



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

**Division of Facilities Construction and Management**

**DFCM**

# **STANDARD LOW BID PROJECT**

**August 12, 2010**

## **CAMP WILLIAMS FIRE ALARM UPGRADE VARIOUS BUILDINGS**

**UTAH NATIONAL GUARD**

**DRAPER, UTAH**

DFCM Project Number 10179480

Protection Consultants Inc.

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Current copies of the following documents are hereby made part of these contract documents by reference. These documents are available on the DFCM web site at <http://dfcm.utah.gov/StdDocs/index.html> "Standard Documents" – "Reference Documents I" – "Item 7. Supplemental General Conditions" or are available upon request from DFCM:

DFCM Supplemental General Conditions dated July 1, 2010 \*  
DFCM Supplemental General Conditions revised May 11, 2010 \*  
DFCM Supplemental General Conditions dated July 1, 2009 \*  
DFCM Supplemental General Conditions dated July 15, 2008  
DFCM General Conditions dated May 25, 2005  
DFCM Application and Certification for Payment dated May 25, 2005.

**\* NOTE: THE NEW SUPPLEMENTAL GENERAL CONDITIONS EFFECTIVE JULY 1, 2010 ADDRESSING DRUG AND ALCOHOL TESTING ARE REFERENCED AT THE LINK ABOVE.**

The Agreement and General Conditions dated May 25, 2005 have been updated from versions that were formally adopted and in use prior to this date. The changes made to the General Conditions are identified in a document entitled Revisions to General Conditions that is available on DFCM's web site at <http://dfcm.utah.gov>

# NOTICE TO CONTRACTORS

Sealed bids will be received by the Division of Facilities Construction and Management (DFCM) for:

**FIRE ALARM UPGRADE VARIOUS BUILDINGS CAMP WILLIAMS**  
**UTAH NATIONAL GUARD – DRAPER, UTAH**  
**DFCM PROJECT NO:10179480**

Bids will be in accordance with the Contract Documents that will be available on Thursday, August 12, 2010, and distributed in electronic format only on CDs from DFCM, 4110 State Office Building, Salt Lake City, Utah and on the DFCM web page at <http://dfcm.utah.gov>. For questions regarding this project, please contact Wayne Smith, DFCM, at 801-550-6536. No others are to be contacted regarding this bidding process. The construction estimate for this project is \$154,000.00.

A **mandatory** pre-bid meeting will be held at **9:00 AM on August, 23, 2010** at BLDG 1190 Camp Williams, 17800 South Redwood Road, Riverton, Utah. All bidders wishing to bid on this project are required to attend this meeting.

Bids will be received until the hour of **3:00 PM on Wednesday, September 1, 2010** at DFCM, 4110 State Office Building, Salt Lake City, Utah 84114. Bids will be opened and read aloud in the DFCM Conference Room, 4110 State Office Building, Salt Lake City, Utah. NOTE: Bids must be received at 4110 State Office Building by the specified time.

A bid bond in the amount of five percent (5%) of the bid amount, made payable to the Division of Facilities Construction and Management on DFCM's bid bond form, shall accompany the bid.

The Division of Facilities Construction and Management reserves the right to reject any or all bids or to waive any formality or technicality in any bid in the interest of DFCM.

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

Joanna Reese, Contract Coordinator

4110 State Office Building, Salt Lake City, Utah 84114

## PROJECT DESCRIPTION

This project will upgrade the fire alarm system throughout Camp Williams. Several of the buildings need an upgrade to existing systems and some buildings have no system in place. This project will provide an integrated system that will tie all buildings to alarm at the central location of the Guard House. Contractors wishing to submit bids must be pre-approved by DFCM prior to the mandatory pre-bid meeting. (See schedule)

Contractors who have previously been pre-qualified by DFCM and performed work for the state within the last 3-5 years **MUST** call DFCM 801-550-6536 notifying DFCM of intention to bid the project.

**ALL** other contractors wishing to submit bids for this project **MUST** comply with the following requirements to become qualified to bid on this project to be allowed to attend the mandatory pre-bid meeting. Pre Qualification Packets must be received in hard copy or electronically by DFCM no later than the date and time specified in the project schedule. Contractors will be notified by DFCM if approval is granted prior to the pre-bid meeting.

### **PRE\_QUALIFICATION REQUIREMENTS:**

Submit a 3-5 year work history of work closely related to the scope of work as this project. List construction costs for all projects. Projects may be other than government projects but must be similar in scope and cost.

Submit an outline of the Project Team that will be assigned to this project including, manager, superintendent, sub-contractors, etc. to include individual work experience, projects completed, expertise, management skills etc.

Submit a concise Management Plan to include work schedule, risk factors of the project, lead times for ordering equipment, work process from start to finish, power outages, weather factors, agency coordination, etc.

**PROJECT SCHEDULE**

<b>PROJECT NAME: FIRE ALARM UPGRADES VARIOUS BUILDINGS CAMP WILLIAMS UTAH NATIONAL GUARD – DRAPER, UTAH DFCM PROJECT NO. 10179480</b>				
<b>Event</b>	<b>Day</b>	<b>Date</b>	<b>Time</b>	<b>Place</b>
Bidding Documents Available	Thursday	August 12,2010	4:00 PM	DFCM 4110 State Office Bldg SLC, UT and the DFCM web site *
Prequalification Requirements Due	Wednesday	August 18, 2010	5:00 PM	DFCM 4110 State Office Bldg SLC, UT Or by email to: wfsmith@utah.gov
<b>Mandatory</b> Pre-bid Site Meeting	Monday	August 23, 2010	9:00 AM	Bldg1190 Camp Williams, 17800 South Redwood Road, Riverton, Utah
Last Day to Submit Questions	Wednesday	August 25, 2010	5:00 PM	<u>Wayne Smith</u> – DFCM E-mail wfsmith@utah.gov Fax 801-538-3267
Addendum Deadline (exception for bid delays)	Monday	August 30, 2010	2:00 PM	DFCM web site *
Prime Contractors Turn In Bid and Bid Bond	Wednesday	September1, 2010	3:00 PM	DFCM 4110 State Office Bldg SLC, UT
Sub-contractor List Due	Thursday	September 2, 2010	3:00 PM	DFCM 4110 State Office Bldg SLC, UT Fax 801-538-3677
Substantial Completion Date		December 31, 2010		

\* **NOTE:** DFCM's web site address is <http://dfcm.utah.gov>



## BID FORM

NAME OF BIDDER \_\_\_\_\_ DATE \_\_\_\_\_

To the Division of Facilities Construction and Management  
4110 State Office Building  
Salt Lake City, Utah 84114

The undersigned, responsive to the "Notice to Contractors" and in accordance with the "Instructions to Bidders", in compliance with your invitation for bids for the Fire Alarm Upgrades Various Buildings Camp Williams – Utah National Guard – Draper, Utah – DFCM Project No. 10179480 and having examined the Contract Documents and the site of the proposed Work and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of labor, hereby proposes to furnish all labor, materials and supplies as required for the Work in accordance with the Contract Documents as specified and within the time set forth and at the price stated below. This price is to cover all expenses incurred in performing the Work required under the Contract Documents of which this bid is a part:

I/We acknowledge receipt of the following Addenda: \_\_\_\_\_

For all work shown on the Drawings and described in the Specifications and Contract Documents, I/we agree to perform for the sum of:

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_)

(In case of discrepancy, written amount shall govern)

I/We guarantee that the Work will be Substantially Complete by December 31, 2010, should I/we be the successful bidder, and agree to pay liquidated damages in the amount of **\$250.00** per day for each day after expiration of the Contract Time as stated in Article 3 of the Contractor's Agreement.

This bid shall be good for 45 days after bid opening.

Enclosed is a 5% bid bond, as required, in the sum of \_\_\_\_\_

The undersigned Contractor's License Number for Utah is \_\_\_\_\_.

Upon receipt of notice of award of this bid, the undersigned agrees to execute the contract within ten (10) days, unless a shorter time is specified in the Contract Documents, and deliver acceptable Performance and Payment bonds in the prescribed form in the amount of 100% of the Contract Sum for faithful performance of the contract.

The Bid Bond attached, in the amount not less than five percent (5%) of the above bid sum, shall become the property of the Division of Facilities Construction and Management as liquidated damages for delay and additional expense caused thereby in the event that the contract is not executed and/or acceptable 100% Performance and Payment bonds are not delivered within the time set forth.

Type of Organization:

\_\_\_\_\_  
(Corporation, Partnership, Individual, etc.)

