

CITY AND BOROUGH OF WRANGELL



WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT RE- BID

PROJECT MANUAL

November 2022

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END OF SECTION

SECTION 00030 - NOTICE INVITING BIDS

OBTAINING CONTRACT DOCUMENTS. The Contract Documents: **Wrangell High School and Middle School Fire Alarm Replacement Re-Bid**

Notice is hereby given that the City and Borough of Wrangell, Alaska will receive sealed bids for the construction of **Wrangell High School and Middle School Fire Alarm Replacement Re-Bid**.

DOCUMENTS. The Contract Documents may be downloaded free of charge on the City & Borough of Wrangell website (www.wrangell.com) under the Bids and RFPs section. Downloading Contract Documents from the City & Borough of Wrangell's website requires registration with the Borough Clerk to be placed on the Plan Holders List and to ensure receipt of subsequent Addenda. Failure to register may adversely affect your proposal. It is the Offeror's responsibility to ensure that they have received all Addenda affecting this Solicitation. To be registered, contact the Borough Clerk at 907-874-2381; Borough Clerks Office, 205 Brueger Street, Wrangell, Alaska 99929; or at clerk@wrangell.com.

OWNER: The City and Borough of Wrangell

ENGINEER OF RECORD. Mark Morris, P.E. (AELE8613), Morris Engineering Group, LLC (AECL1010), 2375 Jordan Ave, Juneau, AK 99801.

DESCRIPTION OF WORK. WORK consists of all activities necessary to completely replace the existing fire alarm systems at the Wrangell High School and Middle School. This includes demolition and replacement of all 'field devices' such as: notification devices (horns, horn strobes, strobe only devices), initiation devices (smoke detectors, heat detectors, duct detectors, manual pull stations), flow and tamper switches, and all auxiliary components including fire alarm relays and circuit interface modules. Work includes demolition and replacement of the fire alarm panel, remote annunciator panels, fire alarm extender panels, and all fire alarm wiring. Conduit and boxes to remain for reuse, abandoned in place or removed per the Drawings.

All new field devices & accessories, fire alarm extender panels, and remote annunciators are to be provided per the Drawings. New fire alarm wiring to be routed in j-hooks, new concealed conduit, new surface mounted conduit, or within existing conduit per the Drawings and technical specifications. Additional work includes new ceiling access panels, cutting, patching, and painting of ceilings and walls, and floor penetrations per the Drawings. The new fire alarm system shall be a voice evacuation system that meets intelligibility requirements required of Code, the City of Wrangell, and the Authority Having Jurisdiction.

PROJECT FUNDING SOURCES. Funding for the construction project will be partially funded with funds from the U.S. Housing and Urban Development (HUD) through the State of Alaska Community Development Block Grant Program (CDBG) and is therefore subject to the Federal and State laws and regulations associated with this program.

Recipients of HUD/CDBG program funds must maintain a current SAM.gov registration and have a Unique Entity ID generated by SAM.gov. This information must be current during the term of the contract.

The City and Borough of Wrangell and all Contractors and Subcontractors will comply with HUD's Section 3 requirements in implementing this CDBG partially funded-project, and will to the greatest extent feasible, and consistent with existing Federal, State and local laws and regulations, ensure that employment and other economic opportunities are directed to low- and very low-income persons, per 24 CFR Part 75.

SITE OF WORK. The WORK is located at 312 Reid St in Wrangell, Alaska, 99929.

COMPLETION OF WORK. The OWNER will open the work site to the CONTRACTOR immediately following the Notice to Proceed. Substantial Completion must be reached by August 15th, 2023. Final

SECTION 00030 - NOTICE INVITING BIDS

Completion of all punch list item work shall be reached by September 15th, 2023.

PREBID CONFERENCE. A prebid conference for all bidders will be held at the City and Borough of Wrangell, Capital Facilities Department Conference Room, Case Avenue, Wrangell, Alaska on November 28th, 2022 at 10:00AM, local time. A walk through of the High School and Middle School buildings will be offered immediately following the meeting. Prospective bidders are encouraged to attend. To attend by teleconference, use the following dial-in information:

By Computer: <https://us02web.zoom.us/j/82636180148?pwd=QXU2ZkozYkVHeFJUQjk2eEoxL2RJUT09>
By Phone: 253-215-8782
Meeting ID: 826 3618 0148 / Passcode: 396893

TIME OF COMPLETION AND LIQUIDATED DAMAGES. Bidders shall begin the Work on receipt of the Notice to Proceed and shall complete the Work within the Contract Time. Work is subject to liquidated damages identified in the Agreement, Section 00500.

BIDDING, CONTRACT, or TECHNICAL QUESTIONS. All questions must be submitted by 5:00 p.m. AST on December 1, 2022. An addendum, including any revisions made and responding to all questions, will be distributed. All communications relative to this WORK, prior to opening Bids, shall be directed to the following: Amber Al-Haddad, Capital Facilities Director, Telephone: (907) 874-3902, Email: aal-haddad@wrangell.com

BID SECURITY. Each bid shall be accompanied by a bid bond, cashier’s check or certified check made payable to the City and Borough of Wrangell in the amount of five percent (5%) of the total bid price. This serves as a guarantee that the Bidder, if its Bid is accepted, will promptly execute the Agreement. A Bid shall not be considered unless one of the forms of Bidder's security is enclosed with it. In addition, performance and payment bonds are required, see Sections 00610 and 00620 for more information.

RECEIPT OF BIDS. Sealed bids will be received by the City and Borough of Wrangell, Post Office Box 531, Wrangell, Alaska 99929, located at the Borough Clerk’s Office, 205 Brueger Street, Wrangell, Alaska 99929, until 2:00 PM prevailing time on December 6th, 2022, at which time they shall be opened and read aloud. Opening date and time may be changed to a later date or time via Addendum. Clearly mark on the outside of the envelope **“Sealed Bid for Wrangell High School and Middle School Fire Alarm Replacement Re-Bid”**.

BID TO REMAIN OPEN. The Bidder shall guarantee the Bid for a period of sixty (60) calendar days from the date of Bid opening. Any component of the Bid including additive alternates may be awarded anytime during the sixty (60) days.

OWNER'S RIGHTS RESERVED. The OWNER reserves the right to reject any or all Bids and to re-advertise for Bids, to waive any informality or irregularity in any or all Bids which do not materially affect the integrity or effectiveness of the competitive bidding process, and to make award to the lowest responsive, responsible Bidder as it may best serve the interests of the OWNER.

By: _____
Jeff Good, Borough Manager

Date

END OF SECTION

SECTION 00100 - INSTRUCTIONS TO BIDDERS

1.0 DEFINED TERMS. Terms used in these “Instructions to Bidders” and the “Notice Inviting Bids” which are defined in the General Conditions have the meanings assigned to them in the General Conditions. The term “Bidder” means one who submits a Bid directly to the OWNER, as distinct from a sub-bidder, who submits a Bid to a Bidder. “Bidding Documents” include “Notice Inviting Bids”, “Instructions to Bidders”, “Bid”, “Bid Schedule with Add Alts”, and proposed contract documents, including any Addenda issued prior to receipt of Bids.

2.0 INTERPRETATIONS AND ADDENDA.

A. **INTERPRETATIONS.** All questions about the meaning or intent of the Contract Documents are to be directed to the ENGINEER. Each bidder shall examine and study Bidding Documents carefully and compare with each other, examine site and local conditions, and shall make written request to the OWNER for interpretation or correction by the ENGINEER of any ambiguity, error, or inconsistency discovered. Interpretations or clarifications considered necessary by the ENGINEER in response to such questions will be issued by Addendum and emailed to all parties recorded by the OWNER as having received the Contract Documents. Questions received less than 7 Days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect.

B. **ADDENDA.** Addenda may be issued to modify the Contract Documents as deemed advisable by the OWNER. Addenda shall be binding and shall become part of the Contract Documents. The OWNER may issue addenda by fax, with a follow-up addendum copy issued by regular mail. Addenda may be emailed less than 7 Days prior to the anticipated Bid opening. The OWNER will make reasonable attempts to provide addenda; however, it is strongly recommended by the OWNER that Bidders independently confirm the contents, number, and dates of each Addenda prior to submitting a Bid. Bidders are responsible to acknowledge all published Addenda in their final bid submission; failure to acknowledge all such Addenda may render the Bidder nonresponsive. All Bidders who submit a bid shall be deemed to have received and reviewed all addenda.

3.0 FAIR COMPETITION. More than one Bid from an individual, firm, partnership, corporation, or association under the same or different names will not be considered. If the OWNER believes that any Bidder is interested in more than one Bid for the WORK contemplated, all Bids in which such Bidder is interested will be rejected. If the OWNER believes that collusion exists among the Bidders, all Bids will be rejected.

4.0 RESPONSIBLE BIDDER. Only responsive Bids from responsible Bidders will be considered. A Bid submitted by a Bidder determined to be not responsible may be rejected. A responsible Bidder is one who is considered to be capable of performing the WORK.

A. The general standards for responsibility are to determine the CONTRACTOR’s ability to perform WORK adequately, considering the CONTRACTOR’s

1. Financial Resources
2. Ability to Meet Delivery Standards
3. Past Performance Record
 - a. References from others on CONTRACTOR’s performance
 - b. Record of performance on prior OWNER contracts

SECTION 00100 - INSTRUCTIONS TO BIDDERS

4. Record of Integrity
5. Obligations to OWNER
 - a. Bidders must be registered as required by law and in good standing for all amounts owed to the OWNER within 5 Days of OWNER's Notice of Intent to Award.

- B. Special standards for responsibility, if applicable, will be specified. These special standards establish minimum standards or experience required for a responsible Bidder on a specific contract.

- C. Before a Bid is considered for award, a Bidder may be requested to submit information documenting its ability and competency to perform the WORK, according to general standards of responsibility and any special standards which may apply. It is Bidder's responsibility to submit sufficient, relevant, and adequate information. OWNER will make its determination of responsibility and has no obligation to request clarification or supplementary information.

5.0 RESPONSIVE BIDS. Only responsive Bids will be considered. Bids may be considered non-responsive and may be rejected. Some of the reasons a Bid may be rejected for being non-responsive are:

- A. If the Bid is on a form other than that furnished by the OWNER, or legible copies thereof; or if the form is altered or any part thereof is detached; or if the Bid is improperly signed.

- B. If there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite, or ambiguous as to its meaning.

- C. If the Bidder adds any unauthorized conditions, limitations, or provisions reserving the right to accept or reject any award, or to enter into a contract pursuant to an award. This does not exclude a Bid limiting the maximum gross amount of awards acceptable to any one Bidder at any one bid opening, provided that any selection of awards will be made by the OWNER.

- D. If the Bid does not contain a unit price for each pay item listed, except in the case of authorized alternate pay items.

- E. If the Bidder has not acknowledged receipt of each Addendum.

- F. If the Bidder fails to furnish an acceptable Bid Guaranty with the Bid.

- G. If any of the unit prices bid are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the OWNER.

- H. If a bid does not conform to Articles 15.0 and 16.0 of this Section.

6.0 BIDDER'S EXAMINATION OF CONTRACT DOCUMENTS AND SITE. It is the responsibility of each Bidder before submitting a Bid:

SECTION 00100 - INSTRUCTIONS TO BIDDERS

- A. To examine thoroughly the Contract Documents, and other related data identified in the bidding documents (including “technical data” referred to below):
 - 1. To visit the site to become familiar with and to satisfy the Bidder as to the general and local conditions that may affect cost, progress, or performance of the WORK;
 - 2. To consider federal, state and local laws and regulations that may affect cost, progress, or performance of the WORK;
 - 3. To study and carefully correlate the Bidder’s observations with the Contract Documents, and other related data; and
 - 4. To notify the ENGINEER of all conflicts, errors, or discrepancies in or between the Contract Documents and such other related data.

7.0 REFERENCE IS MADE TO THE SUPPLEMENTARY GENERAL CONDITIONS FOR IDENTIFICATION OF:

- A. Those reports of explorations and tests of subsurface conditions at the site which have been utilized by the Engineer of Record in the preparation of the Contract Documents. The Bidder may rely upon the accuracy of the technical data contained in such reports; however, the interpretation of such technical data is the responsibility of the Bidder.
- B. Those drawings of physical conditions in or relating to existing surface and subsurface conditions (except underground utilities) which are at, or contiguous to, the site have been utilized by the Engineer of Record in the preparation of the Contract Documents. The Bidder may rely upon the accuracy of the technical data contained in such drawings; however, the interpretation of such technical data is the responsibility of the Bidder.
- C. Copies of such reports and drawings will be made available by the OWNER to any Bidder on request if said reports and drawings are not bound herein. Those reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which the Bidder is entitled to rely, as provided in Paragraph SGC-4.2 of the Supplementary General Conditions, are incorporated herein by reference.
- D. Information and data reflected in the Contract Documents with respect to underground utilities at or contiguous to the site is based upon information and data furnished to the OWNER and the Engineer of Record by the owners of such underground utilities or others, and the OWNER and ENGINEER do not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary General Conditions, or in Section 01530 - Protection and Restoration of Existing Facilities.
- E. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, underground utilities and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 4.2, 4.3, and 4.4 of the General Conditions.
- F. Before submitting a Bid, each Bidder will, at its own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and underground utilities) at, or contiguous to, the site or otherwise which may affect cost, progress, or performance of the WORK and which the Bidder deems necessary to determine its Bid for performing the WORK in accordance with the time, price, and other terms and conditions of the Contract Documents.

SECTION 00100 - INSTRUCTIONS TO BIDDERS

- G. On request in advance, the OWNER will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and shall clean up and restore the site to its former condition upon completion of such explorations.
- H. The lands upon which the WORK is to be performed, rights-of-way and easements for access thereto and the lands designated for use by the CONTRACTOR in performing the WORK are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by the CONTRACTOR. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by the OWNER unless otherwise provided in the Contract Documents.
- I. The submission of a Bid will constitute an incontrovertible representation by the Bidder that the Bidder has complied with every requirement of Article 6, "Bidder's Examination of Contract Documents and Site" herein, that without exception the Bid is premised upon performing the WORK required by the Contract Documents and such means, methods, techniques, sequences, or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the WORK.

8.0 BID FORM.

- A. The Bid shall be made on the Bid Schedule(s) bound herein, or on legible and complete copies thereof, and shall contain the following: Sections 00300 - Bid, 00310 – Bid Schedule, and the required Bid Security. In the event there is more than one Bid Schedule, the Bidder must bid on all schedules. The envelope enclosing the sealed Bids shall be plainly marked in the upper left-hand corner with the name and address of the Bidder and shall bear the words "BID FOR," followed by the title of the Contract Documents for the WORK, the name of the OWNER, the address where Bids are to be delivered or mailed to, and the date and hour of opening of Bids. The Bid Security shall be enclosed in the same envelope with the Bid.
- B. All blanks on the Bid Form and Bid Schedule(s) must be completed in ink or typed.
- C. Bids by corporations shall be executed in the corporate name by the president, a vice-president (or another corporate officer). The corporate address and state of incorporation must appear below the signature.
- D. Bids by partnerships must be executed in the partnership name and be signed by a managing partner, and the official address of the partnership must appear below the signature.
- E. The Bidder's Bid shall be signed with ink. All names must be printed or typed below the signature.
- F. The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form. Failure to acknowledge Addenda shall render Bid non-responsive and shall cause its rejection.

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- G. The address to which communications regarding the Bid are to be directed must be shown.
- H. All Bidders shall provide evidence of authority to conduct business in Alaska to the extent required by law.
- I. A Bid for the WORK will not be accepted from a contractor who does not hold a valid Alaska Business License and a valid Contractor's License in Alaska (applicable to the type of work bid upon).

9.0 QUANTITIES OF WORK. The quantities of WORK, or material, stated in unit price items of the Bid are supplied only to give an indication of the general scope of the WORK; the OWNER does not expressly or by implication agree that the actual amount of WORK, or material, will correspond therewith, and reserves the right after award to increase or decrease the amount of any unit price item of the WORK by an amount up to and including 25 percent of any Bid item, without a change in the unit price, and shall include the right to delete any Bid item in its entirety, or to add additional Bid items up to and including an aggregate total amount not to exceed 25 percent of the Contract Price (see General Conditions, Article 10 Changes In the Work).

10.0 SUBSTITUTE OR "OR-EQUAL" ITEMS. Where Bidding Documents refer to any items, materials, products, and equipment by means of one or more manufacturer's trade name, catalog reference, or similar means of identification or manufacturer, such reference establishes standard of required quality, appearance, dimension, or function. Requests shall be made in writing to clerk@wrangell.com and shall be received no later than ten (10) working days prior to date of receipt of Bids. The procedure for the submittal of substitute or "or-equal" products is specified in Section 01300 - Contractor Submittals.

11.0 SUBMISSION OF BIDS. The Bid shall be delivered by the time and to the place stipulated in the Notice Inviting Bids. It is the Bidder's sole responsibility to see that its Bid is received in proper time. Oral, telegraphic, telephonic or faxed Bids will not be considered.

12.0 BID SECURITY, BONDS, AND INSURANCE. Each Bid shall be accompanied by a certified, or cashier's check, or approved Bid Bond in an amount of at least 5 percent of the total Bid price. The "total Bid price" is the amount of the base bid, plus the amount of alternate bids, if any, which total to the maximum amount for which the contract could be awarded. Said check or Bond shall be made payable to the OWNER and shall be given as a guarantee that the Bidder, if offered the WORK, will enter into an Agreement with the OWNER, and will furnish the necessary insurance certificates, Payment Bond, and Performance Bond; each of said Bonds, if required, and insurance amounts shall be as stated in the Supplementary General Conditions. In case of refusal or failure to enter into said Agreement, the check or Bid Bond, as the case may be, shall be forfeited to the OWNER. If the Bidder elects to furnish a Bid Bond as its Bid security, the Bidder shall use the Bid Bond form bound herein, or one conforming substantially to it in form. Bid Bonds must be accompanied by a legible power of attorney.

13.0 RETURN OF BID SECURITY. Within 14 Days after award of the contract, the OWNER will return the Bid securities accompanying such of the Bids as are not considered in making the award. All other Bid securities will be held until the Agreement has been executed. They will then be returned to the respective Bidders whose Bids they accompanied.

14.0 DISCREPANCIES IN BIDS. In the event there is more than one pay item in a Bid Schedule, the Bidder shall furnish a price for all pay items in the schedule, and failure to do so may render the

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Bid non-responsive and cause its rejection. In the event there are unit price pay items in a Bid Schedule and the "amount" indicated for a unit price pay item does not equal the product of the unit price and quantity, the unit price shall govern and the amount will be corrected accordingly, and the Bidder shall be bound by said correction. In the event there is more than one pay item in the Bid Schedule and the total indicated for the schedule does not agree with the sum of the prices bid on the individual items, the prices bid on the individual items shall govern and the total for the schedule will be corrected accordingly, and the Bidder shall be bound by the correction.

15.0 BID MODIFICATIONS AND UNAUTHORIZED ALTERNATIVE BIDS.

- A. Any Bidder may modify a Bid by mail, email (clerk@wrangell.com), or fax (**Fax: 907-874-3952**) provided that such modification is received by the OWNER prior to the time set for opening of Bids. Bid modifications shall be made using the project Modified Bid Schedule form and shall be used with bid modifications made as a line by line pay item adjustment per the schedule. Bidders are strongly advised to telephone the City & Borough of Wrangell (**Telephone: 907-874-2381**) to confirm the successful and timely transmission of all email and fax Bid modifications.

An email or fax Bid Modification shall not reveal the Bid price but shall provide the addition or subtraction or other modification so that the final prices will not be known by the OWNER until the sealed Bid is opened. Modifications shall include both the modification of the unit bid price and the total modification of each item modified. The OWNER shall not be responsible for its failure to receive fax modifications whether such failure is caused by transmission line problems, fax device problems, operator error or otherwise.

- B. Unauthorized conditions, limitations, or provisions attached to the Bid will render it informal and cause its rejection as being non-responsive. The completed bid forms shall be without interlineation, alterations, or erasures in the printed text. All changes shall be initialed by the person signing the Bid. Alternative bids will not be considered unless called for.

16.0 WITHDRAWAL OF BID. The Bid may be withdrawn by the Bidder by means of a written request, signed by the Bidder or its properly authorized representative. Such written request must be delivered to the place stipulated in the Notice Inviting Bids for receipt of Bids prior to the scheduled closing time for receipt of Bids. Unless otherwise provided, no Bidder shall modify, withdraw, or cancel the Bid or any part thereof for sixty (60) calendar days after the time designated for receipt of Bids.

17.0 BID PROTEST. Bid protests must be received no later than seven (7) calendar days after Notice of Intent to award is issued.

18.0 REJECTION OF BIDS. Bidder shall acknowledge right of OWNER to reject any or all bids and to waive any informalities or irregularities which do not materially affect the integrity or effectiveness of the competitive bidding process. Bidder recognizes right of OWNER to reject a bid if Bidder has failed to:

- A. Furnish the required Bid Security.
- B. Submit data required by Bidding Documents.

SECTION 00100 - INSTRUCTIONS TO BIDDERS

- C. Complete in any way the electronic submission or required attachments.
- D. Attend the pre-bid meeting where attendance at such meeting is required.

19.0 AWARD OF CONTRACT.

- A. Award of a contract, if it is awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Technical Specifications and will be made to the lowest responsive, responsible Bidder whose Bid complies with all the requirements prescribed. Unless otherwise specified, any such award will be made within the period stated in the Notice Inviting Bids that the Bids are to remain open. Unless otherwise indicated, a single award will be made for all the pay items in an individual Bid Schedule.
- B. If the OWNER has elected to advertise this Project with a base bid and additive or deductive alternates, the OWNER may elect to award the contract for the base bid, or the base bid plus one or more alternates selected by the OWNER. In either case, award shall be made to the responsive, responsible Bidder offering the lowest total bid for the WORK to be awarded.
- C. Low Bidder will be determined based on the lowest total of the base bid plus combinations of additive alternatives and other factors as deemed in the best interest of the OWNER. The applicable other factors may include:
 - 1. Ability, capacity, and skill to comply with the specifications and perform the work required by the contract.
 - 2. Character, integrity, reputation, judgment, experience, and efficiency of the Bidder.
 - 3. Ability to perform the Work within the time specified.
 - 4. Previous and current compliance with laws relating to the Contract.
 - 5. The time to complete the work. Time is of the essence and will be a factor in the award of this Contract.
 - 6. The quality of the Bidder's performance of previous contracts.
- D. A Local Bidder Preference shall apply to all City and Borough of Wrangell procurements, except when restricted by state or federal regulations. To be considered a qualifying bidder, bidders shall meet the requirements of the Local Bidder Preference ordinance, according to WMC 5.10.040 (D). The Owner may request documentation to support entries made on this form.

The Wrangell Municipal Code (WMC) Article 5.10.040, Section D. LOCAL BIDDER PREFERENCE AWARD reads:

- 1. Unless contrary to federal or state law or regulation, or as otherwise provided in section (D)(2) of this section, a contract for, or purchase of, supplies, materials, equipment, contractual services, or public improvements shall be awarded to a local bidder where the bid by such local bidder is in all material

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respects comparable to the lowest responsible nonlocal bid, and if the amount bid by such local bidder does not exceed the lowest responsible nonlocal bid by more than:

- a. Five percent of the amount bid by the lowest responsible nonlocal bidder if that nonlocal bidder's bid is \$1,000,000 or less;
 - b. Three percent of the amount bid by the lowest responsible nonlocal bidder if that nonlocal bidder's bid is \$1,000,001 or more.
2. This preference shall not be interpreted to mean that the borough is precluded from making the purchase from whatever source is most advantageous to the borough after considering all factors in the public interest even when the price quoted by the local bidder satisfies subsection (D)(1)(a) or (b) of this section.
 3. "Local bidder" for purposes of the section shall mean a bidder who:
 - a. Holds a current Alaska business license;
 - b. Submits a bid for goods or services under the name appearing on the person's current Alaska business license;
 - c. Has maintained a place of business within the boundaries of the borough for a period of six months immediately preceding the date of the bid;
 - d. Is not delinquent in the payment of any utilities, taxes, charges or assessments owing to the borough on account of that business;
 - e. Is incorporated or qualified to do business under the laws of Alaska with its principal place of business in the borough, is a proprietorship and the proprietor is a resident of the borough, or is a partnership and all partners are residents of the City and Borough of Wrangell;
 - f. If a joint venture, all joint venture partners must qualify under subsection (D)(3)(a) through (e) of this section;
 - g. The manager may require such documentation or verification by the person claiming to be a local bidder as is deemed necessary to establish the requirements of this section.

20.0 EXECUTION OF AGREEMENT.

- A. All Bids \$25,000 and higher must be approved by the Wrangell Borough Assembly. After the Assembly has approved the award, the OWNER will issue a Notice of Intent to Award to the approved Bidder. The Bidder to whom award is made shall execute a written Agreement with the OWNER on the Agreement form, Section 00500, and shall secure all insurance and furnish all certificates and bonds required by the Contract

SECTION 00100 - INSTRUCTIONS TO BIDDERS

Documents within ten (10) days from the date stated in the Notice of Intent to Award letter.

- B. Failure or refusal to enter into the Agreement as herein provided or to conform to any of the stipulated requirements in connection therewith shall be just cause for annulment of the award and forfeiture of the Bid security. If the lowest responsive, responsible Bidder refuses or fails to execute the Agreement, the OWNER may award the contract to the second lowest responsive, responsible Bidder. If the second lowest responsive, responsible Bidder refuses or fails to execute the Agreement, the OWNER may award the contract to the third lowest responsive, responsible Bidder. On the failure or refusal of such second or third lowest Bidder to execute the Agreement, each such Bidder's Bid securities shall be likewise forfeited to the OWNER.
- 21.0 INSURANCE.** The successful Bidder will be required to secure and maintain during the life of the Contract insurance of the types and with the required limits of liability as specified in 00800 Supplementary General Conditions. The successful Bidder shall furnish to the Owner properly executed copies of the Certificate of Insurance Form, evidencing the required coverage prior to the start of construction. The successful Bidder will be solely responsible for any and all costs, losses, or damages due their failure to maintain the required insurance during the life of the contract.
- 22.0 LIQUIDATED DAMAGES.** Time is of the essence and may be a factor in the award of this Contract. The Owner intends to substantially complete and occupy the entire project no later than August 15, 2023. Punch list work for occupied spaces shall be completed not more than thirty (30) calendar days from the date established for substantial completion. Provisions for liquidated damages are set forth in the Section 00030, Notice Inviting Bids.
- 23.0 PERMITS.** The CONTRACTOR is responsible for all WORK associated with meeting any local, state, and federal permit requirements.

END OF SECTION

SECTION 00300 - BID

BID TO: CITY & BOROUGH OF WRANGELL

For Project Name: Wrangell High School and Middle School Fire Alarm Replacement Re-Bid

By Company Name: _____

To the Contracting Officer, City and Borough of Wrangell:

1. In compliance with your Invitation to Bid for the above-referenced project, the undersigned proposes to furnish and deliver all the materials and to perform all the work and labor required in the construction of the Project, located in Wrangell, Alaska, according to all of the terms in the plans and specifications and for the amount and prices named herein as indicated on the Bid Schedule which is made a part of this Bid.
2. If this Bid is accepted, the undersigned does hereby agree to enter into an Agreement with the OWNER on the form included in the Contract Documents (as defined in Article 7 of Section 00500 - Agreement) to perform the WORK as specified or indicated in said Contract Documents.
3. This Bid will remain open for the period stated in the "Notice Inviting Bids" unless otherwise required by law. The undersigned will enter into an Agreement within the time and in the manner required in the "Notice Inviting Bids" and the "Instructions to Bidders." The undersigned agrees to commence the work within 10 calendar days after receipt of Notice to Proceed, unless otherwise stipulated in the contract, and to complete the work within by the Substantial Completion Date provided in the contract, after the effective date of the Notice to Proceed, unless extended in writing by the Owner.
4. The undersigned will furnish insurance certificates, Payment Bond, Performance Bond, and any other documents as required by the Contract Documents as surety for the full, complete, and faithful performance of this contract.
5. Bidder has familiarized itself with the nature and extent of the Contract Documents, WORK, site, locality where the WORK is to be performed, the legal requirements (federal, state, and local laws, ordinances, rules, and regulations), and the conditions affecting cost, progress or performance of the WORK and has made such independent investigations as Bidder deems necessary.
6. The Undersigned declares that they have carefully examined the contract requirements and that they have made a personal examination of the site of the work; that they understand that the quantities, where such are specified in the Bid Schedule or on the plans for this project, are approximate only and subject to increase or decrease, and that they are willing to perform increased or decreased quantities of work at unit prices bid under the conditions set forth in the Contract Documents.
7. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.
8. To all the foregoing and including all Bid Schedule and information required of Bidder contained in this Bid Form, said Bidder further agrees to complete the WORK required under the Contract

SECTION 00300 - BID

Documents within the Contract Time stipulated in said Contract Documents, and to accept in full payment therefor the Contract Price based on the total bid price(s) named in the Bid Schedule.

9. The undersigned has examined copies of all the Contract Documents and acknowledges receipt of the following addenda to the drawings and/or specifications:

Addenda No.	Date Issued	Addenda No.	Date Issued

Give number and date of each Addendum above. Failure to acknowledge receipt of all Addenda will cause the Bid to be non-responsive and shall cause its rejection.

10. The undersigned has read the forgoing and hereby agrees to the conditions stated therein by affixing their signature below.

Dated: _____	Bidder: _____ (Company Name)
Bidder's Alaska Contractor License No.: _____	By: _____ (Signature in Ink)
Bidder's Alaska Business License No.: _____	Printed Name: _____
Telephone No.: _____	Title: _____
Facsimile No.: _____	Address: _____ (Street or P.O. Box)
Email: _____	_____ (City, State, Zip)

11. **DOCUMENTS REQUIRED FOR BID. TO BE CONSIDERED, ALL BIDDERS MUST COMPLETE AND INCLUDE THE FOLLOWING AT THE TIME OF THE BID OPENING:**

- Bid form, Section 00300
- Bid Schedule, Section 00310
- Bid Security, Section 00320
- Modified Bid Schedule, Section 00330 (if applicable)
- Bid Form Supplement, Unit Prices, Section 00432

12. **DOCUMENTS REQUIRED AFTER NOTICE OF APPARENT LOW BIDDER.** Unless otherwise notified by the OWNER, the apparent low Bidder is required to complete and submit the following document within five (5) working days following notice of apparent low bidder:

- Current SAM.gov active registration
- Alaska Business License

SECTION 00300 - BID

- Contractor's License
 - Subcontractor Report, Section 00360
13. DOCUMENTS REQUIRED FOR AWARD. To be awarded the contract, the successful Bidder must complete and submit, within ten (10) days after the date of the "Notice of Intent to Award" letter, the following executed documents:
- Agreement Form, Section 00500
 - Performance Bond, Section 00610
 - Payment Bond, Section 00620
 - Certificates of Contractor Insurance Section 00700 and Section 00800
14. DOCUMENTS REQUIRED AFTER NOTICE TO PROCEED. The successful Bidder will be required to submit, within ten (10) days after the date of the Notice to Proceed the following executed documents:
- Certificates of Subcontractor Insurance Section 00700 and Section 00800
 - One executed copy of each subcontract for WORK.

END OF SECTION

SECTION 00310 - BID SCHEDULE

Bidders Please Note: Before preparing this Bid Schedule, carefully read the Invitation for Bids, Instructions to Bidders, and the Technical Specifications.

The Bidder shall insert a unit price opposite each pay item in the Bid Schedule and multiply the unit price by the estimated quantities for this contract. No price is to be tendered for any item not appearing in the Bid Schedule.

In the event there is more than one pay item in the Bid Schedule and the total indicated for the schedule does not agree with the sum of the prices bid on the individual items, the prices bid on the individual items shall govern and the total for the schedule will be corrected accordingly, and the Bidder shall be bound by the correction.

A Local Bidder Preference of five percent (5%) _____ will, X will not be utilized on this project.

WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID - BASE BID

Pay Item No.	Pay Item Description	Pay Unit	Approximate Quantity	Unit Price		Amount	
				Dollars	Cents	Dollars	Cents
01505.1	Fire Alarm System, Mobilization	LS	All Req'd				
01505.2	Fire Alarm System Mobilization for Elevator Modernization Project	LS	All Req'd				
02220.01	Fire Alarm System, Demolition	LS	All Req'd				
16000.1	Fire Alarm System, New & Complete	LS	All Req'd				

TOTAL WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID BASE BID AMOUNT IN FIGURES: \$ _____

TOTAL WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID BASE BID AMOUNT IN WORDS:

WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID - ALTERNATE A

Pay Item No.	Pay Item Description	Pay Unit	Approximate Quantity	Unit Price		Amount	
				Dollars	Cents	Dollars	Cents
01505.1-A	One (1) fire rated ceiling access hatch	EA	One				

TOTAL WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT ALTERNATE A REBID AMOUNT IN FIGURES: \$ _____

TOTAL WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SECTION 00310 - BID SCHEDULE

ALTERNATE A REBID AMOUNT IN WORDS:

WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID - ALTERNATE B

Pay Item No.	Pay Item Description	Pay Unit	Approximate Quantity	Unit Price		Amount	
				Dollars	Cents	Dollars	Cents
01505.1 - B	One (1) speaker strobe, wall mounted, with base, wiring, j-hooks	EA	One				

TOTAL WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT ALTERNATE B REBID AMOUNT IN FIGURES: \$ _____

TOTAL WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT ALTERNATE B REBID AMOUNT IN WORDS:

WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID - ALTERNATE C

Pay Item No.	Pay Item Description	Pay Unit	Approximate Quantity	Unit Price		Amount	
				Dollars	Cents	Dollars	Cents
01505.1 - C	One (1) smoke detector, ceiling mounted, with base, wiring, j-hooks	EA	One				

TOTAL WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID ADDITIVE ALTERNATE C AMOUNT IN FIGURES: \$ _____

TOTAL WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID ADDITIVE ALTERNATE C AMOUNT IN WORDS:

BIDDER NAME: _____

BIDDER'S TELEPHONE: _____

END OF SECTION

SECTION 00320 - BID BOND

KNOW ALL PERSONS BY THESE PRESENTS, that _____

_____ as Principal, and _____

as Surety, are held and firmly bound unto the **CITY & BOROUGH OF WRANGELL** hereinafter called "OWNER," in the sum of _____ dollars, (not less than five percent (5%) of the total amount of the Bid) for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has submitted a Bid to said OWNER to perform the WORK required under the Bid Schedule of the OWNER's Contract Documents entitled

WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID

NOW THEREFORE, if said Principal is awarded a contract by said OWNER and, within the time and in the manner required in the "Notice Inviting Bids" and the "Instructions to Bidders" enters into a written Agreement on the form of Agreement bound with said Contract Documents, furnishes the required certificates of insurance, and furnishes the required Performance Bond and Payment Bond, then this obligation shall be null and void, otherwise it shall remain in full force and effect. In the event suit is brought upon this bond by said OWNER and OWNER prevails, said Surety shall pay all costs incurred by said OWNER in such suit, including a reasonable attorney's fee to be fixed by the court.

SIGNED AND SEALED, this _____ day of _____, 20____

(SEAL) _____
(Principal)

(SEAL) _____
(Surety)

By: _____
(Signature)

By: _____
(Signature)

END OF SECTION

SECTION 00330 – MODIFIED BID SCHEDULE

Bidders Please Note: Before preparing this Modified Bid Schedule, carefully read the Invitation for Bids, Instructions to Bidders, and the Technical Specifications. A Modified Bid Schedule shall not reveal the Bid price but shall provide the addition (+) or subtraction (-) to the line by line pay item so that the final prices will not be known by the OWNER until the sealed Bid is opened. Modifications shall include both the modification of the unit bid price and the total modification of each pay item modified. Changes to the adjusted total bid amount will be computed by the Owner.

WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID - BASE BID

Pay Item No.	Pay Item Description	REVISION TO	REVISION TO
		UNIT PRICE BID AMOUNT +/-	TOTAL LINE ITEM BID AMOUNT +/-
01505.1	Fire Alarm System, Mobilization		
01505.2	Fire Alarm System Mobilization for Elevator Modernization Project		
02220.01	Fire Alarm System, Demolition		
16000.1	Fire Alarm System, New & Complete		

WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID - ALTERNATE A

Pay Item No.	Pay Item Description	REVISION TO	REVISION TO
		UNIT PRICE BID AMOUNT +/-	TOTAL LINE ITEM BID AMOUNT +/-

WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID - ALTERNATE B

Pay Item No.	Pay Item Description	REVISION TO	REVISION TO
		UNIT PRICE BID AMOUNT +/-	TOTAL LINE ITEM BID AMOUNT +/-

WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID - ALTERNATE C

Pay Item No.	Pay Item Description	REVISION TO	REVISION TO
		UNIT PRICE BID AMOUNT +/-	TOTAL LINE ITEM BID AMOUNT +/-

BIDDER NAME: _____
BIDDER SIGNATURE: _____
BID MODIFICATION DATE: _____
BIDDER'S TELEPHONE: _____

END OF SECTION

SECTION 00360 - SUBCONTRACTOR REPORT

LIST OF SUBCONTRACTORS

The apparent low Bidder must submit a list of Subcontractors that the Bidder proposes to use in the performance of this contract by close of business on the fifth calendar day following the posting of the bid tabulations. If the fifth calendar day falls on a weekend or holiday, the report is due by close of business on the next business day following the weekend or holiday. The list must include each Subcontractor's name, address, location, evidence of valid Alaska Business License, and valid Alaska Contractor's Registration under AS 08.18. *If no Subcontractors are to be utilized in the performance of the WORK, write in ink or type "NONE" on line (1) below.*

<u>SUBCONTRACTOR</u>	¹ AK Contractor <u>License No.</u>	¹ <u>Contact Name</u>	<u>Type of</u>	<u>Contract</u>	<input type="checkbox"/>
<u>ADDRESS</u>	² AK Business <u>License No.</u>	² <u>Phone No.</u>	<u>Work</u>	<u>Amount</u>	<input checked="" type="checkbox"/> if <u>DBE</u>
1. _____ _____ _____	1 _____ 2 _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>
2. _____ _____ _____	1 _____ 2 _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>
3. _____ _____ _____	1 _____ 2 _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>
4. _____ _____ _____	1 _____ 2 _____	_____ _____	_____ _____	\$ _____	<input type="checkbox"/>

I certify that the above listed Alaska Business License(s) and CONTRACTOR Registration(s), if applicable, were valid at the time Bids were opened for this Project.

CONTRACTOR, Authorized Signature

CONTRACTOR, Printed Name

SECTION 00360 - SUBCONTRACTOR REPORT

- A. A Bidder may replace a listed Subcontractor if the Subcontractor:
1. fails to comply with AS 08.18;
 2. files for bankruptcy or becomes insolvent;
 3. fails to execute a contract with the Bidder involving performance of the WORK for which the Subcontractor was listed and the Bidder acted in good faith;
 4. fails to obtain bonding;
 5. fails to obtain insurance acceptable to the OWNER;
 6. fails to perform the contract with the Bidder involving work for which the Subcontractor was listed;
 7. must be substituted in order for the CONTRACTOR to satisfy required state and federal affirmative action requirements;
 8. refuses to agree or abide with the Bidder's labor agreement; or
 9. is determined by the OWNER not to be a responsible Bidder.
- B. If a Bidder fails to list a Subcontractor or lists more than one Subcontractor for the same portion of WORK, the Bidder shall be considered to have agreed to perform that portion of WORK without the use of a Subcontractor and to have represented the Bidder to be qualified to perform that WORK.
- C. A Bidder who attempts to circumvent the requirements of this section by listing as a Subcontractor another contractor who, in turn, sublets the majority of the WORK required under the contract violates this section.
- D. If a contract is awarded to a Bidder who violates this section, the OWNER may:
1. cancel the contract; or
 2. after notice and a hearing, assess a penalty on the Bidder in an amount that does not exceed 10 percent of the value of the subcontract at issue.
- E. For contract award, the apparent low Bidder must submit one copy of each subcontract, to the OWNER, for WORK.
- F. An apparent low Bidder who fails to submit a completed Subcontractor Report within the time specified in this section will be found to be not a responsible Bidder and may be required to forfeit the Bid security. The OWNER will then consider the next lowest Bidder for award of the contract.

END OF SECTION

SECTION 00432 – UNIT PRICES

DOCUMENT 00432 - UNIT PRICES FORM

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: Wrangell High School and Middle School Fire Alarm Replacement Re-Bid.
- C. Project Location: 312 Reid St, Wrangell, Alaska 99929
- D. Owner: City and Borough of Wrangell.
- E. Engineer: Mark Morris, P.E., Morris Engineering Group, LLC.

1.2 BID FORM SUPPLEMENT

- A. This form is required to be attached to the Bid Form.
- B. The undersigned Bidder proposes the amounts below be added to or deducted from the Contract Sum on performance and measurement of the individual items of Work
- C. Bidder shall indicate "NOT APPLICABLE."

1.3 UNIT PRICES

- A. Unit-Price No. 1: Addition of one (1) fire rated ceiling access hatch per the Plans, including all labor required.
 - 1. _____ dollars (\$_____) per unit.
- B. Unit-Price No. 2: Addition of one (1) fire alarm speaker strobe, wall mounted, including addressable base, 50 feet of fire alarm cable, five j-hooks, and all labor required.
 - 1. _____ dollars (\$_____) per unit.
- C. Unit-Price No. 3: Addition of one (1) fire alarm smoke detector, ceiling mounted, including addressable base, 50 feet of fire alarm cable, five j-hooks, and all labor required.
 - 1. _____ dollars (\$_____) per unit.

1.4 SUBMISSION OF BID SUPPLEMENT

- A. Respectfully submitted this _____ day of _____, 2022.
- B. Submitted By: _____ (Insert name of firm or corporation).

SECTION 00432 – UNIT PRICES

- C. Authorized Signature: _____ (Handwritten signature).
- D. Signed By: _____ (Type or print name).
- E. Title: _____ (Owner/Partner/President/Vice President).

END OF SECTION

SECTION 00500 - AGREEMENT

THIS AGREEMENT is between THE CITY & BOROUGH OF WRANGELL (hereinafter called OWNER) and _____ (hereinafter called CONTRACTOR) OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK.

- A. CONTRACTOR shall complete the WORK as specified or as indicated under the Bid Schedule of the OWNER's Contract Documents entitled **WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT REBID**. The WORK is generally described as follows: Complete replacement of the existing fire alarm system at the Wrangell High School and Middle School. See Section 00030 – Notice Inviting Bids for a complete project description.
- B. Alternates: Contractor shall provide prices for Alternates A, B, C per details provided within the contract documents.

ARTICLE 2. CONTRACT COMPLETION TIME.

Substantial completion by August 15, 2023.

ARTICLE 3. DATE OF AGREEMENT

The date of this Agreement will be the later of the date of the Borough Manager signature on page three of this section and the signature of the CONTRACTOR authorized representative.

ARTICLE 4. LIQUIDATED DAMAGES.

OWNER and the CONTRACTOR recognize that time is of the essence of this Agreement and that the OWNER will suffer financial loss if the WORK is not completed within the time specified in Article 2 herein, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense, and difficulties involved in proving in a legal proceeding the actual damages suffered by the OWNER if the WORK is not completed on time. Accordingly, instead of requiring any such proof, the OWNER and the CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) the CONTRACTOR shall pay the OWNER \$1,500.00 for each Calendar Day that expires after the substantial completion time specified in Article 2 above. The amount of liquidated damages specified above is agreed to be a reasonable estimate based on all facts known as of the date of this Agreement.

ARTICLE 5. CONTRACT PRICE.

OWNER shall pay CONTRACTOR for completion of the WORK in accordance with the Contract Documents in the amount set forth in the Bid Schedule. The CONTRACTOR agrees to accept as full and complete payment for all WORK to be done in this contract for: _____ those Unit Price amounts as set forth in the Bid Schedule in the Contract Documents for this Project.

The total amount of this contract shall be _____, except as adjusted in accordance with the provisions of the Contract Documents.

ARTICLE 6. PAYMENT PROCEDURES.

SECTION 00500 - AGREEMENT

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by the ENGINEER as provided in the General Conditions.

Progress payments will be paid in full in accordance with Article 14 of the General Conditions until ninety (90) percent of the Contract Price has been paid. The remaining ten (10) percent of the Contract Price may be retained, in accordance with applicable Alaska State Statutes, until final inspection, completion, and acceptance of the Project by the OWNER.

ARTICLE 7. CONTRACT DOCUMENTS.

The Contract Documents which comprise the entire Agreement between OWNER and CONTRACTOR concerning the WORK consist of this Agreement (pages 00500-1 to 00500-6, inclusive) and the following sections of the Contract Documents:

- Table of Contents
- Notice Inviting Bids
- Instructions to Bidders
- Bid
- Bid Schedule and Modified Bid Schedule (if applicable)
- Bid Bond
- Subcontractor Report
- Performance Bond
- Payment Bond
- Insurance Certificate(s)
- General Conditions
- Supplementary General Conditions
- Alaska Labor Standards, Reporting, and Prevailing Wage Determination
- Permits
- Technical Specifications as listed in the Table of Contents
- _____ Drawings consisting of ____ sheets, as listed in the Table of Contents
- _____ Drawings consisting of ____ sheets, as listed in the Table of Contents
- Addenda numbers ___ to ___, inclusive.
- Change Orders which may be delivered or issued after the Date of the Agreement and which are not attached hereto

There are no Contract Documents other than those listed in this Article 7. The Contract Documents may only be amended by Change Order as provided in Paragraph 3.3 of the General Conditions.

ARTICLE 8. MISCELLANEOUS.

Terms used in this Agreement, which are defined in Article 1 of the General Conditions, will have the meanings indicated in the General Conditions.

No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such written consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents. CONTRACTOR understands and agrees that the Borough will not accept any assignment of this Contract to an LLC unless

SECTION 00500 - AGREEMENT

all the members of the LLC sign as guarantors of performance of this Contract.

OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents. This Agreement shall be governed by the laws of the State of Alaska. The Superior Court for the State of Alaska, First Judicial District at Wrangell, Alaska, shall be the exclusive jurisdiction and venue for any action of any kind an any nature arising out of or relating to this Agreement and all Contract documents or for any action of any kind and any nature arising out of or related to the performance of non-performance of the CONTRACTOR, and CONTRACTOR’S employees, subcontractors, consultants and representatives.

The CONTRACTOR acknowledges that the CONTRACTOR has read and understands the terms of this Agreement and the terms and conditions of all the Contract documents listed in this Agreement and has had the opportunity to review the Agreement with counsel of his/her choice, and is executing this Agreement of his/her own free will. CONTRACTOR acknowledges and agrees that CONTRACTOR is not relying on any representations by any Borough employee, the Mayor, an assembly member, the borough attorney, the borough manager or any consultant of the Borough in deciding to enter this Agreement and perform this project.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have caused this Agreement to be executed on the date listed below by OWNER.

OWNER:

CONTRACTOR:

City & Borough of Wrangell

(Company Name)

(Signature)

(Signature)

By: Jeff Good, Borough Manager
(Printed Name)

By: _____
(Printed Name, Authority or Title)

Date: _____

Date: _____

Address: P.O. Box 531

Address: _____

Wrangell, Alaska 99929

907-874-2381 907-874-3952
(Telephone) (Fax)

(Telephone) (Fax)

(E-mail address)

Owner Attest:

Contractor Attest:

By: _____

By: _____

SECTION 00500 - AGREEMENT

Kim Lane, Borough Clerk

Name/Title:

**CERTIFICATE
(if Corporation)**

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Board of Directors of the _____ a corporation existing under the laws of the State of _____, held on _____, 20____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as _____ President of the Corporation, be and is hereby authorized to **execute the Agreement** with OWNER and this corporation and that the execution thereof, attested by the Secretary of the Corporation, and with the Corporate Seal affixed, shall be the official act and deed of this Corporation.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Corporation this _____ day of _____, 20_____.

Secretary

(SEAL)

SECTION 00500 - AGREEMENT

**CERTIFICATE
(if Partnership)**

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Partners of the
_____ a partnership existing under the laws of the State
of _____, held on _____, 20____, the following resolution was duly
passed and adopted:

"RESOLVED, that _____, as _____ of the Partnership, be and is
hereby authorized to **execute the Agreement** with the OWNER and this partnership and that the
execution thereof, attested by the _____ shall be the official act and deed of
this Partnership."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of _____,
20_____.

Secretary

(SEAL)

SECTION 00500 - AGREEMENT

**CERTIFICATE
(if Joint Venture)**

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Principals of the

_____ a joint venture existing under the laws of the

State of _____, held on _____, 20____, the following resolution was duly passed and adopted:

"RESOLVED, that _____, as _____ of the Joint Venture, be and is hereby authorized to **execute the Agreement** with the OWNER and this joint venture and that the execution thereof, attested by the _____ shall be the official act and deed of this Joint Venture."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of _____, 20____.

Secretary

(SEAL)

SECTION 00500 - AGREEMENT

CERTIFICATE
(If Limited Liability Company)

STATE OF)
) SS:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the members of the

_____, a Limited Liability Company (LLC) existing under the laws of the State of _____, held on _____, 20____, the following resolution was duly passed and adopted:

"RESOLVED, that _____, acting as _____ of the Limited Liability Company, is hereby authorized by all Members to **execute the Agreement** with the OWNER and this Limited Liability Company and that the execution thereof, attested by the _____ shall be the official act and deed of this Limited liability Company."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of _____, 20_____.

Secretary

(SEAL)

By: _____
(Signature of authorized Member)

(Title of person signing)

END OF SECTION

SECTION 00610 - PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: That we _____
(Name of Contractor)

_____ a _____
(Corporation, Partnership, Individual)

hereinafter called "Principal" and _____
(Surety)

of _____, State of _____ hereinafter called the "Surety," are held and
firmly bound to the CITY & BOROUGH of WRANGELL, ALASKA hereinafter called "OWNER,"
(Owner) (City and State)

for the penal sum of _____

_____ dollars (\$ _____) in lawful money of the
United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs,
executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the CONTRACTOR has entered
into a certain contract with the OWNER, the effective date of which is _____, a
copy of which is hereto attached and made a part hereof for the construction of:

**WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT
REBID**

NOW, THEREFORE, if the Principal shall truly and faithfully perform its duties, all the
undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof,
and any extensions thereof, which may be granted by the OWNER, with or without notice to the Surety,
and if it shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and
save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so,
and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making
good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that
no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be
performed thereunder or the specifications accompanying the same shall in any wise affect its obligation
on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition
to the terms of the contract or to the WORK or to the Specifications.

PROVIDED, FURTHER, that no final settlement between the OWNER and the Principal shall
abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is issued in two (2) identical counterparts, each one of
which shall be deemed an original.

SECTION 00610 - PERFORMANCE BOND

CONTRACTOR:

By: _____
(Signature)

(Printed Name)

(Company Name)

(Street or P.O. Box)

(City, State, Zip Code)

SURETY:

By: _____
(Signature of Attorney-in-Fact)

Date Issued: _____

(Printed Name)

(Company Name)

(Street or P.O. Box)

(City, State, Zip Code)

(Affix SURETY'S SEAL)

NOTE: If CONTRACTOR is Partnership, all Partners must execute bond.

END OF SECTION

SECTION 00620 - PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: That we _____
(Name of Contractor)

_____ a _____
(Corporation, Partnership, Individual)

hereinafter called "Principal" and _____
(Surety)

of _____, State of _____ hereinafter called the "Surety," are held and
firmly bound to the CITY & BOROUGH of WRANGELL, ALASKA hereinafter called "OWNER,"
(Owner) (City and State)

for the penal sum of _____

_____ dollars (\$ _____) in lawful money of the
United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs,
executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the CONTRACTOR has
entered into a certain contract with the OWNER, the effective date of which is
_____, a copy of which is hereto attached and made a part hereof for the
construction of:

**WRANGELL HIGH SCHOOL AND MIDDLE SCHOOL FIRE ALARM REPLACEMENT
REBID**

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,
Subcontractors, and corporations furnishing materials for, or performing labor in the prosecution of the
WORK provided for in such contract, and any authorized extension or modification thereof, including all
amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and
tools, consumed or used in connection with the construction of such WORK, and all insurance premiums
on said work, and for all labor performed in such WORK, whether by Subcontractor or otherwise, then
this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that
no change, extension of time, alteration or addition to the terms of the contract or to the work to be
performed thereunder or the specifications accompanying the same shall in any wise affect its obligation
on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition
to the terms of the contract or to the WORK or to the Specifications.

PROVIDED, FURTHER, that no final settlement between the OWNER and the Principal shall
abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

SECTION 00620 - PAYMENT BOND

IN WITNESS WHEREOF, this instrument is issued in two (2) identical counterparts, each one of which shall be deemed an original.

CONTRACTOR:

By: _____
(Signature)

(Printed Name)

(Company Name)

(Street or P.O. Box)

(City, State, Zip Code)

SURETY:

By: _____
(Signature of Attorney-in-Fact)

Date Issued: _____

(Printed Name)

(Company Name)

(Street or P.O. Box)

(City, State, Zip Code)

(Affix SURETY'S SEAL)

NOTE: If CONTRACTOR is Partnership, all Partners must execute bond.

END OF SECTION

SECTION 00700 - GENERAL CONDITIONS

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ARTICLE 1 DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof. Where an entire word is capitalized in the definitions and is found not capitalized in the Contract Documents it has the ordinary dictionary definition.

Addenda - Written or graphic instruments issued prior to the opening of Bids which make additions, deletions, or revisions to the Contract Documents.

Agreement - The written contract between the OWNER and the CONTRACTOR covering the WORK to be performed; other documents are attached to the Agreement and made a part thereof as listed out in the Agreement.

Application for Payment - The form furnished by the ENGINEER which is to be used by the CONTRACTOR to request progress or final payment and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

Asbestos - Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

Bid - The offer or proposal of the Bidder submitted on the prescribed form setting forth the price or prices for the WORK.

Bonds - Bid, Performance, and Payment Bonds and other instruments which protect against loss due to inability or refusal of the CONTRACTOR to perform its contract.

Project Manager - The authorized representative of the City and Borough of Wrangell, as OWNER, who is responsible for administration of the contract.

Change Order - A document recommended by the ENGINEER, which is signed by the CONTRACTOR and the OWNER and authorizes an addition, deletion, or revision in the WORK, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.

Contract Documents - The Table of Contents, Notice Inviting Bids, Instructions to Bidders, Bid Forms (including the Bid, Bid Schedule(s), Information Required of Bidder, Bid Bond, and all required certificates and affidavits), Agreement, Performance Bond, Payment Bond, General Conditions, Supplementary General Conditions, Technical Specifications, Drawings, Permits, and all Addenda, and Change Orders executed pursuant to the provisions of the Contract Documents.

Contract Price - The total monies payable by the OWNER to the CONTRACTOR under the terms and conditions of the Contract Documents.

Contract Time - The number of successive calendar days stated in the Contract Documents for the completion of the WORK.

CONTRACTOR - The individual, partnership, corporation, joint-venture or other legal entity with whom the OWNER has executed the Agreement.

Day - A calendar day of 24 hours measured from midnight to the next midnight.

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Defective WORK - WORK that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents; or WORK that has been damaged prior to the ENGINEER's recommendation of final payment.

Drawings - The Drawings, plans, maps, profiles, diagrams, and other graphic representations which indicate the character, location, nature, extent, and scope of the WORK and which have been prepared by the ENGINEER and are referred to in the Contract Documents. Shop Drawings are not within the meaning of this paragraph.

Effective Date of the Agreement - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

Engineer of Record - The individual, partnership, corporation, joint-venture or other legal entity named as such in the Contract Documents.

ENGINEER - The ENGINEER is the firm or person(s) selected by the OWNER to perform the duties of project inspection and management. Wrangell will inform the CONTRACTOR of the identity of the ENGINEER at or before the Notice to Proceed.

Field Order - A written order issued by the ENGINEER which may or may not involve a change in the WORK.

General Requirements - Division 1 of the Technical Specifications.

Hazardous Waste - The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 9603) as amended from time to time.

Holidays - Legal holidays occur on:

1. New Year's Day - January 1
2. Martin Luther King's Birthday - Third Monday in January
3. President's Day - Third Monday in February
4. Seward's Day - Last Monday in March
5. Memorial Day - Last Monday in May
6. Independence Day - July 4
7. Labor Day - First Monday in September
8. Alaska Day - October 18
9. Veteran's Day - November 11
10. Thanksgiving Day - Fourth Thursday and the following Friday in November
11. Christmas Day - December 25

If any holiday listed above falls on a Saturday, Saturday and the preceding Friday are both legal holidays. If the holiday should fall on a Sunday, Sunday and the following Monday are both legal holidays.

Inspector - The authorized representative of the ENGINEER assigned to make detailed inspections for conformance to the Contract Documents. Any reference to the Resident Project Representative in this document shall mean the Inspector.

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Laws and Regulations; Laws or Regulations - Any and all applicable laws, rules, regulations, ordinances, codes, and/or orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

Mechanic's Lien - A form of security, an interest in real property, which is held to secure the payment of an obligation. When referred to in these Contract Documents, "Mechanic's Lien" or "lien" means "Stop Notice".

Milestone - A principal event specified in the Contract Documents relating to an intermediate completion date of a portion of the WORK, or a period of time within which the portion of the WORK should be performed prior to Substantial Completion of all the WORK.

Notice of Intent to Award - The written notice by the OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the requirements listed therein, within the time specified, the OWNER will enter into an Agreement.

Notice of Award - The written notice by the OWNER to the apparent successful bidder stating that the apparent successful bidder has complied with all conditions for award of the contract.

Notice of Substantial Completion - A form signed by the ENGINEER and the CONTRACTOR recommending to the OWNER that the WORK is Substantially Complete and fixing the date of Substantial Completion. After acceptance of the WORK by the OWNER's governing body, the form is signed by the OWNER and filed with the County Recorder. This filing starts the 30 day lien filing period on the WORK.

Notice to Proceed - The written notice issued by the OWNER to the CONTRACTOR authorizing the CONTRACTOR to proceed with the WORK and establishing the date of commencement of the Contract Time.

OWNER - The City and Borough of Wrangell, acting through its legally designated officials, officers, or employees.

Partial Utilization - Use by the OWNER or a substantially completed part of the WORK for the purpose for which it is intended prior to Substantial Completion of all the WORK.

PCB's - Polychlorinated biphenyls.

PERMITTEE – CONTRACTOR.

Petroleum - Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.

Project - The total construction of which the WORK to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

Radioactive Material - Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

SECTION 00700 - GENERAL CONDITIONS

Shop Drawings - All Drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for the CONTRACTOR and submitted by the CONTRACTOR, to the ENGINEER, to illustrate some portion of WORK.

Specifications - (Same definition as for Technical Specifications hereinafter).

Stop Notice - A legal remedy for Subcontractors and suppliers who contribute to public works, but who are not paid for their WORK, which secures payment from construction funds possessed by the OWNER. For public property, the Stop Notice remedy is designed to substitute for mechanic's lien rights.

Sub-Consultant - The individual, partnership, corporation, joint-venture or other legal entity having a direct contract with ENGINEER, or with any of its Consultants to furnish services with respect to the Project.

Subcontractor - An individual, partnership, corporation, joint-venture or other legal entity having a direct contract with the CONTRACTOR, or with any of its Subcontractors, for the performance of a part of the WORK at the site.

Substantial Completion - Refers to when the WORK has progressed to the point where, in the opinion of the ENGINEER as evidenced by Notice of Completion as applicable, it is sufficiently complete, in accordance with the Contract Documents, so that the WORK can be utilized for the purposes for which it is intended; or if no such notice is issued, when final payment is due in accordance with Paragraph 14.8. The terms "substantially complete" and "substantially completed" as applied to any WORK refer to substantial completion thereof.

Supplementary General Conditions (SGC) - The part of the Contract Documents which make additions, deletions, or revisions to these General Conditions.

Supplier - A manufacturer, fabricator, supplier, distributor, materialman, or vendor.

Technical Specifications - Divisions 1 through 16 of the Contract Documents consisting of the General Requirements and written technical descriptions of products and execution of the WORK.

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

WORK - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. WORK is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.

ARTICLE 2 PRELIMINARY MATTERS

2.1 DELIVERY OF BONDS/INSURANCE CERTIFICATES. When the CONTRACTOR delivers the signed Agreements to the OWNER, the CONTRACTOR shall also deliver to the OWNER such Bonds and Insurance Policies and Certificates as the CONTRACTOR may be required to furnish in accordance with the Contract Documents.

SECTION 00700 - GENERAL CONDITIONS

- 2.2 **COPIES OF DOCUMENTS.** The OWNER shall furnish to the CONTRACTOR the required number of copies of the Contract Documents specified in the Supplementary General Conditions.
- 2.3 **COMMENCEMENT OF CONTRACT TIME; NOTICE TO PROCEED.** The Contract Time will start to run on the commencement date stated in the Notice to Proceed.
- 2.4 **STARTING THE WORK**
- A. The CONTRACTOR shall begin to perform the WORK within 10 days after the commencement date stated in the Notice to Proceed, but no WORK shall be done at the site prior to the commencement date, including mobilization.
 - B. Before undertaking each part of the WORK, the CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. The CONTRACTOR shall promptly report in writing to the ENGINEER any conflict, error, or discrepancy which the CONTRACTOR may discover and shall obtain a written interpretation or clarification from the ENGINEER before proceeding with any WORK affected thereby.
 - C. The CONTRACTOR shall submit to the ENGINEER for review those documents called for under Section 01300 - Contractor Submittals in the General Requirements.
- 2.5 **PRE-CONSTRUCTION CONFERENCE.** The CONTRACTOR is required to attend a Pre-Construction Conference. This conference will be attended by the ENGINEER and others as appropriate in order to discuss the WORK in accordance with the applicable procedures specified in the General Requirements, Section 01010 - Summary of Work in the General Requirements.

ARTICLE 3 CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

- 3.1 **INTENT**
- A. The Contract Documents comprise the entire Agreement between the OWNER and the CONTRACTOR concerning the WORK. The Contract Documents shall be construed as a whole in accordance with Alaska Law.
 - B. It is the intent of the Contract Documents to describe the WORK, functionally complete, to be constructed in accordance with the Contract Documents. Any work, materials, or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for. When words or phrases which have a well-known technical or construction industry or trade meaning are used to describe work, materials, or equipment such words or phrases shall be interpreted in accordance with that meaning, unless a definition has been provided in Article 1 of the General Conditions. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the OWNER,

SECTION 00700 - GENERAL CONDITIONS

the CONTRACTOR, or the ENGINEER or any of their consultants, agents, or employees from those set forth in the Contract Documents.

- C. If, during the performance of the WORK, CONTRACTOR discovers any conflict, error, ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such Law or Regulation applicable to the performance of the WORK or of any such standard, specification, manual or code or of any instruction of any Supplier referred to in paragraph 6.5, the CONTRACTOR shall report it to the ENGINEER in writing at once, and the CONTRACTOR shall not proceed with the WORK affected thereby (except in an emergency as authorized by the ENGINEER) until a clarification field order, or Change Order to the Contract Documents has been issued.

3.2 ORDER OF PRECEDENCE OF CONTRACT DOCUMENTS

- A. In resolving conflicts resulting from, errors, or discrepancies in any of the Contract Documents, the order of precedence shall be as follows:

1. Permits from other agencies as may be required by law, excepting the definition of "PERMITEE" in these permits.
2. Field Orders
3. Change Orders
4. ENGINEER's written interpretations and clarifications.
5. Agreement
6. Addenda
7. CONTRACTOR's Bid (Bid Form)
8. Supplementary General Conditions
9. Notice Inviting Bids
10. Instructions to Bidders
11. General Conditions
12. Technical Specifications
13. Drawings

- B. With reference to the Drawings the order of precedence is as follows:

1. Figures govern over scaled dimensions
2. Detail Drawings govern over general Drawings
3. Addenda/ Change Order drawings govern over Contract Drawings
4. Contract Drawings govern over standard drawings

- 3.3 AMENDING AND SUPPLEMENTING CONTRACT DOCUMENTS. The Contract Documents may be amended to provide for additions, deletions, and revisions in the WORK or to modify the terms and conditions thereof by a Change Order (pursuant to Article 10 CHANGES IN THE WORK).

- 3.4.0 REUSE OF DOCUMENTS. Neither the CONTRACTOR, nor any Subcontractor or Supplier, nor any other person or organization performing any of the WORK under a contract with the OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Technical Specifications, or other documents used on the WORK, and they shall not reuse any of them on the extensions of the Project or any other project without written consent of the OWNER.

SECTION 00700 - GENERAL CONDITIONS

ARTICLE 4 AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS

4.1 AVAILABILITY OF LANDS. The OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the WORK is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of the CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the OWNER, unless otherwise provided in the Contract Documents. Nothing contained in the Contract Documents shall be interpreted as giving the CONTRACTOR exclusive occupancy of the lands or rights-of-way provided. The CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment; provided, that the CONTRACTOR shall not enter upon nor use any property not under the control of the OWNER until a written temporary construction easement, lease or other appropriate agreement has been executed by the CONTRACTOR and the property owner, and a copy of said agreement furnished to the ENGINEER prior to said use; and, neither the OWNER nor the ENGINEER shall be liable for any claims or damages resulting from the CONTRACTOR's unauthorized trespass or use of any such properties.

4.2 PHYSICAL CONDITIONS - SUBSURFACE AND EXISTING STRUCTURES

A. Explorations and Reports. Reference is made to SGC 4.2 Physical Conditions of the Supplementary General Conditions for identification of those reports of explorations and tests of sub-surface conditions at the site that have been utilized by the ENGINEER in the preparation of the Contract Documents. The CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, however, reports are not to be considered complete or comprehensive and nontechnical data, interpretations, and opinions contained in such reports shall be verified by the CONTRACTOR prior to bid. The CONTRACTOR is responsible for any further explorations or tests that may be necessary and any interpretation, interpolation, or extrapolation that it makes of any information shown in such reports.

B. Existing Structures. Reference is made to SGC 4.2 Physical Conditions of the Supplementary General Conditions for identification of those drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Utilities referred to in Paragraph 4.4 herein) which are at or contiguous to the site that have been utilized by the ENGINEER in the preparation of the Contract Documents. The CONTRACTOR may rely upon the accuracy of the technical data contained in such drawings, however, nontechnical data, interpretations, and opinions contained in such drawings shall be verified by the CONTRACTOR prior to bid. The CONTRACTOR is also responsible for any interpretation, interpolation, or extrapolation that it makes of any information shown in such drawings.

4.3 DIFFERING SITE CONDITIONS

A. The CONTRACTOR shall promptly upon discovery (but in no event later than 14 days thereafter) and before the following conditions are disturbed, notify the ENGINEER, in writing of any:

1. Material that the CONTRACTOR believes may be material that is hazardous waste, as defined in Article 1 of these General Conditions, or asbestos, PCB's,

SECTION 00700 - GENERAL CONDITIONS

petroleum or any other substance or material posing a threat to human or to the environment.

2. Subsurface or latent physical conditions at the site differing from those indicated in the reports referenced in SGC 4.2 Physical Conditions.
 3. Unknown physical conditions at the site of any unusual nature, differing materially from those physical conditions ordinarily encountered in the area of project and generally recognized as inherent in the area of the project and as ordinarily encountered and inherent in WORK of the character provided for in the contract. Weather conditions specifically do not constitute any change condition under this section.
- B. The OWNER shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the CONTRACTOR's cost of, or the time required for, performance of any part of the WORK shall issue a Change Order under the procedures described in the contract.
- C. In the event that a dispute arises between the OWNER and the CONTRACTOR whether the conditions materially differ, or involved hazardous waste or other materials listed above, or cause a decrease or increase in the CONTRACTOR's cost of, or time required for, performance of any part of the WORK, the CONTRACTOR shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all WORK to be performed under the contract. The CONTRACTOR and OWNER shall retain any and all rights provided either by contract or by Law which pertain to the resolution of disputes and protests between the contracting parties.

4.4 PHYSICAL CONDITIONS - UNDERGROUND UTILITIES

- A. Indicated. The information and data indicated in the Contract Documents with respect to existing Underground Utilities at or contiguous to the site are based on information and data furnished to the OWNER or the ENGINEER by the owners of such Underground Utilities or by others. Unless it is expressly provided in the Supplementary General Conditions and/or Section 01530 - Protection and Restoration of Existing Facilities of the General Requirements, the OWNER and the ENGINEER shall not be responsible for the accuracy or completeness of any such information or data, and the CONTRACTOR shall have full responsibility for reviewing and checking all such information and data, for locating all Underground Utilities indicated in the Contract Documents, for coordination of the WORK with the owners of such Underground Utilities during construction, for the safety and protection thereof and repairing any damage thereto resulting from the WORK, the cost of which will be considered as having been included in the Contract Price.
- B. Not Indicated. If an Underground Utility is uncovered or revealed at or contiguous to the site which was not indicated in the Contract Documents and which the CONTRACTOR could not reasonably have been expected to be aware of, the CONTRACTOR shall identify the owner of such Underground Utility and give written notice thereof to that owner and shall notify the ENGINEER in accordance with the requirements of the Supplementary General Conditions and Section 01530 - Protection and Restoration of Existing Facilities of the General Requirements.

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4.5 REFERENCE POINTS

- A. The ENGINEER will provide one benchmark, near or on the site of the WORK, and will provide two points near or on the site to establish a base line for use by the CONTRACTOR for alignment control. Unless otherwise specified in the General Requirements, the CONTRACTOR shall furnish all other lines, grades, and benchmarks required for proper execution of the WORK.
- B. The CONTRACTOR shall preserve all bench marks, stakes, and other survey marks, and in case of their removal or destruction by its own employees or by its Subcontractor's employees, the CONTRACTOR shall be responsible for the accurate replacement of such reference points by personnel qualified under the Alaska Statute governing the licensing of Architects, Engineers, and Land Surveyors.

ARTICLE 5 BONDS AND INSURANCE

5.1 PERFORMANCE, PAYMENT, AND OTHER BONDS

- A. The CONTRACTOR shall furnish, when required, Performance and Payment Bonds on forms provided by the OWNER for the penal sums of 100% of the amount of the Bid award. The surety on each bond may be any corporation or partnership authorized to do business in the State of Alaska as an insurer under AS 21.09. These bonds shall remain in effect for 12 months after the date of final payment and until all obligations and liens under this contract have been satisfied. The CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary General Conditions. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.
- B. If the surety on any Bond furnished by the CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the WORK is located, the CONTRACTOR shall within 7 days thereafter substitute another Bond and Surety, which must be acceptable to the OWNER.
- C. All Bonds required by the Contract Documents to be purchased and maintained by CONTRACTOR shall be obtained from surety companies that are duly licensed or authorized in the State of Alaska to issue Bonds for the limits so required. Such surety companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary General Conditions. The City Manager may, on behalf of the OWNER, notify the surety of any potential default or liability.

