gun-grade, elastomeric, polyether moisture curing sealant for sealing SBS membrane terminations.
   1. Soprema SopraMastic SP1.
   2. Siplast PS-209 Elastomeric Sealant.

E. Self-Adhering High Temperature Resistant Supplemental Membrane Flashing: For installation under metal flashings, i.e. coping at Hose Tower parapet or as indicated in drawings, high tensile strength rubberized asphalt membrane designed to withstand temperatures of 250 degrees Fahrenheit, 40 mils, as manufactured by Carlisle WIP 300HT or similar.

F. Cant strips to be three (3) inch perlite, unless otherwise specified, as manufactured by GAF or Manville.

G. Tapered edge strips, Johns-Manville, "Tapered Fesco Board", "US Intec Inc., "Tapered Permalite", or approved equal. Slope as required.

H. Provide 4 pound/sf lead flashing and caps for soil stacks and conduit penetrations. Pre-prime with asphalt primer and set in full bed of roof cement as detailed in manufacturer's instructions. Where soil stacks exceed height of lead flashing, provide double wrap boot of 6" Batten Seam Cover Tape (as manufactured by Firestone or Carlisle). POURABLE SEALER POCKETS ARE NOT ACCEPTABLE.

I. Fasteners for Securing the Top of the Baseflashing Membrane: One (1) inch annular shank nails with square head caps or of sufficient length to penetrate through the substrate or into the substrate ¾-inch minimum, Round Top Cap Nail by National nail or comparable.

J. Mechanical Fasteners for Coverboard and Rigids Board Insulation at Wood Decks: Corrosion resistant screws and three (3) inch plates as approved by the roofing materials manufacturer, Buildex Roof Grip #14 size, or greater, as recommended by the manufacturer. All screws should be of length to penetrate into the T&G deck a minimum of one (1) inch.

K. Insulation Adhesive: For adhering coverboard over new rigid board insulation (Alternate Bid #1 ONLY): One or two part urethane adhesive:
1. Soprema Mammouth DuoTack dual component polyurethane adhesive.
2. Siplast Para-Stik single component urethane adhesive.

L. Provide 1/4" x 1" aluminum termination bar to secure top edge of membrane at concrete wall surfaces.

M. Mineral Granules: As manufactured by 3M Corporation, size no. 11, #71 Gray Corona, or as approved by the manufacturer.

PART 3 EXECUTION

3.01 GENERAL

A. Contractor shall be responsible for inspecting the roof deck and verifying that no conditions are present which may prevent or otherwise interfere with the installation of the proposed roof system.

B. Any adverse condition which may affect the performance of the roof system shall be reported in writing to the Owner. Absence of such notification shall constitute the Subcontractor's verification that existing conditions will allow the installation of the

system in accordance with the Drawings and Specifications and the manufacturer's guaranty.

C. All surfaces shall be swept clean prior to commencement of roofing.

D. The roofing contractor shall coordinate the installation so that each area is made watertight at the end of each work period. No more coverboard shall be installed than can be covered with roofing membrane, at least through the fully torch adhered interply and flashing ply sheet, in the same day.

E. Application of roofing shall immediately follow installation of coverboard as a continuous operation.

F. Application shall be in accordance with the projects structural engineer and roofing system manufacturer's instructions, NRCA and the following requirements. Should manufacturer's specifications and owner's specifications conflict, use the more stringent.

G. Contractor shall verify that work penetrating the roof deck, or which may otherwise impact or affect the roofing, has been properly completed, including any structural upgrades deemed necessary by the structural engineer.

3.02 PREPARATION AND DEMOLITION: GENERAL

A. The Applicator shall verify that all downspouts and drain lines are functioning correctly (not clogged or blocked) before starting work. Applicator shall report any such blockages in writing to the Owner' (letter copy to Roofing Consultant) for corrective action prior to commencement of roof work.

B. Completely remove and legally dispose of the existing roof membrane, baseflashings, cants, counterflashings, coping and roof flashings as necessary to complete the new re-roofing work in accordance with specifications and detailed requirements.

a. Provide and install temporary weather protection as required to leave the building weather tight on a daily basis.

C. A moisture scan was conducted by Wetherholt and Associates, Inc. and wet areas identified were marked on the roof with surveyor’s paint or lumber crayon. Approximate locations and areas of wet existing roofing are also noted in the Roof plan, Sheet R1. Completely remove existing roof membrane assembly and insulation containing moisture and replace with new rigid insulation of thickness to match existing insulated roof assembly. <u>Note: Areas of moisture infiltrated roofing and any other moisture infiltrated/damaged insulation areas shall be removed to fully dry and sound materials and replaced with new.</u>

D. Regulatory Requirements:

1. Comply with governing EPA and PSAPCA notification regulations before starting demolition. Comply with hauling and disposal regulations of authority having jurisdiction.
2. Conform to WISHA, Puget Sound Clean Air Agency (PSCAA) regulations and the following applicable rules related to removal and disposal of any asbestos containing materials.
   a. Applicable Rules:
      i. Chapter 296-62 WAC, Part I-1—General requirements for handling asbestos
      ii. Chapter 296-65 WAC—Asbestos certification and notification requirements
      iii. Chapter 296-155 WAC, Part S—Construction demolition, prior removal of asbestos.
      iv. Asbestos is also regulated by the EPA and regional air pollution authorities in Washington

E. Remove abandoned curbs (where depicted in the drawings) and infill gaps in the roof structure as directed by the structural engineer.

F. Clean the existing roof substrate and remove any loose granules, debris, and any other loose particles. The decking shall present as smooth a surface as possible onto which the new roofing components can be installed.

G. Do not begin placement of the roofing system until the roofing manufacturer's representative has examined surfaces to receive the roofing system and has determined that the surfaces are acceptable.

H. Remove water or any other substance that would interfere with bonding of the roofing system.

I. Provide for public protection as required by law. Keep interior of building, surrounding grounds, streets, and walks clean and free from obstruction. Furnish, install, and maintain for the duration of work all required scaffolds, chutes, tarpaulins, barricades, canopies, warning signs, platforms, and any other temporary construction necessary for proper completion of the work in compliance with all pertinent safety and other regulations.

J. All adjacent or other work in the building or on site damaged by the Contractor shall be repaired or replaced at Contractor's expense to the satisfaction of the Owner.

K. Any structural damage caused by water leakage found during the work shall be reported immediately to the Owner and Structural Engineer. Repairs agreed upon (beyond simple wood deck replacement) will be on a negotiated time and materials basis.

L. Coordinate inspections required by the City of Kirkland for any decking or structural work.

M. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

3.03 MECHANICAL EQUIPMENT, ROOF HATCHES, CONDUIT LINE, SATELLITES, FIBER OPTIC EQUIPMENT, FIBER OPTIC LINES, GAS LINES, AND PIPE PENETRATIONS

A. Maintain existing utilities in service and protect them against damage during demolition operations.

B. Raise conduit penetrations, insulated pipes, soil stacks, vents, sleepers, skylight curbs, roof hatches, and mechanical curbs as necessary to obtain a minimum eight (8) inch flashable height above the finished roof plane (unless otherwise shown in the drawings). Include rewiring and duct extensions as necessary to raise or extend conduit and/or ducts. Perform all work necessary to reinstall and reconnect equipment to fully functioning.

C. Disconnect and raise horizontal conduit lines and electrical lines as necessary to perform roofing work (unless otherwise shown in the drawings). Reconnect and reinstall all conduit and electrical lines to fully functioning. Install new PVC support blocks to provide an eight (8) feet on center spacing. Install rubber protection pads adhered to the underside of the new blocks. Perform all work necessary to reinstall and reconnect equipment to fully functioning.

D. Coordinate temporary removal, storage, and reinstallation of satellite dishes, antennas, and fiber optic cable with the Owner as required to accomplish roofing work (unless otherwise shown in the drawings). Disconnect and reinstallation of satellite dishes, antennas and fiber optic cables should be performed by a specialized contractor, approved by the Owner. Install new granular surfaced modified asphalt protection pad under ballasted equipment base.

E. Coordinate removal and storage of all unattached rooftop equipment to be reinstalled once roofing is complete.

F. Coordinate all mechanical unit, electrical, and gas shut down and start-up with the Owner.

G. All electrical, mechanical, and gas line work to be performed by a journeyman worker experienced and trained in work performed to building code and current industry standards.

3.04 GENERAL INSTALLATON REQUIREMENTS

A. Install SBS modified built-up roofing system according to roofing system manufacturer's written instructions and applicable recommendations of NRCA/ARMA's "Quality Control Recommendations for Polymer Modified Bitumen Roofing".
   1. Install roofing system according to applicable specification plates of NRCA's "The NRCA Roofing and Waterproofing Manual".

B. The Contractor is responsible for project safety. Where conditions are deemed unsafe to use open flames, manufacturer's alternate membrane application methods shall be used to install SBS modified bitumen membrane and flashings. Acceptable alternate installation methods include hot asphalt, cold adhesive-applied, self-adhered membranes and mechanically fastened plies. Hot-air welding equipment may be used in lieu of roof torches to seal membrane side and end laps where heat welding the laps is necessary. Refer to NRCA CERTA, local codes and building owner's requirements for hot work operations.

C. Torch Safety: Crew members handing torches shall be trained by an Authorized Certified Roofing Torch Applicator (CERTA) Trainer, be certified according to CERTA torch safety guidelines as published by the National Roofing Contractors Association (NRCA), and follow torch safety practices as required by the contractor's insurance carrier. Designate one person on each crew to perform a daily 2-hour fire watch. The designated crew member shall watch for fires or smoldering materials on all areas during roof construction actively, and for the minimum period required by CERTA guidelines, after roofing material application has been suspended for the day.

D. Start installation of modified built-up membrane roofing in presence of roofing system manufacturer's technical personnel.

E. Cant Strips: Install and secure preformed 45-degree cant strips at junctures of modified built-up membrane roofing system where vertical surfaces can provide an 8-inch minimum flashing height above the finished roof surface.

F. Coordinate installing roofing system components so existing deck, plywood sheathing, insulation and coverboard are not exposed to precipitation or left exposed at the end of the workday or when rain is forecast.

G. Protect exposed plies from roof traffic damage by use of temporary plastic sheeting, rigid insulation and plywood.

H. Immediately repair all damage to roofing membrane caused by construction activities.

3.05 POLYISOCYANURATE INSULATION INSTALLATION

A. Alternate Bid #1
   1. Mechanically fasten the insulation layer with plates and screws at a pattern and rate to meet wind uplift requirements that should include tighter spacing and increased number of fasteners at corners and perimeters per manufacturer's requirements and/or recommendations. Screws shall penetrate into the T&G wood deck a minimum one (1) inch. Install with joints offset from existing underlying layer and staggered between rows. Tightly butt boards to one another and at penetrations and transitions leaving no gaps larger than ⅛ inch.

B. Base Bid
   1. Infill at Wet/Damaged Replacement Areas
      a. Install specified insulation over the deck at locations where existing insulation is removed, as shown in the drawings. Install such that surface of new "infill" insulation is level with the surface of the existing dry surrounding roofing insulation. Insulation boards to be tightly butted with no more than 1/8 inch gap. Sporadically fasten to hold in place until coverboard fastening takes place.
   2. Tapered Insulation Crickets
      a. Layout insulation boards with joints offset between layers and staggered between rows. Tightly butt boards to one another and at penetrations and transitions leaving no gaps larger than one-eight (⅛) inch. Install in multiple layer to achieve specified slope. Sporadically fasten to hold in place until coverboard fastening takes place.

3.06 COVERBOARD INSTALLATION

A. Alternate Bid #1
   1. Set coverboard in ribbons of adhesive with each ribbon spaced to meet wind uplift requirements that should include tighter spacing of adhesive ribbons at corners and perimeters per manufacturer's requirements and/or recommendations. Install with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt boards together. Offset joints of coverboard from joints of underlying insulation board.

B. Base Bid
   1. Install coverboard with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows and joints offset from underlying insulation panels. Tightly butt coverboards together. Mechanically fasten with screws and three 3 inch plates per project uplift requirements. Screws shall penetrate into the T&G deck a minimum one (1) inch.

C. At vertical transitions, mechanically fasten vertical substrate board as required to provide an acceptable substrate for flashing membrane installation.

D. Substrate board shall not be installed over concrete substrates.

3.07 PRIMER APPLICATION

A. Examine all substrates and conduct adhesion peel tests as necessary, to ensure satisfactory adhesion is achieved.

B. Apply the appropriate specified primer to dry, compatible substrates as required to enhance adhesion of new specified materials.

C. Apply primer using brush, roller, or sprayer at the rate published on the product data sheet.

D. Apply primer to dry compatible substrates.

E. Monitor changing conditions, monitor the drying time of primers, and monitor the adhesion of the membrane plies. Adjust primer and membrane application methods as necessary to achieve the desired results.

3.08 ROOFING MEMBRANE APPLICATION

A. General: Application shall be in accordance with roofing system manufacturer's instructions and the following requirements. Should the manufacturer's and these specifications conflict, use the more stringent requirements.
   1. Ensure environmental conditions are safe and satisfactory, and will remain safe and satisfactory, during the application of the membrane and flashings.

B. Field Basesheet Application
   1. Ensure all roofing and flashing substrates are prepared and acceptable to receive the self-adhesive membrane.
   2. Ensure primer is tacky to-the-touch, but not wet. Primer should not transfer to the finger tips when touched. Do not proceed if primer is wet or becomes fully dry and dirty. If primer becomes fully dry, dirty and looses all tack, re-prime the substrate as necessary to achieve membrane adhesion.
   3. Unroll membrane onto the roof surface and allow time to relax prior to installing the membrane.
   4. Cut membrane to working lengths and widths to conform to rooftop conditions, and lay out to always work to a selvage edge starting at the low point of the roof.
   5. All courses shall be laid free of wrinkles, creases, or fishmouths and shall be laid at right angles (perpendicular) to the slope of the deck, and shingled 3-inches at sides to prevent back-water laps.
   6. Peel the release film from the underside of the membrane. Press and adhere

the leading edge of the membrane to the substrate, but leaving the 6 inch end-lap un-adhered in order to heat weld the end-lap.

7. As the release film is peeled away, use a weighted roller to firmly set the sheet in place. Ensure full contact is made between the ply and the substrate for full adhesion. Use a hand-roller to roll-in vertical flashings and confined areas to firmly apply pressure.
8. At the 6 inch end-laps, use a hot-air welder to melt plastic burn-off film from the top surface where present. Embed granules or otherwise remove surfacing where present using a hot-air welder.
9. At the 6 inch end-laps, cut a 45 degree dog-ear away from the 3 in selvage edge to ensure the membrane is fully heat-welded or adhered watertight at all T-joints.
10. Offset self-adhered end-laps 3 feet.
11. Each day, physically inspect all side and end-laps, and ensure the membrane is watertight. Where necessary, use a hot-air welder and a clean trowel to ensure all laps are fully sealed.
12. Inspect the installation each day to ensure the plies are fully adhered. Repair all un-adhered voids, wrinkles, open laps and all other deficiencies.

B. Flashing Ply Sheet Application

1. The flashing ply sheet shall be lapped a minimum of (three) 3 inches to itself and shall extend under the cant a minimum of four (4) inches beyond the toe of the cant and wrapping the top of the parapet, curbs and/or sleepers. Extend to one (1) inch below the bottom nailer on the outside face or to the top interior edge of curbs as indicated in the drawings.
2. Where the parapet height exceeds twenty four (24) inches above the finished roof plane, install a two-piece membrane flashing assembly, with intermittent horizontal fastening at eight (8) inches on center, per the manufacturer's installation instructions.
3. Ensure flashing ply sheet covers and seals all substrates requiring protection from exposure to torch operations.
4. Install gussets to seal corner transitions.

