AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
J	1 of 3

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO.(If applicable)
0004	15-Apr-2003	W68MD9-2339-3199	

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than item 6)	CODE
USA ENGINEER DISTRICT, SEATTLE ATTN: CENWS-CT P.O. BOX 3755 SEATTLE WA 98124-3755	DACA67	**See Item 6**	

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		
	X	9A. AMENDMENT OF SOLICITATION NO. DACA67-03-R-0208
	X	9B. DATED (SEE ITEM 11) 31-Mar-2003
		10A. MOD. OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE / FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer [X] is extended, [ ] is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

[ ] A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

[ ] B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).

[ ] C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

[ ] D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

PROJECT: IDIQ Multiple Award Contract (MATOC) for Miscellaneous Construction, Repair and Maintenance of Facilities at Fort Lewis and Yakima, Washington

(SEE CONTINUATION PAGE)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) TEL: EMAIL:	
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)	16C. DATE SIGNED 15-Apr-2003

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

A. The purpose of this Amendment Number Four (0004) is to incorporate revised Sections 00110, 00800, and 13851, provide a question/answer for clarification purposes, and extend the proposal due date. .

B. DELETE: Section 00110
INSERT: Revised Section 00110

DELETE: Section 00800
INSERT: Revised Section 00800

DELETE: Section 13851
INSERT: Revised Section 13851

C. The following questions/answers are provided for informational purposes:

QUESTION: With regard to the seed project, does the Government have an estimated contract amount or range? We could use this information in obtaining the bid bond required with our pricing proposal.

ANSWER: The "seed project" range is $1-$5 million. The "seed project", entitled "Closure of Municipal Solid Waste Landfill Cell 6, Fort Lewis, Washington", provides the Government pricing information for this solicitation, and may not be awarded at this time. Thus, no bid bonds are required for the "seed project"; however, pricing for the "seed project" must be accurate and reasonable, because this pricing information will be used as a basis when the task order is awarded.

QUESTION: Are registered aliens and naturalized citizens allowed to work on base?.

ANSWER: Yes

QUESTIONS There are no existing contours shown on the drawings. The notes on the drawing tell us to assume that the existing contours shown are to be used as our starting grid. The existing site conditions differ materially from what is shown on the plans. How are we supposed to calculate the cost of re-grading this site? How are we supposed to calculate the amount of import fill (cap) material required to established the starting contours? If we use the existing material that is currently capping the site, is there enough to established the desired contours?

ANSWER: See note 2, sheet 3, and detail 4, sheet 4. Contours shown on sheet 3 represent the proposed contours. The landfill is still active and will continue to receive construction fill and cover materials until the contours shown are reached.

D. ***THE PROPOSAL DUE DATE AND TIME IS CHANGED TO 22 April 2003, 2 P.M. PST.***

E. NOTICE TO BIDDERS: Offeror must acknowledge receipt of this amendment by number and date on Standard Form 1442, in Block 19, or by telegram.

F. All Technical Amendments are available for download this date on the Army Corps of Engineers website at http://www.nws.usace.army.mil/ct/.,

Attachments:
Revised Sections 00110, 00800, 13851

SECTION 00110
PROPOSAL SUBMISSION AND EVALUATION

1. INTRODUCTION.

1.1. Your firm is invited to submit a proposal for the project entitled "Indefinite Delivery Indefinite Quantity (IDIQ) Multiple Award Contract (MATOC) for Miscellaneous Construction, Repair and Maintenance of Facilities at Fort Lewis and Yakima, Washington. Prospective offerors are required to prepare and submit proposals that will be evaluated in accordance with this section of the solicitation.

1.1.1. Competition for this procurement is limited to eligible 9(a) firms located in Washington State and 8(a) participants in good standing, serviced by a SBA office outside of these states, but having a Bona fide branch office in this state. A Bona fide branch office is a place of business for purposes of 8(a) construction procurements located where an 8(a) participant regularly maintains an office that employs at least one full-time individual within the appropriate geographical boundary. The term does not include construction trailers or other temporary construction sites.

1.1.2. Joint Venture Agreements – Joint Venture Agreements are allowable on competitive 8(a) setasides and must be received by SBA prior to proposal due date and approved before award of a resulting contract. If you are contemplating a joint venture on this project, you must advise your assigned Business Opportunity Specialist (BOS) as soon as possible. It is also recommended that the agreement be submitted as soon as practicable to ensure compliance with established regulations. Any corrections and/or changes needed can be made only when your BOS has adequate time for a thorough review before the proposal due date. NO corrections and/or changes are allowed after time of submission of proposal or bids.

1.2. Project Description. The Multiple Award Task Order Contract (MATOC) will consist of the award to 8(a)contractors, three separate construction contracts. Use of the MATOC will provide the Government with a construction product delivery method that can accommodate quick and straight-forward projects, as well as some complex projects, and can help minimize design effort and related overhead expenditures, as well as handle compressed schedules. Task orders will include a variety of trades such as carpentry, road repair, roofing, excavation, interior/exterior elements, steam welding, asbestos and lead paint abatement incidental to construction and/or project design. The MATOC will not be used for AE services; however, incidental AE services maybe needed for some projects.

1.3. Evaluation and Award. An Indefinite-Delivery Indefinite-Quantity type contract will be awarded to three 8(a) firms submitting the proposals that: a) conform to this Request for Proposal (RFP), b) are considered to offer the best value to the Government in terms of the evaluation factors, including price (seed project), and contractor's coefficient, and c) are determined to be in the best interest of the Government. The total amount of the three contracts will not exceed the cumulative value of $6 million dollars per contract period, or $30 million dollars over the life of the contract. See Section 00800 for details. No proposal shall be accepted that does not address all criteria specified in this solicitation or which includes stipulations or qualifying conditions. The evaluation process used to determine the most advantageous offer for the technical criteria is described in the following paragraphs. .

2. EVALUATION FACTORS. Proposals will be evaluated on the basis of two factors, TECHNICAL and PRICE (SEED PROJECT), listed in descending order of importance.

2.1. Technical Evaluation Criteria .

2.1.1. Relevant Experience.
2.1.2. Past Performance
2.1.3. Organizational Structure
2.1.4. ~~Plan for Fiscal, Management and Technical Support by Home or Corporate Office &~~ Subcontracting ~~Capability~~ Management

2.2. Pricing Factors:

2.2.1. Factor 1: The contractor must submit a price proposal for Seed project entitled "Closure of municipal Solid Waste Landfill . Price must be complete and accurate.

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2.2.2. Factor 2: the price proposal must also include a contractor's coefficient (see Section 00800, SC-23 for further explanation and utilization of coefficient) for the purpose of pricing sole source orders. SC 23 will also further define elements which must be included in the coefficient.

2.2.3. Each pricing factor will be evaluated for reasonableness. The pricing factors will be evaluated but not rated. Financial capacity and bonding ability will be checked for responsibility during preaward survey, but not rated.

2.3. Relative Importance Definitions: For this evaluation, the following terms will be used to establish the relative importance of the technical criteria to each other:

2.3.1. **Significantly More Important**: The criterion is three (3) times more important in value to the Government than another criterion.

2.3.2. **More Important**: The criterion is two (2) times more important in value to the Government than another criterion.

2.3.3. **Equal**: The criterion is of the same value to the Government as another criterion.

2.4. Summary Of Order Of Importance For Technical Criteria:

2.4.1. Criteria 1 and 2 are equal.
2.4.2. Criteria 1 and 2 are significantly more important than criteria 3.
2.4.3. Criteria 3 is more important than criteria 4.

2.5. Technical Merit Ratings: Technical evaluation criteria will be rated using the following adjectival descriptions. Evaluators will apply the appropriate adjective to each criterion rated.

2.5.1. OUTSTANDING. The proposal **fully meets** all minimum performance, capability or qualifications standards required by the RFP **and exceeds many** of the requirements. Information submitted demonstrates offeror's potential to Significantly exceed performance or capability standards. The offeror has clearly demonstrated an understanding of all aspects of the requirements to the extent that timely and highest quality performance is anticipated. Has exceptional strengths that will significantly benefit the Government. The offeror's qualifications met the fullest expectations of the Government. The offeror has convincingly demonstrated that the RFP requirements have been analyzed, evaluated, and synthesized into approaches, plans, and techniques that, when implemented, should result in outstanding, effective, efficient, and economical performance under the contract. An assigned rating within "outstanding" indicates that, in terms of the specific factor (or subfactor), the submittal very significantly exceeds most or all solicitation requirements. **VERY HIGH PROBABILITY OF SUCCESS.**

2.5.2. ABOVE AVERAGE. The proposal **meets all** of the minimum performance, capability or qualifications standards required by the RFP **and exceeds some** of them. Has one or more strengths that will benefit the Government. The offeror's qualifications are adequately responsive. Information submitted demonstrates offeror's potential to exceed performance or capability standards. Has one or more strengths that will benefit the Government. The areas in which the offeror exceeds the requirements are anticipated to result in a high level of efficiency or productivity or quality. The submittal contains excellent features that will likely produce results very beneficial to the Government. . Response exceeds a "Satisfactory" rating. **HIGH PROBABILITY OF SUCCESS.**

2.5.3. SATISFACTORY (NEUTRAL). Proposal **meets all** of the minimum performance, capability or qualifications standards required by the RFP with few or no advantages or strengths. Equates to Neutral. Information submitted demonstrates offeror's potential to meet performance or capability standards. Acceptable solution. Meets minimum standard requirements. Few or no advantages or strengths. A rating of "Satisfactory" indicates that, in terms of the specific factor (or subfactor), the offeror may satisfactorily complete the proposed tasks, but there is at least moderate risk that

he will not be successful. Equates to Neutral. Good probability of success as there is sufficient confidence that a fully compliant level of performance will be achieved. Meets all RFP requirements. Response exceeds a "Marginal" rating. **No significant advantages or disadvantages.**

2.5.4. MARGINAL. The proposal **meets most** of the minimum performance, capability or qualifications standards required by the RFP. Information submitted demonstrates offeror's potential to marginally meet performance or capability standards necessary for minimal but acceptable contract performance. The submittal is not adequately responsive or does not address the specific factor(s) (or subfactor(s). The offeror's interpretation of the Government's requirements is superficial, incomplete, vague, incompatible, incomprehensible, or incorrect. The assignment of a rating within the bounds of "Marginal" indicates that the evaluator feels that mandatory corrective action would be required to prevent significant deficiencies from affecting the overall project. The offeror's response demonstrates an acceptable understanding of the requirements of the RFP and the approach will likely result in an adequate quality of performance, which represents a moderate level of risk to the Government. Low probability of success although the submittal has a reasonable chance of becoming at least acceptable. Response exceeds an "unsatisfactory" rating. **Significant weaknesses and some disadvantages.**

2.5.5. UNSATISFACTORY. **Fails to meet** performance or capability standards. Requirements can only be met with major changes to the submittal. The submittal does not meet the minimum requirements of the RFP. There is no reasonable expectation that acceptable performance would be achieved. Offeror's response has many deficiencies and/or gross omissions; failure to provide a reasonable, logical approach to fulfilling much of the Government's requirements; failure to meet many of the minimum requirements. The offeror's proposal is so unacceptable that it would have to be completely revised in order to attempt to make it other than unacceptable. **VERY SIGNIFICANT DISADVANTAGES.**

2.6. DEFINITIONS OF KEY EVALUATION TERMS.

2.6.1 Deficiency – A material failure of a proposal to meet a Government requirement or a combination of significant weaknesses in a proposal that increases the risk of unsuccessful contract performance to an unacceptable level. Examples of deficiencies include a statement by the offeror that it cannot or will not meet a requirement, an approach that clearly does not meet a requirement, or omission of data required to asses compliance with the requirement.