5.2 INSURANCE

- A. The CONTRACTOR shall purchase and maintain the insurance required under this paragraph. Such insurance shall include the specific coverages set out herein and be written for not less than the limits of liability and coverages provided in the Supplementary General Conditions, or required by law, whichever are greater. All

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insurance shall be maintained continuously during the life of the Agreement up to the date of Final Completion and at all times thereafter when the CONTRACTOR may be correcting, removing, or replacing Defective WORK in accordance with Paragraph 13.6, but the CONTRACTOR's liabilities under this Agreement shall not be deemed limited in any way to the insurance coverage required.

- B. All insurance required by the Contract Documents to be purchased and maintained by the CONTRACTOR shall be obtained from insurance companies that are duly licensed or authorized in the State of Alaska to issue insurance policies for the limits and coverages so required. Such insurance companies shall have a current Best's Rating of at least an "A" (Excellent) general policy holder's rating and a Class VII financial size category and shall also meet such additional requirements and qualifications as may be provided in the Supplementary General Conditions.
- C. The City and Borough of Wrangell shall be listed as an additional insured on the CONTRACTOR'S general liability insurance policy and the CONTRACTOR'S pollution liability policy. CONTRACTOR shall furnish certificates to the Borough of such insurance and showing the Borough as an additional insured within ten days of receiving the Notice to Proceed. Failure to comply with this provision constitutes a material breach and default of the Agreement.

ARTICLE 6 CONTRACTOR'S RESPONSIBILITIES

6.1 SUPERVISION AND SUPERINTENDENCE

- A. The CONTRACTOR shall supervise, inspect, and direct the WORK competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the WORK in accordance with the Contract Documents. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incidental thereto. The CONTRACTOR shall be responsible to see that the completed WORK complies accurately with the Contract Documents.
- B. The CONTRACTOR shall designate in writing and keep on the WORK site at all times during its progress a technically qualified, English-speaking superintendent, who is an employee of the CONTRACTOR and who shall not be replaced without written notice to the OWNER and the ENGINEER. The superintendent will be the CONTRACTOR's representative at the site and shall have authority to act on behalf of the CONTRACTOR. All communications given to the superintendent shall be as binding as if given to the CONTRACTOR. The CONTRACTOR shall issue all its communications to the OWNER through the ENGINEER and the ENGINEER only.
- C. The CONTRACTOR's superintendent shall be present at the site of the WORK at all times while WORK is in progress. Failure to observe this requirement shall be considered suspension of the WORK by the CONTRACTOR until such time as such superintendent is again present at the site.

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6.2 LABOR, MATERIALS, AND EQUIPMENT

- A. The CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the WORK and perform construction as required by the Contract Documents. The CONTRACTOR shall furnish, erect, maintain, and remove the construction plant and any temporary works as may be required. The CONTRACTOR shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the WORK or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all WORK at the site shall be performed during regular working hours, and the CONTRACTOR will not permit overtime work or the performance of work on Saturday, Sunday, or any legal holiday without the OWNER's written consent. The CONTRACTOR shall apply for this consent through the ENGINEER.
- B. Except as otherwise provided in this Paragraph, the CONTRACTOR shall receive no additional compensation for overtime work, i.e., work in excess of 8 hours in any one calendar day or 40 hours in any one calendar week, even though such overtime work may be required under emergency conditions and may be ordered by the ENGINEER in writing. Additional compensation will be paid the CONTRACTOR for overtime work only in the event extra work is ordered by the ENGINEER and the Change Order specifically authorizes the use of overtime work and then only to such extent as overtime wages are regularly being paid by the CONTRACTOR for overtime work of a similar nature in the same locality.
- C. All costs of inspection and testing performed during overtime work by the CONTRACTOR which is allowed solely for the convenience of the CONTRACTOR shall be borne by the CONTRACTOR. The OWNER shall have the authority to deduct the cost of all such inspection and testing from any partial payments otherwise due to the CONTRACTOR.
- D. Unless otherwise specified in the Contract Documents, the CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up, and completion of the WORK, including all mobilization and demobilization.
- E. All materials and equipment to be incorporated into the WORK shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of the OWNER. If required by the ENGINEER, the CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provisions of any such instructions will be effective to assign to the ENGINEER, or any of the ENGINEER consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the WORK or any duty or authority to undertake responsibility contrary to the provisions of Paragraphs 9.9C and 9.9D.

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- F. The CONTRACTOR shall at all times employ sufficient labor and equipment for prosecuting the several classes of WORK to full completion in the manner and time set forth in and required by these specifications. All workers shall have sufficient skill and experience to perform properly the WORK assigned to them. Workers engaged in special WORK, or skilled WORK, shall have sufficient experience in such WORK and in the operation of the equipment required to perform all WORK, properly and satisfactorily.
- G. Any person employed by the CONTRACTOR or by any Subcontractor who, in the opinion of the ENGINEER, does not perform the WORK in a proper and skillful manner, or is intemperate or disorderly shall, at the written request of the ENGINEER, be removed forthwith by the CONTRACTOR or Subcontractor employing such person, and shall not be employed again in any portion of the WORK without the approval of the ENGINEER. Should the CONTRACTOR fail to remove such person or persons as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the WORK, the ENGINEER may suspend the WORK by written notice until such orders are complied with.
- 6.3 ADJUSTING PROGRESS SCHEDULE. The CONTRACTOR shall submit monthly updates of the progress schedule to the ENGINEER for acceptance in accordance with the provisions in Section 01300 - Contractor Submittals in the General Requirements.
- 6.4 SUBSTITUTES OR "OR-EQUAL" ITEMS. The CONTRACTOR shall submit proposed substitutes or "or-equal" items in accordance with the provisions in Section 01300 - Contractor Submittals in the General Requirements.
- 6.5 CONCERNING SUBCONTRACTORS, SUPPLIERS, AND OTHERS.
- A. The CONTRACTOR shall be responsible to the OWNER and the ENGINEER for the acts and omissions of its Subcontractors and their employees to the same extent as CONTRACTOR is responsible for the acts and omissions of its own employees. Nothing contained in this Paragraph shall create any contractual relationship between any Subcontractor and the OWNER or the ENGINEER nor relieve the CONTRACTOR of any liability or obligation under the Agreement and Contract documents.
- B. The CONTRACTOR shall perform not less than 40% of the WORK with its own forces (i.e., without subcontracting). The 40% requirement shall be understood to mean that the CONTRACTOR shall perform, with its own organization, WORK amounting to at least 40% of the awarded contract amount. The 40% requirement will be calculated based upon the total of the subcontract amounts submitted for contract award, and any other information requested by the OWNER from the apparent low bidder.
- 6.6 PERMITS
- A. Unless otherwise provided in the Supplementary General Conditions, the CONTRACTOR shall obtain and pay for all construction permits and licenses from the agencies having jurisdiction, including the furnishing of insurance and bonds if required by such agencies. The enforcement of such requirements under this contract shall not be made the basis for claims for additional compensation. The OWNER shall assist the CONTRACTOR, when necessary, in obtaining such permits and licenses. The CONTRACTOR shall pay all governmental charges and inspection fees necessary for the

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prosecution of the WORK, which are applicable at the time of opening of Bids. The CONTRACTOR shall pay all charges of utility owners for connections to the WORK.

- B. These Contract Documents may require that the WORK be performed within the conditions and/or requirements of local, state and/or federal permits. These permits may be bound within the Contract Documents, included within the Contract Documents by reference, or included as part of the WORK, as designated in this Section. The CONTRACTOR is responsible for completing the WORK required for compliance with all permit requirements; this WORK is incidental to other items in the Contract Documents. Any reference to the “permittee” in the permits shall mean the CONTRACTOR. If any permits were acquired by the OWNER, this action was done to expedite the start of construction. If the CONTRACTOR does not complete the WORK within the specified permit window, the CONTRACTOR shall be responsible for the permit extension, and for completing any additional requirements placed upon the permit.
- C. These Contract Documents may require that the WORK be performed within the conditions and/or requirements of local, state and/or federal permits. These permits may be bound within the Contract Documents, included within the Contract Documents by reference, or included as part of the WORK, as designated in Section 00700 – General Conditions, Article 6.6 - PERMITS. The CONTRACTOR is responsible for completing the WORK required for compliance with all permit requirements; this WORK is incidental to other items in the Contract Documents. Any reference to the “permittee” in the permits shall mean the CONTRACTOR. If any permits were acquired by the OWNER, this action was done to expedite the start of construction. If the CONTRACTOR does not complete the WORK within the specified permit window, the CONTRACTOR shall be responsible for the permit extension, and for completing any additional requirements placed upon the permit.
- D. The OWNER shall apply for, and obtain, the necessary building permit for this project, however, the CONTRACTOR is responsible for scheduling and coordinating all necessary inspections. All other provisions of this Section remain in effect.
- 6.7 PATENT FEES AND ROYALTIES. The CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the WORK or the incorporation in the WORK of any invention, design, process, product, software or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the WORK and if to the actual knowledge of the OWNER or the ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by the OWNER in the Contract Documents. The CONTRACTOR shall indemnify, defend and hold harmless the OWNER and the ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses, and expenses (including attorneys’ fees and court costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the WORK or resulting from the incorporation in the WORK of any invention, design, process, product, or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.
- 6.8 LAWS AND REGULATIONS. The CONTRACTOR shall observe and comply with all federal, state, and local laws, ordinances, codes, orders, and regulations which in any manner affect those engaged or employed on the WORK, the materials used in the WORK, or the conduct of the

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WORK. If any discrepancy or inconsistency should be discovered in this contract in relation to any such law, ordinance, code, order, or regulation, the CONTRACTOR shall report the same in writing to the ENGINEER. The CONTRACTOR shall indemnify, defend, and hold harmless the OWNER, the ENGINEER, and their officers, agents, and employees against all claims or liability arising from violation of any such law, ordinance, code, order, or regulation, whether by CONTRACTOR or by its employees, Subcontractors, or third parties. Any particular law or regulation specified or referred to elsewhere in the Contract Documents shall not in any way limit the obligation of the CONTRACTOR to comply with all other provisions of federal, state, and local laws and regulations.

The OWNER may, per AS 36.30, audit the CONTRACTOR's or Subcontractor(s) records that are related to the cost or pricing data for this contract, all related Change Orders, and/or contract modifications.

6.9 TAXES. The CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by the CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the WORK.

6.10 USE OF PREMISES. The CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to (1) the Project site, (2) the land and areas identified in and permitted by the Contract Documents, and (3) the other land and areas permitted by Laws and Regulations, rights-of-way, permits, leases and easements. The CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the WORK. Should any claim be made against the OWNER or the ENGINEER by any such owner or occupant because of the performance of the WORK, the CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim through litigation. The CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify, defend, and hold the OWNER and the ENGINEER harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers attorneys, and other professionals and court costs) arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any such owner or occupant against the OWNER, the ENGINEER, their Consultants, Sub-consultants, and the officers, directors, employees and agents of each and any of them to the extent caused by or based upon the CONTRACTOR's performance or non-performance of the WORK.

6.11 SAFETY AND PROTECTION

A. The CONTRACTOR shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the WORK. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all employees on the WORK and other persons and organizations who may be affected thereby;
2. all the WORK and materials and equipment to be incorporated therein, whether in storage on or off the site; and
3. other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

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- B. The CONTRACTOR shall comply with all applicable Laws and Regulations whether referred to herein or not) of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss and shall erect and maintain all necessary safeguards for such safety and protection. The CONTRACTOR shall notify owners of adjacent property and utilities when prosecution of the WORK may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. The CONTRACTOR shall designate a qualified and experienced safety representative at the site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and program.
- D. Materials that contain hazardous substances or mixtures may be required on the WORK. A Material Safety Data Sheet shall be requested by the CONTRACTOR from the manufacturer of any hazardous product used.
- E. Material usage shall be accomplished with strict adherence to all safety requirements and all manufacturer's warnings and application instructions listed on the Material Safety Data Sheet and on the product container label.
- F. The CONTRACTOR shall be responsible for coordinating communications on any exchange of Material Safety Data Sheets or other hazardous material information that is required to be made available to, or exchanged between, or among, employers at the site in accordance with Laws or Regulations.
- G. The CONTRACTOR shall notify the ENGINEER if it considers a specified product or its intended usage to be unsafe. This notification must be given to the ENGINEER prior to the product being ordered, or if provided by some other party, prior to the product being incorporated in the WORK.

6.12 SHOP DRAWINGS AND SAMPLES

- A. After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, the CONTRACTOR shall submit to the ENGINEER for review, all Shop Drawings in accordance with Section 01300 - Contractor Submittals in the General Requirements.
- B. The Contractor shall also submit to the ENGINEER for review all samples in accordance with Section 01300 - Contractor Submittals in the General Requirements.
- C. Before submittal of each shop drawing or sample, the CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the WORK and the Contract Documents.

- 6.13 CONTINUING THE WORK. The CONTRACTOR shall carry on the WORK and adhere to the progress schedule during all disputes or disagreements with the OWNER. No work shall be delayed or postponed pending resolution of any disputes or disagreements, except as the CONTRACTOR and the OWNER may otherwise agree in writing.

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6.14 INDEMNIFICATION

- A. To the fullest extent permitted by the laws of the State of Alaska, the CONTRACTOR shall indemnify, defend, and hold harmless the OWNER, the ENGINEER, their Consultants, Sub-consultants and the officers, assembly members, mayor, directors, employees, and agents of each and any of them, against and from all claims, actions, damages, and liability of any kind and any nature arising out of or related to in way any acts or omissions of the CONTRACTOR, including death, and including in any administrative action by any federal or state agency, except where the claim or action alleges willful misconduct of the OWNER and the ENGINEER. Such indemnification by the CONTRACTOR shall include but not be limited to the following:
1. Liability or claims resulting directly or indirectly from the negligence or carelessness of the CONTRACTOR, its employees, or agents in the performance of the WORK, or non-performance of the WORK, or in guarding or maintaining the same, or from any improper materials, implements, or appliances used in its construction, or by or on account of any act or omission of the CONTRACTOR, its employees, agents, or third parties;
 2. Liability or claims arising directly or indirectly from bodily injury, occupational sickness or disease, or death of the CONTRACTOR's or Subcontractor's own employees engaged in the WORK resulting in actions brought by or on behalf of such employees against the OWNER, and the ENGINEER;
 3. Liability or claims arising directly or indirectly from or based on the violation of any federal, state or local law, ordinance, regulation, order, or decree, whether by the CONTRACTOR, its employees, or agents;
 4. Liability or claims arising directly or indirectly from the use or manufacture by the CONTRACTOR, its employees, or agents in the performance of this contract of any copyrighted or non-copyrighted composition, secret process, patented or non-patented invention, computer software, article, or appliance, unless otherwise specifically stipulated in this contract.
 5. Liability or claims arising directly or indirectly from the breach of any warranties, whether express or implied, made to the OWNER or any other parties by the CONTRACTOR, its employees, or agents;
 6. Liabilities or claims arising directly or indirectly from the willful or criminal misconduct of the CONTRACTOR, its employees, or agents; and,
 7. Liabilities or claims arising directly or indirectly from any breach of the obligations of the CONTRACTOR in the Agreement and all Contract documents.
- B. The CONTRACTOR shall reimburse the ENGINEER and the OWNER for all costs and expenses, (including but not limited to fees and charges of engineers, attorneys, experts, and other professionals and court costs including all costs of appeals) incurred by the OWNER, and the ENGINEER in enforcing the provisions of this Paragraph 6.14.
- C. The indemnification obligation under this Paragraph 6.14 shall not be limited in any way by any limitation of the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR or any such Subcontractor or other person or organization under workers' compensation acts, disability benefit acts, or other employee benefit acts.

6.15 CONTRACTOR'S DAILY REPORTS. The CONTRACTOR shall complete a daily report indicating total manpower for each construction trade, major equipment on site, each

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Subcontractor's manpower, weather conditions, etc., involved in the performance of the WORK. The daily report shall be completed on forms provided by the ENGINEER and shall be submitted to the ENGINEER at the conclusion of each workday. The report should comment on the daily progress and status of the WORK within each major component of the WORK. These components will be decided by the ENGINEER.

- 6.16 **ASSIGNMENT OF CONTRACT.** The CONTRACTOR shall not assign, sublet, sell, transfer, or otherwise dispose of the contract or any portion thereof, or its right, title, or interest therein, or obligations thereunder, without the written consent of the OWNER except as imposed by law. If the CONTRACTOR violates this provision, the contract may be terminated at the sole option of the OWNER. In such event, the OWNER shall be relieved of all liability and obligations to the CONTRACTOR and to its assignee or transferee, growing out of such termination.
- 6.17 **CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES.** It is understood that any turn-on or turn-off, line locates and any other work or assistance necessary by the OWNER, will be at the CONTRACTOR's expense unless otherwise stated in the bid documents. All cost must be agreed to prior to any related actions and will be considered incidental to the project cost. Billing to the CONTRACTOR will be direct from the OWNER.
- 6.18 **OPERATING WATER SYSTEM VALVES**
- A. The CONTRACTOR shall submit a written request, to the ENGINEER, for approval to operate any valve on any in-service section of the City water system. The request must be submitted at least 24-hours prior to operating any valves. The request shall specifically identify each valve to be operated, the time of operation, and the operation to be performed. The CONTRACTOR shall obtain the written approval of the ENGINEER for any scheduled operation before operating any valve.
- B. The CONTRACTOR shall be responsible for all damages, both direct and consequential, to the OWNER or any other party, caused by unauthorized operation of any valve of the City water system.
- 6.19 **CONTRACTOR'S WORK SCHEDULE LIMITATIONS.** City and Borough of Wrangell Noise Ordinance. The noise loudness measured at the boundary line of the premises used for industrial activities shall not exceed 90 decibels between the hours of 7:00 AM and 8:00 PM on weekdays and the hours of 10:00 AM and 8:00 PM on weekends and holidays, and 40 decibels at other hours, unless a permit shall first be obtained from the OWNER. Such permit shall be issued by the OWNER only upon a determination that such operation during hours not otherwise permitted hereunder is necessary and will not result in unreasonable disturbance to surrounding residents.

ARTICLE 7 OTHER WORK

7.1 RELATED WORK AT SITE

- A. The OWNER may perform other work related to the Project at the site by the OWNER's own forces, have other work performed by utility owners, or let other direct contracts therefor which may contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to the CONTRACTOR prior to starting any such other work.

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- B. The CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (or the OWNER, if the OWNER is performing the additional work with the OWNER's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the WORK with theirs. The CONTRACTOR shall do all cutting, fitting, and patching of the WORK that may be required to make its several parts come together properly and integrate with such other work. The CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of the ENGINEER and the others whose work will be affected.
- C. If the proper execution or results of any part of the CONTRACTOR's WORK depends upon the work of any such other contractor or utility owner (or OWNER), the CONTRACTOR shall inspect and report to the ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for such proper execution and results. The CONTRACTOR's failure to report such delays, defects, or deficiencies will constitute an acceptance of the other work as fit and proper for integration with the CONTRACTOR's WORK except for latent or nonapparent defects and deficiencies in the other work.

7.2 COORDINATION. If the OWNER contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Supplementary General Conditions, and the specific matters to be covered by such authority and responsibility will be itemized and the extent of such authority and responsibilities will be provided in the Supplementary General Conditions.

ARTICLE 8 OWNER'S RESPONSIBILITIES

8.1 COMMUNICATIONS

- A. The OWNER shall issue all its communications to the CONTRACTOR through the ENGINEER.
- B. The CONTRACTOR shall issue all its communications to the OWNER through the ENGINEER.

8.2 PAYMENTS. The OWNER shall make payments to the CONTRACTOR as provided in Paragraphs 14.5, 14.8, 14.9 and 14.10.

8.3 LANDS, EASEMENTS, AND SURVEYS. The OWNER's duties in respect of providing lands and easements and providing surveys to establish reference points are set forth in Paragraphs 4.1 and 4.5.

8.4 CHANGE ORDERS. The OWNER shall execute Change Orders as indicated in Paragraph 10.1F.

8.5 INSPECTIONS AND TESTS. The OWNER's responsibility in respect of inspections, tests, and approvals is set forth in Paragraph 13.3.

8.6 SUSPENSION OF WORK. In connection with the OWNER's right to stop WORK or suspend WORK, see Paragraphs 13.4 and 15.1.

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- 8.7 **TERMINATION OF AGREEMENT.** Paragraphs 15.2 and 15.3 detail the OWNER's right to terminate services of the CONTRACTOR.

ARTICLE 9 ENGINEER'S STATUS DURING CONSTRUCTION

- 9.1 **OWNER'S REPRESENTATIVE.** The ENGINEER will be the OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of the ENGINEER as the OWNER's representative during construction are set forth in the Contract Documents.
- 9.2 **VISITS TO SITE.** The ENGINEER will make visits to the site during construction to observe the progress and quality of the WORK and to determine, in general, if the WORK is proceeding in accordance with the Contract Documents. Exhaustive or continuous on-site inspections to check the quality or quantity of the WORK will not be required of the ENGINEER. The ENGINEER will not, during such visits, or as a result of such observations of the CONTRACTOR's WORK in progress, supervise, direct, or have control over the CONTRACTOR's WORK.
- 9.3 **PROJECT REPRESENTATION.** The ENGINEER may furnish an Inspector to assist in observing the performance of the WORK. The duties, responsibilities, and limitations of authority are as follows:

A. **Duties, Responsibilities and Limitations of Authority of Inspector**

General. The Inspector, who is the ENGINEER's Agent, will act as directed by and under the supervision of the ENGINEER and will confer with the ENGINEER regarding its actions. The Inspector's dealings in matters pertaining to the on-site WORK shall, in general, be only with the ENGINEER and the CONTRACTOR, and dealings with Subcontractors shall only be through or with the full knowledge of the CONTRACTOR. Written communication with the OWNER will be only through or as directed by the ENGINEER.

Duties and Responsibilities. The Inspector will:

1. Review the progress schedule, list of Shop Drawing submittals and schedule of values prepared by the CONTRACTOR and consult with the ENGINEER concerning their acceptability.
2. Attend pre-construction conferences. Arrange a schedule of progress meetings and other job conferences as required in consultation with the ENGINEER and notify those expected to attend in advance. Attend meetings and maintain and circulate copies of minutes thereof.
3. Serve as the ENGINEER's liaison with the CONTRACTOR, working principally through the CONTRACTOR's superintendent and assist said superintendent in understanding the intent of the Contract Documents. Assist the ENGINEER in serving as the OWNER's liaison with the CONTRACTOR when the CONTRACTOR's operations affect the OWNER's on-site operations.
4. As requested by the ENGINEER, assist in obtaining from the OWNER additional details or information, when required at the site for proper execution of the WORK.
5. Receive and record date of receipt of Shop Drawings and samples, receive samples which are furnished at the site by the CONTRACTOR and notify the ENGINEER of their availability for examination.

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6. Conduct on-site observations of the WORK in progress to assist the ENGINEER in determining if the WORK is proceeding in accordance with the Contract Documents.
7. Report to the ENGINEER whenever the Inspector believes that any WORK is unsatisfactory, faulty, or defective or does not conform to the Contract Documents, or does not meet the requirements of any inspection, tests or approval required to be made or has been damaged prior to final payment; and advise the ENGINEER when the Inspector believes WORK should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection, or approval.
8. Verify that the tests, equipment, and systems startups and operating and maintenance instruction are conducted as required by the Contract Documents and in presence of the required personnel, and that the CONTRACTOR maintains adequate records thereof; observe, record and report to the ENGINEER appropriate details relative to the test procedures and start-ups.
9. Accompany visiting inspectors representing public or other agencies having jurisdiction over the WORK, record the outcome of these inspections, and report to the ENGINEER.
10. Transmit to the CONTRACTOR the ENGINEER's clarifications and interpretations of the Contract Documents.
11. Consider and evaluate the CONTRACTOR's suggestions for modifications in the Contract Documents and report them with recommendations to the ENGINEER.
12. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and sample submittals, reproductions of original Contract Documents including all addenda, Change Orders, field orders, additional Drawings issued subsequent to the execution of the contract, the ENGINEER's clarifications and interpretations of the Contract Documents, progress reports, and other related documents.
13. Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions, list all project visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of performing and observing test procedures. Send copies to the ENGINEER.
14. Record names, addresses, and telephone numbers of the CONTRACTOR, Subcontractors, and major suppliers of materials and equipment.
15. Furnish the ENGINEER with periodic reports as required of progress of the WORK and the CONTRACTOR's compliance with the accepted progress schedule and schedule of CONTRACTOR submittals.
16. Consult with the ENGINEER in advance of scheduled major tests, inspections, or start of important phases of the WORK.
17. Report immediately to the ENGINEER upon the occurrence of any accident.
18. Review applications for payment with the CONTRACTOR for compliance with the established procedure for their submittal and forward them with recommendations to the ENGINEER, noting particularly their relation to the schedule of values, WORK completed, and materials and equipment delivered at the site but not incorporated in the WORK.
19. During the course of the WORK, verify that certificates, maintenance and operation manuals, and other data required to be assembled and furnished by the CONTRACTOR are applicable to the items actually installed; and deliver this material to the ENGINEER for its review and forwarding to the OWNER prior to final acceptance of the WORK.

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20. Before the ENGINEER prepares a Certificate of Substantial Completion/Notice of completion, as applicable, review the CONTRACTOR's punch list items requiring completion or correction and add any items that CONTRACTOR has omitted.
21. Conduct final inspection in the company of the ENGINEER, the OWNER, and the CONTRACTOR, and prepare a final punch list of items to be completed or corrected.
22. Verify that all items on the punch list have been completed or corrected and make recommendations to the ENGINEER concerning acceptance.

Limitations of Authority. Except upon written instruction of the ENGINEER, the Inspector:

1. Shall not authorize any deviation from the Contract Documents or approve any substitute material or equipment.
2. Shall not exceed limitations on the ENGINEER's authority as set forth in the Contract Documents.
3. Shall not undertake any of the responsibilities of the CONTRACTOR, Subcontractors or CONTRACTOR's superintendent, or expedite the WORK.
4. Shall not advise on or issue directions relative to any aspect of the means, methods, techniques, sequences, or procedures of construction unless such is specifically called for in the Contract Documents.
5. Shall not advise on or issue directions as to safety precautions and programs in connection with the WORK.

9.4 CLARIFICATIONS AND INTERPRETATIONS. The ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as the ENGINEER may determine necessary, which shall be consistent with, or reasonably inferred from, the overall intent of the Contract Documents.

9.5 AUTHORIZED VARIATIONS IN WORK. The ENGINEER may authorize variations in the WORK from the requirements of the Contract Documents. These may be accomplished by a Field Order and will require the CONTRACTOR to perform the WORK involved in a manner that minimizes the impact to the WORK and the contract completion date. If the CONTRACTOR believes that a Field Order justifies an increase in the Contract Price or an extension of the Contract Time, the CONTRACTOR may make a claim therefor as provided in Article 11 or 12.

9.6 REJECTING DEFECTIVE WORK. The ENGINEER will have authority to reject WORK which the ENGINEER believes to be defective and will also have authority to require special inspection or testing of the WORK as provided in Paragraph 13.3G, whether or not the WORK is fabricated, installed, or completed.

9.7 CONTRACTOR SUBMITTALS, CHANGE ORDERS, AND PAYMENTS

- A. In accordance with the procedures set forth in the General Requirements, the ENGINEER will review all CONTRACTOR submittals, including Shop Drawings, samples, substitutes, or "or equal" items, etc., in order to determine if the items covered by the submittals will, after installation or incorporation in the WORK, conform to the requirements of the Contract Documents and be compatible with the design concept of the completed project as a functioning whole as indicated by the Contract Documents.

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The ENGINEER's review will not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions or programs incident thereto.

- B. In connection with the ENGINEER's responsibilities as to Change Orders, see Articles 10, 11, and 12.
- C. In connection with the ENGINEER's responsibilities in respect of Applications for Payment, see Article 14.

9.8 DECISIONS ON DISPUTES

- A. The ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the WORK thereunder. Claims, disputes, and other matters relating to the acceptability of the WORK; the interpretation of the requirements of the Contract Documents pertaining to the performance of the WORK; and those claims under Articles 11 and 12 in respect to changes in the Contract Price or Contract Time will be referred initially to the ENGINEER in writing with a request for formal decision in accordance with this paragraph, which the ENGINEER will render in writing within 30 days of receipt of the request. Written notice of each such claim, dispute, and other matter will be delivered by the CONTRACTOR to the ENGINEER promptly (but in no event later than 30 days) after the occurrence of the event giving rise thereto. Written supporting data will be submitted to the ENGINEER within 60 days after such occurrence unless the ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim. The failure of the CONTRACTOR to provide all supporting documentation for the claim shall result in the denial of the claim and the waiver of the claim by the CONTRACTOR.
- B. The rendering of a decision by the ENGINEER with respect to any such claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in Paragraph 14.12) will be a condition precedent to any exercise by the OWNER or the CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Law or Regulations in respect of any such claim, dispute, or other matter.

9.9 LIMITATION ON ENGINEER'S RESPONSIBILITIES

- A. Neither the ENGINEER's authority to act under this Article or other provisions of the Contract Documents nor any decision made by the ENGINEER in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the ENGINEER to the CONTRACTOR, any Subcontractor, any Supplier, any surety for any of them, or any other person or organization performing any of the WORK.
- B. Whenever in the Contract Documents the terms "as ordered," "as directed," "as required," "as allowed," "as reviewed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review, or judgment of the ENGINEER as to the WORK, it is intended that such requirement, direction, review, or judgment will be solely to evaluate the WORK for compliance with the requirements of the Contract Documents, and conformance with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents, unless there is a specific statement indicating otherwise. The use of

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any such term or adjective shall not be effective to assign to the ENGINEER any duty or authority to supervise or direct the performance of the WORK or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.9C or 9.9D.

- C. The ENGINEER will not supervise, direct, control, or have authority over or be responsible for the CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of the CONTRACTOR to comply with Laws and Regulations, applicable to the performance of the WORK. The ENGINEER will not be responsible for the CONTRACTOR's failure to perform the WORK in accordance with the Contract Documents, except where the failure of the CONTRACTOR is the result of negligent acts or omissions of the ENGINEER in the ENGINEER's performance of its obligations.
- D. The ENGINEER will not be responsible for the acts or omissions of the CONTRACTOR nor of any Subcontractor, supplier, or any other person or organization performing any of the WORK.

ARTICLE 10 CHANGES IN THE WORK

10.1 GENERAL

- A. Without invalidating the Agreement and without notice to any surety, the OWNER may at any time or from time to time, order additions, deletions, or revisions in the WORK; these will be authorized by a written Field Order and/or a Change Order issued by the ENGINEER.
- B. If the CONTRACTOR believes that it is entitled to an increase or decrease in the Contract Price, or an extension or shortening in the Contract Time as the result of a Field Order, a claim may be made as provided in Articles 11 and 12.
- C. If the OWNER and CONTRACTOR agree on the value of any work, or the amount of Contract Time that should be allowed as a result of a Field Order, upon receiving written notice from the ENGINEER, the CONTRACTOR shall proceed so as to minimize the impact on and delays to the work pending the issuance of a Change Order.
- D. If the OWNER and the CONTRACTOR are unable to agree as to the extent, if any, of an increase or decrease in the Contract Price or an extension or shortening of the Contract Time that should be allowed as a result of a Field Order, the ENGINEER can direct the CONTRACTOR to proceed on the basis of Time and Materials so as to minimize the impact on and delays to WORK, and a claim may be made therefor as provided in Articles 11 and 12.
- E. The CONTRACTOR shall not be entitled to an increase in the Contract Price nor an extension of the Contract Time with respect to any work performed that is not required by the Contract Documents as amended, modified, supplemented by Change Order, except in the case of an emergency and except in the case of uncovering work as provided in Paragraph 13.3G.
- F. The OWNER and the CONTRACTOR shall execute appropriate Change Orders covering:

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1. changes in the WORK which are ordered by the OWNER pursuant to Paragraph 10.1A;
 2. changes required because of acceptance of Defective WORK under Paragraph 13.7;
 3. changes in the Contract Price or Contract Time which are agreed to by the parties; or
 4. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by the ENGINEER pursuant to Paragraph 9.8.
- G. If notice of any change is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be the CONTRACTOR's responsibility, and the amount of each applicable Bond shall be adjusted accordingly.

10.2 ALLOWABLE QUANTITY VARIATIONS

- A. In the event of an increase or decrease in Bid item quantity of a unit price contract, the total amount of WORK actually done or materials or equipment furnished shall be paid for according to the unit bid price established for such WORK under the Contract Documents, wherever such unit price has been established; provided, that an adjustment in the Contract Price may be made for changes which result in an increase or decrease in excess of 25% of the estimated quantity of any major item of the WORK. Major Item is defined as any bid item amount that is ten percent (10%) or more of the total contract amount.
- B. In the event a part of the WORK is to be entirely eliminated and no lump sum or unit price is named in the Contract Documents to cover such eliminated work, the price of the eliminated work shall be agreed upon in writing by the OWNER and the CONTRACTOR. If the OWNER and the CONTRACTOR fail to agree upon the price of the eliminated work, the price shall be determined in accordance with the provisions of Article 11.

ARTICLE 11 CHANGE OF CONTRACT PRICE

11.1 GENERAL

- A. The Contract Price constitutes the total compensation payable to the CONTRACTOR for performing the WORK. All duties, responsibilities, and obligations assigned to or undertaken by the CONTRACTOR to complete the WORK shall be at its expense without change in the Contract Price.
- B. The Contract Price may only be changed by a Change Order approved by the Borough Assembly. Any claim for an increase in the Contract Price shall be based on written notice delivered by the CONTRACTOR to the ENGINEER promptly (but in no event later than 7 days) after the start of the occurrence or the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with all supporting documentation and data shall be delivered within 14 days after such occurrence (unless the ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR's written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the CONTRACTOR is entitled as a result of the occurrence or event. All claims for adjustment in the Contract Price shall be determined by the

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ENGINEER in accordance with Paragraph 9.8A if the OWNER and the CONTRACTOR cannot otherwise agree on the amount involved. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this Paragraph 11.1B.

- C. The value of any work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:
1. Where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved. Unit prices not specified in the contract documents shall be determined by the unit price for that item or items in the CONTRACTOR'S bid.
 2. By mutual acceptance of a lump sum, which may, but is not required to, include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.4.
 3. On the basis of the cost of work (determined as provided in Paragraphs 11.3) plus a CONTRACTOR's fee for overhead and profit (determined as provided in Paragraph 11.4).

11.2 COSTS RELATING TO WEATHER. The CONTRACTOR shall have no claims against the OWNER for damages for any injury to WORK, materials, or equipment, resulting from the action of the elements. If, however, in the opinion of the ENGINEER, the CONTRACTOR has made all reasonable efforts to protect the materials, equipment and work, the CONTRACTOR may be granted a reasonable extension of Contract Time to make proper repairs, renewals, and replacements of the work, materials, or equipment.

11.3 COST OF WORK (BASED ON TIME AND MATERIALS)

- A. General. The term "cost of work" means the sum of all costs actually and necessarily incurred and paid by the CONTRACTOR for labor, materials, and equipment in the proper performance of extra work. Except as otherwise may be agreed to in writing by the OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project; shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.5 EXCLUDED COSTS.
- B. Labor. The costs of labor will be the actual cost for wages prevailing for each craft or type of workers performing the extra work at the time the extra work is done, plus employer payments of payroll taxes, worker's compensation insurance, liability insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. Labor costs for equipment operators and helpers shall be paid only when such costs are not included in the invoice for equipment rental. The labor costs for forepersons shall be proportioned to all of their assigned work and only that applicable to extra work shall be paid. Non-direct labor costs including superintendence shall be considered part of the mark-up set out in paragraph 11.4.
- C. Materials. The cost of materials reported shall be at invoice or lowest current price at which materials are locally available and delivered to the job in the quantities involved, plus the cost of freight, delivery and storage, subject to the following:

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1. Trade discounts available to the purchaser shall be credited to the OWNER notwithstanding the fact that such discounts may not have been taken by the CONTRACTOR.
 2. For materials secured by other than a direct purchase and direct billing to the purchaser, the cost shall be deemed to be the price paid to the actual supplier as determined by the ENGINEER. Mark-up except for actual costs incurred in the handling of such materials will not be allowed.
 3. Payment for materials from sources owned wholly or in part by the purchaser shall not exceed the price paid by the purchaser for similar materials from said sources on extra work items or the current wholesale price for such materials delivered to the work site, whichever price is lower.
 4. If in the opinion of the ENGINEER the cost of material is excessive, or the CONTRACTOR does not furnish satisfactory evidence of the cost of such material, then the cost shall be deemed to be the lowest current wholesale price for the quantity concerned delivered to the work site less trade discount. The OWNER reserves the right to furnish materials for the extra work and no claim shall be allowed by the CONTRACTOR for costs and profit on such materials.
- D. Equipment. The CONTRACTOR will be paid for the use of equipment at the rental rate listed for such equipment specified in the Supplementary General Conditions. Such rental rate will be used to compute payments for equipment whether the equipment is under the CONTRACTOR's control through direct ownership, leasing, renting, or another method of acquisition. The rental rate to be applied for use of each item of equipment shall be the rate resulting in the least total cost to the OWNER for the total period of use. If it is deemed necessary by the CONTRACTOR to use equipment not listed in the publication specified in the Supplementary General Conditions, an equitable rental rate for the equipment will be established by the ENGINEER. The CONTRACTOR may furnish cost data which might assist the ENGINEER in the establishment of the rental rate. The CONTRACTOR shall not be entitled for any rental rate for equipment the use of which would have necessary to provide the unit of work and which should have been included in the CONTRACTOR'S bid price for that unit of work.
1. All equipment shall, in the opinion of the ENGINEER, be in good working condition and suitable for the purpose for which the equipment is to be used.
 2. Before construction equipment is used on the extra work, the CONTRACTOR shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to the ENGINEER, in duplicate, a description of the equipment and its identifying number.
 3. Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.
 4. Individual pieces of equipment or tools having a replacement value of \$200 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefor.
 5. Rental time will not be allowed while equipment is inoperative due to breakdowns.
 6. Equipment Rental Rates. Unless otherwise agreed in writing, the CONTRACTOR will be paid for the use of equipment at the rental rate listed for such equipment specified in the current edition of the following reference publication: "Rental Rate Blue Book" as published by Dataquest (a company of the Dunn and Bradstreet

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Corporation), 1290 Ridder Park Drive, San Jose, CA 95131, telephone number (800) 227-8444.

- E. Equipment on the Work Site. The rental time to be paid for equipment on the work site shall be the time the equipment is in productive operation on the extra work being performed and, in addition, shall include the time required to move the equipment to the location of the extra work and return it to the original location or to another location requiring no more time than that required to return it to its original location; except, that moving time will not be paid if the equipment is used on other than the extra work, even though located at the site of the extra work, or if it was not necessary to move equipment from another location to the site. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made for loading and transporting costs when the equipment is used at the site of the extra work on other than the extra work. The following shall be used in computing the rental time of equipment on the work site.
1. When hourly rates are listed, any part of an hour less than 30 minutes of operation shall be considered to be 1/2-hour of operation, and any part of an hour in excess of 30 minutes will be considered one hour of operation.
 2. When daily rates are listed, any part of a day less than 4 hours operation shall be considered to be 1/2-day of operation. When owner-operated equipment is used to perform extra work to be paid for on a time and materials basis, the CONTRACTOR will be paid for the equipment and operator, as set forth in Paragraphs (3), (4), and (5), following.
 3. Payment for the equipment will be made in accordance with the provisions in Paragraph 11.3D, herein.
 4. Payment for the cost of labor and subsistence or travel allowance will be made at the rates paid by the CONTRACTOR to other workers operating similar equipment already on the work site, or in the absence of such labor, established by collective bargaining agreements for the type of worker and location of the extra work, whether or not the operator is actually covered by such an agreement. A labor surcharge will be added to the cost of labor described herein in accordance with the provisions of Paragraph 11.3B, herein, which surcharge shall constitute full compensation for payments imposed by state and federal laws and all other payments made to or on behalf of workers other than actual wages.
 5. To the direct cost of equipment rental and labor, computed as provided herein, will be added the allowances for equipment rental and labor as provided in Paragraph 11.4, herein.
- F. Specialty Work. Specialty work is defined as that work characterized by extraordinary complexity, sophistication, or innovation or a combination of the foregoing attributes which are unique to the construction industry. The following shall apply in making estimates for payment for specialty work:
1. Any bid item of WORK to be classified as Specialty Work shall be listed as such in the Supplementary General Conditions. Specialty work shall be performed by an entity especially skilled in the work to be performed. After validation of invoices and determination of market values by the ENGINEER, invoices for specialty work based upon the current fair market value thereof may be accepted without complete itemization of labor, material, and equipment rental costs.

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- 2. When the CONTRACTOR is required to perform work necessitating special fabrication or machining process in a fabrication or a machine shop facility away from the job site, the charges for that portion of the work performed at the off-site facility may, by agreement, be accepted as specialty work and accordingly, the invoices for the work may be accepted without detailed itemization.
- 3. All invoices for specialty work will be adjusted by deducting all trade discounts offered or available, whether the discounts were taken or not. In lieu of the allowances for overhead and profit specified in Paragraph 11.4, herein, an allowance of 5 percent will be added to invoices for specialty work.

G. Sureties. All work performed hereunder shall be subject to all of the provisions of the Contract Documents and the CONTRACTOR’s sureties shall be bound with reference thereto as under the original Agreement. Copies of all amendments to surety bonds or supplemental surety bonds shall be submitted to the OWNER for review prior to the performance of any work hereunder.

11.4 CONTRACTOR’S FEE

A. Extra work ordered on the basis of time and materials will be paid for at the actual necessary cost as determined by the ENGINEER, plus allowances for overhead and profit. The allowance for overhead and profit shall include full compensation for superintendence, bond and insurance premiums, taxes, field office expense, extended overhead, home office overhead, and all other items of expense or cost not included in the cost of labor, materials, or equipment provided for under Paragraph 11.3. The allowance for overhead and profit will be made in accordance with the following schedule:

Actual Overhead and Profit Allowance	
Labor	15 percent
Materials.....	10 percent
Equipment	10 percent

To the sum of the costs and mark-ups provided for in this Article, one percent shall be added as compensation for bonding.

B. It is understood that labor, materials, and equipment may be furnished by the CONTRACTOR or by the Subcontractor on behalf of the CONTRACTOR. When all or any part of the extra work is performed by a Subcontractor, the allowance specified herein shall be applied to the labor, materials, and equipment costs of the Subcontractor, to which the CONTRACTOR may add 5 percent of the Subcontractor’s total cost for the extra work. Regardless of the number of hierarchical tiers of Subcontractors, the 5 percent increase above the Subcontractor’s total cost which includes the allowances for overhead and profit specified herein may be applied one time only.

11.5 EXCLUDED COSTS. The term Cost of the Work shall not include any of the following:

A. Payroll costs and other compensation of CONTRACTOR’s officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, estimators, attorneys’ auditors, accountants, purchasing and contracting agents, expenditures, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR’s principal or a branch office for general administration of the work, or not

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specifically covered by paragraph 11.3, all of which are to be considered administrative costs covered by the CONTRACTOR's fee.

- B. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the site.
- C. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.
- D. Cost of premiums for all bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by paragraph 11.4 above).
- E. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of Defective WORK, disposal of materials or equipment wrongly supplied and making good any damage to property.
- F. Other overhead or general expense costs of any kind and the cost of any item not specifically and expressly included in paragraph 11.4.
- G. Equipment rental cost for equipment that would be needed to perform the unit of work as reflected in the bid price for that unit of work.
- H. Mobilization or demobilization for equipment that would necessarily have been used to perform that unit of work as reflected in the bid price for that unit of work.

ARTICLE 12 CHANGE OF CONTRACT TIME

12.1 GENERAL

- A. The Contract Time may only be changed by a Change Order. Any claim for an extension of the Contract Time (or Milestones) shall be based on written notice delivered by the CONTRACTOR to the ENGINEER promptly (but in no event later than 30 days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within 60 days after such occurrence (unless the ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR'S written statement that the adjustment claimed is the entire adjustment to which the CONTRACTOR has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by the ENGINEER in accordance with Paragraph 9.8 if the OWNER and the CONTRACTOR cannot otherwise agree. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this Paragraph 12.1A. An increase in Contract Time does not mean that the Contractor is due an increase in Contract Price. Only Compensable time extensions will result in an increase in Contract Price.
- B. All time limits stated in the Contract Documents are of the essence of the Agreement. OWNER reserves the right to direct CONTRACTOR to accelerate his work, at no cost to OWNER, if CONTRACTOR fails to maintain contract schedule.

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- C. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost on the critical path of the project due to such delay if a claim is made therefor as provided in paragraph 12.1. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, unprecedented weather conditions or acts of God. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

- D. Where CONTRACTOR is prevented from completing any part of the WORK within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost on the critical path of the project due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay. In no event shall the OWNER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from (i) delays caused by or within the control of CONTRACTOR, or (ii) delays beyond the control of both parties including but not limited to fires, floods, epidemics abnormal weather conditions, acts of God or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.

12.2 EXTENSIONS OF TIME FOR DELAY DUE TO WEATHER. Contract Time may be extended by the ENGINEER because of delays in completion of the WORK due to unusually severe weather, provided that the CONTRACTOR shall, within 10 days of the beginning of any such delay, notify the ENGINEER in writing of the cause of delay and request an extension of Contract Time. The ENGINEER will ascertain the facts and the extent of the delay and extend the time for completing the work when, in the ENGINEER's judgment, the findings of fact justify such an extension. Unprecedented, abnormal, or unusually severe weather will be defined as an event, or events, with a greater than 50-year recurrence interval, as determined by the National Weather Service, or equivalent State or Federal agency

ARTICLE 13 WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

- 13.1 WARRANTY AND GUARANTEE. The CONTRACTOR warrants and guarantees to the OWNER and the ENGINEER that all work will be in accordance with the Contract Documents and will not be defective. Prompt notice of defects known to the OWNER or ENGINEER shall be given to the CONTRACTOR. All defective work, whether or not in place, may be rejected, corrected, or accepted as provided in this Article 13.

- 13.2 ACCESS TO WORK. OWNER, ENGINEER, their Consultants, sub-consultants, other representatives and personnel of OWNER, independent testing laboratories and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's site safety procedures and programs so that they may comply therewith as applicable.

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13.3 TESTS AND INSPECTIONS

- A. The CONTRACTOR shall give the ENGINEER timely notice of readiness of the WORK for all required inspections, tests, or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. If Laws or Regulations of any public body having jurisdiction other than the OWNER require any WORK to specifically be inspected, tested, or approved, the CONTRACTOR shall pay all costs in connection therewith. The CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with the OWNER's or the ENGINEER's acceptance of a Supplier of materials or equipment proposed as a substitution or (or-equal) to be incorporated in the WORK, or of materials or equipment submitted for review prior to the CONTRACTOR's purchase thereof for incorporation in the WORK. The cost of all inspections, tests, and approvals in addition to the above which are required by the Contract Documents shall be paid by the OWNER (unless otherwise specified).
- C. The ENGINEER will make, or have made, such inspections and tests as the ENGINEER deems necessary to see that the WORK is being accomplished in accordance with the requirements of the Contract Documents. Unless otherwise specified in the Supplementary General Conditions, the cost of such inspection and testing will be borne by the OWNER. In the event such inspections or tests reveal non-compliance with the requirements of the Contract Documents, the CONTRACTOR shall bear the cost of corrective measures deemed necessary by the ENGINEER, as well as the cost of subsequent reinspection and retesting. Neither observations by the ENGINEER nor inspections, tests, or approvals by others shall relieve the CONTRACTOR from the CONTRACTOR's obligation to perform the WORK in accordance with the Contract Documents.
- D. All inspections, tests, or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to the ENGINEER and the CONTRACTOR.
- E. If any work (including the work of others) that is to be inspected, tested, or approved is covered without written concurrence of the ENGINEER, it must, if requested by the ENGINEER, be uncovered for observation. Such uncovering shall be at the CONTRACTOR's expense unless the CONTRACTOR has given the ENGINEER timely notice of the CONTRACTOR's intention to perform such test or to cover the same and the ENGINEER has not acted with reasonable promptness in response to such notice.
- F. If any WORK is covered contrary to the written request of the ENGINEER, it must, if requested by the ENGINEER, be uncovered for the ENGINEER's observation and recovered at the CONTRACTOR's expense.
- G. If the ENGINEER considers it necessary or advisable that covered WORK be observed by the ENGINEER or inspected or tested by others, the CONTRACTOR, at the ENGINEER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, material, and equipment. If it is found that such work is defective, the CONTRACTOR shall bear all direct, indirect, and consequential costs and damages of such uncovering, exposure, observation, inspection,

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and testing and of satisfactory reconstruction, including but not limited to fees and charges of engineers, attorneys, and other professionals. However, if such work is not found to be defective, the CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, the CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.

- 13.4 OWNER MAY STOP THE WORK. If the WORK is defective, or the CONTRACTOR fails to perform work in such a way that the completed WORK will conform to the Contract Documents, the OWNER may order the CONTRACTOR to stop the WORK, or any portion thereof, until the cause for such order has been eliminated; however, this right of the OWNER to stop the WORK shall not give rise to any duty on the part of the OWNER to exercise this right for the benefit of the CONTRACTOR or any other party.
- 13.5 CORRECTION OR REMOVAL OF DEFECTIVE WORK. If required by the ENGINEER, the CONTRACTOR shall promptly, either correct all defective work, whether or not fabricated, installed, or completed, or, if the WORK has been rejected by the ENGINEER, remove it from the site and replace it with non-defective work. The CONTRACTOR shall bear all direct, indirect and consequential costs and damages of such correction or removal, including but not limited to fees and charges of engineers, attorneys, and other professionals made necessary thereby.
- 13.6 ONE YEAR CORRECTION PERIOD
- A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any work is found to be defective, the CONTRACTOR shall promptly, without cost to the OWNER and in accordance with OWNER's written notification, (i) correct such Defective WORK, or, if it has been rejected by the OWNER, remove it from the site and replace it with non-defective work, and (ii) satisfactorily correct or remove and replace any damage to other work of others resulting therefrom. If the CONTRACTOR does not promptly comply with such notification, or in an emergency where delay would cause serious risk of loss or damage, the OWNER may have the Defective WORK corrected or the rejected WORK removed and replaced, and all direct, indirect, and consequential costs and damages of such removal and replacement including but not limited to fees and charges of engineers, attorneys and other professionals will be paid by the CONTRACTOR.
- B. Where Defective WORK (and damage to other WORK resulting therefrom) has been corrected, removed or replaced under this paragraph 13.6, the correction period hereunder with respect to such WORK will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- 13.7 ACCEPTANCE OF DEFECTIVE WORK. If, instead of requiring correction or removal and replacement of defective work, the OWNER prefers to accept the WORK, the OWNER may do so. The CONTRACTOR shall bear all direct, indirect, and consequential costs attributable to the OWNER's evaluation of and determination to accept such defective work. If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the WORK, and the OWNER shall be entitled to an appropriate decrease in the Contract Price.

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ARTICLE 14 PAYMENTS TO CONTRACTOR AND COMPLETION

- 14.1 SCHEDULE OF VALUES (LUMP SUM PRICE BREAKDOWN). The schedule of values or lump sum price breakdown established as provided in the General Requirements shall serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to the ENGINEER.
- 14.2 UNIT PRICE BID SCHEDULE. Progress payments on account of Unit Price work will be based on the number of units completed.
- 14.3 APPLICATION FOR PROGRESS PAYMENT
- A. Unless otherwise prescribed by law, on the 25th of each month, the CONTRACTOR shall submit to the ENGINEER for review, an Application for Payment filled out and signed by the CONTRACTOR covering the WORK completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
- B. The Application for Payment shall identify, as a sub-total, the amount of the CONTRACTOR'S Total Earnings to Date, plus the Value of Materials Stored at the Site which have not yet been incorporated in the WORK, and less a deductive adjustment for materials installed which were not previously incorporated in the WORK, but for which payment was allowed under the provisions for payment for Materials Stored at the Site, but not yet incorporated in the WORK.
- C. Each Application for Payment shall be submitted with an updated Progress Schedule, as required in Section 01300 Contractor Submittals. Each Application for Payment will also be accompanied by Contractor and Subcontractor certified payroll reports for periods covered by the period covered by the Application for Payment.
- D. The Net Payment Due the CONTRACTOR shall be the above-mentioned subtotal from which shall be deducted the total amount of all previous payments made to the CONTRACTOR. Progress payments will be paid in full in accordance with Article 14 of the General Conditions until 90% of the Contract Price has been paid. The remaining 10% of the Contract Price amount may be withheld until:
1. final inspection has been made;
 2. completion of the project; and
 3. acceptance of the project by the OWNER.
- E. The Value of Materials Stored at the Site shall be an amount equal to the specified percent of the value of such materials as set forth in the Supplementary General Conditions. Said amount shall be based upon the value of all acceptable materials and equipment not incorporated in the WORK but delivered and suitably stored at the site or at another location agreed to in writing; provided, each such individual item has a value of more than \$5,000.00 and will become a permanent part of the WORK. The Application for Payment shall also be accompanied by an invoice (including shipping), a certification that the materials meet the applicable contract specifications, and any evidence required by the OWNER that the materials and equipment are covered by appropriate property insurance and other arrangements to protect the OWNER's interest

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therein, all of which will be satisfactory to the OWNER. Payment for materials will not constitute final acceptance. It shall be the CONTRACTOR's responsibility to protect the material from damage, theft, loss, or peril while in storage. Unless otherwise prescribed by law, the Value of Materials Stored at the Site shall be paid at the invoice amount up to a maximum of 85% of the Contract Price for those items.

14.4 CONTRACTOR'S WARRANTY OF TITLE. The CONTRACTOR warrants and guarantees that title to all work, materials, and equipment covered by an Application for Payment, whether incorporated in the WORK or not, will pass to the OWNER no later than the time of payment free and clear of all liens.

14.5 REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT

- A. The ENGINEER will, within 7 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to the OWNER, or return the Application to the CONTRACTOR indicating in writing the ENGINEER's reasons for refusing to recommend payment. In the later case, the CONTRACTOR may make the necessary corrections and resubmit the Application, at which point the 7 days for ENGINEER review will begin again. If the ENGINEER still disagrees with a portion of the Application, it will submit the Application recommending the undisputed portion of the Application to the OWNER for payment and provide reasons for recommending non-payment of the disputed amount. Thirty days after presentation of the Application for Payment with the ENGINEER's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.5B) become due and when due will be paid by the OWNER to the CONTRACTOR.
- B. The OWNER may refuse to make payment of the full amount recommended by the ENGINEER because claims have been made against the OWNER on account of the CONTRACTOR's performance of the WORK or Liens have been filed in connection with the WORK or there are other items entitling the OWNER to a credit against the amount recommended, but the OWNER must give the CONTRACTOR written notice within 7 days (with a copy to the ENGINEER) stating the reasons for such action.

14.6 PARTIAL UTILIZATION

- A. The OWNER shall have the right to utilize or place into service any item of equipment or other usable portion of the WORK prior to completion of the WORK. Whenever the OWNER plans to exercise said right, the CONTRACTOR will be notified in writing by the OWNER, identifying the specific portion or portions of the WORK to be so utilized or otherwise placed into service.
- B. It shall be understood by the CONTRACTOR that until such written notification is issued, all responsibility for care and maintenance of all of the WORK shall be borne by the CONTRACTOR. Upon issuance of said written notice of partial utilization, the OWNER will accept responsibility for the protection and maintenance of all such items or portions of the WORK described in the written notice.
- C. The CONTRACTOR shall retain full responsibility for satisfactory completion of the WORK, regardless of whether a portion thereof has been partially utilized by the OWNER and the CONTRACTOR's one year correction period shall commence only after the date of Substantial Completion for the WORK.

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- 14.7 SUBSTANTIAL COMPLETION. When the CONTRACTOR considers the WORK ready for its intended use the CONTRACTOR shall notify the OWNER and the ENGINEER in writing that the WORK is substantially complete. The CONTRACTOR will attach to this request a list of all work items that remain to be completed and a request that the ENGINEER prepare a Notice of Completion. Within a reasonable time thereafter, the OWNER, the CONTRACTOR, and the ENGINEER shall make an inspection of the WORK to determine the status of completion. If the ENGINEER does not consider the WORK substantially complete, or the list of remaining work items to be comprehensive, the ENGINEER will notify the CONTRACTOR in writing giving the reasons therefor. If the ENGINEER considers the WORK substantially complete, the ENGINEER will prepare and deliver to the OWNER, for its execution and recording, the Notice of Completion signed by the ENGINEER and CONTRACTOR, which shall fix the date of Substantial Completion.
- 14.8 FINAL APPLICATION FOR PAYMENT. After the CONTRACTOR has completed all of the remaining work items referred to in Paragraph 14.7 and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, contract releases, record as-built documents (as provided in the General Requirements) and other documents, all as required by the Contract Documents, and after the ENGINEER has indicated that the WORK is acceptable, the CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to the OWNER) of all liens arising out of or filed in connection with the WORK.
- 14.9 FINAL PAYMENT AND ACCEPTANCE
- A. If, on the basis of the ENGINEER's observation of the WORK during construction and final inspection, and the ENGINEER's review of the final Application for Payment and accompanying documentation, all as required by the Contract Documents, the ENGINEER is satisfied that the WORK has been completed and the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the ENGINEER will, within 14 days after receipt of the final Application for Payment, indicate in writing the ENGINEER's recommendation of payment and present the Application to the OWNER for payment.
- B. After acceptance of the WORK by the OWNER's governing body, the OWNER will make final payment to the CONTRACTOR of the amount remaining after deducting all prior payments and all amounts to be kept or retained under the provisions of the Contract Documents, including the following items:
1. Liquidated damages, as applicable.
 2. Two times the value of outstanding items of correction work or punch list items yet uncompleted or uncorrected, as applicable. All such work shall be completed or corrected to the satisfaction of the OWNER within the time stated on the Notice of Completion, otherwise the CONTRACTOR does hereby waive any and all claims to all monies withheld by the OWNER to cover the value of all such uncompleted or uncorrected items.
- 14.10 RELEASE OF RETAINAGE AND OTHER DEDUCTIONS

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- A. After executing the necessary documents to initiate the lien period, and not more than 45 days thereafter (based on a 30-day lien filing period and 15-day processing time), the OWNER will release to the CONTRACTOR the retainage funds withheld pursuant to the Agreement, less any deductions to cover pending claims against the OWNER pursuant to Paragraph 14.5B.
 - B. After filing of the necessary documents to initiate the lien period, the CONTRACTOR shall have 30 days to complete any outstanding items of correction work remaining to be completed or corrected as listed on a final punch list made a part of the Notice of Completion. Upon expiration of the 45 days, referred to in Paragraph 14.10A, the amounts withheld pursuant to the provisions of Paragraph 14.9B herein, for all remaining work items will be returned to the CONTRACTOR; provided, that said work has been completed or corrected to the satisfaction of the OWNER within said 30 days. Otherwise, the CONTRACTOR does hereby waive any and all claims for all monies withheld by the OWNER under the Contract to cover 2 times the value of such remaining uncompleted or uncorrected items.
- 14.11 **CONTRACTOR'S CONTINUING OBLIGATION.** The CONTRACTOR's obligation to perform and complete the WORK in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by the ENGINEER, nor the issuance of a Notice of Completion, nor any payment by the OWNER to the CONTRACTOR under the Contract Documents, nor any use or occupancy of the WORK or any part thereof by the OWNER, nor any act of acceptance by the OWNER nor any failure to do so, nor any review of a Shop Drawing or sample submittal, will constitute an acceptance of work not in accordance with the Contract Documents or a release of the CONTRACTOR's obligation to perform the WORK in accordance with the Contract Documents.
- 14.12 **FINAL PAYMENT TERMINATES LIABILITY OF OWNER.** Final payment is defined as the last progress payment made to the CONTRACTOR for earned funds, less monies withheld as applicable, pursuant to Paragraph 14.10A. The acceptance by the CONTRACTOR of the final payment referred to in Paragraph 14.9 herein, shall be a release of the OWNER and its agents from all claims of liability to the CONTRACTOR for anything done or furnished for, or relating to, the WORK or for any act of neglect of the OWNER or of any person relating to or affecting the WORK, except demands against the OWNER for the remainder, if any, of the amounts kept or retained under the provisions of Paragraph 14.9 herein; and excepting pending, unresolved claims filed prior to the date of the Notice of Completion.

ARTICLE 15 SUSPENSION OF WORK AND TERMINATION

- 15.1 **SUSPENSION OF WORK BY OWNER.** The OWNER, acting through the ENGINEER, may, at any time and without cause, suspend the WORK or any portion thereof for a period of not more than 90 days by notice in writing to the CONTRACTOR. The CONTRACTOR shall resume the WORK on receipt from the ENGINEER of a notice of resumption of work. The CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if the CONTRACTOR makes an approved claim therefor as provided in Articles 11 and 12.
- 15.2 **TERMINATION OF AGREEMENT BY OWNER (CONTRACTOR DEFAULT)**
- A. In the event of default by the CONTRACTOR, the OWNER may give 10 days written notice to the CONTRACTOR of OWNER's intent to terminate the Agreement and

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provide the CONTRACTOR an opportunity to remedy the conditions constituting the default. It shall be considered a default by the CONTRACTOR whenever CONTRACTOR shall: (1) declare bankruptcy, become insolvent, or assign its assets for the benefit of its creditors; (2) fail to provide materials or quality of work meeting the requirements of the Contract Documents; (3) disregard or violate provisions of the Contract Documents or ENGINEER's instructions; (4) fail to prosecute the WORK according to the approved progress schedule; or, (5) fail to provide a qualified superintendent, competent workers, or materials or equipment meeting the requirements of the Contract Documents; or 5) breach any of the material terms of the Agreement or the Contract documents. If the CONTRACTOR fails to remedy the conditions constituting default within the time allowed, the OWNER may then issue the Notice of Termination.

- B. In the event the Agreement is terminated in accordance with Paragraph 15.2A, herein, the OWNER may take possession of the WORK and may complete the WORK by whatever method or means the OWNER may select. The cost of completing the WORK shall be deducted from the balance which would have been due the CONTRACTOR had the Agreement not been terminated and the WORK completed in accordance with the Contract Documents. If such cost exceeds the balance which would have been due, the CONTRACTOR shall pay the excess amount to the OWNER. If such cost is less than the balance which would have been due, the CONTRACTOR shall not have claim to the difference.

15.3 TERMINATION OF AGREEMENT BY OWNER (FOR CONVENIENCE). The OWNER may terminate the Agreement at any time in its sole discretion in the best interests of the City and Borough of Wrangell. In such a case, the CONTRACTOR shall have no claims against the OWNER except: (1) for the value of work performed up to the date the Agreement is terminated, which shall be based on the CONTRACTOR'S bid price for all units of work performed and in no circumstances shall exceed the bid price for each unit of work actually performed; and, (2) for the cost of materials and equipment on hand, in transit, or on definite commitment, as of the date the Agreement is terminated which would be needed in the WORK and which meet the requirements of the Contract Documents. The value of work performed and the cost of materials and equipment delivered to the site, as mentioned above, shall be determined by the ENGINEER in accordance with the procedure prescribed for the making of the final application for payment and payment under Paragraphs 14.8 and 14.9.

15.4 TERMINATION OF AGREEMENT BY CONTRACTOR. The CONTRACTOR may terminate the Agreement upon 10 days written notice to the OWNER, whenever: 1) the WORK has been suspended under the provisions of Paragraph 15.1, herein, for more than 90 consecutive days through no fault or negligence of the CONTRACTOR, and notice to resume work or to terminate the Agreement has not been received from the OWNER within this time period; or, 2) the OWNER should fail to pay the CONTRACTOR any monies due him as approved for payment by the ENGINEER in accordance with the terms of the Contract Documents and within 60 days after presentation to the OWNER by the CONTRACTOR of a request therefor, unless within the 10-day period the OWNER shall have remedied the condition upon which the payment delay was based. In the event of such termination, the CONTRACTOR shall have no claims against the OWNER except for those claims specifically enumerated in Paragraph 15.3, herein, and as determined in accordance with the requirements of that paragraph.

ARTICLE 16 MISCELLANEOUS

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- 16.1 GIVING NOTICE. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice. E-mail shall not constitute written notice.
- 16.2 RIGHTS IN AND USE OF MATERIALS FOUND ON THE WORK
- A. The CONTRACTOR may use on the Project, with ENGINEER's approval, such stone, gravel, sand, or other material determined suitable by the ENGINEER, as may be found in the excavation. The CONTRACTOR will be paid for the excavation of such material at the corresponding contract unit price. No additional payment will be made for utilizing the material from excavation as borrow or select borrow.
 - B. The CONTRACTOR shall replace, at its own expense, with other acceptable material, all of that portion of the excavated material so removed and used which was needed for use on the project. No charge for the materials so used will be made against the CONTRACTOR except that the CONTRACTOR shall be responsible for payment of any royalties required.
 - C. The CONTRACTOR shall not excavate or remove any material from within the Project location which is not within the grading limits, as indicated by the slope and grade lines, without written authorization from the ENGINEER.
 - D. In the event the CONTRACTOR has processed materials from OWNER-furnished sources in excess of the quantities required for performance of this contract, including any waste material produced as a by-product, the OWNER may retain possession of such materials without obligation to reimburse the CONTRACTOR for the cost of their production. When such materials are in a stockpile, the ENGINEER may require: That it remain in stockpile; the CONTRACTOR level such stockpile(s); or that the CONTRACTOR remove such materials and restore the premises to a satisfactory condition at the CONTRACTOR's expense. This provision shall not preclude the OWNER from arranging with the CONTRACTOR to produce material over and above the contract needs, payment for which shall be by written agreement between the OWNER and the CONTRACTOR.
 - E. Unless otherwise provided, the material from any existing old structure may be used temporarily by the CONTRACTOR in the erection of the new structure. Such material shall not be cut or otherwise damaged except with the approval of the ENGINEER.
- 16.3 RIGHT TO AUDIT. If the CONTRACTOR submits a claim to the OWNER for additional compensation, the OWNER shall have the right, as a condition to considering the claim, and as a basis for evaluation of the claim, and until the claim has been settled, to audit the CONTRACTOR's books to the extent they are relevant. This right shall include the right to examine books, records, documents, and other evidence and accounting procedures and practices, sufficient to discover and verify all direct and indirect costs of whatever nature claimed to have been incurred or anticipated to be incurred and for which the claim has been submitted. The right to audit shall include the right to inspect the CONTRACTOR's plants, or such parts thereof, as may be or have been engaged in the performance of the WORK. The CONTRACTOR further agrees that the right to audit encompasses all subcontracts and is binding upon Subcontractors. The rights to examine and inspect herein provided for shall be exercisable through such

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representatives as the OWNER deems desirable during the CONTRACTOR's normal business hours at the office of the CONTRACTOR. The CONTRACTOR shall make available to the OWNER for auditing, all relevant accounting records and documents, and other financial data, and upon request, shall submit true copies of requested records to the OWNER.

- 16.4 **ARCHAEOLOGICAL OR HISTORICAL DISCOVERIES.** When the CONTRACTOR's operation encounters prehistoric artifacts, burials, remains of dwelling sites, paleontological remains, such as shell heaps, land or sea mammal bones or tusks, or other items of historical significance, the CONTRACTOR shall cease operations immediately and notify the ENGINEER. No artifacts or specimens shall be further disturbed or removed from the ground and no further operations shall be performed at the site until so directed. Should the ENGINEER order suspension of the CONTRACTOR's operations in order to protect an archaeological or historical finding, or order the CONTRACTOR to perform extra work, such order(s) shall be covered by an appropriate contract change document.
- 16.5 **CONSTRUCTION OVER OR ADJACENT TO NAVIGABLE WATERS.** All work over, on, or adjacent to navigable waters shall be so conducted that free navigation of the waterways will not be interfered with and the existing navigable depths will not be impaired, except as allowed by permit issued the U.S. Coast Guard and/or the U.S. Army Corps of Engineers, as applicable.
- 16.6 **GRATUITY AND CONFLICT OF INTEREST.** The CONTRACTOR agrees to not extend any loan, gratuity, or gift of money of any form whatsoever to any employee or elected official of the OWNER.

16.7 SUITS OF LAW CONCERNING THE WORK

A. The Superior Court for the State of Alaska, First Judicial District at Wrangell, Alaska, shall be the exclusive jurisdiction and venue for any action of any kind an any nature arising out of or relating to this Agreement and all Contract documents or for any action of any kind and any nature arising out of or related to the performance of non-performance of the CONTRATOR, and CONTRACTOR'S employees, subcontractors, consultants and representatives.

- B. If one of the questions at issue is the satisfactory performance of the work by the CONTRACTOR and should the appropriate court of law judge the work of the CONTRACTOR to be unsatisfactory, then the CONTRACTOR (or the CONTRACTOR's surety) shall reimburse the OWNER for all legal and all other expenses (as may be allowed and set by the court) incurred by the OWNER because of the suit of the law and, further, it is agreed that the OWNER may deduct such expense from any sum or sums then, or any that become due the CONTRACTOR under the contract.

16.8 CERTIFIED PAYROLLS

- A. All CONTRACTORs or Subcontractor who perform work on a public construction contract for the OWNER shall file a certified payroll with the Alaska Department of Labor before Friday of each week that covers the preceding week (Section 14-2-4 ACLA 1949; am Section 4 ch 142 SLA 1972).

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- B. In lieu of submitting the State payroll form, the CONTRACTOR's standard payroll form may be submitted, provided it contains the information required by AS 36.05.040 and a statement that the CONTRACTOR is complying with AS 36.10.010.
- C. A CONTRACTOR or Subcontractor, who performs work on public construction in the State, as defined by AS 36.95.010(3), shall pay not less than the current prevailing rate of wages as issued by the Alaska Department of Labor before the end of the pay period. (AS 36.05.010).