C. Field Interply Application

1. Unroll membrane onto the roof surface and allow time to relax prior to installing the membrane.
2. Cut membrane to working lengths and widths to conform to rooftop conditions, and lay out to always work to a selvage edge starting at the low point of the roof.
3. All courses shall be laid free of wrinkles, creases, or fishmouths and shall be laid at right angles (perpendicular) to the slope of the deck, and shingled to prevent back-water laps.
4. Lap sides 3 inches and end laps a minimum of 6 inches. Lap seams in the basesheet and interply shall be offset no less than 18 inches. Stagger side laps from flashing ply sheet side laps.
5. At end-laps, cut a 45 degree dog-ear away from the selvage edge, or

otherwise ensure the membrane is fully heat-welded watertight at all T-joints

6. As the membrane is unrolled, apply heat to the underside of the membrane until the plastic burn-off film melts away. Continuously move the torch side-to-side across the underside of the roll to melt the bitumen on the underside of the sheet, while continuously unrolling the membrane. Torching should be performed from the front of the roll using a cane to pull the roll towards the applicator and not walked on as the membrane is being rolled out.
7. While unrolling and heating the sheet, ensure a constant flow of hot bitumen approximately ¼ to ½ inch flows ahead of the roll as it is unrolled, and there is ⅛ to ¼ inch bleed out at all laps.
8. Adjust the application of heat to the underside of the membrane and to substrate as required for varying substrates and environmental conditions.
9. Inspect the installation each day to ensure the plies are fully adhered and laps are watertight. Repair all voids, wrinkles, open laps and all other deficiencies.

D. Field Capsheet Application

1. Unroll membrane onto the roof surface and allow time to relax prior to adhering or heat welding.
2. Cut membrane to working lengths and widths to conform to rooftop conditions, and lay out to always work to a selvage edge starting at the low point of the roof.
3. All courses shall be laid free of wrinkles, creases, or fishmouths and shall be laid at right angles (perpendicular) to the slope of the deck, and shingled to prevent back-water laps.
4. Lap sides 3 inches and end laps a minimum of 6 inches. Lap seams in the basesheet and surface capsheet shall be offset no less than 18 inches.
5. At the 6 in end-laps, embed granules and remove surfacing using a torch or hot-air welder to provide a bitumen-to-bitumen bond.
6. At end-laps, cut a 45 degree dog-ear away from the selvage edge, or otherwise ensure the membrane is fully heat-welded watertight at all T-joints
7. As the membrane is unrolled, apply heat to the underside of the membrane until the plastic burn-off film melts away. Continuously move the torch side-to-side across the underside of the roll to melt the bitumen on the underside of the sheet, while continuously unrolling the membrane. Torching should be performed from the front of the roll using a cane to pull the roll towards the applicator and not walked on as the membrane is being rolled out.
8. While unrolling and heating the sheet, ensure a constant flow of hot bitumen approximately ¼ to ½ inch flows ahead of the roll as it is unrolled, and there is ⅛ to ¼ inch bleed out at all laps.
9. Adjust the application of heat to the underside of the membrane and to substrate as required for varying substrates and environmental conditions.
10. Inspect the installation each day to ensure the plies are fully adhered and laps are watertight. Repair all voids, wrinkles, open laps and all other

deficiencies.

11. Embed granules, where excess bitumen bleed out is present, when heat welding sheets.

E. Flashings Surface Sheet Application

1. The flashing surface sheet shall be lapped a minimum of three (3) inches to itself and shall extend a minimum of six (6) inches onto the field capsheet surface and extend up under the sheet metal counterflashing, or wrapping the top of the wall or as indicated in the drawings.
2. Where the parapet height exceeds twenty four (24) inches above the finished roof plane, install a two-piece membrane flashing assembly, with intermittent horizontal fastening at eight (8) inches on center, per the manufacturer's installation instructions.
3. Embed granules at faying surface where lapping onto field capsheet surface. Lap seams in the flashing ply sheet shall offset lap seams in the flashing surface sheet a minimum of 12 inches.
4. The flashing surface sheet shall be torched over the flashing ply sheet and mechanically attached to the wall at the leading edge at 12 inches on center. All flashing plies shall be cut off the end of the roll and applied vertically, always working to selvedge.

F. Miscellaneous Items

1. Prime metal flanges as required with a uniform coating of asphalt primer. All flanges shall be set in a smooth even bed of asphalt roof cement.
2. Provide 4 lb/sf lead for flashings. Pre-prime with asphalt primer and set in full bed of asphalt roof cement as detailed. Field solder conduit flashings as necessary. Provide a boot at the top of lead flashings on conduit; two (2) wraps of self adhesive uncured EPDM batten seam cover strip, stainless steel clamping ring at the top edge, and sealant at the top.
   a. Alternate flashing method for flashing continuous penetrations shall be performed with application of reinforced fluid-applied flashing membrane, extending 6 inches out on all sides and 6 inches up the penetration.
3. Overnight seals: Exercise care that moisture does not enter beneath completed section of the roof. Temporarily seal loose edges of the membrane daily and when weather is threatening. Night seals can be built using roof cement and roofing felts, and constructed to withstand protracted periods of service. Night seals must be completely removed, all felts employed removed, prior to the resumption of roofing.
4. All exposed cap sheet edges at waste stacks, vent stacks, etc., shall be caulked with sealant, tooled into the joint.
5. Install walkpads / roof protection pads at locations shown on the roof plan(s). Install walkpads per manufacturer's specifications with adhesive and/or torch adhered to the capsheet. Leave space per the manufacturer between sections of walkpad for drainage.
6. Fluid-Applied Flashing Membrane:

a. Clean surface to receive fluid applied flashing, free of all contaminants.
b. Apply primer direct in one step utilizing a brush or paint roller. Do not allow ponding.
c. Allow primer to cure for a minimum of twelve (12) hours, or as required by the manufacturer. Exposure of the primer in excess of five (5) days or pre-mature exposure to moisture may require removal and application of new primer.
d. Mix resin components per manufacturer's recommendations. Once the mix is ready, apply liberally to the prepared surface with a roller using a broad, even stroke.
e. Install membrane flashing system in accordance with the manufacturer's requirements / recommendations. Provide system with base flashing, counter flashing, and all other flashings required for a complete watertight system.
f. Fluid applied membrane application shall extend a minimum of 6 inches in all direction past the transitions and 6 inches up onto penetrations.
g. Reinforcing fleece sections shall overlap each other a minimum of 2 inches.
h. Prime walls, curbs, penetrations, etc. with 2-component polyurethane primer. Follow manufacturer's written instructions for primer cure.
i. Work wet membrane to avoid any blisters, openings, or lifting at corners, junctions, and transitions. Assure full resin saturation of fleece.
j. NOTE: Fluid applied flashing details and installation requirements may vary between different roofing manufacturer's. The manufacturer's installation requirements should govern where fluid applied flashing discrepancies exists between the project drawings, specifications, and the manufacturer's current details and installation instructions.

3.09 FIELD QUALITY CONTROL

A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation upon completion.
   1. Notify Owner and Consultant two (2) working days in advance of the date and time of the manufacturer's inspection.

3.10 PROTECTION

A. The Contractor shall protect system from all other contractors and activities during and after completion. Any damage to the system shall be repaired by contractor prior to acceptance.

3.11 CLEAN-UP

A. The Contractor shall remove all masking, protection, equipment, materials, and debris from the work and storage areas and leave those areas in an undamaged and acceptable condition.

END OF SECTION 07520

SECTION 07520

MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 00 and 01 Specification Sections, provided by Owner, apply to this Section.

B. Section Includes:
1. Preparation of existing substrates.
2. Polyisocyanurate rigid foam insulation.
3. Coverboard: Over rigid foam insulation and on vertical surfaces as needed.
4. Self adhered basesheet with hot-air welded laps.
5. Heat welded styrene-butadiene-styrene (SBS) modified bituminous interply and mineral granule surfacing capsheet.
6. Heat welded SBS modified bituminous capsheet membrane flashing surface sheet and self-adhered flashing ply sheet.
7. Primer and Mastic
8. Lead Flashings
9. Reinforced Fluid-Applied Flashing Membrane
10. Walkpad

1.02 SUMMARY DESCRIPTION

A. Base Bid Scope
1. Main Apparatus Bay Roof, East and West Wing Roofs
   a. Demolish and legally discard the existing torch down and mechanically fastened basesheet (skin-off), related flashings and accessories, and install new tapered insulation crickets per drawings, coverboard and SBS-modified bituminous membrane roofing system secured to a prepared substrate including new flashings and other components over the existing rigid foam insulation to provide a complete and watertight roof system.
2. Hose Tower Roof
   a. Demolish and legally discard the existing wood deck pallets, existing built up asphalt roofing assembly (complete tear-off), related flashings and accessories, and install a new protected roof membrane (PRM) assembly secured to a prepared substrate including new flashings, drainage mat and XPS/concrete composite pavers to provide a complete and watertight roof system.
3. Generator Shed

a. Prepare existing smooth surface modified bitumen membrane to receive a new capsheet installation, baseflashing ply and sheet metal counterflashing.

B. Alternate Bid #1 Scope
1. Main Apparatus Bay Roof, East and West Wing Roofs
a. Install a layer of 3-inch polyisocyanurate rigid foam insulation over the existing rigid foam insulation in addition to the specified Base Bid roof assembly.
2. Hose Tower Roof
a. Install a layer of 3-inch extruded polystyrene (XPS) rigid foam insulation over the new drainage mat in addition to the specified Base Bid PRM assembly.

C. Unit Costs
1. Provide unit cost for each 3-inch by 4-foot by 4-foot replacement of damaged/wet insulation in addition to the assumed allowance of 438 square feet to include total cost for removal, disposal and replacement of existing mechanically fastened to T&G deck.
2. Provide a unit cost for replacement of deteriorated plywood roof sheathing and T&G decking with new, matching existing, on a per 4X8 board and linear foot basis, including the cost for labor and materials. Verify the dimensions and thickness of the existing plywood sheathing and T&G board prior to submitting bids.

1.03 RELATED SECTION

A. Related work specified elsewhere:
1. 01010 General Requirements (to be provided by Owner)
2. 02050 Demolition
3. 06100 Rough Carpentry
4. 07550 Modified Bituminous Protected Membrane Roofing
5. 07620 Flashing and Sheet Metal
6. 08620 Unit Skylights

1.04 REFERENCES

A. General
1. The following documents form part of the Specifications. Where differences exist, the most stringent shall apply.
2. Unless otherwise stated, the referenced standard edition is the current one at the time of commencement of the Work.
3. Refer to Division 01 Section “General Requirements” for the list of applicable regulatory requirements.

B. ASTM D41 – Asphalt Primer Used in Roofing.

C. ASTM D6164 – Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.

D. ASTM D6163 - Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.

E. ASTM E108 -Test Methods for Fire Tests of Roof Coverings.

F. ANSI/SPRI/FM 4435/ES-1 Wind Design Standard for Edge System Used with Low Slope Roofing System.

G. ANSI/SPRI FX-1 2016, Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners

H. ANSI/FM 4474- American National Standard for Evaluating the Simulated Wind Resistance of Roof Assemblies Using Static Positive and/or Negative Differential Pressures

I. National Roofing Contractors Association (NRCA) Current Edition.

J. Sheet Metal and Air-Conditioning Contractors National Association, Inc. (SMACNA)

K. Underwriters Laboratory (UL) – Fire Hazard Classifications.

L. Certified Roofing Torch Applicator Program (CERTA) – Guidelines for torch applicators.

1.05 DEFINITIONS

A. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The Roofing and Waterproofing Manual" apply to this Section.

1.06 PERFORMANCE REQUIRMENTS

A. General: Provide installed roofing membrane, membrane baseflashings and sheet metal flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure for a period of not less than 20 years.

B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.

C. Wind Uplift Resistance: Provide modified bituminous membrane, base flashings,

and component materials that meet requirements of ASCE 7-16.

1. Roofing system shall comply with the following:
   i. Fasten roofing assembly to meet ASCE 7-16 for field with perimeter, additional edge and "L" shaped corner enhancement based on the mean roof height.

D. Fire Classification: UL Class A; complying with ASTM E 108, for application and slopes indicated.

E. Thermal Value:
   a. Base Bid - Existing insulation above deck to remain with estimated thermal value resistance of R-16.8, not including coverboard and plies.
   b. Alternate Bid #1 – Additional layer of insulation over existing to provide estimated thermal value resistance of R-33.6 not including coverboard and plies.

F. Roof Slope: Finished roof slope for SBS modified bitumen surfaces shall be ¼ inch per foot (2 percent) minimum for roof drainage, provided by roof deck with new ½ inch per foot tapered insulation crickets as indicated in drawings.

G. Products provided under the work of this Section shall be 100% asbestos-free.

1.07 BIDDING REQUIREMENTS

A. Pre-Bid Meeting: A pre-bid meeting shall be held with the Owner's Representative and involved trades to discuss all aspects of the project. Procedures to avoid rooftop damage by other trades shall be determined.

B. Site visit: Bidders shall visit the site and carefully examine the areas in question as to conditions that may affect proper execution of the work. All dimensions and quantities shall be determined or verified by the contractor. No claims for extra costs will be allowed because of lack of full knowledge of the existing conditions unless agreed to in advance with the Owner or Owner's Representative

1.08 SUBMITTALS

A. Product data, Roofing System: Submit the name of the manufacturer and specification numbers and product names of all materials proposed for use in the work. Include in submittal installation instructions and general recommendations for each principal roofing system product required. Include data substantiating that the materials comply with requirements, including certificates and delivery logs for bulk materials. Include volatile organic compounds (VOC's) in grams per liter (g/l) for all adhesives, sealants and solvents. Explicitly identify in writing the differences between manufacturer's instructions and the requirements specified herein, with manufacturer's approval of project modifications.

B. Manufacturers: Provide primary products, including each component of the new roof assembly, and flashings, as specified from one manufacturer. Provide secondary products which are acceptable to, and approved by, the manufacturer of the primary products.

C. Shop Drawings: Include plans, sections, details, and attachments to other work, for the following:
   1. Base flashings and membrane terminations.

D. Tear Off: Submit tear-off work plan. Submit copies of dump receipts prior to completion of the job.

E. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install specified roofing system and is eligible to receive the specified roofing manufacturer's warranty. **Submit Manufacturer's certifications with bid proposals.**

F. Submit emergency phone numbers of personnel capable of responding to a roof related emergency after normal working hours. Answering service phone numbers are not acceptable for this purpose.

G. Warranty: Sample copy of specified roofing manufacturer's warranty stating obligations, remedies, limitations, and exclusions of warranty.

H. Manufacturers approved fastener layout patterns, meeting project performance requirements.

I. Maintenance Data: For roofing system to include in the maintenance manuals.

1.09 CODE REQUIREMENTS

A. The applicator shall submit evidence that the proposed roof system meets the requirements of the local building code and has been tested and approved or listed by the following test organizations. These requirements are minimum standards and no roofing work shall commence without written documentation of the system's compliance, as required in the "Submittals" section of this specification.
   1. American Society of Civil Engineers Standard ASCE 7
   2. Underwriters Laboratories, Inc. - Northbrook, IL
      i. Class A fire rated assembly
   3. Building permit
      i. Any permits required by the City of Kirkland that are needed to complete the work will be the responsibility of the contractor. Any costs associated with obtaining permits shall be included in the bid.

1.10 WARRANTIES

A. Furnish the modified bitumen sheet manufacturer's guaranty to include the following for the roofing system. The guaranty shall cover all costs associated with the repair and/or replacement of all defective areas of the roof system. The guaranty shall be issued directly to the Owner. In no event shall the guaranty period be less than twenty (20) years from the date of the Owner's acceptance of the work. The guaranty shall provide that if within the guaranty period the roofing system including membrane, membrane flashing and accessories, becomes non-watertight, splits, tears, separates at the seams, or shows any other symptoms of failure because of defective materials or workmanship, the repair or replacement of defective materials and correction of defective workmanship shall be the responsibility of the manufacturer. If the manufacturer or their approved applicator fail to perform repairs within 72 hours of notification, emergency repairs performed by others shall not void the guaranty, and shall be billed to the manufacturer issuing the guaranty. The guaranty shall be issued to the Owner within 60 days following the acceptance by the Owner of the completed roofing system.