Any request and information related to Utah Preference Laws:

\_\_\_\_\_

Respectfully submitted,

\_\_\_\_\_  
Name of Bidder

ADDRESS:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Authorized Signature

# INSTRUCTIONS TO BIDDERS

## 1. Drawings and Specifications, Other Contract Documents

Drawings and Specifications, as well as other available Contract Documents, may be obtained as stated in the Invitation to Bid.

## 2. Bids

Before submitting a bid, each contractor shall carefully examine the Contract Documents, shall visit the site of the Work; shall fully inform themselves as to all existing conditions and limitations; and shall include in the bid the cost of all items required by the Contract Documents. If the bidder observes that portions of the Contract Documents are at variance with applicable laws, building codes, rules, regulations or contain obvious erroneous or uncoordinated information, the bidder shall promptly notify the DFCM Representative and the necessary changes shall be accomplished by Addendum.

The bid, bearing original signatures, must be typed or handwritten in ink on the Bid Form provided in the procurement documents and submitted in a sealed envelope at the location specified by the Invitation to Bid prior to the deadline for submission of bids.

A bid bond properly signed by a qualified surety, as indicated on the DFCM Bid Bond form provided along with this Instruction to Bidders, in the amount of 5% of the bid, shall accompany the bid submission to DFCM. **THIS BID BOND MUST BE ON THE DFCM BID BOND FORM PROVIDED WITH THIS INSTRUCTION TO BIDDERS IN ORDER TO BE CONSIDERED AN ACCEPTABLE BID** unless only one bid is received by DFCM, or the failure to comply with the bid bond requirements is determined by the Director of DFCM to be nonsubstantial based on the following:

- (a) the bid bond is submitted on a form other than DFCM's required Bid Bond form and the bid bond meets all other requirements including being issued by a surety firm authorized to do business in the State of Utah and be listed in the U.S. Department of the Treasury Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies for an amount not less than the amount of the bond to be issued. A co-surety may be utilized to satisfy this requirement; and
- (b) the contractor provides a bid bond properly signed by a qualified surety and on the required DFCM Bid Bond form by the close of business of the next succeeding business day after the DFCM notifies the bidder of the defective bid bond.

## 3. Contract and Bond

The Contractor's Agreement will be in the form found in the specifications. The Contract Time will be as indicated in the bid. The successful bidder, simultaneously with the execution of the Contract Agreement, will be required to furnish a performance bond and a payment bond, both bearing original signatures, upon the forms provided in the procurement documents. The performance and payment bonds shall be for an amount equal to one hundred percent (100%) of the contract sum and secured from a company that meets the requirements specified in the requisite forms. Any bonding requirements for subcontractors will be specified in the Supplementary General Conditions.

**4. Listing of Subcontractors**

Listing of Subcontractors shall be as summarized in the “Instructions and Subcontractor’s List Form”, which are included as part of these Contract Documents. The Subcontractors List shall be delivered to DFCM or faxed to DFCM at 801-538-3677 within 24 hours of the bid opening. Requirements for listing additional subcontractors will be listed in the Contract Documents.

DFCM retains the right to audit or take other steps necessary to confirm compliance with requirements for the listing and changing of subcontractors. Any contractor who is found to not be in compliance with these requirements is subject to a debarment hearing and may be debarred from consideration for award of contracts for a period of up to three years.

**5. Interpretation of Drawings and Specifications**

If any person or entity contemplating submitting a bid is in doubt as to the meaning of any part of the drawings, specifications or other Contract Documents, such person shall submit to the DFCM Project Manager a request for an interpretation thereof. The person or entity submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by addenda posted on DFCM’s web site at <http://dfcm.utah.gov>. Neither the DFCM nor A/E will be responsible for any other explanations or interpretations of the proposed documents. A/E shall be deemed to refer to the architect or engineer hired by DFCM as the A/E or Consultant for the Project.

**6. Addenda**

Addenda will be posted on DFCM’s web site at <http://dfcm.utah.gov>. Contractors are responsible for obtaining information contained in each addendum from the web site. Addenda issued prior to the submittal deadline shall become part of the bidding process and must be acknowledged on the bid form. Failure to acknowledge addenda may result in disqualification from bidding.

**7. Award of Contract**

The Contract will be awarded as soon as possible to the lowest, responsive and responsible bidder, based on the lowest combination of base bid and acceptable prioritized alternates, provided the bid is reasonable, is in the interests of the State of Utah to accept and after applying the Utah Preference Laws in U.C.A. Title 63, Chapter 56. DFCM reserves the right to waive any technicalities or formalities in any bid or in the bidding. Alternates will be accepted on a prioritized basis with Alternate 1 being highest priority, Alternate 2 having second priority, etc.

**8. DFCM Contractor Performance Rating**

As a contractor completes each DFCM project, DFCM, the architect/engineer and the using agency will evaluate project performance based on the enclosed “DFCM Contractor Performance Rating” form. The ratings issued on this project will not affect this project but may affect the award on future projects.

**9. Licensure**

The Contractor shall comply with and require all of its subcontractors to comply with the license laws as required by the State of Utah.

**10. Permits**

In concurrence with the requirements for permitting in the General Conditions, it is the responsibility of the Contractor to obtain the fugitive dust plan requirements from the Utah Division of Air Quality and the SWPPP requirements from the Utah Department of Environmental Quality and submit the completed forms and pay any permit fee that may be required for this specific project. Failure to obtain the required permit may result in work stoppage and/or fines from the regulating authority that will be the sole responsibility of the Contractor. Any delay to the project as a result of any such failure to obtain the permit or noncompliance with the permit shall not be eligible for any extension in the Contract Time.

**11. Right to Reject Bids**

DFCM reserves the right to reject any or all Bids.

**12. Time is of the Essence**

Time is of the essence in regard to all the requirements of the Contract Documents.

**13. Withdrawal of Bids**

Bids may be withdrawn on written request received from bidder prior to the time fixed for opening. Negligence on the part of the bidder in preparing the bid confers no right for the withdrawal of the bid after it has been opened.

**14. Product Approvals**

Where reference is made to one or more proprietary products in the Contract Documents, but restrictive descriptive materials of one or more manufacturer(s) is referred to in the Contract Documents, the products of other manufacturers will be accepted, provided they equal or exceed the standards set forth in the drawings and specifications and are compatible with the intent and purpose of the design, subject to the written approval of the A/E. Such written approval must occur prior to the deadline established for the last scheduled addenda to be issued. The A/E's written approval will be in an issued addendum. If the descriptive material is not restrictive, the products of other manufacturers specified will be accepted without prior approval provided they are compatible with the intent and purpose of the design as determined by the A/E.

**15. Financial Responsibility of Contractors, Subcontractors and Sub-subcontractors**

Contractors shall respond promptly to any inquiry in writing by DFCM to any concern of financial responsibility of the contractor, subcontractor or sub-subcontractor.

**16. Debarment**

By submitting a bid, the Contractor certifies that neither it nor its principals, including project and site managers, have been, or are under consideration for, debarment or suspension, or any action that would exclude such from participation in a construction contract by any governmental department or agency. If the Contractor cannot certify this statement, attach to the bid a detailed written explanation which must be reviewed and approved by DFCM as part of the requirements for award of the Project.

**BID BOND**

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

**KNOW ALL PERSONS BY THESE PRESENTS:**

That \_\_\_\_\_ hereinafter referred to as the "Principal," and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, with its principal office in the City of \_\_\_\_\_ and authorized to transact business in this State and U. S. Department of the Treasury Listed, (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); hereinafter referred to as the "Surety," are held and firmly bound unto the STATE OF UTAH, hereinafter referred to as the "Obligee," in the amount of \$ \_\_\_\_\_ (5% of the accompanying bid), being the sum of this Bond to which payment the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

**THE CONDITION OF THIS OBLIGATION IS SUCH** that whereas the Principal has submitted to Obligee the accompanying bid incorporated by reference herein, dated as shown, to enter into a contract in writing for the \_\_\_\_\_ Project.

**NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH**, that if the said principal does not execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the principal, then the sum of the amount stated above will be forfeited to the State of Utah as liquidated damages and not as a penalty; if the said principal shall execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the Principal, then this obligation shall be null and void. It is expressly understood and agreed that the liability of the Surety for any and all defaults of the Principal hereunder shall be the full penal sum of this Bond. The Surety, for value received, hereby stipulates and agrees that obligations of the Surety under this Bond shall be for a term of sixty (60) days from actual date of the bid opening.

**PROVIDED, HOWEVER**, that this Bond is executed pursuant to provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to same extent as if it were copied at length herein.