16.9 PREVAILING WAGE RATES

- A. Wage rates for Laborers and Mechanics on Public Contracts, AS 36.05.070. The CONTRACTOR, or Subcontractors, shall pay all employees unconditionally and not less than once a week. Wages may not be less than those stated in Paragraph 16.8C, regardless of the contractual relationship between the CONTRACTOR or Subcontractors and laborers, mechanics, or field surveyors. The scale of wages to be paid shall be posted by the CONTRACTOR in a prominent, easily accessible place at the site of the WORK.
- B. Failure to Pay Agreed Wages, AS 36.05.080. If it is found that a laborer, mechanic, or field surveyor employed by the CONTRACTOR or Subcontractor has been, or is being, paid a rate or wages less than the established rate, the OWNER may, by written notice, terminate the CONTRACTOR or Subcontractors right to proceed with the work. The OWNER may prosecute the work to completion by contract or otherwise, and the CONTRACTOR and sureties will be held liable to the OWNER for excess costs for completing the WORK. (Section 2 ch 52 SLA 1959).
- F. Listing CONTRACTOR's Who Violate Contracts, AS 36.05.090. In addition, a list giving the names of persons who have disregarded the rights of their employees shall be distributed to all departments of State government and all political subdivisions. No person appearing on this list, and no firm, corporation, partnership or association in which the person has an interest, may work as a CONTRACTOR or Subcontractor on a public construction contract for the State, or a political subdivision of the state, until three years after the date of publication of the list. (Section 3 ch 52 SLA 1959; am Section 9 ch 142 SLA).

16.10 EMPLOYMENT REFERENCE. Workers employed in the execution of the contract by the CONTRACTOR or by any Subcontractor under this contract shall not be required or permitted to labor more than 8 hours a day or 40 hours per week in violation of the provisions of the Alaska Wage and Hour Act, Section 23.10.060.

16.11 COST REDUCTION INCENTIVE

- A. At any time within 45 days after the date of the Notice of Award, the CONTRACTOR may submit to the ENGINEER in writing, proposals for modifying the plans, specifications, or other requirements of this contract for the sole purpose of reducing the total cost of construction. The cost reduction proposal shall not impair in any manner the essential functions or characteristics of the project, including but not limited to, service life, economy of operation, ease of maintenance, desired appearance or design and safety standards.
- B. The cost reduction proposal shall contain the following information:

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1. Description of both the existing contract requirements for performing the WORK and the proposed changes.
 2. An itemization of the contract requirements that must be changed if the proposal is adopted.
 3. A detailed estimate of the time required and the cost of performing the WORK under both the existing contract and the proposed change.
 4. A statement of the date by which the CONTRACTOR must receive the decision from the OWNER on the cost reduction proposal.
 5. The contract items of WORK affected by the proposed changes including any quantity variations.
 6. A description and estimate of costs the OWNER may incur in implementing the proposed changes, such as test and evaluation and operating and support costs.
 7. A prediction of any effects the proposed change would have on future operations and maintenance costs to the OWNER.
- C. The provisions of this section shall not be construed to require the OWNER to consider any cost reduction proposal which may be submitted; nor will the OWNER be liable to the CONTRACTOR for failure to accept or act upon any cost reduction proposal submitted, or for delays to the work attributable to the consideration or implementation of any such proposal.
- D. If a cost reduction proposal is similar to a change in the plans or specifications for the project under consideration by the OWNER at the time the proposal is submitted, the OWNER will not accept such proposal and reserves the right to make such changes without compensation to the CONTRACTOR under the provisions of this section.
- E. The CONTRACTOR shall continue to perform the work in accordance with the requirements of the contract until an executed Change Order incorporating the cost reduction proposal has been issued. If any executed Change Order has not been issued by the date upon which the CONTRACTOR's cost reduction proposal specifies that a decision should be made by the OWNER, in writing, the cost reduction proposal shall be considered rejected.
- F. The OWNER shall be the sole judge of the acceptability of a cost reduction proposal and of the estimated net savings in Contract Time and construction costs resulting from the adoption of all or any part of such proposal. Should the CONTRACTOR disagree with OWNER's decision on the cost reduction proposal, there is no further consideration. The OWNER reserves the right to make final determination.
- G. If the CONTRACTOR's cost reduction proposal is accepted in whole or in part, such acceptance will be made by a contract Change Order, which specifically states that the change is executed pursuant to this cost reduction proposal section. Such Change Order shall incorporate the changes in the plans and specifications which are necessary to permit the cost reduction proposal or such part of it as has been accepted to be put into effect and shall include any conditions upon which the OWNER's approval is based, if such approval is conditional. The Change Order shall also describe the estimated net savings in the cost of performing the work attributable to the cost reduction proposal, and shall further provide that the contract cost be adjusted by crediting the OWNER with the estimated net savings amount.

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- H. Acceptance of the cost reduction proposal and performance of the work does not extend the time of completion of the contract, unless specifically provided in the Change Order authorizing the use of the submitted proposal. Should the adoption of the cost reduction proposal result in a Contract Time savings, the total Contract Time shall be reduced by an amount equal to the time savings realized.
- I. The amount specified to the CONTRACTOR in the Change Order accepted in the cost reduction proposal shall constitute full compensation for the performance of WORK. No claims for additional costs as a result of the changes specified in the cost reduction proposal shall be allowed.
- J. The OWNER reserves the right to adopt and utilize any approved cost reduction proposal for general use on any contract administered when it is determined suitable for such application. Cost reduction proposals identical, similar, or previously submitted will not be accepted for consideration if acceptance and compensation has previously been approved. The OWNER reserves the right to use all or part of any cost reduction proposal without obligation or compensation of any kind to the CONTRACTOR.
- K. The CONTRACTOR shall bear the costs, if any, to revise all bonds and insurance requirements for the project, to include the cost reduction WORK.

END OF SECTION

SECTION 00800 - SUPPLEMENTARY GENERAL CONDITIONS

GENERAL. These Supplementary General Conditions make additions, deletions, or revisions to the General Conditions as indicated herein. All provisions which are not so added, deleted, or revised remain in full force and effect. Terms used in these Supplementary General Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

SGC 5.2 INSURANCE AMOUNTS. The limits of liability for the insurance required by Paragraph 5.2 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

A. Workers' Compensation: (under Paragraph 5.2, C.1 of the General Conditions) as in accordance with AS 23.30.045:

- 1. State: Statutory
- 2. Applicable Federal (e.g., Longshore): Statutory

Note: If the WORK called for in the Contract Documents involves work in or on any navigable waters, the CONTRACTOR shall provide Workers' Compensation coverage which shall include coverage under the Longshore and Harbor Workers' Compensation Act, the Jones Act, and any other coverage required under Federal or State laws pertaining to workers in or on navigable waters.

- 3. Employers Liability
 - Bodily Injury by Accident: \$100,000.00 Each Accident
 - Bodily Injury by Disease: \$100,000.00 Each Employee
 - Bodily Injury by Disease: \$500,000.00 Policy Limit

- a. CONTRACTOR agrees to waive all rights of subrogation against the OWNER and CDBG for work performed under Contract.
- b. If CONTRACTOR directly utilizes labor outside of the State of Alaska in the prosecution of the WORK, "Other States" endorsement shall be required as a condition of the Contract.

B. Commercial General Liability: (under Paragraph 5.2, C.2 of the General Conditions):

- 1. Combined Single Limit
 - a. General Policy
 - \$2,000,000.00 Each Occurrence
 - \$3,000,000.00 Annual Aggregate
 - b. Products/Completed Operations
 - \$2,000,000.00 Each Occurrence
 - \$3,000,000.00 Annual Aggregate
 - c. Personal Injury \$2,000,000.00 Each Occurrence

C. Commercial Automobile Liability: (under Paragraph 5.2, C.3 of the General Conditions) including all Owned, Hired, and Non-Owned Vehicles:

Coverage limits not less than \$500,000.00 per person/\$1,000,000.00 per occurrence bodily injury and \$50,000.00 property damage.

D. Policies shall also specify insurance provided by CONTRACTOR will be considered primary and

SECTION 00800 - SUPPLEMENTARY GENERAL CONDITIONS

not contributory to any other insurance available to the OWNER or the CDBG.

- E. All policies will provide for 30 Days written notice prior to any cancellation or nonrenewal of insurance policies required under Contract. Failure to furnish satisfactory evidence of insurance or lapse of the policy is a material breach and grounds for termination of the Grant Agreement and/or contractor's services.

- F. The OWNER and the CDBG shall be named as an "Additional Insured" under all liability coverages listed in this Section, except for workers' compensation insurance. CONTRACTOR shall furnish OWNER a certificate from the insurer showing the OWNER as an Additional Insured within ten (10) days of the CONTRACTOR receiving the Notice to Proceed. Failure of the CONTRACTOR to fully and strictly comply with this Section shall constitute a default and a material breach of the Agreement and Contract documents.

END OF SECTION

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

CDBG SUPPLEMENTAL CONDITIONS

The following CDBG Supplemental Conditions are hereby made a part of this contract and shall supplement and/or supersede any articles of these specifications in conflict therewith.

Any subsequent and/or addenda issued after these specifications have been prepared shall supplement and/or supersede any articles of these specifications.

1. CDBG Funding Notice
2. Alaska License Requirements
3. Insurance and Bonding Requirements
4. Reports and Information
5. Access to Records
6. Contract Pricing
7. Federal Labor Standards Provisions (HUD Form 4010)
8. Schedule of Minimum Hourly Wage Rates
9. Special Equal Opportunity Provisions
 - a. Equal Employment Opportunity
 - b. Title VI of the Civil Rights Act of 1964
 - c. Section 109 of the Housing and Community Development Act of 1974
 - d. Minority/Women Business Enterprise
10. The Architectural Barriers Act
11. The Americans With Disabilities Act
12. Compliance with Clean Air and Clean Water Acts
13. Lead-Based Paint Poisoning Prevention
14. Section 3 of the Housing and Community Development Act of 1968
15. Conflict of Interest
16. Breach of Contract
17. Termination

CDBG SUPPLEMENTAL CONDITIONS

(1)

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

1. CDBG FUNDING NOTICE

This project is funded fully or in part by the Community Development Block Grant program. This contract is subject to all laws and regulations governing the use of such funding. The contractor is bound to each and every applicable provision of the Grant Agreement between the owner and the State of Alaska governing the use of such funding. This contract shall not create between the State of Alaska and the contractor or any subcontractor any relationship. The State of Alaska is not liable for damages or claims from damages arising from the contractor's or any subcontractor's performance or activities under the terms of this contract.

2. ALASKA LICENSE REQUIREMENTS

Any Contractor bidding on public work in the State of Alaska is required to have a license from the State of Alaska based upon the nature, extent, and amount of the contract. No Bid will be considered that does not carry the state license number on the cover page of the Contract Documents and on the Bid Form immediately following the signature and address of the Bidder. Furthermore, the Contractor by signing this Contract represents and warrants that it and its subcontractors are not debarred, suspended, or placed in ineligibility status under the provisions of 24 CFR Part 570 and Alaska Statute 36.30.

3. INSURANCE AND BONDING REQUIREMENTS

The contractor is required to provide and maintain Workers' Compensation Insurance as required by AS 23.30. The contractor must be bonded and insured for at least the amount of the project and, if appropriate, must maintain Professional Liability Insurance.

4. REPORTS AND INFORMATION

The contractor, at such times and in such forms as the owner may require, shall furnish the owner such periodic reports as it may request pertaining to the work or services undertaken pursuant to this contract, the costs and obligations incurred or to be incurred in connection therewith, and any other matters covered by this contract.

5. ACCESS TO RECORDS

The owner, the Inspector General of the United States, the U.S. Department of Housing and Urban Development, and the U.S. Department of Labor, the General Accounting Office, and the State of Alaska Department of Commerce, Community and Economic Development shall be permitted by the contractor to have full access to, and right to examine any pertinent books, documents, papers and records of the contractor involving transactions related to this contract, during the period of the project and for three (3) years from the date of final payment or until all findings have been resolved to the satisfaction of the State of Alaska.

CDBG SUPPLEMENTAL CONDITIONS

(2)

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

6. CONTRACT PRICING

The cost plus a percentage of cost and percentage of construction cost method of contracting shall not be used.

7. FEDERAL LABOR STANDARDS PROVISIONS

(See HUD form 4010 inserted at the end of this section)

8. SCHEDULE OF MINIMUM HOURLY WAGE RATES

(See Wage Determination inserted at the end of this section)

9. SPECIAL EQUAL OPPORTUNITY PROVISIONS

(a) Equal Employment Opportunity. During the performance of this contract, the Contractor agrees as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection of training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

3. The contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

5. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records and accounts by the Department and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

6. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rules, regulations, or order of the Secretary of Labor, or as otherwise provided by law.

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

(b) Title VI of the Civil Rights Act of 1964. Provides that no person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

(c) Section 109 of the Housing and Community Development Act of 1974. "No person in the United States shall on the ground of race, color, national origin or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds available under this title. Any prohibition against discrimination on the basis of age under the Age Discrimination Act of 1975 or with respect to an other wise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973 shall also apply to any such program or activity."

(d) Minority/Women Business Enterprise. Under the provisions of Executive Order 11246 and OMB Circular A-102, contractors on federally-funded projects are required to take affirmative steps to assure that minority businesses are used when possible as sources of supplies, equipment, construction and services. Additionally, the contractor must document all affirmative steps taken to solicit minority businesses and forward this documentation along with the names of the minority subcontractors and suppliers to the owner upon request.

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

10. THE ARCHITECTURAL BARRIERS ACT

All design specifications for the construction of any building shall provide access to the physically handicapped in accordance with the Architectural Barriers Act of 1968.

11. THE AMERICANS WITH DISABILITIES ACT

(a) The contractor will ensure that no person will be discriminated against in any terms or conditions of employment for qualified individuals with a disability, in accordance with Title I of The Americans With Disabilities Act.

(b) The contractor will ensure that services offered by public entities will be accessible and available to persons with disabilities, in accordance with Title II of The Americans With Disabilities Act.

(c) The contractor will take affirmative steps to remove physical barriers and implement readily achievable modifications to existing public accommodations, and will prohibit discriminatory policies and procedures in providing goods and services to the general public, in accordance with Title III of The Americans With Disabilities Act.

(d) The contractor will not retaliate against or attempt to coerce an individual who seeks to enforce his or her own or another's rights under The Americans With Disabilities Act, in accordance with Title V of The Americans With Disabilities Act.

12. COMPLIANCE WITH CLEAN AIR AND CLEAN WATER ACTS

(Applicable to federally-assisted construction contracts and related subcontracts exceeding \$100,000.)

Compliance with Clean Air and Water Acts. During the performance of this contract, the contractor and all subcontractors shall comply with the requirements of the Clean Air Act, as amended, 42 USC 1857 et seq., the Federal Water Pollution Control Act, as amended 33 USC 1251 et seq., and the regulations of the Environmental Protection Agency.

13. LEAD-BASED PAINT POISONING PREVENTION

The Contractor shall comply with the provisions of Title IV of the Lead-Based Paint Poisoning Prevention Act (42 USC 4831), which prohibits the use of lead-based paint in residential structures constructed or rehabilitated with federal assistance of any kind.

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

14. SECTION 3 OF THE HOUSING AND COMMUNITY DEVELOPMENT ACT OF 1968.

Section 3 is a provision of the Housing and Urban Development (HUD) Act of 1968 (12 U.S.C. 1701u) that is regulated by the provisions of [24 CFR Part 75](#). Section 3 applies to recipients receiving community development financial assistance for public construction projects that exceed \$200,000. Section 3 regulations ensure that economic opportunities, most importantly employment, generated by certain HUD financial assistance shall be directed to low- and very low-income persons, particularly those who are recipients of government assistance for housing or residents of the community in which the Federal assistance is spent.

15. CONFLICT OF INTEREST

No member, officer, or employee of the owner or its designees or agents shall have any personal or pecuniary gain or interest, direct or indirect, in this contract or any subcontracts assisted by this contract.

16. BREACH OF CONTRACT

If the Contractor fails to perform any of its obligations under the Contract Documents or fails to comply with applicable state and federal laws governing the use of Community Development Block Grant funding, the Owner may apply such administrative, contractual, or legal remedies including sanctions, penalties, and termination as may be appropriate.

17. TERMINATION

The Owner may, at any time, terminate the contract for the Owner's convenience and without cause. Upon receipt of written notice from the owner of such termination for the owner's convenience, the contractor shall cease operations as directed by the Owner and the notice.

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

Federal Labor Standards Provisions

U.S. Department of Housing and Urban Development Office of Davis-Bacon and Labor Standards

A. APPLICABILITY

The Project or Program to which the construction work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

(1) MINIMUM WAGES

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment, computed at rates not less than those contained in the wage determination of the Secretary of Labor (which is attached hereto and made a part hereof), regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH1321)) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place, where it can be easily seen by the workers.

(ii) Additional Classifications.

- (A) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:
- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination;
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor, the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division ("Administrator"), Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget ("OMB") under OMB control number 1235-0023.)
- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, or HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

- (D) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (1)(ii)(B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this Contract from the first day on which work is performed in the classification.
- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)
- (2) **Withholding.** HUD or its designee shall, upon its own action or upon written request of an authorized representative of the U.S. Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Department of Labor shall make such disbursements in the case of direct Davis-Bacon Act contracts.
- (3) **Payrolls and basic records.**
- (i) **Maintaining Payroll Records.** Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification(s), hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid.
- Whenever the Secretary of Labor has found, under 29 CFR 5.5(a)(1)(iv), that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.
- Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1235-0023 and 1215-0018)
- (ii) **Certified Payroll Reports.**
- (A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <https://www.dol.gov/agencies/whd/forms> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the U.S. Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1235-0008.)

- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;
 - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract; and
- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph (a)(3)(ii)(b).
- (D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.
- (iii) The contractor or subcontractor shall make the records required under subparagraph (a)(3)(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the U.S. Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.
- (4) **Apprentices and Trainees.**
- (i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency (where appropriate), to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program.

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed, unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (iii) **Equal employment opportunity.** The utilization of apprentices, trainees, and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.
- (5) **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this Contract.
- (6) **Subcontracts.** The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs (1) through (11) in this paragraph (a) and such other clauses as HUD or its designee may, by appropriate instructions, require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.
- (7) **Contract termination; debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- (8) **Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this Contract.
- (9) **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.
- (10) **Certification of Eligibility.**
- (i) By entering into this Contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

(ii) No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) Anyone who knowingly makes, presents, or submits a false, fictitious, or fraudulent statement, representation or certification is subject to criminal, civil and/or administrative sanctions, including fines, penalties, and imprisonment (e.g., 18 U.S.C. §§ 287, 1001, 1010, 1012; 31 U.S.C. §§ 3729, 3802.

(11) **Complaints, Proceedings, or Testimony by Employees.** No laborer or mechanic, to whom the wage, salary, or other labor standards provisions of this Contract are applicable, shall be discharged or in any other manner discriminated against by the contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The provisions of this paragraph (b) are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

- (1) **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work, which may require or involve the employment of laborers or mechanics, shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek, unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.
- (2) **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in subparagraph B(1) of this paragraph, the contractor, and any subcontractor responsible therefor, shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph B(1) of this paragraph, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph B(1) of this paragraph. In accordance with the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. § 2461 Note), the Department of Labor adjusts this civil monetary penalty for inflation no later than January 15 each year.
- (3) **Withholding for unpaid wages and liquidated damages.** HUD or its designee shall, upon its own action or upon written request of an authorized representative of the U.S. Department of Labor, withhold or cause to be withheld from any moneys payable on account of work performed by the contractor or subcontractor under any such contract, or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages, as provided in the clause set forth in subparagraph B(2) of this paragraph.
- (4) **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph B(1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs B(1) through (4) of this paragraph.

C. HEALTH AND SAFETY

The provisions of this paragraph (c) are applicable where the amount of the prime contract exceeds \$100,000.

- (1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
- (2) The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96), 40 U.S.C. § 3701 et seq.
- (3) The contractor shall include the provisions of this paragraph in every subcontract, so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS



U.S. Department of Labor
Wage and Hour Division

PAYROLL

(For Contractor's Optional Use; See Instructions at www.dol.gov/whd/forms/wh347instr.htm)
Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

NAME OF CONTRACTOR OR SUBCONTRACTOR ADDRESS PROJECT OR CONTRACT NO.

OMB No.: 1235-0008
Expires: 07/31/2024

FOR WEEK ENDING PROJECT AND LOCATION

PROJECT AND LOCATION

FOR WEEK ENDING

PAYROLL NO.

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER OF WORKER)	(2) SOCIAL SECURITY NUMBER	(3) WORK CLASSIFICATION	(4) DAY AND DATE							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS			(9) NET WAGES PAID FOR WEEK		
			1	2	3	4	5	6	7				FICA	WITH-HOLDING TAX	OTHER		TOTAL DEDUCTIONS	

While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information called on contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "submit weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. §§ 5.5(a)(3)(i) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room 3350, 200 Constitution Avenue, NW, Washington, D.C. 20210

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

"General Decision Number: AK20220001 07/08/2022"

Superseded General Decision Number: AK20210001

State: Alaska

Construction Types: Building and Heavy

Counties: Alaska Statewide.

BUILDING AND HEAVY CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<p>Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.</p>
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<p>Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.</p>

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

Additional information on contractor requirements and worker protections under the Executive Orders is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Modification Number Publication Date

0	01/07/2022
1	02/18/2022
2	02/25/2022
3	03/11/2022
4	03/18/2022
5	04/15/2022
6	07/08/2022

ASBE0097-001 06/01/2021	Rates	Fringes
Asbestos Workers/Insulator (includes application of all insulating materials protective coverings, coatings and finishings to all types of mechanical systems).....	\$ 38.68	21.57
HAZARDOUS MATERIAL HANDLER (includes preparation, wetting, stripping, removal scrapping, vacuming, bagging, and disposing of all insulation materials, whether they contain asbestos or not, from mechanical systems).....	\$ 37.38	19.55

BOIL0502-002 01/01/2021	Rates	Fringes
BOILERMAKER.....	\$ 47.03	30.59

BRAK0001-002 07/01/2020	Rates	Fringes
Bricklayer, Blocklayer, Stonemason, Marble Mason, Tile Setter, Terrazzo Worker.....	\$ 42.16	19.67
Tile & Terrazzo Finisher.....	\$ 35.99	19.67

CARP1501-001 09/01/2019	Rates	Fringes
MILLWRIGHT.....	\$ 37.64	23.46

CARP2520-003 09/01/2019	Rates	Fringes

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

Diver		
Stand-by.....	\$ 42.65	26.51
Tender.....	\$ 41.65	26.51
Working.....	\$ 82.45	26.51
Piledriver		
Piledriver; Skiff Operator and Rigger.....	\$ 38.34	26.51
Sheet Stabber.....	\$ 38.34	26.51
Welder.....	\$ 43.90	26.51

DEPTH PAY PREMIUM FOR DIVERS BELOW WATER SURFACE:

50-100 feet	\$1.00 per foot
101 feet and deeper	\$2.00 per foot

ENCLOSURE PAY PREMIUM WITH NO VERTICAL ASCENT:

5-50 FEET	\$1.00 PER FOOT/DAY
51-100 FEET	\$2.00 PER FOOT/DAY
101 FEET AND ABOVE	\$3.00 PER FOOT/DAY

SATURATION DIVING:

The standby rate applies until saturation starts. The saturation diving rate applies when divers are under pressure continuously until work task and decompression are complete. the diver rate shall be paid for all saturation hours.

WORK IN COMBINATION OF CLASSIFICATIONS:

Employees working in any combination of classifications within the diving crew (except dive supervisor) in a shift are paid in the classification with the highest rate for that shift.

CARP4059-001 09/01/2019	Rates	Fringes
CARPENTER		
Including Lather and Drywall Hanging.....	\$ 38.34	26.51

ELEC1547-004 04/01/2022	Rates	Fringes
CABLE SPLICER.....	\$ 42.77	3% + 27.97
ELECTRICIAN.....	\$ 42.44	3% + 28.22

* ELEC1547-005 04/01/2022

Line Construction	Rates	Fringes
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SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

CABLE SPLICER.....	\$ 62.29	3%+32.37
Linemen (Including Equipment Operators, Technician)	\$61.29	3%+30.98
Powderman.....	\$ 59.29	3%+32.37
TREE TRIMMER.....	\$ 38.05	3%+27.01

ELEV0019-002 01/01/2022	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 63.16	36.885+a+b

FOOTNOTE:

- a. Employer contributes 8% of the basic hourly rate for over 5 year's service and 6% of the basic hourly rate for 6 months to 5 years' of service as vacation paid credit.
- b. Eight paid holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Veteran's Day; Thanksgiving Day; Friday after Thanksgiving, and Christmas Day

ENGI0302-002 01/01/2022	Rates	Fringes
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POWER EQUIPMENT OPERATOR

GROUP 1.....	\$ 43.53	25.95
GROUP 1A.....	\$ 45.29	25.95
GROUP 2.....	\$ 42.76	25.95
GROUP 3.....	\$ 42.76	25.95
GROUP 4.....	\$ 35.83	25.95

TUNNEL WORK

GROUP 1.....	\$ 47.88	25.95
GROUP 1A.....	\$ 49.82	25.95
GROUP 2.....	\$ 47.04	25.95
GROUP 3.....	\$ 46.24	25.95
GROUP 4.....	\$ 39.41	25.95

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Asphalt Roller: Breakdown, Intermediate, and Finish; Back Filler; Barrier Machine (Zipper); Beltcrete ith power pack and similar conveyors; Bending Machine; Boat Coxwains; Bulldozers; Cableways, Highlines and Cablecars; Cleaning Machine; Coating Machine; Concrete Hydro Blaster; Cranes-45 tons and under or 150 foot boom and under (including jib and attachments): (a) Hydralifts or Transporters, all track or truck type,(b) Derricks; Crushers; Deck Winches-Double Drum; Ditching or Trenching Machine (16 inch or over); Drilling Machines, core, cable, rotary and exploration; Finishing Machine Operator, Concrete Paving, Laser Screed, Sidewalk, Curb and Gutter Machine; Helicopters; Hover Craft, Flex Craft, Loadmaster, Air Cushion, All Terrain Vehicle, Rollagon, Bargecable, Nodwell, and Snow Cat; Hydro Ax: Feller Buncher and similar; Loaders (2 1/2 yards through 5 yards, including all attachments): Forklifts with telescopic boom and swing attachment, Overhead and front end, 2 1/2 yards through 5 yards, Loaders with forks or pipe clamps; Loaders, elevating

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

belt type, Euclid and similar types; Mechanics, Bodyman; Micro Tunneling Machine; Mixers: Mobile type w/hoist combination; Motor Patrol Grader; Mucking Machines: Mole, Tunnel Drill, Horizontal/Directional Drill Operator, and/or Shield; Operator on Dredges; Piledriver Engineers, L. B. Foster, Puller or similar Paving Breaker; Power Plant, Turbine Operator, 200 k.w. and over (power plants or combination of power units over 300 k.w.); Scrapers-through 40 yards; Service Oiler/Service Engineer; Sidebooms-under 45 tons; Shot Blast Machine; Shovels, Backhoes, Excavators with all attachments, and Gradealls (3 yards and under), Spreaders, Blaw Knox, Cedarapids, Barber Greene, Slurry Machine; Sub-grader (Gurries, Reclaimer, and similar types); Tack tractor; Truck mounted Concrete Pumps, Conveyor, Creter; Water Kote Machine; Unlicensed off road hauler

GROUP 1A: Camera/Tool/Video Operator (Slipline), Cranes-over 45 tons or 150 foot (including jib and attachments): (a) Clamshells and Draglines (over 3 yards), (b) Tower cranes; Licensed Water/Waste Water Treatment Operator; Loaders over 5 yds.; Certified Welder, Electrical Mechanic, Camp Maintenance Engineer, Mechanic (over 10,000 hours); Motor Patrol Grader, Dozer, Grade Tractor, Roto-mill/Profiler (finish: when finishing to final grade and/or to hubs, or for asphalt); Power Plants: 1000 k.w. and over; Quad; Screed; Shovels, Backhoes, Excavators with all attachments (over 3 yards), Sidebooms over 45 tons; Slip Form Paver, C.M.I. and similar types; Scrapers over 40 yards;

GROUP 2: Boiler-fireman; Cement Hog and Concrete Pump Operator; Conveyors (except as listed in group 1); Hoist on steel erection; Towermobiles and Air Tuggers; Horizontal/Directional Drill Locator; Licensed Grade Technician; Loaders, (i.e., Elevating Grader and Material Transfer Vehicle); Locomotives: rod and geared engines; Mixers; Screening, Washing Plant; Sideboom (cradling rock drill regardless of size); Skidder; Trenching Machine under 16 inches; Waste/ Waste Water Treatment Operator.

GROUP 3: ""A"" Frame Trucks, Deck Winches: single power drum; Bombardier (tack or tow rig); Boring Machine; Brooms-power; Bump Cutter; Compressor; Farm tractor; Forklift, industrial type; Gin Truck or Winch Truck with poles when used for hoisting; Grade Checker and Stake Hopper; Hoist, Air Tuggers, Elevators; Loaders: (a) Elevating-Athey, Barber Green and similar types (b) Forklifts or Lumber Carrier (on construction job site) (c) Forklifts with Tower (d) Overhead and Front-end, under 2 1/2 yds. Locomotives: Dinkey (air, steam, gas and electric) Speeders; Mechanics (light duty); Oil, Blower Distribution; Post Hole Diggers, mechanical; Pot Fireman (power agitated); Power Plant, Turbine Operator, under 200 k.w.; Pumps-water; Roller-other than Plantmix; Saws, concrete; Skid Steer with all attachments; Straightening Machine; Tow Tractor

GROUP 4: Rig Oiler/Crane Assistant Engineer; Parts and Equipment Coordinator; Swamper (on trenching machines or shovel type equipment); Spotter; Steam Cleaner; Drill Helper.

FOOTNOTE: Groups 1-4 receive 10% premium while performing tunnel or underground work. Rig Oiler/Crane Assistant Engineer shall be required on cranes over 85 tons or over 100 feet of boom.

IRON0751-003 07/01/2021

Rates

Fringes

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

IRONWORKER BENDER OPERATOR.....	\$ 40.82	34.99
BRIDGE, STRUCTURAL, ORNAMENTAL, REINFORCING		
MACHINERY MOVER, RIGGER, SHEETER, STAGE RIGGER, BENDER OPERATOR.....	\$ 40.82	34.99
BRIDGE, STRUCTURAL, ORNAMENTAL, REINFORCING MACHINERY MOVER, RIGGER, SHEETER, STAGE RIGGER, BENDER OPERATOR.....	\$ 38.75	32.63
FENCE, BARRIER INSTALLER....	\$ 37.32	34.99
GUARDRAIL INSTALLERS.....	\$ 38.32	34.99
GUARDRAIL LAYOUT MAN.....	\$ 38.06	34.99
HELICOPTER, TOWER.....	\$ 41.82	34.99

LABO0341-001 04/01/2021	Rates	Fringes
LABORER (South of the 63 rd Parallel & West of Longitude 138 Degrees)		
GROUP 1.....	\$ 32.00	31.11
GROUP 2.....	\$ 33.00	31.11
GROUP 3.....	\$ 33.90	31.11
GROUP 3A.....	\$ 37.18	31.11
GROUP 3B.....	\$ 40.97	28.40
GROUP 4.....	\$ 21.57	31.11
TUNNELS, SHAFTS, AND RAISES		
GROUP 1.....	\$ 35.20	31.11
GROUP 2.....	\$ 36.30	31.11
GROUP 3.....	\$ 37.29	31.11
GROUP 3A.....	\$ 40.90	31.11
GROUP 3B.....	\$ 45.07	28.40

LABORERS CLASSIFICATIONS

GROUP 1: Asphalt Workers (shovelman, plant crew); Brush Cutters; Camp Maintenance Laborer; Carpenter Tenders; Choke Setters, Hook Tender, Rigger, Signalman; Concrete Laborer (curb and gutter, chute handler, grouting, curing, screeding); Crusher Plant Laborer; Demolition Laborer; Ditch Diggers; Dump Man; Environmental Laborer (asbestos (limited to nonmechanical systems), hazardous and toxic waste, oil spill); Fence Installer; Fire Watch Laborer; Flagman; Form

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

Strippers; General Laborer; Guardrail Laborer, Bridge Rail Installers; Hydro-Seeder Nozzleman; Laborers (building); Landscape or Planter; Laying of Decorative Block (retaining walls, flowered decorative block 4 feet and below); Material Handlers; Pneumatic or Power Tools; Portable or Chemical Toilet Serviceman; Pump Man or Mixer Man; Railroad Track Laborer; Sandblast, Pot Tender; Saw Tenders; Scaffold Building and Erecting; Slurry Work; Stake Hopper; Steam Point or Water Jet Operator; Steam Cleaner Operator; Tank Cleaning; Utiliwalk, Utilidor Laborer and Conduit Installer; Watchman (construction projects); Window Cleaner

GROUP 2: Burning and Cutting Torch; Cement or Lime Dumper or Handler (sack or bulk); Choker Splicer; Chucktender (wagon, airtrack and hydraulic drills); Concrete Laborers (power buggy, concrete saws, pumpcrete nozzleman, vibratorman); Culvert Pipe Laborer; Cured in place Pipelayer; Environmental Laborer (marine work, oil spill skimmer operator, small boat operator); Foam Gun or Foam Machine Operator; Green Cutter (dam work); Gunnite Operator; Hod Carriers; Jackhammer or Pavement Breakers (more than 45 pounds); Laying of Decorative Block (retaining walls, flowered decorative block above 4 feet); Mason Tender and Mud Mixer (sewer work); Pilot Car; Plasterer, Bricklayer and Cement Finisher Tenders; Power Saw Operator; Railroad Switch Layout Laborer; Sandblaster; Sewer Caulkers; Sewer Plant Maintenance Man; Thermal Plastic Applicator; Timber Faller, chain saw operator, filer; Timberman

GROUP 3: Alarm Installer; Bit Grinder; Guardrail Machine Operator; High Rigger and tree topper; High Scaler; Multiplate; Slurry Seal Squeegee Man

GROUP 3A: Asphalt Raker, Asphalt Belly dump lay down; Drill Doctor (in the field); Drillers (including, but not limited to, wagon drills, air track drills; hydraulic drills); Powderman; Pioneer Drilling and Drilling Off Tugger (all type drills); Pipelayers

GROUP 3B: Grade checker (setting or transferring of grade marks, line and grade)

GROUP 4: Final Building Cleanup

TUNNELS, SHAFTS, AND RAISES CLASSIFICATIONS

GROUP 1: Brakeman; Muckers; Nippers; Topman and Bull Gang; Tunnel Track Laborer

GROUP 2: Burning and Cutting Torch; Concrete Laborers; Jackhammers; Nozzleman, Pumpcrete or Shotcrete.

GROUP 3: Miner; Retimberman

GROUP 3A: Asphalt Raker, Asphalt Belly dump lay down; Drill Doctor (in the field); Drillers (including, but not limited to, wagon drills, air track drills; hydraulic drills); Powderman; Pioneer Drilling and Drilling Off Tugger (all type drills); Pipelayers.

GROUP 3B: Grade checker (setting or transferring of grade marks, line and grade)

Tunnel shaft and raise rates only apply to workers regularly employed inside a tunnel portal or shaft collar.

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

LABO0942-001 04/01/2022	Rates	Fringes
Laborers: North of the 63rd Parallel & East of Longitude 138 Degrees		
GROUP 1.....	\$ 33.00	31.37
GROUP 2.....	\$ 34.00	31.37
GROUP 3.....	\$ 34.90	31.37
GROUP 3A.....	\$ 38.18	31.37
GROUP 3B.....	\$ 41.97	29.00
GROUP 4.....	\$ 22.57	31.37
TUNNELS, SHAFTS, AND RAISES		
GROUP 1.....	\$ 36.20	31.37
GROUP 2.....	\$ 37.40	31.37
GROUP 3.....	\$ 38.39	31.37
GROUP 3A.....	\$ 42.00	31.37
GROUP 3B.....	\$ 46.17	29.00

LABORERS CLASSIFICATIONS

GROUP 1: Asphalt Workers (shovelman, plant crew); Brush Cutters; Camp Maintenance Laborer; Carpenter Tenders; Choke Setters, Hook Tender, Rigger, Signalman; Concrete Laborer (curb and gutter, chute handler, grouting, curing, screeding); Crusher Plant Laborer; Demolition Laborer; Ditch Diggers; Dump Man; Environmental Laborer (asbestos limited to nonmechanical systems), hazardous and toxic waste, oil spill); Fence Installer; Fire Watch Laborer; Flagman; Form Strippers; General Laborer; Guardrail Laborer, Bridge Rail Installers; Hydro-Seeder Nozzleman; Laborers (building); Landscape or Planter; Laying of Decorative Block (retaining walls, flowered decorative block 4 feet and below); Material Handlers; Pneumatic or Power Tools; Portable or Chemical Toilet Serviceman; Pump Man or Mixer Man; Railroad Track Laborer; Sandblast, Pot Tender; Saw Tenders; Scaffold Building and Erecting; Slurry Work; Stake Hopper; Steam Point or Water Jet Operator; Steam Cleaner Operator; Tank Cleaning; Utiliwalk, Utilidor Laborer and Conduit Installer; Watchman (construction projects); Window Cleaner

GROUP 2: Burning and Cutting Torch; Cement or Lime Dumper or Handler (sack or bulk); Choker Splicer; Chucktender (wagon, airtrack and hydraulic drills); Concrete Laborers (power buggy, concrete saws, pumcrete nozzleman, vibratorman); Culvert Pipe Laborer; Cured in place Pipelayer; Environmental Laborer (marine work, oil spill skimmer operator, small boat operator); Foam Gun or Foam Machine Operator; Green Cutter (dam work); Gunnite Operator; Hod Carriers; Jackhammer or Pavement Breakers (more than 45 pounds); Laying of Decorative Block (retaining walls, flowered decorative block above 4 feet); Mason Tender and Mud Mixer (sewer work); Pilot Car; Plasterer, Bricklayer and Cement Finisher Tenders; Power Saw Operator; Railroad Switch Layout Laborer; Sandblaster; Sewer Caulkers; Sewer Plant Maintenance Man; Thermal Plastic Applicator; Timber Faller, chain saw operator, filer; Timberman

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

GROUP 3: Alarm Installer; Bit Grinder; Guardrail Machine Operator; High Rigger and tree topper; High Scaler; Multiplate; Slurry Seal Squeegee Man

GROUP 3A: Asphalt Raker, Asphalt Belly dump lay down; Drill Doctor (in the field); Drillers (including, but not limited to, wagon drills, air track drills; hydraulic drills); Powderman; Pioneer Drilling and Drilling Off Tugger (all type drills); Pipelayers

GROUP 3B: Grade checker (setting or transferring of grade marks, line and grade)

GROUP 4: Final Building Cleanup

TUNNELS, SHAFTS, AND RAISES CLASSIFICATIONS

GROUP 1: Brakeman; Muckers; Nippers; Topman and Bull Gang; Tunnel Track Laborer

GROUP 2: Burning and Cutting Torch; Concrete Laborers; Jackhammers; Nozzleman, Pumpcrete or Shotcrete.

GROUP 3: Miner; Retimberman

GROUP 3A: Asphalt Raker, Asphalt Belly dump lay down; Drill Doctor (in the field); Drillers (including, but not limited to, wagon drills, air track drills; hydraulic drills); Powderman; Pioneer Drilling and Drilling Off Tugger (all type drills); Pipelayers.

GROUP 3B: Grade checker (setting or transferring of grade marks, line and grade)

Tunnel shaft and raise rates only apply to workers regularly employed inside a tunnel portal or shaft collar.

PAIN1959-001 12/01/2021

NORTH OF THE 63RD PARALLEL	Rates	Fringes
PAINTER		
BRUSH/ROLLER PAINT OR WALL COVERER.....	\$ 34.25	25.10
TAPING, TEXTURING, STRUCTURAL PAINTING, SANDBLASTING, POT TENDER, FINISH METAL, SPRAY, BUFFER OPERATOR, RADON MITIGATION, LEAD BASED PAINT ABATEMENT, HAZARDOUS MATERIAL HANDLER.....	\$ 34.77	25.10

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

PAIN1959-002 12/01/2021

SOUTH OF THE 63RD PARALLEL	Rates	Fringes
PAINTER		
General Painter.....	\$ 32.64	25.95
Industrial Painter.....	\$ 32.74	25.95
Taper / Paper & Vinyl Hanger.....	\$ 32.64	25.95

PAIN1959-003 12/01/2021

NORTH OF THE 63RD PARALLEL	Rates	Fringes
GLAZIER.....	\$ 41.16	28.16

PAIN1959-004 07/01/2019

FLOOR LAYER: Carpet.....	\$ 28.75	14.44
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PAIN1959-006 12/01/2021

SOUTH OF THE 63RD PARALLEL	Rates	Fringes
GLAZIER.....	\$ 41.37	27.25

* PLUM0262-002 07/01/2022

East of the 141st Meridian	Rates	Fringes
Plumber; Steamfitter.....	\$ 41.32	27.62

PLUM0367-002 07/01/2021

South of the 63rd Parallel	Rates	Fringes
Plumber; Steamfitter.....	\$ 41.00	27.95

PLUM0375-002 07/01/2021

North of the 63rd Parallel	Rates	Fringes
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SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

Plumber; Steamfitter.....	\$ 42.91	31.25

PLUM0669-002 04/01/2019	Rates	Fringes
SPRINKLER FITTER.....	\$ 47.25	26.49

ROOF0189-006 04/01/2021	Rates	Fringes
ROOFER.....	\$ 44.62	17.63

SHEE0023-003 07/01/2021		
South of the 63rd Parallel	Rates	Fringes
SHEET METAL WORKER.....	\$ 43.75	27.92

SHEE0023-004 07/01/2021		
North of the 63rd Parallel	Rates	Fringes
SHEET METAL WORKER.....	\$ 49.04	28.26

TEAM0959-003 04/01/2021	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 41.94	26.12
GROUP 1A.....	\$ 43.21	26.12
GROUP 2.....	\$ 40.68	26.12
GROUP 3.....	\$ 39.86	26.12
GROUP 4.....	\$ 39.28	26.12
GROUP 5.....	\$ 38.52	26.12

GROUP 1: Semi with Double Box Mixer; Dump Trucks (including rockbuggy and trucks with pups) over 40 yards up to and including 60 yards; Deltas, Commanders, Rollogans and similar equipment when pulling sleds, trailers or similar equipment; Boat Coxswain; Lowboys including attached trailers and jeeps, up to and including 12 axles; Ready-mix over 12 yards up to and including 15 yards); Water Wagon (250 Bbls and above); Tireman, Heavy Duty/Fueler

GROUP 1A: Dump Trucks (including Rockbuggy and Trucks with pups) over 60 yards up to and including 100 yards; Jeeps (driver under load)

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

GROUP 2: Turn-O-Wagon or DW-10 not self-loading; All Deltas, Commanders, Rollogans, and similar equipment; Mechanics; Dump Trucks (including Rockbuggy and Trucks with pups) over 20 yards up to and including 40 yards; Lowboys including attached trailers and jeeps up to and including 8 axles; Super vac truck/cacasco truck/heat stress truck; Ready-mix over 7 yards up to and including 12 yards; Partsman; Stringing Truck

GROUP 3: Dump Trucks (including Rockbuggy and Trucks with pups) over 10 yards up to and including 20 yards; batch trucks 8 yards and up; Oil distributor drivers; Oil Distributor Drivers; Trucks/Jeeps (push or pull); Traffic Control Technician

GROUP 4: Buggymobile; Semi or Truck and trailer; Dumpster; Tireman (light duty); Dump Trucks (including Rockbuggy and Truck with pups) up to and including 10 yards; Track Truck Equipment; Grease Truck; Flat Beds, dual rear axle; Hyster Operators (handling bulk aggregate); Lumber Carrier; Water Wagon, semi; Water Truck, dual axle; Gin Pole Truck, Winch Truck, Wrecker, Truck Mounted "A" Frame manufactured rating over 5 tons; Bull Lifts and Fork Lifts with Power Boom and Swing attachments, over 5 tons; Front End Loader with Forks; Bus Operator over 30 passengers; All Terrain Vehicles; Boom Truck/Knuckle Truck over 5 tons; Foam Distributor Truck/dual axle; Hydro-seeders, dual axle; Vacuum Trucks, Truck Vacuum Sweepers; Loadmaster (air and water); Air Cushion or similar type vehicle; Fire Truck/Ambulance Driver; Combination Truck-fuel and grease; Compactor (when pulled by rubber tired equipment); Rigger (air/water/oilfield); Ready Mix, up to and including 7 yards;

GROUP 5: Gravel Spreader Box Operator on Truck; Flat Beds, single rear axle; Boom Truck/Knuckle Truck up to and including 5 tons; Pickups (Pilot Cars and all light duty vehicles); Water Wagon (Below 250 Bbls); Gin Pole Truck, Winch Truck, Wrecker, Truck Mounted "A" Frame, manufactured rating 5 tons and under; Bull Lifts and Fork Lifts (fork lifts with power broom and swing attachments up to and including 5 tons); Buffer Truck; Tack Truck; Farm type Rubber Tired Tractor (when material handling or pulling wagons on a construction project); Foam Distributor, single axle; Hydro-Seeders, single axle; Team Drivers (horses, mules and similar equipment); Fuel Handler (station/bulk attendant); Batch Truck, up to and including 7 yards; Gear/Supply Truck; Bus Operator, Up to 30 Passengers; Rigger/Swamper

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave r Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person

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who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

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Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

SECTION 00801 – CDBG SUPPLEMENTAL CONDITIONS

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

END OF SECTION

**SECTION 00830 - ALASKA LABOR STANDARDS, REPORTING, AND
PREVAILING WAGE RATE DETERMINATION**

- A. State of Alaska, Department of Labor, Laborers' and Mechanics' Minimum Rates of Pay, AS 36.05.010 and AS 36.05.050, Wage and Hour Administration Pamphlet No. 600, the latest edition published by the State of Alaska, Department of Labor inclusive, are made a part of this contract by reference. The current prevailing rate of wages is that contained in the latest determination of prevailing rate of wages issued by the Department of Labor and Workforce Development at least 10 days before the final date for submission of bids for the contract.
- B. If a higher federal wage rate is required for a particular classification due to partial federal funding or other federal participation, the higher rate must be paid. Reporting requirements may differ between the State and Federal requirements.
- C. The CONTRACTOR is responsible for contacting the Alaska Department of Labor to determine compliance with current regulations.
- D. Required Reporting During Contract to be provided by every CONTRACTOR and Subcontractor:

1. **Certified Payrolls must be submitted every week. Before each Friday**, each CONTRACTOR and Subcontractor must file Certified Payrolls with Statements of Compliance for the previous week. If there was no activity for that pay period, indicate "**No Activity.**" Indicate "**Start**" on your first payroll, and "**Final**" on your last payroll for this Project. Send to:

Wage and Hour Section
Labor Law Compliance Division
Alaska Department of Labor
P.O. Box 020630
Juneau, AK 99802-0630
(907) 465-4842

and

Project Manager
City & Borough of Wrangell
P.O. Box 531
Wrangell, AK 99929
(907) 874-3902

2. **Within 10 Days of "Notice of Award/Notice to Proceed"** make a list of **all** Subcontractors. Include their name, address, phone, estimated subcontract amount, and estimated start and finish dates. Send to:

Borough Clerk
City & Borough of Wrangell
P.O. Box 531
Wrangell, AK 99929
(907) 874-2381

and

Wage and Hour Section
Labor Law Compliance Division
Alaska Department of Labor
P.O. Box 020630
Juneau, AK 99802-0630
(907) 465-4839/4842

- E. As part of the **final payment request package**:
1. A final Subcontractor list complete with final subcontract amounts and including all equipment rentals (with operators).
2. A Completion of Public Project form from the Alaska Department of Labor.

END OF SECTION

**SECTION 00840 – FEDERAL LABOR STANDARDS, REPORTING, AND
PREVAILING WAGE RATE DETERMINATION**

- A. The Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to project associated Federal assistance. The Contractor and all Subcontractors are required to comply with the Federal Labor Standards Provisions, Form HUD-4010 (07/2021) and use Form WH347 for weekly certified payroll submission.
- B. The Federal General Decision Number is: AK20220001 issued 07/08/2022
- C. If a higher State of Alaska wage rate is required for a particular classification, the higher rate must be paid. Reporting requirements may differ between the Federal and State requirements.
- D. **Within 15 Days after Notice of Intent to Award**, the CONTRACTOR must compile and submit a list of all Subcontractors and material suppliers, showing all tiers. For each company listed include name, address, phone, employer tax number; DBE status if any; estimated subcontract amount; estimated start and finish dates; and copies of bid tabulations with firm name and number. Send the list to Addresses B and C.
- E. **Within 30 Days of final award**, the CONTRACTOR, and each Subcontractor, who are required to file EEO-1 reports (Standard Form 100 [SF-100]), must send it to the Office of Federal Contract Compliance Programs (OFCCP) Area Office - Address C.
- F. Before each Friday, the CONTRACTOR and each Subcontractor must file:
 - 1. Certified Payrolls with Statements of Compliance for the previous week. If there was no activity for that week, indicate "No Activity." Indicate "Start" on your first payroll, and "Final" on your last payroll for this project. Send the original to Address B and a complete copy to Address A.
 - 2. Weekly Employment Opportunity (EEO) Reports for the previous week to Address A. If the information requested (race and gender) is indicated on the copy of the payroll, then this Weekly EEO Report is hereby waived.
- G. By the 5th of each month, each CONTRACTOR and Subcontractor must complete the Monthly Employment Utilization Report (CC257) for the previous month for its aggregate workforce in Alaska (for federal and non-federal projects). Make a list of all projects (federal and non-federal) in Alaska over \$10,000. Include the firm name, name and location of project, project number, percentage complete, contract amount, and established date of completion. Send both the CC257 and the list of projects to Addresses A and C.
- H. Preparing the final payment request, the CONTRACTOR must verify that the subcontractor list is up-to-date and includes all parties submitting certified payrolls. Send a copy of amended lists to Addresses A and B. Submit completed Compliance Certification and Release for the Prime Contractor and each Subcontractor to Address A.

<i>Address A</i>	<i>Address B</i>	<i>Address C</i>
Project Manager City and Borough of Wrangell P.O. BOX 531 Wrangell, AK 99929 (907) 874-3902	Wage and Hour Section Labor Standards & Alaska Dept. of Labor P.O. Box 020630 Juneau, AK 99802-0630 (907) 465-4839	OFCCP Area Office 605 W. 4th Ave., Room Anchorage, AK 99501 (907) 271-2864

END OF SECTION

SECTION 00852 - PERMITS

PART 1 – GENERAL

1.1 PERMIT APPLICATION INFORMATION

- A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of the Bidders' own investigations. This Document and its attachments are not part of the Contract Documents.
- B. Permit Application: Complete building permit application and file with Authorities Having Jurisdiction within ten days of the Notice to Proceed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01010 - SUMMARY OF WORK

PART 1 – GENERAL

1.1 GENERAL

- A. The WORK to be performed under this contract shall consist of furnishing all tools, equipment, materials, supplies, manufactured articles, labor, transportation, and services, including fuel, power, and essential communications, and performing all WORK, or other operations required for the fulfillment of the contract in strict accordance with the Contract Documents. The WORK shall be complete, and all work, materials, and services not expressly indicated or called for in the Contract Documents which may be necessary for the complete and proper construction of the WORK in good faith shall be provided by the CONTRACTOR as though originally so indicated, at no increase in cost to the OWNER.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. WORK consists of all activities necessary to completely replace the existing fire alarm systems at the Wrangell High School and Middle School. This includes demolition and replacement of all 'field devices' such as: notification devices (horns, horn strobes, strobe only devices), initiation devices (smoke detectors, heat detectors, duct detectors, manual pull stations), flow and tamper switches, and all auxiliary components including fire alarm relays and circuit interface modules. Work includes demolition and replacement of the fire alarm panel, remote annunciator panels, fire alarm extender panels, and all fire alarm wiring. Conduit and boxes to remain for reuse, abandoned in place or removed per the Drawings.

All new field devices & accessories, fire alarm extender panels, and remote annunciators are to be provided per the Drawings. New fire alarm wiring to be routed in j-hooks, new concealed conduit, new surface mounted conduit, or within existing conduit per the Drawings and technical specifications. Additional work includes new ceiling access panels, cutting, patching, and painting of ceilings and walls, and floor penetrations per the Drawings. The new fire alarm system shall be a voice evacuation system that meets intelligibility requirements required of Code, the City of Wrangell, and the Authority Having Jurisdiction.

1.3 SITE OF THE WORK

- A. The site of the WORK is in Wrangell, Alaska.

1.4 BEGINNING AND COMPLETION OF THE WORK

- A. Time is the essence of the contract. All WORK shall be completed in accordance with the following schedule:

WORK DESCRIPTION

COMPLETION DATE

Substantial Completion
Final Completion

August 15, 2023
September 15, 2023

1.5 CONTRACT METHOD

SECTION 01010 - SUMMARY OF WORK

- A. The WORK hereunder will be constructed under a lump sum contract.

1.6 WORK BY OTHERS

- A. The CONTRACTOR's attention is directed to the fact that work may be conducted at the site by other contractors during the performance of the WORK under this Contract. The CONTRACTOR shall conduct its operations so as to cause a minimum of interference with the work of such other contractors, and shall cooperate fully with such contractors to provide continued safe access to their respective portions of the site, as required to perform work under their respective contracts.
- B. Interference With Work On Utilities: The CONTRACTOR shall cooperate fully with all utility forces of the OWNER or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the WORK, and shall schedule the WORK so as to minimize interference with said relocation, altering, or other rearranging of facilities.

1.8 CONTRACTOR USE OF PROJECT SITE

- A. The CONTRACTOR's use of the Project site shall be limited to its construction operations, including on-site storage of materials.

1.9 OWNER USE OF THE PROJECT SITE

- A. The OWNER may utilize all or part of the existing site during the entire period of construction for the conduct of the OWNER's normal operations. The CONTRACTOR shall cooperate and coordinate with the ENGINEER to facilitate the OWNER's operations and to minimize interference with the CONTRACTOR's operations at the same time. In any event, the OWNER shall be allowed access to the Project site during the period of construction.

1.10 PROJECT MEETINGS

- A. Pre-Construction Conference
 - 1. Prior to the commencement of WORK at the site, a Pre-Construction Conference will be held at a mutually agreed time and place which shall be attended by the CONTRACTOR's Project manager, its superintendent, and its Subcontractors as the CONTRACTOR deems appropriate. Other attendants will be:
 - a. ENGINEER and the Inspector.
 - b. Representatives of OWNER.
 - c. Governmental representatives as appropriate.
 - d. Others as requested by CONTRACTOR, OWNER, or ENGINEER.
 - 2. Unless previously submitted to the ENGINEER, the CONTRACTOR shall bring one copy each of the following:
 - a. Plan of Operation.

SECTION 01010 - SUMMARY OF WORK

- b. Project Overview Bar Chart Schedule.
 - c. Procurement schedule of major equipment and materials and items requiring long lead time.
 - d. Shop Drawing/Sample/Substitute or "Or Equal" submittal schedule.
 - e. Name and telephone number of CONTRACTOR's Project Supervisor.
 - f. Schedule of Values
3. The purpose of the Pre-Construction Conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The complete agenda will be furnished to the CONTRACTOR prior to the meeting date.

The CONTRACTOR should be prepared to discuss all the items listed below:

- a. Status of CONTRACTOR's insurance and bonds.
 - b. CONTRACTOR's tentative schedules.
 - c. Transmittal, review, and distribution of CONTRACTOR's submittals.
 - d. Processing applications for payment.
 - e. Maintaining record documents.
 - f. Critical WORK sequencing.
 - g. Field decisions and Change Orders.
 - h. Use of Project site, office and storage areas, security, housekeeping, and OWNER's needs.
 - i. Traffic control and access
 - j. Major equipment deliveries and priorities.
 - k. CONTRACTOR's assignments for safety and first aid.
4. The OWNER will preside at the Pre-Construction Conference and will arrange for keeping and distributing the minutes to all persons in attendance.
5. The CONTRACTOR and its Subcontractors should plan on the conference taking no less than 2 hours. The items listed in paragraph 3 will be covered as well as reviewing the plans and specifications, in extensive detail, with the ENGINEER and the OWNER.

B. Progress Meetings

1. The CONTRACTOR shall schedule and hold weekly progress meetings and at other times as requested by the ENGINEER, or as required by progress of the WORK. The CONTRACTOR, ENGINEER, and all subcontractors active on the site must attend each meeting. CONTRACTOR may at its discretion request attendance by representatives of its suppliers, manufacturers, and other subcontractors.
2. The ENGINEER shall preside at the meetings and will arrange for keeping and distributing the minutes. The purpose of the meetings will be to review the progress of the WORK, maintain coordination of efforts, discuss changes in

SECTION 01010 - SUMMARY OF WORK

scheduling, and resolve other problems which may develop. During each meeting, the CONTRACTOR is required to present any issues which may impact its work, with a view to resolve these issues expeditiously.

- 1.11 DEFINITIONS APPLICABLE TO TECHNICAL SPECIFICATIONS. The following words have the meaning defined in the Technical Portions of the WORK:

Furnish - means to supply and deliver to the site, to unload and unpack ready for assembly, installation, testing, and start-up.

Indicated - is a word used to direct the CONTRACTOR to information contained on the drawings or in the Specifications. Terms such as "shown," "noted," "scheduled," and "specified" also may be used to assist in locating information but no limitation of location is implied or intended.

Install - defines operations at the site including assembly, erection, placing, anchoring, applying, shaping to dimension, finishing, curing, protecting, and cleaning, ready for the OWNER's use.

Installer - a person or firm engaged by the CONTRACTOR or its subcontract or any subcontractor for the performance of installation, erection, or application work at the site. Installers must be expert in the operations they are engaged to perform.

Provide - is defined as furnish and install, ready for the intended use.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SCOPE

- A. Payment for the various items of the Bid Schedule, as further specified herein, shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of WORK being described, as necessary to complete the various items of the WORK all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of PERMITS and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).
- B. No separate payment will be made for any pay item that is not specifically set forth in the Bid Schedule, and all costs therefore shall be included in the prices named in the Bid Schedule for the various appurtenant items of WORK.
- C. In addition to other incidental items of WORK listed elsewhere in the contract, the following items shall also be considered as incidental to other items of WORK under this contract:
 - 1. Miscellaneous connecting and attachment hardware as required installing new equipment.
 - 2. Transport, shipping, and delivery of all materials to the project site, undamaged and in new condition.

1.2 MOBILIZATION (Pay Item No. 01505.1) PRICE BASED ON LUMP SUM

- A. Measurement for payment for Mobilization shall be based upon the completion of the entire WORK as a Lump Sum Pay unit, complete, all-in accordance with the requirements of the Contract Documents.
- B. Payment for Mobilization under the Base Bid and Alternates shall be made at the amount shown under Pay Item No. 01505.1, which payment shall constitute full compensation for all WORK described in Section 01505 - Mobilization, as shown on the plans and as directed by the ENGINEER.
- C. Partial payments will be made as the WORK progresses as follows:
 - 1. CONTRACTOR may submit cost of securing Bonds at time of Agreement, as a portion of mobilization.
 - 2. When 5% of the total original contract amount is earned from other pay items, 50% of the amount bid for Mobilization, or 5% of the original contract amount, whichever is lesser, will be paid.
 - 3. When 10% of the total original contract amount is earned from other pay items, 100% of the amount bid for Mobilization, or 10% of the original contract amount, whichever is lesser, will be paid.

SECTION 01025 - MEASUREMENT AND PAYMENT

4. Upon completion of all WORK on the Project, payment of any amount bid for Mobilization in excess of 10% of the total original contract amount will be paid.

1.3 DEMOLITION (Pay Item No. 02220.1) PRICE BASED ON LUMP SUM

- A. Measurement for payment for Demolition shall be based upon the completion of the entire WORK as a Lump Sum Pay unit, complete, all-in accordance with the requirements of the Contract Documents.
- B. Removal of all existing fire alarm panels, wiring, devices, auxiliary components, and other site appurtenances are part of this pay item.
- C. Payment for Demolition under the Base Bid shall be made at the Lump Sum Price named in the Bid Schedule under Pay Item No. 02220.1, which payment shall constitute full compensation for all WORK described in Section 02220.1-Demolition, as shown on the plans and as directed by the ENGINEER.

1.4 ELECTRICAL (Pay Item No. 26000.1) PRICE BASED ON LUMP SUM

- A. Measurement for payment for Electrical shall be based upon the completion of the entire WORK as a Lump Sum Pay unit, complete, all-in accordance with the requirements of the Contract Documents.
- C. Installation of the all-new fire alarm systems, fully functionally, including all programming, panels, devices, wiring, auxiliary components, raceways, boxes and connections shall be included in this pay item.
- D. Payment for Demolition under the Base Bid shall be made at the Lump Sum Price named in the Bid Schedule under Pay Item No. 16000.1, which payment shall constitute full compensation for all WORK described in Division 26 - Electrical, Division 28 – Safety & Security as shown on the plans and as directed by the ENGINEER.

END OF SECTION

SECTION 01070 - ACRONYMS OF INSTITUTIONS

PART 1 - GENERAL

1.1 GENERAL

- A. Wherever in these Specifications references are made to the standards, specifications, or other published data of the various international, national, regional, or local organizations, such organizations may be referred to by their acronym or abbreviation only. As a guide to the user of these Specifications, the following acronyms which may appear in these Specifications shall have the meanings indicated herein.

1.2 ACRONYMS

AAMA	Architectural Aluminum Manufacturer's Association
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ACI	American Concrete Institute
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGA	American Gas Association
AGMA	American Gear Manufacturer's Association
AHAM	Association of Home Appliance Manufacturers
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANS	American Nuclear Society
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
ASA	Acoustical Society of America
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASQC	American Society for Quality Control
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
ATM	Alaska Test Methods
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BBC	Basic Building Code, Building Officials and Code Administrators International

SECTION 01070 - ACRONYMS OF INSTITUTIONS

BHMA	Builders Hardware Manufacturer's Association
CBM	Certified Ballast Manufacturers
CEMA	Conveyors Equipment Manufacturer's Association
CGA	Compressed Gas Association
CLFMI	Chain Link Fence Manufacturer's Institute
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
DCDMA	Diamond Core Drill Manufacturer's Association
EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
FPL	Forest Products Laboratory
HI	Hydronics Institute
IBC	International Building Code
ICBO	International Conference of Building Officials
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IME	Institute of Makers of Explosives
IOS	International Organization for Standardization
IP	Institute of Petroleum (London)
IPC	Institute of Printed Circuits
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
ITE	Institute of Traffic Engineers
MBMA	Metal Building Manufacturer's Association
MPTA	Mechanical Power Transmission Association
MTI	Marine Testing Institute
NAAMM	National Association of Architectural Metal Manufacturer's
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NCCLS	National Committee for Clinical Laboratory Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NLGI	National Lubricating Grease Institute
NMA	National Microfilm Association
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
RIS	Redwood Inspection Service
RVIA	Recreational Vehicle Industry Association
RWMA	Resistance Welder Manufacturer's Association
SAE	Society of Automotive Engineers
SAMA	Scientific Apparatus Makers Association
SMA	Screen Manufacturers Association
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SPIB	Southern Pine Inspection Bureau
SPR	Simplified Practice Recommendation
SSA	Swedish Standards Association
SSBC	Southern Standard Building Code, Southern Building Code Congress

SECTION 01070 - ACRONYMS OF INSTITUTIONS

SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
TAPPI	Technical Association of the Pulp and Paper Industry
TFI	The Fertilizer Institute
UL	Underwriters Laboratories, Inc.
WCLIB	West Coast Lumber Inspection Bureau
WCRSI	Western Concrete Reinforcing Steel Institute
WIC	Woodwork Institute of California
WRI	Wire Reinforcement Institute, Inc.
WWPA	Western Wood Products Association

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01090 - REFERENCE STANDARDS

PART 1 - GENERAL

1.1 GENERAL

- A. Titles of Sections and Paragraphs: Captions accompanying specification sections and paragraphs are for convenience of reference only, and do not form a part of the Specifications.
- B. Applicable Publications: Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date that the WORK is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of, or omission from, said standards or requirements.
- C. Specialists, Assignments: In certain instances, specification text requires (or implies) that specific work is to be assigned to specialists or expert entities, who must be engaged for the performance of that work. Such assignments shall be recognized as special requirements over which the CONTRACTOR has no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the WORK; also they are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of work is recognized as "expert" for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of contract requirements remains with the CONTRACTOR.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of the Specifications, all WORK specified herein shall conform to or exceed the requirements of applicable codes and the applicable requirements of the following documents.
- B. References herein to "Building Code" or "International Building Code" shall mean International Building Code of the International Code Council.
- C. Similarly, references to "Mechanical Code" or "International Mechanical Code," "Plumbing Code" or "International Plumbing Code," "Fire Code" or "International Fire Code," shall mean International Mechanical Code International Plumbing Code and International Fire Code of the International Code Council. "Electric Code" or "National Electric Code (NEC)" shall mean the National Electric Code of the National Fire Protection Association (NFPA). The latest edition of the codes as approved by the Municipal Code and used by the local agency as of the date that the WORK is advertised for bids, as adopted by the agency having jurisdiction, shall apply to the WORK herein, including all addenda, modifications, amendments, or other lawful changes thereto.
- D. In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought

SECTION 01090 - REFERENCE STANDARDS

to the attention of the ENGINEER for clarification and directions prior to ordering or providing any materials or furnishing labor. The CONTRACTOR shall bid for the most stringent requirements.

- E. The CONTRACTOR shall construct the WORK specified herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards, and specifications listed herein.
- F. Applicable Standard Specifications: References in Contract Sections 02801 -Asphalt Concrete Pavement to Standard Specifications shall mean the Alaska Department of Transportation and Public Facilities "Standard Specifications for Highway Construction - 2004" and any supplements or amendments thereto.
- G. References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
- H. References herein to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01300 - CONTRACTOR SUBMITTALS

PART 1 - GENERAL

1.1 GENERAL

- A. Whenever submittals are required hereunder, all such submittals by the CONTRACTOR shall be submitted to the ENGINEER.
- B. Within 14 days after the date of commencement as stated in the Notice of Award/Notice to Proceed, the CONTRACTOR shall submit the following items to the ENGINEER for review:
 - 1. A Plan of Operation summarizing the methods and equipment to be used to complete the WORK.
 - 2. A Project Schedule as described in Section 1.7 of this specification.
 - 3. A Procurement Schedule outlining key milestones for procurement of major components of the WORK.
 - 4. A preliminary schedule of Shop Drawing, Sample and proposed Substitutes or “Or-Equal” submittals.
 - 5. A list of all permits and licenses the CONTRACTOR shall obtain indicating the agency required to grant the permit and the expected date of submittal for the permit and the required date for receipt of the permit.
 - 6. All required Material Safety Data Sheets.
 - 7. A letter designating the CONTRACTOR’s Superintendent, defining that person’s responsibility and authority, and providing contact information and a specimen of his signature.
 - 8. A letter designating the CONTRACTOR’s safety representative and the person’s responsibility and authority, and providing contact information.

1.2 SHOP DRAWING SUBMITTAL

- A. Wherever called for in the Contract Documents, or where required by the ENGINEER, the CONTRACTOR shall furnish to the ENGINEER, for review, 4 copies of each shop drawing submittal unless otherwise indicated. Electronic submittal transmission may be allowed if approved in advance by the ENGINEER. The term “ Shop Drawings” as used herein shall be understood to include detail design calculations, shop drawings, fabrication and installation drawings, erection drawings, lists, graphs, operating instructions, catalog sheets, data sheets, and similar items.
- B. All Shop Drawing Submittals shall be accompanied by the ENGINEER’s standard submittal transmittal form. The form may be obtained in quantity from the ENGINEER. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for resubmittal.
- C. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer’s “package” or are so functionally related that expediency indicates review of the group or package as a whole. A multiple-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the ENGINEER.

SECTION 01300 - CONTRACTOR SUBMITTALS

- D. Except as otherwise provided herein, the ENGINEER will return prints of each submittal to the CONTRACTOR with its comments noted thereon, within 14 calendar days following their receipt by the ENGINEER. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submittal to the ENGINEER by the second submission of a submittal item. The OWNER reserves the right to withhold monies due to the CONTRACTOR to cover additional costs of the ENGINEER review beyond the second submittal. The ENGINEER's maximum review period for each submittal including all re-submittals will be 7 days per submission. In other words, for a submittal that requires two re-submittals before it is complete, the maximum review period for that submittal could be 28 Days.
- E. If 3 copies (or a single electronic transmission) of a submittal are returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN," formal revision and resubmission of said submittal will not be required.
- F. If 3 copies (or a single electronic transmission) of a submittal are returned to the CONTRACTOR marked "MAKE CORRECTIONS NOTED," formal revision and resubmission of said submittal is not required.
- G. If one copy (or a single electronic transmission) of the submittal is returned to the CONTRACTOR marked "AMEND-RESUBMIT," the CONTRACTOR shall revise said submittal and shall resubmit the required number of copies of said revised submittal to the ENGINEER.
- H. If one copy (or a single electronic transmission) of the submittal is returned to the CONTRACTOR marked "REJECTED-RESUBMIT," the CONTRACTOR shall revise said submittal and shall resubmit the required number of copies of said revised submittal to the ENGINEER.
- I. Fabrication of an item may be commenced only after the ENGINEER has reviewed the pertinent submittal and returned copies to the CONTRACTOR marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED." Corrections indicated on submittal shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis for changes to the Contract requirements. Only a change order can alter the contract price, time, or requirements.
- J. All CONTRACTOR shop drawing submittals shall be carefully reviewed by an authorized representative of the CONTRACTOR, prior to submission to the ENGINEER. Each submittal shall be dated, signed, and certified by the CONTRACTOR, as being correct and in strict conformance with the Contract Documents. In the case of shop drawings, each sheet shall be so dated, signed, and certified. No consideration for review by the ENGINEER of any CONTRACTOR submittal will be made for any items which have not been so certified by the CONTRACTOR. All non-certified submittals will be returned to the CONTRACTOR without action taken by the ENGINEER, and any delays caused thereby shall be the total responsibility of the CONTRACTOR.
- K. The ENGINEER's review of CONTRACTOR shop drawing submittals shall not relieve the CONTRACTOR of the entire responsibility for the correctness of details and dimensions. The CONTRACTOR shall assume all responsibility and risk for any misfits

SECTION 01300 - CONTRACTOR SUBMITTALS

due to any errors in CONTRACTOR submittals. The CONTRACTOR shall be responsible for the dimensions and the design of adequate connections and details.