1. Manufacturer: Shall provide Owner with twenty (20) year NDL product and roofing system guaranty which shall cover: leaks from deterioration of membrane and its associated flashings for the duration of guaranty period and that the roof membrane and flashings will remain in watertight condition for guaranty period. The guaranty shall cover both workmanship and material defect in the roofing system, and shall not be prorated. Such guaranty shall be appropriately amended to include the following:
   i. Manufacturer shall pay all authorized costs to replace or restore to its original condition all sheathing, insulation and drywall that becomes moisture saturated due to leaks resulting from faulty materials or workmanship.
   ii. Manufacturer shall pay all authorized costs associated with replacement of rusted or otherwise defective "approved" fasteners.
   iii. The guaranty shall cover full (100%) replacement cost.
   iv. The guaranty shall be transferable.
   v. There shall be no penal sum associated with this guaranty.
   vi. The Owner shall be able to make temporary repairs without voiding the guaranty.
   vii. Copies of the roof plan, details and specifications shall be attached to the guaranty.
   viii. Manufacturer shall inspect the project prior, during and after roof system is installed.

B. Applicator / Roofing Contractor: The Applicator shall supply the Owner with a separate 2-year workmanship warranty. In the event any work related to roofing, flashing, or metal work is found to be defective or otherwise not in accordance with the Contract Documents and Manufacturer’s requirements and installation instructions within the Applicator’s warranty term, 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 Wetherholt & Associates Inc., and the manufacturer. Blistering, buckling shall also be covered by this warranty.

C. All warranties shall be submitted for approval and shall have been accepted at time of contract award.

SUBMIT FORM OF GUARANTIES REQUIRED TO OWNER WITH BID

1.11 QUALITY ASSURANCE

A. Single Installer Responsibility: A single installer (contractor) shall perform the work, including sheet metal work, as required by this specification; and shall be a firm specializing in roofing system work **who has been in business under the same name and ownership for at least 5 years**, capable of showing successful installations similar to the work required for this project.
   1. Roofing system shall be installed only by a roofing contractor authorized by and in good standing order with the roof membrane manufacturer prior to the bid.
   2. All work pertaining to the installation of roof membrane and flashings shall only be completed by applicator personnel trained and authorized by the roof membrane manufacturer in those procedures.
   3. There shall be no deviation made from the Project Specification or the approved shop drawings without prior written approval by the Owner, the Roofing Consultant, and the roof membrane manufacturer.
   4. Contractor shall provide full time, on-site superintendent or foreman experienced with the specified roofing from beginning through satisfactory project completion.
   5. Contractor shall maintain a daily record, on-site, documenting material installation and related project conditions.
   6. Contractor shall maintain a copy of all submittal documents, specification and plans on-site, available at all times for reference.

B. Owner: Notify Owner and Roofing Consultant 24 hours (one full working day) prior to commencement of work. The owner may provide special inspection of the roofing application. Such inspection will not relieve the contractor of responsibility for proper completion of the work.

C. Manufacturer: Install in accordance with primary products manufacturer, including each type of roofing, and flashings, as specified from one manufacturer. Install secondary products which are acceptable to, and approved by, the manufacturer of the primary products.
   1. Upon completion of installation and delivery to the roof membrane manufacturer by the Applicator of a certification that all work has been done in strict accordance with the contract specifications and manufacturer's requirements, an inspection shall be made by a Technical Representative of the roof membrane manufacturer to review the installed roof system.

2. Manufacturer shall have 20 years of manufacturing experience.
3. Manufacturer shall have trained technical service representatives employed by the manufacturer, independent of sales.
4. Manufacturer shall provide site visit reports in a timely manner.

D. Pre-roofing conference: Prior to the commencement of reroofing work, meet at the project site with the roofing contractor, the Owner, Roofing Consultant, and other entities interested in the performance of the roofing system. Review the requirements (contract documents), submittals, proposed installation schedule, location and storage of materials, requirements for inspections and testing or certifications, forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing, governing regulations, insurance requirements, proposed installation procedures, access and any other items that may be required for completion of the project. If meeting ends with substantial disagreement between parties, determine how disagreement will be resolved and set date for reconvened meeting.

1.12 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Delivery: Material shall be delivered in the manufacturer's original sealed and labeled containers and in quantities sufficient to allow continuity of application. Handle all materials to prevent damage. Mark and remove wet materials from the site.

B. Storage: Obtain permission of the structural engineer for roof top storage. If roof top storage of materials is used, do not exceed the allowable load for the structure. Materials shall be stored out of direct exposure to the elements. Roll goods shall be stored on end and on pallets. Material shall be protected against moisture so as not to allow moisture to penetrate the cover or condensation to occur beneath the cover. Completely cover roll materials permitted to be stored outdoors, on and off roof, with waterproof canvas protective covering. Do not use polyethylene sheet as a covering.
1. As a general rule all adhesives shall be stored at temperatures between 40º F (5º C) and 80º F (27º C). Read instructions contained on adhesive canister for specific storage instructions.
2. All flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow precautions outlined on containers or supplied by material manufacturer/supplier.

C. Handling: Material shall be handled in such a manner as to preclude damage and contamination with moisture or foreign matter.

D. Do not leave unused felts and other sheet materials on the roof overnight or when roofing work is not in progress unless protected from weather and moisture and unless maintained at a temperature exceeding 50 deg F (10 deg C).

E. Properly dispose of all product wrappers, pallets, cardboard tubes, scrap, waste, and debris.

F. Protect insulation and roofing materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store materials in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

G. All materials determined by the Owner, Roofing Consultant, or roof membrane manufacturer representative to be damaged are to be removed from job site and replaced with new, suitable materials at no cost to Owner.

H. Protection of the roof and all adjacent surfaces and structure shall be provided and maintained throughout the project, and any damage repaired to pre-work condition at the expense of the Contractor.

1.13 SITE CONDITIONS

A. Safety: The contractor shall be responsible for complying with all project-related safety and environmental requirements.
   1. Heat-welding shall include heating the specified membrane ply using propane roof torches or electric hot-air welding equipment. The contractor shall determine when and where conditions are appropriate to utilize heat-welding equipment. When conditions are determined by the contractor to be unsafe to proceed, equivalent SBS-modified bitumen materials and methods shall be utilized to accommodate requirements and conditions.
   2. The contractor shall review project conditions and determine when and where conditions are appropriate to utilize the specified liquid-applied, or semi-solid roofing materials. When conditions are determined by the contractor to be unsafe or undesirable to proceed, measures shall be taken to prevent or eliminate the unsafe or undesirable exposures and conditions, or equivalent approved materials and methods shall be utilized to accommodate requirements and conditions.
   3. The contractor shall refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.

B. Environmental Conditions:
   1. Monitor substrate temperature and material temperature, as well as all environmental conditions such as ambient temperature, moisture, sun, cloud cover, wind, humidity, and shade. Ensure conditions are satisfactory to begin work and ensure conditions remain satisfactory during the installation of specified materials. Materials and methods shall be adjusted as necessary to accommodate varying project conditions. Materials shall not be installed when conditions are unacceptable to achieve the specified results.

2. Precipitation and dew point: Monitor weather to ensure the project environment is dry before, and will remain dry, during the application of roofing materials. Ensure all roofing materials and substrates remain above the dew point temperature as required to prevent condensation and maintain dry conditions.
3. Self-adhesive membrane application: During cold weather, store the specified self-adhesive membrane and primer materials in heated storage areas to ensure materials remain no less than 70°F (21°C) during application. Ensure conditions allow primer to remain tacky, but not wet so that primer will not transfer to finger when touched. Self-adhesive primer shall not fully dry and lose tack before applying the self-adhesive membrane. Ensure conditions remain satisfactory to achieve membrane adhesion as specified.
4. Heat-Welding Application: Take all necessary precautions and measures to monitor conditions to ensure all environmental conditions are safe to use roof torches and hot-air welding equipment. Combustibles, flammable liquids and solvent vapors that represent a hazard shall be eliminated. Flammable primers and cleaners shall be fully dry before proceeding with heat-welding operations. Prevent or protect wood, paper, plastics and other such combustible materials from direct exposure to open flames from roof torches. Refer to NRCA CERTA recommendations.

C. Contractor shall provide a scaffold stair for access to the roof during construction, or as coordinated with Site Contact. Location of the scaffold stair to be coordinated with the Site Contact.

D. At ambient temperatures of 40° or less, including wind chill, precautions must be taken to ensure that hot asphalt, cements, and adhesives maintain the minimum acceptable temperature at the point of application as recommended by the roofing materials manufacturer.

E. Protection against staining and mechanical damage shall be provided for adjacent surfaces as required during application of roofing.

F. All surfaces to receive new membrane or flashings shall be clean and dry before any roofing work proceeds. Roofing shall not proceed during precipitation, nor when moisture from dew is present, or if precipitation or other moisture source is expected. Should surface moisture occur, provide the necessary equipment to dry the surface prior to application.

G. Be prepared to immediately protect incomplete installations from damage by inclement weather which may occur unexpectedly.

H. Roofer shall remove or begin installation of no more roofing than can be completely installed through the interply the same day, including all flashing and detail work.
1. All work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather. The existing building will

be occupied and its contents shall be protected against all risks.

I. Uninterrupted water stops shall be installed at the end of each day's work to prevent moisture entering interior of structure and the new roof assembly, and shall be completely removed before proceeding with the next day's work. Water stops shall not emit dangerous or unsafe fumes and shall not remain in contact with the finished roof as the installation progresses.

J. Prior to and during application, all dirt, debris and dust shall be removed from surfaces either by vacumming, sweeping, blowing with low-pressure air and/or similar methods.

K. All new and temporary construction, including equipment and accessories, shall be secured in such a manner as to preclude wind blow-off and subsequent roof or equipment damage. Protection against staining, mechanical damage, and live loads shall be provided for adjacent surfaces as required during application of roofing.

L. All roofing, flashings and metal work (including new roofing waste materials) removed during construction shall be taken off site on a daily basis to a legal dumping area authorized to receive such materials. Hazardous materials, such as materials containing asbestos, are to be removed and disposed of in strict accordance with applicable City, State and Federal requirements.

M. Verify that all roof drain lines are functioning correctly (not clogged or blocked) before starting work. Applicator shall report any such blockages in writing to the Owner's Representative (letter copy to Roofing Consultant) for corrective action prior to commencement of roof work.

N. Site cleanup, including both interior and exterior building areas that have been affected by reroofing, shall be completed to the Owner's satisfaction. All landscaped areas damaged by construction activities shall be repaired at no cost to the Owner.

O. Precautions shall be taken when using adhesives and/or fluid-applied flashings at or near rooftop vents or air intakes. Adhesive and/or fluid-applied flashings odors could enter the building. Coordinate the operation of vents and air intakes in such a manner as to avoid the intake of adhesive and fluid-applied flashings odor while ventilating the building. Keep lids on unused cans at all times.

P. Existing Conditions:
   1. The existing roof membrane was tested by NVL Labs and detected to contain Asbestos Containing Materials in the 'silver coat' (reflective aluminum coating) applied on the surface of the Main Apparatus Bay, East and West Wing Roofs.
   2. Should hazardous materials be suspected, notify Project Manager. Do not proceed with work in suspect area until advised by Project Manager that safe conditions exist. Comply with applicable rules and regulations.

Q. It is the contractor's responsibility to observe all fire prevention policies and practices during the installation of the roof system. It is the contractor's responsibility to train, instruct and warn employees on the use and handling of propane torching equipment, including CERTA training

PART 2 PRODUCTS

2.01 ROOFING ASSEMBLY

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following options.

B. BASE BID - Low-Slope Modified Bituminous Roofing (Reskin over New Coverboard): Main Apparatus Bay, East and West Wing Roofs

	Option #1: Siplast	**Option #2: Soprema**
Substrate	T&G wood decking and plywood sheathing (per plans provided by City of Kirkland). Replace where damaged/deteriorated on a negotiated time and materials basis.	same
Existing Insulation	Flat stock 3" rigid polyisocyanurate foam insulation. Remove and replace with new where wet or damaged to meet flush and butt tightly with surrounding dry insulation, mechanically fastened.	same
Existing Basesheet	Basesheet mechanically fastened with screws and plates through insulation into deck, completely remove to expose insulation except under fastener plates, leave existing plates and fasteners in-place.	same
Tapered Insulation (at cricket locations indicated on roof plan)	Tapered polyisocyanurate insulation at cricket locations to provide a minimum ½" per foot finished slope for positive drainage, 48" x 96", mechanically fastened in conjunction with coverboard. Maximum board thickness of any one layer of 3 inches, all layers staggered. *Note: Primary roof slopes are provided by the structural roof deck.*	same

Roof Coverboard	**Georgia Pacific DensDeck Prime Roof Board (1/4" x 4' x 4')** high density gypsum core with mechanically bonded fiberglass mats on front and back, mechanically fastened with manufacturers approved fasteners with enhancements at perimeters and corners consistent with wind uplift resistance performance requirements.	same
Basesheet	**Paradiene 20 SA**, SBS modified 102 mils base sheet, glass reinforced, self-adhered.	**Sopralene Flam Stick**, SBS modified 98 mils ply sheet, polyester reinforced, self adhered.
Interply	**Paradiene 20 TG**, SBS modified 114 mils ply sheet, glass reinforced, torch adhered.	**Sopralene Flam 180**, SBS modified 120 mils ply sheet, polyester reinforced, torch adhered.
Capsheet	**Paradiene 30 FR TG,** SBS modified 138 mils granulated capsheet, UV resistant, fire rated, glass reinforced, torch applied. Color white or gray.	**Sopralene Flam 180 FR GR,** SBS modified 157 mils granulated capsheet, UV resistant, fire rated, polyester reinforced, torch applied. Color white or gray.
Flashing Ply Sheet	**Siplast Paradiene 20 SA**, SBS modified 102 mils ply sheet adhered to substrate, primed with TA-119 high tack primer.	**Sopralene Flam Stick**, SBS modified 98 mils ply sheet, polyester reinforced, self adhered
Flashing Surface Sheet	**Siplast Parafor 30 TG,** SBS 161 mils granulated capsheet, UV resistant with polyester/fiberglass composite reinforcing, torch adhered. Color white or gray.	**Sopralene Flam 180 FR GR,** SBS modified 157 mils granulated capsheet, UV resistant, fire rated, polyester reinforced, torch applied.

C. ALTERNATE BID #1 - Low-Slope Modified Bituminous Roofing (Reskin over Additional 3" Insulation Layer and New Coverboard): Main Apparatus Bay, East and West Wing Roofs

	Option #1: Siplast	**Option #2: Soprema**
Substrate	T&G wood decking and plywood sheathing (per plans provided by City of Kirkland). Replace where damaged/deteriorated on a negotiated time and materials basis.	same
Existing Insulation	Flat stock 3" rigid polyisocyanurate foam insulation. Remove and replace with new where wet or damaged to meet flush and butt tightly with surrounding dry insulation, mechanically fastened.	same

Existing Basesheet	Basesheet mechanically fastened with screws and plates through insulation into deck, completely remove to expose insulation except under fastener plates, leave existing plates and fasteners in-place.	same
Insulation	Flat stock 3” x 4’ x 8’ rigid polyisocyanurate foam insulation, 20 psi, mechanically fastened with enhancements at perimeters and corners consistent with wind uplift resistance performance requirements.	same
Tapered Insulation (at cricket locations indicated on roof plan)	Tapered polyisocyanurate insulation at cricket locations to provide a minimum ½” per foot finished slope for positive drainage, 48” x 96”, mechanically fastened in conjunction with flat stock insulation layer. Maximum board thickness of any one layer of 3 inches, all layers staggered. *Note: Primary roof slopes are provided by the structural roof deck.*	same
Roof Coverboard	**Georgia Pacific DensDeck Prime Roof Board (1/4” x 4’ x 4’)** high density gypsum core with mechanically bonded fiberglass mats on front and back, adhesively attached with enhancements at perimeters and corners consistent with wind uplift resistance performance requirements.	same
Basesheet	**Paradiene 20 SA**, SBS modified 102 mils base sheet, glass reinforced, self-adhered.	**Sopralene Flam Stick**, SBS modified 98 mils ply sheet, polyester reinforced, self adhered.
Interply	**Paradiene 20 TG**, SBS modified 114 mils ply sheet, glass reinforced, torch adhered.	**Sopralene Flam 180**, SBS modified 120 mils ply sheet, polyester reinforced, torch adhered.
Capsheet	**Paradiene 30 FR TG,** SBS modified 138 mils granulated capsheet, UV resistant, fire rated, glass reinforced, torch applied. Color white or gray.	**Sopralene Flam 180 FR GR,** SBS modified 157 mils granulated capsheet, UV resistant, fire rated, polyester reinforced, torch applied. Color white or gray.
Flashing Ply Sheet	**Siplast Paradiene 20 SA**, SBS modified 102 mils ply sheet adhered to substrate, primed with TA-119 high tack primer.	**Sopralene Flam Stick**, SBS modified 98 mils ply sheet, polyester reinforced, self adhered

Flashing Surface Sheet	**Siplast Parafor 30 TG,** SBS 161 mils granulated capsheet, UV resistant with polyester/fiberglass composite reinforcing, torch adhered. Color white or gray.	**Sopralene Flam 180 FR GR,** SBS modified 157 mils granulated capsheet, UV resistant, fire rated, polyester reinforced, torch applied.