2.6.2. Strength – An aspect of a proposal that appreciably decreases the risk of unsuccessful contract performance or that represents a significant benefit to the Government.

2.6.3. Weakness – A flaw in the proposal that increases the risk of unsuccessful contract performance. A "significant weakness" in the proposal is a flaw that appreciably increases the risk of unsuccessful contract performance.
2.6.4. Uncertainty – Any aspect of the proposal for which the intent of the offeror is unclear because there may be more than one way to interpret the offer or because inconsistencies in the offer indicate that there may be an error, omission or mistake, Examples include a mistake in calculation or measurement and contradictory statement.

3. TECHNICAL CRITERIA SUBMITTAL REQUIREMENTS.

3.1. Relevant Experience.

Provide documentation, which demonstrates the types of relevant experience for itself and for any proposed Division, subcontractor, or teaming contractor whose effort on this contract will significantly influence performance of the proposed construction and design-build effort. Data presented must include all relevant contracts held within the past five (5) years and demonstrates an ability to handle the construction of multiple projects with multiple disciplines. Relevant construction experience will be limited to performance of projects similar in size, scope, and complexity to those that may be ordered under this contract. The work to be described under this criteria shall include renovation, alteration and repair, new construction and some associated architecture and engineering work. Offerors should also explain how the information provided is relevant to the proposed acquisition. Projects submitted should be reflective of the type of work identified by this contract. Work should demonstrate multiple projects done during a period of time and show the contractor's ability to complete multiple projects simultaneously with satisfactory results on all projects. A maximum of ten (10) projects will be evaluated. If more than ten projects are submitted, only the first ten projects will be evaluated starting with the most recent project and working back. Data presented shall be limited to two pages per contract described. Failure to provide the correct, current phone number, fax number, and email address for each point of contact (POC) listed may result in a lower rating for this criteria. Copies of industry awards, certificates, and letters of recommendation may be submitted and will not count in the page limitation. Offerors should include projects with the Federal Government, state and local government agencies, and commercial customers.

3.1.1. Using a format similar to that shown below, provide specific information on the projects listed.

Relevant Experience of Firm:

Project Title, Contract Number & Location
Project Construction Type (e.g., Indefinite-Delivery, Indefinite-Quantity)
Total Dollar Amount
Start & Completion Dates (Month/Year)
Role of Firm(s) (e.g., prime, sub) (address type of work performed and percentage of work, as applicable); also include any proposed team members that were directly involved in this project, including work performed, roles and responsibilities.
Brief Description of Project (address how this relates to solicitation project)
Customer Point of Contact (i.e., name, relationship to project, agency/firm affiliation, city, state, current phone no, and email address if available)
Awards or recognition received (if applicable)

3.2. Past Performance of the Prime. Past performance of the prime contractor will be evaluated using the CCASS database. All performance ratings for the past five (5) years shall be considered. If an offeror does not have past performance available in CCASS or wishes to augment the CCASS system ratings, the offerors may ask customers to submit the Customer Satisfaction Survey found at the end of this section. For each project constructed for Private Industry, provide a completed customer satisfaction survey for each applicable project within the last five (5) years. All Customer Satisfaction Surveys must be submitted to the Government from the customer or agency that is providing the information. Further instructions are found at the top of the Customer Satisfaction Survey. The Government reserves the right to consider all aspects of an offeror's performance history, but will attribute more significance to work that was similar in nature, magnitude, and complexity to this project. Should the offeors want to review the CCASS ratings contained in the Corps of Engineers CCASS Database, they may request the information by fax on company letterhead at the following telefax number: (503) 808-4596. The Government reserves the right to contact the evaluator on previous Government or Private Sector work to verify the Offeror's construction experience. In the case of an offeror without a record of past performance or for whom information on past performance is not available, the offeror **may not be evaluated as favorable or unfavorable** on past performance (See FAR 15.305(a)(2)(iv)). Surveys submitted directly by the offeror may not be considered. Please ensure envelopes containing surveys being submitted to this office do not contain the offeror's return address. As a maximum, no more than five (5) customer satisfaction surveys will be considered for the prime firm.

The Government will evaluate the relative merits of each offeror's past performance. Government databases will be checked and previous customers may be contacted as references. Offerors shall submit a list of all customers (including current Point of Contact and phone number) to whom a Customer Satisfaction Survey was provided.

(SEE THE REPRODUCIBLE FORM AT THE END OF THIS NOTICE). To be considered, the Surveys must be completed by the customers and mailed, hand-delivered, or faxed directly by the customer to the Contracting Office for receipt no later than the time and date the proposal is due.

3.3. Organizational Structure.

3.3.1. Provide an organizational chart that clearly identifies the management, design, and construction teams, and key positions to be utilized in executing task orders under the contract. Chart should show the interrelationship of the management team and the on-site project teams. Key positions should include Project General Manager (the person in the corporation that will lead all the personnel under this contract); Project Manager(s) (person(s) leading the effort on task order(s)); Site Quality Control Manager (Lead QC for the contract); Construction Superintendent (Construction super assigned to Task Order(s) under this contract); AE Project Manager (lead PM/engineer representing the supporting design firm). Identify these positions (or your company's label for these positions) on the organization chart and then provide their position qualifications and CV for those proposed to be used on this contract

3.3.2. Describe the hiring criteria for the key positions stated above to include level of education, professional licenses, technical certifications/licenses/qualifications, experience and background, skill levels and training. Provide resumes for each member of the management team citing specific relevant experience.

3.3.3. Describe overall management approach with regard to organization, coordination, monitoring, and control of construction and/or design-building projects. Describe interface with on-site, home office, subcontractor operations, design and construction teams, Government project managers, contracting officials, inspectors, and users demonstrating thorough understanding of the design building process and sound management approach.

3.3.4. Describe plan for responding to and managing multiple contract task orders of varying size and complexity issued simultaneously.

3.3.5. Demonstrate the ability to effectively team with A-E's, trade subcontractors and in-house personnel.

3.3.6. Describe the project manager's role in the organization and indicate who on the team will have the prime responsibility for total coordination of all disciplines when a design-build effort is involved.

3.4. Subcontracting Management. Describe the method and criteria to be used in selection of subcontractors. Describe policies and procedures for subcontractor management, including surveillance, quality control, scheduling, and performance. Describe the process/system for soliciting subcontractors and measures to be employed to insure appropriate level of experience and quality of work.

4. PROPOSAL CONTENTS.

4.1. Proposals shall be submitted in two parts: a technical proposal and (b) a price proposal (Seed Project). Each shall be submitted in a separate envelope or package with the type of proposal (i.e., technical or price) clearly printed on the outside of the envelope or package. The maximum number of pages in the technical proposal shall be 60 with font size no smaller than 10 point. Proposals must set forth full, accurate, and complete information as required by this RFP. Absence of information will be deemed as if no support for that criteria is available. Offerors submitting proposals should limit submission to data essential for evaluation of proposals so that a minimum of time and moneys are expended in preparing information required by the RFP. Proposals are to be on 8 ½ x 11 – inch paper, to the maximum extent practicable, and submitted in standard letter (8 ½ x 11-inch) hardback loose-leaf binders. Contents of binders shall be tabbed and labeled to afford easy identification from the proposal Table of Contents. No material shall be incorporated by reference or reiteration of the RFP. Any such material will not be considered for evaluation. It shall be presented in a manner, which allows it to "STAND ALONE" without need for evaluators to reference other documents. Photographs and organizational charts will not be considered a page. Technical p~~P~~roposals in excess of 60 pages may be discarded. Unnecessarily elaborate brochures or other presentation materials beyond those sufficient to present a complete and effective response are not desired and may be construed as an indication of the proposer's lack of cost-consciousness. Penalty for making false statements in proposals is prescribed in 18 U.S.C. 1001.

4.2. **Technical Proposal Format**. As a minimum, each copy of the technical proposal should contain the information, and follow the general format specified below. Pages should be numbered from beginning to end, without repeating for new sections.

TECHNICAL PROPOSAL (5 SETS REQUIRED (ORGINAL + 4 COPIES)

- Technical Proposal Cover Letter, to include:
  - Solicitation Number
  - Name, address, and telephone and facsimile numbers of the Offeror (and electronic address, if available)
  - Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the Offeror's behalf with the Government in connection with this solicitation
  - Names, title, and signature of the person authorized to sign the proposal.
  - A statement specifying the extent of agreement to furnish any and all items upon which prices are offered at the prices set opposite each item.
  - A statement that the offer has an acceptance period of 120 calendar days from the date the offer is submitted.
- Table of Contents. List all sections for the technical proposal. Any future amendments, additions and/or revisions to proposal shall include updated Table of Contents for each set.

Technical Proposal Cover Letter Continued:

- Relevant Experience
- Past Performance
- Organization Structure
- Plan for Fiscal, Management and Technical Support by Home or Corporate Office & Subcontracting Capability

4.3. **COEFFICIENT AND DESIGN SERVICES PRICE PROPOSAL**. The cooefficient/price proposal shall be submitted in ORIGINAL only and must be signed by an official authorized to bind your organization. Provide, the name, address, phone and fax numbers for your bank and bonding company. Financial capability will be checked, but not evaluated. Note that SF 1442, Block 13D, provides the number of calendar days after the date of the offer which the proposal is firm.

The price proposal for the seed project, to be submitted at the same time as technical proposal, should include:

Price Proposal (Original Only)

- SF 1442, Solicitation, Offer and Award and Corporate Certificate
- Acknowledge all amendments by number an date in Block 19 on SF 1442 BACK
- Price Proposal for Seed Project, Coefficient, Section 00600, Representation, Certifications and Other Statements of Offerors and Pre-award Information
- Bid Bond

.

5. SELECTION AND AWARD WITHOUT DISCUSSIONS. It is the intent of the Government to make award based upon initial offers, without further discussions or additional information. Therefore, proposals should be submitted initially on the most favorable terms from a price and technical standpoint. Do not assume you will be afforded the opportunity to clarify, discuss or revise your proposal. If award is not made on initial offers, discussions will be conducted as described below.

6. COMPETITIVE RANGE. After initial evaluation of proposals, if the Contracting Officer determines that discussions are to be conducted, the Contracting Officer will establish a competitive range comprised of all of the highest rated technical proposals, unless the range is further reduced for purposes of efficiency (i.e., the Contracting Officer may determine that the number of most highly rated proposals that might otherwise be included in the competitive range exceeds the number at which an efficient competition can be conducted). Discussions may be held with firms in the competitive range.

7. DISCUSSIONS. Written or oral (i.e., telephonic) discussions may be conducted by the Government with all offerors in the competitive range. As a result of discussions, offerors may make revisions to their initial offers. If an offeror's proposal is eliminated or otherwise removed from the competitive range during discussions, no further revisions to that offeror's proposal will be accepted or considered. Discussions will culminate in a request for Final Proposal Revision, the date and time of which will be common to all offerors.