1.3 SAMPLES SUBMITTAL

- A. Whenever in the Specifications samples are required, the CONTRACTOR shall submit not less than 3 samples of each item or material to the ENGINEER for acceptance at no additional cost to the OWNER.
- B. Samples, as required herein, shall be submitted for acceptance a minimum of 14 days prior to ordering such material for delivery to the job site, and shall be submitted in an orderly sequence so that dependent materials or equipment can be assembled and reviewed without causing delays in the WORK.
- C. All samples shall be individually and indelibly labeled or tagged, indicating thereon all specified physical characteristics and Supplier's names for identification and submitted to the ENGINEER for acceptance. Upon receiving acceptance of the ENGINEER, one set of the samples will be stamped and dated by the ENGINEER and returned to the CONTRACTOR, and one set of samples will be retained by the ENGINEER, and one set of samples shall remain at the job site until completion of the WORK.
- D. Unless clearly stated otherwise, it is assumed that all colors and textures of specified items presented in sample submittal are from the manufacturer's standard colors and standard materials, products, or equipment lines. If the samples represent non-standard colors, materials, products or equipment lines, and their selection will require an increase in contract time or price, the CONTRACTOR will clearly indicate this on the transmittal page of the submittal.

1.4 TECHNICAL MANUAL SUBMITTAL

- A. The CONTRACTOR shall include in the technical manuals for each item of mechanical, electrical, and instrumentation equipment, the following:
 - 1. Complete operating instructions, including location of controls, special tools or other equipment required, related instrumentation, and other equipment needed for operation.
 - 2. Preventive maintenance procedures and schedules.
 - 3. Parts lists, by generic title and identification number, complete, with exploded views of each assembly.
 - 4. Disassembly and reassembly instructions.
 - 5. Name and location of nearest supplier and spare parts warehouse.
 - 6. Recommended troubleshooting and startup procedures.
 - 7. Reproducible prints of the record drawings, including diagrams and schematics, as required under the electrical and instrumentation portions of these Specifications.
 - 8. Detailed test procedures to determine performance efficiency of equipment.
 - 9. List of all electrical relay settings including alarm and contact settings.
- B. The CONTRACTOR shall furnish to the ENGINEER 5 identical sets of technical manuals. Each set shall consist of one or more volumes, each of which shall be bound

SECTION 01300 - CONTRACTOR SUBMITTALS

in a standard size, 3-ring, loose-leaf vinyl plastic hard cover binder suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches. A table of contents shall be provided which indicates all equipment in the technical manuals.

- C. All technical manuals shall be submitted in final form to the ENGINEER not later than the 75 percent of construction completion date. All discrepancies found by the ENGINEER in the technical manuals shall be corrected by the CONTRACTOR within 30 days from the date of written notification by the ENGINEER.
- D. Incomplete or unacceptable technical manuals at the 75 percent construction completion point shall constitute sufficient justification to withhold payment for work completed beyond that period in accordance with Paragraph "Technical Manual Submittal" of Section 01700 - Project Closeout.

1.5 SPARE PARTS LIST SUBMITTAL

- A. The CONTRACTOR shall furnish to the ENGINEER 5 identical sets of spare parts information for all mechanical, electrical, and instrumentation equipment. The spare parts list shall include the current list price of each spare part. The spare parts list shall be limited to those spare parts which each manufacturer recommends be maintained by the OWNER in inventory at the plant site. Each manufacturer or supplier shall indicate the name, address, and telephone number of its nearest outlet of spare parts to facilitate the OWNER in ordering. The CONTRACTOR shall cross-reference all spare parts lists to the equipment numbers designated in the Contract Documents. The spare parts lists shall be bound in standard size, 3-ring, loose leaf, vinyl plastic hard cover binders suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches.

1.6 RECORD DRAWINGS SUBMITTALS

- A. The CONTRACTOR shall keep and maintain, at the job site, one record set of Drawings. On these, it shall mark all Project conditions, locations, configurations, and any other changes or deviations which may vary from the details represented on the original contract Drawings, including buried or concealed construction and utility features which are revealed during the course of construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the locations indicated, or which were not indicated on the contract Drawings. Said record drawings shall be supplemented by any detailed sketches as necessary or directed to indicate, fully, the WORK as actually constructed. These master record drawings, of the CONTRACTOR's representation of as-built conditions, including all revisions made necessary by addenda, change orders, and the like shall be maintained up-to-date during the progress of the WORK.
- B. In the case of those drawings which depict the detail requirement for equipment to be assembled and wired in the factory, such as motor control centers and the like, the record drawings shall be updated by indicating those portions which are superseded by Change Order Drawings or final Shop Drawings, and by including appropriate reference information describing the Change Orders by number and the Shop Drawings by manufacturer, drawing, and revision numbers.

SECTION 01300 - CONTRACTOR SUBMITTALS

- C. Record Drawings shall be accessible to the ENGINEER at all times during the construction period and shall be delivered to the ENGINEER on the 20th working day of every third month after the month in which the Notice to Proceed is given as well as upon completion of the WORK.
- D. Final payment will not be acted upon until the CONTRACTOR-prepared record drawings have been delivered to the ENGINEER.

1.7 PROGRESS SCHEDULES

- A. The progress schedule shall be in Bar Chart or Critical Path Method (CPM) form, as required by the ENGINEER.
- B. The progress schedule shall show the order in which the CONTRACTOR proposes to carry out the WORK and the contemplated date on which the CONTRACTOR and their subcontractors will start and finish each of the salient features of the work, including any scheduled periods of shutdown. The schedule shall also indicate any anticipated periods of multiple-shift work.
- C. Upon substantial changes to the CONTRACTOR's progress schedule of work or upon request of the ENGINEER, the CONTRACTOR shall submit a revised progress schedule(s) in the form required. Such revised schedule(s) shall conform with the Contract Time and take into account delays which may have been encountered in the performance of the WORK. In submitting a revised schedule, the CONTRACTOR shall state specifically the reason for the revision and the adjustments made in his schedule or methods of operation to ensure the completion of all the WORK within the Contract Time.

1.8 PROPOSED SUBSTITUTES OR "OR-EQUAL" ITEM SUBMITTAL

- A. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function, and quality required. If the name is followed by the words "or-equal" indicating that a substitution is permitted, materials or equipment of other suppliers may be accepted by the ENGINEER if sufficient information is submitted by the CONTRACTOR to allow the ENGINEER to determine that the material or equipment proposed is equivalent or equal to that named, subject to the following requirements:
 - 1. The burden of proof as to the type, function, and quality of any such substitute material or equipment shall be upon the CONTRACTOR.
 - 2. The ENGINEER will be the sole judge as to the type, function, and quality of any such substitute material or equipment and the ENGINEER's decision shall be final.
 - 3. The ENGINEER may require the CONTRACTOR, to furnish at the CONTRACTOR's expense, additional data about the proposed substitute.
 - 4. The OWNER may require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

SECTION 01300 - CONTRACTOR SUBMITTALS

5. Acceptance by the ENGINEER of a substitute item proposed by the CONTRACTOR shall not relieve the CONTRACTOR of the responsibility for full compliance with the Contract documents and for adequacy of the substitute item.
 6. The CONTRACTOR shall be responsible for resultant changes and all additional costs which the accepted substitution requires in the CONTRACTOR's work, the work of its subcontractors and of other contractors, and shall effect such changes without cost to the OWNER. This shall include the cost for redesign and claims of other contractor affected by the resulting change.
- B. The procedure for review by the ENGINEER will include the following:
1. If the CONTRACTOR wishes to furnish or use a substitute item of material or equipment, the CONTRACTOR shall make written application to the ENGINEER on the "Substitution Request Form" for acceptance thereof.
 2. Unless otherwise provided by law or authorized in writing by the ENGINEER, the "Substitution Request Form(s)" shall be submitted within the 21-day period after Notice of Award.
 3. Wherever a proposed substitute material or equipment has not been submitted within said 21-day period, or wherever the submission of a proposed substitute material or equipment has been judged to be unacceptable by the ENGINEER, the CONTRACTOR shall provide material or equipment named in the Contract Documents.
 4. The CONTRACTOR shall certify that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified, and be suited to the same use as that specified.
 5. The ENGINEER will be allowed a reasonable time within which to evaluate each proposed substitute. In no case will this reasonable time period be less than 14 days.
 6. As applicable, no shop drawing submittals will be made for a substitute item nor will any substitute item be ordered, installed, or utilized without the ENGINEER's prior written acceptance of the CONTRACTOR's "Substitution Request Form" which will be evidenced by a Change Order.
 7. The ENGINEER will record the time required by the ENGINEER in evaluating substitutions proposed by the CONTRACTOR and in making changes in the Contract Documents occasioned thereby. Whether or not the ENGINEER accepts a proposed substitute, the CONTRACTOR shall reimburse the OWNER for the charges of the ENGINEER for evaluating each proposed substitute.
- C. The CONTRACTOR's application using the "Substitution Request Forms" shall contain the following statements and/or information which shall be considered by the ENGINEER in evaluating the proposed substitution:
1. The evaluation and acceptance of the proposed substitute will not prejudice the CONTRACTOR's achievement of substantial completion on time.
 2. Whether or not acceptance of the substitute for use in the WORK will require a change in any of the Contract Documents to adopt the design to the proposed substitute.

SECTION 01300 - CONTRACTOR SUBMITTALS

3. Whether or not incorporation or use of the substitute in connection with the WORK is subject to payment of any license fee or royalty.
4. All variations of the proposed substitute for that specified will be identified.
5. Available maintenance, repair, and replacement service and its estimated cost will be indicated.
6. Itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including cost of redesign and claims of other contractors affected by the resulting change.

1.9 MATERIAL CERTIFICATON SUBMITTAL

- A. The ENGINEER may permit the use, prior to sampling, inspection and testing, of certain materials or assemblies when accompanied by manufacturer's material certifications stating that such materials or assemblies fully comply with the requirements of the Contract. The certification shall be signed by the manufacturer, and will specifically reference the material's compliance with the AASHTO, ASTM and/or CBW Standards specified in the applicable Contract Documents.
- B. Material Certifications shall be submitted to the engineer prior to incorporating the item into the WORK.
- C. Materials or assemblies used on the basis of material certifications may be sampled, inspected and/or tested at any time, and if found not in conformity with these Specifications, will be subject to rejection whether in place or not.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

(SUBSTITUTION REQUEST FORM – next page)

SECTION 01300 - CONTRACTOR SUBMITTALS

**City & Borough of Wrangell
SUBSTITUTION REQUEST FORM**

TO: _____ Project: _____
Contract No. _____
OWNER: _____

SPECIFIED ITEM:

Section	Page	Paragraph	Description
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The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION: _____

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

The undersigned states that the following paragraphs, unless modified on attachments are correct:

1. The proposed substitution does not affect dimensions shown on Drawings and will not require a change in any of the Contract Documents.
2. The undersigned will pay for changes to the design, including engineering design, detailing, and construction costs caused by the requested substitution which is estimated to be \$_____.
3. The proposed substitution will have no adverse affect on other contractors, the construction schedule (specifically the date of substantial completion), or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.
5. The incorporation or use of the substitute in connection with the WORK is not subject to payment of any license fee or royalty.

The undersigned further states that the function, appearance, and quality of the Proposed Substitution are equivalent or superior to the Specified item.

Submitted by CONTRACTOR: _____ Reviewed by ARCHITECT/ENGINEER _____
Signature _____ Accepted Accepted as Noted
Firm: _____ Not Accepted Received Too Late
By: _____ Date: _____
Title: _____ Telephone: _____
Date: _____
Attachments: _____

END OF SECTION

SECTION 01400 - QUALITY CONTROL

PART 1 - GENERAL

1.1 DEFINITION

- A. Specific quality control requirements for the WORK are indicated throughout the Contract Documents. The requirements of this Section are primarily related to performance of the WORK beyond furnishing of manufactured products. The term "Quality Control" includes inspection, testing, and associated requirements.

1.3 SAMPLING AND TESTING

- A. Unless otherwise indicated, all testing shall be in accordance with the methods prescribed in the current standards of NFPA, NEC, and the Authority Having Jurisdiction requirements, as well as all applicable to the class and nature of the devices or systems being considered; however, the OWNER reserves the right to use any generally-accepted system of testing which, in the opinion of the ENGINEER will insure the OWNER that the quality of the workmanship is in full accord with the Contract Documents.
- B. Any waiver by the OWNER of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial WORK, shall not be construed as a waiver of any requirements of the Contract Documents.
- C. Notwithstanding the existence of such waiver, the ENGINEER reserves the right to make independent investigations and tests, and failure of any portion of the WORK to meet any of the requirements of the Contract Documents, shall be reasonable cause for the ENGINEER to require the removal or correction and reconstruction of any such work in accordance with the General Conditions.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Inspection: The OWNER will appoint, employ, and pay for services to inspect materials or equipment upon the arrival on the job site and immediately prior to installation, and reject damaged and defective items.
- B. Measurements: The CONTRACTOR shall verify measurements and dimensions of the WORK, as an integral step of starting each installation.
- C. Manufacturer's Instructions: Where installations include manufactured products, the CONTRACTOR shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents.

END OF SECTION

SECTION 01505 - MOBILIZATION

PART 1 - GENERAL

1.1 GENERAL

- A. Mobilization shall include the obtaining of all permits; moving onto the site of all plant and equipment; furnishing and erecting plants, temporary buildings, and other construction facilities; and implementing security requirements; all as required for the proper performance and completion of the WORK. Mobilization shall include the following principal items:
1. Moving on to the site of all CONTRACTOR's plant and equipment required for operations.
 2. Providing all on-site communication facilities, including radios and cellular phones.
 3. Obtaining all required permits.
 4. Having all OSHA required notices and establishment of safety programs.
 5. Having the CONTRACTOR's superintendent at the job site full time.
 6. Submitting initial submittals.

1.2 PAYMENT FOR MOBILIZATION

- A. As soon as practicable after receipt of the Notice to Proceed, the CONTRACTOR shall submit a breakdown to the ENGINEER for approval, which shall show the estimated value of each major component of Mobilization. When approved by the ENGINEER, the breakdown will be the basis for initial progress payments in which Mobilization is included.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01520 - SECURITY

PART 1 - GENERAL

1.1 SECURITY PROGRAM

A. The CONTRACTOR shall:

1. Protect WORK, existing premises and OWNER's operations from theft, vandalism, and unauthorized entry.
2. Coordinate security with OWNER's operations at job mobilization.
3. Maintain program throughout construction period until OWNER's occupancy.

1.2 ENTRY CONTROL

A. The CONTRACTOR shall:

1. Control entry of persons and vehicles onto Project construction site and existing facilities.
2. Allow entry on the construction site only to authorized persons with proper identification.
3. Coordinate access of OWNER's personnel to site in coordination with CONTRACTOR's security forces.

B. OWNER will control entrance of persons and vehicles related to OWNER's operations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01530 - PROTECTION AND RESTORATION OF EXISTING FACILITIES

PART 1 - GENERAL

1.1 GENERAL

- A. The CONTRACTOR shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.
- B. All utility locates shall be the responsibility of the CONTRACTOR. For aid in utility location call, Public Works at 907-874-3904 for water and sewer and Municipal Light & Power at 907-874-3602 for electrical, at least two working days prior to beginning construction.
- C. The CONTRACTOR shall verify the exact locations and depths of all utilities and the CONTRACTOR shall make exploratory excavations of all utilities that may interfere with the WORK. All such exploratory excavations shall be performed as soon as practicable after award of the contract and, in any event, a sufficient time in advance of construction to avoid possible delays to the CONTRACTOR's work. Any utility or service in conflict with the WORK will be reburied by the CONTRACTOR prior beginning the WORK to avoid damage.

1.5 EXISTING UTILITIES AND IMPROVEMENTS

- A. General: The CONTRACTOR shall protect all Underground Utilities and other improvements which may be impaired during construction operations. It shall be the CONTRACTOR's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that such utilities or other improvements are adequately protected from damage due to such operations. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.
- B. Utilities to be Moved: In case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the CONTRACTOR, be notified by the OWNER to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the ENGINEER a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- C. Where the proper completion of the WORK requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is indicated, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the ENGINEER and the owner of the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

SECTION 01530 - PROTECTION AND RESTORATION OF EXISTING FACILITIES

- G. All costs of locating, repairing damage not due to failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not shown in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the WORK which was interrupted or idled by removal or relocation of such utility facilities, and which was necessarily idled during such work will be paid for as extra work in accordance with the provisions of Articles 10, 11, and 12 of the General Conditions.
- H. Approval of Repairs: All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement owner before being concealed by backfill or other work.
- I. Maintaining in Service: All oil and gasoline pipelines, power, and telephone, cable television or the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the WORK shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the ENGINEER are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. The CONTRACTOR shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

1.7 PROTECTION OF EXISTING STRUCTURES

- A. Compaction Equipment and Operations: The CONTRACTOR shall restrict its compaction operations as necessary to assure no damage occurs to adjacent buildings. This may require the use of smaller compaction equipment than is usually employed for trench backfill and roadway embankment compaction operations when in the vicinity of buildings sensitive to vibrating or other impact-type activities. It shall be the CONTRACTOR's responsibility to determine in which areas of the project the compaction operations must be restricted, to avoid damage to existing buildings. The CONTRACTOR is advised that some structures on the project, especially those founded on steep or unstable ground, and are especially sensitive to vibrations caused by heavy construction equipment. The foregoing restrictions on the size of, and magnitude of impact energy exerted by, compaction equipment will in no way relieve the CONTRACTOR from the compaction requirements as specified in other Sections of the contract.
- B. The CONTRACTOR shall notify all affected businesses and other residents in advance of any operations that will cause vibrations that may damage belongings within the buildings. All property damage caused by the CONTRACTOR's operations shall be repaired or replaced at CONTRACTOR's expense.

PART 2 PRODUCTS – (Not Used)

PART 3 EXECUTION - (Not used)

END OF SECTION

SECTION 01550 - SITE ACCESS AND STORAGE

PART 1 - GENERAL

1.1 HIGHWAY LIMITATIONS

The CONTRACTOR shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to the site of the WORK. It shall be the CONTRACTOR's responsibility to construct and maintain any haul roads required for its construction operations.

1.3 CONTRACTOR'S WORK AND STORAGE AREA

- A. The CONTRACTOR shall make its own arrangements for any necessary off-site storage or shop areas necessary for the proper execution of the WORK.
- B. Should the CONTRACTOR find it necessary to use any additional land for its camp or for other purposes during the construction of the WORK, it shall provide for the use of such lands at its own expense.

1.4 PARKING

- A. The CONTRACTOR shall direct its employees to park in areas as directed by the ENGINEER.
- B. Traffic and parking areas shall be maintained in a sound condition, free of excavated material, construction equipment, mud, and construction materials. The CONTRACTOR shall repair breaks, potholes, low areas which collect standing water, and other deficiencies.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01600 - MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 GENERAL

- A. The word "Products," as used herein, is defined to include purchased items for incorporation into the WORK, regardless of whether specifically purchased for project or taken from CONTRACTOR's stock of previously purchased products. The word "Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, installed, or applied to form units of work. The word "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, and other like items). Definitions in this paragraph are not intended to negate the meaning of other terms used in Contract Documents, including "specialties," "systems," "structure," "finishes," "accessories," "furnishings," special construction," and similar terms, which are self-explanatory and have recognized meanings in the construction industry.
- B. Neither "Products" nor "Materials" nor "Equipment" includes machinery and equipment used for preparation, fabrication, conveying and erection of the WORK.

1.2 QUALITY ASSURANCE

- A. Source Limitations: To the greatest extent possible for each unit of WORK, the CONTRACTOR shall provide products, materials, or equipment of a singular generic kind from a single source.
- B. Compatibility of Options: Where more than one choice is available as options for CONTRACTOR's selection of a product, material, or equipment, the CONTRACTOR shall select an option which is compatible with other products, materials, or equipment already selected. Compatibility is a basic general requirement of product/material selections.

- 1.3 **PRODUCT DELIVERY/STORAGE/HANDLING.** The CONTRACTOR shall deliver, handle, and store products in accordance with manufacturer's written recommendations and by methods and means which will prevent damage, deterioration, and loss including theft. Delivery schedules shall be controlled to minimize long-term storage of products at site and overcrowding of construction spaces. In particular, the CONTRACTOR shall ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss.

1.4 TRANSPORTATION AND HANDLING

- A. Products shall be transported by methods to avoid product damage and shall be delivered in undamaged condition in manufacturer's unopened containers or packaging.
- B. The CONTRACTOR shall provide equipment and personnel to handle products, materials, and equipment by methods to prevent soiling and damage.
- C. The CONTRACTOR shall provide additional protection during handling to prevent marring and otherwise damaging products, packaging, and surrounding surfaces.

SECTION 01600 - MATERIALS AND EQUIPMENT

1.5 STORAGE AND PROTECTION

- A. Products shall be stored in accordance with manufacturer's written instructions, with seals and labels intact and legible. Sensitive products shall be stored in weather-tight climate controlled enclosures and temperature and humidity ranges shall be maintained within tolerances required by manufacturer's written instructions.
- B. For exterior storage of fabricated products, they shall be placed on sloped supports above ground. Products subject to deterioration shall be covered with impervious sheet covering; ventilation shall be provided to avoid condensation.
- C. Loose granular materials shall be stored on solid surfaces in a well-drained area and shall be prevented from mixing with foreign matter.
- D. Storage shall be arranged in a manner to provide access for maintenance and inspection. The CONTRACTOR shall periodically inspect to assure products are undamaged and are maintained under required conditions.

1.6 MAINTENANCE OF STORAGE

- A. Stored products shall be periodically inspected on a scheduled basis. The CONTRACTOR shall maintain a log of inspections and shall make said log available to the ENGINEER on request.
- B. The CONTRACTOR shall verify that storage facilities comply with manufacturer's product storage requirements.
- C. The CONTRACTOR shall verify that manufacturer-required environmental conditions are maintained continually.
- D. The CONTRACTOR shall verify that surfaces of products exposed to the elements are not adversely affected and that any weathering of finishes does not occur.
- E. For mechanical and electrical equipment, the CONTRACTOR shall provide a copy of the manufacturer's service instructions with each item and the exterior of the package shall contain notice that instructions are included.
- F. Products shall be serviced on a regularly scheduled basis, and a log of services shall be maintained and submitted as a record document prior to acceptance by the OWNER in accordance with the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01700 - PROJECT CLOSE-OUT

PART 1 – GENERAL

- 1.1 FINAL CLEAN-UP. The CONTRACTOR shall promptly remove from the vicinity of the completed work, all rubbish, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction. Final acceptance of the WORK by the OWNER will be withheld until the CONTRACTOR has satisfactorily complied with the foregoing requirements for final clean-up of the project site.
- 1.2 CLOSEOUT TIMETABLE. The CONTRACTOR shall establish dates for equipment testing, acceptance periods, and on-site instructional periods, as required under the Contract. Such dates shall be established not less than one week prior to beginning any of the foregoing items, to allow the OWNER, the ENGINEER, and their authorized representatives sufficient time to schedule attendance at such activities.
- 1.3 FINAL SUBMITTALS. The CONTRACTOR, prior to requesting final payment, shall obtain and submit the following items to the ENGINEER for transmittal to the OWNER:
- A. Written guarantees, where required.
 - B. Maintenance stock items; spare parts, special tools, where required.
 - C. Completed record drawings.
 - D. Certificates of inspection and acceptance by governing agencies having jurisdiction.
 - E. Releases from all parties who are entitled to claims against the subject Project, property, or improvement pursuant to the provisions of law.
 - F. Certificate of Compliance and Release form from every contractor and subcontractor involved in the WORK. Submit the original signed document to the OWNER's Project Manager.
- 1.4 MAINTENANCE AND GUARANTEE
- A. The CONTRACTOR shall comply with the maintenance and guarantee requirements contained in Article 13 of the General Conditions.
 - B. The CONTRACTOR shall make all repairs and replacements promptly upon receipt of written order from the OWNER. If the CONTRACTOR fails to make such repairs or replacements promptly, the OWNER reserves the right to do the WORK and the CONTRACTOR and his surety shall be liable to the OWNER for the cost thereof.
- 1.5 BOND. The CONTRACTOR shall provide a bond to guarantee performance of the provisions contained in Paragraph "Maintenance and Guarantee" above, and Article 13 of the General Conditions.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01704 - FINAL CLEAN-UP AND SITE RESTORATION

PART 1 - GENERAL

- 1.1 DESCRIPTION. The WORK under this Section includes providing all supervision, labor, materials, tools and equipment necessary for final clean-up and restoration of all areas disturbed by construction activities, to a condition equal to, or better than, before construction started. This does not include clean-up or restoration incidental to, or directly provided for by, other construction items.

PART 2 - PRODUCTS

- 2.1 MATERIALS. Any materials required shall conform to the appropriate Section of these Specifications.

PART 3 - EXECUTION

3.1 CONSTRUCTION

- A. The CONTRACTOR shall clean up all sites disturbed during construction of the project. This includes removal of all construction equipment, disposal of all excess materials, disposal of all rubbish and debris, and removal of all temporary structures.

END OF SECTION

SECTION 260500 - COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.1 SUMMARY

- A. The work covered under this Section of the Specifications is intended to include the furnishing of all equipment, materials and labor or reasonably incidental to the complete operating installation of systems as shown on the plan and of related equipment all as indicated on the drawings, as hereinbefore specified under Division 26 and as hereinafter specified in this Section.
- B. Section Includes:
 - 1. Sleeves for raceways and cables.
 - 2. Sleeve seals.
 - 3. Grout.
 - 4. Common electrical installation requirements.

1.2 SUBMITTALS

- A. Product Data: For sleeve seals.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70

1.4 COORDINATION

- A. Coordinate arrangement, mounting, and support of electrical equipment.
- B. Coordinate chases, slots, inserts, sleeves, and openings with general construction work and arrange in building structure during progress of construction to facilitate the electrical installations that follow.
 - 1. Set inserts and sleeves in poured-in-place concrete, masonry work, and other structural components as they are constructed.
- C. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the Work. Coordinate installing large equipment requiring positioning before closing in the building.
- D. Coordinate electrical service connections to components furnished by utility companies.
 - 1. Coordinate installation and connection of exterior underground and overhead utilities and services, including provision for electricity-metering components.
 - 2. Comply with requirements of authorities having jurisdiction and of the utility company providing electrical power and other services.

SECTION 260500 - COMMON WORK RESULTS FOR ELECTRICAL

- E. Coordinate location of access panels and doors for electrical items that are concealed by finished surfaces.
- F. Coordinate electrical testing of electrical, mechanical, and architectural items, so equipment and systems that are functionally interdependent are tested to demonstrate successful interoperability.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Firestopping Materials: Subject to compliance with requirements, provide products by one of the following:
 - 1. Dow Corning
 - 2. Hilti
 - 3. Metacaulk
 - 4. Specified Technologies, Inc.
 - 5. 3M Fire Protection Products
 - 6. Tremco Sealants and Coatings

2.2 SLEEVES FOR RACEWAYS AND CABLES

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.

2.3 SLEEVE SEALS

- A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.
 - 1. Sealing Elements: EPDM interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
 - 2. Pressure Plates: Plastic. Include two for each sealing element.
 - 3. Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.4 GROUT

- A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, non-staining, mixed with water to consistency suitable for application and a 30-minute working time.

2.5 TOUCHUP PAINT

SECTION 260500 - COMMON WORK RESULTS FOR ELECTRICAL

- A. Equipment: Equipment manufacturer's paint selected to match installed equipment finish.
- B. Galvanized Surfaces: Zinc-rich paint recommended by item manufacturer.

2.6 ACCESS DOORS

- A. Prime coated, 14-gauge steel, flush, with screwdriver operated cam lock; frame to accommodate construction type. Fire rated for installed assembly location. Milcor style M or DW or equivalent.

PART 3 - EXECUTION

3.1 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

- A. Comply with NECA 1.
- B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items. See Drawings for more on mounting heights.
- C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements. Meet all minimum mounting heights required for the NEC, ADA, and NFPA 72.
- D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.
- E. Right of Way: Give to piping systems installed at a required slope.
- F. Materials and Components: Install level, plum, and parallel and perpendicular to other building systems and components, unless otherwise indicated.
- G. Laying Out Work:
 - 1. Carefully lay out all work in advance of installation using data and measurements from the site, the appropriate architectural and structural drawings, and shop drawings. Confirm code required clearances. Do not infringe upon space required for operation, maintenance, or clearance for items installed by other contractors.
 - 2. Prior to installation of any work, make certain the location does not conflict with other items in or near the same location. If the layouts so prepared indicate that the required conditions cannot be met in the space provided, inform the Architect/Engineer prior to installation and request clarification.
 - 3. Failure to properly coordinate and layout work will require correction by the Contractor at the Contractor's expense.
- H. Data and Measurements: Data given herein and on the drawings is as accurate as could be secured; absolute accuracy is not guaranteed. Obtain exact locations, measurements,

SECTION 260500 - COMMON WORK RESULTS FOR ELECTRICAL

levels, etc., at the site and adapt work to actual conditions. Examine the general construction, mechanical, electrical, and other applicable drawings and the specifications. Electrical drawings are schematic/diagrammatic in nature.

I. Position of Outlets:

1. Locate all outlets and devices mounted on finished surfaces with regard to tile, furring, trim, etc. Install outlets and devices with vertical edges of plates plumb. Install boxes or plaster rings such that the front edge extends to the finished surface of the wall or ceiling without projecting beyond the surface. Orientate so that grounds are positioned downward.
2. Coordinate locations of outlets and devices with other contractors so as not to destroy the aesthetic effect of the surface in which the outlets and devices are mounted. Coordinate the locations of electrical items with work furnished by other trades to avoid interference.
3. Install outlets at the heights indicated below unless otherwise noted. All heights of outlets are measured from the finished floor to the centerline of device. Adjust heights as necessary to clear wall-mounted cabinets, fin tube convectors, unit heaters, etc. Mounting heights shall be in compliance with ADA requirements. When devices are installed in masonry walls, adjust mounting heights to correspond to block cursing. Do not mount outlets below 15 inches or switches above 46 inches.
 - a. Wall switches: 48 inches
 - b. Receptacle outlets: 18 inches
 - c. Communications outlets: 18 inches
 - d. Pushbuttons: 46 inches
 - e. Bells, buzzers, chimes: 8 inches below ceiling. Field verify with Architect/Engineer.
 - f. Fire Alarm Station: 46 inches.
 - g. Fire alarm visual signals and audible/visual signals, wall-mounted: 80 inches to the bottom of the lens, unless local code or ADA requirement mandates different height.
 - h. Exit lights: 4 inches between top of door frame and bottom of exit sign where possible.
 - i. Improperly located devices, outlets, or equipment shall be relocated by the Contractor at the Contractor's expense.
 - j. See the Drawings for additional mounting height information.

3.2 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Electrical penetrations occur when raceways, cables, wireways, cable trays, or busways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies.
- B. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- C. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.

SECTION 260500 - COMMON WORK RESULTS FOR ELECTRICAL

- D. Fire-Rated Assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies unless openings compatible with firestop system used are fabricated during construction of floor or wall.
- E. Cut sleeves to length for mounting flush with both surfaces of walls.
- F. Extend sleeves installed in floors 2 inches above finished floor level.
- G. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and raceway or cable, unless indicated otherwise.
- H. Seal space outside of sleeves with grout for penetrations of concrete and masonry
 - 1. Promptly pack grout solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect grout while curing.
- I. Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint.
- J. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at raceway and cable penetrations. Install sleeves and seal raceway and cable penetration sleeves with firestop materials.
- K. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.
- L. Aboveground, Exterior-Wall Penetrations: Seal penetrations using steel pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- M. Underground, Exterior-Wall Penetrations: Install cast-iron pipe sleeves. Size sleeves to allow for 1-inch annular clear space between raceway or cable and sleeve for installing mechanical sleeve seals.

3.3 SLEEVE-SEAL INSTALLATION

- A. Install to seal exterior wall penetrations.
- B. Use type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

3.4 EQUIPMENT CONNECTION

- A. General:
 - 1. Provide final power and control connections for all equipment furnished under Divisions of this specification and for all Owner-furnished equipment. Connect

SECTION 260500 - COMMON WORK RESULTS FOR ELECTRICAL

all motor controls and associated mechanical equipment as required for a complete and functional control system.

2. Provide interlocks and wiring to and between controls for boilers, pumps, air handling units, fans, rooftop units, furnaces, humidifiers, condensing units, heat pumps, hoods, water treatment system, unit heaters, fan coil units, heat reclaim system, energy management system, and energy system control panel.
3. Verify all control wiring requirements with manufacturer certified shop drawings for each piece of equipment or control system and install accordingly. Install control wiring in conduit.
4. Provide a phenolic nameplate for each emergency shutdown switch. Nameplate shall read "Emergency Shutdown".

3.5 FIRESTOPPING

- A. Apply firestopping to penetrations of fire-rated floor and wall assemblies for electrical installations to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 07 Section "Penetration Firestopping."

END OF SECTION

SECTION 260510 - BASIC ELECTRICAL MATERIALS AND METHODS

1.5 SEQUENCING AND SCHEDULING

- A. Coordinate electrical equipment installation with other trades.
- B. Arrange for chases, slots, and openings in building structure during progress of construction to allow for electrical installations.
- C. Coordinate installing required supporting devices and set sleeves in poured-in-place concrete and other structural components as they are constructed.
- D. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the Work.
- E. Coordinate connecting electrical systems with exterior underground utilities and services. Comply with requirements of governing regulations, utility requirements, and controlling agencies.
- F. Coordinate installing electrical identification after completion of finishing where identification is applied to field-finished surfaces.

PART 2 - PRODUCTS

2.1 SUPPORTING DEVICES

- A. Channel and angle support systems, hangers, anchors, sleeves, brackets, fabricated items, and fasteners are designed to provide secure support from the building structure for electrical components.
 - 1. Material: Steel, except as otherwise indicated, protected from corrosion with zinc coating or with treatment of equivalent corrosion resistance using approved alternative finish or inherent material characteristics.
 - 2. Metal Items for Use Outdoors or in Damp Locations: Hot-dip galvanized steel, or type 316L stainless steel, except as otherwise indicated.
- B. Steel channel supports have 9/16-inch (14-mm) diameter holes at a maximum of 8 inches (203 mm) o.c., in at least 1 surface.
 - 1. Fittings and accessories mate and match with channels and are from the same manufacturer.
- C. Nonmetallic Channel and Angle Systems: Structural-grade, factory-formed, fiberglass-resin channels and angles with 9/16-inch (14-mm) diameter holes at a maximum of 8 inches (203 mm) o.c., in at least 1 surface.
 - 1. Fittings and accessories mate and match with channels or angles and are from the same manufacturer.
 - 2. Fitting and Accessory Material: Same as channels and angles, except metal items may be stainless steel.

SECTION 260510 - BASIC ELECTRICAL MATERIALS AND METHODS

- D. Raceway and Cable Supports: Manufactured clevis hangers, riser clamps, straps, threaded C-clamps with retainers, ceiling trapeze hangers, wall brackets, and spring steel clamps or "click"-type hangers.
- E. Sheet-Metal Sleeves: 0.0276-inch (0.7-mm) or heavier galvanized sheet steel, round tube, closed with welded longitudinal joint.
- F. Pipe Sleeves: ASTM A 53, Type E, Grade A, Schedule 40, galvanized steel, plain ends.
- G. Cable Supports for Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug for non-armored electrical cables in riser conduits. Plugs have number and size of conductor gripping holes as required to suit individual risers. Body constructed of malleable iron casting with hot-dip galvanized finish.
- H. Expansion Anchors: Red Head, Hilti, or equal. Stainless steel.
- I. Toggle Bolts: All-steel springhead type.
- J. Powder-Driven Threaded Studs: Heat-treated steel.

2.2 ELECTRICAL IDENTIFICATION

- A. Manufacturer's Standard Products: Where more than one type is listed for a specified application, selection is Installer's option, but provide single type for each application category. Use colors prescribed by ANSI A13.1, NFPA 70, and these Specifications.
- B. Raceway and Cable Labels: Conform to ANSI A13.1, Table 3, for minimum size of letters for legend and minimum length of color field for each raceway or cable size.
 - 1. Type: Preprinted, flexible, self-adhesive, vinyl. Legend is over-laminated with a clear, weather- and chemical-resistant coating.
 - 2. Color: Black legend on orange field.
 - 3. Legend: Indicates voltage.
- C. Colored Adhesive Marking Tape for Raceways, Wires, and Cables: Self-adhesive vinyl tape not less than 3 mils thick by 1 inch wide (0.08 mm thick by 25 mm wide).
- D. Tape Markers: Vinyl or vinyl-cloth, self-adhesive, wraparound type with preprinted numbers and letters.
- E. Color-Coding Cable Ties: Type 6/6 nylon, self-locking type. Colors to suit coding scheme.
- F. Engraved, Plastic-Laminated Labels, Signs, and Instruction Plates: Engraving stock, melamine plastic laminate punched for mechanical fasteners 1/16-inch (1.6-mm) minimum thick for signs up to 20 sq. in. (129 sq. cm), 1/8 inch (3.2 mm) thick for larger sizes. Engraved legend in black letters on white face.
- G. Fasteners for Plastic-Laminated and Metal Signs: Self-tapping stainless-steel screws or No. 10/32 stainless-steel machine screws with nuts and flat and lock washers.

SECTION 260510 - BASIC ELECTRICAL MATERIALS AND METHODS

3.3 INSTALLATION

- A. Install devices to securely and permanently fasten and support electrical components.
- B. Raceway Supports: Comply with NFPA 70 and the following requirements:
 - 1. Conform to manufacturer's recommendations for selecting and installing supports.
 - 2. Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U bolts, clamps, attachments, and other hardware necessary for hanger assembly and for securing hanger rods and conduits.
 - 3. Support parallel runs of horizontal raceways together on trapeze- or bracket-type hangers.
 - 4. Spare Capacity: Size supports for multiple conduits so capacity can be increased by a 25 percent minimum in the future.
 - 5. Support individual horizontal raceways with separate, malleable iron pipe hangers or clamps.
 - 6. Hanger Rods: 1/4-inch (6-mm) diameter or larger threaded steel, except as otherwise indicated.
 - 7. Spring Steel Fasteners: Specifically designed for supporting single conduits or tubing. May be used in lieu of malleable iron hangers for 1-1/2-inch (38-mm) and smaller raceways serving lighting and receptacle branch circuits above suspended ceilings and for fastening raceways to channel and slotted angle supports.
 - 8. In vertical runs, arrange support so the load produced by the weight of the raceway and the enclosed conductors is carried entirely by the conduit supports, with no weight load on raceway terminals.
- C. Vertical Conductor Supports: Install simultaneously with conductors.
- D. Miscellaneous Supports: Install metal channel racks for mounting cabinets, panelboards, disconnects, control enclosures, pull boxes, junction boxes, transformers, and other devices except where components are mounted directly to structural features of adequate strength.
- E. Sleeves: Install for cable and raceway penetrations of concrete slabs and walls, except where core-drilled holes are used. Install for cable and raceway penetrations of masonry and fire-rated gypsum walls and of all other fire-rated floor and wall assemblies. Install sleeves during erection of concrete and masonry walls.
- F. Fastening: Unless otherwise indicated, securely fasten electrical items and their supporting hardware to the building structure. Perform fastening according to the following:
 - 1. Fasten by means of wood screws or screw-type nails on wood; toggle bolts on hollow masonry units; concrete inserts or expansion bolts on concrete or solid masonry; and by machine screws, welded threaded studs, or spring-tension clamps on steel.
 - 2. Threaded studs driven by a powder charge and provided with lock washers and nuts may be used instead of expansion bolts, machine screws, or wood screws.
 - 3. Drill holes in concrete beams so holes more than 1-1/2 inches (38 mm) deep do not cut main reinforcing bars.
 - 4. Drill holes in concrete so holes more than 3/4 inch (19 mm) deep do not cut main reinforcing bars.
 - 5. Fill and seal holes drilled in concrete and not used.
 - 6. Select fasteners so the load applied to any fastener does not exceed 25 percent of the proof-test load.

SECTION 260510 - BASIC ELECTRICAL MATERIALS AND METHODS

- G. Install identification devices where required.
 - 1. Install labels where indicated and at locations for best convenience of viewing without interference with operation and maintenance of equipment.
 - 2. Coordinate names, abbreviations, colors, and other designations used for electrical identification with corresponding designations indicated on the Contract Documents or required by codes and standards. Use consistent designations throughout the Project.
 - 3. Self-Adhesive Identification Products: Clean surfaces of dust, loose material, and oily films before applying.
 - 4. Tag or label power circuits for future connection and circuits in raceways and enclosures with other circuits. Identify source and circuit numbers in each cabinet, pull box, junction box, and outlet box. Color coding may be used for voltage and phase indication.
 - 6. For panelboards, provide framed, typed circuit schedules with explicit description and identification of items controlled by each individual breaker.

3.4 DEMOLITION

- A. Where electrical work to remain is damaged or disturbed in the course of the WORK, remove damaged portions and install new products of equal capacity, quality, and functionality.
- B. Keep all existing electrical systems on the project site fully operational during the course of the Work.

3.5 CUTTING AND PATCHING

- A. Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces necessary for electrical installations. Perform cutting by skilled mechanics of the trades involved.
- B. Repair disturbed surfaces to match adjacent undisturbed surfaces.

3.6 TOUCH-UP PAINTING

- A. Thoroughly clean damaged areas and provide primer, intermediate, and finish coats to suit the degree of damage at each location.
- B. Follow paint manufacturer's written instructions for surface preparation and for timing and application of successive coats.

END OF SECTION

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. The work covered under this Section of the Specifications is intended to include the furnishing of all equipment, materials and labor or reasonably incidental to the complete operating installation of systems as shown on the plan and of related equipment all as indicated on the drawings, as hereinbefore specified under Division 26 and as hereinafter specified in this Section.
- B. This Section includes the following:
 - 1. Building wires and cables rated 600 V and less.
 - 2. Connectors, splices, and terminations rated 600 V and less.
 - 3. Sleeves and sleeve seals for cables.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Field quality-control test reports.

1.4 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

- A. UL-listed building wires and cables with conductor material, insulation type, cable construction, and rating as specified in Part 3 "Conductor and Insulation Applications" Article.

2.2 COPPER BUILDING WIRE

- A. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600 V or less.
- B. Standards:

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
 2. RoHS compliant.
 3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."
- C. Conductors: Copper, complying with ASTM B 3 for bare annealed copper and with ASTM B 8 for stranded conductors.
- D. Insulation:
1. Type THHN and Type THWN-2: Comply with UL 83.
 2. Conductor Insulation Material: Comply with NEMA WC 70.

2.3 CONNECTORS AND SPLICES

- A. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.
- B. Lugs: One piece, seamless, designed to terminate conductors specified in this Section.
1. Material: Copper
 2. Type: One hole with standard barrels.
 3. Termination: Compression.

2.4 SLEEVES FOR CABLES

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
- C. Coordinate sleeve selection and application with selection and application of firestopping.

2.5 SLEEVE SEALS

- A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and cable.
1. Sealing Elements: EPDM interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
 2. Pressure Plates: Plastic. Include two for each sealing element.
 3. Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating of length required to secure pressure plates to sealing elements. Include one for each sealing element.

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

- A. Feeders: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- B. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Feeders: Type THHN-THWN, single conductors in raceway.
- B. Branch Circuits: Type THHN-THWN, in raceway; #12 AWG minimum.
- C. Fire Alarm Circuits: Power-limited, fire-protective, signaling circuit cable or other cable as recommended by fire alarm manufacturer.
- D. Class 1 Control Circuits: Type THHN-THWN, in raceway.
- E. Class 2 Control Circuits: Power-limited cable, concealed in building finishes.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

- A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.
- B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- D. Install exposed cables parallel and perpendicular to surfaces of exposed structural members and follow surface contours where possible.
- E. Maximum conduit-fill for branch circuits unless otherwise indicated:
 - 1. 4 #12 AWG current-carrying conductors in 1/2 inch conduit; 9 #12 AWG current carrying conductors in 3/4" c.
 - 2. 4 #10 AWG current-carrying conductors in 3/4 inch conduit; 9 #10 AWG current-carrying conductors in 1 inch conduit.
 - 3. 4 #8 AWG current-carrying conductors in 3/4 inch conduit; 9 #8 AWG current-carrying conductors in 1-1/4 inch conduit.
- F. Support cables according to Division 26 Sections "Hangers and Supports for Electrical Systems."
- G. Conductor Splices: Keep to minimum.

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

- H. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- I. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

3.4 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Coordinate sleeve selection and application with selection and application of firestopping.
- B. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- C. Fire-Rated Assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies unless openings compatible with firestop system used are fabricated during construction of floor or wall.
- D. Cut sleeves to length for mounting flush with both wall surfaces.
- E. Extend sleeves installed in floors 2 inches above finished floor level.
- F. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and cable unless sleeve seal is to be installed.
- G. Seal space outside of sleeves with grout for penetrations of concrete and masonry.
- H. Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and cable, using joint sealant appropriate for size, depth, and location of joint.
- I. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at cable penetrations. Install sleeves and seal with firestop materials according to Division 07 Section "Penetration Firestopping."
- J. Underground Exterior-Wall Penetrations: Install cast-iron "wall pipes" for sleeves. Size sleeves to allow for 1-inch annular clear space between cable and sleeve for installing mechanical sleeve seals.

3.5 SLEEVE-SEAL INSTALLATION

- A. Install to seal underground exterior-wall penetrations.
- B. Use type and number of sealing elements recommended by manufacturer for cable material and size. Position cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

3.6 FIRESTOPPING

- A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly.

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

3.7 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
- B. Tests and Inspections:
 - 1. After installing conductors and cables and before electrical circuitry has been energized, test for compliance with requirements.
 - 2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
- C. Test Reports: Prepare a written report to record the following:
 - 1. Test procedures used.
 - 2. Test results that comply with requirements.
 - 3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.
- D. Remove and replace malfunctioning units and retest as specified above.

END OF SECTION

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

- A. The work covered under this Section of the Specifications is intended to include the furnishing of all equipment, materials and labor or reasonably incidental to the complete operating installation of systems as shown on the plan and of related equipment all as indicated on the drawings, as hereinbefore specified under Division 26 and as hereinafter specified in this Section.
- B. This Section includes methods and materials for grounding systems and equipment.

1.02 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Field quality-control test reports.

1.03 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with UL 467 for grounding and bonding materials and equipment.

PART 2 - PRODUCTS

2.01 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
 - 1. Solid Conductors: ASTM B 3.
 - 2. Bonding Conductor: No. 6 AWG, stranded conductor.

2.02 CONNECTORS

- A. Listed and labeled by a nationally recognized testing laboratory acceptable to authorities having jurisdiction for applications in which used, and for specific types, sizes, and combinations of conductors and other items connected.
- B. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 3 - EXECUTION

3.01 APPLICATIONS

- A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger, unless otherwise indicated.
- B. Conductor Terminations and Connections:
 - 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
 - 2. Connections to Structural Steel: Welded connectors.

3.02 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
 - 1. Feeders and branch circuits.
 - 2. Flexible raceway runs.

3.03 INSTALLATION

- A. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- B. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.
 - 1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.

3.04 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections and prepare test reports:
 - 1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
 - 2. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, and at ground test wells.
 - a. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
 - b. Perform tests by fall-of-potential method according to IEEE 81.
- B. Report measured ground resistances that exceed the following values:
 - 1. Power and Lighting Equipment or with Capacity 500 kVA and Less: 10 ohms.

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

- C. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Engineer promptly and include recommendations to reduce ground resistance.

END OF SECTION

SECTION 260529 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

- A. The work covered under this Section of the Specifications is intended to include the furnishing of all equipment, materials and labor or reasonably incidental to the complete operating installation of systems as shown on the plan and of related equipment all as indicated on the drawings, as hereinbefore specified under Division 26 and as hereinafter specified in this Section.
- B. Section includes:
 - 1. Hangers and supports for electrical equipment and systems.
 - 2. Construction requirements for concrete bases.

1.02 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design supports for multiple raceways, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Design supports for multiple raceways capable of supporting combined weight of supported systems and its contents.
- C. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
- D. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this Project, with a minimum structural safety factor of five times the applied force.

1.03 SUBMITTALS

- A. Product Data: For steel slotted support systems.
- B. Shop Drawings: Show fabrication and installation details and include calculations for the following:
 - 1. Trapeze hangers. Include Product Data for components.
 - 2. Steel slotted channel systems. Include Product Data for components.
 - 3. Equipment supports.

1.04 QUALITY ASSURANCE

- A. Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- B. Comply with NFPA 70.

SECTION 260529 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 2 - PRODUCTS

2.01 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

- A. Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.
 - 1. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
 - 2. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
- B. Raceway and Cable Supports: As described in NECA 1 and NECA 101.
- C. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
- D. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.
- E. Structural Steel for Fabricated Supports and Restraints: ASTM A 36/A 36M, steel plates, shapes, and bars; black and galvanized.
- F. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
 - 1. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened portland cement concrete with tension, shear, and pullout capacities appropriate for supported loads and building materials in which used.
 - 2. Concrete Inserts: Steel or malleable-iron, slotted support system units similar to MSS Type 18; complying with MFMA-4 or MSS SP-58.
 - 3. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
 - 4. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
 - 5. Toggle Bolts: All-steel springhead type.
 - 6. Hanger Rods: Threaded steel.

PART 3 - EXECUTION

3.01 APPLICATION

- A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.
- B. Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMT, IMC, and RMC as required by NFPA 70. Minimum rod size shall be 1/4 inch in diameter.

SECTION 260529 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

- C. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.
 - 1. Secure raceways and cables to these supports with two-bolt conduit clamps.
- D. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch and smaller raceways serving branch circuits and communication systems above suspended ceilings and for fastening raceways to trapeze supports.

3.02 SUPPORT INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.
- B. Raceway Support Methods: In addition to methods described in NECA 1, EMT, IMC, and RMC may be supported by openings through structure members, as permitted in NFPA 70.
- C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.
- D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:
 - 1. To New Concrete: Bolt to concrete inserts.
 - 2. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
 - 3. To Existing Concrete: Expansion anchor fasteners.
 - 4. To Steel: Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.
 - 5. To Light Steel: Sheet metal screws.
 - 6. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate.
- E. Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

3.03 PAINTING

- A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
 - 1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils.

SECTION 260529 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

- B. Touchup: Comply with requirements in Division 09 painting Sections for cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal.
- C. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION

SECTION 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. The work covered under this Section of the Specifications is intended to include the furnishing of all equipment, materials and labor or reasonably incidental to the complete operating installation of systems as shown on the plan and of related equipment all as indicated on the drawings, as hereinbefore specified under Division 26 and as hereinafter specified in this Section.
- B. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.
- C. Raceways shall be located and routed such that they are perpendicular and parallel to walls, ceilings and structures. They shall not be run diagonally or at obtuse angles if at all possible. Engineer shall be notified and made aware of possible unforeseen situations deviating from this requirement.
- D. Conduit bodies shall not be used in place of junction boxes. They shall only be used sparingly and only when necessary and allowed by code.
- E. Fire alarm system wiring is required to be installed in ¾" RED conduit above ceiling or to structural ceiling, when installed exposed and in unfinished areas. Conduit and raceway system shall be installed by the Electrical Contractor.

1.2 SUBMITTALS

- A. Product Data: For surface raceways, wireways and fittings, hinged-cover enclosures, and cabinets.
- B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, details, and attachments to other work.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

1.4 COORDINATION

- A. Coordinate layout and installation of raceways, boxes, enclosures, cabinets, and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.
- B. Coordinate layout and installation of raceways and boxes with other construction elements to ensure adequate headroom, working clearance, and access. Do not install

SECTION 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

exposed raceways on floor surfaces. Do not support from floor surfaces in a manner which impedes access to space or equipment or which creates a tripping hazard.

PART 2 - PRODUCTS

2.1 METAL CONDUIT AND TUBING

- A. Rigid Steel Conduit: ANSI C80.1.
- B. IMC: ANSI C80.6.
- C. EMT: ANSI C80.3.
- D. FMC: Zinc-coated steel.
- E. LFMC: Flexible steel conduit with PVC jacket.
- F. Fittings for Conduit (Including all Types and Flexible and Liquidtight), EMT, and Cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.
 - 1. Fittings for EMT: Compression steel fittings.
- G. Wireway Covers: Hinged type.

2.2 NONMETALLIC CONDUIT AND TUBING

- A. RNC: NEMA TC 2, Type EPC-40-PVC, unless otherwise indicated.
- B. Fittings for RNC: NEMA TC 3; match to conduit or tubing type and material.

2.3 BOXES, ENCLOSURES, AND CABINETS

- A. Galvanized Steel Sheet Metal Outlet and Device Boxes: NEMA OS 1, 4-inch square by 2-1/8 inch-deep minimum.
- B. Plaster Rings shall be galvanized steel.
- C. Cast-Metal Access, Pull, and Junction Boxes: NEMA FB 1, cast aluminum with gasketed cover.
- D. Box extensions used to accommodate new building finishes shall be of same material as recessed box.
- E. Device Box Dimensions: 4 inches square by 2-1/8 inches deep
- F. Gangable boxes are prohibited.
- G. Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous-hinge cover with flush latch, unless otherwise indicated.

SECTION 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
- H. Cabinets:
1. NEMA 250, Type 1, galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
 2. Hinged door in front cover with flush latch and concealed hinge.
 3. Key latch to match panelboards.
 4. Metal barriers to separate wiring of different systems and voltage.
 5. Accessory feet where required for freestanding equipment.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

- A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:
1. Exposed Conduit: EMT
 2. Concealed Conduit, Aboveground: EMT
 3. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R or 4.
- B. Comply with the following indoor applications, unless otherwise indicated:
1. Exposed, Not Subject to Physical Damage: EMT.
 2. Concealed in Ceilings and Interior Walls and Partitions: EMT.
 3. Damp or Wet Locations: Rigid steel conduit.
 4. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4, stainless steel or nonmetallic in damp or wet locations.
- C. Raceways in general (except where otherwise indicated) may be electrical metallic tubing, 3/4" minimum size. Such tubing shall be galvanized on the outside and coated on the inside with a smooth hard finish of lacquer, varnish or enamel.
- D. In the rare occasions that a device, such as a relay, control device, or sensor, etc., does not accept a 3/4" conduit a 1/2" conduit is acceptable as long as the 1/2" conduit is kept to a length no longer than 6'-0" in length. At no time shall the National Electrical Code conduit fill requirements be exceeded.
- E. Raceway Fittings: Compatible with raceways and suitable for use and location.
1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
 2. EMT: Use steel compression fittings. Comply with NEMA FB 2.10.
 3. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.
- F. Do not install nonmetallic conduit where ambient temperature exceeds 120 deg F.

SECTION 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

3.2 INSTALLATION

- A. Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.
- B. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- C. Complete raceway installation before starting conductor installation.
- D. Arrange stub-ups so curved portions of bends are not visible above the finished slab.
- E. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed.
- F. Conceal conduit and EMT within finished walls, ceilings, and floors, unless otherwise indicated.
- G. Support conduit within 12 inches of enclosures to which attached.
- H. Stub-ups to Above Recessed Ceilings:
 - 1. Use EMT raceways.
 - 2. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.
- I. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.
- J. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire.
- K. Surface Raceways:
 - 1. Install surface raceway with a minimum 2-inch radius control at bend points.
 - 2. Secure surface raceway with screws or other anchor-type devices at intervals not exceeding 48 inches and with no less than two supports per straight raceway section. Support surface raceway according to manufacturer's written instructions. Tape and glue are not acceptable support methods.
- L. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:
 - 1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
 - 2. Where otherwise required by NFPA 70.

SECTION 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

- M. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Verify heights of all boxes with Architect/Engineer.
- N. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall.
- O. Horizontally separate boxes mounted on opposite sides of walls by 6 inches so they are not in the same vertical channel. Offset by 24 inches in fire-rated partitions and apply fire rated putty pads at each box, at one side of 1 hr fire rated wall. If the wall is 2 hr rated, apply putty pads to all boxes on both sides of wall.
- P. Only one (1) extension box shall be permitted. No conduit shall be installed into extension box.

3.3 FIRESTOPPING

- A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 07 Section "Penetration Firestopping."

END OF SECTION

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. The work covered under this Section of the Specifications is intended to include the furnishing of all equipment, materials and labor or reasonably incidental to the complete operating installation of systems as shown on the plan and of related equipment all as indicated on the drawings, as hereinbefore specified under Division 26 and as hereinafter specified in this Section.
- B. Section Includes:
 - 1. Identification for raceways.
 - 2. Identification of power and control cables.
 - 3. Identification for conductors.
 - 4. Underground-line warning tape.
 - 5. Warning labels and signs.
 - 6. Instruction signs.
 - 7. Equipment identification labels.
 - 8. Miscellaneous identification products.

1.2 SUBMITTALS

- A. Product Data: For each electrical identification product indicated.

1.3 QUALITY ASSURANCE

- A. Comply with ANSI A13.1.
- B. Comply with NFPA 70.
- C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.
- D. Comply with ANSI Z535.4 for safety signs and labels.
- E. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

PART 2 - PRODUCTS

2.1 POWER RACEWAY IDENTIFICATION MATERIALS

- A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway size.
- B. Colors for Raceways Carrying Circuits at 600 V or Less:
 - 1. Legend: Indicate voltage.

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

- C. Self-Adhesive Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

2.2 POWER AND CONTROL CABLE IDENTIFICATION MATERIALS

- A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway and cable size.
- B. Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

2.3 CONDUCTOR IDENTIFICATION MATERIALS

- A. Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils thick by 1 to 2 inches wide.
- B. Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

2.4 UNDERGROUND-LINE WARNING TAPE

- A. Tape:
 - 1. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical and communications utility lines.
 - 2. Printing on tape shall be permanent and shall not be damaged by burial operations.
 - 3. Tape material and ink shall be chemically inert, and not subject to degrading when exposed to acids, alkalis, and other destructive substances commonly found in soils.
- B. Color and Printing:
 - 1. Comply with ANSI Z535.1 through ANSI Z535.5.
 - 2. Inscriptions for Red-Colored Tapes: ELECTRIC LINE, HIGH VOLTAGE,.
 - 3. Inscriptions for Orange-Colored Tapes: TELEPHONE CABLE, CATV CABLE, COMMUNICATIONS CABLE, OPTICAL FIBER CABLE,.
- C. Tag: Type ID:
 - 1. Detectable three-layer laminate, consisting of a printed pigmented polyolefin film, a solid aluminum-foil core, and a clear protective film that allows inspection of the continuity of the conductive core, bright-colored, compounded for direct-burial service.
 - 2. Overall Thickness: 5 mils.
 - 3. Foil Core Thickness: 0.35 mil.
 - 4. Weight: 28 lb/1000 sq. ft.
 - 5. 3-Inch Tensile According to ASTM D 882: 70 lbf , and 4600 psi.

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

2.5 INSTRUCTION SIGNS

- A. Engraved, laminated acrylic or melamine plastic, minimum 1/16 inch thick for signs up to 20 sq. inches and 1/8 inch thick for larger sizes.
 - 1. Engraved legend with black letters on white face.
 - 2. Punched or drilled for mechanical fasteners.
 - 3. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.
- B. Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch. Overlay shall provide a weatherproof and UV-resistant seal for label.

2.6 EQUIPMENT IDENTIFICATION LABELS

- A. Self-Adhesive, Engraved, Laminated Acrylic or Melamine Label: Adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch.

2.7 MISCELLANEOUS IDENTIFICATION PRODUCTS

- A. Paint: Comply with requirements in Division 09 painting Sections for paint materials and application requirements. Select paint system applicable for surface material and location (exterior or interior).
- B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
- B. Apply identification devices to surfaces that require finish after completing finish work.
- C. Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.
- D. Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
- E. System Identification Color-Coding Bands for Raceways and Cables: Each color-coding band shall completely encircle cable or conduit. Place adjacent bands of two-color markings in contact, side by side. Locate bands at changes in direction, at penetrations of walls and floors, at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.
- F. Underground-Line Warning Tape: During backfilling of trenches install continuous underground-line warning tape directly above line at 6 to 8 inches below finished grade.

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

Use multiple tapes where width of multiple lines installed in a common trench or concrete envelope exceeds 16 inches overall.

- G. Painted Identification: Comply with requirements in Division 09 painting Sections for surface preparation and paint application.

3.2 IDENTIFICATION SCHEDULE

- A. Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits More Than 30 A, and 120 V to ground: Install labels at 10-foot maximum intervals.
- B. Accessible Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive vinyl labels with the wiring system legend and system voltage. System legends shall be as follows:
 - 1. Power.
- C. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color-coding conductor tape to identify the phase.
 - 1. Color-Coding for Phase and Voltage Level Identification, 600 V or Less: Use colors listed below for ungrounded service feeder and branch-circuit conductors.
 - a. Color shall be factory applied.
 - b. Colors for 208/120-V Circuits:
 - 1) Phase A: Black
 - 2) Phase B: Red
 - 3) Phase C: Blue
 - 2. Color for Neutral: White.
 - 3. Color for Equipment Grounds: Green.
 - a. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.
- D. Install instructional sign including the color-code for grounded and ungrounded conductors using adhesive-film-type labels.
- E. Conductors to Be Extended in the Future: Attach write-on tags to conductors and list source.
- F. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.
 2. Use system of marker tape designations that is uniform and consistent with system used by manufacturer for factory-installed connections.
 3. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual.
- G. Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring and optical fiber cable.
1. Limit use of underground-line warning tape to direct-buried cables.
 2. Install underground-line warning tape for both direct-buried cables and cables in raceway.
- H. Workspace Indication: Install floor marking tape to show working clearances in the direction of access to live parts. Workspace shall be as required by NFPA 70 and 29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panelboards and similar equipment in finished spaces.
- I. Operating Instruction Signs: Install instruction signs to facilitate proper operation and maintenance of electrical systems and items to which they connect. Install instruction signs with approved legend where instructions are needed for system or equipment operation.
- J. Emergency Operating Instruction Signs: Install instruction signs with white legend on a red background with minimum 3/8-inch- high letters for emergency instructions at equipment used for power transfer.
- K. Arc Flash Warning Labeling: Self-adhesive thermal transfer vinyl labels.
1. Comply with NFPA 70E and ANSI Z535.4.
- L. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification. Label switchboards and panelboards (new and existing), with switchboard/panel designation, voltage, and phase.
1. Labeling Instructions:
 - a. Indoor Equipment: Self-adhesive, engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch- high letters on 1-1/2-inch- high label; where two lines of text are required, use labels 2 inches high.
 - b. Outdoor Equipment: Engraved, laminated acrylic or melamine label.
 - c. Elevated Components: Increase sizes of labels and letters to those appropriate for viewing from the floor.

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

- d. Unless provided with self-adhesive means of attachment, fasten labels with appropriate mechanical fasteners that do not change the NEMA or NRTL rating of the enclosure.

END OF SECTION

SECTION 262726 - WIRING DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes receptacles, connectors, switches, and finish plates.

1.3 SUBMITTALS

- A. Product Data: For each product specified.

1.4 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.
- B. Comply with NEMA WD 1.
- C. Comply with NFPA 70.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the WORK include, but are not limited to, the following:
 - 1. Wiring Devices:
 - a. Bryant Electric, Inc.
 - b. GE Company; GE Wiring Devices.
 - c. Hubbell, Inc.; Wiring Devices Div.
 - d. Leviton Manufacturing Co., Inc.
 - e. Pass & Seymour/Legrand; Wiring Devices Div.

2.2 RECEPTACLES

- A. Straight-Blade and Locking Receptacles: Heavy-Duty grade. 120 volt, 20 amp rated, min. Ivory.

SECTION 262726 - WIRING DEVICES

- B. GFI Receptacles: Provide receptacles with UL listed 5mA ground fault interrupting protection with test and reset buttons. Provide receptacle with green LED indicating light that is illuminated when power is available to receptacle. LED shall go off when receptacle has tripped due to a ground fault current.

2.3 SWITCHES

- A. Snap Switches: Heavy-duty, quiet type. 120 volt, 20 amp rated, min. Ivory.

2.4 WALL PLATES

- A. Single and combination types match corresponding wiring devices.
 - 1. Material for mechanical rooms: Galvanized steel.
 - 2. Material for all other spaces: Stainless steel.
 - 3. Provide weatherproof covers for all devices in existing and new bus storage areas, bus wash, bus wash mechanical, and exterior of building.
- B. Telephone and data receptacles
 - 1. Category 6 modular jack devices, 8-position, 8-conductor modular jacks, terminated to 110 type IDC connections for the installation of UTP cable.
 - 2. Units shall be labeled in accordance with both wiring designations of T568A/B. See details for cable connections and labeling.
 - 3. Provide and install faceplates for mounting telecommunication outlet connector modules described elsewhere in the specifications. Four-gang faceplate, as required and as indicated on the plans.
 - 4. Provide and install blank inserts as needed.
 - 5. Label communication faceplates in accordance with both wiring designations T68A/B.
 - 6. Ivory receptacles with stainless cover plates.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install devices and assemblies plumb and secure.
- B. Install wall plates when painting is complete.
- C. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical, and grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.
- D. Protect devices and assemblies during painting.
- E. Provide weatherproof covers for all devices in existing and new bus storage areas, bus wash, bus wash mechanical, and exterior of building.

SECTION 262726 - WIRING DEVICES

3.2 IDENTIFICATION

- A. Comply with Division 26 Section 260510 – Basic Electrical Material And Methods.
 - 1. Switches: Where three or more switches are ganged, and elsewhere as indicated, identify each switch with approved legend engraved on wall plate.
 - 2. Receptacles: Identify panelboard and circuit number from which served. Use machine-printed, pressure-sensitive, abrasion-resistant label tape on face of plate and durable wire markers or tags within outlet boxes.

3.3 CONNECTIONS

- A. Connect wiring device grounding terminal to branch-circuit equipment grounding conductor.
- B. Tighten electrical connectors and terminals according to manufacturers published torque-tightening values. If manufacturers torque values are not indicated, use those specified in UL 486A and UL 486B.

3.4 FIELD QUALITY CONTROL

- A. Test wiring devices for proper polarity and ground continuity. Operate each device at least six times.
- B. Replace damaged or defective components.

3.5 CLEANING

- A. Internally clean devices, device outlet boxes, and enclosures. Replace stained or improperly painted wall plates or devices.

END OF SECTION

SECTION 262816 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes individually mounted switches and circuit breakers used for the following:
 - 1. Feeder and equipment disconnect switches.
 - 2. Feeder branch-circuit protection.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 26 Section 262726 - Wiring Devices for attachment plugs and receptacles, and snap switches used for disconnect switches.

1.3 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product Data for disconnect switches, circuit breakers, and accessories specified in this Section.
- C. Maintenance data for tripping devices to include in the operation and maintenance manual specified in Division 1.
- D. Field Test Reports.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain disconnect switches and circuit breakers from one source and by a single manufacturer.
- B. Comply with NFPA 70 for components and installation.
- C. Listing and Labeling: Provide disconnect switches and circuit breakers specified in this Section that are listed and labeled.
 - 1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.

SECTION 262816 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering disconnect switches and circuit breakers that may be incorporated into the Work include, but are not limited to, the following:
 1. Molded-Case Circuit Breakers:
 - a. American Circuit Breaker Corp.
 - b. Eaton Corp.; Cutler-Hammer Products.
 - c. General Electric Co.; Electrical Distribution and Control Division.
 - d. Siemens Energy & Automation, Inc.
 - e. Square D Co.

2.2 DISCONNECT SWITCHES

- A. Enclosed, Nonfusible Switch: NEMA KS 1, Type HD, with lockable handle.
- B. Enclosed, Fusible Switch, 800 A and Smaller: NEMA KS 1, Type HD, clips to accommodate specified fuses, enclosure consistent with environment where located, handle lockable with 2 padlocks, and interlocked with cover in CLOSED position.
- C. Enclosure: NEMA KS 1, Type 1, unless otherwise specified or required to meet environmental conditions of installed location.
 1. Other Wet or Damp Indoor Locations (this includes existing and new Bus Storage, Bus Wash, & Bus Wash Mechanical): Type 4, 316L Stainless steel.

2.3 ENCLOSED CIRCUIT BREAKERS

- A. Enclosed, Molded-Case Circuit Breaker: NEMA AB 1, with lockable handle.
- B. Characteristics: Frame size, trip rating, number of poles, and auxiliary devices as indicated and interrupting rating to meet available fault current. See single line diagram for required fault current rating. Meet rating of device feeding circuit breaker.
- C. Application Listing: Appropriate for application, including switching fluorescent lighting loads or heating, air-conditioning, and refrigerating equipment.
- D. Circuit Breakers, 200 A and Larger: Trip units interchangeable within frame size.

SECTION 262816 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

- E. Circuit Breakers, 400 A and Larger: Field-adjustable, short-time and continuous-current settings.
- F. Current-Limiting Trips: Where indicated, let-through ratings less than NEMA FU 1, Class RK-5.
- G. Current Limiters: Where indicated, integral fuse listed for circuit breaker.
- H. Molded-Case Switch: Where indicated, molded-case circuit breaker without trip units.
- I. Lugs: Mechanical lugs and power-distribution connectors for number, size, and material of conductors indicated.
- J. Shunt Trip: Where indicated.
- K. Accessories: As indicated.
- L. Enclosure: NEMA AB 1, Type 1, unless otherwise specified or required to meet environmental conditions of installed location.
 - 1. Other Wet or Damp Indoor Locations: Type 4, 316L Stainless Steel.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install disconnect switches and circuit breakers in locations as indicated, according to manufacturer's written instructions.
- B. Install disconnect switches and circuit breakers level and plumb.
- C. Install wiring between disconnect switches, circuit breakers, control, and indication devices.
- D. Connect disconnect switches and circuit breakers and components to wiring system and to ground as indicated and instructed by manufacturer.
 - 1. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. Where manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- E. Identify each disconnect switch and circuit breaker according to requirements specified in Division 16 Section 260510 - Basic Electrical Materials And Methods.

3.2 FIELD QUALITY CONTROL

- A. Testing: After installing disconnect switches and circuit breakers and after electrical circuitry has been energized, demonstrate product capability and compliance with requirements.

SECTION 262816 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

1. Procedures: Perform each visual and mechanical inspection and electrical test stated in NETA ATS, Section 7.5 for disconnect switches and Section 7.6 for molded-case circuit breakers. Certify compliance with test parameters.
- B. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, remove and replace with new units and retest.

3.3 ADJUSTING

- A. Set field-adjustable disconnect switches and circuit-breaker trip ranges as indicated.

3.4 CLEANING

- A. After completing system installation, including outlet fittings and devices, inspect exposed finish. Remove burrs, dirt, and construction debris and repair damaged finish including chips, scratches, and abrasions.

END OF SECTION

SECTION 280513 – CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Balanced twisted-pair cabling.
 - 2. Fire alarm wire and cable.
 - 3. Identification products.