2.02 COVERBOARD

A. Horizontal and Vertical Surfaces: ASTM C 1177, glass-mat, water-resistant gypsum substrate, (.025) ¼-inch thick.
   1. Product: Subject to compliance with requirements
      i. "DensDeck Prime" by Georgia Pacific Corporation, no substitutions.

2.03 RIGID POLYISOCYANURATE INSULATION

A. Approved manufacturers:
   1. Soprema Sopra-ISO Plus
   2. Siplast Paratherm CG
   3. or equivalent as approved by manufacturer.

B. Flat Stock Roof Insulation **(for use as additional layer per Alt. Bid #1 and for infill panels at areas of replacement):** Rigid closed cell polyisocyanurate foam insulation with premium performance coated glass facers, 48" x 96" x 3" (max thickness). NO ORGANIC OR PAPER FACERS ALLOWED. ASTM C 1289, Type II, Class 2, Grade 2, (20 psi).
   1. Verify insulation required by membrane manufacturer for system warranty applications.
   2. Install insulation in multiple layers to meet flush with height of thickest point in insulation layout in field.
   3. Primary roof slopes are provided by the structural roof framing.

C. Tapered Insulation **(for use at crickets per drawings):** Preformed tapered rigid closed cell polyisocyanurate foam insulation with premium performance coated glass facers, 48" x 48" x slope to provide a minimum ½" per foot <u>finished</u> slope at roof with zero edge start. NO ORGANIC OR PAPER FACERS ALLOWED. Minimum edge thickness of tapered insulation shall be one-half inch (½"). ASTM C 1289, Type II, Class 2, Grade 2, (20 psi).
   1. Verify insulation required by manufacturer for system warranty applications.
   2. Contractor to field verify cricket locations and provide taper plan.

2.04 FLUID-APPLIED FLASHING

A. Fully reinforced PMMA fluid applied flashing membrane (at locations shown on the drawings):
   1. Primer: As recommended by the manufacturer.
   2. Membrane/Resin: Siplast Parapro 123 or Soprema Alsan RS.

3. Reinforcing Fleece: As recommended by the manufacturer. All systems are to have reinforcing fleece.

2.04 WALKWAY/ROOF PROTECTION PAD

A. Roof protection pad material to be composed of polyester reinforced SBS modified bitumen walkway protection with a granule surface and sanded underside.
   1. Soprema SopraWalk, thickness 200 mils, 39.4 inch width, color black.
   2. Siplast Paratread, thickness 217 mils, 30 inch width, color stone gray.
   3. Install at locations shown on roof plan.

2.05 CAPSHEET MEMBRANE OVERLAY FOR GENERATOR SHED ROOF

A. Siplast Paradiene 30 FR TG.
B. Soprema Sopralene Flam 180 FR GR.

2.06 ACCESSORIES

A. Asphalt Primer: For coating metal and concrete surfaces to receive roofing membranes: Primer should be a roofing system manufacturers standard asphalt based blend, type as approved by manufacturer:
   1. Soprema Elastocol 500 Primer.
   2. Siplast PA-1125 Primer.

B. Solvent Based Primer: For the preparation of membrane substrates for self-adhesive SBS membrane and self-adhered SBS flashing applications.
   1. Soprema Elastocol Stick Primer.
   2. Siplast TA-119 Primer.

C. Roofing Cement/Mastic: SBS-modified general purpose roofing cement for low-slope roofing used for setting metal flashings, sealing membrane T-joints and membrane edges along terminations, transitions and at roof penetrations
   1. Soprema SopraMastic.
   2. Siplast PA-1021.

D. Sealant: General purpose, paintable, gun-grade, elastomeric, polyether moisture curing sealant for sealing SBS membrane terminations.
   1. Soprema SopraMastic SP1.
   2. Siplast PS-209 Elastomeric Sealant.

E. Self-Adhering High Temperature Resistant Supplemental Membrane Flashing: For installation under metal flashings, i.e. coping at Hose Tower parapet or as indicated in drawings, high tensile strength rubberized asphalt membrane designed to withstand temperatures of 250 degrees Fahrenheit, 40 mils, as manufactured by Carlisle WIP 300HT or similar.

F. Cant strips to be three (3) inch perlite, unless otherwise specified, as manufactured by GAF or Manville.

G. Tapered edge strips, Johns-Manville, "Tapered Fesco Board", "US Intec Inc., "Tapered Permalite", or approved equal. Slope as required.

H. Provide 4 pound/sf lead flashing and caps for soil stacks and conduit penetrations. Pre-prime with asphalt primer and set in full bed of roof cement as detailed in manufacturer's instructions. Where soil stacks exceed height of lead flashing, provide double wrap boot of 6" Batten Seam Cover Tape (as manufactured by Firestone or Carlisle). POURABLE SEALER POCKETS ARE NOT ACCEPTABLE.

I. Fasteners for Securing the Top of the Baseflashing Membrane: One (1) inch annular shank nails with square head caps or of sufficient length to penetrate through the substrate or into the substrate ¾-inch minimum, Round Top Cap Nail by National nail or comparable.

J. Mechanical Fasteners for Coverboard and Rigids Board Insulation at Wood Decks: Corrosion resistant screws and three (3) inch plates as approved by the roofing materials manufacturer, Buildex Roof Grip #14 size, or greater, as recommended by the manufacturer. All screws should be of length to penetrate into the T&G deck a minimum of one (1) inch.

K. Insulation Adhesive: For adhering coverboard over new rigid board insulation (Alternate Bid #1 ONLY): One or two part urethane adhesive:
1. Soprema Mammouth DuoTack dual component polyurethane adhesive.
2. Siplast Para-Stik single component urethane adhesive.

L. Provide 1/4" x 1" aluminum termination bar to secure top edge of membrane at concrete wall surfaces.

M. Mineral Granules: As manufactured by 3M Corporation, size no. 11, #71 Gray Corona, or as approved by the manufacturer.

PART 3 EXECUTION

3.01 GENERAL

A. Contractor shall be responsible for inspecting the roof deck and verifying that no conditions are present which may prevent or otherwise interfere with the installation of the proposed roof system.

B. Any adverse condition which may affect the performance of the roof system shall be reported in writing to the Owner. Absence of such notification shall constitute the Subcontractor's verification that existing conditions will allow the installation of the

system in accordance with the Drawings and Specifications and the manufacturer's guaranty.

C. All surfaces shall be swept clean prior to commencement of roofing.

D. The roofing contractor shall coordinate the installation so that each area is made watertight at the end of each work period. No more coverboard shall be installed than can be covered with roofing membrane, at least through the fully torch adhered interply and flashing ply sheet, in the same day.

E. Application of roofing shall immediately follow installation of coverboard as a continuous operation.

F. Application shall be in accordance with the projects structural engineer and roofing system manufacturer's instructions, NRCA and the following requirements. Should manufacturer's specifications and owner's specifications conflict, use the more stringent.

G. Contractor shall verify that work penetrating the roof deck, or which may otherwise impact or affect the roofing, has been properly completed, including any structural upgrades deemed necessary by the structural engineer.

3.02 PREPARATION AND DEMOLITION: GENERAL

A. The Applicator shall verify that all downspouts and drain lines are functioning correctly (not clogged or blocked) before starting work. Applicator shall report any such blockages in writing to the Owner' (letter copy to Roofing Consultant) for corrective action prior to commencement of roof work.

B. Completely remove and legally dispose of the existing roof membrane, baseflashings, cants, counterflashings, coping and roof flashings as necessary to complete the new re-roofing work in accordance with specifications and detailed requirements.

a. Provide and install temporary weather protection as required to leave the building weather tight on a daily basis.

C. A moisture scan was conducted by Wetherholt and Associates, Inc. and wet areas identified were marked on the roof with surveyor’s paint or lumber crayon. Approximate locations and areas of wet existing roofing are also noted in the Roof plan, Sheet R1. Completely remove existing roof membrane assembly and insulation containing moisture and replace with new rigid insulation of thickness to match existing insulated roof assembly. <u>Note: Areas of moisture infiltrated roofing and any other moisture infiltrated/damaged insulation areas shall be removed to fully dry and sound materials and replaced with new.</u>

D. Regulatory Requirements:

1. Comply with governing EPA and PSAPCA notification regulations before starting demolition. Comply with hauling and disposal regulations of authority having jurisdiction.
2. Conform to WISHA, Puget Sound Clean Air Agency (PSCAA) regulations and the following applicable rules related to removal and disposal of any asbestos containing materials.
   a. Applicable Rules:
      i. Chapter 296-62 WAC, Part I-1—General requirements for handling asbestos
      ii. Chapter 296-65 WAC—Asbestos certification and notification requirements
      iii. Chapter 296-155 WAC, Part S—Construction demolition, prior removal of asbestos.
      iv. Asbestos is also regulated by the EPA and regional air pollution authorities in Washington

E. Remove abandoned curbs (where depicted in the drawings) and infill gaps in the roof structure as directed by the structural engineer.

F. Clean the existing roof substrate and remove any loose granules, debris, and any other loose particles. The decking shall present as smooth a surface as possible onto which the new roofing components can be installed.

G. Do not begin placement of the roofing system until the roofing manufacturer's representative has examined surfaces to receive the roofing system and has determined that the surfaces are acceptable.

H. Remove water or any other substance that would interfere with bonding of the roofing system.

I. Provide for public protection as required by law. Keep interior of building, surrounding grounds, streets, and walks clean and free from obstruction. Furnish, install, and maintain for the duration of work all required scaffolds, chutes, tarpaulins, barricades, canopies, warning signs, platforms, and any other temporary construction necessary for proper completion of the work in compliance with all pertinent safety and other regulations.

J. All adjacent or other work in the building or on site damaged by the Contractor shall be repaired or replaced at Contractor's expense to the satisfaction of the Owner.

K. Any structural damage caused by water leakage found during the work shall be reported immediately to the Owner and Structural Engineer. Repairs agreed upon (beyond simple wood deck replacement) will be on a negotiated time and materials basis.

L. Coordinate inspections required by the City of Kirkland for any decking or structural work.

M. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

3.03 MECHANICAL EQUIPMENT, ROOF HATCHES, CONDUIT LINE, SATELLITES, FIBER OPTIC EQUIPMENT, FIBER OPTIC LINES, GAS LINES, AND PIPE PENETRATIONS

A. Maintain existing utilities in service and protect them against damage during demolition operations.

B. Raise conduit penetrations, insulated pipes, soil stacks, vents, sleepers, skylight curbs, roof hatches, and mechanical curbs as necessary to obtain a minimum eight (8) inch flashable height above the finished roof plane (unless otherwise shown in the drawings). Include rewiring and duct extensions as necessary to raise or extend conduit and/or ducts. Perform all work necessary to reinstall and reconnect equipment to fully functioning.

C. Disconnect and raise horizontal conduit lines and electrical lines as necessary to perform roofing work (unless otherwise shown in the drawings). Reconnect and reinstall all conduit and electrical lines to fully functioning. Install new PVC support blocks to provide an eight (8) feet on center spacing. Install rubber protection pads adhered to the underside of the new blocks. Perform all work necessary to reinstall and reconnect equipment to fully functioning.

D. Coordinate temporary removal, storage, and reinstallation of satellite dishes, antennas, and fiber optic cable with the Owner as required to accomplish roofing work (unless otherwise shown in the drawings). Disconnect and reinstallation of satellite dishes, antennas and fiber optic cables should be performed by a specialized contractor, approved by the Owner. Install new granular surfaced modified asphalt protection pad under ballasted equipment base.

E. Coordinate removal and storage of all unattached rooftop equipment to be reinstalled once roofing is complete.

F. Coordinate all mechanical unit, electrical, and gas shut down and start-up with the Owner.

G. All electrical, mechanical, and gas line work to be performed by a journeyman worker experienced and trained in work performed to building code and current industry standards.

3.04 GENERAL INSTALLATON REQUIREMENTS

A. Install SBS modified built-up roofing system according to roofing system manufacturer's written instructions and applicable recommendations of NRCA/ARMA's "Quality Control Recommendations for Polymer Modified Bitumen Roofing".
   1. Install roofing system according to applicable specification plates of NRCA's "The NRCA Roofing and Waterproofing Manual".

B. The Contractor is responsible for project safety. Where conditions are deemed unsafe to use open flames, manufacturer's alternate membrane application methods shall be used to install SBS modified bitumen membrane and flashings. Acceptable alternate installation methods include hot asphalt, cold adhesive-applied, self-adhered membranes and mechanically fastened plies. Hot-air welding equipment may be used in lieu of roof torches to seal membrane side and end laps where heat welding the laps is necessary. Refer to NRCA CERTA, local codes and building owner's requirements for hot work operations.

C. Torch Safety: Crew members handing torches shall be trained by an Authorized Certified Roofing Torch Applicator (CERTA) Trainer, be certified according to CERTA torch safety guidelines as published by the National Roofing Contractors Association (NRCA), and follow torch safety practices as required by the contractor's insurance carrier. Designate one person on each crew to perform a daily 2-hour fire watch. The designated crew member shall watch for fires or smoldering materials on all areas during roof construction actively, and for the minimum period required by CERTA guidelines, after roofing material application has been suspended for the day.

D. Start installation of modified built-up membrane roofing in presence of roofing system manufacturer's technical personnel.

E. Cant Strips: Install and secure preformed 45-degree cant strips at junctures of modified built-up membrane roofing system where vertical surfaces can provide an 8-inch minimum flashing height above the finished roof surface.

F. Coordinate installing roofing system components so existing deck, plywood sheathing, insulation and coverboard are not exposed to precipitation or left exposed at the end of the workday or when rain is forecast.

G. Protect exposed plies from roof traffic damage by use of temporary plastic sheeting, rigid insulation and plywood.

H. Immediately repair all damage to roofing membrane caused by construction activities.

3.05 POLYISOCYANURATE INSULATION INSTALLATION

A. Alternate Bid #1
   1. Mechanically fasten the insulation layer with plates and screws at a pattern and rate to meet wind uplift requirements that should include tighter spacing and increased number of fasteners at corners and perimeters per manufacturer's requirements and/or recommendations. Screws shall penetrate into the T&G wood deck a minimum one (1) inch. Install with joints offset from existing underlying layer and staggered between rows. Tightly butt boards to one another and at penetrations and transitions leaving no gaps larger than ⅛ inch.