**IN WITNESS WHEREOF**, the above bounden parties have executed this instrument under their several seals on the date indicated below, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

**DATED** this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

**Principal's name and address (if other than a corporation):**

\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

**Principal's name and address (if a corporation):**

\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_  
(Affix Corporate Seal)

**Surety's name and address:**

\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_  
Attorney-in-Fact (Affix Corporate Seal)

STATE OF \_\_\_\_\_ )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me \_\_\_\_\_, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.  
My Commission Expires: \_\_\_\_\_  
Resides at: \_\_\_\_\_

**Agency:** \_\_\_\_\_  
**Agent:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

Approved As To Form: May 25, 2005  
By Alan S. Bachman, Asst Attorney General



**Division of Facilities Construction and**

**INSTRUCTIONS AND SUBCONTRACTORS LIST FORM**

The three low bidders, as well as all other bidders that desire to be considered, are required by law to submit to DFCM within 24 hours of bid opening a list of **ALL** first-tier subcontractors, including the subcontractor’s name, bid amount and other information required by Building Board Rule and as stated in these Contract Documents, based on the following:

**DOLLAR AMOUNTS FOR LISTING**

**PROJECTS UNDER \$500,000: ALL FIRST-TIER SUBS \$20,000 OR OVER MUST BE LISTED**  
**PROJECTS \$500,000 OR MORE: ALL FIRST-TIER SUBS \$35,000 OR OVER MUST BE LISTED**

- Any additional subcontractors identified in the bid documents shall also be listed.
- The DFCM Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law.
- List subcontractors for base bid as well as the impact on the list that the selection of any alternate may have.
- Bidder may not list more than one subcontractor to perform the same work.
- If there are no subcontractors for the job that are required to be reported by State law (either because there are no subcontractors that will be used on the project or because there are no first-tier subcontractors over the dollar amounts referred to above), then you do not need to submit a sublist. If you do not submit a sublist, it will be deemed to be a representation by you that there are no subcontractors on the job that are required to be reported under State law. At any time, DFCM reserves the right to inquire, for security purposes, as to the identification of the subcontractors at any tier that will be on the worksite.

**LICENSURE:**

The subcontractor’s name, the type of work, the subcontractor’s bid amount, and the subcontractor's license number as issued by DOPL, if such license is required under Utah Law, shall be listed. Bidder shall certify that all subcontractors, required to be licensed, are licensed as required by State law. A subcontractor includes a trade contractor or specialty contractor and does not include suppliers who provide only materials, equipment, or supplies to a contractor or subcontractor.

**‘SPECIAL EXCEPTION’:**

A bidder may list ‘Special Exception’ in place of a subcontractor when the bidder intends to obtain a subcontractor to perform the work at a later date because the bidder was unable to obtain a qualified or reasonable bid under the provisions of U.C.A.Section 63A-5-208(4). The bidder shall insert the term ‘Special Exception’ for that category of work, and shall provide documentation with the subcontractor list describing the bidder’s efforts to obtain a bid of a qualified subcontractor at a reasonable cost and why the bidder was unable to obtain a qualified subcontractor bid. The Director must find that the bidder complied in good faith with State law requirements for any ‘Special Exception’ designation, in order for the bid to be considered. If awarded the contract, the Director shall supervise the bidder’s efforts to obtain a qualified subcontractor bid. The amount of the awarded contract may not be adjusted to reflect the actual amount of the subcontractor’s bid. Any listing of ‘Special Exception’ on the sublist form shall also include amount allocated for that work.

**GROUNDS FOR DISQUALIFICATION:**

The Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law. Director may withhold awarding the contract to a particular bidder if one or more of the proposed subcontractors are considered by the Director to be unqualified to do the Work or for

**INSTRUCTIONS AND SUBCONTRACTORS LIST FORM**  
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such other reason in the best interest of the State of Utah. Notwithstanding any other provision in these instructions, if there is a good faith error on the sublist form, at the sole discretion of the Director, the Director may provide notice to the contractor and the contractor shall have 24 hours to submit the correction to the Director. If such correction is submitted timely, then the sublist requirements shall be considered met.

**CHANGES OF SUBCONTRACTORS SPECIFICALLY IDENTIFIED ON SUBLIST FORM:**

Subsequent to twenty-four hours after the bid opening, the contractor may change its listed subcontractors only after receiving written permission from the Director based on complying with all of the following criteria.

- (1) The contractor has established in writing that the change is in the best interest of the State and that the contractor establishes an appropriate reason for the change, which may include, but not is not limited to, the following reasons: the original subcontractor has failed to perform, or is not qualified or capable of performing, and/or the subcontractor has requested in writing to be released.
- (2) The circumstances related to the request for the change do not indicate any bad faith in the original listing of the subcontractors.
- (3) Any requirement set forth by the Director to ensure that the process used to select a new subcontractor does not give rise to bid shopping.
- (4) Any increase in the cost of the subject subcontractor work is borne by the contractor.
- (5) Any decrease in the cost of the subject subcontractor work shall result in a deductive change order being issued for the contract for such decreased amount.
- (6) The Director will give substantial weight to whether the subcontractor has consented in writing to being removed unless the Contractor establishes that the subcontractor is not qualified for the work.

**EXAMPLE:**

Example of a list where there are only four subcontractors:

TYPE OF WORK	SUBCONTRACTOR, "SELF" OR "SPECIAL EXCEPTION"	SUBCONTRACTOR BID AMOUNT	CONTRACTOR LICENSE #
ELECTRICAL	ABCD Electric Inc.	\$350,000.00	123456789000
LANDSCAPING	"Self" *	\$300,000.00	123456789000
CONCRETE (ALTERNATE #1)	XYZ Concrete Inc	\$298,000.00	987654321000
MECHANICAL	"Special Exception" (attach documentation)	Fixed at: \$350,000.00	(TO BE PROVIDED AFTER OBTAINING SUBCONTRACTOR)

\* Bidders may list "self", but it is not required.

**PURSUANT TO STATE LAW - SUBCONTRACTOR BID AMOUNTS CONTAINED IN THIS SUBCONTRACTOR LIST SHALL NOT BE DISCLOSED UNTIL THE CONTRACT HAS BEEN AWARDED.**



SUBCONTRACTORS LIST
FAX TO 801-538-3677

PROJECT TITLE: \_\_\_\_\_

Caution: You must read and comply fully with instructions.

Table with 4 columns: TYPE OF WORK, SUBCONTRACTOR, 'SELF' OR 'SPECIAL EXCEPTION', SUBCONTRACTOR BID AMOUNT, CONT. LICENSE #

We certify that:

- 1. This list includes all subcontractors as required by the instructions, including those related to the base bid as well as any alternates.
2. We have listed 'Self' or 'Special Exception' in accordance with the instructions.
3. All subcontractors are appropriately licensed as required by State law.

FIRM: \_\_\_\_\_

DATE: \_\_\_\_\_

SIGNED BY: \_\_\_\_\_

NOTICE: FAILURE TO SUBMIT THIS FORM, PROPERLY COMPLETED AND SIGNED, AS REQUIRED IN THESE CONTRACT DOCUMENTS, SHALL BE GROUNDS FOR OWNER'S REFUSAL TO ENTER INTO A WRITTEN CONTRACT WITH BIDDER. ACTION MAY BE TAKEN AGAINST BIDDERS BID BOND AS DEEMED APPROPRIATE BY OWNER. ATTACH A SECOND PAGE IF NECESSARY.

**CONTRACTOR'S AGREEMENT**

FOR:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

THIS CONTRACTOR'S AGREEMENT, made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between the DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT, hereinafter referred to as "DFCM", and \_\_\_\_\_, incorporated in the State of \_\_\_\_\_ and authorized to do business in the State of Utah, hereinafter referred to as "Contractor", whose address is \_\_\_\_\_.

WITNESSETH: WHEREAS, DFCM intends to have Work performed at \_\_\_\_\_.

WHEREAS, Contractor agrees to perform the Work for the sum stated herein.

NOW, THEREFORE, DFCM and Contractor for the consideration provided in this Contractor's Agreement, agree as follows:

**ARTICLE 1. SCOPE OF WORK.** The Work to be performed shall be in accordance with the Contract Documents prepared by \_\_\_\_\_ and entitled "\_\_\_\_\_."

The DFCM General Conditions ("General Conditions") dated May 25, 2005 and all Supplemental General Conditions ("also referred to as General Conditions") on file at the office of DFCM and available on the DFCM website (<http://dfcm.utah.gov/StdDocs/index.html>), are hereby incorporated by reference as part of this Agreement and are included in the specifications for this Project. All terms used in this Contractor's Agreement shall be as defined in the Contract Documents, and in particular, the General Conditions.