1.3 DEFINITIONS

- A. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control and signaling power-limited circuits.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings:
 - 1. Cabling administration drawings and printouts.

1.5 INFORMATIONAL SUBMITTALS

- A. Source quality-control reports.
- B. Field quality-control reports.

1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An NRTL.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Flame-Spread Index: 25 or less.
 - 2. Smoke-Developed Index: 50 or less.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

SECTION 280513 – CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY

2.2 FIRE ALARM WIRE AND CABLE

- A. General Wire and Cable Requirements: NRTL listed and labeled as complying with NFPA 70, Article 760. Plenum rated.
- B. Signaling Line Circuits: Twisted, shielded pair, size as recommended by system manufacturer.
 - 1. Circuit Integrity Cable: Twisted shielded pair, NFPA 70, Article 760, Classification CI, for power-limited fire alarm signal service Type FPL. NRTL listed and labeled as complying with UL 1424 and UL 2196 for a two-hour rating.
- C. Non-Power-Limited Circuits: Solid-copper conductors with 600-V rated, 75 deg C, color-coded insulation, and complying with requirements in UL 2196 for a two-hour rating.
 - 1. Low-Voltage Circuits: No. 16 AWG, minimum, in pathway.
 - 2. Line-Voltage Circuits: No. 12 AWG, minimum, in pathway.

2.3 IDENTIFICATION PRODUCTS

- A. Comply with TIA-606-B and UL 969 for a system of labeling materials, including label stocks, laminating adhesives, and inks used by label printers.

2.4 SOURCE QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to evaluate cables.
- B. Factory test balanced twisted-pair cables according to TIA-568-C.2.
- C. Cable will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 WIRING METHOD

- A. Install wiring in metal pathways and wireways.
 - 1. Minimum conduit size shall be 3/4 inch. Control and data-transmission wiring shall not share conduits with other building wiring systems.
- B. Install cable, concealed in accessible ceilings, walls, and floors when possible.

3.2 INSTALLATION OF CONDUCTORS AND CABLES

- A. Comply with NECA 1 and NFPA 70.
- B. Conductors: Size according to system manufacturer's written instructions unless otherwise indicated.

SECTION 280513 – CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY

- C. Do not install conductors and cables that are wet, moisture damaged, or mold damaged.
- D. Install balanced twisted-pair cables and connecting materials after spaces are complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
- E. General Requirements for Cabling:
 - 1. Comply with TIA-568-C.1.
 - 2. Comply with BICSI "Information Technology Systems Installation Methods Manual."
 - 3. Terminate all conductors; no cable shall contain unterminated elements. Make terminations only at indicated outlets, terminals, and cross-connect and patch panels. Leave a minimum of 6 inches of slack at outlet terminations and coil loosely into box after termination on outlet fitting.
 - 4. Cables may not be spliced. Secure and support cables at intervals not exceeding 30 inches and not more than 6 inches from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
 - 5. Maintain minimum cable bending radius during installation and termination of cables.
 - 6. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
 - 7. Cold-Weather Installation: Bring cable to room temperature before dereeling. Heat lamps shall not be used for heating.
 - 8. Pulling Cable: Monitor cable pull tensions. Do not exceed manufacturer's rated cable-pulling tension.
 - 9. Riser Cable: Riser cable support intervals shall be in accordance with manufacturer's recommendations.
- F. Open-Cable Installation:
 - 1. Suspend copper cable not in a wireway or pathway a minimum of 8 in above ceilings by cable supports not more than 60 inches apart. Cable supports shall be fastened to structural members or floor slabs in accordance with Section 260528.29 "Hangers and Supports for Communications Systems."
 - 2. Cable shall not be run in contact with pipes, ducts, or other potentially damaging items. Cables shall not be run through structural members or use structural members, pipes, ducts, or equipment as a support.
- G. Separation from EMI Sources:
 - 1. Comply with BICSI Telecommunications Distribution Methods Manual and TIA-569-D recommendations for separating unshielded copper voice and data communication cable from potential EMI sources, including electrical power lines and equipment.
 - 2. Separation between open communication cables or cables in nonmetallic pathways and unshielded power conductors and electrical equipment shall be as follows:
 - a. Equipment Rating Less Than 2 kVA: A minimum of 5 inches
 - b. Equipment Rating between 2 to 5 kVA: A minimum of 12 inches

SECTION 280513 – CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY

- c. Equipment Rating More Than 5 kVA: A minimum of 24 inches
3. Separation between communication cables in grounded metallic pathways and unshielded power lines or electrical equipment shall be as follows:
 - a. Equipment Rating Less Than 2 kVA: A minimum of 2-1/2 inches
 - b. Equipment Rating between 2 and 5 kVA: A minimum of 6 inches
 - c. Equipment Rating More Than 5 kVA: A minimum of 12 inches
4. Separation between cables in grounded metallic pathways and power lines and electrical equipment located in grounded metallic conduits or enclosures shall be as follows:
 - a. Equipment Rating Less Than 2 kVA: No requirement.
 - b. Equipment Rating between 2 and 5 kVA: A minimum of 3 inches
 - c. Equipment Rating More Than 5 kVA: A minimum of 6 inches
5. Separation between Cables and Fluorescent Fixtures: A minimum of 5 inches

3.3 FIRE ALARM WIRING INSTALLATION

- A. Comply with NECA 1 and NFPA 72.
- B. Wiring Method: Install wiring in metal pathway according to Section 280528 "Pathways for Electronic Safety and Security."
 1. Install plenum cable in environmental air spaces, including plenum ceilings.
 2. Fire alarm circuits and equipment control wiring associated with the fire alarm system shall be installed in a dedicated pathway system. This system shall not be used for any other wire or cable.
- C. Wiring Method:
 1. Cables and pathways used for fire alarm circuits, and equipment control wiring associated with the fire alarm system, may not contain any other wire or cable.
 2. Fire-Rated Cables: Use of two-hour, fire-rated fire alarm cables, NFPA 70, Types MI and CI, is not permitted.
 3. Signaling Line Circuits: Power-limited fire alarm cables shall not be installed in the same cable or pathway as signaling line circuits.
- D. Wiring within Enclosures: Separate power-limited and non-power-limited conductors as recommended by manufacturer. Install conductors parallel with or at right angles to sides and back of the enclosure. Bundle, lace, and train conductors to terminal points with no excess. Connect conductors that are terminated, spliced, or interrupted in any enclosure associated with the fire alarm system to terminal blocks. Mark each terminal according to the system's wiring diagrams. Make all connections with approved crimp-on terminal spade lugs, pressure-type terminal blocks, or plug connectors.
- E. Cable Taps: Use numbered terminal strips in junction, pull, and outlet boxes, cabinets, or equipment enclosures where circuit connections are made.

SECTION 280513 – CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY

- F. Color Coding: Color code fire alarm conductors differently from the normal building power wiring. Use one color code for alarm circuit wiring and another for supervisory circuits. Color code audible alarm-indicating circuits differently from alarm-initiating circuits. Use different colors for visible alarm-indicating devices. Paint fire alarm system junction boxes and covers red.
- G. Risers: Install at least two vertical cable risers to serve the fire alarm system. Separate risers in close proximity to each other with a minimum one-hour-rated wall, so the loss of one riser does not prevent the receipt or transmission of signals from other floors or zones.
- H. Wiring to Remote Alarm Transmitting Device: 1-inch conduit between the fire alarm control panel and the transmitter. Install number of conductors and electrical supervision for connecting wiring as needed to suit monitoring function.

3.4 POWER AND CONTROL-CIRCUIT CONDUCTORS

- A. 120-V Power Wiring: Install according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables" unless otherwise indicated.
- B. Minimum Conductor Sizes:
 - 1. Class 1 remote-control and signal circuits, No. 14 AWG.
 - 2. Class 2 low-energy, remote-control and signal circuits, No. 16 AWG.
 - 3. Class 3 low-energy, remote-control, alarm and signal circuits, No. 12 AWG.

3.5 CONNECTIONS

- A. Comply with requirements in Section 284621.13 "Conventional Fire-Alarm System" for connecting, terminating, and identifying wires and cables.

3.6 FIRESTOPPING

- A. Comply with TIA-569-D, "Firestopping" Annex.
- B. Comply with BICSI Telecommunications Distribution Methods Manual Telecommunications Distribution Methods Manual , "Firestopping Systems" Article.

3.7 GROUNDING

- A. For communication wiring, comply with TIA-607-B and with BICSI Telecommunications Distribution Methods Manual 's "Bonding and Grounding (Earthing)" chapter.
- B. Provide grounding and bonding of systems per NEC 250.50 and Low-Voltage systems.

3.8 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections:
 - 1. Visually inspect balanced twisted-pair and optical-fiber cable jacket materials for NRTL certification markings. Inspect cabling terminations to confirm color

SECTION 280513 – CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY

- coding for pin assignments and inspect cabling connections to confirm compliance with TIA-568-C.1.
2. Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cords, and labeling of all components.
 3. Test balanced twisted-pair cabling for DC loop resistance, shorts, opens, intermittent faults, and polarity between conductors. Test operation of shorting bars in connection blocks. Test cables after termination but not cross connection.
 - a. Test instruments shall comply with or exceed applicable requirements in TIA-568-C.2. Perform tests with a tester that complies with performance requirements in "Test Instruments (Normative)" Annex, complying with measurement accuracy specified in "Measurement Accuracy (Informative)" Annex. Use only test cords and adapters that are qualified by test equipment manufacturer for channel or link test configuration.
- B. Document data for each measurement. Print data for submittals in a summary report that is formatted using Table 10.1 in BICSI Telecommunications Distribution Methods Manual as a guide, or transfer the data from the instrument to the computer, save as text files, print, and submit.
- C. End-to-end cabling will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

END OF SECTION

SECTION 280528 – PATHWAYS FOR ELECTRONIC SAFETY AND SECURITY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Metal conduits, tubing, and fittings.
 - 2. Nonmetallic conduits, tubing, and fittings.
 - 3. Surface pathways.
 - 4. Boxes, enclosures, and cabinets.

1.2 ACTION SUBMITTALS

- A. Product Data: For surface pathways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.
- B. Shop Drawings: For custom enclosures and cabinets.

PART 2 - PRODUCTS

2.1 METAL CONDUITS AND FITTINGS

- A. General Requirements for Metal Conduits and Fittings:
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 - 2. Comply with TIA-569-D.
- B. GRC: Comply with ANSI C80.1 and UL 6.
- C. ARC: Comply with ANSI C80.5 and UL 6A.
- D. EMT: Comply with ANSI C80.3 and UL 797.
- E. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.
 - 1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886 and NFPA 70.
 - 2. Fittings for EMT:
 - a. Material: Steel.
 - b. Type: Setscrew.
 - 3. Expansion Fittings: PVC or steel to match conduit type, complying with UL-467, rated for environmental conditions where installed, and including flexible external bonding jumper.
- F. Joint Compound for GRC or ARC: Approved, as defined in NFPA 70, by authorities having jurisdiction for use in conduit assemblies, and compounded for use to lubricate and protect threaded conduit joints from corrosion and to enhance their conductivity.

SECTION 280528 – PATHWAYS FOR ELECTRONIC SAFETY AND SECURITY

2.2 NONMETALLIC CONDUITS AND FITTINGS

- A. General Requirements for Nonmetallic Conduits and Fittings:
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 - 2. Comply with TIA-569-D.
- B. RNC: Type EPC-40-PVC, complying with NEMA TC 2 and UL 651 unless otherwise indicated.
- C. Fittings for RNC: Comply with NEMA TC 3; match to conduit or tubing type and material.
- D. Solvents and Adhesives: As recommended by conduit manufacturer.

2.3 SURFACE PATHWAYS

- A. General Requirements for Surface Pathways:
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 - 2. Comply with TIA-569-D.
- B. Surface Metal Pathways: Galvanized steel with snap-on covers complying with UL 5. Manufacturer's standard enamel finish.
- C. Surface Nonmetallic Pathways: Two- or three-piece construction, complying with UL 5A, and manufactured of rigid PVC with texture and color selected by Architect from manufacturer's standard colors. Product shall comply with UL-94 V-0 requirements for self-extinguishing characteristics.

2.4 BOXES, ENCLOSURES, AND CABINETS

- A. General Requirements for Boxes, Enclosures, and Cabinets:
 - 1. Comply with TIA-569-D.
 - 2. Boxes, enclosures and cabinets installed in wet locations shall be listed for use in wet locations.
- B. Sheet-Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.
- C. Cast-Metal Outlet and Device Boxes: Comply with NEMA FB 1, Type FD, with gasketed cover.
- D. Box extensions used to accommodate new building finishes shall be of same material as recessed box.
- E. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- F. Cast-Metal Access, Pull, and Junction Boxes: Comply with NEMA FB 1 and UL 1773, cast aluminum with gasketed cover.

SECTION 280528 – PATHWAYS FOR ELECTRONIC SAFETY AND SECURITY

- G. Device Box Dimensions: 4 inches square by 2-1/8 inches deep
- H. Gangable boxes are prohibited.
- I. Nonmetallic Outlet and Device Boxes: Comply with NEMA OS 2 and UL 514C.
- J. Hinged-Cover Enclosures: Comply with UL 50 and NEMA 250, continuous-hinge cover with flush latch unless otherwise indicated.
 - 1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
 - 2. Interior Panels: Steel; all sides finished with manufacturer's standard enamel.
- K. Cabinets:
 - 1. NEMA 250, Type 1, Type 3R galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
 - 2. Hinged door in front cover with flush latch and concealed hinge.
 - 3. Key latch to match panelboards.
 - 4. Metal barriers to separate wiring of different systems and voltage.
 - 5. Accessory feet where required for freestanding equipment.
 - 6. Nonmetallic cabinets shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

PART 3 - EXECUTION

3.1 PATHWAY APPLICATION

- A. Indoors: Apply pathway products as specified below unless otherwise indicated:
 - 1. Exposed, Not Subject to Physical Damage: EMT.
 - 2. Exposed, Not Subject to Severe Physical Damage: EMT
 - 3. Exposed and Subject to Severe Physical Damage: GRC.
 - 4. Concealed in Ceilings and Interior Walls and Partitions: EMT
 - 5. Damp or Wet Locations: GRC.
- B. Minimum Pathway Size: 3/4-inch trade size.
- C. Pathway Fittings: Compatible with pathways and suitable for use and location.
 - 1. Rigid Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
 - 2. EMT: Use setscrew steel fittings. Comply with NEMA FB 2.10.
 - 3. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.
- D. Do not install aluminum conduits, boxes, or fittings in contact with concrete or earth.
- E. Install surface pathways only where indicated on Drawings.

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3.2 INSTALLATION

- A. Comply with NECA 1, NECA 101, and TIA-569-D for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for aluminum pathways. Comply with NFPA 70 limitations for types of pathways allowed in specific occupancies and number of floors.
- B. Keep pathways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal pathway runs above water and steam piping.
- C. Comply with requirements in Section 270528.29 "Hangers and Supports for Communications Systems" for hangers and supports.
- D. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications wiring conduits for which only two 90-degree bends are allowed. Support within 12 inches of changes in direction.
- E. Conceal conduit and EMT within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.
- F. Stub-ups to Above Recessed Ceilings:
 - 1. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.
- G. Coat field-cut threads on PVC-coated pathway with a corrosion-preventing conductive compound prior to assembly.
- H. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install insulated bushings on conduits terminated with locknuts.
- I. Install pathways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.
- J. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to conduit assembly to assure a continuous ground path.
- K. Spare Pathways: Install pull wires in empty pathways. Cap underground pathways designated as spare above grade alongside pathways in use.
- L. Surface Pathways:
 - 1. Install surface pathway for surface electrical outlet boxes only where indicated on Drawings.
- M. Pathways for Optical-Fiber and Communications Cable: Install pathways as follows:
 - 1. 3/4-Inch Trade Size and Smaller: Install pathways in maximum lengths of 50 feet.
 - 2. 1-Inch Trade Size and Larger: Install pathways in maximum lengths of 75 feet.
 - 3. Install with a maximum of two 90-degree bends or equivalent for each length of pathway unless Drawings show stricter requirements.

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- N. Install pathway sealing fittings at accessible locations according to NFPA 70 and fill them with listed sealing compound.
- O. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal the interior of all pathways at the following points:
 - 1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
 - 2. Where an underground service pathway enters a building or structure.
 - 3. Where otherwise required by NFPA 70.
- P. Expansion-Joint Fittings:
 - 1. Install in each run of aboveground RNC that is located where environmental temperature change may exceed 30 deg F, and that has straight-run length that exceeds 25 feet. Install in each run of aboveground RMC that is located where environmental temperature change may exceed 100 deg F and that has straight-run length that exceeds 100 feet.
 - 2. Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per deg F of temperature change for PVC conduits. Install fitting(s) that provide expansion and contraction for at least 0.000078 inch per foot of length of straight run per deg F of temperature change for metal conduits.
 - 3. Install expansion fittings at all locations where conduits cross building or structure expansion joints.
 - 4. Install each expansion-joint fitting with position, mounting, and piston setting selected according to manufacturer's written instructions for conditions at specific location at time of installation. Install conduit supports to allow for expansion movement.
- Q. Mount boxes at heights indicated on Drawings according to ADA requirements. Install boxes with height measured to bottom of box unless otherwise indicated.
- R. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.

3.3 FIRESTOPPING

- A. Install firestopping at penetrations of fire-rated floor and wall assemblies.

3.4 PROTECTION

- A. Protect coatings, finishes, and cabinets from damage and deterioration.

END OF SECTION

SECTION 284621 – ADDRESSABLE FIRE ALARM SYSTEMS

PART 1 - GENERAL

1.0 PROJECT DESCRIPTION, EXPECTATIONS, COORDINATION & DEVIATIONS

- A. This project consists of the replacement of the fire alarm system at the High School and Middle School in Wrangell, Alaska. The Swimming Pool is also included as it is housed in a portion of the High School building. Contractor shall provide all new fire alarm devices, wiring, annunciators, and fire alarm panel. Provide all new conduit and boxes. Existing conduits and boxes may be reused if correct size, in correct location, and in good working condition. However, do not assume existing conduit and boxes are to be reused until verified to meet requirements noted in this paragraph. See Sheet E1, Note 11 for more information. One overall system shall be provided which serves both buildings via main fire alarm panel. The buildings are fully sprinkled, and the existing sprinkler systems shall be monitored from the new fire alarm panel.

Protect and maintain the existing fire alarm system as needed during construction to ensure full coverage throughout the project. See Sheet E1 of the plans for more information.

Project shall adhere to all local, state, and industry codes that apply, Fire Chief requirements, and Owner/Engineer requirements outlined in the plans and specifications. NFPA 70 (NEC) 2020 edition and NFPA 72 2010 edition apply to this project.

The two schools are classified per IBC/NFPA 101 as educational occupancies. However, school athletic teams, and other student groups sometimes utilize portions of the buildings for overnight stays, and they sleep in classrooms and use locker rooms for showering. Due to this arrangement the project design team has specified increased smoke and carbon dioxide detection to meet IBC/NFPA 101 requirements for lodging/residential construction. As most interior spaces in the schools remain unlocked, the design assumes that students may freely roam during overnight stays and so the design has a higher density of initiation and notification devices than one may anticipate for a typical educational facility.

While one fire alarm system is being provided for the two buildings, the system shall be programmed to delineate alarms and notifications between the buildings and between areas and levels in each building. Contractor shall participate in a pre-programming meeting with Fire Chief, Engineer, and Owner to outline expectations of system programming. See Article 3.10, Paragraph J for more on fire alarm system programming expectations.

The two schools are in close proximity and connected via outdoor covered breezeways. The new fire alarm system is to be programmed so that the two buildings' alarm and notification functions are distinct. That is, upon a single alarm in either building the other building's notification devices are expected to not go into alarm. Also, magnetic door holds are to be controlled in groups based upon the area or level in alarm, on a building basis. See Article 3.10, Paragraph J for more on programming expectations. In all programming, the Contractor is to meet Fire Chief and Code requirements.

A new elevator is to be provided as part of a separate project in the Summer of 2023. As noted in this project, the fire alarm Contractor is to provide associated elevator shaft, cab, and machine

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room devices, electrical, etc. to allow for connection of the elevator system into the fire alarm system once the elevator is installed. Contractor will be required to co-ordinate work during the elevator construction project.

The plans show a full fire alarm device layout but do not indicate notification device ex-tender panels. The Contractor is responsible to provide a set of layout drawings for Fire Chief review and approval. Contractor is responsible for all battery calculations, voltage drop calculations, and other requirements per Code and the specifications. Determine the number and locations of extender panels needed, if any, and provide as required. Provide all auxiliary, accessories, and other supporting devices, connections and wiring required for a fully functional and interconnected set of extender panels, devices, and main fire alarm panel. Show precise device locations and spacing within the layout plans provided. While minor device location changes can be expected, any significant device layout, device quantity, or device alternate technology proposed by the Contractor must be submitted for re-view prior to commencement of work. Do not assume any significant alterations in device layout, device quantity, or device technology will be allowed until Contractor receives writ-ten approval by the Owner.

1.2 SUMMARY

A. Section Includes:

1. Addressable fire-alarm system.
2. Fire-alarm control panel (FACP).
3. Manual fire-alarm boxes.
4. System smoke detectors.
5. Duct smoke detectors.
6. Heat detectors.
7. Projected Beam Smoke Detectors.
8. Fire-alarm notification appliances.
9. Magnetic Door Holders.
10. Fire-alarm Remote Annunciators.
11. Fire-alarm addressable interface devices.
12. Digital alarm communicator transmitter.
13. Voice Evacuation System.

B. Related Requirements:

1. Section 260000 "Basic Electrical Requirements".
2. Section 260526 "Grounding and Bonding for Electrical Systems" for system grounding expectations.
3. Section 260519 "Low-Voltage Electrical Power Conductors and Cables" for cables and conductors for fire-alarm systems.
4. Codes and Standards: Except as modified by governing codes and where more stringent standards are specified by the contract documents, comply with the latest applicable provisions and latest recommendations of the following:
 - a. National Fire Protection Association (NFPA): NFPA 70, "2017 National Electrical Code"; NFPA 72, "National Fire Alarm and Signaling Code"; NFPA 241, "Standard for Safeguarding Construction, Alteration and Demolition Operations"; NFPA 101, "Life Safety Code".
 - b. Factory Mutual (FM): FM 37825, "1952 Approved Guide".

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- c. Underwriters Laboratories (UL): UL FPED, “Fire Protection Equipment Directory; UL 268, “Smoke Detectors for Fire Protective Signaling Systems”, UL 197/ANSI, “Codes applicable to Americans with Disabilities Act Compliance”, “Testing for Fire Resistive Cables” UL 2196, “Cables for Power-Limited Fire-Alarm Circuits” UL 1424.
- d. Americans with Disabilities Act.
- e. Local and City Code and Amendments.
- f. International Building Code, IBC-2012.
- g. International Fire Code, IFC-2012.

1.3 DEFINITIONS

- A. DACT: Digital alarm communicator transmitter.
- B. FACP: Fire-alarm control unit.
- C. Voltage Class: For specified circuits and equipment, voltage classes are defined as follows:
 - 1. Control Voltage: Listed and labeled for use in remote-control, signaling, and power-limited circuits supplied by a Class 2 or Class 3 power supply having rated output not greater than 150 V and 5 A, allowing use of alternate wiring methods complying with NFPA 70, Article 725.
 - 2. Low Voltage: Listed and labeled for use in circuits supplied by a Class 1 or other power supply having rated output not greater than 1000 V, requiring use of wiring methods complying with NFPA 70, Article 300, Part I.
- D. Definition in NFPA 72 apply to fire alarm terms used in the Section.

1.4 SEQUENCING AND SCHEDULING

- A. Intelligibility Study:
 - 1. Contractor shall perform an intelligibility audit/study of the fire alarm system after all devices are installed, operational, and tested. Provide all testing and performance results to Engineer/Owner for review. Testing shall be done per NFPA 72 requirements. Contractor shall conduct two distinct intelligibility studies. First, self-perform an intelligibility study upon substantial completion of project and provide a signed letter stating system meetings intelligibility requirements. Second, at request for final inspection, a second intelligibility test shall be conducted by a three-party walk throughout the building. Parties will include the Contractor, Owner’s Representative (i.e. Fire Chief), and the Engineer. All three parties shall walk the entire project and confirm via majority vote that each space is has intelligible voice messages. For any spaces not found to be intelligible, the Contractor shall provide additional notification device(s) and a retest shall be conducted via the three-party approach. The project will not be considered complete until the three-party walk through is completed and a signed letter from the Contractor is received confirming acceptance.
 - 2. Intelligibility testing as described above does not require STI/CIS testing procedures & results. However, at Contractor option, alternate intelligibility testing may be conducted

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based upon STI/CIS testing procedures and per NFPA 72, including Annex D. Test results/reports verifying STI/CIS acceptance shall be provided to the Owner, along with a signed letter stating that the system meets intelligibility requirements. If the alternate path is chosen, a three-party walkthrough as described above is not required.

- B. Equipment Removal: After acceptance of new fire-alarm system, remove existing disconnected fire-alarm equipment and wiring.

1.5 ACTION SUBMITTALS

- A. Intelligibility Study: Contractor shall perform an intelligibility audit of the fire alarm system when all devices are installed, operational, and tested. Provide all testing and performance results to Engineering/Owner for review. Testing shall be done per NFPA 72. See Section 1.4 for more.
- B. Approved Permit Submittal: Submittals must be approved by authorities having jurisdiction prior to submitting them to Engineer.
- C. Product Data: For each type of product, including furnished options and accessories.
 - 1. Include construction details, material descriptions, dimensions, profiles, and finishes.
 - 2. Include rated capacities, operating characteristics, and electrical characteristics.
- D. Shop Drawings: For fire-alarm system.
 - 1. Comply with recommendations and requirements in "Documentation" section of "Fundamentals" chapter in NFPA 72.
 - 2. Wiring Diagrams: Detail wiring and differentiate between manufacturer-installed and field-installed wiring. Include diagrams for equipment and for system with all terminals and interconnections identified.
 - 3. Annunciator panel details as required by authorities having jurisdiction.
 - 4. Detail assembly and support requirements.
 - 5. Include voltage drop calculations for notification-appliance circuits.
 - 6. Include battery-size calculations.
 - 7. Include input/output matrix.
 - 8. Include written statement from manufacturer that equipment and components have been tested as a system and comply with requirements in this Section and in NFPA 72.
 - 9. Include performance parameters and installation details for each detector.
 - 10. Verify that each duct detector is listed for complete range of air velocity, temperature, and humidity possible when air-handling system is operating.
 - 11. Provide control wiring diagrams for fire-alarm interface to HVAC; coordinate location of duct smoke detectors and access to them.
 - a. Show critical dimensions that relate to placement and support of sampling tubes, detector housing, and remote status and alarm indicators.
 - b. Show field wiring and equipment required for HVAC unit shutdown on alarm.
 - c. Locate detectors in accordance with manufacturer's written instructions.

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12. Include voice/alarm signaling-service equipment rack or console layout, grounding schematic, amplifier power calculation, and single-line connection diagram.
 13. Include floor plans to indicate final outlet locations showing address of each addressable device. Show size and route of cable and conduits and point-to-point wiring diagrams.
- E. Delegated Design Submittal: For notification appliances and smoke and heat detectors, in addition to submittals listed above, indicate compliance with performance requirements and design criteria, including analysis data signed and sealed by qualified professional engineer responsible for their preparation.
1. Drawings showing location of each notification appliance and smoke and heat detector, rating of each, and installation details as needed to comply with listing conditions of device.
 2. Design Calculations: Calculate requirements for selecting spacing and sensitivity of detection, complying with NFPA 72. Calculate spacing and intensities for strobe signals and sound-pressure levels for audible appliances.
 3. Indicate audible appliances required to produce square wave signal per NFPA 72.

1.6 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.
- B. Qualification Statements: For Installer.
- C. Sample Warranty: Submittal must include line-item pricing for replacement parts and labor.

1.7 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For fire-alarm systems and components to include in emergency, operation, and maintenance manuals.
 1. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following and deliver copies to authorities having jurisdiction:
 - a. Comply with "Records" section of "Inspection, Testing and Maintenance" chapter in NFPA 72.
 - b. Provide "Fire-Alarm and Emergency Communications System Record of Completion Documents" in accordance with "Completion Documents" Article in "Documentation" section of "Fundamentals" chapter in NFPA 72.
 - c. Complete wiring diagrams showing connections between devices and equipment. Each conductor must be numbered at every junction point with indication of origination and termination points.
 - d. Riser diagram.
 - e. Device addresses.
 - f. Air-sampling system sample port locations and modeling program report showing layout meets performance criteria.
 - g. Record copy of site-specific software.
 - h. Provide "Inspection and Testing Form" in accordance with "Inspection, Testing and Maintenance" chapter in NFPA 72, and include the following:

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- 1) Equipment tested.
 - 2) Frequency of testing of installed components.
 - 3) Frequency of inspection of installed components.
 - 4) Requirements and recommendations related to results of maintenance.
 - 5) Manufacturer's user training manuals.
- i. Manufacturer's required maintenance related to system warranty requirements.
 - j. Abbreviated operating instructions for mounting at FACP and each annunciator unit.
2. Certification of Completion: Comply with NFPA 72.

1.8 MAINTENANCE MATERIAL SUBMITTALS

- A. Extra Stock Material: Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 1. Lamps for Remote Indicating Lamp Units: Quantity equal to 10 percent of amount installed, but no fewer than one unit.
 2. Lamps for Strobe Units: Quantity equal to 10 percent of amount installed, but no fewer than one unit.
 3. Smoke Detectors, Fire Detectors: Quantity equal to 10 percent of amount of each type installed, but no fewer than one unit of each type.
 4. Detector Bases: Quantity equal to two percent of amount of each type installed, but no fewer than one unit of each type.
 5. Keys and Tools: One extra set for access to locked or tamper-proof components.
 6. Audible and Visual Notification Appliances: One of each type installed.
 7. Fuses: Two of each type installed in system. Provide in box or cabinet with compartments marked with fuse types and sizes.

1.9 QUALITY ASSURANCE

- A. Installer Qualifications:
 1. Personnel must be trained and certified by manufacturer for installation of units required for this Project.
 2. Installation must be by personnel certified by NICET as fire-alarm Level III technician.
 3. Obtain certification by NRTL in accordance with NFPA 72.
 4. Licensed or certified by authorities having jurisdiction.
- B. Manufacturer Qualifications: A firm experienced in manufacturing systems similar to those indicated for this Project and with a record of successful in-service performance.
- C. Source Limitations: Obtain fire alarm system components through one source from a single manufacturer.
- D. Compliance with Local Requirements: Comply with applicable building code, local ordinances and regulations, and requirements of authorities have jurisdiction.

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1.10 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace fire-alarm system equipment and components that fail because of defects in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ADDRESSABLE FIRE-ALARM SYSTEM

- A. Description:
 - 1. Noncoded, UL-certified addressable system, with multiplexed signal transmission and voice-and-strobe notification for evacuation.
- B. Performance Criteria:
 - 1. Regulatory Requirements:
 - a. Fire-Alarm Components, Devices, and Accessories: Listed and labeled by a NRTL in accordance with NFPA 70 for use with selected fire-alarm system and marked for intended location and application.
 - b. Comply with NFPA 72.
 - 2. General Characteristics:
 - a. Automatic sensitivity control of certain smoke detectors.
 - b. Fire-alarm signal initiation must be by one or more of the following devices:
 - 1) Manual stations.
 - 2) Heat detectors.
 - 3) Smoke detectors.
 - 4) Duct smoke detectors.
 - 5) Automatic sprinkler system water flow.
 - 6) Fire standpipe system.
 - c. Fire-alarm signal must initiate the following actions:
 - 1) Continuously operate alarm notification appliances, including voice evacuation notices.
 - 2) Identify alarm and specific initiating device at FACP, and remote annunciators.
 - 3) Transmit alarm signal to remote alarm receiving station.
 - 4) Release fire and smoke doors held open by magnetic door holders.
 - 5) Activate voice/alarm communication system.
 - 6) Switch HVAC equipment controls to fire-alarm mode.

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- 7) Shutdown of fans and other air-handling equipment serving zone where alarm was initiated.
 - 8) Recall elevators to primary or alternate recall floors.
 - 9) Activate elevator power shunt trip.
 - 10) Record events in system memory.
- d. Supervisory signal initiation must be by one or more of the following devices and actions:
- 1) Valve supervisory switch.
 - 2) Elevator shunt-trip supervision.
 - 3) Zones or individual devices have been disabled.
 - 4) FACP has lost communication with network.
- e. System trouble signal initiation must be by one or more of the following devices and actions:
- 1) Open circuits, shorts, and grounds in designated circuits.
 - 2) Opening, tampering with, or removing alarm-initiating and supervisory signal-initiating devices.
 - 3) Loss of communication with addressable sensor, input module, relay, control module, remote annunciator, or Ethernet module.
 - 4) Loss of primary power at FACP.
 - 5) Ground or single break in internal circuits of FACP.
 - 6) Abnormal ac voltage at FACP.
 - 7) Break in standby battery circuitry.
 - 8) Failure of battery charging.
 - 9) Abnormal position of switch at FACP or annunciator.
 - 10) Voice signal amplifier failure.
- f. System Supervisory Signal Actions:
- 1) Initiate notification appliances.
 - 2) Identify specific device initiating event at FACP and remote annunciators.
 - 3) Record event in system memory.
 - 4) After time delay of 200 seconds, transmit trouble or supervisory signal to remote alarm receiving station.
 - 5) Transmit system status to building management system.
- g. Device Guards:
- 1) Description: Welded wire mesh of size and shape for manual station, smoke detector, gong, or other device requiring protection.
 - a) Factory fabricated and furnished by device manufacturer.
 - b) Finish: Paint of color to match protected device.

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2.2 FIRE-ALARM CONTROL PANEL (FACP)

- A. Description: Field-programmable, microprocessor-based, modular, power-limited design with electronic modules.
- B. Performance Criteria:
 - 1. Regulatory Requirements: Comply with NFPA 72 and UL 864.
 - 2. General Characteristics:
 - a. System software and programs must be held in nonvolatile flash, electrically erasable, programmable, read-only memory, retaining information through failure of primary and secondary power supplies.
 - b. Include real-time clock for time annotation of events on event recorder.
 - c. Provide communication between FACP and remote circuit interface panels, annunciators, and displays.
 - d. FACP must be listed for connection to central-station signaling system service.
 - e. Provide nonvolatile memory for system database, logic, and operating system and event history. System must require no manual input to initialize in the event of complete power down condition. FACP must provide minimum 500-event history log.
 - f. Addressable Initiation Device Circuits: FACP must indicate which communication zones have been silenced and must provide selective silencing of alarm notification appliance by building communication zone.
 - 1) Addressable Control Circuits for Operation of Mechanical Equipment: FACP must be listed for releasing service.
 - 2) Smoke sensors shall additionally communicate sensitivity setting.
 - 3) Temperature sensors shall additionally test for and communicate the sensitivity range of the device.
 - g. Fire-Alarm Annunciator: Arranged for interface between human operator at FACP and addressable system components including annunciation and supervision. Display alarm, supervisory, and component status messages and programming and control menu.
 - 1) Annunciator and Display: LCD, 80 characters, minimum.
 - 2) Keypad: Arranged to permit entry and execution of programming, display, and control commands.
 - h. Alphanumeric Display and System Controls: Arranged for interface between human operator at FACP and addressable system components including annunciation and supervision. Display alarm, supervisory, and component status messages and programming and control menu.
 - 1) Annunciator and Display: LCD, two line(s) of 40 characters, minimum.
 - 2) Keypad: Arranged to permit entry and execution of programming, display, and control commands.
 - i. Initiating-Device, Notification-Appliance, and Signaling-Line Circuits:

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- 1) Pathway Class Designations: NFPA 72, Class B.
 - 2) Pathway Survivability: Level 0.
 - 3) Install no more than 100 addressable devices on each signaling-line circuit.
 - 4) Install fault circuit isolators to comply with circuit performance requirements of NFPA 72 or with manufacturer's written instructions, whichever is more conservative.
- j. Serial Interfaces:
- 1) One dedicated RS 485 port for central-station operation using point ID DACT.
 - 2) One RS 485 port for remote annunciators, Ethernet module, or multi-interface module.
 - 3) One USB port for PC configuration.
 - 4) One RS 232 port for air-aspirating smoke detector connection.
 - 5) One RS 232 port for voice evacuation interface.
- k. Smoke-Alarm Verification:
- 1) Initiate audible and visible indication of "alarm-verification" signal at FACP.
 - 2) Activate approved "alarm-verification" sequence at FACP and detector.
 - 3) Record events in system memory.
 - 4) Sound general alarm if alarm is verified.
 - 5) Cancel FACP indication and system reset if alarm is not verified.
- l. Notification-Appliance Circuit:
- 1) Audible appliances must sound in three-pulse temporal pattern, as defined in NFPA 72.
 - 2) Visual alarm appliances must flash in synchronization where multiple appliances are in same field of view, as defined in NFPA 72.
- m. Elevator Recall: Initiate by one of the following alarm-initiating devices:
- 1) Elevator lobby detectors except lobby detector on designated floor.
 - 2) Smoke detectors in elevator machine room.
 - 3) Smoke detectors in elevator hoistway.
- n. Elevator controller must be programmed to move cars to alternate recall floor if lobby detectors located on designated recall floors are activated.
- o. Water-flow alarm connected to sprinkler in elevator shaft and elevator machine room must shut down elevators associated with location without time delay.
- 1) Water-flow switch associated with sprinkler in elevator pit may have delay to allow elevators to move to designated floor.
- p. Door Controls: Door hold-open devices that are controlled by smoke detectors at doors in smoke-barrier walls must be connected to fire-alarm system.

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- q. Remote Smoke-Detector Sensitivity Adjustment: Controls must select specific addressable smoke detectors for adjustment, display their current status and sensitivity settings, and change those settings. Allow controls to be used to program repetitive, time-scheduled, and automated changes in sensitivity of specific detector groups. Record sensitivity adjustments and sensitivity-adjustment schedule changes in system memory.
- r. Transmission to Remote Alarm Receiving Station: Automatically transmit alarm, supervisory, and trouble signals to remote alarm station.
- s. Voice/Alarm Signaling Service: Central emergency communication system with redundant microphones, preamplifiers, amplifiers, and tone generators provided as special module that is part of FACP.
 - 1) Indicate number of alarm channels for automatic, simultaneous transmission of different announcements to different zones or for manual transmission of announcements by use of central-control microphone. Amplifiers must comply with UL 1711.
 - a) Allow application of, and evacuation signal to, indicated number of zones and simultaneously allow voice paging to other zones selectively or in combination.
 - b) Programmable tone and message sequence selection.
 - c) Standard digitally recorded messages for "Evacuation" and "All Clear."
 - d) Generate tones to be sequenced with audio messages of type recommended by NFPA 72 and that are compatible with tone patterns of notification-appliance circuits of FACP.
 - 2) Status Annunciator: Indicate status of various voice/alarm speaker zones.
 - 3) Preamplifiers, amplifiers, and tone generators must automatically transfer to backup units, on primary equipment failure.
- t. Primary Power: 24 V(dc) obtained from 120 V(ac) service and power-supply module. Initiating devices, notification appliances, signaling lines, trouble signals, supervisory and DACT must be powered by 24 V(dc) source.
- u. Alarm current draw of entire fire-alarm system must not exceed 80 percent of power-supply module rating.
- v. Secondary Power: 24 V(dc) supply system with batteries, automatic battery charger, and automatic transfer switch.
- w. Batteries: Sealed lead calcium.

C. Accessories:

- 1. Instructions: Computer printout or typewritten instruction card mounted behind plastic or glass cover in stainless steel or aluminum frame. Include interpretation and describe appropriate response for displays and signals. Briefly describe functional operation of system under normal, alarm, and trouble conditions.
- 2. Preaction System Functionality:
 - a. Initiate Presignal Alarm: This function must cause audible and visual alarm and indication to be provided at FACP. Activation of initiation device connected as part of preaction system must be annunciated at FACP only, without activation of general evacuation alarm.

D. REMOTE EMERGENCY POWER SUPPLY (WHERE APPLICABLE)

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1. General: Components include recombinant lead calcium battery; charge, and an automatic transfer switch.
 - a. Batteries: Sealed lead calcium.
 - b. Battery and Charger Capacity: Comply with NFPA 72.
2. Integral Automatic Transfer Switch: Transfers the load to the battery without loss of signal or status indications when normal power fails.

2.3 MANUAL FIRE-ALARM BOXES

- A. General Requirements for Manual Fire-Alarm Boxes: Comply with UL 38. Boxes must be finished in red with molded, raised-letter operating instructions in contrasting color; must show visible indication of operation; and must be mounted on recessed outlet box. If indicated as surface mounted, provide manufacturer's surface back box.
 1. Single-action mechanism, pull-lever type; with integral addressable module arranged to communicate manual-station status (normal, alarm, or trouble) to FACP.
 2. Station Reset: Key- or wrench-operated switch.
 3. Indoor Protective Shield: Factory-fabricated, clear plastic enclosure hinged at top to permit lifting for access to initiate alarm. Lifting cover actuates integral battery-powered audible horn intended to discourage false-alarm operation.
 4. Weatherproof Protective Shield (where applicable): Factory-fabricated, clear plastic enclosure hinged at top to permit lifting for access to initiate alarm.
 5. Able to perform at up to 90 percent relative humidity at **90 deg F (32 deg C.)**
 6. Material: Manual stations made of Lexan polycarbonate.
 7. Able to be used in indoor or outdoor areas.

2.4 SYSTEM SMOKE DETECTORS

- A. Photoelectric Smoke Detectors:
 1. Performance Criteria:
 - a. Regulatory Requirements:
 - 1) NFPA 72.
 - 2) UL 268.
 - b. General Characteristics:
 - 1) Detectors must be two-wire type.
 - 2) Base Mounting: Detector and associated electronic components must be mounted in twist-lock module that connects to fixed base. Provide terminals in fixed base for connection to building wiring.
 - 3) Self-Restoring: Detectors do not require resetting or readjustment after actuation to restore them to normal operation.
 - 4) Integral Visual-Indicating Light: LED type, indicating detector has operated and power-on status.
 - 5) Detector address must be accessible from FACP and must be able to identify detector's location within system and its sensitivity setting.

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- 6) Operator at FACP, having designated access level, must be able to manually access the following for each detector:
 - a) Primary status.
 - b) Device type.
 - c) Present average value.
 - d) Present sensitivity selected.
 - e) Sensor range (normal, dirty, etc.).
- 7) Detector must have functional humidity range within 10 to 90 percent relative humidity.
- 8) Color: White.
- 9) Remote Control: Unless otherwise indicated, detectors must be digital-addressable type, individually monitored at FACP for calibration, sensitivity, and alarm condition and individually adjustable for sensitivity by FACP.
- 10) Rate-of-rise temperature characteristic of combination smoke- and heat-detection units must be selectable at FACP for 15 or 20 deg F (8 or 11 deg C) per minute.
- 11) Fixed-temperature sensing characteristic of combination smoke- and heat-detection units must be independent of rate-of-rise sensing and must be settable at FACP to operate at 135 or 155 deg F (57 or 68 deg C).
- 12) Multiple levels of detection sensitivity for each sensor.

2.5 DUCT SMOKE DETECTORS

A. Description: Photoelectric-type, duct-mounted smoke detector.

B. Performance Criteria:

1. Regulatory Requirements:

- a. NFPA 72.
- b. UL 268A.

2. General Characteristics:

- a. Detectors must be four-wire type.
- b. Integral Addressable Module: Arranged to communicate detector status (normal, alarm, or trouble) to FACP.
- c. Self-Restoring: Detectors do not require resetting or readjustment after actuation to restore them to normal operation.
- d. Integral Visual-Indicating Light: LED type, indicating detector has operated and power-on status.
- e. Detector address must be accessible from FACP and must be able to identify detector's location within system and its sensitivity setting.
- f. Operator at FACP, having designated access level, must be able to manually access the following for each detector:

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- 1) Primary status.
 - 2) Device type.
 - 3) Present average value.
 - 4) Present sensitivity selected.
 - 5) Sensor range (normal, dirty, etc.).
- g. Provide remote status and alarm indicator and test station where duct detectors are located in non-accessible locations.
- h. Weatherproof Duct Housing Enclosure: NEMA 250, Type 4X; NRTL listed for use with supplied detector for smoke detection in HVAC system ducts.
- i. Each sensor must have multiple levels of detection sensitivity.
- j. Sampling Tubes: Design and dimensions as recommended by manufacturer for specific duct size, air velocity, and installation conditions where applied.
- k. Relay Fan Shutdown: Fully programmable relay rated to interrupt fan motor-control circuit.

2.6 HEAT DETECTORS

A. Combination-Type Heat Detectors:

1. Performance Criteria:

a. Regulatory Requirements:

- 1) NFPA 72.
- 2) UL 521.

b. General Characteristics:

- 1) Temperature sensors must test for and communicate sensitivity range of device.

c. Actuated by fixed temperature of [**135 deg F (57 deg C)**] or rate of rise that exceeds [**15 deg F (8 deg C)**] per minute unless otherwise indicated.

d. Mounting: Twist-lock base interchangeable with smoke-detector bases.

e. Integral Addressable Module: Arranged to communicate detector status (normal, alarm, or trouble) to FACP.

f. Detector must have functional humidity range of 10 to 90 percent relative humidity.

g. Color: White.

B. Fixed-Temperature-Type Heat Detectors:

1. Performance Criteria:

a. Regulatory Requirements:

- 1) NFPA 72.
- 2) UL 521.

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b. General Characteristics:

- 1) Actuated by temperature that exceeds fixed temperature of [190 deg F (88 deg C).
- 2) Mounting: Twist-lock base interchangeable with smoke-detector bases].
- 3) Integral Addressable Module: Arranged to communicate detector status (normal, alarm, or trouble) to FACP.
- 4) Detector must have functional humidity range of 10 to 90 percent.
- 5) Color: White.

2.7 PROJECTED BEAM SMOKE DETECTORS

- A. Projected Beam Light Source and Receiver: Designed to accommodate small angular movements and continue to operate and not cause nuisance alarms.
- B. Detector Address: Accessible from fire-alarm control unit and able to identify the detector's location within the system and its sensitivity setting.
- C. An operator at fire-alarm control unit, having the designated access level, shall be able to manually access the following for each detector:
 1. Primary status.
 2. Device type.
 3. Present average value.
 4. Present sensitivity selected.
 5. Sensor range (normal, dirty, etc.).

2.8 FIRE-ALARM NOTIFICATION APPLIANCES

- A. Fire-Alarm Audible Notification Appliances:
- B. Fire-Alarm Voice/Tone Notification Appliances:
 1. Description: Notification appliances capable of outputting voice evacuation messages.
 2. Performance Criteria:
 - a. Regulatory Requirements:
 - 1) NFPA 72.
 - 2) UL 1480.
 - b. General Characteristics:
 - 1) Speakers for Voice Notification: Locate speakers for voice notification to provide intelligibility requirements of "Notification Appliances" and "Emergency Communications Systems" chapters in NFPA 72.
 - 2) High-Range Units: Rated 2 to 15 W.
 - 3) Low-Range Units: Rated 1 to 2 W.

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- 4) Matching Transformers: Tap range matched to acoustical environment of speaker location.
- 5) Combination Devices: Factory-integrated audible and visible devices in single-mounting assembly, equipped for mounting as indicated, and with screw terminals for system connections.

C. Fire-Alarm Visible Notification Appliances:

1. Performance Criteria:

a. Regulatory Requirements:

- 1) NFPA 72.
- 2) UL 1971.

b. General Characteristics:

- 1) Rated Light Output Per NFPA, contractor calculated.
- 2) Synchronized Xenon strobe lights listed under UL 1971.
- 3) Clear or nominal white polycarbonate lens mounted on aluminum faceplate.
- 4) Mounting: Wall mounted unless otherwise indicated.
- 5) For units with guards to prevent physical damage, light output ratings must be determined with guards in place.
- 6) Flashing must be in temporal pattern, synchronized with other units.
- 7) Strobe Leads: Factory connected to screw terminals.
- 8) Mounting Faceplate: Factory finished, red. The word 'FIRE' engraved in minimum 1-inch high letters on the lens.

2.9 CARBON MONOXIDE DETECTORS

A. General: Carbon monoxide detector listed for connection to fire alarm system.

1. Mounting: Adapter plate for outlet box mounting.
2. Testable by introducing test carbon monoxide into the sensing cell.
3. Detector shall provide alarm contacts and trouble contacts.
4. Detector shall send trouble alarm when nearing end-of-life, power supply problems, or internal faults.
5. Comply with UL 2075.
6. Locate, mount, and wire according to manufacturer's written instructions.
7. Provide means for addressable connection to fire alarm system.
8. Test button simulates an alarm condition.

2.10 FIRE-ALARM REMOTE ANNUNCIATORS

A. Performance Criteria:

1. Regulatory Requirements:
 - a. NFPA 72.

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2. General Characteristics:
 - a. Annunciator functions must match those of FACP for alarm, supervisory, and trouble indications. Manual switching functions must match those of FACP, including acknowledging, silencing, resetting, and testing.
 - 1) Mounting: Flush cabinet, NEMA 250, Type 1 – Interior cabinets.
 - b. Display Type and Functional Performance: Alphanumeric display and LED indicating lights must match those of FACP. Provide controls to acknowledge, silence, reset, and test functions for alarm, supervisory, and trouble signals.
 - c. Provide with integral firefighter’s microphone, inside cabinet.

2.11 FIRE-ALARM ADDRESSABLE INTERFACE DEVICES

A. Performance Criteria:

1. Regulatory Requirements:
 - a. NFPA 72.
2. General Characteristics:
 - a. Include address-setting means on module.
 - b. Store internal identifying code for control panel use to identify module type.
 - c. Listed for controlling HVAC fan motor controllers.
 - d. Monitor Module: Microelectronic module providing system address for alarm-initiating devices for wired applications with normally open contacts.
 - e. Integral Relay: Capable of providing direct signal to elevator controller to initiate elevator recall to circuit-breaker shunt trip for power shutdown. Open magnetic door holders, etc.
 - 1) Allow control panel to switch relay contacts on command.
 - 2) Have minimum of two normally open and two normally closed contacts available for field wiring.

2.12 DIGITAL ALARM COMMUNICATOR TRANSMITTERS (DACTs)

A. Performance Criteria:

1. Regulatory Requirements:
 - a. NFPA 72.
 - b. UL 864.
2. General Characteristics:

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- a. DACT must be acceptable to remote central station and must be listed for fire-alarm use.
- b. Functional Performance: Unit must receive alarm, supervisory, or trouble signal from FACP and automatically capture two telephone line(s) and dial preset number for remote central station. When contact is made with central station(s), signals must be transmitted. If service on either line is interrupted for longer than 45 seconds, transmitter must initiate local trouble signal and transmit signal indicating loss of telephone line to remote alarm receiving station over remaining line. Transmitter must automatically report telephone service restoration to central station. If service is lost on both telephone lines, transmitter must initiate local trouble signal.
- c. Local functions and display at DACT must include the following:
 - 1) Verification that both telephone lines are available.
 - 2) Programming device.
 - 3) LED display.
 - 4) Manual test report function and manual transmission clear indication.
 - 5) Communications failure with central station or FACP.
- d. Digital data transmission must include the following:
 - 1) Address of alarm-initiating device.
 - 2) Address of supervisory signal.
 - 3) Address of trouble-initiating device.
 - 4) Loss of ac supply.
 - 5) Loss of power.
 - 6) Low battery.
 - 7) Abnormal test signal.
 - 8) Communication bus failure.
- e. Secondary Power: Integral rechargeable battery and automatic charger.
- f. Self-Test: Conducted automatically every 24 hours with report transmitted to central station.

2.13 VOICE EVACUATION SYSTEM

- A. Provide a fire alarm voice evacuation system compatible with fire alarm panel.
- B. The Digital Voice Command Center located with the FACP, shall contain all equipment required for all audio control, emergency telephone system control, signaling and supervisory functions. This shall include speaker zone indication and control, telephone circuit indication and control, digital voice units, microphone and main telephone handset. The DVC shall support up to 8 channels of voice when configured with Digital Audio Amplifiers and 4 channels of voice when employing the optional analog output card. Each DVC shall support up to 32 digital audio amplifiers.
- C. The Voice Command Center equipment shall perform the following functions:
 1. Operate as a supervised multi-channel emergency voice communication system.
 2. Audibly and visually annunciate the active or trouble condition of every speaker circuit and emergency telephone circuit.

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3. Audibly and visually annunciate any trouble condition for digital tone and voice units required for normal operation of the system.
 4. Provide all-call Emergency Paging activities through activation of a single control switch.
 5. As required, provide vectored paging control to specific audio zones via dedicated control switches.
 6. Provide a factory recorded "library" of voice messages and tones in standard WAV. File format, which may be edited and saved on a PC running a current Windows® operating system.
 7. Provide a software utility capable of off-line programming for the VCC operation and the audio message files. This utility shall support the creation of new programs as well as editing and saving existing program files. Uploading or downloading the VCC shall not inhibit the emergency operation of other nodes on the fire alarm network.
 8. Support an optional mode of operation with four analog audio outputs capable of being used with UL 864 fire-listed analog audio amplifiers and SCL controlled switching.
 9. The Digital Voice Command shall be modular in construction and shall be capable of being field programmable without requiring the return of any components to the manufacturer and without requiring use of any external computers or other programming equipment.
 10. The Digital Voice Command and associated equipment shall be protected against unusually high voltage surges or line transients.
- D. Audio Message Generator (Prerecorded Voice)/Speaker Control:
1. Each initiating zone or intelligent device shall interface with an emergency voice communication system capable of transmitting a prerecorded voice message to all speakers in the building.
 2. Actuation of any alarm initiating device shall cause a prerecorded message to sound over the speakers. The message shall be repeated four (4) times. Pre- and post-message tones shall be supported.
 3. A built-in microphone shall be provided to allow paging through speaker circuits.
 4. System paging from emergency telephone circuits shall be supported.
 5. The audio message generator shall have the following indicators and controls to allow for proper operator understanding and control:
 - a. LED Indicators:
 - b. Lamp Test
 - c. Trouble
 - d. Off-Line Trouble
 - e. Microphone Trouble
 - f. Phone Trouble
 - g. Busy/Wait
 - h. Page Inhibited
 - i. Pre/Post Announcement Tone

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2.14 WIRE

- A. NFPA 70, Types FPL, FPLR, or FPLP, as recommended by manufacturer. All wiring shall be plenum rated.
- B. Non-Power-Limited Circuits: Solid-cooper conductors with 600-V rated, 75 deg C, color-coded insulation.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions for compliance with requirements for ventilation, temperature, humidity, and other conditions affecting performance of the Work.
 - 1. Verify that manufacturer's written instructions for environmental conditions have been permanently established in spaces where equipment and wiring are installed, before installation begins.
- B. Examine roughing-in for electrical connections to verify actual locations of connections before installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Preinstallation Testing: Perform verification of functionality of installed components of existing system prior to starting work. Document equipment or components not functioning as designed.
- B. Interruption of Existing Fire-Alarm Service: Do not interrupt fire-alarm service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary guard service in accordance with requirements indicated:
 - 1. Notify Engineer no fewer than seven days in advance of proposed interruption of fire-alarm service.
 - 2. Do not proceed with interruption of fire-alarm service without Engineer's written permission.
- C. Protection of In-Place Conditions: Protect devices during construction unless devices are placed in service to protect facility during construction.

3.3 INSTALLATION OF EQUIPMENT

- A. Comply with NECA 305, NFPA 72, NFPA 101, and requirements of authorities having jurisdiction for installation and testing of fire-alarm equipment. Install electrical wiring to comply with requirements in NFPA 70 including, but not limited to, Article 760, "Fire Alarm Systems."

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1. Devices placed in service before other trades have completed cleanup must be replaced.
 2. Devices installed, but not yet placed, in service must be protected from construction dust, debris, dirt, moisture, and damage in accordance with manufacturer's written storage instructions.
- B. Connecting to Existing Equipment: Verify that existing fire-alarm system is operational before making changes or connections.
- C. Install wall-mounted equipment, with tops of cabinets not more than 72 inch (1829 mm) above finished floor.
- D. Connect FACP with a disconnect switch or circuit breaker with breaker lock.
- E. Manual Fire-Alarm Boxes:
1. Install manual fire-alarm box in normal path of egress within 60 inch (1520 mm) of exit doorway.
 2. Mount manual fire-alarm semi-flush in recessed back box.
 3. Operable part of manual fire-alarm box must be between 42 and 48 inch (1060 and 1220 mm) above floor level. Devices must be mounted at same height unless otherwise indicated.
- F. Smoke- and Heat-Detector Spacing:
1. Comply with "Smoke-Sensing Fire Detectors" section in "Initiating Devices" chapter in NFPA 72, for smoke-detector spacing.
 2. Comply with "Heat-Sensing Fire Detectors" section in "Initiating Devices" chapter in NFPA 72, for heat-detector spacing.
 3. Smooth ceiling spacing must not exceed **30 ft. (9 m)**.
 4. Spacing of detectors for irregular areas, for irregular ceiling construction, and for high ceiling areas must be determined in accordance with Annex A or Annex B in NFPA 72.
 5. HVAC: Locate detectors not closer than **36 inch (910 mm)** from air-supply diffuser or return-air opening.
 6. Lighting Fixtures: Locate detectors not closer than 12 inch (300 mm) from lighting fixture and not directly above pendant mounted or indirect lighting.
- G. Install cover on each smoke detector that is not placed in service during construction. Cover must remain in place except during system testing. Remove cover prior to system turnover.
- H. Duct Smoke Detectors: Comply with NFPA 72 and NFPA 90A. Install sampling tubes so they extend full width of duct. Tubes more than 36 inch (9100 mm) long must be supported at both ends.
1. Do not install smoke detector in duct smoke-detector housing during construction. Install detector only during system testing and prior to system turnover.
- I. Elevator Shafts: Coordinate temperature rating and location with sprinkler rating and location. Do not install smoke detectors in sprinklered elevator shafts.

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- J. Remote Status and Alarm Indicators: Install in visible location near each smoke detector, sprinkler water-flow switch, and valve-tamper switch that is not readily visible from normal viewing position.
- K. Audible Alarm-Indicating Devices: Install not less than 6 inch (150 mm) below ceiling. Install speaker/strobe devices on flush-mounted back boxes with device-operating mechanism concealed behind grille. Install devices at same height unless otherwise indicated.
- L. Visible Alarm-Indicating Devices: Install adjacent to each alarm bell or alarm horn and at least 6 inch (150 mm) below ceiling. Install devices at same height unless otherwise indicated.
- M. Device Location-Indicating Lights: Locate in public space near device they monitor.

3.4 ELECTRICAL CONNECTIONS

- A. Connect wiring in accordance with Section 260519 "Low-Voltage Electrical Power Conductors and Cables."
- B. Ground equipment in accordance with Section 260526 "Grounding and Bonding for Electrical Systems."
- C. Install electrical devices furnished by manufacturer, but not factory mounted, in accordance with NFPA 70 and NECA 1.
- D. Install nameplate for each electrical connection, indicating electrical equipment designation and circuit number feeding connection.
 - 1. Nameplate must be laminated acrylic or melamine plastic signs with black background and engraved white letters at least **1/2 inch (13 mm)** high.
- E. Manual Pull Stations: Mount semi-flush in recessed back boxes.
- F. Water-Flow Detectors and Valve Supervisory Switches: Connect for each sprinkler valve station required to be supervised.
- G. Ceiling-Mounted Smoke Detectors: Not less than 4 inches (100 mm) from a sidewall to the near edge.
- H. Wall-Mounted Smoke Detectors: At least 4 inches (100 mm), but not more than 12 inches (300 mm), below the ceiling.
- I. Audible Alarm-Indicating Devices: Install not less than 6 inches (150 mm) below the ceiling. Install on flush-mounted back boxes with the device-operating mechanism concealed behind a grille. Combine audible and visible alarms at the same location into a single unit.

3.5 CONTROL CONNECTIONS

- A. Install control and electrical power wiring to field-mounted control devices.

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- B. Connect control wiring in accordance with Section 260523 "Control-Voltage Electrical Power Cables."
- C. Install nameplate for each control connection, indicating field control panel designation and I/O control designation feeding connection.
- D. Alarm Transmitting: Provide CAT 3 telephone cables in ¾" conduit as required from Digital Alarm Transmitter in fire alarm control panel to telephone board.

3.6 PATHWAYS

- A. Pathways above recessed ceilings and in inaccessible locations may be routed exposed.
 - 1. Exposed pathways located less than 96 inch (2440 mm) above floor must be installed in EMT.
- B. Exposed Pathways must be installed in EMT.
- C. Exposed EMT must be painted red enamel.
- D. Concealed pathways may be loose FA cable fished above ceilings along j-hooks or structural members.

3.7 CONNECTIONS

- A. For fire-protection systems related to doors in fire-rated walls and partitions and to doors in smoke partitions, comply with requirements in this section. Connect hardware and devices to fire-alarm system.
 - 1. Verify that hardware and devices are listed for use with installed fire-alarm system before making connections.
- B. Make addressable connections with supervised interface device to the following devices and systems. Install interface device less than 36 inch (910 mm) from device controlled. Make addressable confirmation connection when such feedback is available at device or system being controlled.
 - 1. Alarm-initiating connection to smoke-control system (smoke management) at firefighters' smoke-control system panel.
 - 2. Magnetically held-open doors.
 - 3. Alarm-initiating connection to elevator recall system and components.
 - 4. Supervisory connections at valve supervisory switches.
 - 5. Supervisory connections at elevator shunt-trip breaker.

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3.8 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 26 00 00 “Basic Electrical Requirements.”
- B. Install framed instructions in location visible from FACP.
- C. FACP power-supply circuit breaker shall be painted red and lockable. Label “Fire Alarm.”

3.9 GROUNDING

- A. Ground FACP and associated circuits in accordance with Section 260526 "Grounding and Bonding for Electrical Systems."
- B. Ground shielded cables at control panel location only. Insulate shield at device location.

3.10 FIELD QUALITY CONTROL

- A. Field tests must be witnessed by Engineer authorities having jurisdiction.
- B. Administrant for Tests and Inspections:
 - 1. Engage factory-authorized service representative to administer and perform tests and inspections on components, assemblies, and equipment installations, including connections. Report results in wiring.
- C. Tests and Inspections:
 - 1. Visual Inspection: Conduct visual inspection prior to testing.
 - a. Inspection must be based on completed record Drawings and system documentation that is required by "Completion Documents, Preparation" table in "Documentation" section of "Fundamentals" chapter in NFPA 72.
 - b. Comply with "Visual Inspection Frequencies" table in "Inspection" section of "Inspection, Testing and Maintenance" chapter in NFPA 72; retain "Initial/Reacceptance" column and list only installed components.
 - 2. System Testing: Comply with "Test Methods" table in "Testing" section of "Inspection, Testing and Maintenance" chapter in NFPA 72.
 - 3. Test audible appliances for public operating mode in accordance with manufacturer's written instructions. Perform test using portable sound-level meter complying with Type 2 requirements in ASA S1.4 Part 1/IEC 61672-1.
 - 4. Test audible appliances for private operating mode in accordance with manufacturer's written instructions.
 - 5. Test visible appliances for public operating mode in accordance with manufacturer's written instructions.
 - 6. Factory-authorized service representative must prepare "Fire Alarm System Record of Completion" in "Documentation" section of "Fundamentals" chapter in NFPA 72 and

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"Inspection and Testing Form" in "Records" section of "Inspection, Testing and Maintenance" chapter in NFPA 72.

- D. Reacceptance Testing: Perform reacceptance testing to verify proper operation of added or replaced devices and appliances.
- E. Final Test Notice: Provide a minimum of 7 days' notice in writing when the system is ready for final acceptance testing.
- F. Fire-alarm system will be considered defective if it does not pass tests and inspections.
- G. Prepare test and inspection reports.
- H. Maintenance Test and Inspection: Perform tests and inspections listed for weekly, monthly, quarterly, and semiannual periods. Use forms developed for initial tests and inspections.
- I. Annual Test and Inspection: One year after date of Substantial Completion, test fire-alarm system complying with visual and testing inspection requirements in NFPA 72. Use forms developed for initial tests and inspections.
- J. System Programming: The fire alarm system shall be fully programmed in accordance with manufacturer's instructions, Fire Chief requirements, all adopted codes, Owner expectations, and the plans and specifications. Programming shall achieve all Code requirements, system performance, and system sequencing that is expected of a modern fire alarm system where one panel is utilized for a multi-building (i.e. campus) environment. In addition, programming shall be done that is tailored to Owner expectations of overall system functioning that, at a minimum, provides the same functionality and system sequence of events as the as the existing system being demolished.

The system shall be programmed to minimize actions that are not code required which increase the staff's burden in responding to the system and may confuse or unnecessarily worry the occupants. System programming shall be done in consideration of the list of factors below. The list below is not exhaustive of all the programming considerations that will need to be made by the contractor after consulting the Owner, Engineer, and Fire Chief. A full list of programming considerations shall be developed by the contractor via a pre-programming meeting with the Owner, Engineer, and Fire Chief prior to commencement of work.

List of programming considerations (not exhaustive):

- 1. Consider releasing magnetic door hold opens in groups to limit the number of doors that close simultaneously given a single alarm event. Groupings shall be considered based on an area or level basis, in conjunction with basic code requirements. For example, it is expected that an alarm generated on the 3rd level of the east wing of the High School should not open door holds in the 1st level pool area of the High School. Provide the necessary devices, programming, relays, etc. necessary to provide grouped door hold open controls. As a basis for bidding assuming door hold opens are to be grouped by level in each building (i.e. 4-groups in High School and 2-groups in Middle School). High School alarms should not open door holds within the Middle School, and vice versa.

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2. An alarm in the High School shall be reported as an alarm at the Middle School annunciators but shall not activate the Middle School devices. Likewise, an alarm in the Middle School shall be reported as an alarm at the High School annunciators and the main FACP but shall not activate the Middle School devices. See Note 11 below.
3. A supervisor trouble signal in the High School shall be reported as a trouble signal at the Middle School annunciators. Likewise, a supervisor trouble signal in the Middle School shall be reported as a trouble signal at the High School annunciators and the main FACP.
4. All annunciators in both schools and the main FACP shall be programmed to display text that distinguishes high school alarms, troubles, etc. from middle school alarms, troubles, etc.
5. Both the High School and Middle School offices will have annunciator panels. It is expected that the offices in both schools will be alerted in a distinct way via the annunciators or area devices immediately upon either school system reporting an alarm or trouble. In doing so it is expected that staff will be given the opportunity to take action discretely to silence troubles and perform further actions to avoid undue worry or confusion from building occupants.
6. Programming shall ensure both building's sprinkler system statuses are reported distinctly at all annunciators and the fire alarm panel. Reporting shall distinguish flow and tamper signals from the high school sprinkler system from the flow and tamper signals from the middle school sprinkler system.
7. The overall system has one dialer that shall be utilized to report for both buildings.
8. Voice evacuation messaging shall be kept separate between the High School and Middle School. High School devices that go into alarm and trigger a voice evacuation message in the High School shall not automatically trigger voice evacuation messaging in the Middle School, and vice versa.
9. Programming shall include all necessary work to get the new elevator system tied into the fire alarm system. The elevator is part of a separate project to be construction in Summer 2023.
10. Simultaneous activation of more than one initiating device in either school shall trigger all door holds to be released in that school, and both school voice evacuation systems to begin messaging.”

3.11 CLEANING AND ADJUSTING

- A. Cleaning: Remove paint splatters and other spots, dirt, and debris. Touch up scratches and marred finish to match original finish. Clean unit internally using methods and materials recommended by manufacturer.

3.12 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain fire-alarm system. Allow Owner to record training. Provide 4-hours minimum of training.
- B. Schedule training a minimum of 7-days prior. Adjust schedule to meet Owner scheduling needs.

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3.13 MAINTENANCE

- A. Maintenance Service: Beginning at Substantial Completion, maintenance service must include 12 months' full maintenance by skilled employees of manufacturer's designated service organization. Include preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper operation. Parts and supplies must be manufacturer's authorized replacement parts and supplies.
1. Include visual inspections in accordance with "Visual Inspection Frequencies" table in "Testing" paragraph of "Inspection, Testing and Maintenance" chapter in NFPA 72.
 2. Perform tests in "Test Methods" table in "Testing" paragraph of "Inspection, Testing and Maintenance" chapter in NFPA 72.
 3. Perform tests per "Testing Frequencies" table in "Testing" paragraph of "Inspection, Testing and Maintenance" chapter in NFPA 72.
 4. For bidding purposes of the project, contractor to assume two (2) site trips will be required within the first two months after installation.

END OF SECTION

State of Alaska
Department of Commerce, Community, and Economic Development
Division of Community and Regional Affairs
Community Development Block Grant (CDBG)

Section 3 Plan

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1. Overview of Section 3 Requirements

A. What is Section 3?

Section 3 is a provision of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u) that is regulated by the provisions of 24 CFR Part 75. Section 3 regulations ensure that economic opportunities, most importantly employment, generated by certain HUD financial assistance shall to the greatest extent feasible, and consistent with existing Federal, State and local laws and regulations, be directed to low- and very low-income persons, particularly those who are recipients of government assistance for housing or residents of the community in which the Federal assistance is spent.

B. Purpose of This Document

This plan outlines how the Division of Commerce and Regional Affairs (DCRA) and its subrecipients, contractors, and subcontractors will comply with HUD's Section 3 requirements in implementing the City or Borough's CDBG project. The City or Borough will, to the greatest extent feasible, ensure that employment and other economic opportunities are directed to low- and very low-income persons (Section 3 Workers and Targeted Section 3 Workers) and to eligible businesses (Section 3 Businesses) and will require the same of its contractors.

The City or Borough shall create or amend its Section 3 Policies and Procedures to ensure compliance with 24 CFR Part 75 requirements as referenced in this Section 3 Plan.

C. Applicability

For community development financial assistance, this plan applies to public construction projects that exceed \$200,000 of community development financial assistance from HUD programs. Applicability is determined at the project level. This plan also applies to projects that include multiple funding sources.

Section 3 requirements **do not** apply to: 1) Material Supply Contracts - § 75.3(b), 2) Indian and Tribal Preferences - § 75.3(c), and 3) Other HUD assistance and other Federal assistance not subject to Section 3 §75.3 (d). However, for financial assistance that is not subject to Section 3, recipients are encouraged to consider ways to support the purpose of Section 3.