8. SELECTION AND AWARD. The Government intends to make award based on initial offers. If discussions are conducted, then after receipt of Final Proposal Revision, the Technical Evaluation Team will evaluate supplemental information provided by offerors, adjust technical ratings previously assigned, and provide a recommendation to the Contracting Officer. Subsequently, and after evaluation of any changes to proposed prices, the Contracting Officer will perform a best-value analysis. Selection will be made on the basis of the responsible offer, which conforms to the RFP and represents the most advantageous offer to the Government, subject to availability of funds.

9. BEST-VALUE ANALYSIS

9.1. The Government is more concerned with obtaining superior technical proposals, than with making award at the lowest overall price to the Government. In determining the best value to the Government, the tradeoff process of evaluation will be utilized. The tradeoff process permits tradeoffs among cost or price and non-cost factors, and allows the Government to consider award to other than the lowest priced offeror or other than the highest technically rated offeror.

9.2. **You are advised that greater consideration will be given to the evaluation of technical proposals rather than price, with evaluation factors other than cost or price, when combined, are significantly more important than cost or price.** The best-value offers of three contractors will be selected using a tradeoff analysis of technical ratings and price. In making this determination, the Government is concerned with achieving highly qualified firms with a reasonable price. It is pointed out, however, that should technical competence between offerors be considered approximately the same, the price could become more important in determining award. The seed project provides pricing information. Award of Task Order ~~Number 0001~~ entitled "Closure of Municipal Solid Waste Landfill Cell 6, Fort Lewis, Washington", ~~will~~ may be made to one of the three contractors awarded this MATOC contract, who represents the lowest price for this seed project.

10. DEBRIEFINGS. Upon written request to the Contracting Officer, unsuccessful offerors will be debriefed and furnished the basis for the selection decision and contract award. Debriefings will be in accordance with FAR Part 15. 505 and 15.506.

11 PROPOSAL EXPENSES AND PRECONTRACT COSTS. This RFP does not commit the Government to pay costs incurred in preparation and submission of the

initial and any subsequent proposals or for any other costs incurred prior to execution of a formal contract.

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SECTION 00800

SPECIAL CONTRACT REQUIREMENTS

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SECTION 00800
SPECIAL CONTRACT REQUIREMENTS

SC-1**.** **PURPOSE AND SCOPE** . The purpose of this indefinite-delivery, indefinite-quantity (IDIQ) Multiple-Award Task Order Contract (MATOC) is to provide real property repair and maintenance and minor construction services for military projects at Fort Lewis and Yakima Training Center, Washington. Use of the MATOC will provide the Government with a construction product delivery method that can accommodate quick and straight-forward projects, as well as some complex projects, and can help minimize design effort and related overhead expenditures, as well as handle compressed schedules. **Three** contracts will be awarded as a result of this solicitation. As requirements develop, Requests for Proposals (RFP) for Task Orders will be issued on a competitive or sole source basis, at the Government's option. Award of competitive Task Orders may be based on either best value or low price. Sole source orders will be based on 2003 R.S. MEANS and the contractor's coefficient. Task Orders will vary in size from $50,000 to $3 million and can be issued by the Seattle District Contracting Officer. Orders will include tasks in a variety of trades, such as carpentry, road repair, roofing, excavation, interior/exterior electrical, steam fitting, HVAC, plumbing, sheet metal, painting, fencing, demolition, concrete, masonry and welding, as well as asbestos and lead-paint abatement that is incidental to construction or project design.

SC-2. **PERIOD OF SERVICE**. Day one of each contract is the date of signature by the Contracting Officer. The ordering period for each contract shall automatically end upon the completion of the base period absent an extension.

2.1. Both contracts will include a base period, not-to exceed (NTE) one year and four option periods (NTE one year each), for a total contract performance period NTE five years. If capacity is fully utilized for any period before the one-year time limit, the Government may decide to exercise the next option early. Maximum value of all work awarded under the **three** MATOC's will be limited to $6 million per contract period (shared by the three contractors) or $30 million over the life of the contracts. Task Order minimum and maximum limits are $50,000 and $3 million, respectively. The minimum-guarantee amount (shared by the three contractors) for the base period is $120,000 per contract awarded. The minimum-guarantee amount (shared by the three contractors) for each option period exercised is $60,000 per contract award. The expiration or termination of the ordering period shall not affect any order issued during the effective period of these contracts. Only the Contracting Officer executing these contracts and the Successor Contracting Officer has the authority to modify the term and conditions of these contracts.

SC-3. **ORDERING PROCEDURES FOR TASK ORDERS.**

3.1. A Request for Proposal (RFP) shall be issued when the Government requires work performed under this MATOC contract. The RFP shall include information concerning the statement of work, guide specifications, drawings, attachments, information pertaining to a site visit, design requirements for design-build projects, evaluation criteria, and any other requirements for submission (e.g. proposal requirements, bid schedule, etc.). Performance and payment bonds shall be required for Task Orders, as described in SC 9, PERFORMANCE AND PAYMENT BONDS AND ALTERNATIVE PAYMENT PROTECTIONS FOR CONSTRUCTION CONTRACTS. Bid bonds will be required if stated in the RFP in accordance with SC-8, BID GUARANTEE.

3.2. It is anticipated that the majority of the Task Orders will be awarded based on competition. Awardees may compete for projects among themselves and with other MATOC's already awarded. The Government reserves the right to issue additional solicitations and award additional contracts within the region covered by this solicitation. In this event, new MATOC contractors, in accordance with the terms of their contracts, may compete for Task Orders with the Contractors selected under this solicitation.

3.3. Competing for a Task Order. In determining eligibility to compete, the Contracting Officer will consider such factors as past performance on earlier Task Orders under the MATOC, quality, timeliness, or other factors the Contracting Officer determines are relevant to award of a particular Task Order. In the event a Contractor is unable to submit an offer in response to an RFP, the Contractor shall notify the Contracting Officer in writing.

3.4. All MATOC Contractors will be given a fair opportunity to bid on projects unless the Contracting Officer determines:

a. an urgent need exists and seeking competition would result in unacceptable delay
b. only one Contractor is capable at the level of quality required because the requirement is unique or highly specialized
c. a sole source is in the interest of economy and efficiency as a logical follow-on to an order already competed
d. to satisfy contract minimum award obligations.

3.5. Offeror's attendance at walk-throughs is considered vital to preparation of competitive and cost-effective offers, and to understanding the total results desired by the Government. Failure to attend walk-throughs may not be used as an excuse for omission or miscalculation in offers, and may be taken into consideration in determining a Contractor's eligibility to participate in future Task Orders. The Contractor will not be reimbursed for attendance during negotiations, site visits, or other pre-Task Order costs.

3.6. **Award Decision.** Whenever possible, award will be made without discussions. At the conclusion of any discussions, each MATOC contractor will be requested to provide a final proposal revision. Task Order award will be made based on the lowest price or the best value to the Government, as described in the RFP. The awarded Task Order will be firm fixed-price with a specific completion date.

3.7. Task Orders will be issued on DD Form 1155. Orders may be placed via mail, telephone, facsimile or electronic commerce. The Task Order becomes binding when the Contracting Officer signs the Order. Notice to Proceed (NTP) will be issued separately after receipt of acceptable performance and payment bonds. The Seattle District Corps of Engineers Contracting Officer is authorized to issue orders under the MATOC contracts.

3.8. In accordance with FAR 16.505(a) (8), no protest under Subpart 33.1 is authorized in connection with the issuance or proposed issuance of an order under a Task Order Contract except for a protest on the grounds that the order increases the scope, period, or maximum value of the contract.

3.9. **Ombudsman.** If the Contractor believes it was not fairly considered for a particular Task Order, the Contractor may present the matter to the Contracting Officer. The Contractor may appeal the explanation or decision of the Contracting Officer to the U.S. Army Corps of Engineers (USACE) Ombudsman, who is the USACE Principal Assistant Responsible for Contracting (PARC), at the following address: Headquarters, U.S. Army Corps of Engineers, Attention: CEPR-P (USACE Ombudsman), 20 Massachusetts Avenue N.W., Washington, DC 20314-1000. The ombudsman will review the Contractor's complaint, and in coordination with the Contracting Officer, ensure that the Contractor was afforded a fair opportunity to be considered for the Task Order.

3.10. **Ordering. (FAR 52.216-18) (OCT 1995)**

a. Any supplies and services to be furnished under this contract shall be ordered by issuance of Task Orders by the individuals or activities designated in this contract. Such orders may be issued from date of contract award until the 365th calendar day thereafter.

b. All Task Orders are subject to the terms and conditions of this contract. In the event of conflict between a Task Order and this contract, the contract shall control.

c. If mailed, a Task Order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in this contract.

3.11 **Task Order Limitations. (FAR 52.216-19) (OCT 1995)**

a. **Minimum Order**. When the Government requires supplies or services covered by this contract in an amount less than $50,000, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

b. **Maximum Order**. The maximum Task Order limitation is $3 million, including subsequent modifications. The Government may combine several projects, as indicated by separate Statements of Work and individual line items, in one Task Order, as required. The Contractor is not obligated to honor—

(1) Any order for a single Task Order less than $50,000;
(2) Any order for a single Task Order in excess of $3 million.

SC-4. **PROPOSAL SUBMISSION REQUIREMENTS - COMPETITIVE RFPS.**

4.1. Depending upon the requirements of each Task Order, the Contractor will provide one of the following in response to an RFP: (a) lump-sum price, (b) a price for each line item in the Schedule (when optional items are used), or (c) technical proposal in one package and the price proposal in a separate package.

4.2. Contractors shall respond within the number of calendar days stated in the RFP by submitting a proposal to the Contracting Officer in accordance with requirements stated in the RFP.

4.3. Proposals will either be accepted as is or negotiated to the mutual agreement of both the Government and the Contractor. Upon conclusion of satisfactory discussions or negotiations (if required), a Task Order will be issued by the Contracting Officer reflecting the negotiated order price and payment terms as outlined in the statement of work or specifications. In any instance where there is failure to reach agreement on price, the Government reserves the right to withdraw the project and have it completed by other means.

SC-5. **PROPOSAL SUBMISSION REQUIREMENTS - SOLE SOURCE.**

5.1. When it is necessary to negotiate with one firm on a sole-source basis, the 2003 R.S. MEANS and the Contractor's coefficient shall be utilized in establishing the price. For any items not covered by MEANS, the Contractor shall provide competitive quotes to establish a fair and reasonable price. The Contractor's coefficient will be applied to the overall MEANS price to establish the total value of the Task Order. There may be circumstances where proposals will be negotiated without R.S. MEANS, such as follow-on work.

5.2. **Coefficient for Modifications to Task Orders.** When it is determined that a Task Order requires a modification, the Contractor shall calculate his proposal utilizing the same coefficient that was used in calculating the task order price, regardless of the date of the modification.

SC-6. **EVALUATION METHOD AND PROCEDURES.**

6.1. The Contracting Officer, in making decisions in award of any individual Task Order, may consider factors such as past performance on earlier Task Orders under the MATOC, quality, timeliness, or other factors that the Contracting Officer determines to be relevant to award of a particular Task Order. Award factors will vary depending on the unique requirements for each Task Order; however, pricing will weight heavily.

6.2. When an RFP for a Task Order is issued, the Government intends to select the most advantageous, responsive, and responsible proposal resulting in the Best Value to the Government, price and other factors considered.