The Contractor Agrees to furnish labor, materials and equipment to complete the Work as required in the Contract Documents which are hereby incorporated by reference. It is understood and agreed by the parties hereto that all Work shall be performed as required in the Contract Documents and shall be subject to inspection and approval of DFCM or its authorized representative. The relationship of the Contractor to the DFCM hereunder is that of an independent Contractor.

**ARTICLE 2. CONTRACT SUM.** The DFCM agrees to pay and the Contractor agrees to accept in full performance of this Contractor's Agreement, the sum of \_\_\_\_\_ DOLLARS AND NO CENTS (\$\_\_\_\_\_.00), which is the base bid, and which sum also includes the cost of a 100% Performance Bond and a 100%

CONTRACTOR'S AGREEMENT  
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Payment Bond as well as all insurance requirements of the Contractor. Said bonds have already been posted by the Contractor pursuant to State law. The required proof of insurance certificates have been delivered to DFCM in accordance with the General Conditions before the execution of this Contractor's Agreement.

**ARTICLE 3. TIME OF COMPLETION AND DELAY REMEDY.** The Work shall be Substantially Complete by \_\_\_\_\_. Contractor agrees to pay liquidated damages in the amount of \$\_\_\_\_\_ per day for each day after expiration of the Contract Time until the Contractor achieves Substantial Completion in accordance with the Contract Documents, if Contractor's delay makes the damages applicable. The provision for liquidated damages is: (a) to compensate the DFCM for delay only; (b) is provided for herein because actual damages can not be readily ascertained at the time of execution of this Contractor's Agreement; (c) is not a penalty; and (d) shall not prevent the DFCM from maintaining Claims for other non-delay damages, such as costs to complete or remedy defective Work.

No action shall be maintained by the Contractor, including its or Subcontractor or suppliers at any tier, against the DFCM or State of Utah for damages or other claims due to losses attributable to hindrances or delays from any cause whatsoever, including acts and omissions of the DFCM or its officers, employees or agents, except as expressly provided in the General Conditions. The Contractor may receive a written extension of time, signed by the DFCM, in which to complete the Work under this Contractor's Agreement in accordance with the General Conditions.

**ARTICLE 4. CONTRACT DOCUMENTS.** The Contract Documents consist of this Contractor's Agreement, the Conditions of the Contract (DFCM General Conditions, Supplementary and other Conditions), the Drawings, Specifications, Addenda and Modifications. The Contract Documents shall also include the bidding documents, including the Invitation to Bid, Instructions to Bidders/ Proposers and the Bid/Proposal, to the extent not in conflict therewith and other documents and oral presentations that are documented as an attachment to the contract.

All such documents are hereby incorporated by reference herein. Any reference in this Contractor's Agreement to certain provisions of the Contract Documents shall in no way be construed as to lessen the importance or applicability of any other provisions of the Contract Documents.

**ARTICLE 5. PAYMENT.** The DFCM agrees to pay the Contractor from time to time as the Work progresses, but not more than once each month after the date of Notice to Proceed, and only upon Certificate of the A/E for Work performed during the preceding calendar month, ninety-five percent (95%) of the value of the labor performed and ninety-five percent (95%) of the value of materials furnished in place or on the site. The Contractor agrees to furnish to the DFCM invoices for materials purchased and on the site but not installed, for which the Contractor requests payment and agrees to

safeguard and protect such equipment or materials and is responsible for safekeeping thereof and if such be stolen, lost or destroyed, to replace same.

Such evidence of labor performed and materials furnished as the DFCM may reasonably require shall be supplied by the Contractor at the time of request for Certificate of Payment on account. Materials for which payment has been made cannot be removed from the job site without DFCM's written approval. Five percent (5%) of the earned amount shall be retained from each monthly payment. The retainage, including any additional retainage imposed and the release of any retainage, shall be in accordance with UCA 13-8-5 as amended. Contractor shall also comply with the requirements of UCA 13-8-5, including restrictions of retainage regarding subcontractors and the distribution of interest earned on the retention proceeds. The DFCM shall not be responsible for enforcing the Contractor's obligations under State law in fulfilling the retention law requirements with subcontractors at any tier.

**ARTICLE 6. INDEBTEDNESS.** Before final payment is made, the Contractor must submit evidence satisfactory to the DFCM that all payrolls, materials bills, subcontracts at any tier and outstanding indebtedness in connection with the Work have been properly paid. Final Payment will be made after receipt of said evidence, final acceptance of the Work by the DFCM as well as compliance with the applicable provisions of the General Conditions.

Contractor shall respond immediately to any inquiry in writing by DFCM as to any concern of financial responsibility and DFCM reserves the right to request any waivers, releases or bonds from Contractor in regard to any rights of Subcontractors (including suppliers) at any tier or any third parties prior to any payment by DFCM to Contractor.

**ARTICLE 7. ADDITIONAL WORK.** It is understood and agreed by the parties hereto that no money will be paid to the Contractor for additional labor or materials furnished unless a new contract in writing or a Modification hereof in accordance with the General Conditions and the Contract Documents for such additional labor or materials has been executed. The DFCM specifically reserves the right to modify or amend this Contractor's Agreement and the total sum due hereunder either by enlarging or restricting the scope of the Work.

**ARTICLE 8. INSPECTIONS.** The Work shall be inspected for acceptance in accordance with the General Conditions.

**ARTICLE 9. DISPUTES.** Any dispute, PRE or Claim between the parties shall be subject to the provisions of Article 7 of the General Conditions. DFCM reserves all rights to pursue its rights and remedies as provided in the General Conditions.

**ARTICLE 10. TERMINATION, SUSPENSION OR ABANDONMENT.** This Contractor's Agreement may be terminated, suspended or abandoned in accordance with the General Conditions.

**ARTICLE 11. DFCM'S RIGHT TO WITHHOLD CERTAIN AMOUNT AND MAKE USE THEREOF.** The DFCM may withhold from payment to the Contractor such amount as, in DFCM's judgment, may be necessary to pay just claims against the Contractor or Subcontractor at any tier for labor and services rendered and materials furnished in and about the Work. The DFCM may apply such withheld amounts for the payment of such claims in DFCM's discretion. In so doing, the DFCM shall be deemed the agent of Contractor and payment so made by the DFCM shall be considered as payment made under this Contractor's Agreement by the DFCM to the Contractor. DFCM shall not be liable to the Contractor for any such payment made in good faith. Such withholdings and payments may be made without prior approval of the Contractor and may be also be prior to any determination as a result of any dispute, PRE, Claim or litigation.

**ARTICLE 12. INDEMNIFICATION.** The Contractor shall comply with the indemnification provisions of the General Conditions.

**ARTICLE 13. SUCCESSORS AND ASSIGNMENT OF CONTRACT.** The DFCM and Contractor, respectively bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement, and to partners, successors, assigns and legal representatives of such other party with respect to all covenants, provisions, rights and responsibilities of this Contractor's Agreement. The Contractor shall not assign this Contractor's Agreement without the prior written consent of the DFCM, nor shall the Contractor assign any moneys due or to become due as well as any rights under this Contractor's Agreement, without prior written consent of the DFCM.

**ARTICLE 14. RELATIONSHIP OF THE PARTIES.** The Contractor accepts the relationship of trust and confidence established by this Contractor's Agreement and covenants with the DFCM to cooperate with the DFCM and A/E and use the Contractor's best skill, efforts and judgment in furthering the interest of the DFCM; to furnish efficient business administration and supervision; to make best efforts to furnish at all times an adequate supply of workers and materials; and to perform the Work in the best and most expeditious and economic manner consistent with the interests of the DFCM.

**ARTICLE 15. AUTHORITY TO EXECUTE AND PERFORM AGREEMENT.** Contractor and DFCM each represent that the execution of this Contractor's Agreement and the performance thereunder is within their respective duly authorized powers.

**ARTICLE 16. ATTORNEY FEES AND COSTS.** Except as otherwise provided in the dispute resolution provisions of the General Conditions, the prevailing party shall be entitled to reasonable attorney fees and costs incurred in any action in the District Court and/or appellate body to enforce this Contractor's Agreement or recover damages or any other action as a result of a breach thereof.