B. Base Bid
   1. Infill at Wet/Damaged Replacement Areas
      a. Install specified insulation over the deck at locations where existing insulation is removed, as shown in the drawings. Install such that surface of new "infill" insulation is level with the surface of the existing dry surrounding roofing insulation. Insulation boards to be tightly butted with no more than 1/8 inch gap. Sporadically fasten to hold in place until coverboard fastening takes place.
   2. Tapered Insulation Crickets
      a. Layout insulation boards with joints offset between layers and staggered between rows. Tightly butt boards to one another and at penetrations and transitions leaving no gaps larger than one-eight (⅛) inch. Install in multiple layer to achieve specified slope. Sporadically fasten to hold in place until coverboard fastening takes place.

3.06 COVERBOARD INSTALLATION

A. Alternate Bid #1
   1. Set coverboard in ribbons of adhesive with each ribbon spaced to meet wind uplift requirements that should include tighter spacing of adhesive ribbons at corners and perimeters per manufacturer's requirements and/or recommendations. Install with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt boards together. Offset joints of coverboard from joints of underlying insulation board.

B. Base Bid
   1. Install coverboard with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows and joints offset from underlying insulation panels. Tightly butt coverboards together. Mechanically fasten with screws and three 3 inch plates per project uplift requirements. Screws shall penetrate into the T&G deck a minimum one (1) inch.

C. At vertical transitions, mechanically fasten vertical substrate board as required to provide an acceptable substrate for flashing membrane installation.

D. Substrate board shall not be installed over concrete substrates.

3.07 PRIMER APPLICATION

A. Examine all substrates and conduct adhesion peel tests as necessary, to ensure satisfactory adhesion is achieved.

B. Apply the appropriate specified primer to dry, compatible substrates as required to enhance adhesion of new specified materials.

C. Apply primer using brush, roller, or sprayer at the rate published on the product data sheet.

D. Apply primer to dry compatible substrates.

E. Monitor changing conditions, monitor the drying time of primers, and monitor the adhesion of the membrane plies. Adjust primer and membrane application methods as necessary to achieve the desired results.

3.08 ROOFING MEMBRANE APPLICATION

A. General: Application shall be in accordance with roofing system manufacturer's instructions and the following requirements. Should the manufacturer's and these specifications conflict, use the more stringent requirements.
   1. Ensure environmental conditions are safe and satisfactory, and will remain safe and satisfactory, during the application of the membrane and flashings.

B. Field Basesheet Application
   1. Ensure all roofing and flashing substrates are prepared and acceptable to receive the self-adhesive membrane.
   2. Ensure primer is tacky to-the-touch, but not wet. Primer should not transfer to the finger tips when touched. Do not proceed if primer is wet or becomes fully dry and dirty. If primer becomes fully dry, dirty and looses all tack, re-prime the substrate as necessary to achieve membrane adhesion.
   3. Unroll membrane onto the roof surface and allow time to relax prior to installing the membrane.
   4. Cut membrane to working lengths and widths to conform to rooftop conditions, and lay out to always work to a selvage edge starting at the low point of the roof.
   5. All courses shall be laid free of wrinkles, creases, or fishmouths and shall be laid at right angles (perpendicular) to the slope of the deck, and shingled 3-inches at sides to prevent back-water laps.
   6. Peel the release film from the underside of the membrane. Press and adhere

the leading edge of the membrane to the substrate, but leaving the 6 inch end-lap un-adhered in order to heat weld the end-lap.

7. As the release film is peeled away, use a weighted roller to firmly set the sheet in place. Ensure full contact is made between the ply and the substrate for full adhesion. Use a hand-roller to roll-in vertical flashings and confined areas to firmly apply pressure.
8. At the 6 inch end-laps, use a hot-air welder to melt plastic burn-off film from the top surface where present. Embed granules or otherwise remove surfacing where present using a hot-air welder.
9. At the 6 inch end-laps, cut a 45 degree dog-ear away from the 3 in selvage edge to ensure the membrane is fully heat-welded or adhered watertight at all T-joints.
10. Offset self-adhered end-laps 3 feet.
11. Each day, physically inspect all side and end-laps, and ensure the membrane is watertight. Where necessary, use a hot-air welder and a clean trowel to ensure all laps are fully sealed.
12. Inspect the installation each day to ensure the plies are fully adhered. Repair all un-adhered voids, wrinkles, open laps and all other deficiencies.

B. Flashing Ply Sheet Application

1. The flashing ply sheet shall be lapped a minimum of (three) 3 inches to itself and shall extend under the cant a minimum of four (4) inches beyond the toe of the cant and wrapping the top of the parapet, curbs and/or sleepers. Extend to one (1) inch below the bottom nailer on the outside face or to the top interior edge of curbs as indicated in the drawings.
2. Where the parapet height exceeds twenty four (24) inches above the finished roof plane, install a two-piece membrane flashing assembly, with intermittent horizontal fastening at eight (8) inches on center, per the manufacturer's installation instructions.
3. Ensure flashing ply sheet covers and seals all substrates requiring protection from exposure to torch operations.
4. Install gussets to seal corner transitions.

C. Field Interply Application

1. Unroll membrane onto the roof surface and allow time to relax prior to installing the membrane.
2. Cut membrane to working lengths and widths to conform to rooftop conditions, and lay out to always work to a selvage edge starting at the low point of the roof.
3. All courses shall be laid free of wrinkles, creases, or fishmouths and shall be laid at right angles (perpendicular) to the slope of the deck, and shingled to prevent back-water laps.
4. Lap sides 3 inches and end laps a minimum of 6 inches. Lap seams in the basesheet and interply shall be offset no less than 18 inches. Stagger side laps from flashing ply sheet side laps.
5. At end-laps, cut a 45 degree dog-ear away from the selvage edge, or

otherwise ensure the membrane is fully heat-welded watertight at all T-joints

6. As the membrane is unrolled, apply heat to the underside of the membrane until the plastic burn-off film melts away. Continuously move the torch side-to-side across the underside of the roll to melt the bitumen on the underside of the sheet, while continuously unrolling the membrane. Torching should be performed from the front of the roll using a cane to pull the roll towards the applicator and not walked on as the membrane is being rolled out.
7. While unrolling and heating the sheet, ensure a constant flow of hot bitumen approximately ¼ to ½ inch flows ahead of the roll as it is unrolled, and there is ⅛ to ¼ inch bleed out at all laps.
8. Adjust the application of heat to the underside of the membrane and to substrate as required for varying substrates and environmental conditions.
9. Inspect the installation each day to ensure the plies are fully adhered and laps are watertight. Repair all voids, wrinkles, open laps and all other deficiencies.

D. Field Capsheet Application

1. Unroll membrane onto the roof surface and allow time to relax prior to adhering or heat welding.
2. Cut membrane to working lengths and widths to conform to rooftop conditions, and lay out to always work to a selvage edge starting at the low point of the roof.
3. All courses shall be laid free of wrinkles, creases, or fishmouths and shall be laid at right angles (perpendicular) to the slope of the deck, and shingled to prevent back-water laps.
4. Lap sides 3 inches and end laps a minimum of 6 inches. Lap seams in the basesheet and surface capsheet shall be offset no less than 18 inches.
5. At the 6 in end-laps, embed granules and remove surfacing using a torch or hot-air welder to provide a bitumen-to-bitumen bond.
6. At end-laps, cut a 45 degree dog-ear away from the selvage edge, or otherwise ensure the membrane is fully heat-welded watertight at all T-joints
7. As the membrane is unrolled, apply heat to the underside of the membrane until the plastic burn-off film melts away. Continuously move the torch side-to-side across the underside of the roll to melt the bitumen on the underside of the sheet, while continuously unrolling the membrane. Torching should be performed from the front of the roll using a cane to pull the roll towards the applicator and not walked on as the membrane is being rolled out.
8. While unrolling and heating the sheet, ensure a constant flow of hot bitumen approximately ¼ to ½ inch flows ahead of the roll as it is unrolled, and there is ⅛ to ¼ inch bleed out at all laps.
9. Adjust the application of heat to the underside of the membrane and to substrate as required for varying substrates and environmental conditions.
10. Inspect the installation each day to ensure the plies are fully adhered and laps are watertight. Repair all voids, wrinkles, open laps and all other

deficiencies.

11. Embed granules, where excess bitumen bleed out is present, when heat welding sheets.

E. Flashings Surface Sheet Application

1. The flashing surface sheet shall be lapped a minimum of three (3) inches to itself and shall extend a minimum of six (6) inches onto the field capsheet surface and extend up under the sheet metal counterflashing, or wrapping the top of the wall or as indicated in the drawings.
2. Where the parapet height exceeds twenty four (24) inches above the finished roof plane, install a two-piece membrane flashing assembly, with intermittent horizontal fastening at eight (8) inches on center, per the manufacturer's installation instructions.
3. Embed granules at faying surface where lapping onto field capsheet surface. Lap seams in the flashing ply sheet shall offset lap seams in the flashing surface sheet a minimum of 12 inches.
4. The flashing surface sheet shall be torched over the flashing ply sheet and mechanically attached to the wall at the leading edge at 12 inches on center. All flashing plies shall be cut off the end of the roll and applied vertically, always working to selvedge.

F. Miscellaneous Items

1. Prime metal flanges as required with a uniform coating of asphalt primer. All flanges shall be set in a smooth even bed of asphalt roof cement.
2. Provide 4 lb/sf lead for flashings. Pre-prime with asphalt primer and set in full bed of asphalt roof cement as detailed. Field solder conduit flashings as necessary. Provide a boot at the top of lead flashings on conduit; two (2) wraps of self adhesive uncured EPDM batten seam cover strip, stainless steel clamping ring at the top edge, and sealant at the top.
   a. Alternate flashing method for flashing continuous penetrations shall be performed with application of reinforced fluid-applied flashing membrane, extending 6 inches out on all sides and 6 inches up the penetration.
3. Overnight seals: Exercise care that moisture does not enter beneath completed section of the roof. Temporarily seal loose edges of the membrane daily and when weather is threatening. Night seals can be built using roof cement and roofing felts, and constructed to withstand protracted periods of service. Night seals must be completely removed, all felts employed removed, prior to the resumption of roofing.
4. All exposed cap sheet edges at waste stacks, vent stacks, etc., shall be caulked with sealant, tooled into the joint.
5. Install walkpads / roof protection pads at locations shown on the roof plan(s). Install walkpads per manufacturer's specifications with adhesive and/or torch adhered to the capsheet. Leave space per the manufacturer between sections of walkpad for drainage.
6. Fluid-Applied Flashing Membrane:

a. Clean surface to receive fluid applied flashing, free of all contaminants.
b. Apply primer direct in one step utilizing a brush or paint roller. Do not allow ponding.
c. Allow primer to cure for a minimum of twelve (12) hours, or as required by the manufacturer. Exposure of the primer in excess of five (5) days or pre-mature exposure to moisture may require removal and application of new primer.
d. Mix resin components per manufacturer's recommendations. Once the mix is ready, apply liberally to the prepared surface with a roller using a broad, even stroke.
e. Install membrane flashing system in accordance with the manufacturer's requirements / recommendations. Provide system with base flashing, counter flashing, and all other flashings required for a complete watertight system.
f. Fluid applied membrane application shall extend a minimum of 6 inches in all direction past the transitions and 6 inches up onto penetrations.
g. Reinforcing fleece sections shall overlap each other a minimum of 2 inches.
h. Prime walls, curbs, penetrations, etc. with 2-component polyurethane primer. Follow manufacturer's written instructions for primer cure.
i. Work wet membrane to avoid any blisters, openings, or lifting at corners, junctions, and transitions. Assure full resin saturation of fleece.
j. NOTE: Fluid applied flashing details and installation requirements may vary between different roofing manufacturer's. The manufacturer's installation requirements should govern where fluid applied flashing discrepancies exists between the project drawings, specifications, and the manufacturer's current details and installation instructions.

3.09 FIELD QUALITY CONTROL

A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation upon completion.
   1. Notify Owner and Consultant two (2) working days in advance of the date and time of the manufacturer's inspection.

3.10 PROTECTION

A. The Contractor shall protect system from all other contractors and activities during and after completion. Any damage to the system shall be repaired by contractor prior to acceptance.

3.11 CLEAN-UP

A. The Contractor shall remove all masking, protection, equipment, materials, and debris from the work and storage areas and leave those areas in an undamaged and acceptable condition.

END OF SECTION 07520

SECTION 07550

MODIFIED BITUMINOUS PROTECTED MEMBRANE ROOFING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 00 and 01 Specification Sections, provided by Owner, apply to this Section.

B. Section Includes:
1. Preparation of existing substrates.
2. Heat welded styrene-butadiene-styrene (SBS) modified bituminous base and top ply.
3. Heat welded SBS modified bituminous flashing ply and surface sheet.
4. Primer and Mastic
5. Reinforced Fluid-Applied Flashing Membrane
6. Drainage mat
7. XPS/Concrete Composite Panels (pavers)

1.02 SUMMARY DESCRIPTION

A. Base Bid Scope
1. Hose Tower Roof
a. Demolish and legally discard the existing wood deck pallets, existing built up asphalt roofing assembly (complete tear-off), related flashings and accessories, and install a new protected roof membrane (PRM) assembly adhered to a prepared substrate including new flashings, drainage mat and XPS/concrete composite panels to provide a complete and watertight roof system.

B. Alternate Bid #1 Scope
1. Hose Tower Roof
a. Install a layer of 3-inch extruded polystyrene (XPS) rigid foam insulation over the new drainage mat in addition to the specified Base Bid PRM assembly.

1.03 RELATED SECTION

A. Related work specified elsewhere:
1. 01010 General Requirements (to be provided by Owner)
2. 02050 Demolition
3. 06100 Rough Carpentry

4. 07520 Modified Bituminous Membrane Roofing
5. 07620 Flashing and Sheet Metal
6. 08620 Unit Skylights

1.04 REFERENCES

A. General
1. The following documents form part of the Specifications. Where differences exist, the most stringent shall apply.
2. Unless otherwise stated, the referenced standard edition is the current one at the time of commencement of the Work.
3. Refer to Division 01 Section "General Requirements" for the list of applicable regulatory requirements.

B. ASTM D41 – Asphalt Primer Used in Roofing.

C. ASTM D6164 – Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.

D. ASTM D6163 - Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.

E. ASTM E108 -Test Methods for Fire Tests of Roof Coverings.

F. ASTM D 5385 - Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes.

G. ASTM C578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation

H. ASTM D2842 Standard Test Method for Water Absorption of Rigid Cellular Plastics

I. ANSI/SPRI/FM 4435/ES-1 Wind Design Standard for Edge System Used with Low Slope Roofing System.

J. ANSI/SPRI FX-1 2016, Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners

K. ANSI/FM 4474- American National Standard for Evaluating the Simulated Wind Resistance of Roof Assemblies Using Static Positive and/or Negative Differential Pressures

L. National Roofing Contractors Association (NRCA) Current Edition.

M. Sheet Metal and Air-Conditioning Contractors National Association, Inc. (SMACNA)

N. Underwriters Laboratory (UL) – Fire Hazard Classifications.

O. Certified Roofing Torch Applicator Program (CERTA) – Guidelines for torch applicators.

1.05 DEFINITIONS

A. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The Roofing and Waterproofing Manual" apply to this Section.

1.06 PERFORMANCE REQUIRMENTS

A. General: Provide installed roofing membrane, membrane baseflashings and sheet metal flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure for a period of not less than 20 years.

B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.

C. Wind Uplift Resistance: Provide modified bituminous membrane, base flashings, and component materials that meet requirements of ASCE 7-16.

D. Fire Classification: UL Class A; complying with ASTM E 108, for application and slopes indicated.

1.07 BIDDING REQUIREMENTS

A. Pre-Bid Meeting: A pre-bid meeting shall be held with the Owner's Representative and involved trades to discuss all aspects of the project. Procedures to avoid rooftop damage by other trades shall be determined.