6.3. There may be instances where the technical rating outranks price. Each RFP will describe criteria to be utilized in evaluating Task Order proposals.

6.4. **Arithmetic Discrepancies in the Evaluation of Offers Submitted in Response to RFPs for Individual Task Orders.**) **EFARS (MAR 1995)**

a. For the purpose of initial evaluations of offers proposed for individual Task Orders, the following will be utilized in resolving arithmetic discrepancies found on the face of pricing schedule as submitted by the Offeror: (1) Obviously misplaced decimal points will be corrected; (2) Discrepancy between unit price and extended price, the unit price will govern; (3) Apparent errors in extension of unit prices will be corrected;
(4) Apparent errors in addition of lump-sum and extended prices will be corrected.

b. For purposes of price evaluation, the Government will proceed on the assumption that the Offeror intends the proposed price to be evaluated on basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above.

c. These correction procedures shall not be used to resolve any ambiguity concerning which price is low.

6.5. **Contract Prices--Bidding Schedules.** The Government's payment for the items listed in the Pricing Schedules of individual Task Orders shall constitute full compensation to the Contractor for-- (1) Furnishing all plant, labor, equipment, appliances, and materials; and (2) Performing all operations required to complete the work in conformity with the drawings and specifications. The Contractor shall include in the prices for the items listed in the Bidding Schedule all costs for work in the specifications, whether or not specifically listed in the Bidding Schedule.

6.6. **Evaluation of Options (FAR 52.217-5) (JUL 1990).** Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for the purpose of awarding Task Orders by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

SC-7. **GENERAL WAGE GENERAL DECISIONS.** Davis-Bacon wage rates shall be utilized for all Task Orders under this contract. Wage decisions will be updated as each task order is issued with no adjustment in contract price (reference Sec 0700, FAR Clause 52.222-30).

SC-8. **BID GUARANTEE. (FAR 52.228-1) (SEP 1996) –** A bid guarantee shall be included in each offer submitted in response to a Task-Order RFP if so stated in the task order RFP.

a. Failure to furnish a bid guarantee in the proper form and amount, by the time set for submittal of offers, may be cause for rejection of the offer.

b. The Offeror shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful offerors as soon as practicable after the closing date, and (2) to the successful Offeror upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the offer as accepted.

c. The amount of the bid guarantee shall be 20 percent of the offer price or $3 million, whichever is less.

d. If the successful Offeror, upon acceptance of its offer by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 5 calendar days after receipt of the forms by the Offeror, the Contracting Officer may terminate the contract for default.

e. In the event the contract is terminated for default, the Offeror is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

SC-9. **PERFORMANCE AND PAYMENT BONDS, AND ALTERNATIVE PAYMENT PROTECTIONS FOR CONSTRUCTION CONTRACTS. FAR 52.228-15 (Jul 2000)**

(a) Definitions. As used in this clause --

"Original contract price" means the award price of the contract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original contract price does not include the price of any options, except those options exercised at the time of contract award.

(b) Amount of required bonds. Unless the resulting contract price is $100,000 or less, the successful offeror shall furnish performance and payment bonds to the Contracting Officer as follows:

(1) Performance Bonds (Standard Form 25). The penal amount of performance bonds at the time of contract award shall be 100 percent of the original contract price.

(2) Payment Bonds (Standard Form 25-A). The penal amount of payment bonds at the time of contract award shall be 100 percent of the original contract price.

(3) Additional bond protection.

(i) The Government may require additional performance and payment bond protection if the contract price is increased. The increase in protection generally will equal 100 percent of the increase in contract price.

(ii) The Government may secure the additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) Furnishing executed bonds. The Contractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the Contracting Officer, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the Contracting Officer, but in any event, before starting work.

(d) Surety or other security for bonds. The bonds shall be in the form of firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier's check,

irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the Federal Register or may be obtained from the:

U.S. Department of Treasury
Financial Management Service
Surety Bond Branch
401 14th Street, NW, 2nd Floor, West Wing
Washington, DC 20227

(e) Notice of subcontractor waiver of protection (40 U.S.C. 270b(c)). Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the contract.

SC-10. **COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (FAR 52.211-10) (APR 1984)**. The Contractor shall be required to commence work within the time frame specified in the individual Task Orders, prosecute the work diligently, and complete the entire work ready for use not later than the number of calendar days specified in the Task Order. The time stated for completion shall include final cleanup of the premises. The Contractor shall ensure that all Task Order work under this contract is completed and that submittals are made in accordance with the time allowances and progress schedules set forth in individual Task Orders. The schedule is subject to adjustment by the Contracting Officer or a duly authorized representative, in writing, for material delays on the part of the Government and for conditions beyond the control of the parties hereto. The order completion schedule shall be based on receipt of either written or verbal Notice to Proceed (NTP), whichever is sooner.

SC-11. **LIQUIDATED DAMAGES – CONSTRUCTION. (FAR 52.211-12)(SEP 2000)**

11.1. (a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of

(i) All work within a 100 mile radius of Fort Lewis, WA $642
(ii) All other work managed by the Fort Lewis Area Office, Fort Lewis, WA $699

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

11.2. For any number of Task Orders accomplished at one site for which delay costs are applicable at the same time, the total daily liquidated damages will be limited to the damages for one Task Order for each calendar day of delay except when separate additional damages are specified in an individual Task Order. These additional damages, if specified, shall be concurrent and cumulative and applied in addition to the basic liquidated damages noted above or in the Task Order. For any number of Task Orders at separate sites for which delay costs are applicable at the same time, the total daily basic

liquidated damages shall be applied concurrent and cumulative. This shall be calculated with each and any other delinquent Task Order for each calendar day of delay. If separate liquidated damages are specified in the Task Order, this amount will be separate from other task orders.

11.3. If the Government terminates the Contractor's right to proceed, resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Government in completing the work.

11.4. If the Government does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

11.5. Exception to Liquidated Damage. In case the Contracting Officer determines completion of work is not feasible during the completion period(s) stated in the Task Order, such work will be exempted from liquidated damages.

SC-12. **INSURANCE - WORK ON A GOVERNMENT INSTALLATION. (FAR 52.228-5) (JAN 1997)**

a. The Contractor shall, at its own expense, provide and maintain during the entire performance period of this contract at least the kinds and minimum amounts of insurance required in the Insurance Liability Schedule or elsewhere in the contract.

b. Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective:

(1) for such period as laws of the State in which this contract is to be performed prescribe; or

(2) until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

c. The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

d. Insurance Liability Schedule (FAR 28.307-2)

(1) Workers' compensation and employer's liability. Contractors are required to comply with applicable Federal and State workers' compensation and occupational disease statutes. If occupational diseases are not compensable under those statutes, they shall be covered under the employer's liability section of the insurance policy, except when Contract operations are so commingled with a Contractor's commercial operation that it would not be practical to require this coverage. Employer's liability coverage of at least $100,000 shall be required, except in states with exclusive or monopolistic funds that do not permit workers' compensation to be written by private carriers.

(2) General Liability.

(A) The Contracting Officer shall require bodily injury liability insurance coverage written on the comprehensive form of policy of at least $500,000 per occurrence.

(B) Property damage liability insurance shall be required only in special circumstances as determined by the agency.

(3) Automobile liability. The Contracting Officer shall require automobile liability insurance written on the comprehensive form of policy. The policy shall provide for bodily injury and property damage liability covering the operation of all automobiles used in connection with performing work under the contract. Policies covering automobiles operated in the United States shall provide coverage of at least $200,000 per person and $500,000 per occurrence for bodily injury and $20,000 per occurrence for property damage. The amount of liability coverage on other policies shall be commensurate with any legal requirements of the locality and sufficient to meet normal and customary claims.

(4) Aircraft public and passenger liability. When aircraft are used in connection with performing work under the contract, the Contracting Officer shall require aircraft public and passenger liability insurance. Coverage shall be at least $200,000 per person and $500,000 per occurrence for bodily injury, other than passenger liability, and $200,000 per occurrence for property damage. Coverage for passenger liability bodily injury shall be at least $200,000 multiplied by the number of seats or passengers, whichever is greater.

(5) Vessel liability. When contract performance involves use of vessels, the Contracting Officer shall require, as determined by the agency, vessel collision liability and protection and indemnity liability insurance.

(6) Environmental Liability. If this contract includes the transport, treatment, storage, or disposal of hazardous material waste the following coverage is required.

The Contractor shall ensure the transporter and disposal facility have liability insurance if effect for claims arising out of the death or bodily injury and property damage from hazardous material/waste transport, treatment, storage and disposal, including vehicle liability and legal defense costs in the amount of $1,000,000 as evidenced by a certificate of insurance for General, Automobile, and Environmental Liability Coverage. Proof of this insurance shall be provided to the Contracting Officer.

SC-13. **TIME EXTENSIONS. FAR 52.211-13 (Sept 2000)**

Time extensions for contract changes will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements related to the changed work and that the remaining contract completion dates for all other portions of the work will not be altered. The change order also may provide an equitable readjustment of liquidated damages under the new completion schedule.

SC-14. **PERFORMANCE OF WORK BY THE CONTRACTOR. (FAR 52.236-1) (APR 1984).** The Contractor shall perform on the site, and with its own organization, work equivalent to at least fifteen percent (15%) of the total amount of work to be performed under the contract. The percentage may be reduced by a supplemental contract to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

SC-15. **SHOP DRAWINGS AND SUBMITTALS.** The Contractor is responsible for preparation of all shop drawings, submittals, and as-builts for each Task Order in accordance with requirements contained therein.

SC-16. **PHYSICAL DATA (FAR 52.236-4) (APR 1984).** Data and information furnished or referred to below is for the Contractor's information. The Government will not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) Physical Conditions: The indications of physical conditions on the drawings and in the specifications are the result of site investigations by test holes shown on the drawings.

(b) Weather Conditions: Each bidder shall be satisfied before submitting his bid as to the hazards likely to arise from weather conditions. Complete weather records and reports may be obtained from any National Weather Service Office.

(c) Transportation Facilities: Each bidder, before submitting his bid, shall make an investigation of the conditions of existing public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress at the job site. The unavailability of transportation facilities or limitations thereon shall not become a basis for claims for damages or extension of time for completion of the work.

(d) Right-of-Way: The right-of-way for the work covered by these specifications will be furnished by the Government, except that the Contractor shall provide right-of-way for ingress and egress across private property where necessary to gain access to the job site. The Contractor may use such portions of the land within the right-of-way not otherwise occupied as may be designated by the Contracting Officer. The Contractor shall, without expense to the Government, and at any time during the progress of the work when space is needed within the right-of-way for any other purposes, promptly vacate and clean up any part of the grounds that have been allotted to, or have been in use by, him when directed to do so by the Contracting Officer. The Contractor shall keep the buildings and grounds in use by him at the site of the work in an orderly and sanitary condition. Should the Contractor require additional working space or lands for material yards, job offices, or other purposes, he shall obtain such additional lands or easements at his expense.

SC-17. **LAYOUT OF WORK (FAR 52.236-17) (APR 1984).** The Contractor shall lay out its work from Government-established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed by the Contractor or through its negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due, or to become due, to the Contractor.

SC-18. **EVALUATION OF CONTRACTOR PERFORMANCE.** In accordance with FAR 36.201(a)(1)(i), the Contractor's performance will be evaluated upon completion of each Task Order of $500,000 or more. As an alternative, the Contractor's performance may be evaluated upon completion of work on several small Task Orders with a total dollar value of $500,000 or more. Interim evaluations may be prepared at any time during contract performance when determined to be in the best interest of the Government.