2. Section 3 Coordinator

The City or Borough's Section 3 Coordinator serves as the central point of contact for Section 3 compliance for the City or Borough and its subrecipients, contractors and subcontractors supporting the program. Subrecipients, contractors, subcontractors, and others are encouraged to reach out to the City or Borough's Section 3 Coordinator listed below with questions regarding Section 3 compliance.

Name of City or Borough's Section 3 Coordinator _____

City or Borough _____

Email of Section 3 Coordinator: _____

Phone Number of Section 3 Coordinator: _____

3. Employment, Training, and Contracting Goals

A. Safe Harbor Compliance

The City or Borough will be considered to have complied with the Section 3 requirements and met safe harbor, if they certify that they followed the required prioritization of effort and met or exceeded the Section 3 benchmarks, absent evidence of the contrary.

Prior to the beginning of work, contractors and subcontractors will be required to certify that they will follow the required prioritization of effort for Section 3 Workers, Targeted Section 3 Workers, and Section 3 Business Concerns as outlined below in Section C. After completion of the project, contractors and subcontractors will be required to certify that they followed the prioritization of effort requirements.

If the contractor and subcontractor do not meet the safe harbor requirements, they must provide evidence that they have made qualitative efforts to assist low and very low-income persons with employment and training opportunities. (See Appendix A.)

B. Safe Harbor Benchmarks

The City or Borough must establish employment and training goals that subrecipients, contractors, and subcontractors should meet in order to comply with Section 3 requirements outlined in 24 CFR Part 75.19 – for housing and community development financial assistance.

The safe harbor benchmark goals are as follows:

- 1) Twenty-five (25) percent or more of the total number of labor hours worked by all Workers on a Section 3 project are Section 3 Workers;

$$\text{Section 3 Labor Hours/Total Labor Hours} = 25\%$$

- 2) Five (5) percent or more of the total number of labor hours worked by all Workers on a Section 3 project are Targeted Section 3 Workers, as defined at 24 CFR Part 75.21.

$$\text{Targeted Section 3 Labor Hours/Total Labor Hours} = 5\%$$

HUD establishes and updates Section 3 benchmarks for Section 3 Workers and/or Targeted Section 3 Workers through a document published in the Federal Register, not less frequently than once every 3 years. Given that the Section 3 benchmarks are subject to change every three years or sooner, the City or Borough will review and update the Section 3 Plan when safe harbor benchmarks are updated by HUD.

It is the responsibility of contractors to implement efforts to achieve Section 3 compliance. Any contractor that does not meet the Section 3 benchmarks must demonstrate why meeting the benchmarks were not feasible. All contractors submitting bids or proposals to the City or Borough are required to certify that they will comply with the requirements of Section 3.

C. Certification of Prioritization of Effort for Employment, Training, and Contracting

Employment and Training

Under the City or Borough's Section 3 Program, contractors and subcontractors should make best efforts to provide employment and training opportunities to Section 3 Workers in the priority order listed.

- Provide employment and training opportunities to Section 3 Workers within the project area in which the project is located in the priority order listed below:
 - 1) Section 3 Workers residing within the service area or the neighborhood of the project, and
 - 2) Participants in YouthBuild programs.
- Contractors and subcontractors will be required to certify that they will and have made best efforts to follow the prioritization of effort requirements in employment and training prior to beginning work and after work is completed. (See Appendix E.)

Contracting

Under the City or Borough's Section 3 Program, contractors and subcontractors must make their best efforts to award contracts and subcontracts to business concerns that provide economic opportunities to Section 3 Workers in the following order or priority:

- 1) Business concerns that provide economic opportunities to Section 3 Workers residing within the project area in which assistance is located in the following order of priority (**where feasible**):
 - a) Section 3 Business concerns that provide economic opportunities to Section 3 Workers residing within the service area or the neighborhood of the project; and
 - b) YouthBuild programs.

Contractors and subcontractors will be required to certify that they will and have made best efforts to follow the prioritization of effort requirements for contracting prior to beginning work and after work is completed. (See Appendix E.)

4. Section 3 Eligibility and Certifications

Individuals and businesses that meet Section 3 criteria may seek Section 3 preference from the City or Borough or its contractors/subcontractors for training, employment, or contracting opportunities generated by community development financial assistance. To qualify as a Section 3 Worker, Targeted Section 3 Worker or a Section 3 Business Concern, each must self-certify that they meet the applicable criteria.

Businesses who misrepresent themselves as Section 3 Business Concerns and report false information to the City or Borough may have their contracts terminated as default and be barred from ongoing and future considerations for contracting opportunities.

A. Section 3 Worker and Targeted Section 3 Worker Certification

A Section 3 Worker seeking certification shall submit self-certification documentation to the contractor or subcontractor, that the person is a Section 3 Worker or Targeted Section 3 Worker as defined in 24 CFR Part 75. (See Appendix B.) For the purposes of Section 3 Worker eligibility, the City or Borough will use individual income rather than family/household income to determine eligibility. The income limits will be determined annually using the hud guidelines [published](#).

Persons seeking the Section 3 Worker preference shall demonstrate that it meets one or more of the following criteria currently or when hired within the past five years, as documented:

- 1) A low or very low-income resident (the Worker's income for the previous or annualized calendar year is below the income limit established by HUD); or
- 2) Employed by a Section 3 Business concern; or
- 3) A YouthBuild participant.

Persons seeking the Targeted Section 3 Worker preference shall demonstrate that it meets one or more of the following criteria:

- 1) Employed by a Section 3 Business concern or
- 2) Currently meets or when hired met at least one of the following categories as documented within the past five years:
 - a) Living within the service area or the neighborhood of the project, as defined in 24 CFR Part 75.5; or
 - b) A YouthBuild participant.

Section 3 Workers and Targeted Section 3 Workers who are seeking preference in training and employment must submit the Section 3 Worker and Targeted Section 3 Worker Certification Form. (See Appendix D.) The certification procedure will consist of the following:

- 1) The City or Borough/contractor should establish a certification procedure.
- 2) The certification procedure should provide step-by-step guidance to eligible Section 3 Workers and Targeted Section 3 Workers seeking certification.

Projects Involving Multiple Sources of Funding

In cases where Section 3 covered projects include multiple housing and development funding sources (financial assistance) from single or multiple recipients, the City or Borough will follow Subpart C of Part 75. Refer to the chart in Appendix C.

B. Section 3 Business Concern Certification

The City or Borough should encourage contractors and subcontractors to make best efforts to award contracts and subcontracts to Section 3 Business concerns.

Businesses that believe they meet the Section 3 Business requirements may self-register in the [HUD Business registry](#). Businesses Section 3 Business Concern preference by demonstrating that it meets one or more of the following criteria:

- 1) At least 51 percent of the business is owned and controlled by low- or very low-income persons; or
- 2) At least 51 percent of the business is owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing; or
- 3) Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 Workers.

Businesses that seek Section 3 preference shall certify or demonstrate to the City or Borough contractors or subcontractors, that they meet the definitions provided in the above. Businesses may demonstrate eligibility by submitting the Section 3 Business Concern Certification Form (See Appendix D.)

Section 3 Business Concern Certification Forms must be submitted at the time of bid/proposal. If the City or Borough previously approved the business concern to be Section 3 certified, then the certification can be submitted along with the bid, as long as the form is submitted within the prescribed expiration date.

The Section 3 Business Concern Certification Form will expire after 12 months. Establishing a 12-month certification of eligibility period allows the City or Borough the ability to assess contractor performance to ensure the business is striving to meet the required goals.

5. Assisting Contractors with Achieving Section 3 Goals

In an effort to assist contractors with meeting or exceeding the Section 3 goals, the City or Borough will do the following:

- 1) Share Section 3 Plan with contractors and subcontractors and explain policies and procedures.
- 2) If applicable, require contractors wishing to submit a bid/offer/proposal to attend pre-bid meeting.
- 3) Require contractor to sign the Contractor Certification at the pre-construction conference. (See Appendix E.)
- 4) Review Section 3 benchmarks and prioritization of effort with contractors and subcontractors to ensure that the goals are understood. It is not intended for contractors and subcontractors to terminate existing employees, but to make every effort feasible to meet Section 3 benchmark goals by utilizing existing qualified workforce and by considering qualified eligible Section 3 Workers and Targeted Section 3 Workers (per the prioritization of effort outlined in Section #3) before any other person, when hiring additional employees is needed to complete proposed work to be performed with the CDBG program.
- 5) At the time of bid, require the contractor to present a list of the number of total labor hours, Section 3 Worker labor hours, and Targeted Section 3 Worker labor hours expected to be generated from the initial contract and a list of projected number of available positions, to include job descriptions and wage rates. (See Appendix A.)
- 6) If available, provide the contractor with a list of interested and qualified Section 3 Workers and Targeted Section 3 Workers and contact information.
- 7) Inform contractors about the [HUD Section 3 Opportunity Portal](#)
- 8) Encourage local businesses to register on the HUD Business Registry and direct contractors to the [HUD Section 3 Business Registry](#).
- 9) If possible, leverage the City or Borough's communication outlets (social media, website, etc.) to effectively communicate employment and contracting opportunities that arise.

6. Section 3 Outreach

A. Outreach Efforts for Employment and Training

In order to educate and inform Workers and contractors, the City or Borough's Section 3 Coordinator will be prepared to provide training and technical assistance on a regular basis per program guidelines. When training opportunities are available, contractors and subcontractors should, to the greatest extent feasible:

- 1) Notify the Section 3 Coordinator when training opportunities are available.
- 2) Provide information/handouts about Section 3 training opportunities to potential Section 3 Workers and Targeted Section 3 Workers.
- 3) Conduct an annual training for Section 3 Workers and Section 3 Businesses.

Contractors and subcontractors should utilize several active strategies to notify Section 3 Workers and Targeted Section 3 Workers of Section 3 job opportunities, including:

- 1) Clearly indicating Section 3 eligibility on all job postings with the following statement: **"This job is a Section 3 eligible job opportunity. We encourage applications from individuals that are low income and/or live in Public Housing and/or receive a Section 8 voucher"**.

- 2) Including the Section 3 Worker and Targeted Section 3 Worker Self-Certification Form in all job postings.
- 3) Working with the Section 3 Coordinator to connect Section 3 Worker and Targeted Section 3 Workers in the City or Borough database with opportunities and/or utilize the Section 3 Opportunity Portal to find qualified candidates.
- 4) Establishing a current list of Section 3 eligible applicants.
- 5) Contacting local community organizations and provide them with job postings for Section 3 eligible applicants.
- 6) Coordinating a programmatic ad campaign, which results in widespread job posting across diverse ad networks including:
 - a) Advertising job opportunities via social media
 - b) Advertising job opportunities via flyer distributions and mass mailings and posting ads in common areas
 - c) Contacting neighborhood community organizations to request their assistance in notifying residents of available training and employment opportunities

B. Outreach Efforts for Contracting

When contracting opportunities arise in connection with the CDBG project, the City or Borough will employ the following strategies to notify Section 3 Business Concerns of Section 3 contracting opportunities, including but not limited to:

- 1) Adding Section 3 language to all RFPs, procurement documents, bid offerings and contracts. (See Appendix F.)
- 2) Coordinating pre-bid meetings to inform Section 3 Business Concerns of upcoming contracting opportunities. The Section 3 Coordinator will participate in these meetings to explain and answer questions related to Section 3 policy.
- 3) Advertising contracting opportunities in local community papers and notices that provide general information about the work to be contracted and where to obtain additional information.
- 4) Providing written notice of contracting opportunities to all known Section 3 Business Concerns. The written notice will be provided in sufficient time to enable business concerns the opportunity to respond to bid invitations.
- 5) Coordinating with the prime contractor to publicize contracting opportunities for small businesses.
- 6) Coordinating with the City or Borough's Business/Economic Development Department and all other business assistance agencies and contractor associations to inform them of contracting opportunities and request their assistance in identifying Section 3 business concerns. Could include local community development organizations, business development agencies (Chamber of Commerce), and minority contracting associations.
- 7) Connecting Section 3 business concerns with resources to support business development to assist in obtaining contracting opportunities (e.g., bonding and insurance assistance, etc.). Contractors will also be encouraged to collaborate with the City or Borough as subcontract opportunities arise in an effort to notify eligible Section 3 business concerns about the contracting opportunities.

7. Section 3 Contracting Policy and Procedure

The City or Borough will incorporate Section 3 in its existing procurement policy and adopt a Section 3 Contracting policy and procedure to be included in all procurements generated for use with HUD funding. This policy and procedure should contain requirements for making efforts to award contracts to Section 3 Business Concerns.

It is not required; however, recipients may want to consider developing a Section 3 contracting policy and procedure to ensure that Section 3 requirements are incorporated into covered contracts and procurements.

All contractors and businesses seeking Section 3 preference, before submitting bids or proposals to the City or Borough will be required to complete certifications, as appropriate. Such certifications shall be adequately supported with appropriate documentation as referenced in the Section 3 Business Concern Certification Form. (See Appendix D.)

8. Section 3 Provisions Language

The City or Borough will include standard Section 3 language in all of its contracts to ensure compliance with regulations in 24 CFR Part 75. (See Appendix F.) The City or Borough will take appropriate actions upon finding that a contractor is in violation of 24 CFR Part 75 and does not knowingly contract with any contractor that has been found in violation of the Section 3 regulations. On a periodic basis the Section 3 Coordinator will audit the City or Borough contractors for compliance with the minimum Section 3 requirements outlined in the Section 3 Plan.

To comply with the requirements outlined in 24 CFR Part 75.19, it is recommended that recipients and grantees develop Section 3 language to include in covered contracts, subcontracts and agreements to ensure that the Section 3 requirements of 24 CFR Part 75 are binding to subrecipients, contractors and subcontractors.

In addition, contractors and subrecipients are required to include language in all Section 3 covered contracts or agreements for subcontractors to meet the requirements of 24 CFR Part 75.19. (See Appendix F for an example of contract language.)

For businesses, noncompliance with HUD's regulations in 24 CFR part 75 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

9. Reporting Requirements

For Section 3 covered contracts, contractors must report to the City or Borough's Section 3 Coordinator quarterly and at the close out of the project.

A. Quarterly Reporting

- 1) Contractors are required to submit activity reports quarterly on their Section 3 outreach efforts, Section 3 Worker certification, and Section 3 targeted Worker certification to the City or Borough's Section 3 Coordinator.
- 2) The City or Borough's Section 3 Coordinator will submit the Section 3 data to their DCRA grant administrator at the end of each quarter. (See Appendix A.)

B. Close-Out Reporting

- 1) Once a project is completed, contractors must submit a final Section 3 cumulative report, documenting Section 3 outreach and training efforts, Section 3 Worker certification, and Section 3 targeted Worker certification to the City or Borough's Section 3 Coordinator. They must also

include the actual total labor hours worked, as well as actual labor hours worked by Section 3 Workers, and actual labor hours worked by Targeted Section 3 Workers.

- 2) Upon the completion of a project, the City or Borough's Section 3 Coordinator will conduct a final review of the project's overall performance and compliance.
- 3) The City or Borough's Section 3 Coordinator will submit the Section 3 data to their DCRA grant administrator at the close-out of the project.

C. Reporting on Projects with Multiple Funding Sources

For projects assisted with funding from multiple sources of community development assistance that exceed the thresholds of \$200,000, the City or Borough will follow subpart C of Part 75 and will report to their DCRA grants administrator.

10. Internal Section 3 Complaint Procedure

In an effort to resolve complaints generated due to non-compliance through an internal process, the City or Borough encourages submittal of such complaints to its Section 3 Coordinator as follows:

- 1) Complaints of non-compliance should be filed in writing and must contain the name of the complainant and brief description of the alleged violation of 24 CFR Part 75.
- 2) Complaints must be filed within 30 calendar days after the complainant becomes aware of the alleged violation.
- 3) An investigation will be conducted if complaint is found to be valid. The City or Borough will conduct an informal, but thorough investigation affording all interested parties, if any, an opportunity to submit testimony and/or evidence pertinent to the complaint.
- 4) The City or Borough will provide written documentation detailing the findings of the investigation. The City or Borough will review the findings for accuracy and completeness before it is released to complainants. The findings will be made available no later than (90) days after the filing of complaint. If complainants wish to have their concerns considered outside of the City or Borough a complaint may be filed with the local [HUD](#) field office.

Complainants may be eligible to bring complaints under other federal laws. The U.S. Equal Employment Opportunity Commission (EEOC) is responsible for enforcing federal laws that make it illegal to discriminate against a job applicant or an employee because of the person's race, color, religion, sex (including pregnancy), national origin, age (40 or older), disability or genetic information (medical history or predisposition to disease). For more information about complainant rights, please contact [EEOC](#).

The [Department of Labor Office of Federal Contract Compliance Programs \(OFCCP\)](#) enforces, for the benefit of job seekers and wage earners, the contractual promise of affirmative action and equal employment opportunity required of those who do business with the Federal government..

APPENDICES

Appendix A:

Quarterly Section 3 Reporting Form—*Excel version available*

(2 pages)

Appendix B:

Section 3 Worker and Targeted Section 3 Worker Self-Certification

(3 pages, fillable form)

Appendix C:

Multiple Funding Sources Chart

(1 page)

Appendix D:

Section 3 Business Concern Certification for Contracting

(3 pages, fillable form)

Appendix E:

Section 3 Contractor Certification

(1 page, fillable form)

Appendix F:

Example of Section 3 Language

(1 page)

Appendix G:

Definitions

(2 pages)

Quarterly Section 3 Reporting Form, Year _____

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Labor Hours Worked (including subcontractors)					
Labor Hours worked by Section 3 Workers					
Labor Hours worked by Targeted Section 3 Workers					
*Section 3 Worker Percentage					
**Targeted Section 3 Worker Percentage					

Certification of Prioritization of Effort
<p>Have you made your best effort to provide employment and training opportunities first to Section 3 workers residing within the service area or the neighborhood of the project, second to participants in the YouthBuild program?</p> <p style="text-align: center;"> <input type="checkbox"/> YES <input type="checkbox"/> NO </p>
<p>Please explain:</p>

Safe Harbor Benchmarks	
*Section 3 Workers	<p><i>Total Labor Hours worked by Section 3 workers divided by the total number of labor hours worked by all workers.</i></p> <p style="text-align: center;">Section 3 Workers Benchmark is 25%</p>
**Targeted Section 3 Workers	<p><i>Total Labor Hours worked by Targeted Section 3 workers divided by total labor hours worked by all workers.</i></p> <p style="text-align: center;">Targeted Section 3 Workers Benchmark is 5%</p>

If Section 3 Safe Harbor Benchmarks are not met, then additional reporting is required. Please provide documentation on efforts taken and/or explain why meeting the benchmarks were not feasible. (See Page 2)

Complete if Safe Harbor Benchmarks are NOT Met

Quarterly Section Reporting Form

Quarter _____ Year _____

Additional reporting is required if benchmarks are not met. Please check all that apply and provide documentation.

- Engaged in outreach efforts to generate job applicants who are Targeted Section 3 workers.
- Provided training or apprenticeship opportunities.
- Provided technical assistance to help Section 3 workers compete for jobs (e.g., resume assistance, coaching).
- Provided or connected Section 3 workers with assistance in seeking employment including: drafting resumes, preparing for interviews, and finding job opportunities connecting residents to job placement services.
- Held one or more job fairs.
- Provided or referred Section 3 workers to services supporting work readiness and retention (e.g., work readiness activities, interview clothing, test fees, transportation, childcare).
- Provided assistance to apply for/or attend community college, a four-year educational institution, or vocational/technical training.
- Assisted Section 3 workers to obtain financial literacy training and/or coaching.
- Engaged in outreach efforts to identify and secure bids from Section 3 business concerns.
- Provided technical assistance to help Section 3 business concerns understand and bid on contracts.
- Divided contracts into smaller jobs to facilitate participation by Section 3 business concerns.
- Provided bonding assistance, guaranties, or other efforts to support viable bids from Section 3 business concerns.
- Promoted use of business registries designed to create opportunities for disadvantaged and small businesses.
- Outreach, engagement, or referrals with the state one-stop system as defined in Section 121(e)(2) of the Workforce Innovation and Opportunity Act.

Appendix B: Section 3 Worker and Targeted Section 3 Worker Self-Certification

The purpose of HUD's Section 3 program is to provide employment, training and contracting opportunities to low-income individuals, particularly those who are recipients of government assistance for public assistance programs. **Your response is voluntary, confidential, and has no effect on your employment.**

Eligibility for Section 3 Worker or Targeted Section 3 Worker Status

A Section 3 worker seeking certification shall self-certify and submit this form to the recipient contractor or subcontractor, that the person is a Section 3 worker or Targeted Section 3 Worker as defined in 24 CFR Part 75.

Instructions: Enter/select the appropriate information to confirm your Section 3 worker or Targeted Section 3 Worker status.

Employee Name: _____

1. Are you a resident of _____? YES NO
2. In the field below, select the amount of individual income you believe you earn on an annual basis?
 Less than \$10,000 \$30,001 - \$40,000 More than \$60,000
 \$10,001 - \$20,000 \$40,001 - \$50,000
 \$20,001 - \$30,000 \$50,001 - \$60,000

Select from **ONE** of the following two options below:

I qualify as a:

- Section 3 Worker (as defined on page 3 of this Section 3 Worker Certification Form)
- Targeted Section 3 Worker (as defined on page 3)

(frontside)

Employee Affirmation

I affirm that the above statements (on frontside of this form) are true, complete, and correct to the best of my knowledge and belief. I hereby certify, under penalty of law, that the following information is correct to the best of my knowledge.

Employee Address: _____

Print Name: _____ Date Hired: _____

Signature: _____ Date: _____

FOR ADMINISTRATIVE USE ONLY

Is the employee a **Section 3 worker** based on their self-certification? YES NO

Is the employee a **Targeted Section 3 worker** based on their self-certification? YES NO

Was this an applicant who was hired as a result of the Section 3 project? YES NO

If Yes, what is the name of the company? _____

What was the date of hire? _____

(backside)

Appendix C: Multiple Funding Sources Chart

TYPE OF FINANCIAL ASSISTANCE	DEFINITIONS *TARGETED SECTION 3 WORKER	THRESHOLDS	PRIORITIZATION	REPORTING
Multiple Sources of Housing and Community Development <i>(single or multiple recipients)</i>	Must follow Subpart C of Part 75	Exceeds \$200,000 for Section 3 projects	Must follow Subpart C of Part 75	<ul style="list-style-type: none"> • Must follow Subpart C of Part 75 • Must report on project as a whole and identify the multiple associated recipients • Must report to the applicable HUD program office, as prescribed by HUD

Appendix D: Section 3 Business Concern Certification for Contracting

Instructions: Enter the following information and select the criteria that applies to certify your business' Section 3 Business Concern status.

Business Information

Name of Business _____

Address of Business _____

Name of Business Owner _____

Phone Number of Business Owner _____

Email Address of Business Owner _____

Preferred Contact Information

Same as above

Name of Preferred Contact _____

Phone Number of Preferred Contact _____

Type of Business (select from the following options):

Corporation Partnership Sole Proprietorship Joint Venture

Select from **ONE** of the following three options below that applies:

- At least 51 percent of the business is owned and controlled by low- or very low-income persons (Refer to income guidelines on page 3).
- At least 51 percent of the business is owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing.
- Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers (Refer to definition on page).

(frontside)

Business Concern Affirmation

I affirm that the above statements (on the frontside of this form) are true, complete, and correct to the best of my knowledge and belief. I understand that businesses who misrepresent themselves as Section 3 business concerns and report false information to _____ may have their contracts terminated as default and be barred from ongoing and future considerations for contracting opportunities. I hereby certify, under penalty of law, that the following information is correct to the best of my knowledge.

Print Name: _____

Signature: _____ Date: _____

*Certification expires within 12 months of the date of signature

Information regarding Section 3 Business Concerns can be found at [24 CFR 75.5](#)

<p style="text-align: center;">FOR ADMINISTRATIVE USE ONLY</p> <p>Is the business a Section 3 business concern based upon their certification?</p> <p style="text-align: center;"><input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>EMPLOYERS MUST RETAIN THIS FORM IN THEIR SECTION 3 COMPLIANCE FILE FOR FIVE YEARS.</p>

(backside)

City or Borough _____

Section 3 Income Limits

Eligibility Guidelines

The worker's income must be at or below the amount provided below for an individual (household of 1) regardless of actual household size.

Individual Income Limits

FY 20____ Income Limit Area	Income Limits Category	FY 20____ Income Limits
City or Borough _____	Extremely Low Income Limits (30%)	_____
	Very Low Income Limits (50%)	_____
	Low Income Limits (80%)	_____

See <https://www.huduser.gov/portal/datasets/il.html> for most recent income limits.

Section 3 Worker Definition:

- A low or very low-income resident (the worker's income for the previous or annualized calendar year is below the income limit established by HUD); or
- Employed by a Section 3 business concern; or
- A YouthBuild participant.

Targeted Section 3 Worker Definition:

- Employed by a Section 3 business concern or
- Currently meets or when hired met at least one of the following categories as documented within the past five years:
 - A resident of public housing; or
 - A resident of other public housing projects or Section 8-assisted housing; or
 - A YouthBuild participant.

Appendix E: Section 3 Contractor Certification (24 CFR 75.19)

The undersigned Contractor hereby agrees to ensure that employment and training opportunities are directed to Section 3 workers and YouthBuild participants and to Section 3 businesses and YouthBuild programs to the greatest extent feasible as described below. The undersigned Contractor also agrees to fully read and agree to the Section 3 Plan.

Employment and Training Opportunities

Contractors and subcontractors certify that they will make best effort (where feasible) to follow the prioritization of effort requirements prior to beginning work and after work is completed by:

- Providing employment and training opportunities in the priority order listed below:
 - 1) Section 3 workers residing within the service area or the neighborhood of the project, and
 - 2) Participants in YouthBuild programs.

Business Concerns

Under the City or Borough's Section 3 Program, contractors and subcontractors certify they will make their best effort (where feasible) to award contracts and subcontracts to:

- Business concerns that provide economic opportunities in the priority order listed below:
 - 1) Section 3 business concerns that provide economic opportunities to Section 3 workers residing within the service area or the neighborhood of the project; and
 - 2) YouthBuild programs.
-

Certification:

1.) We, the undersigned, have read and fully agree to the Section 3 Plan, and will become a party to the full implementation of this program.

2.) We, the undersigned, certify that we will make our best effort to follow the prioritization of effort requirements listed above.

CDBG Recipient Community: _____

Contractor/Subcontractor Business: _____

Contractor/Subcontractor Representative Name _____

Title: _____

Signature: _____

Date: _____

Appendix F: Example of Section 3 Language

Below is an example of Section 3 language to include in all RFPs, bid offerings, contracts, and subcontracts to meet the requirement of 24 CFR Part 75.19.

Section 3 is a Housing and Urban Development (HUD) requirement which applies to recipients receiving community development financial assistance for public construction projects that exceed \$200,000. The city/borough and any contractor/subcontractors will comply with HUD's Section 3 requirements in implementing the CDBG project, and will to the greatest extent feasible, and consistent with existing Federal, State and local laws and regulations, ensure that employment and other economic opportunities are directed to low- and very low-income persons per 24 CFR Part 75. The Section 3 Clause must be included in all contracts/subcontracts related to the city/borough's project.

Appendix G: Definitions

The terms **HUD, Public housing, and Public Housing Agency (PHA)** are defined in 24 CFR part 5.

The following definitions also apply to 24 CFR Part 75 HUD's Economic Opportunities for Low- and Very Low-Income Persons:

1937 Act means the United States Housing Act of 1937, 42 U.S.C. 1437 *et seq. activities related to PublicHousing*

Contractor means any entity entering into a contract with:

- (1) A recipient to perform work in connection with the expenditure of public housing financial assistance or for work in connection with a Section 3 project; or
- (2) A subrecipient for work in connection with a Section 3 project.

Labor hours means the number of paid hours worked by persons on a Section 3 project or by persons employed with funds that include public housing financial assistance.

Low-income person means a person as defined in Section 3(b)(2) of the 1937 Act, at or below 80% AMI. Note that Section 3 worker eligibility uses individual income rather than family/household income.

Material supply contracts means contracts for the purchase of products and materials, including, but not limited to, lumber, drywall, wiring, concrete, pipes, toilets, sinks, carpets, and office supplies.

Professional services means non-construction services that require an advanced degree or professional licensing, including, but not limited to, contracts for legal services, financial consulting, accounting services, environmental assessment, architectural services, and civil engineering services.

Recipient means any entity that receives directly from HUD housing and community development assistance that funds Section 3 projects, including, but not limited to, any State, local government, instrumentally, or other public agency, public or private nonprofit organization.

Section 3 means Section 3 of the Housing and Urban Development Act of 1968, as amended (12 U.S.C.1701u).

Section 3 business concern means:

- (1) A business concern meeting at least one of the following criteria, documented within the last six-month period:
 - (i) It is at least 51 percent owned and controlled by low- or very low-income persons;
 - (ii) Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers; or
 - (iii) It is a business at least 51 percent owned and controlled by current public housing

residents or residents who currently live in Section 8-assisted housing.

- (2) The status of a Section 3 business concern shall not be negatively affected by a prior arrest or conviction of its owner(s) or employees.
- (3) Nothing in this part shall be construed to require the contracting or subcontracting of a Section 3 business concern. Section 3 business concerns are not exempt from meeting the specifications of the contract.

Section 3 Coordinator is person tasked with overseeing all Section 3 responsibilities.

Section 3 project means a project defined in 24 CFR Part 75.3(a)(2).

Section 3 worker means:

- (1) Any worker who currently fits or when hired within the past five years fit at least one of the following categories, as documented:
 - (i) The worker's income for the previous or annualized calendar year is below the income limit established by HUD.
 - (ii) The worker is employed by a Section 3 business concern.
 - (iii) The worker is a YouthBuild participant.
- (2) The status of a Section 3 worker shall not be negatively affected by a prior arrest or conviction.
- (3) Nothing in this part shall be construed to require the employment of someone who meets this definition of a Section 3 worker. Section 3 workers are not exempt from meeting the qualifications of the position to be filled.

Service area or the neighborhood of the project means an area within one mile of the Section 3 project or, if fewer than 5,000 people live within one mile of a Section 3 project, within a circle centered on the Section 3 project that is sufficient to encompass a population of 5,000 people according to the most recent U.S. Census.

Subcontractor means any entity that has a contract with a contractor to undertake a portion of the contractor's obligation to perform work in connection with the expenditure of the Section 3 project.

Subrecipient has the meaning provided in the applicable program regulations or in 2 CFR 200.93.

Targeted Section 3 worker has the meanings provided in 24 CFR Part 75.11, 75.21, or 75.29, and does not exclude an individual that has a prior arrest or conviction.

Very low-income person means the definition for this term set forth in section 3(b)(2) of the 1937 Act (at or below 50% AMI).

YouthBuild programs refers to YouthBuild programs receiving assistance under the Workforce Innovation and Opportunity Act (29 U.S.C. 3226).

GENERAL NOTES:

- THE ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, CITY, STATE AND NATIONAL CODES, LAWS, ACTS AND ORDINANCES AND THE AUTHORITY HAVING JURISDICTION, THE OWNERS INSURANCE COMPANY REQUIREMENTS, APPLICABLE INDUSTRY STANDARDS OF GOOD PRACTICE AND SAFETY, THE MANUFACTURER'S STRICTEST REQUIREMENTS AND RECOMMENDATIONS FOR EQUIPMENT AND PRODUCT APPLICATION AND INSTALLATION. IN THE EVENT OF CONFLICT BETWEEN THESE PLANS AND GOVERNING LAWS, THE MORE STRICT SHALL APPLY.
- DRAWINGS ARE LARGELY SCHEMATIC IN NATURE AND SHALL BE ADAPTED TO ACTUAL SITE CONDITIONS AND OWNER'S REQUIREMENTS AT NO ADDITIONAL COST. THOUGH A LOT OF DETAILS MAY BE SHOWN THEY ARE NOT INTENDED TO SHOW EVERY DETAIL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH AND CONFIRM EXISTING/SITE CONDITIONS TO PROVIDE A FULLY FUNCTIONAL SYSTEM PER THE INTENT OF DESIGN. ALL REQUIRED SUPPORTS AND SYSTEMS SHALL BE PROVIDED FOR A FULLY FUNCTIONAL SYSTEM PER THE DESIGN INTENT. PROVIDE ALL NEW EQUIPMENT, WIRING, CONDUIT, BOXES, ETC. AS REQUIRED. SEE NOTE 11, THIS SHEET FOR DISCUSSION ABOUT REUSE OF EXISTING ELECTRICAL INFRASTRUCTURE.
- THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE DURING ON-SITE INVESTIGATION/EXISTING DRAWINGS. THEY ARE SCHEMATIC IN NATURE & NOT INTENDED TO SHOW EVERY DETAIL. DO NOT SCALE OFF PLANS, VERIFY ACTUAL LOCATIONS/DIMENSIONS IN THE FIELD.
- THOROUGHLY FAMILIARIZE ONESELF WITH THE PLANS, SPECIFICATIONS & CONDITIONS COVERING THE JOB. NOTIFY THE PROJECT MANAGER/ENGINEER OF ANY DISCREPANCIES/UNUSUAL CONDITIONS.
- THE EXISTING FIRE-ALARM SYSTEMS SHALL BE REMOVED IN THEIR ENTIRETY. THIS INCLUDES ALL PANELS, DEVICES, INTERFACES, CABLING, ETC., EVEN IF NOT IDENTIFIED ON THESE PLANS. EXISTING RACEWAYS/BOXES MAY BE REUSED IF IN SERVICEABLE CONDITION. OWNER SHALL HAVE FIRST SALVAGE RIGHTS ON ALL ITEMS. REMOVE ALL MATERIALS NOT CLAIMED AS SALVAGE FROM PREMISES. ALL MATERIALS TO BE DISPOSED OF PROPERLY.
- NOTIFY PROJECT MANAGER 72-HOURS IN ADVANCE OF ANY ANTICIPATED SHUTDOWN, OUTAGE, OR TESTING. DO NOT INTERRUPT FIRE-ALARM SERVICE TO FACILITIES WITHOUT OWNER'S PERMISSION.
- THE EXISTING FIRE-ALARM SYSTEMS SHALL REMAIN IN OPERATION UNTIL THE NEW FIRE-ALARM SYSTEMS ARE OPERATIONAL. NO SPACE SHALL BE OUT OF SERVICE FOR MORE THAN 4 HOURS IN A 24-HOUR PERIOD. PROVIDE ONSITE FIRE WATCH IF REQUIRED.

AN ALTERNATE OPTION, IF THE CONTRACTOR CHOOSES, IS TO DEMOLISH THE EXISTING SYSTEM AND RE-USE EXISTING CONDUITS AND WIRE TO THE EXTENT POSSIBLE FOR THE NEW SYSTEM.

A TEMPORARY SYSTEM SHALL THEN BE INSTALLED TO PROVIDE PROTECTION FOR THE POOL AREA, SLEEPING AREAS, AND OTHER AREAS REQUIRED DURING DEMOLITION AND INSTALLATION OF THE NEW SYSTEM. THE POOL AREAS, LOCKER ROOM, AND ASSOCIATED AREAS WILL BE OCCUPIED AND USED DURING THE SUMMER MONTHS AND MUST STAY MONITORED AND PROTECTED. THE TEMPORARY SYSTEM SHALL HAVE AUDIBLE/VISIBLE NOTIFICATION, DIALOUT, AND MONITORING OF THE FIRE SPRINKLER SYSTEM. PROVIDE DIALER AND CONNECT TO THE TELEPHONE SYSTEM. PROVIDE ALL TEMPORARY SYSTEM PROGRAMMING NECESSARY. THIS SYSTEM SHALL BE HORN/STROBE CAPABLE AND IS NOT REQUIRED TO BE VOICE-EVACUATION. ONCE THE NEW FIRE ALARM SYSTEM IS INSTALLED, THE TEMPORARY SYSTEM AND ALL REMAINING DEVICES, WIRING, CONDUIT, AND ASSOCIATED ITEMS FROM THE ORIGINAL SYSTEM SHALL BE REMOVED.

CONTRACTOR SHALL PROVIDE A WRITTEN PHASING & TEMPORARY PLAN FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK. PLAN WILL ADDRESS THE PHASED APPROACH TO CONSTRUCTION AND THE TEMPORARY SYSTEM PLAN. DO NOT BEGIN WORK ONSITE UNTIL THIS PLAN IS APPROVED BY OWNER AND ENGINEER.
- THE OWNER SHALL PROVIDE INPUT & MAKE FINAL DECISION AS TO THE TYPE & COLOR OF BLANK COVER PLATES TO BE PROVIDED. COLORS TO MATCH EXISTING SURFACES AS CLOSELY AS POSSIBLE. ALL COVER PLATES SHALL HAVE POWDER COAT FINISH & SHALL NOT BE HAND PAINTED, BRUSHED, OR MANUALLY SPRAY PAINTED FOR FINISHED AREAS. CONTRACTOR SHALL VERIFY COLOR WITH OWNER & PROVIDED SAMPLES OF PLATES TO BE USED AT ALL DIFFERING LOCATIONS REQUIRING A SEPARATE COLOR SCHEME. PROVIDE OVERSIZED PLATE TO ADEQUATELY COVER EXISTING FIRE-ALARM BOXES THAT HAVE BEEN ABANDONED. THIS NOTE SHALL APPLY TO ENTIRE PROJECT.
- A NEW FIRE-ALARM SYSTEM IS TO BE INSTALLED/TESTED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF NFPA 70/72. THESE PLANS/SPECIFICATIONS ARE A PERFORMANCE DESIGN & INTENDED TO OBTAIN A BUILDING PERMIT ONLY. ACTUAL LOCATIONS/QUANTITIES ARE TO BE DETERMINED BY THE FIRE-ALARM CONTRACTOR & SHALL MEET ALL APPLICABLE CODES. SUBMIT DRAWINGS, WITH ADDITIONAL DEVICES IF NECESSARY, TO AUTHORITY HAVING JURISDICTION FOR APPROVAL & THEN TO ENGINEER FOR REVIEW.
- MAINTAIN REQUIRED WORKSPACE CLEARANCES & REQUIRED CLEARANCES FOR EQUIPMENT ACCESS DOORS & PANELS. PANELS SHALL BE INSTALLED IN MECHANICAL ROOMS ONLY.
- FIRE ALARM WIRING INSTALLED ABOVE ACCESSIBLE CEILINGS IS NOT REQUIRED TO BE IN CONDUIT, RATHER IT SHALL BE ROUTED ALONG J-HOOKS. DO NOT USE STRUCTURAL MEMBERS FOR SUPPORTING FIRE ALARM CABLE. WIRING SHALL BE INSTALLED IN RED 3/4" CONDUIT (EMT FOR DRY LOCATIONS, GRC IN DAMP AND WET LOCATIONS). IN UNFINISHED AREAS, IN ALL OTHER AREAS WHERE INSTALLED EXPOSED, CONDUIT SHALL BE PAINTED TO MATCH SURROUNDINGS. PROVIDE ALL NEW CONDUIT AND BOXES. EXISTING RACEWAYS AND BOXES MAY BE REUSED IF CORRECT SIZE, IN CORRECT LOCATION, AND IN GOOD WORKING CONDITION. HOWEVER, DO NOT ASSUME EXISTING CONDUIT AND BOXES ARE TO BE REUSED UNTIL VERIFIED TO MEET REQUIREMENTS NOTED IN THIS PARAGRAPH. EXISTING RACEWAYS AND BOXES MAY NOT BE RELOCATED AND REINSTALLED AT NEW LOCATIONS. PAINT ALL REUSED CONDUIT AND BOXES AS REQUIRED PER LANGUAGE ABOVE.

CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL
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FIRE ALARM REPLACEMENT RE-BID
NOVEMBER 22, 2022

- IN FINISHED SPACES, EXPOSED CONDUIT/RACEWAY SHALL BE PAINTED TO MATCH EXISTING SURFACES (COLOR BY OWNER).
- IN FINISHED SPACES, NEW BOXES SHALL BE CUT IN & RECESSED WHERE POSSIBLE. MAKE EVERY EFFORT TO CONCEAL NEW RACEWAYS. IF NOT PHYSICALLY POSSIBLE/PRACTICAL TO CONCEAL NEW RACEWAYS, PROVIDE SMALL STEEL SURFACE RACEWAY, FROM DEVICE UP TO STRUCTURAL CEILING OR TO ABOVE ACCESSIBLE CEILING. WIREMOLD 700/2000 SERIES (OR EQUAL, COLOR BY OWNER).
- REMOVE/REPLACE ALL CEILING TILE AS REQUIRED FOR THE INSTALLATION OF NEW RACEWAYS & WHERE EXISTING DEVICES HAVE BEEN REMOVED. CEILING PADS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY CONTRACTOR AND SHALL MATCH SURROUNDING TILE TEXTURE PATTERN AND COLOR.
- IN A MANNER SATISFACTORY TO THE OWNER'S REPRESENTATIVE, TOUCH-UP OR REFINISH FACTORY-APPLIED PAINTS OR FINISHES WHICH ARE CHIPPED, DEFACED, SCRATCH, OR IN ANY OTHER WAY DISTURBED DUE TO HANDLING, INSTALLATION, OR GENERAL CONSTRUCTION WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEAN UP DURING AND AT CONCLUSION OF CONSTRUCTION PERIOD. NO MATERIALS SHALL BE LEFT ON SITE WHEN WORK IS COMPLETED, UNLESS REQUESTED BY OWNER'S REPRESENTATIVE. ALL MATERIALS SHALL BE DISPOSED OF PROPERLY. DURING CONSTRUCTION LIMIT UNCLEANED AREAS TO ONLY ACTIVE WORK AREAS.
- ANY WORK THAT MAY REQUIRE CUTTING INTO EXISTING BEAMS AND STRUCTURAL MEMBERS SHALL BE DISCUSSED, REVIEWED, AND APPROVED BY OWNER AND THE ENGINEER PRIOR TO WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CUTTING, PATCHING AND PAINTING OF WALLS WHERE NEW DEVICES/CONDUIT ARE TO BE INSTALLED RECESSED.
- COORDINATE WALL PENETRATIONS WITH EXISTING STRUCTURAL CONDITIONS. MAINTAIN ALL ROOF WARRANTIES. ALL PENETRATIONS THROUGH FIRE-RATED WALLS AND FLOORS SHALL BE CAULKED AND SEALED WITH APPROVED FIRE RATED CAULKING MATERIAL.
- ALL PAINTING OF PATCHED/REPAIRED AREAS WILL BE DONE BY THE CONTRACTOR.
- IF HAZARDOUS MATERIALS ARE ENCOUNTERED, STOP WORK IMMEDIATELY AND INFORM THE OWNER'S REPRESENTATIVE IN WRITING AND VERBALLY. THE OWNER'S REPRESENTATIVE WILL THEN BE RESPONSIBLE TO TAKE APPROPRIATE ACTIONS.
- PROVIDE A 2' X 2' METAL HINGED CEILING ACCESS PANEL AT ALL AREAS WHERE IT WILL BE REQUIRED TO INSTALL NEW CONDUIT, CABLING, AND J-BOXES AT DRYWALL CEILINGS, TO CONCEAL THESE ITEMS. COLOR OF PANEL SHALL MATCH INSTALLED AREA. VERIFY ALL LOCATIONS WITH FLOOR PLANS. ACCESS PANEL SHALL HAVE A 1HR FIRE RATING. INCLUDES UL LISTED "B" LABEL WITH UNIVERSAL SELF-LATCHING BOLT OPERATED BY KNOB OR FLUSH KEY. 16 GA. DOOR AND MOUNTING FRAME THAT IS FLUSH TO FRAME WITH REINFORCED EDGES, AND 1" WIDE FLANGES ALL SIDES. CUT, PATCH, AND PAINT SURFACE AS REQUIRED FOR PROPER INSTALLATION.
- INSTALL RACEWAYS AND ELECTRICAL EQUIPMENT, INCLUDING ACCESS PANELS WHICH PENETRATE FIRE-RATED OR SMOKE BARRIER SURFACES, IN A MANNER, WHICH MAINTAINS THE SURFACE RATING OR BARRIER INTENT. DRILL WALL AND FLOOR OPENINGS FOR PENETRATIONS AS NEEDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING SLEEVES, CUTTING, PATCHING, AND PAINTING.
- THIS CONTRACTOR SHALL FURNISH AND INSTALL DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS FOR EACH SUPPLY DUCT IF 2000CFM OR GREATER AND ALSO EACH RETURN DUCT IF 15000 CFM OR GREATER. COORDINATE ALL EQUIPMENT REQUIREMENTS AND LOCATIONS WITH MECHANICAL CONTRACTOR PRIOR TO BIDDING.
- PROVIDE SMOKE DETECTOR AT EVERY FIRE ALARM PANEL AND DISTRIBUTED POWER SUPPLY (WITHIN 5-FT.). CONTRACTOR TO DETERMINE QUANTITIES AND LOCATIONS OF POWER SUPPLIES BASED ON POWER REQUIREMENTS AND VOLTAGE DROP. QUANTITIES SHOWN ON PLANS ARE MINIMUMS.
- ALL DASHED ELECTRICAL ITEMS IN BOLD TEXT SHALL BE REMOVED IN THEIR ENTIRETY. THIS INCLUDES WIRING DEVICES, CONDUIT/RACEWAY, J-BOXES, AND ALL ASSOCIATED WIRING/CABLING TO EXTENT POSSIBLE.
- EXISTING ELECTRICAL ITEMS (SHOWN IN LIGHT SHADE) ARE TO REMAIN AND SHALL BE PROTECTED. MAINTAIN CIRCUIT INTEGRITY OF ALL EXISTING CIRCUITS AND CONNECTIONS.

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E23	ELEVATOR INTERCONNECTION SCHEMATIC

- PROVIDE CIRCUIT INTERFACE MODULES TO PROVIDE ADDRESSABILITY FOR ALL NON-ADDRESSABLE INITIATING AND OTHER DEVICES (FLOW & TAMPER SWITCHES, FAN MOTOR STARTERS, ETC). PROVIDE ONE CIM PER DEVICE.
- INTELLIGIBILITY STUDY: CONTRACTOR SHALL PERFORM AN INTELLIGIBILITY AUDIT/STUDY OF THE FIRE ALARM SYSTEM AFTER ALL DEVICES ARE INSTALLED, OPERATIONAL, AND TESTED. PROVIDE ALL TESTING AND PERFORMANCE RESULTS TO ENGINEER/OWNER FOR REVIEW. TESTING SHALL BE DONE PER NFPA 72 REQUIREMENTS.
- PROVIDE CIM UNITS AS REQUIRED TO PERFORM SHUT DOWN OF ALL FANS PER NFPA 72, IBC, AND NEC. PERFORM ALL WIRING TO SHUT DOWN FAN STARTERS. PROVIDE A NORMALLY CLOSED DRY CONTACT IN THE STARTER CONTROL CIRCUIT SO STARTER IS SHUT DOWN IN BOTH HAND AND AUTO MODE. STARTERS NOT SHOWN ON DRAWINGS.
- MANUAL PULL STATIONS SUBJECT TO ACCESS BY STUDENTS SHALL BE PROVIDED WITH A VANDAL RESISTANT COVER WITH AN INTEGRAL LOCAL BATTERY TO POWER AN AUDIBLE ALARM WHEN LIFTED.
- DEVICE LOCATIONS SHALL BE MODIFIED/ADJUSTED AS REQUIRED TO AVOID EXISTING SYSTEMS - CLOCKS, PUBLIC ADDRESS SPEAKERS, AND OTHER EXISTING EQUIPMENT AND SYSTEMS THAT MAY CONFLICT WITH NEW FIRE ALARM DEVICE LOCATIONS.
- PROVIDE NEW CONDUIT AND WIRE FROM MECHANICAL AIR HANDLING EQUIPMENT DUCT DETECTOR AND RELAY HOUSING TO ASSOCIATED MOTOR STARTER FOR INTERFACE. PROVIDE ADDITIONAL RELAY(S) AND CONNECTIONS AS REQUIRED. UPON ALARM OR SMOKE DETECTION, UNIT SHALL SHUT DOWN AND SEND NOTIFICATION TO FIRE ALARM PANEL. PROVIDE REMOTE INDICATOR AND CONNECT TO DUCT DETECTOR - LOCATE AT EASILY VISIBLE AND ACCESSIBLE AREA IN ROOM WHERE MECHANICAL EQUIPMENT IS LOCATED.
- ENTIRE SYSTEM IS EQUIPPED WITH A SPRINKLER SYSTEM. PROTECT AND MAINTAIN. PROVIDE TEMPORARY SPRINKLER HEAD PROTECTIVE CAGES WHEREVER NECESSARY TO AVOID ACCIDENTAL HEAD DAMAGE AND FLOW OF WATER. CONTRACTOR FULLY RESPONSIBLE FOR WATER DAMAGE IF PROJECT WORK CAUSES EXISTING HEADS TO FLOW WATER. CONTRACTOR RESPONSIBLE TO COORDINATE AND DOCUMENT SPRINKLER SYSTEM RE-CERTIFICATION, PRESSURE TESTING, ZONE VALUE FUNCTIONALITY, ETC. PER AHJ AND CODE REQUIREMENTS.
- DEVICES IN LOCATIONS SUBJECT TO PHYSICAL DAMAGE SHALL BE PROVIDED WITH WIRE GUARDS.
- EXISTING DOOR HOLD OPENS TO REMAIN AND BE REUSED. PROTECT AND MAINTAIN. WIRING TO DOOR HOLDERS SHALL REMAIN AND BE CONNECTED TO THE NEW FIRE ALARM PANEL. PROVIDE NEW WIRING AS REQUIRED. PROVIDE NEW RELAY(S) AND ASSOCIATED HARDWARE AS REQUIRED FOR CONNECTION OF EXISTING DOOR HOLDER CIRCUITS TO NEW FIRE ALARM SYSTEM.
- AS PART OF A SEPARATE CONTRACT THE HIGH SCHOOL ELEVATOR WILL BE REPLACED, INCLUDING CONTROLLERS. AS PART OF THIS CONTRACT PROVIDE ALL FIRE ALARM DEVICES NECESSARY TO INTERFACE WITH THE NEW ELEVATOR.
- ANY SMOKE DETECTOR HEAD INSTALLED BEFORE THE BUILDING IS CLEANED AND ACCEPTED SHALL BE COVERED TO PROTECT IT FROM DUST. ANY FALSE ALARMS DO TO DIRT CONTAMINATED HEADS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



RE-BID
11/22/22

(* NOTE: REVISIONS MARKED ON THIS SHEET WITH AN ASTERISK (*) WERE PART OF PREVIOUS ADDENDUM PROCESS FOR PROJECT'S FIRST BID IN OCTOBER 2022. PREVIOUS REVISION CLOUDS REMAIN FOR CURRENT BIDDER'S CONVENIENCE. NEW ADDENDUM ITEMS AND REVISION CLOUDS WILL BE LABELED AND DATED IN ACCORDANCE WITH THE RE-BID PROCESS.

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
△	N/A	FIRST BID ADD., SEE (*) NOTE			

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DESIGN: MGM CHECKED: MGM SCALE: _____
DRAWN: JRW APPROVED: MGM



CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE: **TITLE, SHEET LIST, & GENERAL NOTES**

MEG PROJECT NO.: 140-05 | DWG. FILE: _____

E1

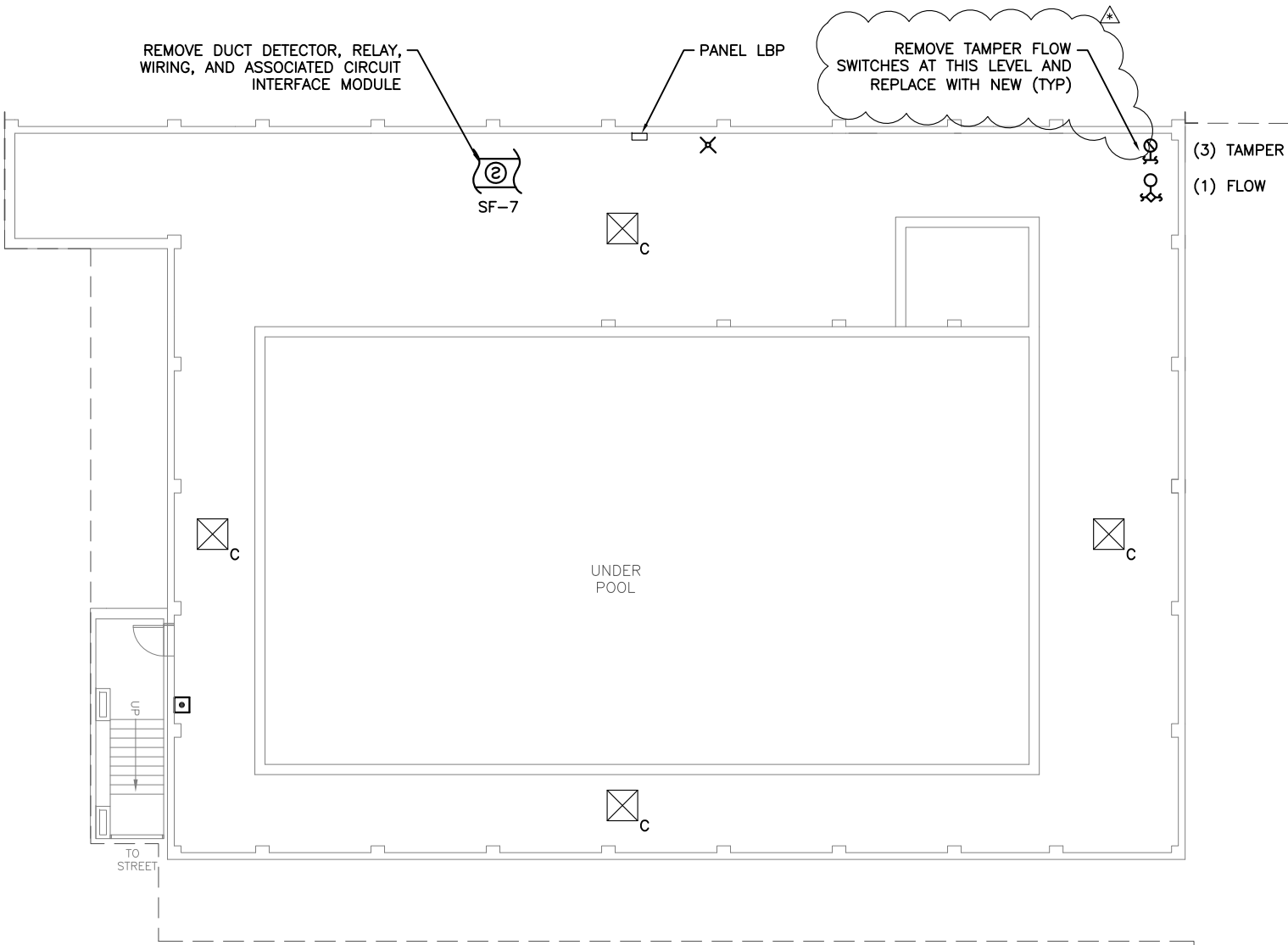
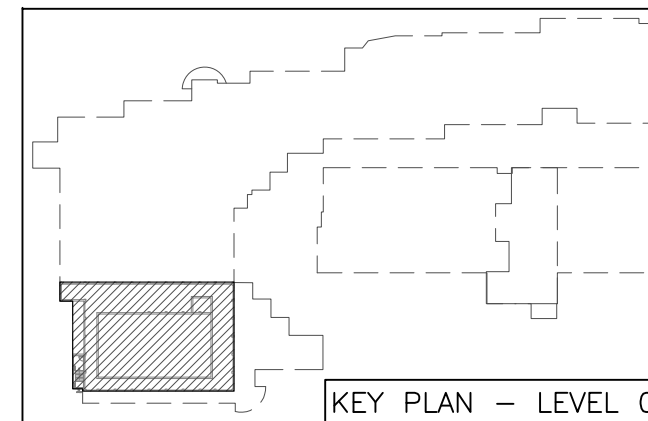
SHEET 1 OF 23

FIRE ALARM LEGEND

DESCRIPTION		MOUNTING HEIGHT/LOCATION
AP	ACCESS PANEL	
CIM	CIRCUIT INTERFACE MODULE (RELAY)	ACCESSIBLE JUNCTION BOX
DH	MAGNETIC DOOR HOLDER	
EMT	ELECTRICAL METALLIC TUBING	
FAA	FIRE ALARM ANNUNCIATOR	
FACP	FIRE ALARM CONTROL PANEL	72" AFF TO TOP OF PANEL
IDC	INITIATING DEVICE CIRCUIT	
NAC	NOTIFICATION APPLIANCE CIRCUIT	
	DUCT SMOKE DETECTOR	INSIDE DUCT
	END OF LINE RESISTOR	
	FIXED TEMP HEAT DETECTOR	CEILING
	FLOW SWITCH (PRESSURE, HIGH & LOW)	
	HORN ONLY, WALL MOUNTED	80" AFF TO BOTTOM OR 6" BELOW CEILING
	HORN STROBE, WALL MOUNTED	80" AFF TO BOTTOM OR 6" BELOW CEILING
	PRESSURE SWITCH	
	MANUAL PULL STATION	48" AFF
	CARBON MONOXIDE DETECTOR	
	SMOKE DETECTOR	CEILING
	SPEAKER, CEILING MOUNTED	
	SPEAKER, WALL MOUNTED	
	SPEAKER STROBE, CEILING MOUNTED	
	SPEAKER STROBE, WALL MOUNTED	80" AFF TO BOTTOM OR 6" BELOW CEILING
	STROBE, CEILING MOUNTED	
	STROBE, WALL MOUNTED	80" AFF TO BOTTOM OR 6" BELOW CEILING
	STROBE ONLY	80" AFF TO BOTTOM OR 6" BELOW CEILING
	TAMPER SWITCH	
VG	VANDAL RESISTANT GUARD	
WG	WIRE GUARD	
WP	WEATHER PROOF	

DEMOLITION NOTES:

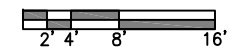
- ALL BOLD ITEMS SHALL BE REMOVED. EXISTING ITEMS SHOWN IN LIGHT SHADE ARE TO REMAIN AND SHALL BE MAINTAINED.
- EXISTING ELECTRICAL CONDUIT WHICH IS NOT CONCEALED IN WALLS OR FLOOR SLAB AND WHICH IS NOT BEING REUSED SHALL BE REMOVED. REMOVE CONDUIT TO SOURCE OR NEAREST JUNCTION BOX NOT TO BE REMOVED. WIRING SHALL BE REMOVED AND ABANDONED CONDUIT SHALL BE CUT OFF FLUSH WHERE IT ENTERS THE FLOOR OR WALL AND SEALED. EXISTING CONDUIT TO REMAIN SHALL BE SUPPORTED.
- THE CONTRACTOR SHALL REPAIR ALL HOLES FROM THE REMOVAL OF FIRE-ALARM/ELECTRICAL SYSTEMS. THIS SHALL INCLUDE ALL PATCHING TO MATCH EXISTING TEXTURES/FINISHES. WALL SURFACES SHALL BE REPAIRED IN LIEU OF PLACING A COVER PLATE OVER HOLES. A COVER PLATE IS ACCEPTABLE IF COVERING AN EXISTING BOX THAT STILL HOUSES WIRING AND IS ALSO ACCEPTABLE FOR COVERING BOXES THAT WILL ACCEPT A 4" SQUARE COVER PLATE OR LESS. PROVIDE STAINLESS STEEL COVER PLATES AT FINISHED AREAS AND GALVANIZED AT UNFINISHED AREAS. IF OPENING IS LARGER THAN 4" AND DOES NOT CONTAIN WIRING, CONTRACTOR SHALL GROUT INFILL HOLE AND SMOOTH TO MATCH EXISTING TEXTURE. PAINT TO MATCH SURROUNDING FINISH. FOR REPAIR OF WALLPAPERED WALLS, USE PAINTED BLANK COVER PLATE. EXTRA CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING SURFACES/FINISHES. NO PATCHING/FINISHING IS REQUIRED AT UNFINISHED CEILING/WALLS, UNLESS IT IS RATED. IN WHICH CASE, THE HOLE SHALL BE REPAIRED TO MAINTAIN THE RATING OF THE SEPARATION. ALL REPAIR COSTS SHALL BE AT CONTRACTOR'S EXPENSE.



CEILING TYPES
(REFERS TO CEILING TYPE AT EACH ROOM/AREA)

	ACOUSTICAL TILE (A)
	GYPSUM BOARD (G)
	GYPSUM W/ GLUED ACOUSTICAL TILE (AG)
	WOOD (W)
	CONCRETE W/ METAL (M)
	CONCRETE (C)
	EXPOSED CEILING (WHERE "X" REFERS TO CEILING TYPE)
	DIRECTION OF VAULTED CEILING
	CEILING TRANSITION

① POOL FIRE ALARM - DEMOLITION LEVEL 0



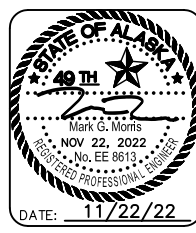
RE-BID
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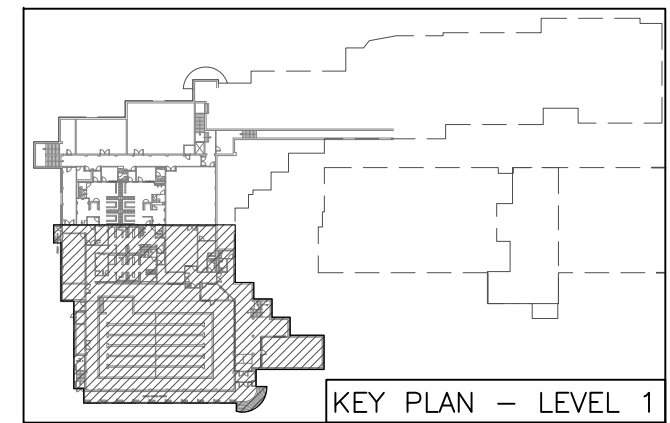
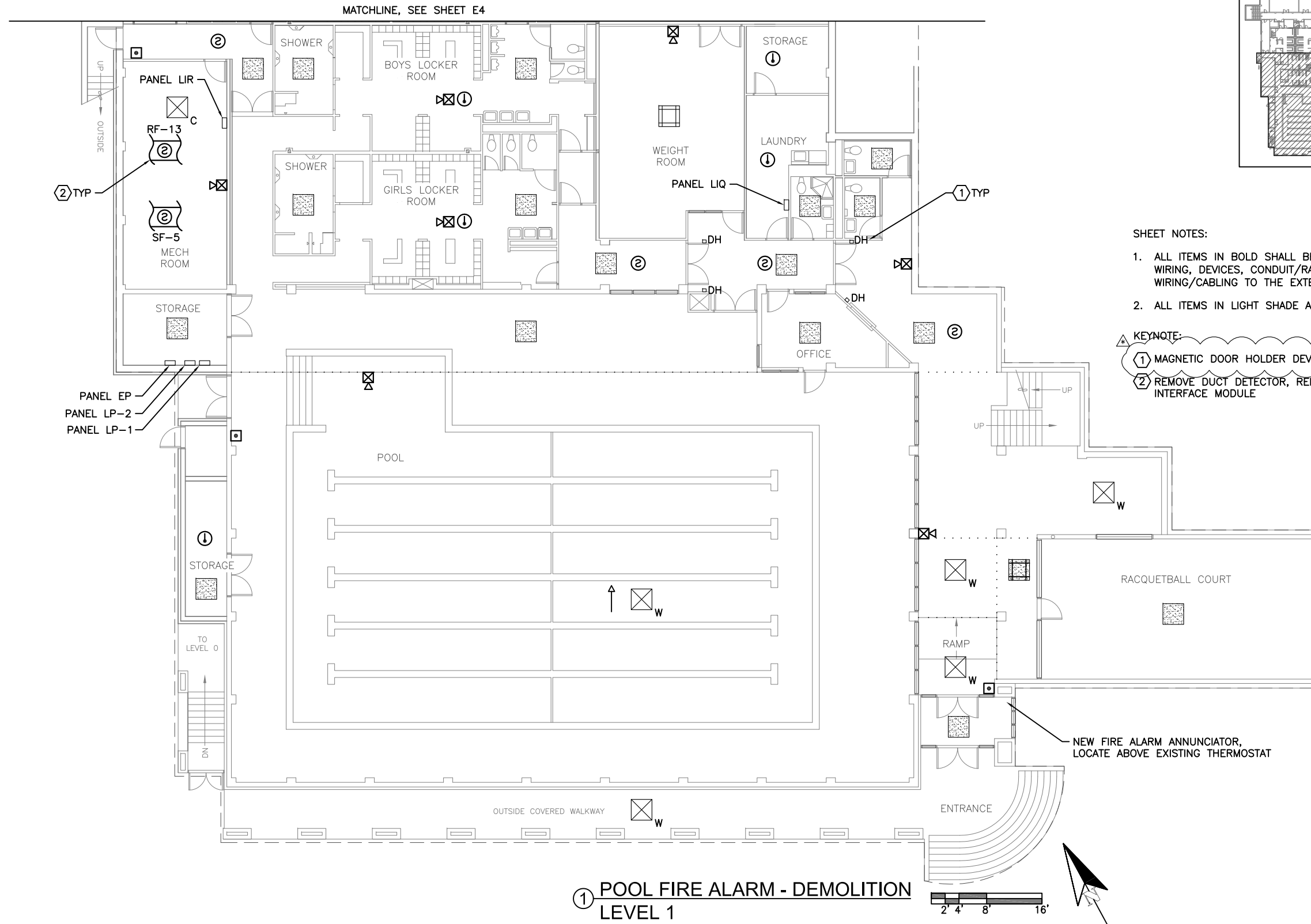
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CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
HIGH SCHOOL POOL - LEVEL 0 - FIRE ALARM DEMOLITION

MEG PROJECT NO.: 140-05 DWG. FILE:



SHEET NOTES:

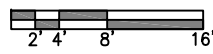
1. ALL ITEMS IN BOLD SHALL BE REMOVED IN THEIR ENTIRETY. THIS INCLUDES WIRING, DEVICES, CONDUIT/RACEWAY, JUNCTION BOXES AND ALL ASSOCIATED WIRING/CABLING TO THE EXTENT POSSIBLE.
2. ALL ITEMS IN LIGHT SHADE ARE TO REMAIN AND SHALL BE PROTECTED.

KEYNOTE:

- ① MAGNETIC DOOR HOLDER DEVICE, WIRING, AND PATH TO REMAIN.
- ② REMOVE DUCT DETECTOR, RELAY, WIRING, AND ASSOCIATED CIRCUIT INTERFACE MODULE

NEW FIRE ALARM ANNUNCIATOR, LOCATE ABOVE EXISTING THERMOSTAT

① POOL FIRE ALARM - DEMOLITION LEVEL 1



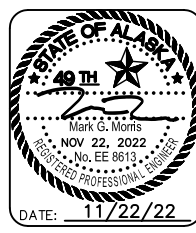
RE-BID 11/22/22

(* NOTE: REVISIONS MARKED ON THIS SHEET WITH AN ASTERISK (*) WERE PART OF PREVIOUS ADDENDUM PROCESS FOR PROJECT'S FIRST BID IN OCTOBER 2022. PREVIOUS REVISION CLOUDS REMAIN FOR CURRENT BIDDER'S CONVENIENCE. NEW ADDENDUM ITEMS AND REVISION CLOUDS WILL BE LABELED AND DATED IN ACCORDANCE WITH THE RE-BID PROCESS.

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
△	N/A	FIRST BID ADD., SEE (*) NOTE			

MORRIS ENGINEERING GROUP INC.
 2375 Jordan Avenue #7, Juneau, AK 99801
 Phone: 907-789-3350, License: AECL1010

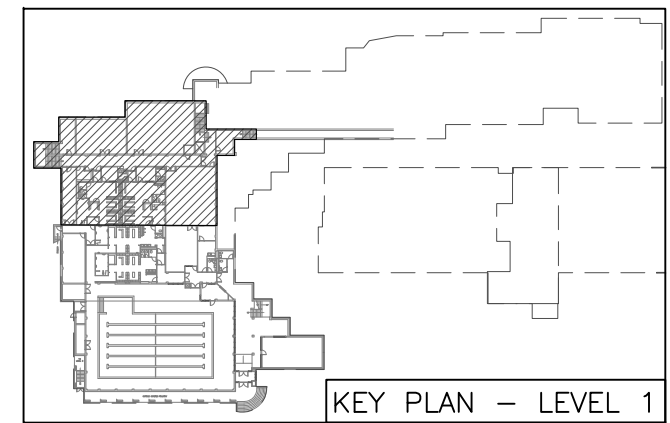
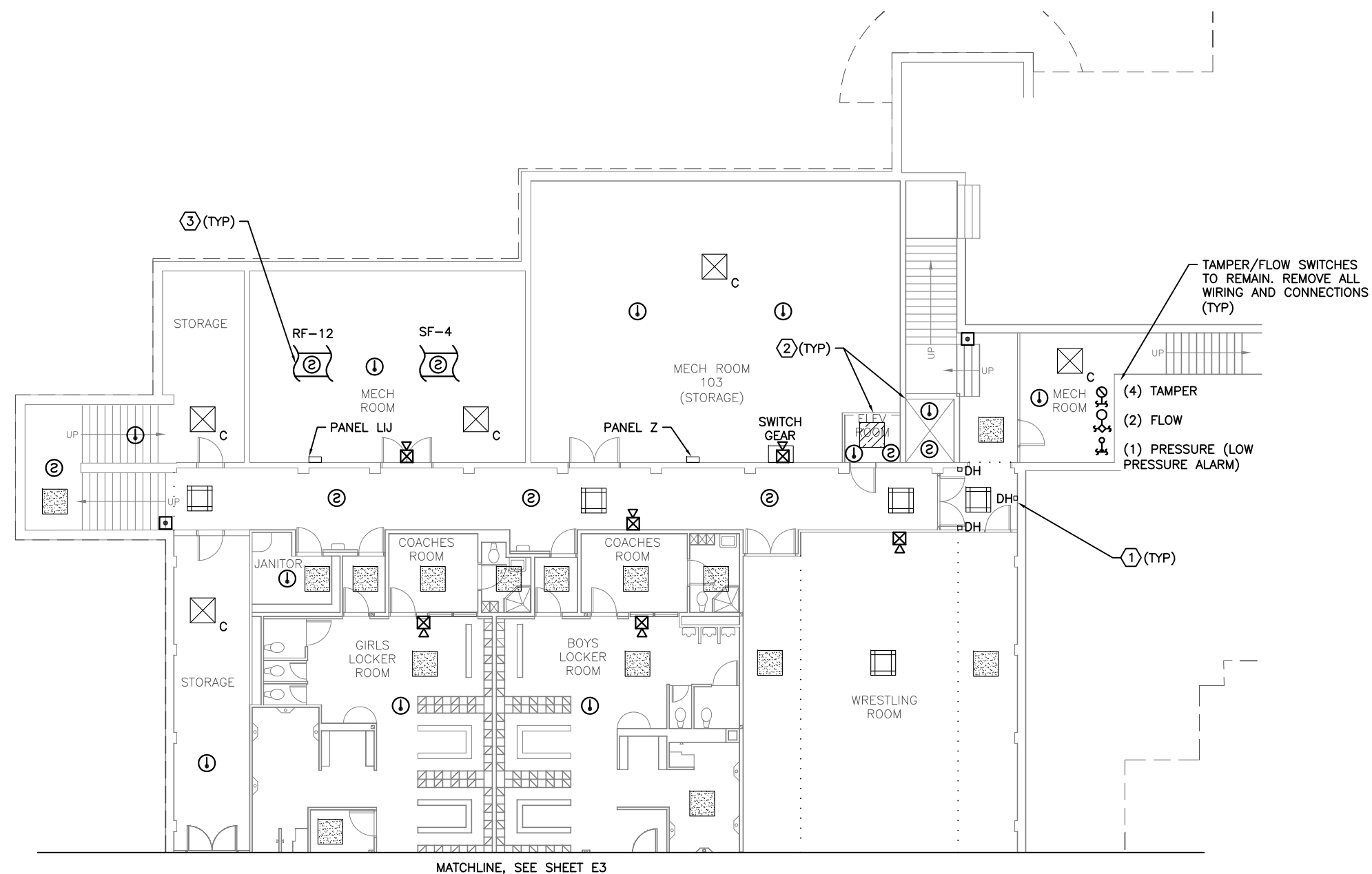
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**CITY AND BOROUGH OF WRANGELL, ALASKA
 WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT**

SHEET TITLE:
HIGH SCHOOL POOL - LEVEL 1 - FIRE ALARM DEMOLITION

MEG PROJECT NO.: 140-05 DWG. FILE:



SHEET NOTES:

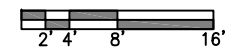
1. ALL ITEMS IN BOLD SHALL BE REMOVED IN THEIR ENTIRETY. THIS INCLUDES WIRING, DEVICES, CONDUIT/RACEWAY, JUNCTION BOXES AND ALL ASSOCIATED WIRING/CABLING TO THE EXTENT POSSIBLE.
2. ALL ITEMS IN LIGHT SHADE ARE TO REMAIN AND SHALL BE PROTECTED.