B. Site visit: Bidders shall visit the site and carefully examine the areas in question as to conditions that may affect proper execution of the work. All dimensions and quantities shall be determined or verified by the contractor. No claims for extra costs will be allowed because of lack of full knowledge of the existing conditions unless agreed to in advance with the Owner or Owner's Representative

1.08 SUBMITTALS

A. Product data, PRM System: Submit the name of the manufacturer and specification

numbers and product names of all materials proposed for use in the work. Include in submittal installation instructions and general recommendations for each principal roofing system product required. Include data substantiating that the materials comply with requirements, including certificates and delivery logs for bulk materials. Include volatile organic compounds (VOC's) in grams per liter (g/l) for all adhesives, sealants and solvents. Explicitly identify in writing the differences between manufacturer's instructions and the requirements specified herein, with manufacturer's approval of project modifications.

B. Manufacturers: Provide primary products, including each component of the new roof assembly, and flashings, as specified from one manufacturer. Provide secondary products which are acceptable to, and approved by, the manufacturer of the primary products.

C. Shop Drawings: Include plans, sections, details, and attachments to other work, for the following:
   1. Base flashings and membrane terminations.
   2. Layout and perimeter securement of XPS/Concrete composite panels.

D. Tear Off: Submit tear-off work plan. Submit copies of dump receipts prior to completion of the job.

E. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install specified roofing system and is eligible to receive the specified roofing manufacturer's warranty. **Submit Manufacturer's certifications with bid proposals.**

F. Submit emergency phone numbers of personnel capable of responding to a roof related emergency after normal working hours. Answering service phone numbers are not acceptable for this purpose.

G. Warranty: Sample copy of specified roofing manufacturer's warranty stating obligations, remedies, limitations, and exclusions of warranty.

H. Maintenance Data: For roofing system to include in the maintenance manuals.

1.09 CODE REQUIREMENTS

A. The applicator shall submit evidence that the proposed roof system meets the requirements of the local building code and has been tested and approved or listed by the following test organizations. These requirements are minimum standards and no roofing work shall commence without written documentation of the system's compliance, as required in the "Submittals" section of this specification.
   1. American Society of Civil Engineers Standard ASCE 7
   2. Underwriters Laboratories, Inc. - Northbrook, IL

i. Class A fire rated assembly

3. Building permit

i. Any permits required by the City of Kirkland that are needed to complete the work will be the responsibility of the contractor. Any costs associated with obtaining permits shall be included in the bid.

1.10 WARRANTIES

A. Upon successful completion of the project, and after all post installation procedures have been completed, furnish the Owner with the manufacturer's No Dollar Limit (NDL) 20 year labor and materials membrane guarantee. The guarantee shall be a term type, without deductibles or limitations on coverage amount, and shall be issued at no additional cost to the Owner. This guarantee shall not exclude random areas of ponding from coverage.

B. The contractor shall guarantee the workmanship and shall provide the owner with the contractor's warranty covering workmanship for a period of 2 years from completion date.

C. All warranties shall be submitted for approval and shall have been accepted at time of contract award.

SUBMIT FORM OF GUARANTIES REQUIRED TO OWNER WITH BID

1.11 QUALITY ASSURANCE

A. Single Installer Responsibility: A single installer (contractor) shall perform the work, including sheet metal work, as required by this specification; and shall be a firm specializing in roofing system work **who has been in business under the same name and ownership for at least 5 years**, capable of showing successful installations similar to the work required for this project.

1. Roofing system shall be installed only by a roofing contractor authorized by and in good standing order with the roof membrane manufacturer prior to the bid.
2. All work pertaining to the installation of roof membrane and flashings shall only be completed by applicator personnel trained and authorized by the roof membrane manufacturer in those procedures.
3. There shall be no deviation made from the Project Specification or the approved shop drawings without prior written approval by the Owner, the Roofing Consultant, and the roof membrane manufacturer.
4. Contractor shall provide full time, on-site superintendent or foreman experienced with the specified roofing from beginning through satisfactory project completion.
5. Contractor shall maintain a daily record, on-site, documenting material installation and related project conditions.
6. Contractor shall maintain a copy of all submittal documents, specification and plans on-site, available at all times for reference.

B. Owner: Notify Owner and Roofing Consultant 24 hours (one full working day) prior to commencement of work. The owner may provide special inspection of the roofing application. Such inspection will not relieve the contractor of responsibility for proper completion of the work.

C. Manufacturer: Install in accordance with primary products manufacturer, including each type of roofing, and flashings, as specified from one manufacturer. Install secondary products which are acceptable to, and approved by, the manufacturer of the primary products.
   1. Upon completion of installation and delivery to the roof membrane manufacturer by the Applicator of a certification that all work has been done in strict accordance with the contract specifications and manufacturer's requirements, an inspection shall be made by a Technical Representative of the roof membrane manufacturer to review the installed roof system.
   2. Manufacturer shall have 20 years of manufacturing experience.
   3. Manufacturer shall have trained technical service representatives employed by the manufacturer, independent of sales.
   4. Manufacturer shall provide site visit reports in a timely manner.

D. Pre-roofing conference: Prior to the commencement of reroofing work, meet at the project site with the roofing contractor, the Owner, Roofing Consultant, and other entities interested in the performance of the roofing system. Review the requirements (contract documents), submittals, proposed installation schedule, location and storage of materials, requirements for inspections and testing or certifications, forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing, governing regulations, insurance requirements, proposed installation procedures, access and any other items that may be required for completion of the project. If meeting ends with substantial disagreement between parties, determine how disagreement will be resolved and set date for reconvened meeting.

1.12 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Delivery: Material shall be delivered in the manufacturer's original sealed and labeled containers and in quantities sufficient to allow continuity of application. Handle all materials to prevent damage. Mark and remove wet materials from the site.

B. Storage: Obtain permission of the structural engineer for roof top storage. If roof top storage of materials is used, do not exceed the allowable load for the structure. Materials shall be stored out of direct exposure to the elements. Roll goods shall be stored on end and on pallets. Material shall be protected against moisture so as not to allow moisture to penetrate the cover or condensation to occur beneath the cover. Completely cover roll materials permitted to be stored outdoors, on and off roof, with waterproof canvas protective covering. Do not use polyethylene sheet as a covering.

1. As a general rule all adhesives shall be stored at temperatures between 40º F (5º C) and 80º F (27º C). Read instructions contained on adhesive canister for specific storage instructions.
2. All flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow precautions outlined on containers or supplied by material manufacturer/supplier.

C. Handling: Material shall be handled in such a manner as to preclude damage and contamination with moisture or foreign matter.

D. Do not leave unused felts and other sheet materials on the roof overnight or when roofing work is not in progress unless protected from weather and moisture and unless maintained at a temperature exceeding 50 deg F (10 deg C).

E. Properly dispose of all product wrappers, pallets, cardboard tubes, scrap, waste, and debris.

F. Protect insulation and roofing materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store materials in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

G. All materials determined by the Owner, Roofing Consultant, or roof membrane manufacturer representative to be damaged are to be removed from job site and replaced with new, suitable materials at no cost to Owner.

H. Protection of the roof and all adjacent surfaces and structure shall be provided and maintained throughout the project, and any damage repaired to pre-work condition at the expense of the Contractor.

1.13 SITE CONDITIONS

A. Safety: The contractor shall be responsible for complying with all project-related safety and environmental requirements.
1. Heat-welding shall include heating the specified membrane ply using propane roof torches or electric hot-air welding equipment. The contractor shall determine when and where conditions are appropriate to utilize heat-welding equipment. When conditions are determined by the contractor to be unsafe to proceed, equivalent SBS-modified bitumen materials and methods shall be utilized to accommodate requirements and conditions.
2. The contractor shall review project conditions and determine when and where conditions are appropriate to utilize the specified liquid-applied, or semi-solid roofing materials. When conditions are determined by the contractor to be unsafe or undesirable to proceed, measures shall be taken to prevent or eliminate the unsafe or undesirable exposures and conditions, or equivalent

approved materials and methods shall be utilized to accommodate requirements and conditions.

3. The contractor shall refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.

B. Environmental Conditions:

1. Monitor substrate temperature and material temperature, as well as all environmental conditions such as ambient temperature, moisture, sun, cloud cover, wind, humidity, and shade. Ensure conditions are satisfactory to begin work and ensure conditions remain satisfactory during the installation of specified materials. Materials and methods shall be adjusted as necessary to accommodate varying project conditions. Materials shall not be installed when conditions are unacceptable to achieve the specified results.
2. Precipitation and dew point: Monitor weather to ensure the project environment is dry before, and will remain dry, during the application of roofing materials. Ensure all roofing materials and substrates remain above the dew point temperature as required to prevent condensation and maintain dry conditions.
3. Primer application: During cold weather, store the specified primer materials in heated storage areas to ensure materials remain no less than 70°F (21°C) during application. Ensure conditions allow primer to remain tacky, but not wet so that primer will not transfer to finger when touched. Ensure conditions remain satisfactory to achieve membrane adhesion as specified.
4. Heat-Welding Application: Take all necessary precautions and measures to monitor conditions to ensure all environmental conditions are safe to use roof torches and hot-air welding equipment. Combustibles, flammable liquids and solvent vapors that represent a hazard shall be eliminated. Flammable primers and cleaners shall be fully dry before proceeding with heat-welding operations. Prevent or protect wood, paper, plastics and other such combustible materials from direct exposure to open flames from roof torches. Refer to NRCA CERTA recommendations.

C. Contractor shall provide a scaffold stair for access to the roof during construction, or as coordinated with Site Contact. Location of the scaffold stair to be coordinated with the Site Contact.

D. At ambient temperatures of 40º or less, including wind chill, precautions must be taken to ensure that hot asphalt, cements, and adhesives maintain the minimum acceptable temperature at the point of application as recommended by the roofing materials manufacturer.

E. Protection against staining and mechanical damage shall be provided for adjacent surfaces as required during application of roofing.

F. All surfaces to receive new membrane or flashings shall be clean and dry before any

roofing work proceeds. Roofing shall not proceed during precipitation, nor when moisture from dew is present, or if precipitation or other moisture source is expected. Should surface moisture occur, provide the necessary equipment to dry the surface prior to application.

G. Be prepared to immediately protect incomplete installations from damage by inclement weather which may occur unexpectedly.

H. Roofer shall remove or begin installation of no more roofing than can be completely installed through the base ply the same day, including all flashing and detail work.
   1. All work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather. The existing building will be occupied and its contents shall be protected against all risks.

I. Uninterrupted water stops shall be installed at the end of each day's work to prevent moisture entering interior of structure and the new roof assembly, and shall be completely removed before proceeding with the next day's work. Water stops shall not emit dangerous or unsafe fumes and shall not remain in contact with the finished roof as the installation progresses.

J. Prior to and during application, all dirt, debris and dust shall be removed from surfaces either by vacumming, sweeping, blowing with low-pressure air and/or similar methods.

K. All new and temporary construction, including equipment and accessories, shall be secured in such a manner as to preclude wind blow-off and subsequent roof or equipment damage. Protection against staining, mechanical damage, and live loads shall be provided for adjacent surfaces as required during application of roofing.

L. All roofing, flashings and metal work (including new roofing waste materials) removed during construction shall be taken off site on a daily basis to a legal dumping area authorized to receive such materials. Hazardous materials, such as materials containing asbestos, are to be removed and disposed of in strict accordance with applicable City, State and Federal requirements.

M. Verify that all roof drain lines are functioning correctly (not clogged or blocked) before starting work. Applicator shall report any such blockages in writing to the Owner's Representative (letter copy to Roofing Consultant) for corrective action prior to commencement of roof work.

N. Site cleanup, including both interior and exterior building areas that have been affected by reroofing, shall be completed to the Owner's satisfaction. All landscaped areas damaged by construction activities shall be repaired at no cost to the Owner.

O. Precautions shall be taken when using adhesives and/or fluid-applied flashings at or near rooftop vents or air intakes. Adhesive and/or fluid-applied flashings odors

could enter the building. Coordinate the operation of vents and air intakes in such a manner as to avoid the intake of adhesive and fluid-applied flashings odor while ventilating the building. Keep lids on unused cans at all times.

P. Existing Conditions:
1. Asbestos: The existing roof membrane was tested by NVL Labs and detected to contain Asbestos Containing Materials in the 'silver coat' (reflective aluminum coating) applied on the surface of the Main Apparatus Bay, East and West Wing Roofs.
2. Should hazardous materials be suspected, notify Project Manager. Do not proceed with work in suspect area until advised by Project Manager that safe conditions exist. Comply with applicable rules and regulations.

Q. It is the contractor's responsibility to observe all fire prevention policies and practices during the installation of the roof system. It is the contractor's responsibility to train, instruct and warn employees on the use and handling of propane torching equipment, including CERTA training

PART 2 PRODUCTS

2.01 PROTECTED ROOF MEMBRANE (PRM) ASSEMBLY

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following options.

B. BASE BID - Low-Slope Modified Bituminous PRM (Complete Tear-Off): Hose Tower

	Option #1: Siplast	**Option #2: Soprema**
Existing Substrate	Concrete over metal deck, prepare/clean/prime	same
Base Ply	**Paradiene 20 TG**, SBS modified 114 mils ply sheet, glass reinforced, torch adhered.	**Colphene Flam 180,** SBS modified 114 mils ply sheet, polyester reinforced, torch adhered.
Top Ply	**Teranap 1M Sand,** SBS modified 154 mils ply sheet, glass/polyester reinforced, torch adhered.	**Colphene Flam 180,** SBS modified 114 mils ply sheet, polyester reinforced, torch adhered

Flashing Base Ply	**Paradiene 20 TG**, SBS modified 114 mils ply sheet, glass reinforced, torch adhered	**Colphene Flam 180,** SBS modified 114 mils ply sheet, polyester reinforced, torch adhered
Flashing Cap Ply	**Parafor 30 TG,** SBS modified 161 mils ply sheet, glass/polyester reinforced with ceramic granules, torch adhered	**Colphene Flam 180 FR GR,** SBS modified 160 mils ply sheet, polyester reinforced with ceramic coated granules, torch adhered
Drainage Mat	**ParaDrain,** polypropylene core covered on one side with a woven polypropylene filter fabric, loose laid	**SopraDrain 102,** moderate weight impermeable polymeric sheet forming a high flow dimpled drainage layer that is fused to a non-woven filter fabric, loose laid
XPS/Concrete Paver	**T-Clear LightGUARD**, 3/8" thick latex-modified concrete panel laminated to 3" thick extruded polystyrene (XPS) insulation board with tongue and groove edges having a finished overall dimension of 2'x4'x3⅜".	same

C. ALTERNATE BID #1 - Low-Slope Modified Bituminous PRM (Complete Tear-Off with Additional 3" Insulation Layer): Hose Tower

D.	**Option #1: Siplast**	**Option #2: Soprema**
Substrate	Concrete over metal deck, prepare/clean/prime	same
Base Ply	**Paradiene 20 TG**, SBS modified 114 mils ply sheet, glass reinforced, torch adhered.	**Colphene Flam 180,** SBS modified 114 mils ply sheet, polyester reinforced, torch adhered.
Top Ply	**Teranap 1M Sand,** SBS modified 154 mils ply sheet, glass/polyester reinforced, torch adhered.	**Colphene Flam 180,** SBS modified 114 mils ply sheet, polyester reinforced, torch adhered

Flashing Base Ply	**Paradiene 20 TG**, SBS modified 114 mils ply sheet, glass reinforced, torch adhered	**Colphene Flam 180,** SBS modified 114 mils ply sheet, polyester reinforced, torch adhered
Flashing Cap Ply	**Parafor 30 TG,** SBS modified 161 mils ply sheet, glass/polyester reinforced with ceramic granules, torch adhered	**Colphene Flam 180 FR GR,** SBS modified 160 mils ply sheet, polyester reinforced with ceramic coated granules, torch adhered
Drainage Mat	**ParaDrain,** polypropylene core covered on one side with a woven polypropylene filter fabric, loose laid	**SopraDrain 102,** moderate weight impermeable polymeric sheet forming a high flow dimpled drainage layer that is fused to a non-woven filter fabric, loose laid
Insulation	**DuPont Styrofoam Brand RoofMate Extruded Polystyrene Foam Insulation, or as approved by roofing system manufacturer**, 3" thickness	**Sopra-XPS 40,** rigid extruded polystyrene thermal insulation board with shiplap edges, 3" thickness
XPS/Concrete Paver	**T-Clear LightGUARD**, 3/8" thick latex-modified concrete panel laminated to 3" thick extruded polystyrene (XPS) insulation board with tongue and groove edges having a finished overall dimension of 2'x4'x3⅜".	same

2.02 FLUID-APPLIED FLASHING

A. Fully reinforced PMMA fluid applied flashing membrane (at locations shown on the drawings):
   1. Primer: As recommended by the manufacturer.
   2. Membrane/Resin: Siplast Parapro 123 or Soprema Alsan RS.
   3. Reinforcing Fleece: As recommended by the manufacturer. All systems are to have reinforcing fleece.