SC-19. **PLANS AND SPECIFICATIONS.** The Contractor will be provided one copy of the construction drawings and Statement of Work (with pertinent supplemental specifications) upon issue of each Task Order. All further reproduction shall be at the Contractor's expense. The Government may provide these as hard copy or as electronic media, such as e-mail or CD ROM, at its option.

SC-20. **ORDER OF PRECEDENCE.** Any inconsistency in this solicitation or contract shall be resolved by giving precedence in the following order: (a) the Schedule (excluding the specifications), (b) representations and other instructions, (c) contract clauses, (d) other documents, exhibits, and attachments, and (e) the specifications.

SC-21. **OPTION TO EXTEND THE TERM OF THE CONTRACT FAR 52.217-9 (Mar 2000)**

(a) The Government may extend the term of this contract by written notice to the Contractor within _THIRTY (30) DAYS provided, that the Government gives the Contractor a preliminary written notice of its intent to extend at least SIXTY (60) days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed FIVE YEARS..

SC-22. **TASK ORDERS INCLUDING DESIGN AND CONSTRUCTION SERVICES.**

22.1. **Limitation On Payment For Design Services.** If it should be necessary to terminate a Task Order which includes design, for any reason, prior to completion, the Government will pay the Contractor a fair and reasonable price for the design services performed and delivered to the Government. However, such payment will not exceed a sum greater than the amount allowable under 10 USC 4540 regardless of the actual costs the Contractor may be able to substantiate.

22.2. **Design Reviews**.

22.2.1. Review(s) of the design will be accomplished in accordance with the Statement of Work for each Task Order. The Contractor is responsible for submitting the number of copies to the addresses identified when review is not accomplished at the Contractor's office.

22.2.2. The time required by the Government to review submissions made during design or construction may vary with the Task Order. However, the Government will attempt to provide as expedited a review as is possible. The review periods, as established in the Task Order Schedule, are the maximum anticipated periods required. Every effort will be made to accomplish reviews within shorter periods. Over-the-shoulder reviews will be used to the maximum extent practicable.

22.2.3. The Contractor is responsible for incorporation of review comments as soon as possible and within the time scheduled in the Task Order.

SC-23. **CONTRACTOR'S COEFFICIENT.**

23.1. The Contractor's coefficient shall contain all costs other than the prepriced unit prices contained in the on 2003 R.S. MEANS book. The coefficient is a numerical factor that represents contractor costs (indirect and direct costs, sales tax, etc.) and profit not considered to be included in the on 2003 R.S. MEANS book data. The Contractor's coefficient shall contain all contractors' costs inclusive of profit, all overhead (to include home office and field overhead), labor burden, insurance, adjustments to listed prices, general and administrative expenses, subcontractor mark-up, contingencies (such as geographical location of work), mobilization and demobilization, and all other costs including, but not limited to, compliance with environmental laws, permits, preparation of reports, correspondence and documentation required by law or these specifications, tax laws, protection and/or moving of government property and engineering services. The coefficient shall also include costs described as costs to provide submittals, interface with Government representatives, coordination with occupants and other contractors. The coefficient shall also include costs for:

- All waste and excess material
- Mobilization and close out for the total contract and each Task Order.
- Clean up
- Safety (i.e.,. Safety Rails, Safety Nets, tethers, face/clothing protection, etc.)
- Traffic and work-site signs and barriers
- Project management and supervision
- Quality control
- Office management and equipment
- Depreciation of mobile office(s)
- Subcontractor profit
- As-built drawing, submittals, permits, license and other risks of doing business
- Site security

23.2. The coefficient is proposed by offerors as a percentage increase, (e.g., 1.10) or decrease (e.g., 0.95) to the MEANS book prices, in association with performance of a Task Order. The coefficient proposed and accepted is incorporated in the contract and used in establishing the price for sole-source Task Orders.

23.3. The MEANS 2003 book will be used for base and option periods of the contract.

23.4. **Coefficient Factors For Option Years .** Adjustment to the base year coefficient factors for option years will be in accordance with the following formula:

$$pl = p \times f$$

Definitions:
pl = New Coefficient Factor
p = Coefficient Factor for Initial Year of Contract
f = Index Factor

a. The Index Factor, f, shall be computed according to the following equation:

$$f = \frac{CCI - C}{CCI - B}$$

b. Where: CCI-C is the Construction Cost Index for the month in which the option year is exercised for which f is computed as published by the ENR (formerly called the Engineering News Record).

c. *NOTE: If the ENR changes the index base year(s), the base reference used herein will be adjusted to accommodate the new CCI-C(s).

d. In computing f, the CCI-C may be located on the Market Trends page of the ENR current issue at the time that the option year is exercised. The CCI-B is the base reference for the month in which the basic contract was awarded.

e. If the CCI-C ceases to be published, the parties shall agree on substitute indices and the contract modified accordingly.

23.5. **Adjustment to Coefficient.** Coefficient will not be adjusted for any other changes or circumstances encountered during the life of the contract.

SC-24**. AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DoD 5010.12-L. (FAR 52.211-2) (DEC 1999)**

Copies of specifications, standards, and data item descriptions cited in this solicitation may be obtained -

(a) From the ASSIST database via the Internet at http://assist.daps.mil; or

(b) By submitting a request to the --

Department of Defense Single Stock Point (DoDSSP)
Building 4, Section D
700 Robbins Avenue
Philadelphia, PA 19111-5094
Telephone (215) 697-2667/2179

Facsimile (215) 697-1462.(End of Provision)

SC-25. **NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (FAR 52.222-23) (Feb 1999)**

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade	Goals for Female Participation for Each Trade
Pierce 6.2% Thurston 6.1% Yakima 9.7%	6.9%

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on

(1) its implementation of the Equal Opportunity clause,

(2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and

(3) its efforts to meet the goals.

The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of $10,000 at any tier for

construction work under the contract resulting from this solicitation. The notification shall list the --

(1) Name, address, and telephone number of the subcontractor;
(2) Employer's identification number of the subcontractor;
(3) Estimated dollar amount of the subcontract;
(4) Estimated starting and completion dates of the subcontract; and
(5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is Washington State: Pierce, Thurston, Yakima Counties.

SC-26. **EPA ENERGY STAR**. The Government requires that certain equipment be Energy Star compliant. Initially, the sole Energy Star requirement shall be the self certification by the bidder that the specified equipment is Energy Star compliant. Within 3 months of the availability of an EPA sanctioned test for Energy Star compliance, the Contractor shall submit all equipment upgrades and additions for testing and provide proof of compliance to the Government upon completion of testing. Testing shall be at the Contractor's expense.

SC-27. **RECOVERED MATERIALS**. The Corps of Enginers encourages all proposers to utilize recovered materials to the maximum extent practicable. The attached APPENDIX R contains procurement guidelines for products containing recovered materials.

~~SC-28. **SECURITY CONTRACT LANGUAGE FOR ALL CORPS OF ENGINEERS' UNCLASSIFIED CONTRACTS.** All Contractor employees (U.S. citizens and Non- U.S. citizens) working under this contract (to include grants, cooperative agreements and task orders) who require access to Automated Information Systems (AIS), (stand alone computers, network computers/systems, e- mail) shall, at a minimum, be designated into an ADP-III position (non-sensitive) in accordance with DoD 5220-22-R, Industrial Security Regulation. The investigative requirements for an ADP-III position are a favorable National Agency Check (NAC), SF-85P, and Public Trust Position. The contractor shall have each applicable employee complete a SF-85P and submit to the Seattle Corps of Engineers District Security Officer within three (3) working days after award of any contract or task order, and shall be submitted prior to the individual being permitted access to an AIS. Contractors that have a commercial or government entitle (CAGE) Code and Facility Security Clearance through the Defense Security Service shall process the NACs and forward visit requests/results of NAC to the Seattle Corps of Engineers District Security Officer. For those contractors that do not have a CAGE Code or Facility Security Clearance, the Seattle Corps of Engineers Security Office will process the investigation in coordination with the Contractor and contract employees. In accordance with Engineering Regulation, ER 380-1-18, Section 4, foreign nationals who work on Corps of Engineers' contracts or task orders shall be approved by the HQUSACE Foreign Disclosure Officer or higher before beginning work on the contract/task order. This regulation includes~~

~~subcontractor employees. (NOTE: exceptions to the above requirement include foreign nationals who perform janitorial and/or ground maintenance services). The contractor shall submit to the Division/District Contract Office, the names of all foreign nationals proposed for performance under this contract/task order, along with documentation to verify that he/she was legally admitted into the United States and has authority to work and/or go to school in the U.S. Such documentation may include a US passport, Certificate of US citizenship (INS Form N-560 or N-561), Certificate of Naturalization (INS Form N-550 or N-570), foreign passport with I- 551stamp or attached INS form I-94 indicating employment authorization, Alien Registration Receipt Card with photograph (INS Form I-151 or I-551), Temporary Resident Card (INS Form I-688), Employment Authorization Card (INS Form I-688A), Reentry Permit (INS Form I-327), Refugee Travel Document (INS Form I-571), Employment authorization Document issued by the INS which contains a photograph (INS Form I-688B).~~

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END OF SECTION 00800

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SECTION 13851

FIRE DETECTION AND ALARM SYSTEM, ADDRESSABLE

1. GENERAL

Criteria and requirements appearing in bold apply to work on Fort Lewis only.

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. Use the most up to date Code (NFPA, NEC) in effect at the time of construction. The publications are referred to in the text by basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI S3.41	(1990; R 1996) Audible Emergency Evacuation Signals

CODE OF FEDERAL REGULATIONS (CFR)

47 CFR 15	Radio Frequency Devices

FACTORY MUTUAL ENGINEERING AND RESEARCH (FM)

FM P7825a	(1998) Approval Guide Fire Protection

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE C62.41	(1991; R 1995) Surge Voltages in Low-Voltage AC Power Circuits

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(1999) National Electrical Code
NFPA 72	(1996; Errata Oct 96, Dec 96; TIA 96-1, 96-2, 96-3) National Fire Alarm Code
NFPA 90A	(1996) Installation of Air Conditioning and Ventilating Systems
NFPA 1221	(1994) Installation, Maintenance and Use of Public Fire Service Communication Systems

UNDERWRITERS LABORATORIES (UL)

UL 6	(1997) Rigid Metal Conduit
UL 38	(1994; Rev Nov 1994) Manually Actuated Signaling Boxes for Use with Fire-Protective Signaling Systems

UL 228	(1997) Door Closers-Holders, With or Without Integral Smoke Detectors
UL 268	(1996; Rev thru Jun 1998) Smoke Detectors for Fire Protective Signaling Systems
UL 268A	(1998) Smoke Detectors for Duct Applications
UL 464	(1996; Rev May 1997) Audible Signal Appliances
UL 521	(1993; Rev Oct 1994) Heat Detectors for Fire Protective Signaling Systems
UL 632/ANSI C33.41	(1994; Rev Sep 1994) Electrically-Actuated Transmitters
UL 797	(1993; Rev thru Mar 1997) Electrical Metallic Tubing
UL 864	(1996) Control Units for Fire-Protective Signaling Systems
UL 1242	(1996; Rev Mar 1998) Intermediate Metal Conduit
UL 1971	(1995; Rev thru May 1997) Signaling Devices for the Hearing Impaired

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Fire Alarm Reporting System;

Detail drawings, prepared and signed by a Registered Professional Engineer or a NICET Level 3 Fire Alarm Technician, consisting of a complete list of equipment and material, including manufacturer's descriptive and technical literature, catalog cuts, and installation instructions. Note that the contract drawings show layouts based on typical detectors. The Contractor shall check the layout based on the actual detectors to be installed and make any necessary revisions in the detail drawings. The detail drawings shall also contain complete wiring and schematic diagrams for the equipment furnished, equipment layout, and any other details required to demonstrate that the system has been coordinated and will properly function as a unit. Detailed point-to-point wiring diagram shall be prepared and signed by a Registered Professional Engineer or a NICET Level 3 Fire Alarm Technician showing points of connection. Diagram shall include connections between system

devices, appliances, control panels, supervised devices, and equipment that is activated or controlled by the panel. **As-Builts shall show the exact run of conduit, quantity of wires, wire color code, location of all initiating devices, signaling devices, modules and major junction boxes and power supplies. As-Builts will also show Loop number and address of each device or module in addressable systems. A copy of the As-Builts shall be provided to DPW Fire Alarm Shop for review two weeks prior to final acceptance testing.**

SD-03 Product Data

Storage Batteries;

Substantiating battery calculations for supervisory and alarm power requirements. Ampere-hour requirements for each system component and each panel component, and the battery recharging period shall be included.