KEYNOTE:

- ① MAGNETIC DOOR HOLDER DEVICE, WIRING, AND PATH TO REMAIN.
- ② REMOVE FIRE ALARM DEVICES AND WIRING AT ELEVATOR EQUIPMENT ROOM AND HOISTWAY PIT/TOP OF SHAFT. THIS WORK WILL BE IN COORDINATION WITH THE SEPARATE ELEVATOR REPLACEMENT PROJECT.
- ③ REMOVE DUCT DETECTOR, RELAY, WIRING, AND ASSOCIATED CIRCUIT INTERFACE MODULE

MATCHLINE, SEE SHEET E3

① HIGH SCHOOL FIRE ALARM - DEMOLITION
LEVEL 1



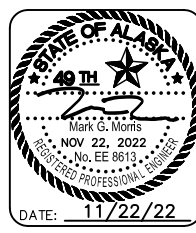
**RE-BID
11/22/22**

(* NOTE: REVISIONS MARKED ON THIS SHEET WITH AN ASTERISK (*) WERE PART OF PREVIOUS ADDENDUM PROCESS FOR PROJECT'S FIRST BID IN OCTOBER 2022. PREVIOUS REVISION CLOUDS REMAIN FOR CURRENT BIDDER'S CONVENIENCE. NEW ADDENDUM ITEMS AND REVISION CLOUDS WILL BE LABELED AND DATED IN ACCORDANCE WITH THE RE-BID PROCESS.

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
1	N/A	FIRST BID ADD., SEE (*) NOTE			

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2375 Jordan Avenue #7, Juneau, AK 99801
Phone: 907-789-3350, License: AECL1010

DESIGN: MGM CHECKED: MGM SCALE:
DRAWN: JRW APPROVED: MGM

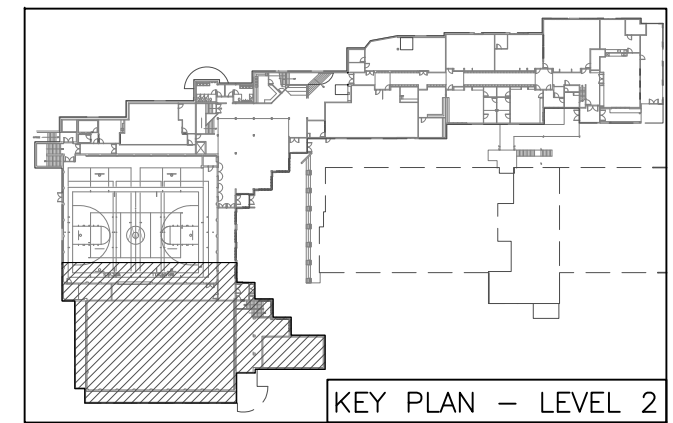


**CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE
SCHOOL FIRE ALARM REPLACEMENT**

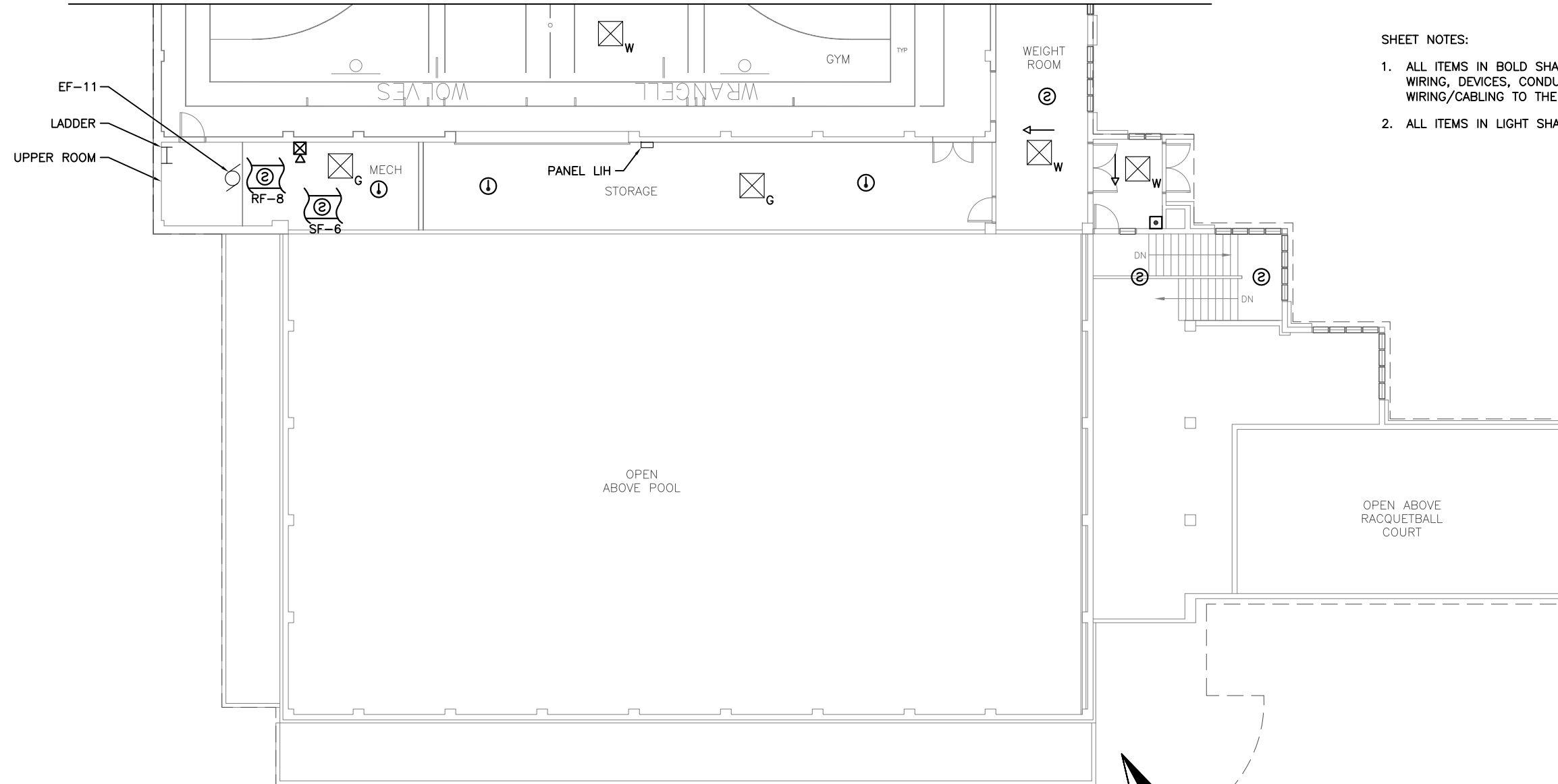
SHEET TITLE:
**HIGH SCHOOL - LEVEL 1 -
FIRE ALARM DEMOLITION**

MEG PROJECT NO.: 140-05 DWG. FILE:

E4
SHEET
4 OF 23



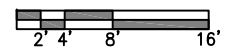
MATCHLINE, SEE SHEET E6



SHEET NOTES:

1. ALL ITEMS IN BOLD SHALL BE REMOVED IN THEIR ENTIRETY. THIS INCLUDES WIRING, DEVICES, CONDUIT/RACEWAY, JUNCTION BOXES AND ALL ASSOCIATED WIRING/CABLING TO THE EXTENT POSSIBLE.
2. ALL ITEMS IN LIGHT SHADE ARE TO REMAIN AND SHALL BE PROTECTED.

① HIGH SCHOOL FIRE ALARM - DEMOLITION
LEVEL 2 SOUTH



RE-BID
11/22/22

(* NOTE: REVISIONS MARKED ON THIS SHEET WITH AN ASTERISK (*) WERE PART OF PREVIOUS ADDENDUM PROCESS FOR PROJECT'S FIRST BID IN OCTOBER 2022. PREVIOUS REVISION CLOUDS REMAIN FOR CURRENT BIDDER'S CONVENIENCE. NEW ADDENDUM ITEMS AND REVISION CLOUDS WILL BE LABELED AND DATED IN ACCORDANCE WITH THE RE-BID PROCESS.

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
△	N/A	FIRST BID ADD., SEE (*) NOTE			

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2375 Jordan Avenue #7, Juneau, AK 99801
Phone: 907-789-3350, License: AECL1010

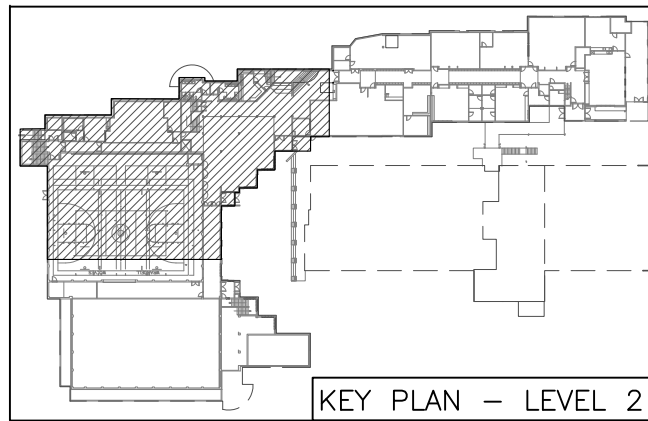
DESIGN: MGM CHECKED: MGM SCALE:
DRAWN: JRW APPROVED: MGM

STATE OF ALASKA
49th
Mark G. Morris
NOV 22, 2022
No. EE 8613
REGISTERED PROFESSIONAL ENGINEER
DATE: 11/22/22

CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
HIGH SCHOOL - LEVEL 2 SOUTH - FIRE ALARM DEMOLITION
MEG PROJECT NO.: 140-05 DWG. FILE:

E5
SHEET 5 OF 23



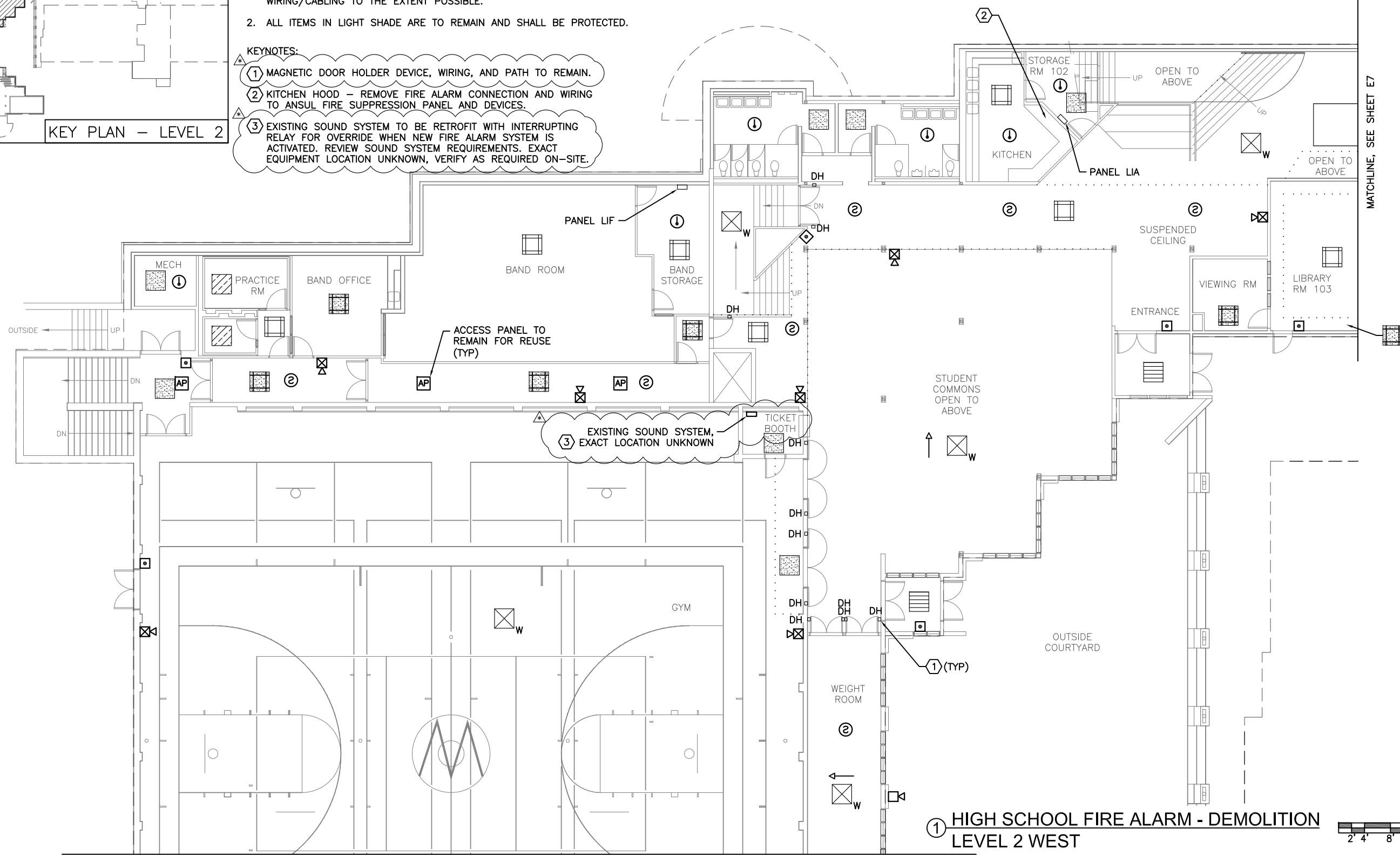
KEY PLAN - LEVEL 2

SHEET NOTES:

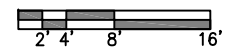
1. ALL ITEMS IN BOLD SHALL BE REMOVED IN THEIR ENTIRETY. THIS INCLUDES WIRING, DEVICES, CONDUIT/RACEWAY, JUNCTION BOXES AND ALL ASSOCIATED WIRING/CABLING TO THE EXTENT POSSIBLE.
2. ALL ITEMS IN LIGHT SHADE ARE TO REMAIN AND SHALL BE PROTECTED.

KEYNOTES:

- ① MAGNETIC DOOR HOLDER DEVICE, WIRING, AND PATH TO REMAIN.
- ② KITCHEN HOOD - REMOVE FIRE ALARM CONNECTION AND WIRING TO ANSUL FIRE SUPPRESSION PANEL AND DEVICES.
- ③ EXISTING SOUND SYSTEM TO BE RETROFIT WITH INTERRUPTING RELAY FOR OVERRIDE WHEN NEW FIRE ALARM SYSTEM IS ACTIVATED. REVIEW SOUND SYSTEM REQUIREMENTS. EXACT EQUIPMENT LOCATION UNKNOWN, VERIFY AS REQUIRED ON-SITE.



① HIGH SCHOOL FIRE ALARM - DEMOLITION
LEVEL 2 WEST



MATCHLINE, SEE SHEET E5



RE-BID
11/22/22

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Phone: 907-789-3350, License: AECL1010

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DRAWN: JRW APPROVED: MGM

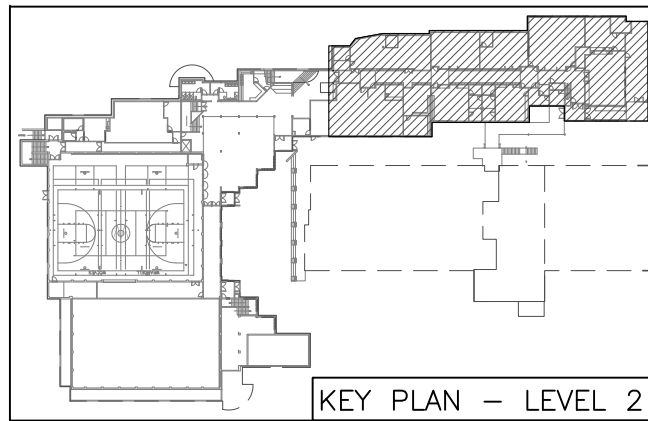
STATE OF ALASKA
49th
Mark G. Morris
NOV 22, 2022
No. EE 8613
REGISTERED PROFESSIONAL ENGINEER
DATE: 11/22/22

CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
HIGH SCHOOL - LEVEL 2 WEST - FIRE ALARM DEMOLITION

MEG PROJECT NO.: 140-05 DWG. FILE:

E6
SHEET 6 OF 23

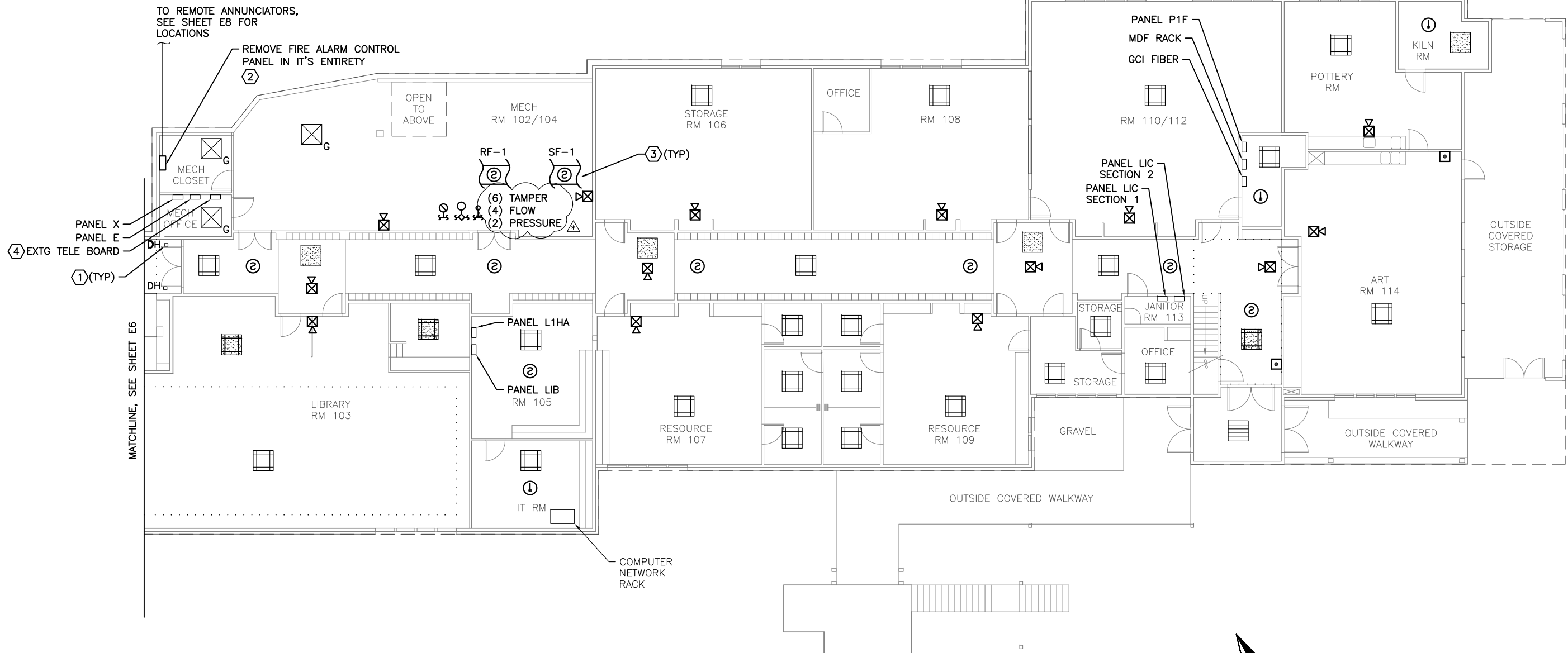


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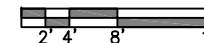
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2. ALL ITEMS IN LIGHT SHADE ARE TO REMAIN AND SHALL BE PROTECTED.

KEYNOTES:

- 1 MAGNETIC DOOR HOLDER DEVICE, WIRING, AND PATH TO REMAIN.
- 2 EXTEND EXISTING 120V, 20A CIRCUITS TO NEW FIRE ALARM PANEL.
- 3 REMOVE DUCT DETECTOR, RELAY, WIRING, AND ASSOCIATED CIRCUIT INTERFACE MODULE
- 4 TELEPHONE LINES TO EXISTING FIRE ALARM PANEL TO BE REESTABLISHED AT NEW PANEL.



**1 HIGH SCHOOL FIRE ALARM - DEMOLITION
LEVEL 2 EAST**



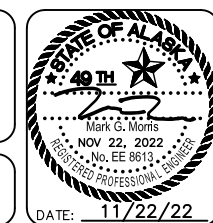
**RE-BID
11/22/22**

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REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
1	N/A	FIRST BID ADD., SEE (*) NOTE			

MORRIS ENGINEERING GROUP INC
 2375 Jordan Avenue #7, Juneau, AK 99801
 Phone: 907-789-3350, License: AECL1010

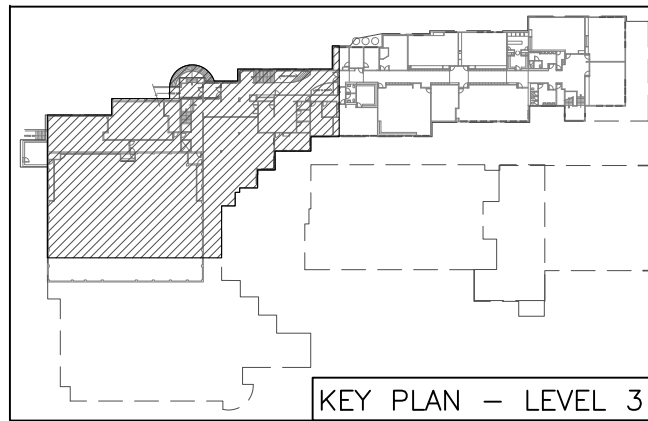
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**CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE
SCHOOL FIRE ALARM REPLACEMENT**

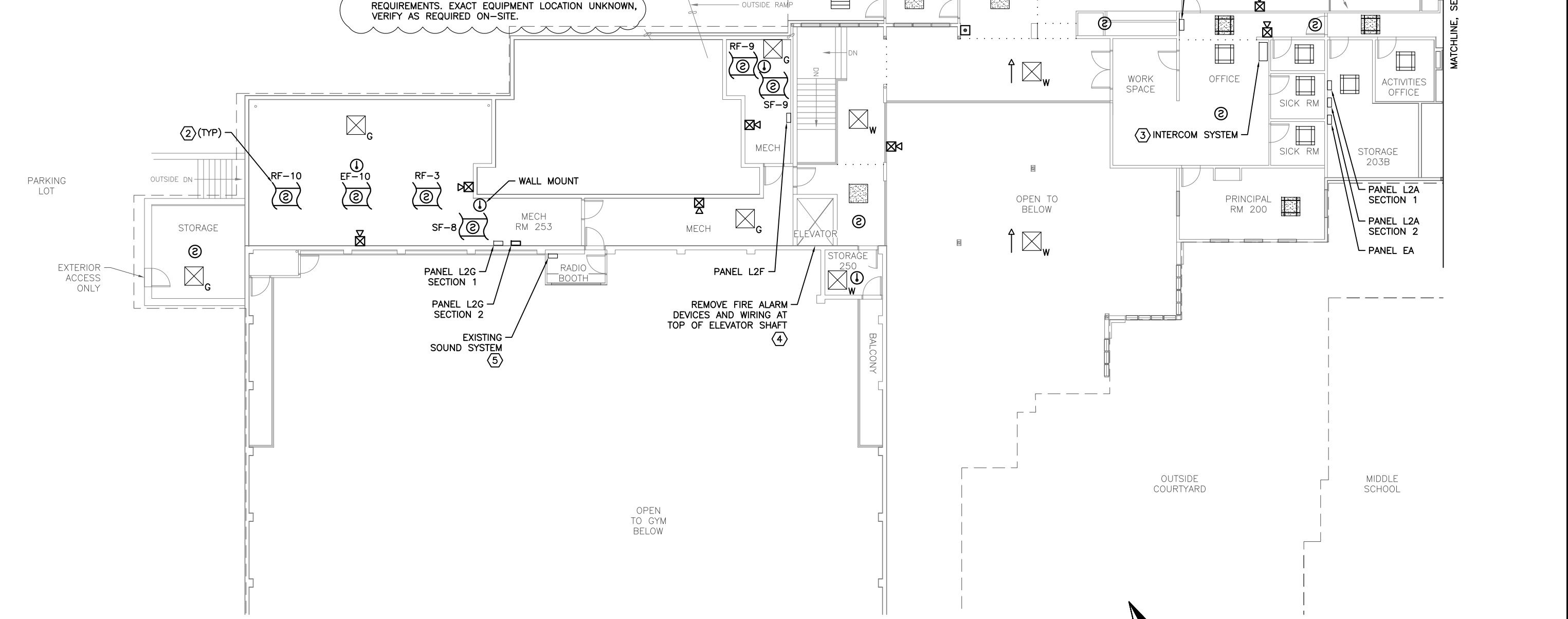
SHEET TITLE:
**HIGH SCHOOL - LEVEL 2 EAST -
FIRE ALARM DEMOLITION**

MEG PROJECT NO.: 140-05 DWG. FILE:



- KEYNOTE:**
- ① MAGNETIC DOOR HOLDER DEVICE, WIRING, AND PATH TO REMAIN.
 - ② REMOVE DUCT DETECTOR, RELAY, WIRING, AND ASSOCIATED CIRCUIT INTERFACE MODULE.
 - ③ EXISTING INTERCOM TO BE RETROFIT WITH INTERRUPTING RELAY FOR OVERRIDE WHEN NEW FIRE ALARM SYSTEM IS ACTIVATED. REVIEW INTERCOM SYSTEM REQUIREMENTS.
 - ④ ELEVATOR SHAFT WORK SHALL BE COORDINATED WITH SEPARATE ELEVATOR REPLACEMENT CONTRACT WORK.
 - ⑤ EXISTING SOUND SYSTEM TO BE RETROFIT WITH INTERRUPTING RELAY FOR OVERRIDE WHEN NEW FIRE ALARM SYSTEM IS ACTIVATED. REVIEW SOUND SYSTEM REQUIREMENTS. EXACT EQUIPMENT LOCATION UNKNOWN, VERIFY AS REQUIRED ON-SITE.

- SHEET NOTES:**
- 1. ALL ITEMS IN BOLD SHALL BE REMOVED IN THEIR ENTIRETY. THIS INCLUDES WIRING, DEVICES, CONDUIT/RACEWAY, JUNCTION BOXES AND ALL ASSOCIATED WIRING/CABLING TO THE EXTENT POSSIBLE.
 - 2. ALL ITEMS IN LIGHT SHADE ARE TO REMAIN AND SHALL BE PROTECTED.



① HIGH SCHOOL FIRE ALARM - DEMOLITION
LEVEL 3 WEST



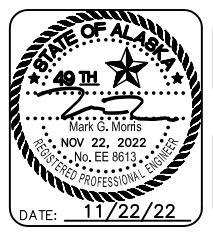
RE-BID
11/22/22

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REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
△	N/A	FIRST BID ADD., SEE (*) NOTE			

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2375 Jordan Avenue #7, Juneau, AK 99801
Phone: 907-789-3350, License: AECL1010

DESIGN: MGM CHECKED: MGM SCALE:
DRAWN: JRW APPROVED: MGM

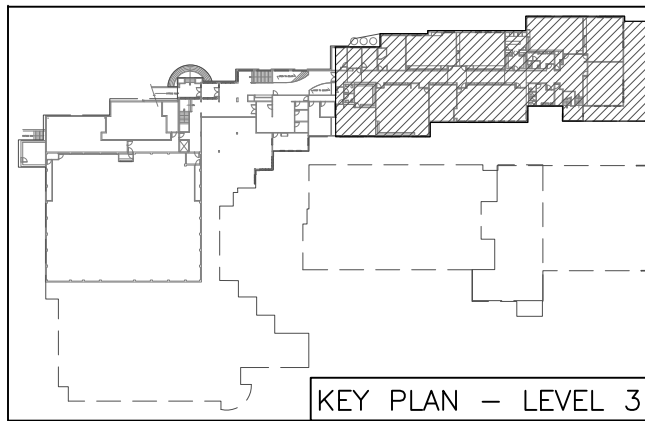


CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
HIGH SCHOOL - LEVEL 3 WEST - FIRE ALARM DEMOLITION

MEG PROJECT NO.: 140-05 DWG. FILE:

E8
SHEET 8 OF 23

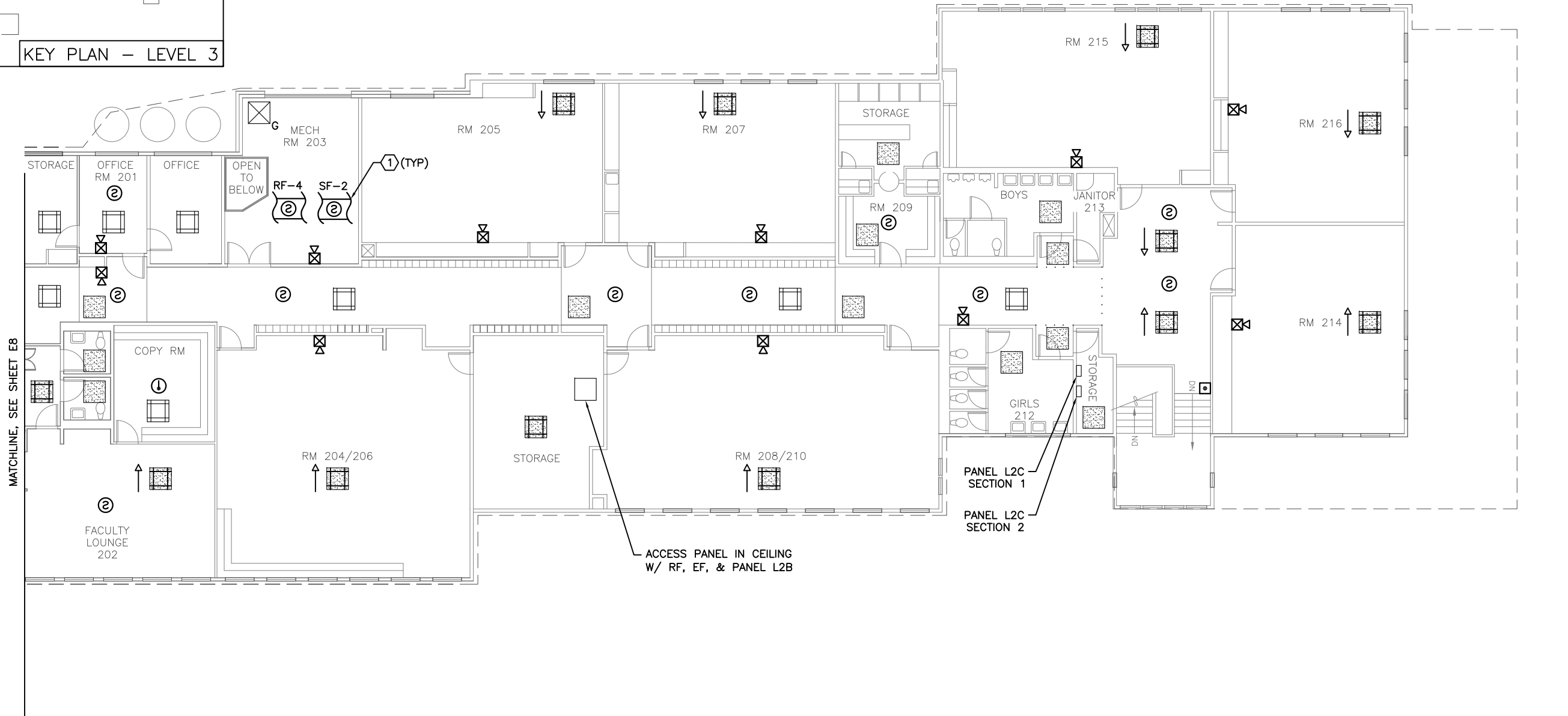


SHEET NOTES:

1. ALL ITEMS IN BOLD SHALL BE REMOVED IN THEIR ENTIRETY. THIS INCLUDES WIRING, DEVICES, CONDUIT/RACEWAY, JUNCTION BOXES AND ALL ASSOCIATED WIRING/CABLING TO THE EXTENT POSSIBLE.
2. ALL ITEMS IN LIGHT SHADE ARE TO REMAIN AND SHALL BE PROTECTED.

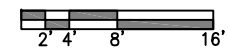
KEYNOTE:

- ① REMOVE DUCT DETECTOR, RELAY, WIRING, AND ASSOCIATED CIRCUIT INTERFACE MODULE.



MATCHLINE, SEE SHEET E8

① HIGH SCHOOL FIRE ALARM - DEMOLITION
LEVEL 3 EAST



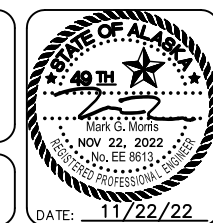
RE-BID
11/22/22

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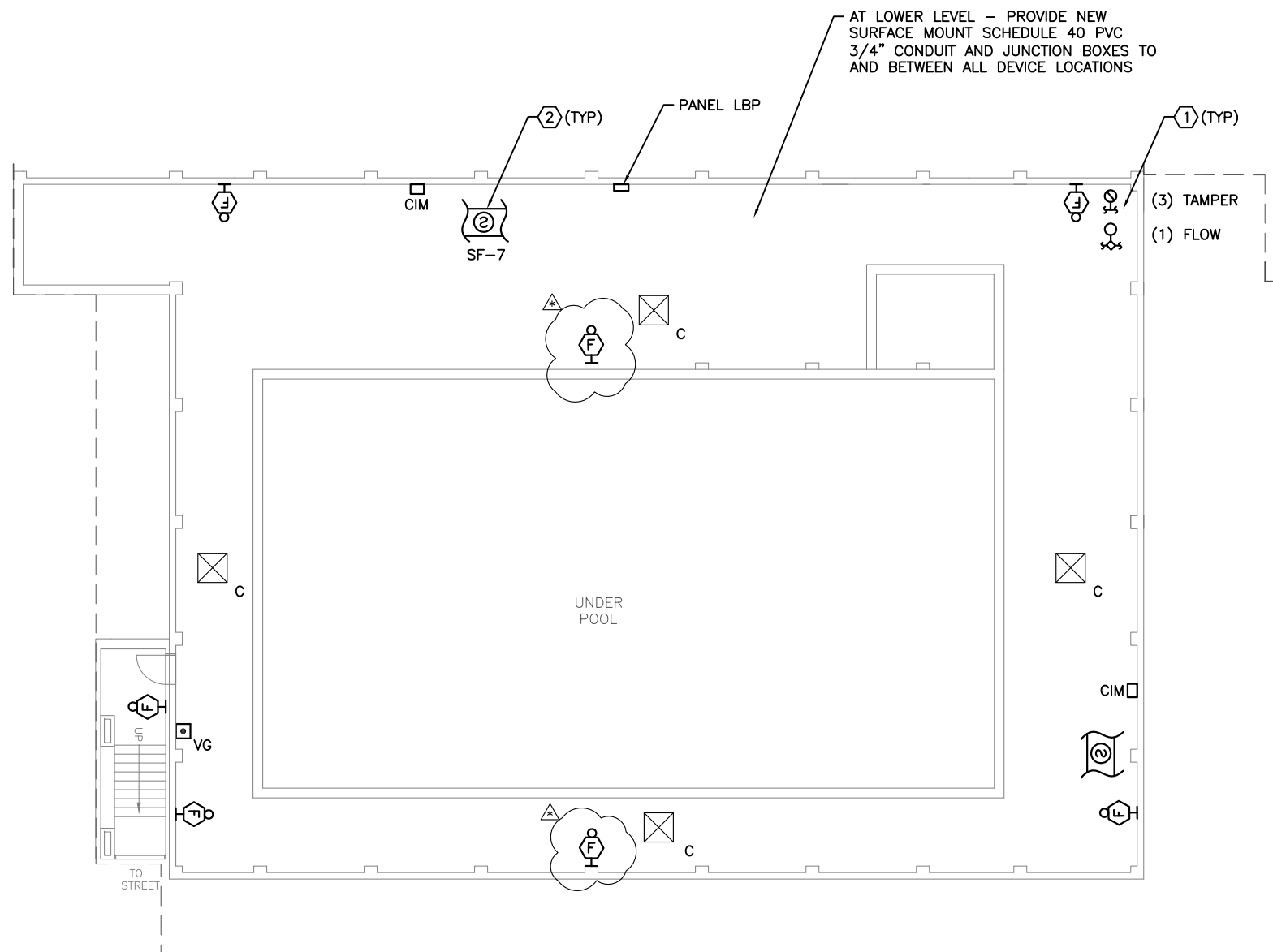
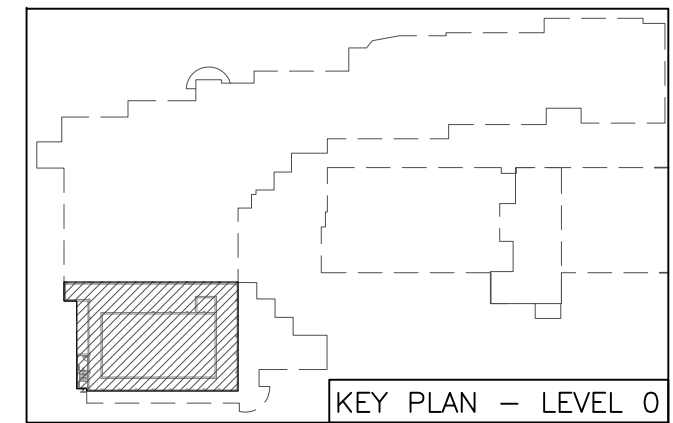
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CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
HIGH SCHOOL - LEVEL 3 EAST - FIRE ALARM DEMOLITION

MEG PROJECT NO.: 140-05 DWG. FILE:



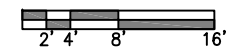
SHEET NOTES:

1. IN FINISHED SPACES, NEW BOXES SHALL BE CUT IN AND RECESSED WHERE POSSIBLE. MAKE EVERY EFFORT TO CONCEAL NEW RACEWAYS. IF NOT PHYSICALLY POSSIBLE/PRACTICAL TO CONCEAL NEW RACEWAYS OR RECESS NEW BOXES, PROVIDE SURFACE MOUNT BOXES AND CONDUIT. SEE SHEET E1 FOR ADDITIONAL INFORMATION.
2. IN UNFINISHED SPACES (MECHANICAL ROOMS, UTILITY ROOMS, SIMILAR AREAS) - PROVIDE SURFACE MOUNT, RED, 3/4" EMT CONDUIT AND BOXES WITH RED COLORED LIDS UNLESS NOTED OTHERWISE FOR A SPECIFIC AREA.

KEYNOTES:

- ① PROVIDE NEW SPRINKLER FLOW/TAMPER SWITCHES AND NEW WIRING/CONNECTIONS. CONNECT TO FIRE ALARM SYSTEM.
- ② PROVIDE NEW DUCT DETECTOR AND RELAY. CONNECT TO FIRE ALARM SYSTEM WITH NEW WIRING. PROVIDE NEW CIRCUIT INTERFACE MODULE(S) AND CONNECT TO DUCT DETECTOR ASSEMBLY. VERIFY EXACT QUANTITY.

① POOL FIRE ALARM
LEVEL 0



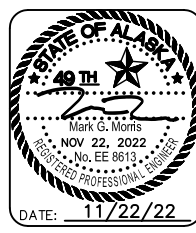
**RE-BID
11/22/22**

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REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
△	N/A	FIRST BID ADD., SEE (*) NOTE			

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 2375 Jordan Avenue #7, Juneau, AK 99801
 Phone: 907-789-3350, License: AECL1010

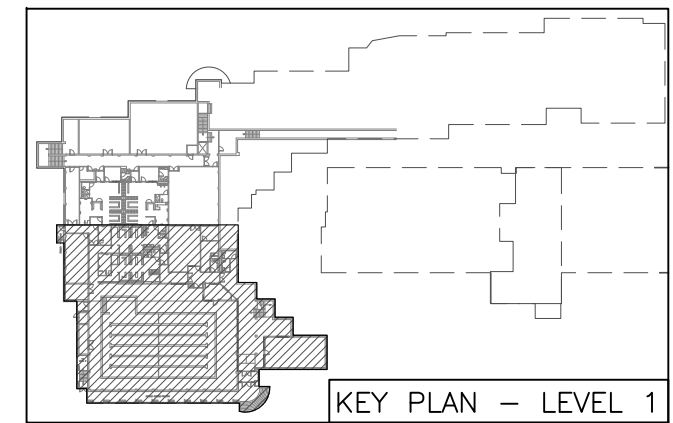
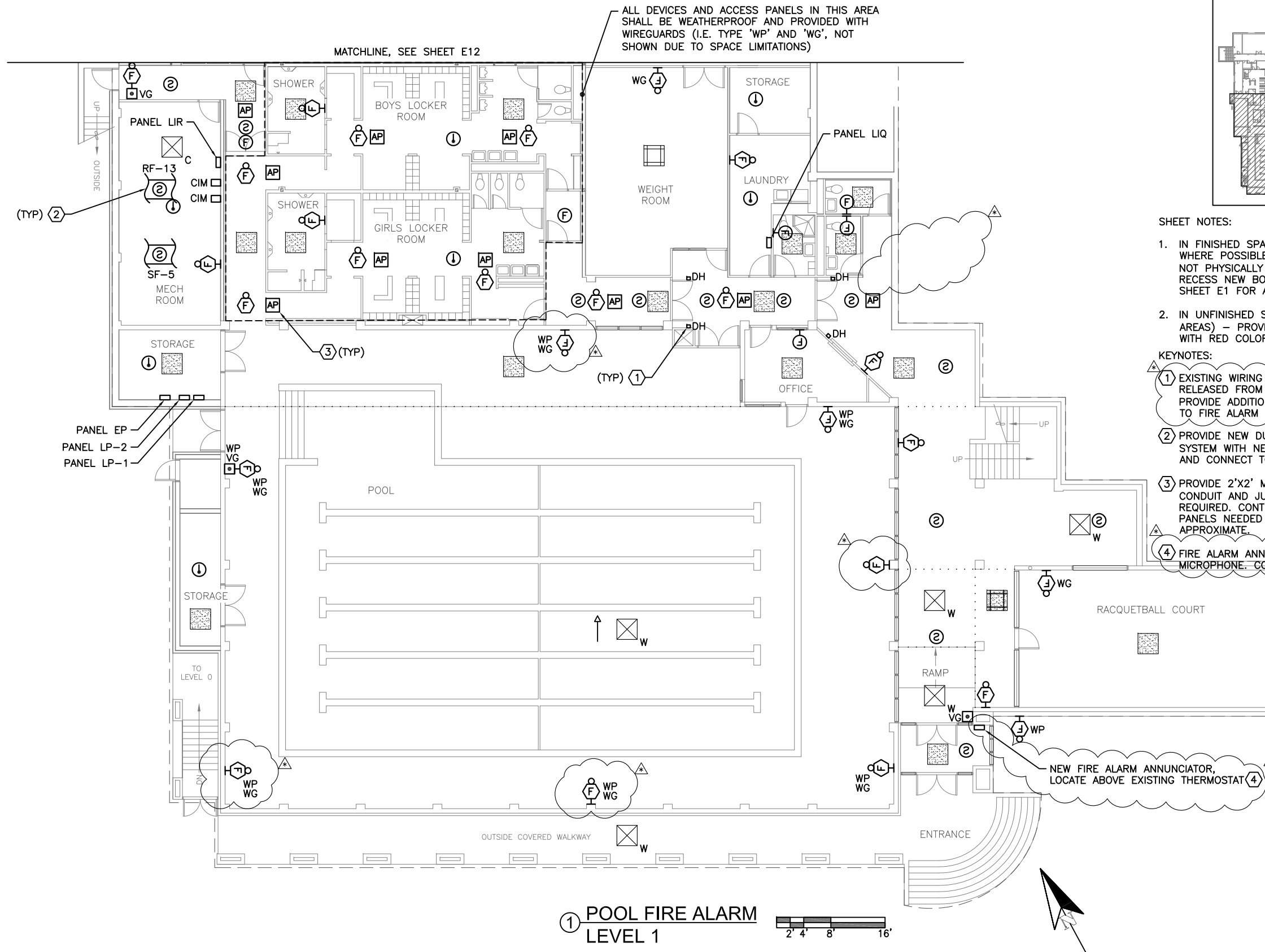
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**CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE
SCHOOL FIRE ALARM REPLACEMENT**

SHEET TITLE:
**HIGH SCHOOL POOL - LEVEL 0 -
FIRE ALARM**

MEG PROJECT NO.: 140-05 DWG. FILE:



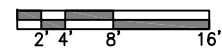
SHEET NOTES:

1. IN FINISHED SPACES, NEW BOXES SHALL BE CUT IN AND RECESSED WHERE POSSIBLE. MAKE EVERY EFFORT TO CONCEAL NEW RACEWAYS. IF NOT PHYSICALLY POSSIBLE/PRACTICAL TO CONCEAL NEW RACEWAYS OR RECESS NEW BOXES, PROVIDE SURFACE MOUNT BOXES AND CONDUIT. SEE SHEET E1 FOR ADDITIONAL INFORMATION.
2. IN UNFINISHED SPACES (MECHANICAL ROOMS, UTILITY ROOMS, SIMILAR AREAS) - PROVIDE SURFACE MOUNT, RED, 3/4" EMT CONDUIT AND BOXES WITH RED COLORED LIDS UNLESS NOTED OTHERWISE FOR A SPECIFIC AREA.

KEYNOTES:

- ① EXISTING WIRING TO DOOR HOLDERS TO REMAIN. DOORS SHALL BE RELEASED FROM FIRE ALARM PANEL. PROVIDE NEW WIRING AS NECESSARY. PROVIDE ADDITIONAL RELAY(S) AND ASSOCIATED HARDWARE FOR CONNECTION TO FIRE ALARM SYSTEM.
- ② PROVIDE NEW DUCT DETECTOR AND RELAY. CONNECT TO FIRE ALARM SYSTEM WITH NEW WIRING. PROVIDE NEW CIRCUIT INTERFACE MODULE(S) AND CONNECT TO DUCT DETECTOR ASSEMBLY. VERIFY EXACT QUANTITY.
- ③ PROVIDE 2'X2' METAL HINGED CEILING ACCESS PANEL FOR INSTALLATION OF CONDUIT AND JUNCTION BOXES ABOVE DRYWALL/IN-ACCESSIBLE CEILING, AS REQUIRED. CONTRACTOR SHALL VERIFY ACTUAL QUANTITY AND LOCATION OF PANELS NEEDED THROUGHOUT BUILDING. LOCATIONS AND QUANTITIES ARE APPROXIMATE.
- ④ FIRE ALARM ANNUNCIATOR PANEL WITH FIREFIGHTER'S ONE-WAY MICROPHONE. CONNECT TO FIRE ALARM SYSTEM.

① POOL FIRE ALARM
LEVEL 1



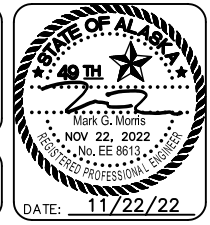
**RE-BID
11/22/22**

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REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
△	N/A	FIRST BID ADD., SEE (*) NOTE			



DESIGN: MGM CHECKED: MGM SCALE:
DRAWN: JRW APPROVED: MGM

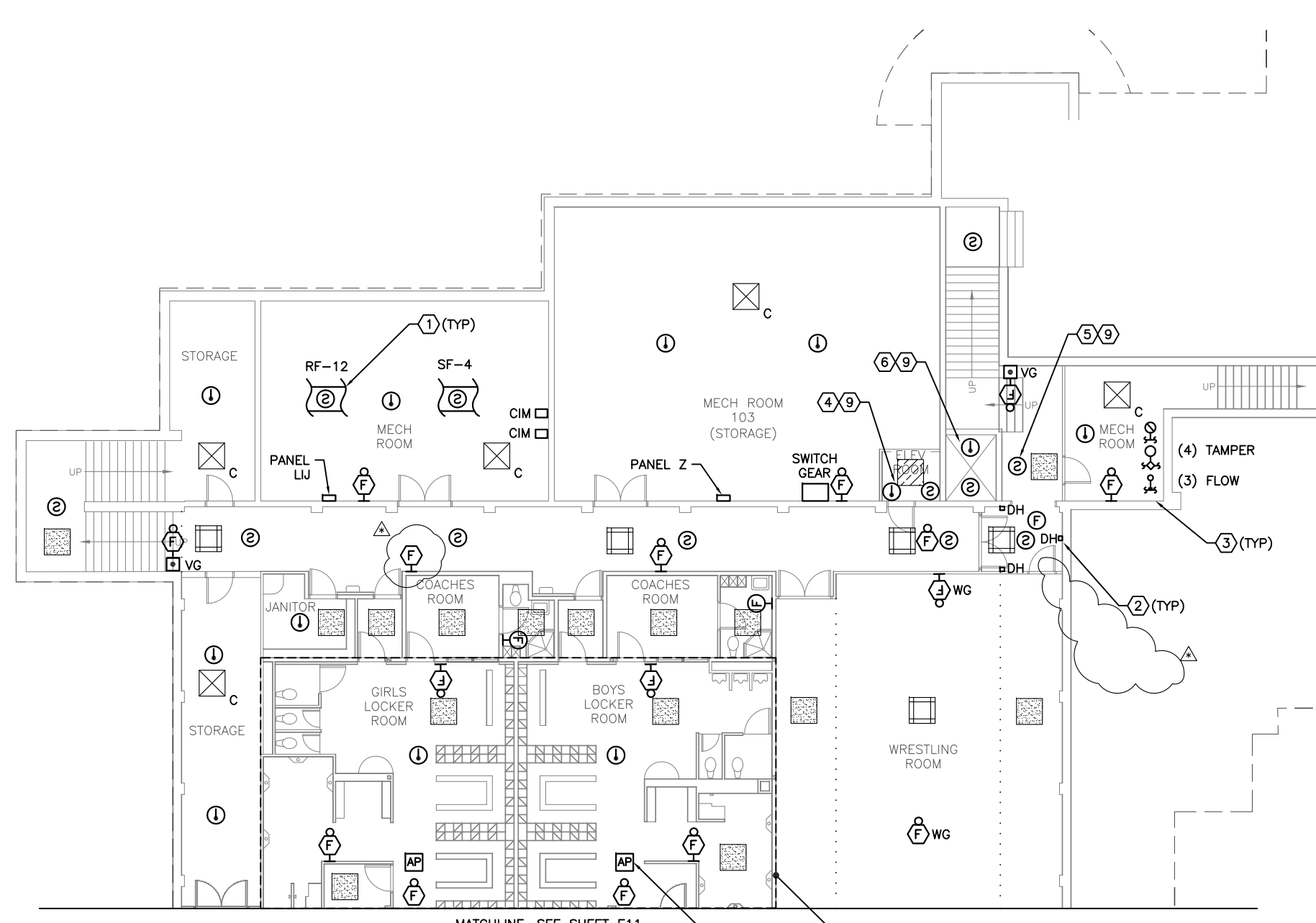
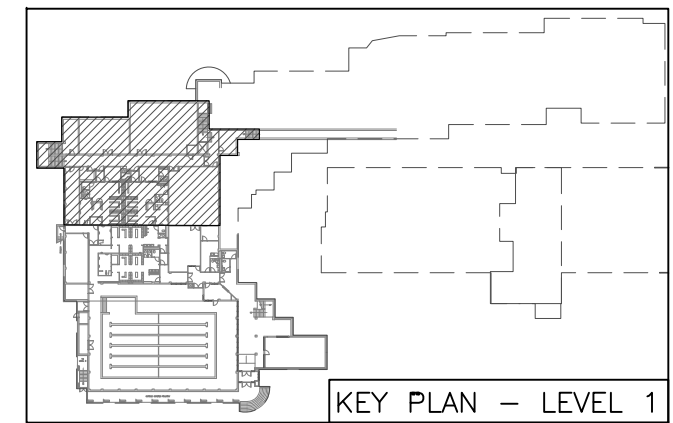


**CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE
SCHOOL FIRE ALARM REPLACEMENT**

SHEET TITLE:
**HIGH SCHOOL POOL - LEVEL 1 -
FIRE ALARM**

MEG PROJECT NO.: 140-05 DWG. FILE:

E11
SHEET
11 OF 23



SHEET NOTES:

1. IN FINISHED SPACES, NEW BOXES SHALL BE CUT IN AND RECESSED WHERE POSSIBLE. MAKE EVERY EFFORT TO CONCEAL NEW RACEWAYS. IF NOT PHYSICALLY POSSIBLE/PRACTICAL TO CONCEAL NEW RACEWAYS OR RECESS NEW BOXES, PROVIDE SURFACE MOUNT BOXES AND CONDUIT. SEE SHEET E1 FOR ADDITIONAL INFORMATION.
2. IN UNFINISHED SPACES (MECHANICAL ROOMS, UTILITY ROOMS, SIMILAR AREAS) - PROVIDE SURFACE MOUNT, RED, 3/4" EMT CONDUIT AND BOXES WITH RED COLORED LIDS UNLESS NOTED OTHERWISE FOR A SPECIFIC AREA.

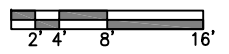
KEYNOTES:

- 1 PROVIDE NEW DUCT DETECTOR AND RELAY. CONNECT TO FIRE ALARM SYSTEM WITH NEW WIRING. PROVIDE NEW CIRCUIT INTERFACE MODULE(S) AND CONNECT TO DUCT DETECTOR ASSEMBLY. VERIFY EXACT QUANTITY.
- 2 EXISTING WIRING TO DOOR HOLDERS TO REMAIN. DOORS SHALL BE RELEASED FROM FIRE ALARM PANEL. PROVIDE NEW WIRING AS NECESSARY. PROVIDE ADDITIONAL RELAY(S) AND ASSOCIATED HARDWARE FOR CONNECTION TO FIRE ALARM SYSTEM.
- 3 PROVIDE NEW WIRING/CONNECTIONS TO EXISTING SPRINKLER FLOW/TAMPER SWITCHES. NUMBER INDICATES QUANTITY. CONNECT TO FIRE ALARM SYSTEM.
- 4 PROVIDE NEW FIRE ALARM DEVICES IN ELEVATOR EQUIPMENT ROOM.
- 5 CONNECT DEVICE FOR ELEVATOR RECALL.
- 6 PROVIDE NEW FIRE ALARM DEVICES AT HOISTWAY PIT AND ALSO AT TOP OF SHAFT.
- 7 PROVIDE 2'X2' METAL HINGED CEILING ACCESS PANEL FOR INSTALLATION OF CONDUIT AND JUNCTION BOXES ABOVE DRYWALL/IN-ACCESSIBLE CEILING, AS REQUIRED. CONTRACTOR SHALL VERIFY ACTUAL QUANTITY AND LOCATION OF PANELS NEEDED THROUGHOUT BUILDING. LOCATIONS AND QUANTITIES ARE APPROXIMATE.
- 8 NOT USED
- 9 ELEVATOR WORK TO OCCUR IN CONJUNCTION WITH SEPARATE ELEVATOR REPLACEMENT PROJECT. SEE DETAIL - SHEET E23. CONTRACTOR SHALL PROVIDE ALL FIRE ALARM DEVICES AS NOTED IN DETAIL, FOR CONNECTION TO THE NEW ELEVATOR CONTROLLER AND ASSOCIATED ITEMS.

MATCHLINE, SEE SHEET E11

ALL DEVICES AND ACCESS PANELS IN THIS AREA SHALL BE WEATHERPROOF AND PROVIDED WITH WIREGUARDS (I.E. TYPE 'WP' AND 'WG', NOT SHOWN DUE TO SPACE LIMITATIONS)

1 HIGH SCHOOL FIRE ALARM LEVEL 1



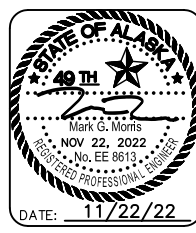
RE-BID 11/22/22

(* NOTE: REVISIONS MARKED ON THIS SHEET WITH AN ASTERISK (*) WERE PART OF PREVIOUS ADDENDUM PROCESS FOR PROJECT'S FIRST BID IN OCTOBER 2022. PREVIOUS REVISION CLOUDS REMAIN FOR CURRENT BIDDER'S CONVENIENCE. NEW ADDENDUM ITEMS AND REVISION CLOUDS WILL BE LABELED AND DATED IN ACCORDANCE WITH THE RE-BID PROCESS.

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
1	N/A	FIRST BID ADD., SEE (*) NOTE			

MORRIS ENGINEERING GROUP
 2375 Jordan Avenue #7, Juneau, AK 99801
 Phone: 907-789-3350, License: AECL1010

DESIGN: MGM CHECKED: MGM SCALE:
 DRAWN: JRW APPROVED: MGM

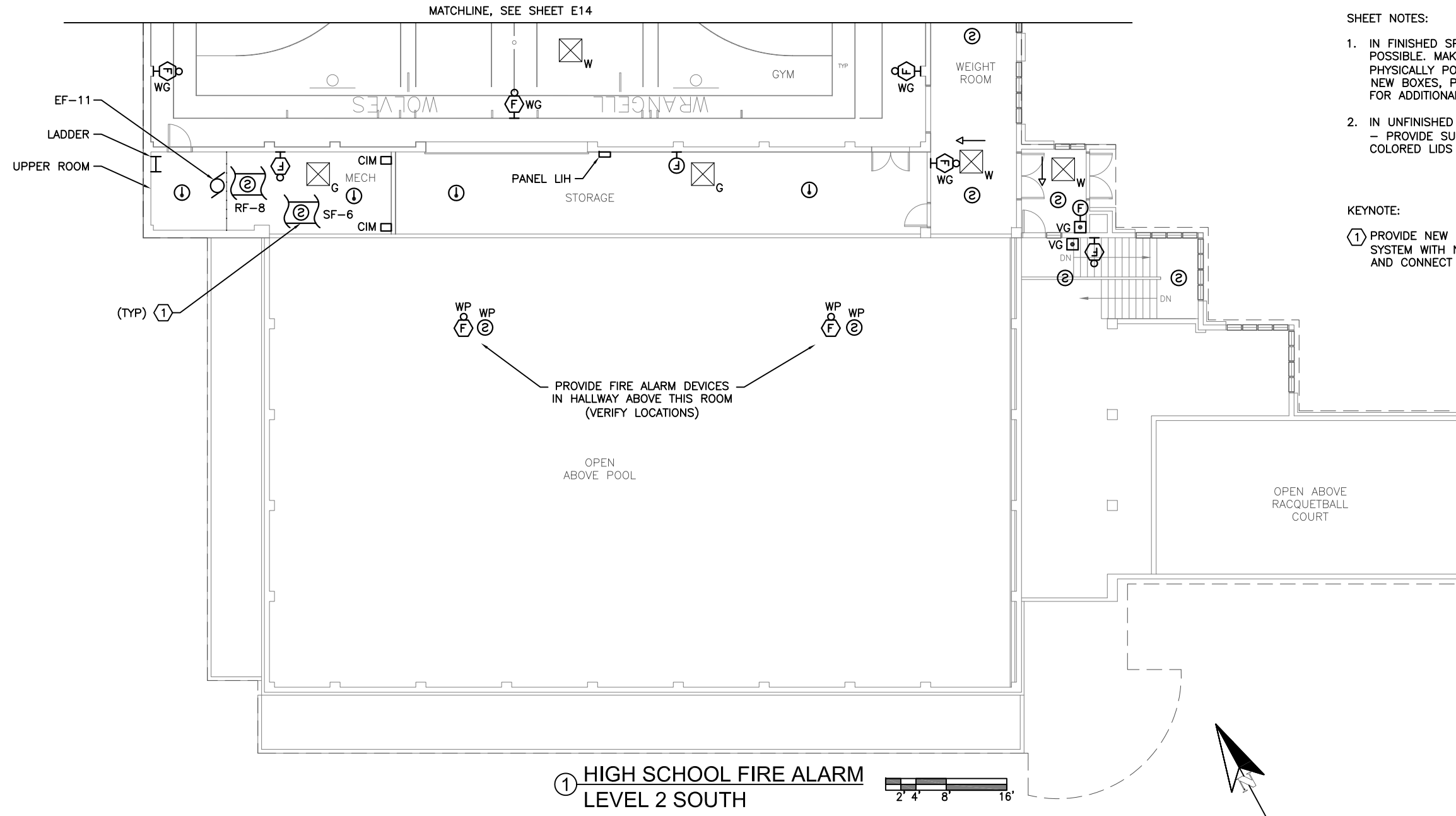
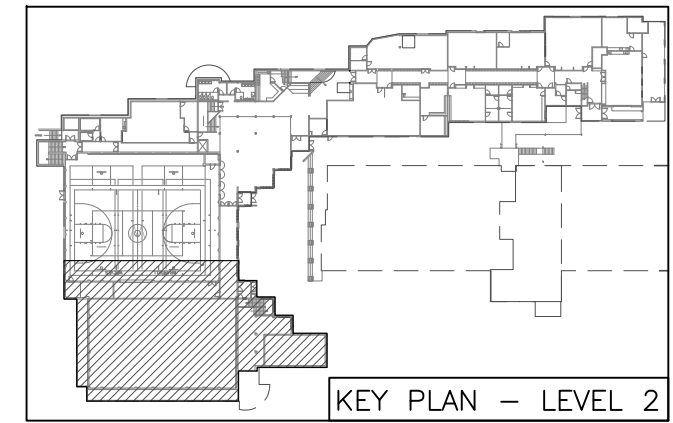


**CITY AND BOROUGH OF WRANGELL, ALASKA
 WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT**

SHEET TITLE: **HIGH SCHOOL - LEVEL 1 - FIRE ALARM**

MEG PROJECT NO.: 140-05 DWG. FILE:

E12
 SHEET 12 OF 23



SHEET NOTES:

1. IN FINISHED SPACES, NEW BOXES SHALL BE CUT IN AND RECESSED WHERE POSSIBLE. MAKE EVERY EFFORT TO CONCEAL NEW RACEWAYS. IF NOT PHYSICALLY POSSIBLE/PRACTICAL TO CONCEAL NEW RACEWAYS OR RECESS NEW BOXES, PROVIDE SURFACE MOUNT BOXES AND CONDUIT. SEE SHEET E1 FOR ADDITIONAL INFORMATION.
2. IN UNFINISHED SPACES (MECHANICAL ROOMS, UTILITY ROOMS, SIMILAR AREAS) - PROVIDE SURFACE MOUNT, RED, 3/4" EMT CONDUIT AND BOXES WITH RED COLORED LIDS UNLESS NOTED OTHERWISE FOR A SPECIFIC AREA.

KEYNOTE:

- ① PROVIDE NEW DUCT DETECTOR AND RELAY. CONNECT TO FIRE ALARM SYSTEM WITH NEW WIRING. PROVIDE NEW CIRCUIT INTERFACE MODULE(S) AND CONNECT TO DUCT DETECTOR ASSEMBLY. VERIFY EXACT QUANTITY.

① HIGH SCHOOL FIRE ALARM
LEVEL 2 SOUTH



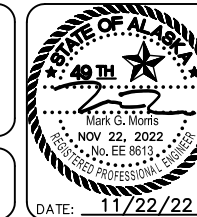
RE-BID
11/22/22

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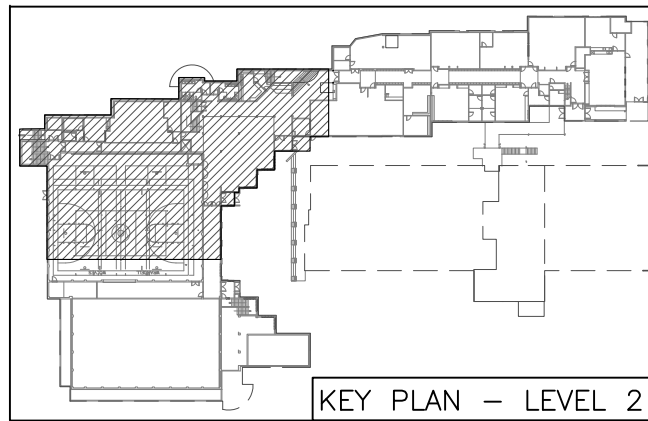
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CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
HIGH SCHOOL - LEVEL 2 SOUTH - FIRE ALARM
MEG PROJECT NO.: 140-05 DWG. FILE:

E13
SHEET
13 OF 23



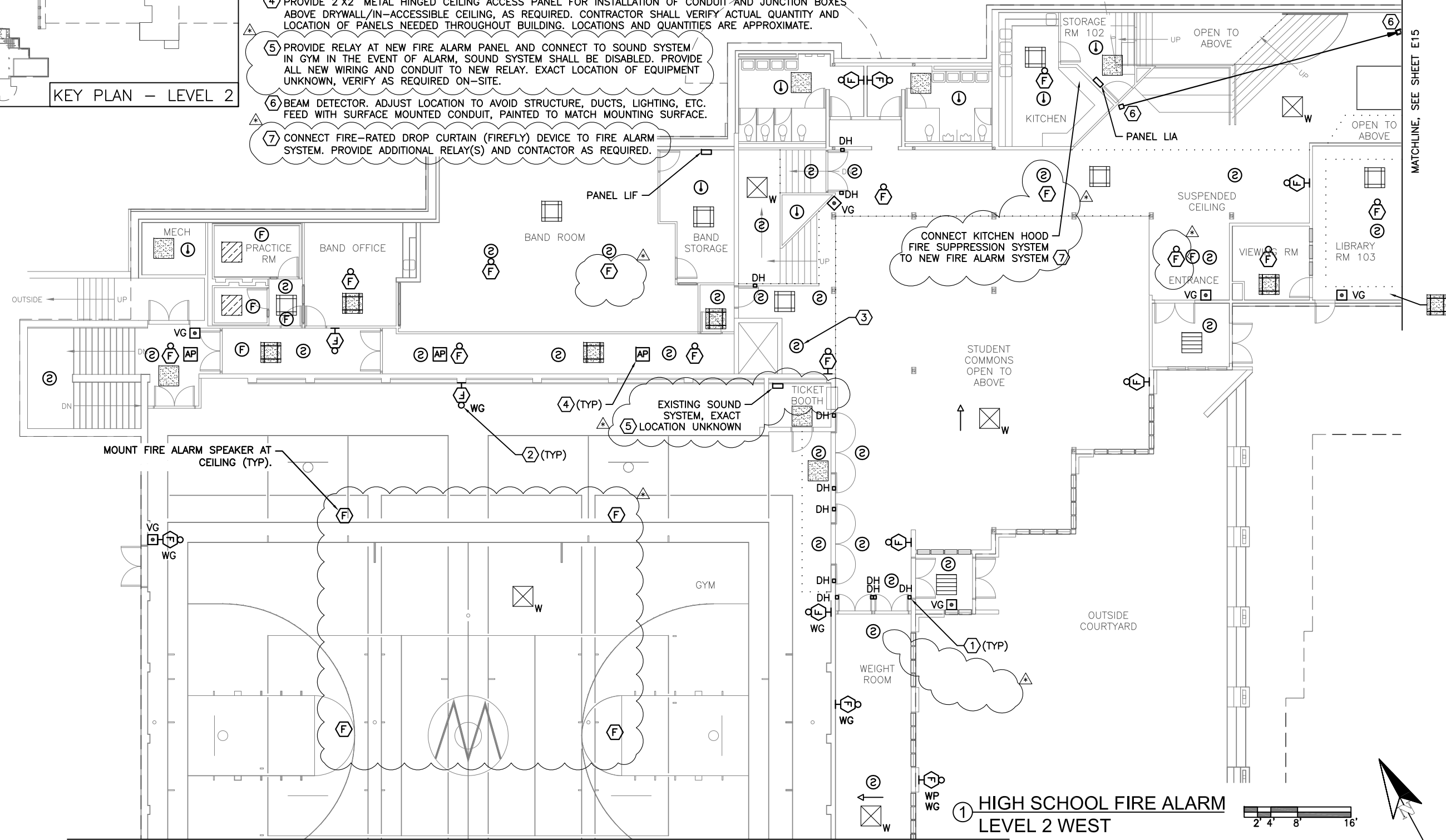
KEY PLAN - LEVEL 2

KEYNOTES:

- ① EXISTING WIRING TO DOOR HOLDERS TO REMAIN. DOORS SHALL BE RELEASED FROM FIRE ALARM PANEL. PROVIDE NEW WIRING AS NECESSARY. PROVIDE ADDITIONAL RELAY(S) AND ASSOCIATED HARDWARE FOR CONNECTION TO FIRE ALARM SYSTEM.
- ② LOCATE DEVICE 6 FEET ABOVE TOP OF HIGHEST BLEACHER ROW SEAT.
- ③ CONNECT DEVICE FOR ELEVATOR RECALL. WORK WILL BE IN CONJUNCTION WITH SEPARATE ELEVATOR REPLACEMENT PROJECT.
- ④ PROVIDE 2'X2' METAL HINGED CEILING ACCESS PANEL FOR INSTALLATION OF CONDUIT AND JUNCTION BOXES ABOVE DRYWALL/IN-ACCESSIBLE CEILING, AS REQUIRED. CONTRACTOR SHALL VERIFY ACTUAL QUANTITY AND LOCATION OF PANELS NEEDED THROUGHOUT BUILDING. LOCATIONS AND QUANTITIES ARE APPROXIMATE.
- ⑤ PROVIDE RELAY AT NEW FIRE ALARM PANEL AND CONNECT TO SOUND SYSTEM IN GYM IN THE EVENT OF ALARM, SOUND SYSTEM SHALL BE DISABLED. PROVIDE ALL NEW WIRING AND CONDUIT TO NEW RELAY. EXACT LOCATION OF EQUIPMENT UNKNOWN, VERIFY AS REQUIRED ON-SITE.
- ⑥ BEAM DETECTOR. ADJUST LOCATION TO AVOID STRUCTURE, DUCTS, LIGHTING, ETC. FEED WITH SURFACE MOUNTED CONDUIT, PAINTED TO MATCH MOUNTING SURFACE.
- ⑦ CONNECT FIRE-RATED DROP CURTAIN (FIREFLY) DEVICE TO FIRE ALARM SYSTEM. PROVIDE ADDITIONAL RELAY(S) AND CONTACTOR AS REQUIRED.