2.03 ACCESSORIES

A. Asphalt Primer: For coating metal and concrete surfaces to receive roofing membranes: Primer should be a roofing system manufacturers standard asphalt based blend, type as approved by manufacturer:
   1. Soprema Elastocol 500 Primer.
   2. Siplast PA-1125 Primer.

B. Roofing Cement/Mastic: SBS-modified general purpose roofing cement for low-slope roofing used for setting metal flashings, sealing membrane T-joints and membrane edges along terminations, transitions and at roof penetrations
   1. Soprema SopraMastic.
   2. Siplast PA-1021.

C. Sealant: General purpose, paintable, gun-grade, elastomeric, polyether moisture curing sealant for sealing SBS membrane terminations.
   1. Soprema SopraMastic SP1.
   2. Siplast PS-304 Elastomeric Sealant.

D. Self-Adhering High Temperature Resistant Supplemental Membrane Flashing: For installation under metal flashings, i.e. coping at Hose Tower parapet or as indicated in drawings, high tensile strength rubberized asphalt membrane designed to withstand temperatures of 250 degrees Fahrenheit, 40 mils, as manufactured by Carlisle WIP 300HT or similar.

E. Cant strips to be three (3) inch perlite, unless otherwise specified, as manufactured by GAF or Manville.

PART 3 EXECUTION

3.01 GENERAL

A. Contractor shall be responsible for inspecting the roof deck and verifying that no conditions are present which may prevent or otherwise interfere with the installation of the proposed roof system.

B. Any adverse condition which may affect the performance of the roof system shall be reported in writing to the Owner. Absence of such notification shall constitute the Subcontractor's verification that existing conditions will allow the installation of the system in accordance with the Drawings and Specifications and the manufacturer's guaranty.

C. All surfaces shall be swept clean prior to commencement of roofing.

D. The roofing contractor shall coordinate the installation so that each area is made watertight at the end of each work period.

E. Application shall be in accordance with the projects structural engineer and roofing system manufacturer's instructions, NRCA and the following requirements. Should manufacturer's specifications and owner's specifications conflict, use the more stringent.

F. Contractor shall verify that work penetrating the roof deck, or which may otherwise

impact or affect the roofing, has been properly completed, including any structural upgrades deemed necessary by the structural engineer.

3.02 PREPARATION AND DEMOLITION: GENERAL

A. The Applicator shall verify that all downspouts and drain lines are functioning correctly (not clogged or blocked) before starting work. Applicator shall report any such blockages in writing to the Owner' (letter copy to Roofing Consultant) for corrective action prior to commencement of roof work.

B. Completely remove and legally dispose of the existing roof membrane, insulation, baseflashings, cants, counterflashings, coping and roof flashings as necessary to complete the new re-roofing work in accordance with specifications and detailed requirements.
   a. Provide and install temporary weather protection as required to leave the building weather tight on a daily basis.

C. Regulatory Requirements:
   1. Comply with governing EPA and PSAPCA notification regulations before starting demolition. Comply with hauling and disposal regulations of authority having jurisdiction.
   2. Conform to WISHA, Puget Sound Clean Air Agency (PSCAA) regulations and the following applicable rules related to removal and disposal of any asbestos containing materials.
      a. Applicable Rules:
         i. Chapter 296-62 WAC, Part I-1—General requirements for handling asbestos
         ii. Chapter 296-65 WAC—Asbestos certification and notification requirements
         iii. Chapter 296-155 WAC, Part S—Construction demolition, prior removal of asbestos.
         iv. Asbestos is also regulated by the EPA and regional air pollution authorities in Washington

D. Remove abandoned curbs (where depicted in the drawings) and infill gaps in the roof structure as directed by the structural engineer.

E. Clean the existing roof substrate and remove any loose granules, debris, and any other loose particles. The substrate shall present as smooth a surface as possible onto which the new roofing components can be installed.

F. Do not begin placement of the roofing system until the roofing manufacturer’s representative has examined surfaces to receive the roofing system and has determined that the surfaces are acceptable.

G. Remove water or any other substance that would interfere with bonding of the roofing system.

H. Provide for public protection as required by law. Keep interior of building, surrounding grounds, streets, and walks clean and free from obstruction. Furnish, install, and maintain for the duration of work all required scaffolds, chutes, tarpaulins, barricades, canopies, warning signs, platforms, and any other temporary construction necessary for proper completion of the work in compliance with all pertinent safety and other regulations.

I. All adjacent or other work in the building or on site damaged by the Contractor shall be repaired or replaced at Contractor's expense to the satisfaction of the Owner.

J. Any structural damage caused by water leakage found during the work shall be reported immediately to the Owner and Structural Engineer. Repairs agreed upon (beyond simple wood deck replacement) will be on a negotiated time and materials basis.

K. Coordinate inspections required by the City of Kirkland for any decking or structural work.

L. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

3.03 GENERAL INSTALLATON REQUIREMENTS

A. Install SBS modified roofing system according to roofing system manufacturer's written instructions and applicable recommendations of NRCA/ARMA's "Quality Control Recommendations for Polymer Modified Bitumen Roofing".
   1. Install roofing system according to applicable specification plates of NRCA's "The NRCA Roofing and Waterproofing Manual".

B. The Contractor is responsible for project safety. Where conditions are deemed unsafe to use open flames, manufacturer's alternate membrane application methods shall be used to install SBS modified bitumen membrane and flashings. Acceptable alternate installation methods include hot asphalt, cold adhesive-applied, self-adhered membranes and mechanically fastened plies. Hot-air welding equipment may be used in lieu of roof torches to seal membrane side and end laps where heat welding the laps is necessary. Refer to NRCA CERTA, local codes and building owner's requirements for hot work operations.

C. Torch Safety: Crew members handing torches shall be trained by an Authorized Certified Roofing Torch Applicator (CERTA) Trainer, be certified according to CERTA torch safety guidelines as published by the National Roofing Contractors

Association (NRCA), and follow torch safety practices as required by the contractor's insurance carrier. Designate one person on each crew to perform a daily 2-hour fire watch. The designated crew member shall watch for fires or smoldering materials on all areas during roof construction actively, and for the minimum period required by CERTA guidelines, after roofing material application has been suspended for the day.

D. Start installation of modified membrane roofing in presence of roofing system manufacturer's technical personnel.

E. Cant Strips: Install and secure preformed 45-degree cant strips at junctures as shown on drawings.

F. Coordinate installing roofing system components so existing deck is not exposed to precipitation or left exposed at the end of the workday or when rain is forecast.

G. Protect exposed plies from roof traffic damage by use of temporary plastic sheeting, rigid insulation and plywood.

H. Immediately repair all damage to roofing membrane caused by construction activities.

3.04 PRIMER APPLICATION

A. Examine all substrates and conduct adhesion peel tests as necessary, to ensure satisfactory adhesion is achieved.

B. Apply the appropriate specified primer to dry, compatible substrates as required to enhance adhesion of new specified materials.

C. Apply primer using brush, roller, or sprayer at the rate published on the product data sheet to provide a uniform coating.

D. Monitor changing conditions, monitor the drying time of primers, and monitor the adhesion of the membrane plies. Adjust primer and membrane application methods as necessary to achieve the desired results.

3.05 MEMBRANE INSTALLATION

A. General: Application shall be in accordance with roofing system manufacturer's instructions and the following requirements. Should the manufacturer's and these specifications conflict, use the more stringent requirements.
   1. Ensure environmental conditions are safe and satisfactory, and will remain safe and satisfactory, during the application of the membrane and flashings.

B. Base Ply Application:

1. Layout sheet perpendicular to the slope of the deck, free of wrinkles, creases or fishmouths. Fully bond the base ply to the prepared and primed substrate, providing minimum 3-inch side laps and 6-inch end laps.
2. Apply each sheet directly behind the torch applicator ensuring approximately ¼ to ½-inch of hot bitumen flows ahead of the roll as it is unrolled, and there is ⅛ to ¼-inch bleed out at all laps.
3. At the 6-inch end laps, melt the plastic burn-off film from the top surface or embed granules and remove surfacing, where present, using a torch or hot-air welder.
4. Exert sufficient pressure on the roll during application to ensure prevention of air pockets.
5. Cut a dog ear angle at the end laps on overlapping selvage edges.
6. Using a clean trowel, apply top pressure to top seal T-laps immediately following sheet application.
7. Stagger end laps a minimum of 3 feet.

C. Top Ply Application:
1. Layout sheet perpendicular to the slope of the deck, free of wrinkles, creases or fishmouths. Fully bond the base ply to the prepared and primed substrate, providing minimum 6-inch side laps and end laps.
2. Apply each sheet directly behind the torch applicator ensuring approximately ¼ to ½-inch of hot bitumen flows ahead of the roll as it is unrolled, and there is ⅛ to ¼-inch bleed out at all laps.
3. At the 6-inch end laps, melt the plastic burn-off film from the top surface or embed granules and remove surfacing, where present, using a torch or hot-air welder.
4. Exert sufficient pressure on the roll during application to ensure prevention of air pockets.
5. Cut a dog ear angle at the end laps on overlapping selvage edges.
6. Using a clean trowel, apply top pressure to top seal T-laps immediately following sheet application.
7. Stagger top ply side laps 18-inches from undelaying base ply side laps and end laps a minimum of 3 feet.

D. Flashing Application:
1. Flash walls and curbs using the specified flashing base and cap plies.
2. Prime the base ply surfaces to receive the reinforcing sheet.
3. Fully adhere the reinforcing sheet, utilizing minimum 3 inch side laps, 4 inches onto the primed base ply surface and up the primed wall or curb to a flashing height a minimum of 8-inches above the top of the paver.
4. Prepare the surface area that is to receive flashing coverage by torch heating film surfaces or by application of asphalt primer; allowing the primer to dry thoroughly.
5. Torch apply the flashing sheet into place using three foot widths (cut off the end of roll) always lapping the factory selvage edge.
6. Stagger the laps of the flashing cap ply from lap seams in the flashing base

ply.

7. Extend the flashing sheet a minimum of 6 inches beyond the vertical flashing substrate onto the prepared surface of the finished roof and up the wall or curb to a flashing height a minimum of 8-inches above the top of the paver.
8. Check and seal all loose laps and edges.

E. Fluid-Applied Flashing Membrane:
1. Clean surface to receive fluid applied flashing, free of all contaminants.
2. Apply primer direct in one step utilizing a brush or paint roller. Do not allow ponding.
3. Allow primer to cure for a minimum of twelve (12) hours, or as required by the manufacturer. Exposure of the primer in excess of five (5) days or premature exposure to moisture may require removal and application of new primer.
4. Mix resin components per manufacturer's recommendations. Once the mix is ready, apply liberally to the prepared surface with a roller using a broad, even stroke.
5. Install membrane flashing system in accordance with the manufacturer's requirements / recommendations. Provide system with base flashing, counter flashing, and all other flashings required for a complete watertight system.
6. Fluid applied membrane application shall extend a minimum of 6 inches in all direction past the transitions and 6 inches up onto penetrations.
7. Reinforcing fleece sections shall overlap each other a minimum of 2 inches.
8. Prime walls, curbs, penetrations, etc. with 2-component polyurethane primer. Follow manufacturer's written instructions for primer cure.
9. Work wet membrane to avoid any blisters, openings, or lifting at corners, junctions, and transitions. Assure full resin saturation of fleece.
10. NOTE: Fluid applied flashing details and installation requirements may vary between different roofing manufacturer's. The manufacturer's installation requirements should govern where fluid applied flashing discrepancies exists between the project drawings, specifications, and the manufacturer's current details and installation instructions.

F. Drainage Mat:
1. Place the specified drainage mat with the polyethylene filter fabric side up, unadhered directly over all areas of the newly applied membrane, extending to walls, curbs, and other related junctures.
2. Ensure fabric is adhered at all joints and fold any excess fabric at ends under the core.

3.06 XPS INSULATION INSTALLATION (ALT. BID #1)

A. Loose lay insulation boards with joints offset between layers and staggered between rows. Tightly butt boards to one another and at penetrations and transitions leaving no gaps larger than one-eight (⅛) inch.

B. Ensure that joints are offset in a manner to stagger joints from overlying XPS/concrete composite paver per layout required by the manufacturer.

3.07 XPS/CONCRETE COMPOSITE PAVER INSTALLATION

A. Install in accordance with manufacturer's instructions and approved Shop Drawings.
   1. Make long joints (length of board) continuous. Stagger side joints.
   2. Fit boards to avoid cracks and openings. Butt sides of boards tightly to adjacent board. Provide tight tongue and groove integrity with no gaps greater than ¼-inch.
   3. Extend boards to within 1/4 to 1/2 inch of projections. The concrete mortar surface on the boards must not be in contact with terminations such as parapets, curbs, etc. Use of 1/2 in. thick polyethylene foam at board edges to provide a cushion.
   4. Layout array should start at a corner close to the source of the prevailing wind with a whole board and long dimension in the direction of the roof slope. Work from the bottom of slope to the top.
   5. Second row of boards should begin with a half board to obtain a stagger.
   6. Cut boards using a masonry saw blade to achieve straight even cuts.

B. Perimeter Securement
   1. Install perimeter securement and interior metal straps in accordance with panel manufacturer's instructions.
   2. If conditions exist where written instructions do not clearly apply, obtain direction from manufacturer before proceeding.
   3. Install continuously around roof penetrations in maximum 12 foot sections.
   4. Allow for expansion and contraction.
   5. Attach at maximum 12 inches on center.
   6. Attach to first perimeter insulation board that has tongue-and-groove integrity and is minimum 12 inches in width.
   7. Extend minimum 6 inches onto insulation board and attach at maximum 18 inches on center.

3.08 FIELD QUALITY CONTROL

A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation upon completion.
   1. Notify Owner and Consultant two (2) working days in advance of the date and time of the manufacturer’s inspection.

3.09 PROTECTION

A. The Contractor shall protect system from all other contractors and activities during and after completion. Any damage to the system shall be repaired by contractor prior to acceptance.

3.10 CLEAN-UP

A. The Contractor shall remove all masking, protection, equipment, materials, and debris from the work and storage areas and leave those areas in an undamaged and acceptable condition.

END OF SECTION 07550

SECTION 07620

FLASHING AND SHEET METAL

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

B. Section Includes:
1. Counterflashing
2. Coping
3. Transition Flashings (Saddles)
4. Drip Edge
5. Collector Boxes
6. Downspouts
7. Sleeper Caps
8. Lead Flashing
9. High Temperature Resistant Self Adhered Membrane

1.02 SUMMARY DESCRIPTION

A. Work includes new metal flashings at roof parapets, sleepers, curbs, scuppers and mechanical penetrations and as otherwise required for a complete, weatherproof installation.

B. Fastening systems shall allow for the thermal movement of the materials without buckling, loosening, and leakage.

1.03 COORDINATION

A. Coordinate layout and installation of roof accessories with roofing membrane and base flashing interfacing and adjoining construction to provide a leakproof, weathertight, secure, and noncorrosive installation.

B. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.

C. Fabricate/raise curbs to minimum height of 8 inches above finished roofing surface unless otherwise indicated.
1. Level top of curb, with roof slope accommodated.