Voltage Drop;

Voltage drop calculations for notification appliance circuits to indicate that sufficient voltage is available for proper appliance operation.

Special Tools and Spare Parts;

Spare parts data for each different item of material and equipment specified, not later than 3 months prior to the date of beneficial occupancy. Data shall include a complete list of parts and supplies with the current unit prices and source of supply and a list of the parts recommended by the manufacturer to be replaced after 1 year of service.

Technical Data and Computer Software; G

Technical data which relates to computer software.

Training;

Lesson plans, operating instructions, maintenance procedures, and training data, furnished in manual format, for the training courses. The operations training shall familiarize designated government personnel with proper operation of the fire alarm system. The maintenance training course shall provide the designated government personnel adequate knowledge required to diagnose, repair, maintain, and expand functions inherent to the system.

Testing;

Detailed test procedures, prepared and signed by a Registered Professional Engineer or a NICET Level 3 Fire Alarm Technician, for the fire detection and alarm system 60 days prior to performing system tests.

SD-06 Test Reports

Testing;

Test reports, in booklet form, showing field tests performed to prove compliance with the specified performance criteria, upon completion and testing of the installed system. Each test report shall document readings, test results and indicate the final position of controls. The Contractor shall include the NFPA 72 Certificate of Completion and NFPA 72 Inspection and Testing Form, with the appropriate test reports.

SD-07 Certificates

Equipment;

Certified copies of current approvals or listings issued by an independent test lab if not listed by UL, FM or other nationally recognized testing laboratory, showing compliance with specified NFPA standards.

Qualifications;

Proof of qualifications for required personnel. The installer shall submit proof of experience for the Professional Engineer, fire alarm technician, and the installing company.

SD-10 Operation and Maintenance Data

Technical Data and Computer Software; G

Six copies of operating manual outlining step-by-step procedures required for system startup, operation, and shutdown. The manual shall include the manufacturer's name, model number, service manual, parts list, and complete description of equipment and their basic operating features. Six copies of maintenance manual listing routine maintenance procedures, possible breakdowns and repairs, and troubleshooting guide. The manuals shall include conduit layout, equipment layout and simplified wiring, and control diagrams of the system as installed. The manuals shall include complete procedures for system revision and expansion, detailing both equipment and software requirements. Original and backup copies of all software delivered for this project shall be provided, on each type of media utilized. Manuals shall be approved prior to training. **Two copies of the fire alarm system database and all software/hardware required for programming/editing shall be turned over to DPW at the time of acceptance testing.**

1.3 GENERAL REQUIREMENTS

1.3.1 Standard Products

Material and equipment shall be the standard products of a manufacturer regularly engaged in the manufacture of the products for at least 2 years prior to bid opening. Equipment shall be supported by a service organization that can provide service within 24 hours of notification.

~~1.3.2 Preferred Materials/Manufacturers.~~

~~A. Silent Knight, EST, Simplex, Notifier Fire Alarm Panels. All fire alarm transmitters shall be equal in all aspects to King Fisher transmitter.~~

1.3.2 Nameplates

Major components of equipment shall have the manufacturer's name, address, type or style, voltage and current rating, and catalog number on a noncorrosive and nonheat-sensitive plate which is securely attached to the equipment.

1.3.3 Keys and Locks

Locks shall be keyed alike. Four keys for the system shall be provided.

1.3.4 Tags

Tags with stamped identification number shall be furnished for keys and locks.

1.3.5 Verification of Dimensions

After becoming familiar with details of the work, the Contractor shall verify dimensions in the field and shall advise the Contracting Officer of any discrepancy before performing the work.

1.3.6 Compliance

The fire detection and alarm system and the central reporting system shall be configured in accordance with NFPA 72; exceptions are acceptable as directed by the Contracting Officer. The equipment furnished shall be compatible and be UL listed, FM approved, or approved or listed by a nationally recognized testing laboratory in accordance with the applicable NFPA standards.

1.3.7 Qualifications

1.3.7.1 Engineer and Technician

a. Registered Professional Engineer with verification of experience and at least 4 years of current experience in the design of the fire protection and detection systems.

b. National Institute for Certification in Engineering Technologies (NICET) qualifications as an engineering technician in fire alarm systems program with verification of experience and current NICET certificate.

c. The Registered Professional Engineer may perform all required items under this specification. The NICET Fire Alarm Technician shall perform only the items allowed by the specific category of certification held.

1.3.7.2 Installer

The installing Contractor shall provide the following: NICET Fire Alarm Technicians to perform the installation of the system. A NICET Level 3 Fire Alarm Technician shall supervise the installation of the fire alarm system. NICET Level 2 or higher Fire Alarm Technician shall install and terminate fire alarm devices, cabinets and panels. An electrician or NICET Level 1 Fire Alarm Technician shall install conduit for the fire alarm system. A Fire Alarm Technician with a minimum of 4 years of experience shall perform/supervise the installation of the fire alarm system. Fire Alarm Technicians with a minimum of 2 years of experience shall be utilized to assist in the installation and terminate fire alarm devices, cabinets and panels. An electrician shall be allowed to install wire or cable and to install conduit for the fire alarm system. The Fire Alarm technicians installing the equipment shall be factory trained in the installation, adjustment, testing, and operation of the equipment specified herein and on the drawings.

1.3.7.3 Design Services

Installations requiring designs or modifications of fire detection, fire alarm, or fire suppression systems shall require the services and review of a qualified fire protection engineer. For the purposes of meeting this requirement, a qualified fire protection engineer is defined as an individual meeting one of the following conditions:

a. An engineer having a Bachelor of Science or Masters of Science Degree in Fire Protection Engineering from an accredited university engineering program, plus a minimum of 2 years' work experience in fire protection engineering.

b. A registered professional engineer (P.E.) in fire protection engineering.

c. A registered PE in a related engineering discipline and member grade status in the National Society of Fire Protection Engineers.

d. An engineer with a minimum of 10 years' experience in fire protection engineering and member grade status in the National Society of Fire Protection Engineers.

1.4 SYSTEM DESIGN

1.4.1 Operation

The fire alarm and detection system shall be a complete, supervised fire alarm reporting system. **Fire alarm systems with 4 or more devices per alarm initiating device zone shall be of the addressable type, except in troop housing where all systems shall be addressable.** The system shall be activated into the alarm mode by actuation of any alarm initiating device. The system shall remain in the alarm mode until the initiating device is reset and the fire alarm control panel is reset and restored to normal. Alarm initiating devices shall be connected to initiating device circuits (IDC), Style D, or to signal line circuits (SLC), Style 5, in accordance with NFPA 72. Alarm notification appliances shall be connected to notification appliance circuits (NAC), Style Z in accordance with NFPA 72. A looped conduit system shall be provided so that if the conduit and all

conductors within are severed at any point, all IDC, NAC and SLC will remain functional. The conduit loop requirement is not applicable to the signal transmission link from the local panels (at the protected premises) to the Supervising Station (fire station, fire alarm central communication center). **Wiring on all fire alarm system components shall be Class A for alarm initiating devices and Style Z for indicating appliances per current NFPA 72. No T-tapping is allowed in alarm system wiring.** Textual, audible, and visual appliances and systems shall comply with NFPA 72. Fire alarm system components requiring power, except for the control panel power supply, shall operate on 24 Volts dc. Addressable system shall be microcomputer, microprocessor or microcontroller based with a minimum word size of eight bits and shall provide the following features:

a. Sufficient memory to perform as specified and as shown for addressable system.

b. Individual identity of each addressable device for the following conditions: alarm; trouble; open; short; and appliances missing/failed remote detector - sensitivity adjustment from the panel for smoke detectors

c. Capability of each addressable device being individually disabled or enabled from the panel.

d. Each SLC shall be sized to provide 40 percent addressable expansion without hardware modifications to the panel.

1.4.2 Operational Features

The system shall have the following operating features:

a. Monitor electrical supervision of SLC and NAC. Smoke detectors shall have combined alarm initiating and power circuits.

b. Monitor electrical supervision of the primary power (ac) supply, battery voltage, placement of alarm zone module (card, PC board) within the control panel, and transmitter tripping circuit integrity.

c. A trouble buzzer and trouble LED/LCD (light emitting diode/liquid crystal diode) to activate upon a single break, open, or ground fault condition which prevents the required normal operation of the system. The trouble signal shall also operate upon loss of primary power (ac) supply, low battery voltage, removal of alarm zone module (card, PC board), and disconnection of the circuit used for transmitting alarm signals off-premises. A trouble alarm silence switch shall be provided which will silence the trouble buzzer, but will not extinguish the trouble indicator LED/LCD. Subsequent trouble and supervisory alarms shall sound the trouble signal until silenced. After the system returns to normal operating conditions, the trouble buzzer shall again sound until the silencing switch returns to normal position, unless automatic trouble reset is provided.

d. A one person test mode. Activating an initiating device in this mode will activate an alarm for a short period of time, then

automatically reset the alarm, without activating the transmitter during the entire process.

e. A transmitter disconnect switch to allow testing and maintenance of the system without activating the transmitter but providing a trouble signal when disconnected and a restoration signal when reconnected.

f. Evacuation alarm silencing switch which, when activated, will silence alarm devices, but will not affect the zone indicating LED/LCD nor the operation of the transmitter. This switch shall be over-ridden upon activation of a subsequent alarm from an unalarmed device and the NAC devices will be activated.

g. Electrical supervision for circuits used for supervisory signal services (i.e., sprinkler systems, valves, etc.). Supervision shall detect any open, short, or ground.

h. Confirmation or verification of all smoke detectors. The control panel shall interrupt the transmission of an alarm signal to the system control panel for a factory preset period. This interruption period shall be adjustable from 1 to 60 seconds and be factory set at 20 seconds. Immediately following the interruption period, a confirmation period shall be in effect during which time an alarm signal, if present, will be sent immediately to the control panel. Fire alarm devices other than smoke detectors shall be programmed without confirmation or verification.

i. The fire alarm control panel shall provide supervised addressable relays for HVAC shutdown. An override at the HVAC panel shall not be provided.

j. Provide one person test mode - Activating an initiating device in this mode will activate an alarm for a short period of time, then automatically reset the alarm, without activating the transmitter during the entire process.

k. The fire alarm control panel shall provide the required monitoring and supervised control outputs needed to accomplish elevator recall.

l. The fire alarm control panel shall monitor and control the fire sprinkler system, or other fire protection extinguishing system.

m. The control panel and field panels shall be software reprogrammable to enable expansion or modification of the system without replacement of hardware or firmware. Examples of required changes are: adding or deleting devices or zones; changing system responses to particular input signals; programming certain input signals to activate auxiliary devices.

n. Zones shall be arranged as indicated on the contract drawings.