**PAYMENT BOND**

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

**KNOW ALL PERSONS BY THESE PRESENTS:**

That \_\_\_\_\_ hereinafter referred to as the "Principal," and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_ authorized to do business in this State and U. S. Department of the Treasury Listed (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); with its principal office in the City of \_\_\_\_\_, hereinafter referred to as the "Surety," are held and firmly bound unto the State of Utah hereinafter referred to as the "Obligee," in the amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Principal has entered into a certain written Contract with the Obligee, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, to construct \_\_\_\_\_ in the County of \_\_\_\_\_, State of Utah, Project No. \_\_\_\_\_ for the approximate sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), which contract is hereby incorporated by reference herein.

**NOW, THEREFORE**, the condition of this obligation is such that if the said Principal shall pay all claimants supplying labor or materials to Principal or Principal's Subcontractors in compliance with the provisions of Title 63, Chapter 56, of Utah Code Annotated, 1953, as amended, and in the prosecution of the Work provided for in said Contract, then, this obligation shall be void; otherwise it shall remain in full force and effect.

That said Surety to this Bond, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the Contract or to the Work to be performed thereunder, or the specifications or drawings accompanying same shall in any way affect its obligation on this Bond, and does hereby waive notice of any such changes, extensions of time, alterations or additions to the terms of the Contract or to the Work or to the specifications or drawings and agrees that they shall become part of the Contract Documents.

**PROVIDED, HOWEVER**, that this Bond is executed pursuant to the provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

**IN WITNESS WHEREOF**, the said Principal and Surety have signed and sealed this instrument this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

**WITNESS OR ATTESTATION:**

\_\_\_\_\_

**PRINCIPAL:**

\_\_\_\_\_

By: \_\_\_\_\_ (Seal)

Title: \_\_\_\_\_

**WITNESS OR ATTESTATION:**

\_\_\_\_\_

**SURETY:**

\_\_\_\_\_

By: \_\_\_\_\_ Attorney-in-Fact (Seal)

STATE OF \_\_\_\_\_ )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me \_\_\_\_\_, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

My commission expires: \_\_\_\_\_  
Resides at: \_\_\_\_\_

NOTARY PUBLIC

**Agency:** \_\_\_\_\_  
**Agent:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_

Approved As To Form: May 25, 2005  
By Alan S. Bachman, Asst Attorney General



CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT \_\_\_\_\_ PROJECT NO: \_\_\_\_\_

AGENCY/INSTITUTION \_\_\_\_\_

AREA ACCEPTED \_\_\_\_\_

The Work performed under the subject Contract has been reviewed on this date and found to be Substantially Completed as defined in the General Conditions; including that the construction is sufficiently completed in accordance with the Contract Documents, as modified by any change orders agreed to by the parties, so that the State of Utah can occupy the Project or specified area of the Project for the use for which it is intended.

The DFCM - (Owner) accepts the Project or specified area of the Project as Substantially Complete and will assume full possession of the Project or specified area of the Project at \_\_\_\_\_ (time) on \_\_\_\_\_ (date).

The DFCM accepts the Project for occupancy and agrees to assume full responsibility for maintenance and operation, including utilities and insurance, of the Project subject to the itemized responsibilities and/or exceptions noted below:

\_\_\_\_\_

The Owner acknowledges receipt of the following closeout and transition materials:

- As-built Drawings
- O & M Manuals
- Warranty Documents
- Completion of Training Requirements

A list of items to be completed or corrected (Punch List) is attached hereto. The failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents, including authorized changes thereof. The amount of \_\_\_\_\_(Twice the value of the punch list work) shall be retained to assure the completion of the punch list work.

The Contractor shall complete or correct the Work on the list of (Punch List) items appended hereto within \_\_\_\_\_ calendar days from the above date of issuance of this Certificate. The amount withheld pending completion of the list of items noted and agreed to shall be: \$\_\_\_\_\_. If the list of items is not completed within the time allotted the Owner has the right to be compensated for the delays and/or complete the work with the help of independent contractor at the expense of the retained project funds. If the retained project funds are insufficient to cover the delay/completion damages, the Owner shall be promptly reimbursed for the balance of the funds needed to compensate the Owner.

\_\_\_\_\_ by: \_\_\_\_\_  
CONTRACTOR (include name of firm) (Signature) DATE

\_\_\_\_\_ by: \_\_\_\_\_  
A/E (include name of firm) (Signature) DATE

\_\_\_\_\_ by: \_\_\_\_\_  
USING INSTITUTION OR AGENCY (Signature) DATE

\_\_\_\_\_ by: \_\_\_\_\_  
DFCM (Owner) (Signature) DATE



**CAMP WILLIAMS FIRE ALARM SYSTEMS UPGRADES  
DFCM # 10179480**

**SPECIFICATION SECTION 13851  
FIRE ALARM SYSTEM**

**SECTION 13851 - FIRE ALARM SYSTEM**

**PART I - GENERAL**

1.01 RELATED DOCUMENTS:

- A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and General Requirements, apply to the work specified in this section.

1.02 DESCRIPTION OF WORK:

- A. This specification includes the demolition of existing fire alarm systems, installation of new fire alarm systems, minor maintenance/upgrade to existing fire alarm systems and connection of all new and existing fire alarm control panels at Camp Williams to existing fire alarm reporting system (EST3 panel at guard house). Fire alarm systems shall include, but not be limited to, alarm initiating devices, alarm notification appliances, Fire Alarm Control Panels (FACP), remote power supplies, auxiliary control devices and relays, annunciators, conduit and wiring as shown on the drawings and specified herein.

1.03 QUALITY ASSURANCE:

- A. The fire alarm systems shall comply with requirements of NFPA 72 (National Fire Alarm Code) for Local Protected Premises Signaling Systems except as modified and supplemented by this specification. The system field wiring shall be supervised either electrically or by software-directed polling of field devices.
- B. Major system components (control panels, initiating devices, addressable modules or relays, power supplies, etc.) shall be manufactured by a State of Utah DFCM approved manufacturer.
- C. State of Utah DFCM Approved Manufacturers:
  - 1. Fire-Lite
  - 2. Silent Knight
- D. All initiating devices shall be listed compatible with the control equipment used.
- E. Materials, devices and equipment shall be Underwriters Laboratories (UL) listed or Factory Mutual approved for use in fire alarm systems and shall comply with all applicable requirements of the following UL standards:
  - 1. UL 38 Manually Actuated Signaling Boxes
  - 2. UL 50 Cabinets and Boxes
  - 3. UL 864 Control Units for Fire Protective Signaling Systems
  - 4. UL 268 Smoke Detectors for Fire Protective Signaling Systems
  - 5. UL 268A Smoke Detectors for Duct Applications
  - 6. UL 464 Audible Signaling Appliances
  - 7. UL 521 Heat Detectors for Fire Protective Signaling Systems
  - 8. UL 1971 Visual Notification Appliances.
- F. Shop drawings shall be prepared by an engineering technician or senior engineering technician (Level III or Level IV) NICET certified for fire alarm design. Include NICET certification number on the drawings. Drawings will be signed by the technician and submitted for approval under his name.

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- G. Contractor (and/or subcontractor) shall be licensed as both an electrical and a fire alarm contractor in the State of Utah. License shall be active throughout the duration of the project.

1.04 SUBMITTALS:

- A. Descriptive Data: Descriptive data shall be submitted on the following items of material and/or equipment. Such data shall consist of manufacturer's or supplier's catalog information in sufficient detail to allow verification that the material and/or equipment meets the specification requirements, or is equal to that specified. Descriptive data shall be included with the shop drawings submittal described in paragraph B below.
1. Fire alarm control panels.
  2. Annunciator panels.
  3. Remote power supplies for notification appliance circuits.
  4. Initiating devices (smoke detectors, heat detectors, manual pull stations, monitor modules, etc.)
  5. Relay modules to control protected premise fire safety functions.
  6. Notification appliances.
- B. Shop Drawings: Prior to ordering or installing any equipment, contractor shall prepare shop drawings for each building and for the campus network for submittal to Owner/Engineer. Shop drawings shall include sufficient information, clearly presented, to determine compliance with drawings and specifications. Include manufacturer's name(s), model numbers, ratings, power requirements, equipment layout, device arrangement, complete wiring point-to-point diagrams, and conduit layouts. Indicate type and gauge of wire to be used for each different circuit type. Show annunciator layout, configurations, and terminations.
- C. Submit four sets of drawings, descriptive data, battery calculations and voltage drop calculations to the Owner/Engineer for review. After review and acceptance by the Owner/Engineer, submit to State Fire Marshal for review. Any review comments, and associated drawing revisions, from state or local approving authorities that affect the system design shall be approved by the Owner/Engineer prior to installation.
- D. Testing Documentations/Certificates: Upon completion of installation and prior to final acceptance testing, complete and submit fire alarm system record of completion. Record of completion, along with all other material and test certificates shall be submitted to Project Engineer.
- E. As-Built Drawings: A complete set of "as-built" drawings showing installed wiring, color coding, and wire tag notations for exact locations of all installed equipment, specific interconnections between all equipment, and internal wiring of the equipment shall be delivered to the owner upon completion of system. As built drawings shall be furnished in printed (reproducible) format as well as electronic format (PDF and DWG).
- F. O&M Manuals: Operating and instruction manuals shall be submitted prior to testing of the system. Three (3) complete sets of operating and instruction manuals shall be delivered to the owner upon completion. User operating instructions shall be provided prominently displayed on a separate sheet located next to the control unit in accordance with U.L. Standard 864.
- G. Warranty Letter: Provide letter stating that contractor will warrant all equipment and wiring to be free from inherent mechanical and electrical defects for one year (365 days) from the date of final acceptance. Provide information regarding any equipment warranty provided by the equipment manufacturer that exceeds 365 days.