1.04 RELATED SECTION

A. Related work specified elsewhere:
1. 01010 General Requirements (to be provided by Owner)
2. 02050 Demolition
3. 06100 Rough Carpentry
4. 07520 Modified Bituminous Membrane Roofing
5. 07550 Modified Bituminous Protected Membrane Roofing
6. 08620 Unit Skylights

1.05 REFERENCES

D. General
1. The following documents form part of the Specifications. Where differences exist, the most stringent shall apply.
2. Unless otherwise stated, the referenced standard edition is the current one at the time of commencement of the Work.
3. Refer to Division 01 Section "General Requirements" for the list of applicable regulatory requirements.

E. Sheet Metal and Air-Conditioning Contractors National Association, Inc. (SMACNA)

1.06 PERFORMANCE REQUIREMENTS

A. General Performance: Roof accessories and flashings shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.

1.07 SUBMITTALS

A. Product data: Submit the name of the manufacturer, specification numbers, color samples for exposed products, and product names of all materials proposed for use in the work. Include in submittal installation instructions and general recommendations for each principal product required. Include data substantiating that the materials comply with requirements.

B. Shop Drawings: Show installation layout of sheet metal flashing, including plans, elevations, and keyed details.
1. Include details for forming, joining, supporting, and securing sheet metal flashing, including pattern of seams, termination points, fixed points, expansion joints, expansion-joint covers, edge conditions, special conditions, and connections to adjoining work

C. Samples: Submit 6"x6" sample of prefinished sheet metal to be utilized for flashings.

D. Warranty: Sample of special warranty.

1.08 WARRANTIES

A. Furnish guarantee from the installer of each system that metal flashings will properly shed water to the roof or to the building exterior, under all weather conditions, for a minimum period of five (5) years from the date of Substantial Completion. Leaks due to failure of flashing materials, and due to improper installation shall be promptly repaired at no expense to the Owner, and that watertightness of the repair will be demonstrated to the Owner.

B. For coil-coated sheet metal materials, furnish from the coatings installer non-prorated 20-year warranty against failure of film integrity, and against fade and chalking.

1.09 QUALITY ASSURANCE

A. Applicator: Company specializing in sheet metal flashing work with five (5) years minimum experience.

B. Comply with pertinent recommendations contained in "Architectural Sheet Metal Manual," latest edition, of the Sheet Metal and Air Conditioning Contractors National Association, Inc.

C. Take field measurements required for proper and adequate fabrication and installation of the work taking into account roofing build-up. Exact measurements are the contractor's responsibility. Furnish templates for exact locations of items to be embedded.

1.10 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation.

B. Prevent contact with materials during storage which may cause discoloration, staining, or damage.

PART 2 MATERIAL

2.01 GENERAL

A. Counterflashing, Sleeper Caps and Coping: Prefinished galvanized sheet steel, 24 gauge unless otherwise noted. Use 20 gage minimum for clips. Finish to be Kynar 500 (PVF_2), color as directed by Owner, as selected from standard color chart.

B. Collector Boxes: Prefinished galvanized sheet steel, 22 gage unless otherwise noted. Finish to be Kynar 500 (PVF_2), color as directed by Owner, as selected from standard color chart. Use 26 gage fully soldered stainless steel for outlet tubes. Use 22 ga prefinished galvanized straps where depicted in the drawings.

C. Soldered Transition Flashings, Soldered Saddle Flashings, Drip Flashing at concrete scuppers, and Soldered Through-Wall Scuppers: AISI 302/304 26 gage stainless steel, 4 inch flanges minimum. Provide soldered flashing at plane transitions to provide a complete waterproof system; i.e. parapet-to-wall transitions.

D. Reglet/Receiver: Pre-manufactured, S-lock style, for two piece flashing, metal to match flashing and sheet metal, formed and sealed corners.

E. Downspouts: Pre-Coated Galvanized Steel: ASTM A 446, Grade A, G90 zinc coating; 24 gage core 45 steel, shop pre-coated, 4-inch diameter round. Kynar finished?

F. Fasteners: Nails shall be hot-dip galvanized for galvanized steel. Bolts, nuts, power driven fasteners, screws, washers, etc., shall be hot-dip galvanized or stainless steel. Screws shall be a high-dome, neoprene gasketed, hex head type, or incorporate a washer with a laminated neoprene gasket. Exposed screws to have prefinished heads of color matching the coping metal.

G. Masonry Fasteners: Provide expandable fasteners for use in masonry substrates; 3/16" Rawl Drive Pins, Rawl Zamac Hammer-Screw, or Rawl Nailin fasteners.

H. Sealant: High-grade urethane-based product such as BASF Sonolastic NP-1, or equivalent. Use Namaco Sof Rod, or approved backer rod, where required for a proper sealant joint**.**

I. Lead: ASTM B749, Type L51121, minimum 4 lbs./sq. ft. (0.0625 inches thick).

J. Solder: For use with steel or copper, Class A, Grade I, half-and-half, pig lead and block tin, ASTM B32, Type 50-50, with rosin flux.
   1. For use with stainless steel, 60-40 tin/lead solder, ASTM B32, with acid-chloride flux, except use rosin flux over tinned surfaces.

K. Coating for Dissimilar Metals: Bitumastic paint or as required to be compatible with adjacent materials and finishes.

L. Metal Accessories: Sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of work, matching or compatible with material being installed, non-corrosive, size and gage as required for performance.

M. Self Adhered Flashing Membrane for use under Coping, Counterflashings and as depicted in drawings: ASTM D1970, high tensile strength rubberized asphalt

designed to withstand temperatures up to 250 degrees Fahrenheit. Carlisle WIP 300HT or approved equal.

PART 3 EXECUTION

3.01 COORDINATION

A. Review drawings for sheet metal work. Coordinate to achieve proper incorporation of this work with roofing work.

3.02 FABRICATION AND INSTALLATION

A. Examine the substrate and the conditions under which the work is to be performed, and do not proceed until unsatisfactory conditions have been corrected. Surfaces to receive sheet metal are to be clean, even, smooth, dry, and free from defects and projections that might adversely affect the application. Verify slope prior to installation. Temporarily remove all mechanical units and telecommunications equipment as required for access to curbs and sleepers. Reinstall as required. Comply with SMACNA recommendations.

B. Work shall be accurately formed to sizes, shapes, and dimensions indicated with all angles and lines in true alignment. All work shall be straight, sharp, and erected plumb and level in proper plane without bulges or waves. Conform to standards of SMACNA Manual.

C. Exposed bottom edges of sheet metal shall be folded back to form a 1/2 in. wide hem. Finish work shall be free from water leakage under all weather conditions. The workmanship and methods employed for forming, anchoring, cleating and the expansion and contraction of sheet metal work shall conform to applicable details and description as indicated in current edition of the above publication unless other methods are shown or specified herein.

D. Fabricate all items in maximum length and keep the number of joints to a minimum.

E. Typical sheet metal laps shall be a minimum 4 inches and sealed with two continuous beads of approved sealant in the lap formed with a bayonet-type expansion provision.

F. Where overlapped or bayonet-type expansion provision in work cannot be used, or would not be water/weatherproof, form expansion joint of intermeshing hooked flanges, not less than 1” deep, filled with mastic sealant.

G. Provide mechanical sheet metal closure caps, fully sealed, at typical flashing ends.

H. When no detail direction is provided in the contract documents for an existing roofing related condition, the contactor shall bring such transitions to the attention of the Owner and Consultant.

I. Cooperate with other trades in installation of work. Deliver items to be installed by others in time to avoid delay of project.

J. Make proper allowances for expansion and contraction of materials in all work. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection.

K. Provide required separations between non-compatible. Do not allow direct contact of non-compatible products.

L. Install stainless steel soldered flashing in water shedding sequence at all plane transitions to provide a complete waterproof system; i.e. parapet-to-wall and edge-to-parapet transitions.

M. Fabricate new coping with standing seam joints and corners, SMACNA joint type J8. Outside face of coping to be held in place with continuous clip. Inside face dimension to be three (3) inches minimum. Hem edges. Fasten inside face with gasketed cap screws spaced at two (2) feet on center. Top fastening or fastening through laps is not permitted. Existing coping metal is not to be reused.

N. Counterflashing to lap base flashing 4 inches minimum and be secured with gasketed screws to the unit flange spaced 12 inches on center or be inset into saw-cut mortar joint per drawings. Lap counterflashing joints a minimum of 4 inches and bed with sealant.

O. Downspouts: Form downspouts in 8 to 10 foot lengths. Telescope end joints 1-1/2" and lock longitudinal joints. Fasten downspouts to walls with 3" wide straps. Space straps not more than 6 feet apart. Fasten straps to walls with screws in lead sleeves. Form downspouts of length to discharge water 3'-0" from building slab/walls. Install splash blocks under downspouts over protection course.

P. Curbs/Sleepers:
   1. Secure to roof deck per the manufacturers instruction or as required by structural.

3.03 CLEAN-UP

A. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instruction.

B. Immediately upon completion of this work, clean finished surfaces, remove from site all debris and scrap material including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain roof in a clean condition during construction.

C. Replace roof specialties that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

D. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing according to ASTM A 780/A 780M.

E. Touch up factory-primed surfaces with compatible primer ready for field painting.

F. Clean off excess sealants.

G. Replace roof accessories that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 07620

SECTION 08620

UNIT SKYLIGHTS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

B. Section Includes:
1. Prefabricated fixed unit skylights
2. Safety screens

1.02 RELATED SECTION

A. Related work specified elsewhere:
1. 01010 General Requirements (to be provided by Owner)
2. 02050 Demolition
3. 06100 Rough Carpentry
4. 07520 Modified Bituminous Membrane Roofing
5. 07550 Modified Bituminous Protect Membrane Roofing
6. 07620 Flashing and Sheet Metal

1.03 REFERENCES

A. Aluminum Association (AA) - Specifications for Aluminum Structures.

B. American Architectural Manufacturers Association/Window and Door Manufacturers Association/Canadian Standards Association (AAMA/WDMA/CSA) 101/I.S.2/A440 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights.

C. American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1 - Energy Standard for Buildings Except Low-Rise Residential Buildings.

D. ASTM International (ASTM):
1. B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.
3. D1929 - Standard Test Method for Determining Ignition Temperature of Plastics.

4. D2843 - Method for Density of Smoke from the Burning or Decomposition of Plastics.

E. International Code Council (ICC):
1. International Building Code (IBC).
2. International Energy Conservation Code (IECC).

1.04 PERFORMANCE REQUIREMENTS

A. Thermal performance must be NFRC Certified and posted as such with the NFRC.

B. Thermal and VLT performance: Bristol 53% VLT, 0.71 U Factor, 0.31 SHGC.

C. Conform with Federal, state and local code bodies having jurisdiction.

D. Designed to withstand forces of nature deemed necessary by those code bodies for specified project location.

E. Conform to recommendations of AA Specifications for Aluminum Structures.

F. Meet or exceed thermal performance values of ICC IECC.

G. Meet or exceed requirements of ASHRAE 90.1.

H. Unit skylights shall meet the requirements of ASTM E547/E331 that allows for no water infiltration at a test pressure of 12 psf.

I. Unit skylights shall meet the requirements of ASTM E283 that allows a maximum air infiltration of 0.06 cfm of the total glazed surface area.

J. Designed to carry minimum 20 psf tributary roof load or greater per site.

K. Units are designed to comply with the intent of OSHA fall protection guidelines.

L. Tested to AAMA/WDMA/CSA 101/I.S.2/A440.

M. Performance criterions supported by test reports from an accredited, third party test laboratory.

1.05 SUBMITTALS

A. Product Data: Manufacturer’s data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

B. Shop Drawings:
   1. Submit plan, section, elevation, and perspective drawings as necessary to depict each specified skylight. Include flashing, connection, and termination details.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Primary products supplied by single manufacturer with minimum of ten (10) years experience.

B. Installer Qualifications: Skylights installed by single installer with minimum of five (5) years demonstrated experience in installing products of same type and scope as specified.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of hazardous materials, and materials contaminated by hazardous materials, in accordance with requirements of local authorities having jurisdiction.

1.08 PROJECT CONDITIONS

A. Do not install skylights unless temperature, humidity, and ventilation are within limits set by manufacturer.

B. Do not leave skylight openings exposed to weather. If openings are to be temporarily covered, ensure openings are clearly marked and roped off to identify any potential fall hazard.

1.09 WARRANTY

A. Provide manufacturer's standard ten (10) year material and workmanship warranty against manufacturing defects, outlining terms, conditions, and exclusions from coverage. Warranty shall include that no water will leak through the commercial curb top or self flashed skylight for a period of ten (10) years.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design:
   1. Kingspan Light + Air, 401 E Goetz, Ave, Santa Ana, CA 92707, phone 714.540.8950, fax 714.540.5415, http://www.kingspanlightandair.us.

2. Applicable Model: Bristol ALT-SF-2-WTM-CC-WN-MF
   i. Skylights shall be fully factory assembled consisting of a cast acrylic double dome with a CC-2 Classification. The dome is sealed by interior and exterior gasketing to a heliarc welded aluminum frame fabricated of 6063-T5 aluminum and polyurethane thermal break material to prevent thermal losses through the frame and the formation of condensation on its interior surfaces. The frame is to have an integral condensation channel to carry moisture to the exterior, an aluminum retainer cap and retainer cap fasteners that are to be corrosive resistant. The skylight shall be installed on a 1-1/2" wide curb furnished by others with a 2-3/4" roof flange. All units are to be guaranteed against defective workmanship and materials.

2.02 MATERIALS

A. Aluminum Extrusions:
   1. ASTM B221, 6063-T6 alloy and temper.

2.03 UNIT SKYLIGHTS

A. Dome Shape: Bubble

B. Glazing:
   1. Outer glazing: Medium white acrylic.
   2. Inner glazing: Clear acrylic.

C. Dome Material:
   1. UBC-26-7 and ASTM D635 achieving minimum CC2 rating.
   2. ASTM D2843.
   3. ASTM D1929.

D. Frame:
   1. Frame type: Curb mounted, thermally broken, with curb seal tape.
   2. Frame Construction:
      i. Architectural grade extruded aluminum, minimum 0.075 inch thick,
      ii. Squared with 90 degree corners and flat on one plane by insertion of corner stabilizers prior to full heliarc welding.
      iii. Full perimeter condensation trough with minimum of six non-clog weep holes routed to outside of frame.
      iv. Contain AAMA compliant “poured and debridged” long life, polyurethane thermal break separating interior and exterior aluminum.
   3. Frame Cap:
      i. Architectural grade extruded aluminum, minimum 0.050 inch thick.
      ii. Frame cap squared and flat prior to full heliarc welding.

4. Sealing Gasket: Custom formed, UL Listed, 25 years, engineered thermoplastic.
5. Frame finish: Mill finish.
6. Curb seal tape: 1-1/2” wide Ethylene Propylene Diene Monomer tape.
7. Safety screen: 0.162 inch diameter steel wires at 4 inches on center, welded at intersections, for installation between curb and skylight.

2.04 FABRICATION

A. Skylights factory assembled and glazed, ready for installation.

B. Fabricate skylights weather tight and free of visual distortions and defects.

C. Protect exterior drip/counter flashing and drainage ports from weather and airborne debris.

D. Miter and full penetration weld corners of curb and retaining frames.

E. Seal retaining frames securing glazing panels along each side under spring tension with silicone sealant along full perimeter of retaining frame.

F. Pre-drill frames for anchorage to roof curbs.

G. Seal glazing panels to base frame with allowance for expansion and contraction.

H. Provide exterior weep hole arrangement.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, openings and conditions to verify compliance with requirements for installation tolerances, actual locations, dimensions and other conditions affecting performance.

B. Verify dimensions of roof openings for roof accessories.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Install skylights in accordance with manufacturer's instructions and approved Shop Drawings.

3.03 PROTECTION

A. Protect installed products until Final Completion.

3.04 REPAIR AND CLEANING

A. Touch up factory-primed surfaces with compatible primer ready for field painting.

B. Clean exposed surfaces according to manufacturer's written instructions.

C. Clean off excess sealants.

D. Replace roof accessories that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 08620