1.4.3 Alarm Functions

An alarm condition on a circuit shall automatically initiate the following functions:

a. Transmission of a signal over the station fire reporting system. The signal shall be common for all zones.

b. Visual indications of the alarmed devices on the fire alarm control panel display and on the remote audible/visual display.

c. Continuous sounding or operation of alarm notification appliances throughout the building as required by ANSI S3.41.

d. Closure of doors held open by electromagnetic devices.

e. Operation of the smoke control system.

f. Deactivation of the air handling units serving the alarmed area.

g. Shutdown of power to the data processing equipment in the alarmed area.

h. Automatic discharge of the designated fire suppression systems. A 15 second maximum delay shall be provided for the deluge system, a 30 second delay for the wet pipe system.

1.4.4 Primary Power

Operating power shall be provided as required by paragraph Power Supply for the System. Transfer from normal to emergency power or restoration from emergency to normal power shall be fully automatic and not cause transmission of a false alarm. Loss of ac power shall not prevent transmission of a signal via the fire reporting system upon operation of any initiating circuit.

1.4.5 Battery Backup Power

Battery backup power shall be through use of rechargeable, sealed-type storage batteries and battery charger.

1.4.6 Interface With Existing Fire Alarm Equipment (where occurs)

The equipment specified herein shall operate as an extension to an existing configuration. The new equipment shall be connected to existing equipment as indicated. Existing equipment shall be expanded, modified, or supplemented as necessary to extend the existing functions to the new points or zones. New components shall be capable of merging with the existing configuration without degrading the performance of either system. The scope of the acceptance tests of paragraph Testing shall include aspects of operation that involve combined use of both new and existing portions of the final configuration.

1.4.7 Interface With other Equipment

Interfacing components shall be furnished as required to connect to subsystems or devices which interact with the fire alarm system, such as supervisory or alarm contacts in suppression systems, operating interfaces for smoke control systems, door releases, etc.

1.5 TECHNICAL DATA AND COMPUTER SOFTWARE

Technical data and computer software (meaning technical data which relates to computer software) which is specifically identified in this project, and which may be defined/required in other specifications, shall be delivered, strictly in accordance with the CONTRACT CLAUSES, and in accordance with the Contract Data Requirements List, DD Form 1423. Data delivered shall be identified by reference to the particular specification paragraph against which it is furnished. Data to be submitted shall include complete system, equipment, and software descriptions. Descriptions shall show how the equipment will operate as a system to meet the performance requirements of this contract. The data package shall also include the following:

(1) Identification of programmable portions of system equipment and capabilities.

(2) Description of system revision and expansion capabilities and methods of implementation detailing both equipment and software requirements.

(3) Provision of operational software data on all modes of programmable portions of the fire alarm and detection system.

(4) Description of Fire Alarm Control Panel equipment operation.

(5) Description of auxiliary and remote equipment operations.

(6) Library of application software.

(7) Operation and maintenance manuals as specified in SD-19 of the Submittals paragraph.

1.6 DELIVERY AND STORAGE

Equipment delivered and placed in storage shall be stored with protection from the weather, humidity and temperature variation, dirt, dust, and any other contaminants.

2 PRODUCTS

2.1 CONTROL PANEL

Control Panel shall comply with the applicable requirements of UL 864. Panel shall be modular, installed in a steel cabinet with hinged door and cylinder lock. **Control Panels shall have expansion capability for future modifications of 10% without adding hardware.** Control panel shall be a clean, uncluttered, and orderly assembled panel containing components and equipment required to provide the specified operating and supervisory functions of the system. The panel shall have prominent rigid plastic, phenolic or metal identification plates for LED/LCDs, zones, SLC, controls, meters, fuses, and switches. Nameplates for fuses shall also include ampere rating. The LED/LCD displays shall be located on the exterior of the cabinet door or be visible through the cabinet door. Control panel switches shall be within the locked cabinet. A suitable means (single operation) shall be provided for testing the control panel visual indicating devices (meters or LEDs/LCDs). Meters and LEDs shall be plainly visible when the cabinet door is closed. Signals and LEDs/LCDs shall be provided to indicate

by zone any alarm, supervisory or trouble condition on the system. Each IDC shall be powered and supervised so that a signal on one zone does not prevent the receipt of signals from other devices. Loss of power, including batteries, shall not require the manual reloading of a program. Upon restoration of power, startup shall be automatic, and shall not require any manual operation. The loss of primary power or the sequence of applying primary or emergency power shall not affect the transmission of alarm, supervisory or trouble signals. Visual annunciation shall be provided for LED/LCD visual display as an integral part of the control panel and shall identify with a word description and id number each device. Cabinets shall be provided with ample gutter space to allow proper clearance between the cabinet and live parts of the panel equipment. If more than one modular unit is required to form a control panel, the units shall be installed in a single cabinet large enough to accommodate units. Cabinets shall be painted red.

2.1.1 Remote System Audible/Visual Display

Audible appliance shall have a minimum sound level output rating of 85 dBA at 10 feet and operate in conjunction with the panel integral display. The audible device shall be silenced by a system silence switch on the remote system. The audible device shall be silenced by the system silence switch located at the remote location, but shall not extinguish the visual indication. The remote LED/LCD visual display shall provide identification, consisting of the word description and id number for each device as displayed on the control panel. A rigid plastic, phenolic or metal identification sign which reads "Fire Alarm System Remote Display" shall be provided at the remote audible/visual display. The remote visual appliance located with the audible appliance shall not be extinguished until the trouble or alarm has been cleared.

2.1.2 Circuit Connections

Circuit conductors entering or leaving the panel shall be connected to screw-type terminals with each conductor and terminal marked for identification.

2.1.3 System Expansion and Modification Capabilities

Any equipment and software needed by qualified technicians to implement future changes to the fire alarm system shall be provided as part of this contract.

2.1.4 Addressable Control Module

The control module shall be capable of operating as a relay (dry contact form C) for interfacing the control panel with other systems, and to control door holders or initiate elevator fire service. The module shall be UL listed as compatible with the control panel. The indicating device or the external load being controlled shall be configured as a Style Y notification appliance circuits. The system shall be capable of supervising, audible, visual and dry contact circuits. The control module shall have both an input and output address. The supervision shall detect a short on the supervised circuit and shall prevent power from being applied to the circuit. The control model shall provide address setting means compatible with the control panel's SLC supervision and store an internal identifying code. The control module shall contain an integral LED that flashes each

time the control module is polled. Existing fire alarm system notification appliance circuits shall be connected to a single module to power and supervise the circuit.

2.1.5 Addressable Initiating Device Circuits Module

The initiating device being monitored shall be configured as a Style D initiating device circuit. The system shell be capable of defining any module as an alarm module and report alarm trouble, loss of polling, or as a supervisory module, and reporting supervisory short, supervisory open or loss of polling. The module shall be UL listed as compatible with the control panel. The monitor module shall provide address setting means compatible with the control panel's SLC supervision and store an internal identifying code. Monitor module shall contain an integral LED that flashes each time the monitor module is polled. Pull stations with a monitor module in a common backbox are not required to have an LED. Existing fire alarm system initiating device circuits shall be connected to a single module to power and supervise the circuit.

2.2 STORAGE BATTERIES

Storage batteries shall be provided and shall be 24 Vdc sealed, lead-calcium type requiring no additional water. The batteries shall have ample capacity, with primary power disconnected, to operate the fire alarm system for a period of 72 hours. Following this period of battery operation, the batteries shall have ample capacity to operate all components of the system, including all alarm signaling devices in the total alarm mode for a minimum period of 15 minutes. Batteries shall be located at the bottom of the panel or in a separate battery cabinet. Batteries shall be provided with overcurrent protection in accordance with NFPA 72. Separate battery cabinets shall have a lockable, hinged cover similar to the fire alarm panel. The lock shall be keyed the same as the fire alarm control panel. Cabinets shall be painted to match the fire alarm control panel.

2.3 BATTERY CHARGER

Battery charger shall be completely automatic, 24 Vdc with high/low charging rate, capable of restoring the batteries from full discharge (18 Volts dc) to full charge within 48 hours. A pilot light indicating when batteries are manually placed on a high rate of charge shall be provided as part of the unit assembly, if a high rate switch is provided. Charger shall be located in control panel cabinet or in a separate battery cabinet.

2.4 ADDRESSABLE MANUAL FIRE ALARM STATIONS

Addressable manual fire alarm stations shall conform to the applicable requirements of UL 38. Manual stations shall be connected into signal line circuits. Stations shall be installed on outlet boxes. Manual stations shall be mounted at 54 inches. Stations shall be single action type. Stations shall be finished in red, with raised letter operating instructions of contrasting color. Stations requiring the breaking of glass or plastic panels for operation are not acceptable. Stations employing glass rods are not acceptable. The use of a key or wrench shall be required to reset the station. Gravity or mercury switches are not acceptable. Switches and contacts shall be rated for the voltage and current upon which they operate. Addressable pull stations shall be capable of being field programmed, shall latch upon operation and remain latched until manually reset. Stations

shall have a separate screw terminal for each conductor. Surface mounted boxes shall be matched and painted the same color as the fire alarm manual stations.

2.5 FIRE DETECTING DEVICES

Fire detecting devices shall comply with the applicable requirements of NFPA 72, NFPA 90A, UL 268, UL 268A, and UL 521. The detectors shall be provided as indicated. **Provide smoke/heat detection of control equipment per NFPA 72; 4.4.5 in areas that are not continuously occupied** Detector base shall have screw terminals for making connections. No solder connections will be allowed. Detectors located in concealed locations (above ceiling, raised floors, etc.) shall have a remote visible indicator LED/LCD. Addressable fire detecting devices, except flame detectors, shall be dynamically supervised and uniquely identified in the control panel. All fire alarm initiating devices shall be individually addressable, except where indicated. Installed devices shall conform to NFPA 70 hazard classification of the area where devices are to be installed.

2.5.1 Heat Detectors

Heat detectors shall be designed for detection of fire by fixed temperature or combination fixed temperature and rate-of-rise principle, as indicated. Heat detector spacing shall be rated in accordance with UL 521. Detectors located in areas subject to moisture, exterior atmospheric conditions, or hazardous locations as defined by NFPA 70, shall be types approved for such locations. Heat detectors located in attic spaces or similar concealed spaces below the roof shall be intermediate temperature rated.