SHEET NOTES:

1. IN FINISHED SPACES, NEW BOXES SHALL BE CUT IN AND RECESSED WHERE POSSIBLE. MAKE EVERY EFFORT TO CONCEAL NEW RACEWAYS. IF NOT PHYSICALLY POSSIBLE/PRACTICAL TO CONCEAL NEW RACEWAYS OR RECESS NEW BOXES, PROVIDE SURFACE MOUNT BOXES AND CONDUIT. SEE SHEET E1 FOR ADDITIONAL INFORMATION.
2. IN UNFINISHED SPACES (MECHANICAL ROOMS, UTILITY ROOMS, SIMILAR AREAS) - PROVIDE SURFACE MOUNT, RED, 3/4" EMT CONDUIT AND BOXES WITH RED COLORED LIDS UNLESS NOTED OTHERWISE FOR A SPECIFIC AREA.



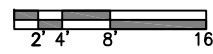
MATCHLINE, SEE SHEET E15

MOUNT FIRE ALARM SPEAKER AT CEILING (TYP).

EXISTING SOUND SYSTEM, EXACT LOCATION UNKNOWN

CONNECT KITCHEN HOOD FIRE SUPPRESSION SYSTEM TO NEW FIRE ALARM SYSTEM

① HIGH SCHOOL FIRE ALARM LEVEL 2 WEST



MATCHLINE, SEE SHEET E13



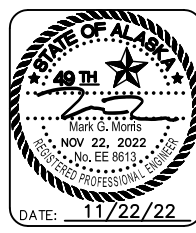
RE-BID
11/22/22

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MORRIS ENGINEERING GROUP INC.
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DESIGN: MGM CHECKED: MGM SCALE:
DRAWN: JRW APPROVED: MGM

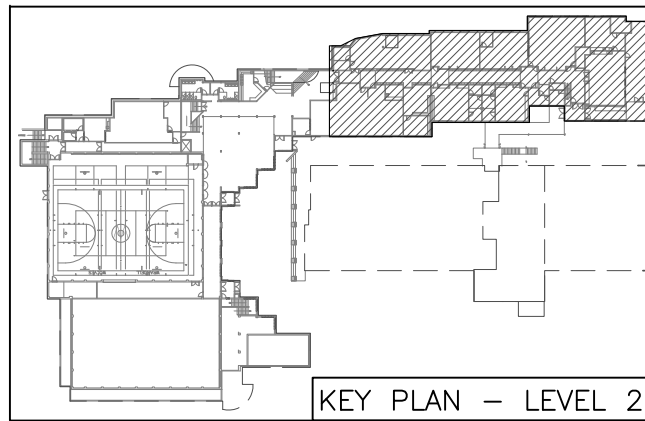


CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
HIGH SCHOOL - LEVEL 2 WEST - FIRE ALARM

MEG PROJECT NO.: 140-05 DWG. FILE:

E14
SHEET 14 OF 23

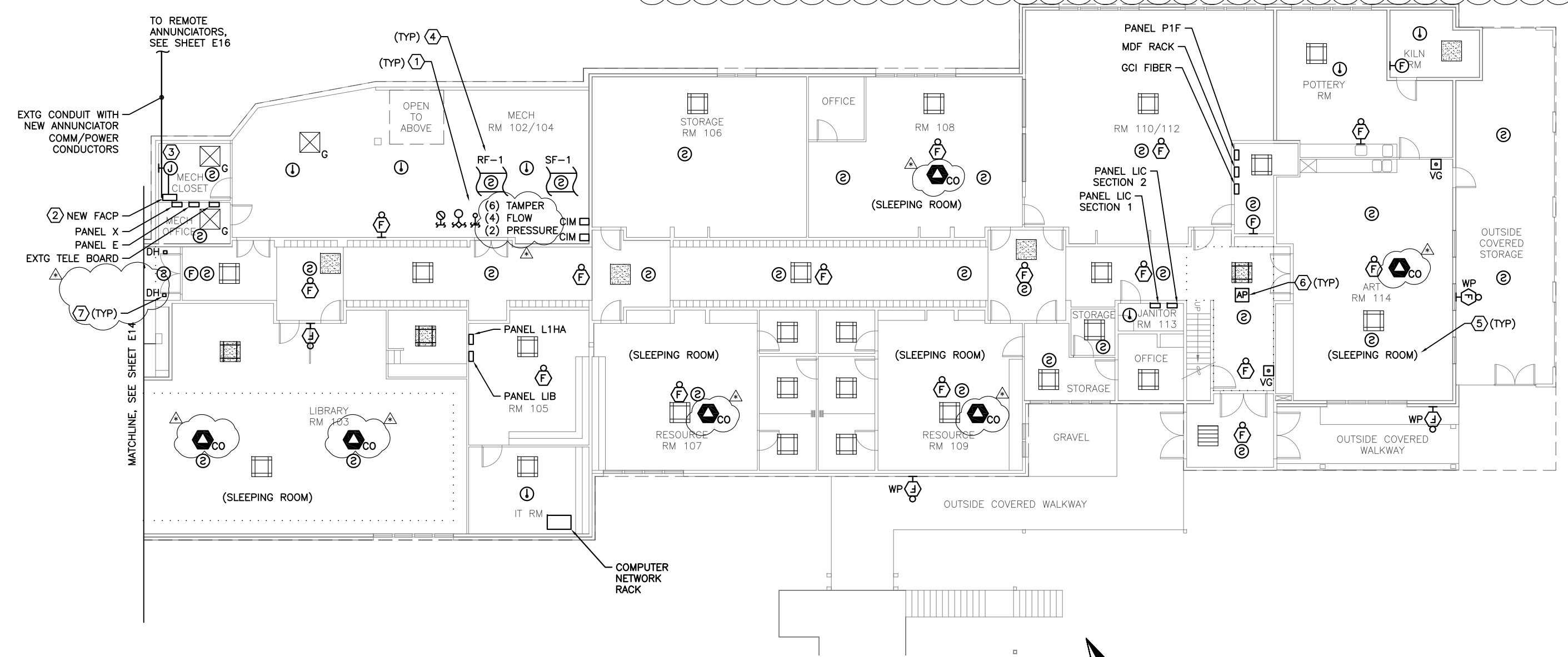


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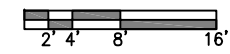
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2. IN UNFINISHED SPACES (MECHANICAL ROOMS, UTILITY ROOMS, SIMILAR AREAS) - PROVIDE SURFACE MOUNT, RED, 3/4" EMT CONDUIT AND BOXES WITH RED COLORED LIDS UNLESS NOTED OTHERWISE FOR A SPECIFIC AREA.

KEYNOTES:

- 1 PROVIDE NEW WIRING/CONNECTIONS TO EXISTING SPRINKLER FLOW/TAMPER SWITCHES. NUMBER INDICATES QUANTITY. CONNECT TO FIRE ALARM SYSTEM
- 2 NEW FIRE ALARM CONTROL PANEL WITH VOICE EVACUATION. TOP OF UNIT SHALL NOT BE MORE THAN 72" AFF. LOCATE NEXT TO EXISTING FIRE ALARM PANEL THAT IS BEING REMOVED. ROUTE (2) CAT 6 PLENUM CABLE TO TELECOM BOARD AND TERMINATE FOR EMERGENCY CALL-OUT. PROVIDE WITH ONE-WAY MICROPHONE. PROVIDE A SILENCE AND RESET BUTTON AT PANEL LOCATION TO SILENCE AND RESET BOTH THE MIDDLE SCHOOL FIRE ALARM PANEL AND THE HIGH SCHOOL FIRE ALARM PANEL.
- 3 PROVIDE A JUNCTION BOX AT EXISTING FACP LOCATION AND EXTEND POWER CIRCUIT FROM JUNCTION BOX TO NEW FACP IN 3/4" EMT CONDUIT. SEE SHEET E18 FOR MORE INFORMATION.
- 4 PROVIDE NEW DUCT DETECTOR AND RELAY. CONNECT TO FIRE ALARM SYSTEM WITH NEW WIRING. PROVIDE NEW CIRCUIT INTERFACE MODULE(S) AND CONNECT TO DUCT DETECTOR ASSEMBLY. VERIFY EXACT QUANTITY.
- 5 SLEEPING ROOM - UTILIZED FOR OVERNIGHT STAYS OF VISITING SCHOOLS FOR SCHOLASTIC EVENTS.
- 6 PROVIDE 2'X2' METAL HINGED CEILING ACCESS PANEL FOR INSTALLATION OF CONDUIT AND JUNCTION BOXES ABOVE DRYWALL/IN-ACCESSIBLE CEILING, AS REQUIRED. CONTRACTOR SHALL VERIFY ACTUAL QUANTITY AND LOCATION OF PANELS NEEDED THROUGHOUT BUILDING. LOCATIONS AND QUANTITIES ARE APPROXIMATE.
- 7 EXISTING WIRING TO DOOR HOLDERS TO REMAIN. DOORS SHALL BE RELEASED FROM FIRE ALARM PANEL. PROVIDE NEW WIRING AS NECESSARY. PROVIDE ADDITIONAL RELAY(S) AND ASSOCIATED HARDWARE FOR CONNECTION TO FIRE ALARM SYSTEM.



1 HIGH SCHOOL FIRE ALARM
LEVEL 2 EAST



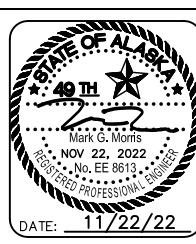
**RE-BID
11/22/22**

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MORRIS ENGINEERING GROUP
2375 Jordan Avenue #7, Juneau, AK 99801
Phone: 907-789-3350, License: AECL1010

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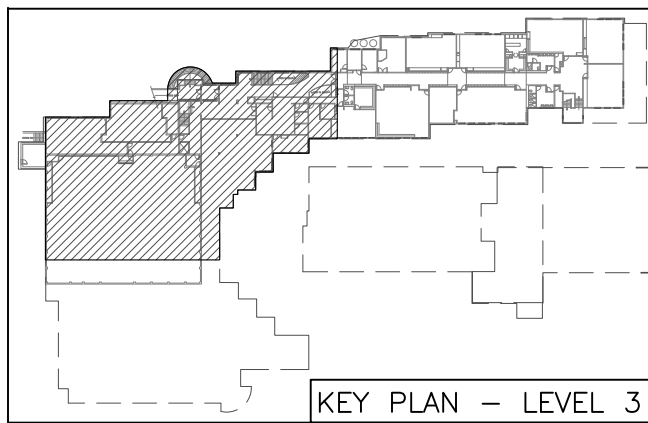


**CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE
SCHOOL FIRE ALARM REPLACEMENT**

SHEET TITLE:
**HIGH SCHOOL - LEVEL 2 EAST -
FIRE ALARM**

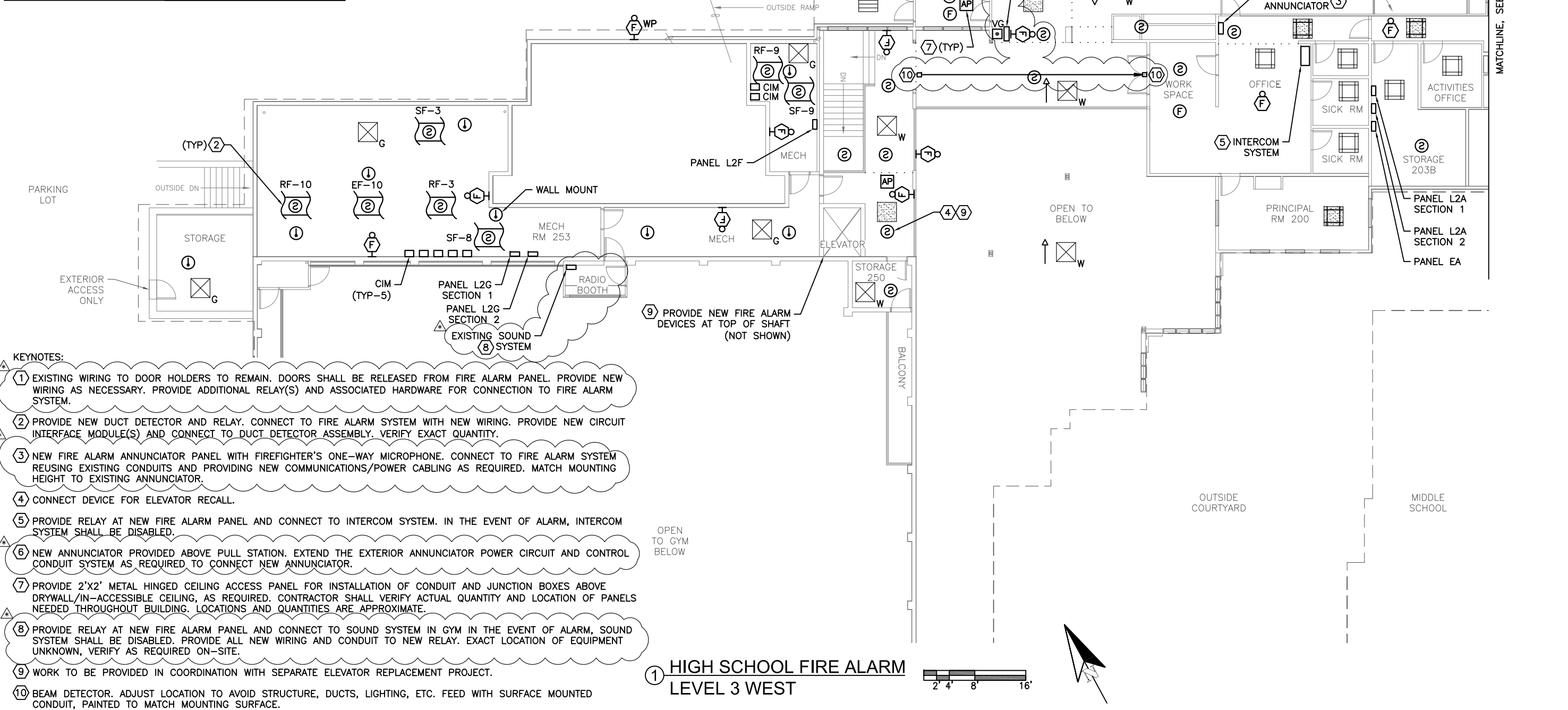
MEG PROJECT NO.: 140-05 DWG. FILE:

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SHEET
15 OF 23



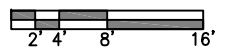
SHEET NOTES:

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2. IN UNFINISHED SPACES (MECHANICAL ROOMS, UTILITY ROOMS, SIMILAR AREAS) - PROVIDE SURFACE MOUNT, RED, 3/4" EMT CONDUIT AND BOXES WITH RED COLORED LIDS UNLESS NOTED OTHERWISE FOR A SPECIFIC AREA.



- KEYNOTES:**
- 1 EXISTING WIRING TO DOOR HOLDERS TO REMAIN. DOORS SHALL BE RELEASED FROM FIRE ALARM PANEL. PROVIDE NEW WIRING AS NECESSARY. PROVIDE ADDITIONAL RELAY(S) AND ASSOCIATED HARDWARE FOR CONNECTION TO FIRE ALARM SYSTEM.
 - 2 PROVIDE NEW DUCT DETECTOR AND RELAY. CONNECT TO FIRE ALARM SYSTEM WITH NEW WIRING. PROVIDE NEW CIRCUIT INTERFACE MODULE(S) AND CONNECT TO DUCT DETECTOR ASSEMBLY. VERIFY EXACT QUANTITY.
 - 3 NEW FIRE ALARM ANNUNCIATOR PANEL WITH FIREFIGHTER'S ONE-WAY MICROPHONE. CONNECT TO FIRE ALARM SYSTEM REUSING EXISTING CONDUITS AND PROVIDING NEW COMMUNICATIONS/POWER CABLING AS REQUIRED. MATCH MOUNTING HEIGHT TO EXISTING ANNUNCIATOR.
 - 4 CONNECT DEVICE FOR ELEVATOR RECALL.
 - 5 PROVIDE RELAY AT NEW FIRE ALARM PANEL AND CONNECT TO INTERCOM SYSTEM. IN THE EVENT OF ALARM, INTERCOM SYSTEM SHALL BE DISABLED.
 - 6 NEW ANNUNCIATOR PROVIDED ABOVE PULL STATION. EXTEND THE EXTERIOR ANNUNCIATOR POWER CIRCUIT AND CONTROL CONDUIT SYSTEM AS REQUIRED TO CONNECT NEW ANNUNCIATOR.
 - 7 PROVIDE 2'X2' METAL HINGED CEILING ACCESS PANEL FOR INSTALLATION OF CONDUIT AND JUNCTION BOXES ABOVE DRYWALL/IN-ACCESSIBLE CEILING, AS REQUIRED. CONTRACTOR SHALL VERIFY ACTUAL QUANTITY AND LOCATION OF PANELS NEEDED THROUGHOUT BUILDING. LOCATIONS AND QUANTITIES ARE APPROXIMATE.
 - 8 PROVIDE RELAY AT NEW FIRE ALARM PANEL AND CONNECT TO SOUND SYSTEM IN GYM IN THE EVENT OF ALARM, SOUND SYSTEM SHALL BE DISABLED. PROVIDE ALL NEW WIRING AND CONDUIT TO NEW RELAY. EXACT LOCATION OF EQUIPMENT UNKNOWN, VERIFY AS REQUIRED ON-SITE.
 - 9 WORK TO BE PROVIDED IN COORDINATION WITH SEPARATE ELEVATOR REPLACEMENT PROJECT.
 - 10 BEAM DETECTOR. ADJUST LOCATION TO AVOID STRUCTURE, DUCTS, LIGHTING, ETC. FEED WITH SURFACE MOUNTED CONDUIT, PAINTED TO MATCH MOUNTING SURFACE.

1 HIGH SCHOOL FIRE ALARM LEVEL 3 WEST



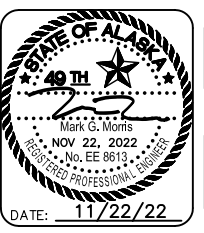
RE-BID 11/22/22

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MORRIS ENGINEERING GROUP INC.
 2375 Jordan Avenue #7, Juneau, AK 99801
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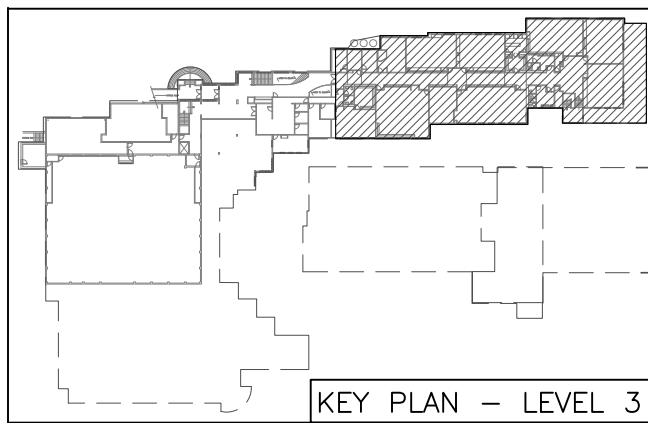


**CITY AND BOROUGH OF WRANGELL, ALASKA
 WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT**

SHEET TITLE: **HIGH SCHOOL - LEVEL 3 WEST - FIRE ALARM**

MEG PROJECT NO.: 140-05 DWG. FILE:

E16
 SHEET 16 OF 23



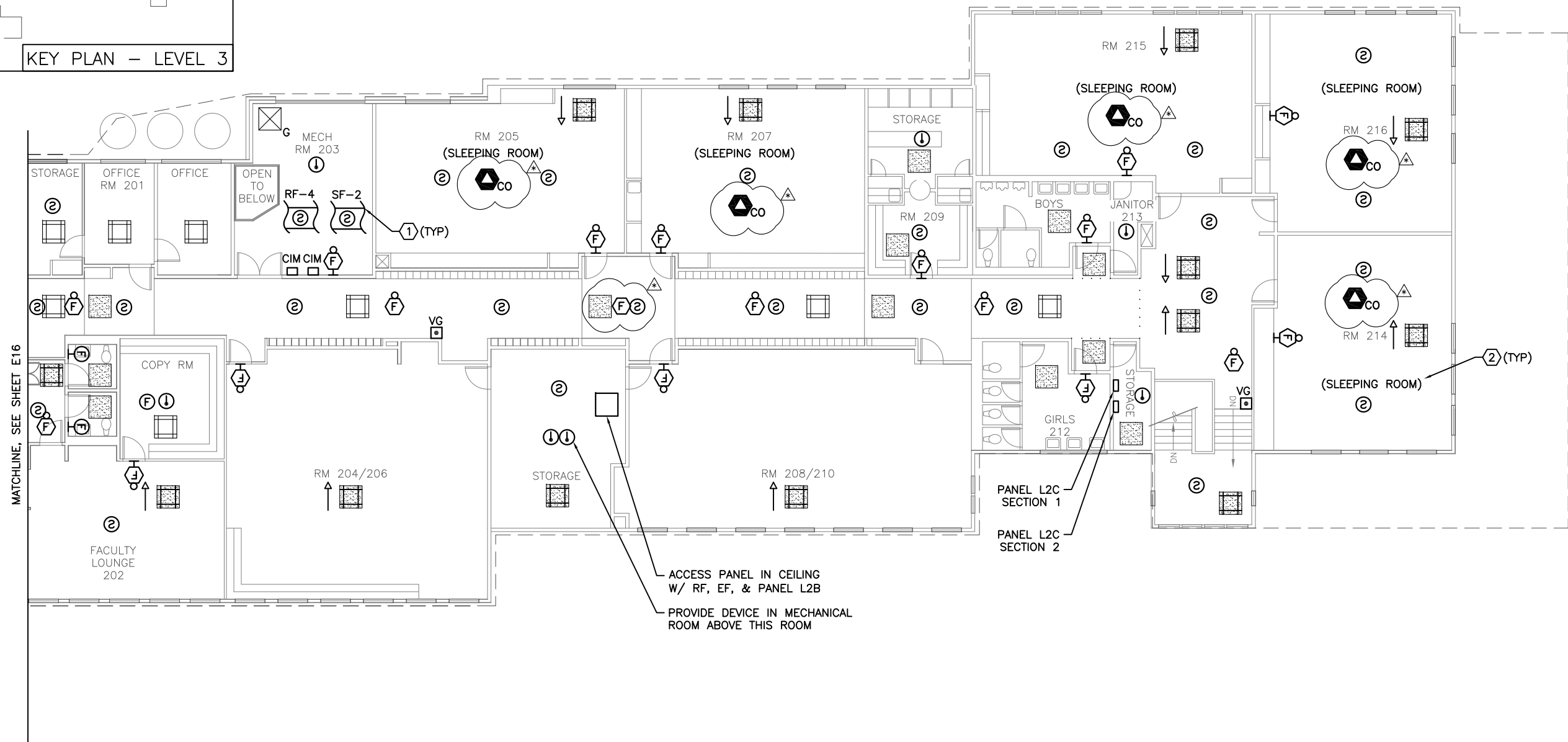
KEY PLAN - LEVEL 3

KEYNOTES:

- ① PROVIDE NEW DUCT DETECTOR AND RELAY. CONNECT TO FIRE ALARM SYSTEM WITH NEW WIRING. PROVIDE NEW CIRCUIT INTERFACE MODULE(S) AND CONNECT TO DUCT DETECTOR ASSEMBLY. VERIFY EXACT QUANTITY.
- ② SLEEPING ROOM - UTILIZED FOR OVERNIGHT STAYS OF VISITING SCHOOLS FOR SCHOLASTIC EVENTS.

SHEET NOTES:

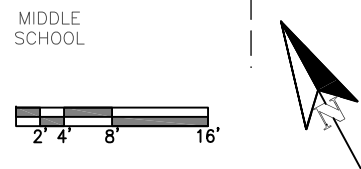
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- 2. IN UNFINISHED SPACES (MECHANICAL ROOMS, UTILITY ROOMS, SIMILAR AREAS) - PROVIDE SURFACE MOUNT, RED, 3/4" EMT CONDUIT AND BOXES WITH RED COLORED LIDS UNLESS NOTED OTHERWISE FOR A SPECIFIC AREA.



MATCHLINE, SEE SHEET E16

ACCESS PANEL IN CEILING W/ RF, EF, & PANEL L2B
 PROVIDE DEVICE IN MECHANICAL ROOM ABOVE THIS ROOM

① HIGH SCHOOL FIRE ALARM
 LEVEL 3 EAST



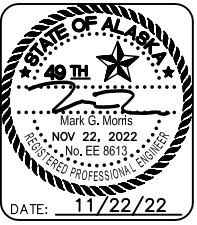
RE-BID
11/22/22

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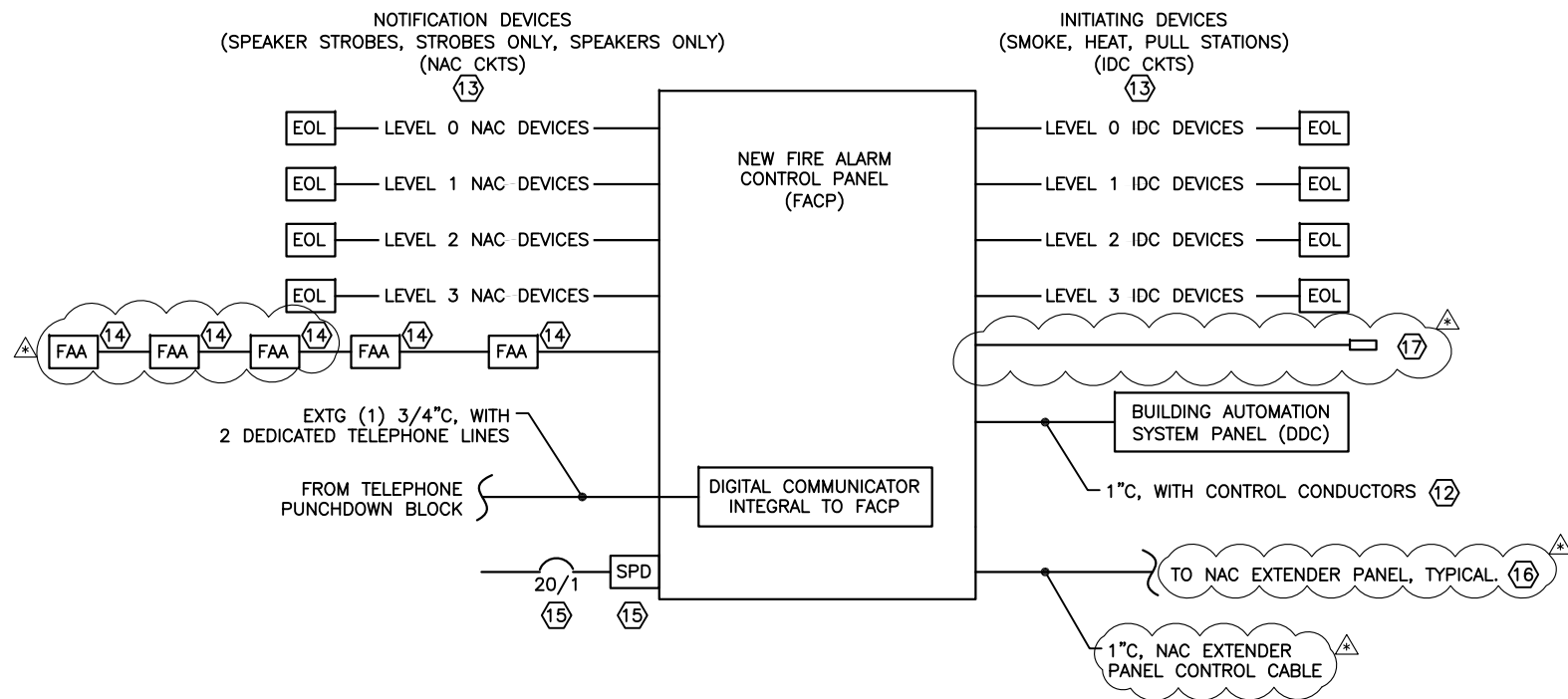
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 DRAWN: JRW APPROVED: MGM



CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
HIGH SCHOOL - LEVEL 3 EAST - FIRE ALARM

MEG PROJECT NO.: 140-05 DWG. FILE:



① **HIGH SCHOOL FIRE ALARM**
NEW SCHEMATIC NO SCALE

NOTES:

- WHEN SPEAKERS ARE SILENCED, THEY SHALL ALL SILENCE TOGETHER. WHEN THE SYSTEM IS RESET, THE INDICATING CIRCUITS SHALL ALL RESET TOGETHER. ALL STROBES AND SPEAKER STROBES VIEWABLE FROM ANY ONE POINT IN THE BUILDING SHALL BE SYNCHRONIZED TOGETHER.
- THE FIRE ALARM SYSTEM DEVICES SHALL BE LOCATED AND INSTALLED PER THESE DRAWINGS, THE SPECIFICATIONS, AND PER THE SHOP DRAWINGS PROVIDED BY THE FIRE ALARM MANUFACTURER'S DISTRIBUTOR THAT HAVE BEEN APPROVED BY THE ENGINEER DURING THE SUBMITTAL PROCESS. NO DEVIATIONS FROM THESE DOCUMENTS MAY BE MADE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
- THE FIRE ALARM DEVICES SHALL BE INSTALLED BY AN INSTALLER CERTIFIED BY THE STATE OF ALASKA TO INSTALL FIRE ALARM SYSTEMS. THE SYSTEM PROGRAMMING, TESTING, AND CERTIFICATION SHALL BE DONE BY A MANUFACTURER TECHNICIAN EMPLOYED BY THE MANUFACTURER'S DISTRIBUTOR THAT SUPPLIED THE FIRE ALARM SYSTEM MATERIALS FOR THE PROJECT.
- PROVIDE STROBE INTENSITIES AS REQUIRED TO MEET NFPA 72. PROVIDE ADDITIONAL SPEAKERS AS REQUIRED.
- PROVIDE END OF LINE RESISTORS ON THE IDC CIRCUITS THAT CONTAIN CIRCUIT INTERFACE MODULES AS REQUIRED. PROVIDE END OF LINE RESISTORS ON OTHER FACP CIRCUITS AS NECESSARY TO MEET NFPA 72.
- ALL DEVICES SHALL BE MOUNTED AT THE HEIGHTS INDICATED ON THE LEGEND, SHEET E2, DEVICES MAY BE SURFACE MOUNTED ONLY IF SPECIFICALLY NOTED. THERE SHALL BE NO CHANGE TO THE LOCATION OR MOUNTING HEIGHT EXCEPT WITH WRITTEN PERMISSION FROM THE ENGINEER.
- MODIFY ALL DEVICES MOUNTING HEIGHTS AT EXISTING DEVICE LOCATIONS TO HEIGHTS SHOWN IN LEGEND AND TO COMPLY WITH NFPA 72.
- ALL SPACE IN THE BUILDING SHALL MEET INTELLIGIBILITY REQUIREMENTS PER NFPA 72. ADJUST WATTAGE OF SPEAKERS AS REQUIRED. PROVIDE ADDITIONAL SPEAKERS AS REQUIRED.
- PROVIDE CIM UNITS AS REQUIRED TO PERFORM SHUT DOWN OF ALL FANS PER NFPA 72, IBC, AND NEC. PERFORM ALL WIRING TO SHUT DOWN FAN STARTERS. PROVIDE A NORMALLY CLOSED DRY CONTACT IN THE STARTER CONTROL CIRCUIT SO STARTER IS SHUT DOWN IN BOTH HAND AND AUTO MODE.
- PROVIDE CIM UNITS TO TRIP DOOR HOLDER CIRCUITS.
- PROVIDE CIM UNITS TO MONITOR ALL TAMPER SWITCHES AND ALL FLOW SWITCHES.
- ⑫ PROVIDE CIRCUITS AND SYSTEM PROGRAMMING TO SHUT DOWN DDC CONTROLLED FANS DURING A FIRE ALARM. COORDINATE WITH MECHANICAL. ROUTE CONDUIT AND CONDUCTORS TO SHUT DOWN MECHANICAL EQUIPMENT.
- ⑬ DAISY CHAIN IDC AND NAC DEVICES IN THE FIELD PER BEST PRACTICES. PROVIDE FACP WITH THE SUFFICIENT NUMBER OF IDC AND NAC CIRCUITS BASED ON TOTAL SYSTEM DEVICES. NUMBER OF CIRCUITS SHOWN HERE IS SCHEMATIC IN NATURE ONLY.
- ⑭ INTERCONNECT THE FIRE ALARM ANNUNCIATOR PANELS TOGETHER AND TO THE FACP AS REQUIRED.
- ⑮ PROVIDE A PARALLEL CONNECTED SURGE PROTECTION DEVICE (SPD) INTEGRAL OR IMMEDIATELY ADJACENT TO THE FACP. UPSTREAM CIRCUIT BREAKER SHALL BE LOCKABLE IN CLOSED POSITION WITH RED LOCKING MECHANISM AND LABELED 'FIRE ALARM PANEL'. THE LOCATION OF THE FIRE ALARM PANEL SOURCE CIRCUIT BREAKER SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL PANEL.
- ⑯ NAC EXTENDER PANELS ARE ANTICIPATED WITHIN THE PROJECT. PROVIDE PANELS AS REQUIRED, COORDINATE SUGGESTED LOCATIONS WITH ENGINEER DURING THE SUBMITTALS PROCESS. QUANTITY IS NOT KNOWN AT THIS TIME AND SHALL BE DETERMINED BY CONTRACTOR VIA THE SUBMITTALS PROCESS. CONNECT EACH PANEL TO THE FIRE ALARM PANEL PER MANUFACTURER REQUIREMENTS.
- ⑰ PROVIDE FIRE ALARM SYSTEM CONNECTION TO FUTURE ELEVATOR CONTROLLER AND ASSOCIATED DEVICES.



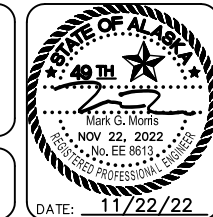
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11/22/22

(* NOTE: REVISIONS MARKED ON THIS SHEET WITH AN ASTERISK (*) WERE PART OF PREVIOUS ADDENDUM PROCESS FOR PROJECT'S FIRST BID IN OCTOBER 2022. PREVIOUS REVISION CLOUDS REMAIN FOR CURRENT BIDDER'S CONVENIENCE. NEW ADDENDUM ITEMS AND REVISION CLOUDS WILL BE LABELED AND DATED IN ACCORDANCE WITH THE RE-BID PROCESS.

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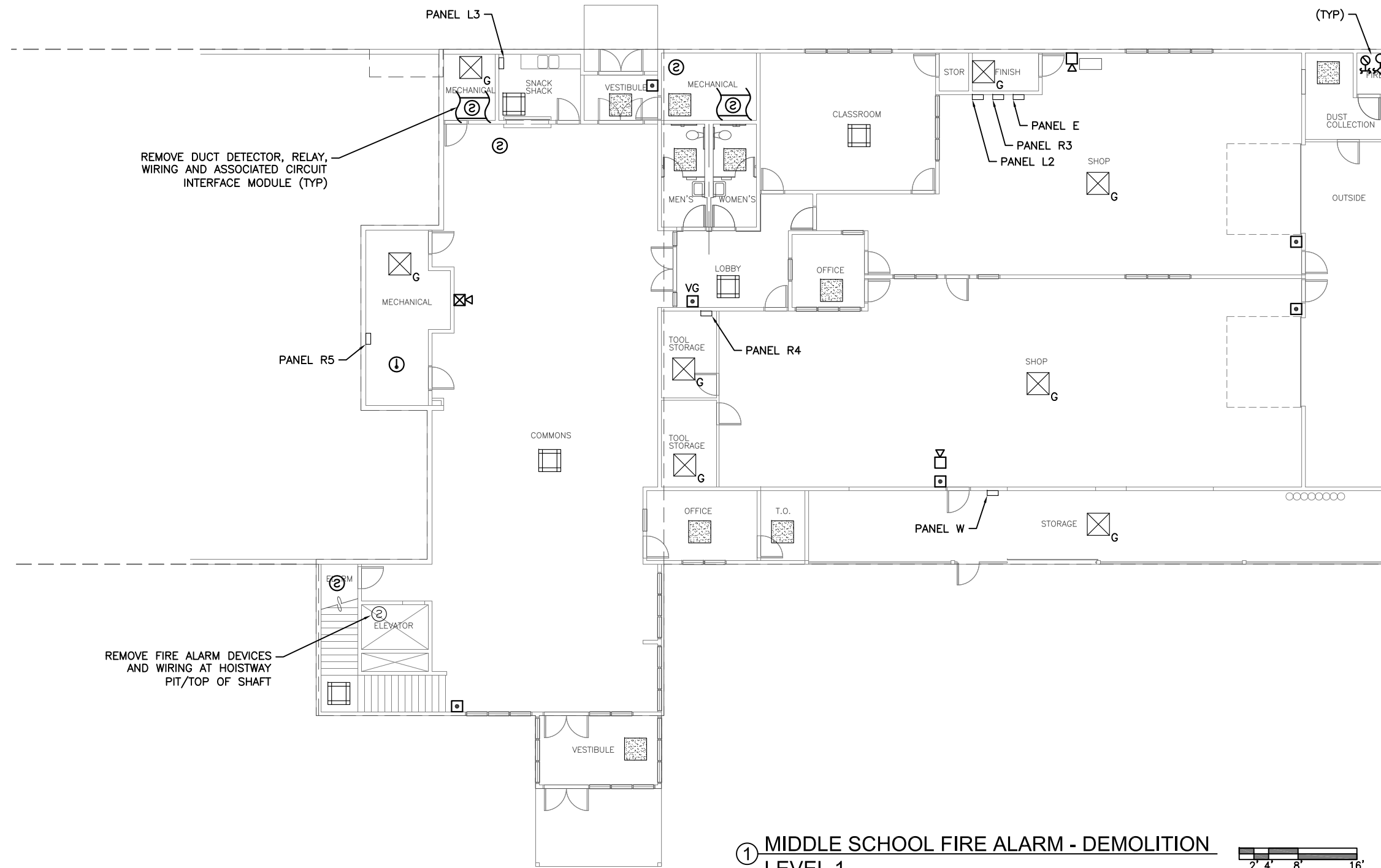
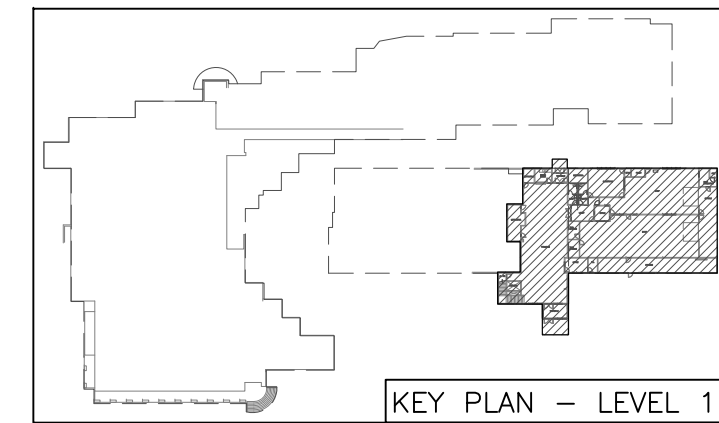
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CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE
SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
FIRE ALARM NEW SCHEMATIC
MEG PROJECT NO.: 140-05 DWG. FILE:

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SHEET
18 OF 23



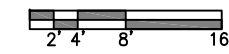
REMOVE DUCT DETECTOR, RELAY, WIRING AND ASSOCIATED CIRCUIT INTERFACE MODULE (TYP)

REMOVE FIRE ALARM DEVICES AND WIRING AT HOISTWAY PIT/TOP OF SHAFT

SHEET NOTES:

1. ALL ITEMS IN BOLD SHALL BE REMOVED IN THEIR ENTIRETY. THIS INCLUDES WIRING, DEVICES, CONDUIT/RACEWAY, JUNCTION BOXES AND ALL ASSOCIATED WIRING/CABLING TO THE EXTENT POSSIBLE.
2. ALL ITEMS IN LIGHT SHADE ARE TO REMAIN AND SHALL BE PROTECTED.

① MIDDLE SCHOOL FIRE ALARM - DEMOLITION LEVEL 1



**RE-BID
11/22/22**

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MORRIS ENGINEERING GROUP
 2375 Jordan Avenue #7, Juneau, AK 99801
 Phone: 907-789-3350, License: AECL1010

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 DRAWN: JRW APPROVED: MGM

STATE OF ALASKA
 49th
 Mark G. Morris
 NOV 22, 2022
 No. EE 8613
 REGISTERED PROFESSIONAL ENGINEER

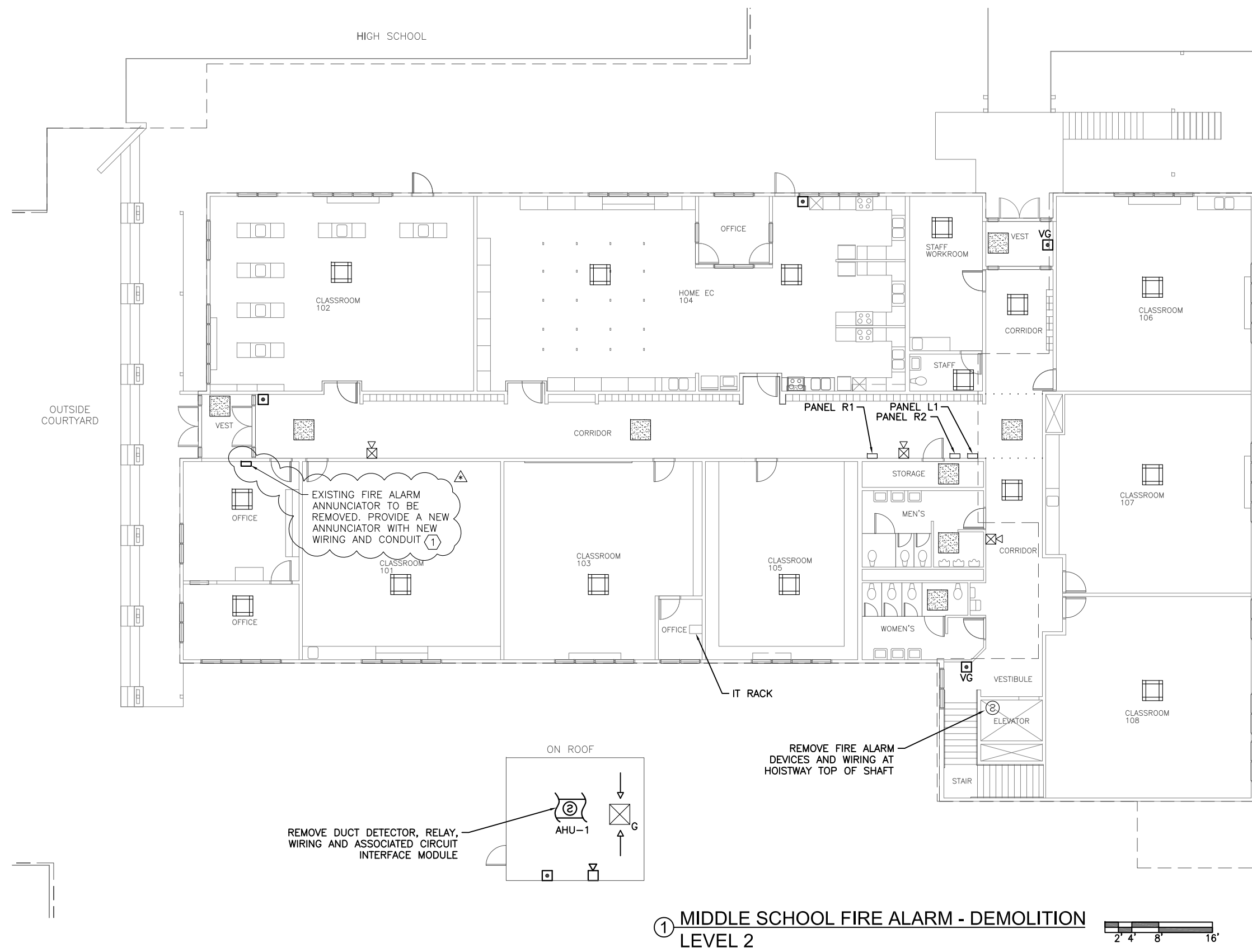
DATE: 11/22/22

CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
MIDDLE SCHOOL - LEVEL 1 - FIRE ALARM DEMOLITION

MEG PROJECT NO.: 140-05 DWG. FILE:

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 SHEET 19 OF 23



SHEET NOTES:

1. ALL ITEMS IN BOLD SHALL BE REMOVED IN THEIR ENTIRETY. THIS INCLUDES WIRING, DEVICES, CONDUIT/RACEWAY, J-BOXES AND ALL ASSOCIATED WIRING/CABLING TO THE EXTENT POSSIBLE.
2. ALL ITEMS IN LIGHT SHADE ARE TO REMAIN AND SHALL BE PROTECTED.

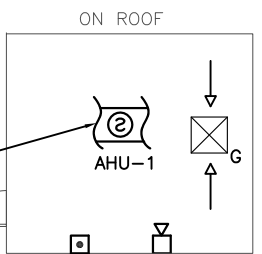
KEYNOTE:

① REMOVE FIRE ALARM ANNUNCIATOR PANEL IN IT'S ENTIRETY, PATHWAY FOR NEW WIRING AND NEW ANNUNCIATOR PANEL.

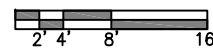
EXISTING FIRE ALARM ANNUNCIATOR TO BE REMOVED. PROVIDE A NEW ANNUNCIATOR WITH NEW WIRING AND CONDUIT ①

REMOVE FIRE ALARM DEVICES AND WIRING AT HOISTWAY TOP OF SHAFT

REMOVE DUCT DETECTOR, RELAY, WIRING AND ASSOCIATED CIRCUIT INTERFACE MODULE



① MIDDLE SCHOOL FIRE ALARM - DEMOLITION LEVEL 2



RE-BID
11/22/22

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Phone: 907-789-3350, License: AECL1010

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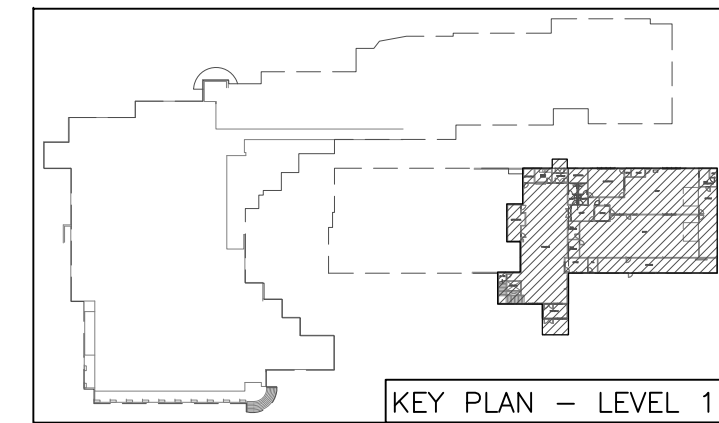
STATE OF ALASKA
49th
Mark G. Morris
NOV 22, 2022
No. EE 8813
REGISTERED PROFESSIONAL ENGINEER
DATE: 11/22/22

CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
MIDDLE SCHOOL - LEVEL 2 - FIRE ALARM DEMOLITION

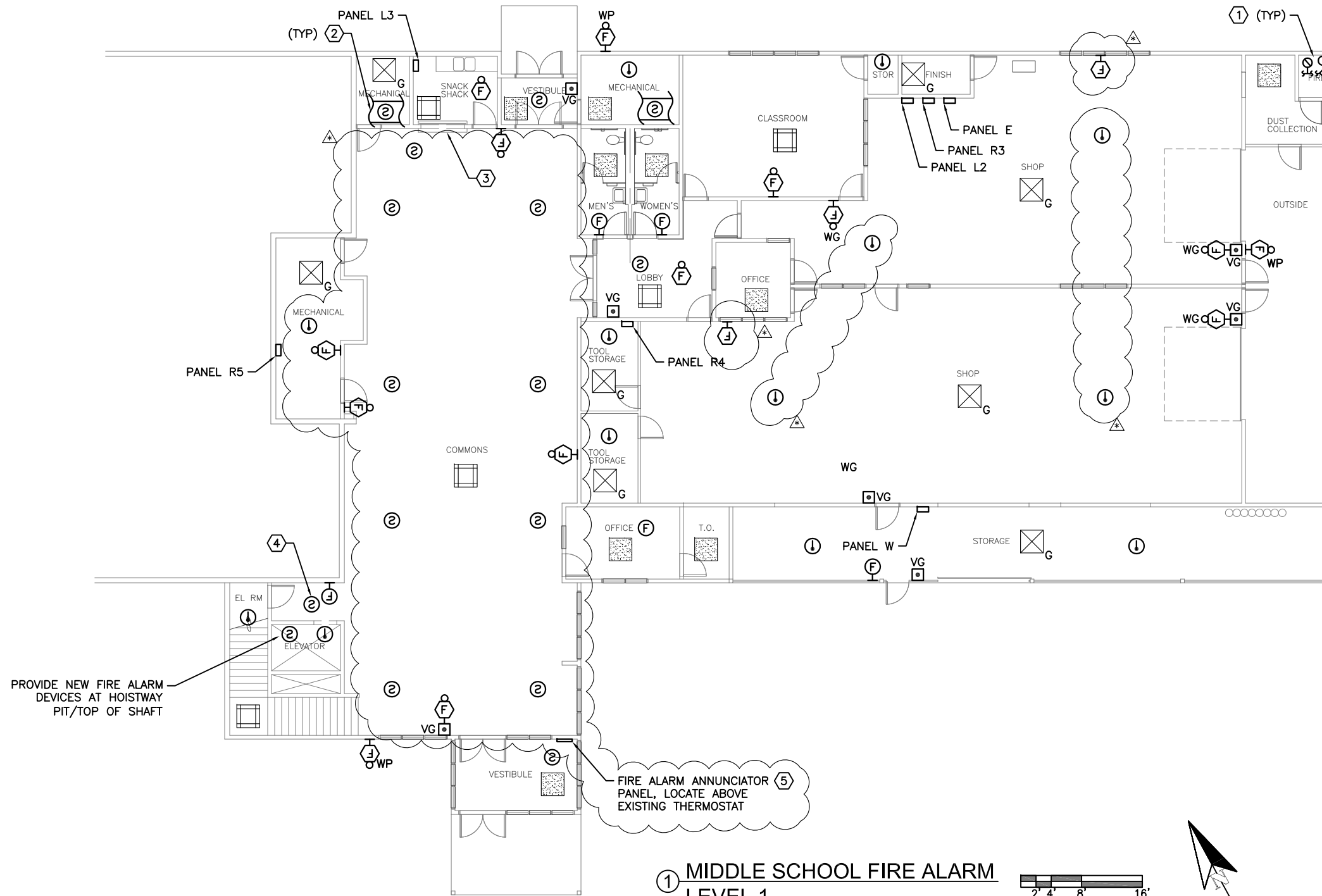
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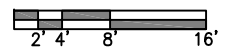


KEY PLAN - LEVEL 1

- SHEET NOTES:**
1. IN FINISHED SPACES, NEW BOXES SHALL BE CUT IN AND RECESSED WHERE POSSIBLE. MAKE EVERY EFFORT TO CONCEAL NEW RACEWAYS. IF NOT PHYSICALLY POSSIBLE/PRACTICAL TO CONCEAL NEW RACEWAYS OR RECESS NEW BOXES, PROVIDE SURFACE MOUNT BOXES AND CONDUIT. SEE SHEET E1 FOR ADDITIONAL INFORMATION.
 2. IN UNFINISHED SPACES (MECHANICAL ROOMS, UTILITY ROOMS, SIMILAR AREAS) - PROVIDE SURFACE MOUNT, RED, 3/4" EMT CONDUIT AND BOXES WITH RED COLORED LIDS UNLESS NOTED OTHERWISE FOR A SPECIFIC AREA.
- KEYNOTES:**
- ① PROVIDE NEW WIRING/CONNECTIONS TO EXISTING SPRINKLER FLOW/TAMPER SWITCHES. CONNECT TO FIRE ALARM SYSTEM.
 - ② PROVIDE NEW DUCT DETECTOR AND RELAY. CONNECT TO FIRE ALARM SYSTEM WITH NEW WIRING. PROVIDE NEW CIRCUIT INTERFACE MODULE(S) AND CONNECT TO DUCT DETECTOR ASSEMBLY. VERIFY EXACT QUANTITY.
 - ③ PROVIDE NEW FIRE ALARM CONNECTION AND RELAY TO EXISTING ROLL DOOR. UPON FIRE ALARM ACTIVATION, DOOR SHALL CLOSE.
 - ④ CONNECT DEVICE FOR ELEVATOR RECALL.
 - ⑤ FIRE ALARM ANNUNCIATOR PANEL WITH FIREFIGHTER'S ONE WAY MICROPHONE. CONNECT TO FIRE ALARM SYSTEM.
 - ⑥ NOT USED.
 - ⑦ NOT USED.
 - ⑧ NOT USED.



① MIDDLE SCHOOL FIRE ALARM LEVEL 1



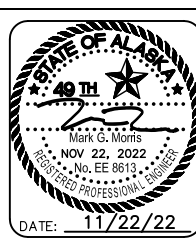
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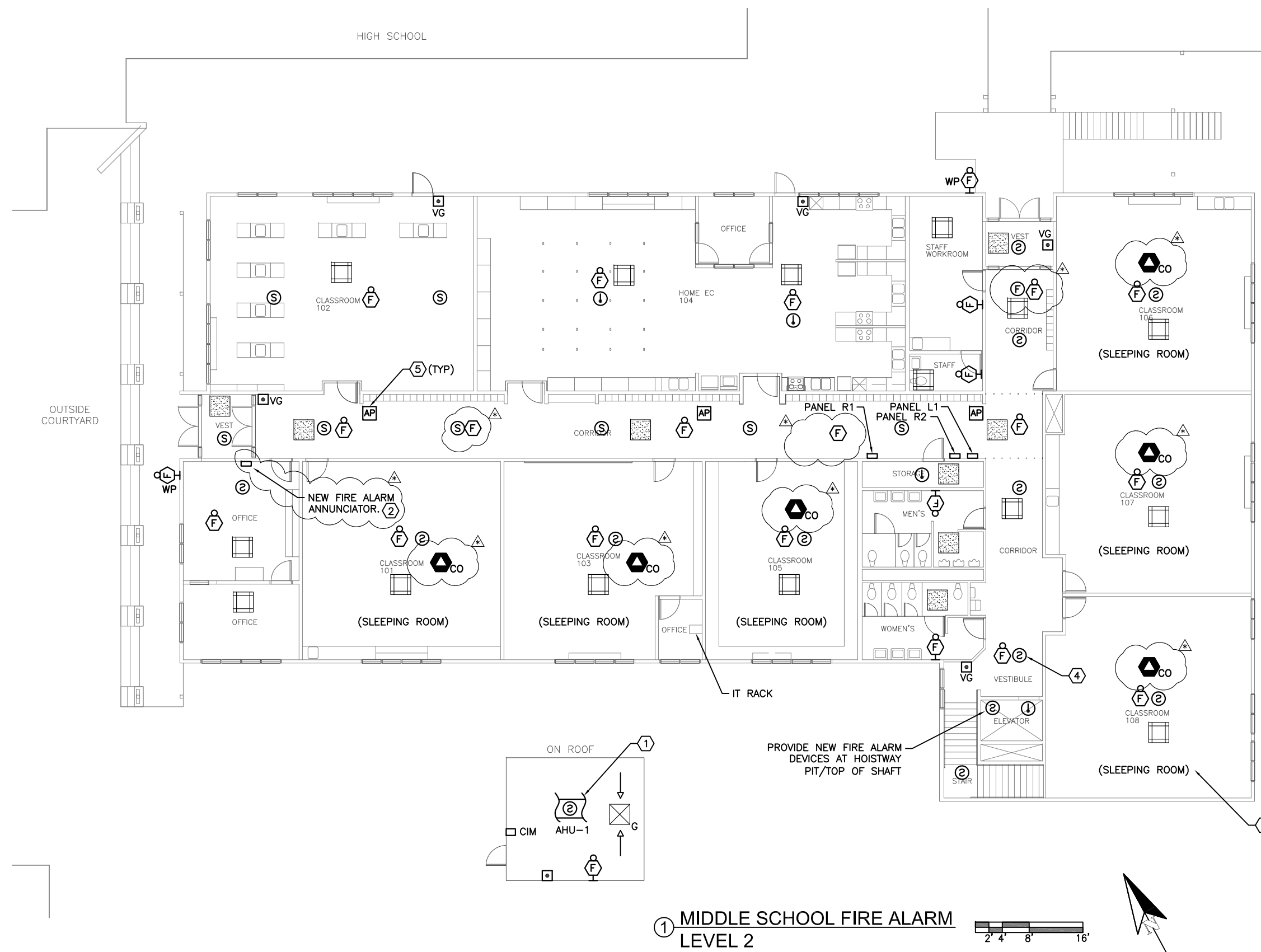
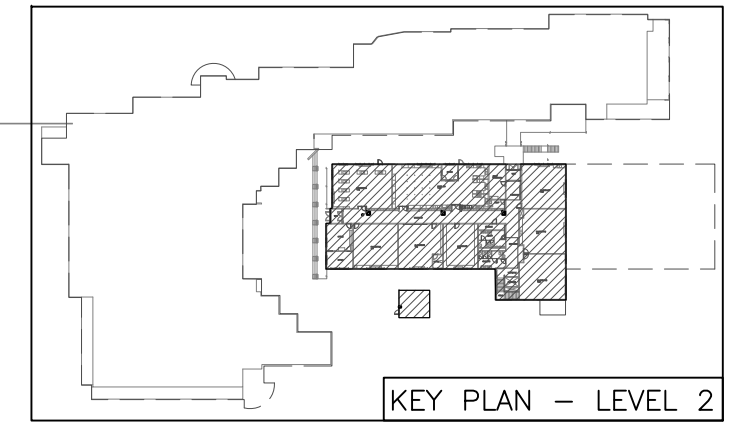
CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
MIDDLE SCHOOL - LEVEL 1 - FIRE ALARM

MEG PROJECT NO.: 140-05 DWG. FILE:

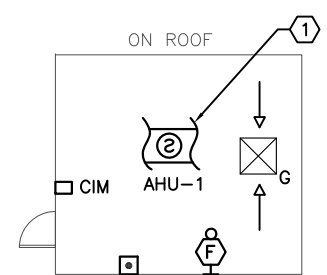
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HIGH SCHOOL



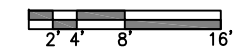
- SHEET NOTES:**
1. IN FINISHED SPACES, NEW BOXES SHALL BE CUT IN AND RECESSED WHERE POSSIBLE. MAKE EVERY EFFORT TO CONCEAL NEW RACEWAYS. IF NOT PHYSICALLY POSSIBLE/PRACTICAL TO CONCEAL NEW RACEWAYS OR RECESS NEW BOXES, PROVIDE SURFACE MOUNT BOXES AND CONDUIT. SEE SHEET E1 FOR ADDITIONAL INFORMATION.
 2. IN UNFINISHED SPACES (MECHANICAL ROOMS, UTILITY ROOMS, SIMILAR AREAS) - PROVIDE SURFACE MOUNT, RED, 3/4" EMT CONDUIT AND BOXES WITH RED COLORED LIDS UNLESS NOTED OTHERWISE FOR A SPECIFIC AREA.

- KEYNOTES:**
- 1 PROVIDE NEW DUCT DETECTOR AND RELAY. CONNECT TO FIRE ALARM SYSTEM WITH NEW WIRING. PROVIDE NEW CIRCUIT INTERFACE MODULE(S) AND CONNECT TO DUCT DETECTOR ASSEMBLY. VERIFY EXACT QUANTITY.
 - 2 NEW FIRE ALARM ANNUNCIATOR PANEL WITH FIREFIGHTERS MICROPHONE. CONNECT TO FIRE ALARM SYSTEM REUSING EXISTING CONDUITS AND PROVIDING NEW COMMUNICATIONS/POWER CABLING AS REQUIRED. MATCH MOUNTING HEIGHT TO EXISTING ANNUNCIATOR.
 - 3 SLEEPING ROOM - UTILIZED FOR OVERNIGHT STAYS OF VISITING SCHOOLS FOR SCHOLASTIC EVENTS.
 - 4 CONNECT DEVICE FOR ELEVATOR RECALL.
 - 5 PROVIDE 2'X2' METAL HINGED CEILING ACCESS PANEL FOR INSTALLATION OF CONDUIT AND JUNCTION BOXES ABOVE DRYWALL/IN-ACCESSIBLE CEILING, AS REQUIRED. CONTRACTOR SHALL VERIFY ACTUAL QUANTITY AND LOCATION OF PANELS NEEDED THROUGHOUT BUILDING. LOCATION SHOWN IS APPROXIMATE.



PROVIDE NEW FIRE ALARM DEVICES AT HOISTWAY PIT/TOP OF SHAFT

1 MIDDLE SCHOOL FIRE ALARM LEVEL 2



RE-BID 11/22/22

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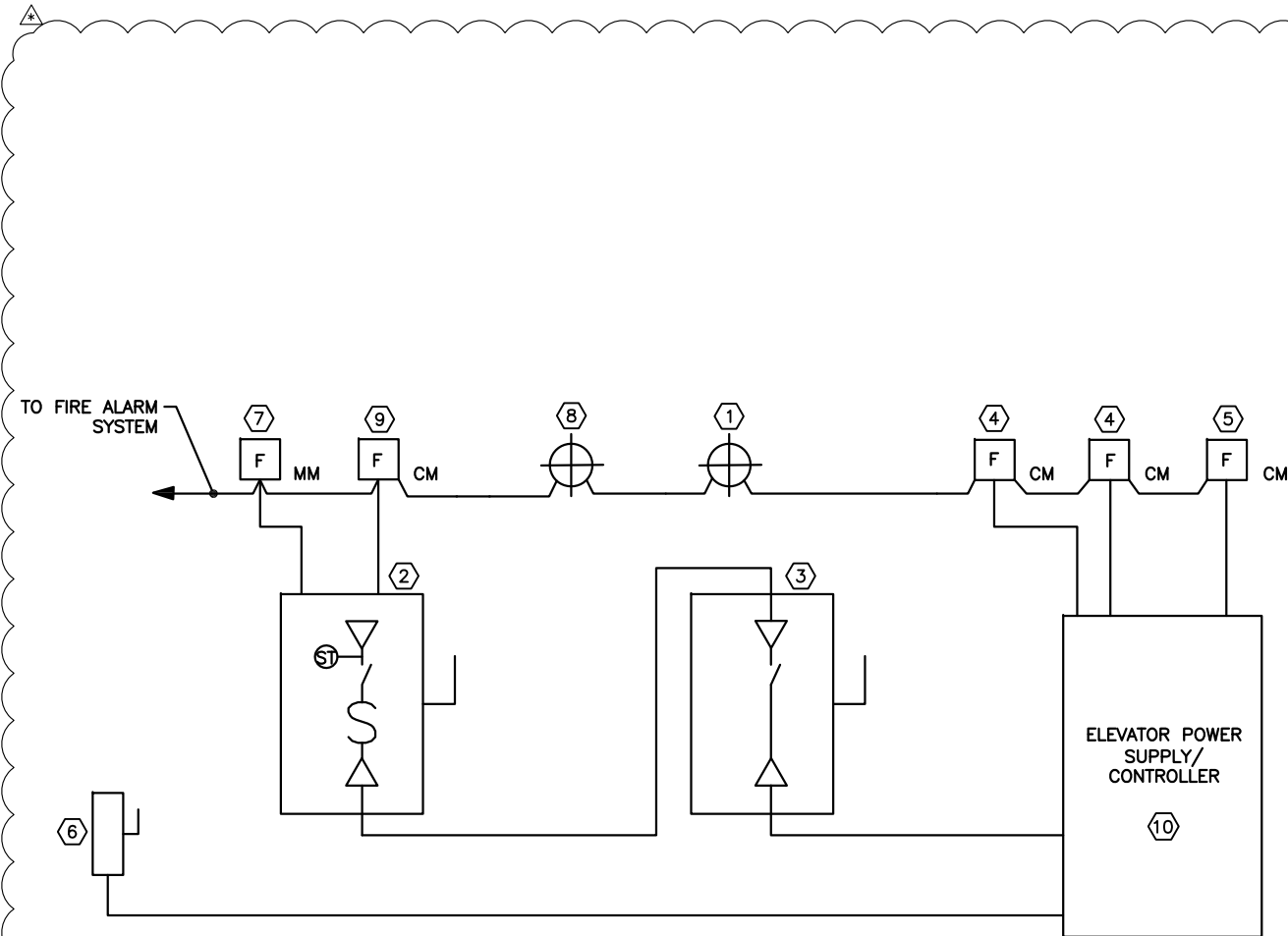


CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE: MIDDLE SCHOOL - LEVEL 2 - FIRE ALARM

MEG PROJECT NO.: 140-05 DWG. FILE:

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 SHEET 22 OF 23



① **ELEVATOR INTERCONNECTION SCHEMATIC**
(SPRINKLED) NO SCALE

SHEET NOTES:

- AS PART OF THE FIRE ALARM SYSTEM INSTALLATION, CONTRACTOR SHALL PROVIDE HEAT/SMOKE DETECTORS AND CONNECTIONS TO FUTURE ELEVATOR CONTROLLER AND SYSTEM.
- NEW ELEVATOR CONTROLLER, AUXILIARY SYSTEMS, AND ALL ASSOCIATED ITEMS WILL BE PROVIDED AND INSTALLED BY AN ELEVATOR CONTRACTOR/ELECTRICAL CONTRACTOR IN SUMMER 2023. THIS FIRE ALARM CONTRACTOR SHALL RETURN TO THE PROJECT SITE AT THAT TIME AND MAKE ALL NECESSARY FIRE ALARM CONNECTIONS TO THE NEW ELEVATOR SYSTEM, AND COMPLETE ALL REQUIREMENTS FOR A FULLY TESTED AND FUNCTIONAL SYSTEM.
- ITEMS SHOWN AS 'FOR REFERENCE ONLY' ARE TO BE PROVIDED IN THE FUTURE BY A SEPARATE CONTRACT WHEN THE ELEVATOR IS UPGRADED.

KEYNOTES:

- SMOKE DETECTORS AT MACHINE ROOM OR SPACE, CONTROL ROOM OR SPACE, ELEVATOR LANDINGS, AND TOP OF ELEVATOR HOISTWAY PER PLAN. ALARM ACTIVATION OF THESE DETECTORS SHALL INITIATE ELEVATOR RECALL PER AHJ.
- ELEVATOR DISCONNECTING MEANS. FOR REFERENCE ONLY.
- NON-FUSED, ENCLOSED SAFETY SWITCH. FOR REFERENCE ONLY.
- ELEVATOR RECALL. FOR REFERENCE ONLY.
- ELEVATOR CAR VISUAL SIGNAL. FOR REFERENCE ONLY.
- 30 AMP ENCLOSED FUSIBLE SAFETY SWITCH. FOR REFERENCE ONLY.
- MONITOR MODULE FOR SHUNT TRIP VOLTAGE MONITORING. CONNECT TO SHUNT TRIP SWITCH TO INITIATE FIRE ALARM SUPERVISORY SIGNAL UPON LOSS OF SHUNT TRIP POWER.
- HEAT DETECTORS IN MACHINE ROOM OR SPACE, CONTROL ROOM OR SPACE, AND TOP AND BOTTOM OF HOISTWAY PER PLAN. PROVIDE DETECTORS WITH LOWER ALARM TEMPERATURE AND HIGHER SENSITIVITY THAN SPRINKLER HEADS PER ELEVATOR CODE. PROVIDE DETECTORS WITHIN 24" OF SPRINKLER HEADS PER NFPA 72. UPON "VERIFIED ALARM" ACTIVATION OF SENSORS SHALL SHUT DOWN POWER TO ELEVATOR.
- ELEVATOR POWER SHUNT TRIP. CONNECT TO FIRE SAFETY INTERFACE IN ELEVATOR CONTROLLER DISCONNECTING MEANS.
- ELEVATOR CONTROLLER BY ELEVATOR CONTRACTOR. FOR REFERENCE ONLY.



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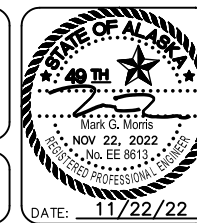
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SCALE:



CITY AND BOROUGH OF WRANGELL, ALASKA
WRANGELL HIGH SCHOOL & MIDDLE SCHOOL FIRE ALARM REPLACEMENT

SHEET TITLE:
ELEVATOR INTERCONNECTION SCHEMATIC

MEG PROJECT NO.: 140-05 DWG. FILE:

E23
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