1.05 SYSTEM DESCRIPTION:

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- A. Add fire alarm system to existing building 7030 and 8100 as indicated on project drawings.
- B. Upgrade existing fire alarm systems in buildings 3010, 6280, 6290 and 6300 as indicated on project drawings.
- C. Perform minor maintenance, upgrade, testing and/or trouble shooting of existing fire alarm systems as summarized on drawings for the following buildings:
  - 1. Building 1000
  - 2. Building 1150
  - 3. Building 1190
  - 4. Building 1830
  - 5. Building 3030
  - 6. Building 3060
  - 7. Building 3220
  - 8. Building 4100
  - 9. Building 4110
  - 10. Building 4120
  - 11. Building 4140
  - 12. Building 4200
  - 13. Building 5131
  - 14. Building 6270
  - 15. Building 8110
  - 16. Building 8200
  - 17. Building 9000
- D. Connect all new and existing fire alarm systems at Camp Williams to existing EST3 panel installed in guard shack to create a facility wide fire alarm reporting system. Interconnection of all fire alarm systems shall be as indicated on drawings and as summarized below:
  - 1. Install new SLC circuit in buried conduit (provided by owner) between guard shack (Building 7011) and telecommunications hub (Building 6170).
  - 2. Install monitor module(s) for each fire alarm system in new cabinet(s) in telecommunication hub (Building 6170).
  - 3. Install new initiating device circuit from each new monitor module to fire alarm and supervisory/trouble relays of fire alarm control panel in each building. Initiating device circuits shall be constructed using exiting wiring (unused phone lines) provided by owner.
  - 4. Program EST3 panel in guard shack (Building 7011) to annunciate fire alarm and supervisory/trouble signals by building number/description.

1.06 SYSTEM DESIGN:

- A. Basic Performance:
  - 1. Alarm, trouble and supervisory signals from all intelligent reporting devices shall be encoded on NFPA Style 6 or 7 (Class A) Signaling Line Circuits (SLC).
  - 2. New Initiating Device Circuits (IDC) installed within buildings shall be wired Class A (NFPA Style D) as part of an addressable device connected by the SLC Circuit.
  - 3. New Initiating Device Circuits (IDC) installed between each FACP and monitor modules in telecommunications hub (Building 6170) may be Class B.
  - 4. New Notification Appliance Circuits (NAC) shall be wired Class A (NFPA Style Z).
  - 5. All circuits shall be power-limited, per 1995 UL864 requirements.
  - 6. A single ground fault or open circuit on the system Signaling Line Circuit shall not cause

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- system malfunction, loss of operating power or the ability to report an alarm.
7. Alarm signals arriving at the building FACP shall not be lost following a primary power failure or outage of any kind until the alarm signal is processed and recorded.
- B. Basic System Functional Operation: When a fire alarm condition is detected and reported by one of the system initiating devices, the following functions shall immediately occur:
1. The system Alarm LED on the FACP shall flash.
  2. A local sounder with the control panel shall sound.
  3. LCD display on the FACP and all remote annunciators shall indicate all information associated with the fire alarm condition, including the type of alarm point and its location within the protected premises.
  4. In response to a fire alarm condition, the system will process all control programming and activate all system outputs (alarm notification appliances and/or relays) associated with the point(s) in alarm.
  6. Alarm signal shall be transmitted via the fire alarm network to the network annunciator located in the Physical Plant Building.
  5. Alarm signal shall be transmitted off-premise via the DACT (install in Network Annunciator) to the central monitoring station selected by the owner.
- C. All copper wiring shall be free of opens, shorts and grounds. All wiring shall be installed in rigid conduit, metallic clad cable (MC), armored cable (AC) or EMT. All penetrations through rated partitions shall be fire stopped with a suitable caulking compound. All wiring (except new power distribution circuits) shall be fire power limited (FPL) with minimum 300V insulation or equivalent complying with NFPA 70 Article 760.
- D. Provide a ground fault detection circuit, to detect positive and negative grounds on all field wiring. The ground fault detector shall operate the general trouble devices as specified but shall not cause an alarm to be sounded. Ground fault will not interfere with the normal operation, such as alarm, or other trouble conditions.
- E. All low voltage circuits will be protected by microprocessor controlled power limiting or have self restoring polyswitches for the following: smoke detector power, main power supply, indicating appliance circuits, battery standby power and auxiliary output.
- F. Notification circuits shall be designed to limit the voltage drop to a maximum of 20% from the power supply to the most remote device on any notification circuit.
- G. All visible alarms within a single field of view shall flash in synchronization.
- H. Secondary power supply (battery backup) shall be sufficient to provide a minimum of 24 hours of standby power with an additional reserve to operate the system for 5 minutes in alarm.

1.07 WARRANTY:

- A. The contractor shall warrant all equipment and wiring free from inherent mechanical and electrical defects for one year (365 days) from the date of final acceptance.

1.08 APPLICABLE CODES AND STANDARDS:

- A. The specifications and standards listed below form a part of this specification. The system shall fully comply with all applicable provisions of the latest issue of these standards.

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1. International Building Code – 2009 edition
2. International Fire Code – 2009 edition
3. International Mechanical Code – 2009 edition
4. Utah State Fire Marshal Rule R710-4
5. NFPA 70 - National Electrical Code – 2008 edition
6. NFPA 72 - National Fire Alarm Code – 2007 edition
7. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems - 2009 edition
8. NFPA 101 Life Safety Code – 2009 edition
9. ASME A17.1 – 2000 edition
10. DFCM standards/established procedures

**PART II - PRODUCTS**

2.01 GENERAL:

- A. All equipment and components shall be new, and the manufacturer's current model. The installer shall be an authorized representative of the manufacturer of the major equipment, such as control panels and shall be responsible for the satisfactory installation of the complete system.
- B. All equipment and components shall be installed in strict compliance with manufacturers' recommendations. Consult the manufacturer's installation manuals for all wiring diagrams, schematics, physical equipment sizes, etc., before beginning system installation.
- C. All equipment shall be attached to walls and ceiling/floor assemblies and shall be held firmly in place. Fasteners and supports shall be adequate to support the required load.

2.02 CONDUIT AND WIRE:

A. Conduit:

1. Conduit shall be in accordance with The National Electrical Code (NEC), local and DFCM requirements.
2. Conduit fill shall not exceed 40 percent of interior cross sectional area where three or more cables are contained within a single conduit.
3. Cable must be separated from any open conductors of Power, or Class 1 circuits, and shall not be placed in any conduit, junction box or raceway containing these conductors, as per NEC Article 760-29.
4. Wiring for 24 volt control, alarm notification, emergency communication and similar power-limited auxiliary functions may be run in the same conduit as initiating and signaling line circuits. All circuits shall be provided with transient suppression devices and the system shall be designed to permit simultaneous operation of all circuits without interference or loss of signals.
5. Conduit shall not enter the fire alarm control panel, or any other remotely mounted control panel equipment or backboxes, except where conduit entry is specified by the equipment manufacturer.
6. Conduit shall be 3/4 inch minimum.
7. Install conduit attached to structure by straps, staples, hangers or similar fittings designed and installed to support conduit. Installation shall conform to DFCM requirements, NFPA 70 Article 760 and 300.4.
8. Conduit shall be rigid or EMT. Flexible conduit may be used for a drop to a single device. Metal clad or armored cable may be used as an alternate to conduit where

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installed and supported in accordance with NFPA 70, DFCM requirements and NEMA RV1.

9. Conduit shall be concealed above ceilings or in walls where ceiling or walls are present. Conduit may be installed exposed in unfinished areas.
10. Conduit and junction boxes used for the fire alarm system shall be marked and labeled to indicate that they are part of the building fire alarm system. Conduits shall be periodically marked with red paint and labeled to indicate the circuit type and designation contained inside. Junction boxes shall be painted red.

B. Wire:

1. All fire alarm system wiring must be new unless specified herein.
2. Wiring shall be in accordance with local, state and national codes (e.g., NEC Article 760) and as recommended by the manufacturer of the fire alarm system. Number and size of conductors shall be as recommended by the fire alarm system manufacturer, but not less than 18 AWG (1.02 mm) for initiating device circuits and signaling line circuits, and 12 or 14 AWG (1.63 mm) for notification appliance circuits.
3. All wire and cable shall be listed and/or approved by a recognized testing agency for use with a protective signaling system.
4. All wiring shall be installed inside permanent conduit or raceway or contained inside approved junction boxes or enclosures.
5. The system shall permit the use of IDC and NAC wiring in the same conduit or raceway with the multiplex communication loop.
6. All field wiring shall be completely supervised. In the event of a primary power failure, disconnected standby battery, removal of any internal modules, or any open circuits in the field wiring; a trouble signal will be activated until the system and its associated field wiring are restored to normal condition.
7. Terminal Boxes, Junction Boxes and Cabinets: All boxes and cabinets shall be UL listed for their use and purpose.
8. The fire alarm control panel and remote notification circuit power supplies shall be connected to dedicated branch circuits. Existing power circuit to FACP to be removed may be reused. Each circuit shall be labeled at the power distribution panel as FIRE ALARM. Primary power wiring shall be 12 AWG. Cabinets shall be grounded securely to either a cold water pipe or grounding rod.

2.03 FIRE ALARM CONTROL PANEL:

- A. Make/model of each fire alarm control panel shall be as indicated on drawings.
- B. Install all required expansion modules to ensure adequate SLC loop capacity for all initiating devices and control relays shown on panel with a additional reserve or a least 20% for future expansion.
- C. The FACP must compensate for the accumulation of contaminants that affect detector sensitivity. Maintenance alert feature (differentiated from trouble condition), detector sensitivity selection, auto-programming mode (Jumpstart) and the ability to upgrade the core operating software on site or over the telephone.
- D. The main communication bus shall be capable of class A or class B configuration with a total Bus length of not less than 6,000 feet.
- E. The main control must have a built in annunciator with a minimum 80 character LCD display and feature LED's for General alarm, Supervisory, System trouble, System silence and Power. When in the normal condition the LCD shall display time and date which is capable of automatic daylight

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savings time adjustments. The annunciator must be able to silence and reset alarms through the use of a keypad-entered code, or by using a firefighter key. The annunciators must have twenty levels of user codes that will allow the limitation of operating system programming to authorized individuals.

- F. Provide all necessary system expansion module required to provide a complete and functional fire alarm system as described on the project drawings and specified herein.

2.04 NOT USED:

2.05 ANNUNCIATOR PANELS:

- A. The fire system shall be capable of supporting up to eight remote annunciators. LCD Remote annunciators shall have the same control and display layout so that they match identically the built in annunciator on the FACP. Remote annunciators shall be capable of operating at a distance of 6000 feet from the main control panel on unshielded non-twisted cable.

2.06 NOT USED:

2.07 SLC CIRCUITS:

- A. Each SLC shall be capable of a wiring distance of 10,000 feet from the SLC driver module and be capable of supporting at least 127 devices per loop. The communication protocol to SLC devices must be digital. Any SLC loop device, which goes into alarm, must interrupt the polling cycle for priority response from the FACP. The FACP must respond consistently to a device that goes into alarm on an SLC in under 3 seconds. The SLC shall be capable of functioning in a class A configuration.

2.08 SLC LOOP DEVICES:

- A. Devices supported must include analog photoelectric, ionization smoke detectors, analog heat detectors, manual pull stations, contact monitoring modules and relay output modules. There is to be no limit to the number of any particular device type that can be connected to the SLC.

2.09 ADDRESSABLE SYSTEM DEVICES - GENERAL:

- A. Addressable devices shall provide an address-setting means using rotary decimal switches.
  1. Addressable devices shall use simple to install and maintain address switches.
  2. Detectors shall be Analog and Addressable, and shall connect to the fire alarm control panel's Signaling Line Circuits.
  3. Addressable smoke and thermal detectors shall provide dual (2) status LEDs. Both LEDs shall flash under normal conditions, indicating that the detector is operational and in regular communication with the control panel, and both LEDs shall be placed into steady illumination by the control panel, indicating that an alarm condition has been detected.
  4. Using software in the FACP, detectors shall automatically compensate for dust accumulation and other slow environmental changes that may affect their performance. The detectors shall be listed by UL as meeting the calibrated sensitivity test requirements of NFPA Standard 72, Chapter 7.
  5. The detectors shall be ceiling-mount and shall include a separate twist-lock base which includes a tamper proof feature.
  6. The detectors shall provide a test means whereby they will simulate an alarm condition

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and report that condition to the control panel.

7. Detectors shall also store an internal identifying type code that the control panel shall use to identify the type of device (ION, PHOTO, THERMAL).
8. Provide individual label for each addressable device to indicate device address. Label shall be permanently attached to device and shall be legible from the floor.

2.10 INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR:

- A. The detectors shall use the photoelectric (light-scattering) principal to measure smoke density and shall, on command from the control panel, send data to the panel representing the analog level of smoke density.

2.11 INTELLIGENT THERMAL DETECTORS:

- A. Thermal detectors shall be intelligent addressable devices rated at 135 degrees Fahrenheit (58 degrees Celsius) fixed temperature element. Detectors incorporating a rate of rise mechanism shall not be used. Detector shall mount to a base that is connected to the fire alarm control panel signaling line circuit.

2.12 INTELLIGENT DUCT SMOKE DETECTOR:

- A. The in-duct smoke detector housing shall accommodate an intelligent photoelectric detector that provides continuous analog monitoring and alarm verification from the panel.
- B. When sufficient smoke is sensed, an alarm signal is initiated at the FACP, and appropriate action taken to shutdown air handling systems to help prevent the rapid distribution of toxic smoke and fire gases throughout the areas served by the duct system.

2.13 ADDRESSABLE DRY CONTACT MONITOR MODULE:

- A. Addressable monitor modules shall be provided to connect one supervised IDC zone of conventional alarm initiating devices (any N.O. dry contact device) to one of the fire alarm control panel SLC loops.
- B. The monitor module shall mount in a 4-inch square, 2-1/8 inch deep electrical box.
- C. The IDC zone shall be suitable for Class A Style D operation. An externally visible LED shall be provided that shall flash under normal conditions, indicating that the monitor module is operational and in regular communication with the control panel. LED shall illuminate continuously when monitored device is in alarm state.

2.14 ADDRESSABLE CONTROL MODULE:

- A. Addressable control modules shall be provided to supervise and control the operation of one conventional NACs of compatible, 24 VDC powered, polarized audio/visual notification appliances. For fan shutdown and other auxiliary control functions, the control module may be set to operate as a dry contract relay.
- B. The control module shall mount in a standard 4-inch square, 2-1/8 inch deep electrical box, or to a surface mounted backbox.
- C. The control module NAC may be wired for Style Z (Class A) with up to 1 amp of inductive A/V

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signal, or 2 amps of resistive A/V signal operation, or as a dry contact (Form-C) relay. The relay coil shall be magnetically latched to reduce wiring connection requirements, and to insure that 100% of all auxiliary relay or NACs may be energized at the same time on the same pair of wires.

- D. Audio/visual power shall be provided by a separate supervised power loop from the main fire alarm control panel or from a supervised, UL listed remote power supply.
- E. The control module shall be suitable for pilot duty applications and rated for a minimum of 0.6 amps at 30 VDC.

2.15 MANUAL PULL STATIONS:

- A. Manual Fire Alarm Stations shall be non-coded, double action type, with a key operated test reset lock in order that they may be tested, and so designed that after actual emergency operation, they cannot be restored to normal except by use of a key. The reset key shall be so designed that it will reset the manual Pull Station and open the FACP cabinet without use of another key. An operated station shall automatically condition itself so as to visually detected, as operated, at a minimum distance of fifty feet, front or side. Manual stations shall be constructed of die cast metal with clearly visible operating instructions on the front of the station in raised letters. Stations shall be suitable for surface mounting on matching back box, or semi-flush mounting on a standard single gang box, and shall be installed within the limits defined by the Americans with Disabilities Act (ADA) dependent on Manual Station accessibility or per local requirements.

2.16 BATTERIES AND EXTERNAL CHARGER:

- A. Battery:
  - 1. Shall be 12 volt, Gell-Cell type.
  - 2. Battery shall have sufficient capacity to power the fire alarm system for not less than 24 hours plus 5 minutes of alarm upon a normal AC power failure.
  - 3. The batteries are to be completely maintenance free. No liquids are required. Fluid level checks refilling, spills and leakage shall not be required.
- B. External Battery Charger:
  - 1. Shall be completely automatic, with constant potential charger maintaining the battery fully charged under all service conditions. Charger shall operate from a 120-volt 60 hertz source.
  - 2. Shall be rated for fully charging a completely discharged battery within 48 hours while simultaneously supplying any loads connected to the battery.
  - 3. Shall have protection to prevent discharge through the charger.
  - 4. Shall have protection for overloads and short circuits on both AC and DC sides.

2.17 ENCLOSURES:

- A. The control panels shall be housed in a UL listed cabinet suitable for surface or semi-flush mounting. Cabinet and front shall be corrosion protected, given a rust-resistant prime coat, and manufacturer's standard finish.
- B. The back box and door shall be constructed of 0.060 steel with provisions for electrical conduit connections into the sides and top.
- C. The door shall provide a key lock and shall include a glass or other transparent opening for

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viewing of all indicators.

- D. The control unit shall be modular in structure for ease of installation, maintenance, and future expansion.

2.18 NOTIFICATION APPLIANCES:

- A. The visible and audible/visible signals shall be listed by Underwriters Laboratories Inc. per UL 1971 and/or 1638.
- B. Each indicating appliance circuit shall be electrically supervised for opens, grounds and short circuit faults, on the circuit wiring, and shall be so arranged that a fault condition on any indicating appliance circuit or group of circuits will not cause an alarm to sound. The occurrence of any fault will light the trouble LED and sound the system trouble sounder, but will not interfere with the proper operation of any circuit which does not have a fault condition.
- C. The notification appliance (combination audible/visible units only) shall produce a peak sound output of 90dba or greater as measured in an anechoic chamber. The visible signaling appliance shall maintain a minimum flash rate of 1Hz or greater regardless of power input voltage. The appliance shall also be capable of meeting the candela requirements of the blueprints presented by the Engineer and ADA. The appliance shall be capable of synchronization with all other appliances in the same field of view.
- D. The appliance shall be polarized to allow for electrical supervision of the system wiring.
- E. The unit shall be provided with terminals with barriers for input/output wiring and be able to mount a single gang or double gang box or double workbox with the use of an adapter plate.
- F. The unit shall have an input voltage range of 20-30 volts with either direct current or full wave rectified power.

2.19 SPARE DEVICES:

- A. Furnish the owner with a stock of spare initiating devices and notification appliances to allow for future addition/relocation of devices or replacement of equipment that fails after expiration of the warranty period. Manufacturer and model number of spare devices shall match those of devices used for the system installation. Minimum number and type of devices per building shall be as indicated below:
  - 1. Three addressable heat detectors.
  - 2. Four addressable smoke detectors.
  - 3. Two addressable manual pull stations.
  - 4. Four addressable contact monitor modules.
  - 5. Two addressable control modules.
  - 6. Six notification appliances corresponding to the type and proportion of notification appliances installed.

**PART III - EXECUTION**

3.01 INSPECTION:

- A. Contractor shall be responsible to attend a mandatory pre-bid walk through of the buildings. If required, an additional pre-bid inspection can be arranged. The contractor shall be responsible to examine all areas and conditions under which fire alarm systems are to be installed and identify

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conditions detrimental to proper completion of the work. All unsatisfactory conditions shall be specifically identified in the bid.

- B. Extent and location of existing fire alarm equipment shown on bid drawings is based on informal field surveys of each building and should be considered to be approximate. Contractor shall be responsible to conduct a detailed inspection to verify conditions prior to preparing shop drawings and/or installing the new fire alarm system.

3.02 INSTALLATION:

- A. Installation shall be in accordance with the NEC, NFPA 72, local and state codes, as shown on the drawings, and as recommended by the major equipment manufacturer.
- B. All conduit, junction boxes, conduit supports and hangers shall be concealed in finished areas and may be exposed in unfinished areas. Smoke detectors shall not be installed prior to the system programming and test period.
- C. All fire detection and alarm system devices, control panels and remote annunciators (unless otherwise noted on drawings) shall be flush mounted when located in finished areas and may be surface mounted when located in unfinished areas.
- D. Contractor is responsible for making his own job check and any necessary adjustments in the design prior to installation. Make final coordination with existing building elements and adjust design as necessary. Major conflicts shall be brought to the attention of the Project Engineer for resolution.
- E. Work shall be performed in a manner to minimize interruptions in service of the existing fire alarm systems. Contractor shall be responsible to provide a fire watch throughout all times that the automatic fire alarm and detection service is interrupted. Off-premise monitoring of the fire sprinkler control valves and water flow switches shall be provided at all times.
- F. Existing conduit and junction boxes not used for the new fire alarm system may remain. Contractor shall remove all existing wiring from abandoned conduits and junction boxes. Abandoned junction boxes in finished areas shall be covered with a decorative plate (to be approved by the owner).
- G. Work only in one area of a building at a time. Complete all required work in that area before proceeding to the next area.
- H. Contractor shall prepare a schedule of work to be performed and submit the schedule to the building coordinator for review/approval.
- I. Work during normal business hours will be allowed but must be scheduled in advance with building coordinator. Operations involving the creation of dust, debris or distracting noise shall be scheduled in advance with the building coordinator and shall be performed early in the morning or near the end of the work day.

3.03 FIELD QUALITY CONTROL:

- A. Obtain permits and post bonds as required by state and local AHJ's (Authorities Having Jurisdiction).
- B. Inform AHJ's of job progress. Request presence of AHJ's, perform tests, and document results

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using Contractor's Material and Test Certificates.

3.04 TESTING/TRAINING:

- A. Make and pay for all tests required by applicable codes during and after completion of the work and correct and defects in the systems indicated by the tests.
- B. The service of a competent, factory-trained engineer or technician authorized by the manufacturer of the fire alarm equipment shall be provided to technically supervise and participate during all of the adjustments and tests for the system.
- C. Testing shall include but not be limited to the following:
  - 1. Before energizing the cables and wires, check for correct connections and test for short circuits, ground faults, continuity, and insulation.
  - 2. Open initiating device circuits and verify that the trouble signal actuates.
  - 3. Open signaling line circuits and verify that the trouble signal actuates.
  - 4. Open and short notification appliance circuits and verify that trouble signal actuates.
  - 5. Ground initiating device circuits and verify response of trouble signals.
  - 6. Ground signaling line circuits and verify response of trouble signals.
  - 7. Ground notification appliance circuits and verify response of trouble signals.
  - 8. Check alert tone and prerecorded voice message to all alarm notification devices.
  - 9. Check installation, supervision, and operation of all intelligent smoke detectors using walk test.
  - 10. Each of the alarm conditions that the system is required to detect should be introduced on the system. Verify the proper receipt and the proper processing of the signal at the FACP and the correct activation of the control points.
  - 11. Test system batteries to verify that secondary power supply is sufficient to provide specified standby and alarm power.
- D. Train the Owner's maintenance personnel in the proper operation, testing and maintenance of all installed equipment. Training shall be sufficient to enable owner to service equipment, add or remove devices and make programming changes.

3.05 FINAL INSPECTION:

- A. At the final inspection, a factory-trained representative of the manufacturer of the major equipment shall demonstrate that the system functions properly in every respect.

3.06 INSTRUCTION:

- A. Instruction shall be required for operating the system. Hands-on demonstrations of the operation of all system components and the entire system including program changes and functions shall be provided.
- B. The contractor and/or the systems manufacturer's representatives shall provide a typewritten "Sequence of Operation"

3.07 CLEANING:

- A. Remove dust, scale, debris, and foreign substances from interior and exterior of devices, equipment, and materials prior to installation.

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- B. Upon job completion, remove tools, surplus materials and equipment, leaving all areas broom clean.

3.07 AUTHORITIES HAVING JURISDICTION:

- A. Acceptance of installation is subject to final inspection and approval by:
  - 1. State of Utah Fire Marshal's Office
  - 2. State of Utah Division of Facilities and Construction Management
  - 3. Camp Williams Maintenance Personnel
  - 4. Project Engineer

END OF SECTION 13851