2.5.1.1 Combination Fixed-Temperature and Rate-of-Rise Detectors

Detectors shall be designed for outlet box mounting and supported independently of wiring connections. Contacts shall be self-resetting after response to rate-of-rise principle. Under fixed temperature actuation, the detector shall have a permanent external indication which is readily visible. Detector units located in boiler rooms, showers, or other areas subject to abnormal temperature changes shall operate on fixed temperature principle only. The UL 521 test rating for the fixed temperature portion shall be 135 degrees F or as shown. The UL 521 test rating for the Rate-of-Rise detectors shall be rated for 50 by 50 ft.

2.5.1.2 Rate Compensating Detectors

Detectors shall be type as indicated, with outlet box supported independently of wiring connections. Detectors shall be hermetically sealed and automatically resetting. Rate Compensated detectors shall be rated for 50 by 50 ft.

2.5.1.3 Fixed Temperature Detectors

Detectors shall be designed for outlet box mounting and supported independently of wiring connections. Detectors shall be designed to detect high heat. The detectors shall have a specific temperature setting of 135 degrees F or as shown. The UL 521 test rating for the fixed temperature detectors shall be rated for 15 by 15 ft.

2.5.2 Smoke Detectors

Smoke detectors shall be designed for detection of abnormal smoke densities. Smoke detectors shall be ionization, photoelectric or projected beam type as indicated. Detectors shall contain a visible indicator LED/LCD that shows when the unit is in alarm condition. Detectors shall not be adversely affected by vibration or pressure. Detectors shall be the plug-in type in which the detector base contains terminals for making wiring connections. Detectors that are to be installed in concealed (above false ceilings, etc.) locations shall be provided with a remote indicator LED/LCD suitable for mounting in a finished, visible location.

2.5.2.1 Ionization Detectors

Ionization detectors with a dual chamber shall be responsive to both invisible and visible particles of combustion. One chamber shall be a reference chamber and the second a sampling chamber. Detectors containing radium shall not be provided. Detectors shall not cause an alarm condition due to anticipated fluctuations in relative humidity. The sensitivity of the detector shall be field adjustable to compensate for operating conditions. Detector shall require no replacement or readjustment to restore it to normal operation after an alarm condition. Each detector shall be capable of withstanding ambient air velocity up to 300 fpm in accordance with UL 268. Addressable smoke detectors shall be capable of having the sensitivity being remotely adjusted by the control panel.

2.5.2.2 Photoelectric Detectors

Detectors shall operate on a light scattering concept using an LED light source. Failure of the LED shall not cause an alarm condition. Detectors shall be factory set for sensitivity and shall require no field adjustments of any kind. Detectors shall have an obscuration rating in accordance with UL 268. Addressable smoke detectors shall be capable of having the sensitivity being remotely adjusted by the control panel.

2.5.2.3 Projected Beam Smoke Detectors

Detectors shall be designed for detection of abnormal smoke densities. Detectors shall consist of separate transmitter and receiver units. The transmitter unit shall emit an infrared beam to the receiver unit. When the signal at the receiver falls below a preset sensitivity, the detector shall initiate an alarm. The receiver shall contain an LED which is powered upon an alarm condition. Long-term changes to the received signal caused by environmental variations shall be automatically compensated. Detectors shall incorporate features to assure that they are operational; a trouble signal shall be initiated if the beam is obstructed, the limits of the compensation circuit are reached, or the housing cover is removed. Detectors shall have multiple sensitivity settings in order to meet UL listings for the different distances covered by the beam. In the event of beam interference for more than three seconds a trouble alarm shall be transmitted.

2.5.2.4 Duct Detectors

Duct-mounted photoelectric smoke detectors shall be furnished and installed where indicated and in accordance with NFPA 90A. **Detectors shall be easily accessible for maintenance.** Units shall consist of a smoke detector as

specified in paragraph Photoelectric Detectors, mounted in a special housing fitted with duct sampling tubes. Detector circuitry shall be mounted in a metallic enclosure exterior to the duct. Detectors shall have a manual reset. Detectors shall be rated for air velocities that include air flows between 500 and 4000 fpm. Detectors shall be powered from the fire alarm panel. Sampling tubes shall run the full width of the duct. The duct detector package shall conform to the requirements of NFPA 90A, UL 268A, and shall be UL listed for use in air-handling systems. The control functions, operation, reset, and bypass shall be controlled from the fire alarm control panel. Lights to indicate the operation and alarm condition; and the test and reset buttons shall be visible and accessible with the unit installed and the cover in place. Detectors mounted above 6 feet and those mounted below 6 feet that cannot be easily accessed while standing on the floor, shall be provided with a remote detector indicator panel containing test and reset switches. Remote lamps and switches as well as the affected fan units shall be properly identified in etched plastic placards. Detectors shall have auxiliary contacts to provide control, interlock, and shutdown functions specified in Section 15950 HEATING, VENTILATING AND AIR CONDITIONING (HVAC) CONTROL SYSTEMS. The detectors shall be supplied by the fire alarm system manufacturer to ensure complete system compatibility.

2.5.3 Combination Smoke and Heat Detectors

Combination smoke and heat detectors shall have an audible device (self-contained) and be designed for detection of abnormal smoke densities by the photoelectric principle and abnormal heat by a fixed temperature sensor. Smoke detectors shall be provided with an LED light source. Failure of the LED shall not cause an alarm condition and the sensitivity shall be factory set at a nominal 3 percent and require no field adjustments of any kind. Heat detector portion shall be fixed temperature sensor rated at 135 degrees F. The audible appliances shall have a minimum sound output of at least 85 dBA at 10 feet.Detectors shall contain a visible indicator LED that shows when the unit is in alarm condition. Detectors shall not be adversely affected by vibration or pressure. Heat detectors shall connect to a control panel and shall be self restorable.

2.5.4 Flame Detectors

The detectors shall comply with FM P7825a. The detectors shall be sensitive to the micron range best suited for their intended use. The detectors shall operate over electrically supervised wiring circuits and the loss of power to the detector shall result in a trouble signal. A self-test feature shall be provided for each detector to be individually tested.

2.5.4.1 Infrared (IR) Single Frequency Flame Detector

The detector shall be sensitive in the range best suited for intended service.

2.5.4.2 Infrared (IR) Dual Frequency Flame Detector

The IR detector shall consist of two or more IR sensors, each selected for a different IR frequency. The primary sensor shall be sensitive in the range best suited for intended service. Secondary sensors are tuned to different IR wavelengths to null out the effect of black body radiation to the primary sensor.

2.5.4.3 Ultraviolet (UV) Flame Detectors

UV flame detector shall be of the narrow band response type which operates on radiated ultraviolet energy and shall be sensitive in the range best suited for intended service. The cone of vision shall be 80 degrees or greater. Each detector shall be completely insensitive to light sources in the visible frequency range.

2.5.4.4 Combination UV/IR Flame Detector

The UV/IR detector shall provide discrimination against false alarms by requiring both UV and IR flame detection before an alarm is sent. The UV sensor shall be sensitive in the range of 0.185 to 0.265 micrometers only. The IR sensor shall be sensitive in the range best suited for intended service. Detectors shall be completely insensitive to light sources in the visible frequency range.

2.6 NOTIFICATION APPLIANCES

Audible appliances shall conform to the applicable requirements of UL 464. Devices shall be connected into notification appliance circuits. Devices shall have a separate screw terminal for each conductor. Audible appliances shall generate a unique audible sound from other devices provided in the building and surrounding area. Surface mounted audible appliances shall be painted red or white as indicated. Recessed audible appliances shall be installed with a grill that is painted with a factory finish to match the surface to which it is mounted.

2.6.1 Alarm Bells

Bells shall be surface mounted with the matching mounting back box. Bells shall be suitable for use in an electrically supervised circuit. Bells shall be the underdome type producing a minimum output rating of 85 dBA at 10 feet. Bells used in exterior locations shall be specifically listed or approved for outdoor use and be provided with metal housing and protective grilles. Single stroke, electrically operated, supervised, solenoid bells shall be used for coded applications.

2.6.2 Alarm Horns

Horns shall be surface mounted, with the matching mounting back box, grille and vibrating type suitable for use in an electrically supervised circuit. Horns shall produce a sound rating of at least 85 dBA at 10 feet. Horns used in exterior locations shall be specifically listed or approved for outdoor use and be provided with metal housing and protective grilles.

2.6.3 Chimes

Chimes shall be electrically operated, supervised, electronic type, with an adjustable frequency of 800 to 1200 Hertz. Chimes shall have a minimum sound rating of 80 dBA at 10 feet. Chimes shall ring the bell codes, as indicated.

2.6.4 Visual Notification Appliances

Visual notification appliances shall conform to the applicable requirements of UL 1971 and the contract drawings. Appliances shall have clear high

intensity optic lens, xenon flash tubes, and output white light. Strobe flash rate shall be between 1 to 3 flashes per second and a minimum of 75 candela.

2.6.5 Combination Audible/Visual Notification Appliances

Combination audible/visual notification appliances shall provide the same requirements as individual units except they shall mount as a unit in standard backboxes. Units shall be factory assembled. Any other audible notification appliance employed in the fire alarm systems shall be approved by the Contracting Officer.

2.6.6 Voice Evacuation System

The voice evacuation system shall provide for one-way voice communications, routing and pre-amplification of digital alarm tones and voice (digital and analog) messages. The system shall be zoned for messages (Custom and prerecorded) and tones as indicated on the drawings. The following electronic tones shall be available from the amplifier: Slow Whoop, High/Low, Horn, Chime, Beep, Stutter, Wail and Bell. The system shall have a microphone and allow for general paging within the space. Operation shall be either manually from a control switch or automatically from the fire alarm control panel. Reset shall be accomplished by the fire alarm control panel during panel reset.

2.7 FIRE DETECTION AND ALARM SYSTEM PERIPHERAL EQUIPMENT

2.7.1 Electromagnetic Door Hold-Open Devices

Devices shall be attached to the walls unless otherwise indicated. Devices shall comply with the appropriate requirements of UL 228. Devices shall operate on 24 Volt dc power. Compatible magnetic component shall be attached to the door. Under normal conditions, the magnets shall attract and hold the doors open. When magnets are de-energized, they shall release the doors. Magnets shall have a holding force of 25 pounds. Devices shall be UL or FM approved. Housing for devices shall be brushed aluminum or stainless steel. Operation shall be fail safe with no moving parts. Electromagnetic door hold-open devices shall not be required to be held open during building power failure.

2.7.2 Conduit

Conduit and fittings shall comply with NFPA 70, UL 6, UL 1242, and UL 797.

2.7.3 Wiring

Wiring shall conform to NFPA 70. Wiring for 120 Vac power shall be No. 12 AWG minimum. The SLC wiring shall be copper cable in accordance with the manufacturers requirements. Wiring for fire alarm dc circuits shall be No. 16 AWG minimum. Voltages shall not be mixed in any junction box, housing, or device, except those containing power supplies and control relays. Wiring shall conform to NFPA 70. System field wiring shall be solid copper and installed in metallic conduit or electrical metallic tubing, except that rigid plastic conduit may be used under slab-on-grade. Conductors shall be color coded. Conductors used for the same functions shall be similarly color coded. Wiring code color shall remain uniform throughout the circuit. Pigtail or T-tap connections to initiating device circuits, supervisory

alarm circuits, and notification appliance circuits are prohibited. T-tapping using screw terminal blocks is allowed for style 5 addressable systems.

2.7.4 Special Tools and Spare Parts

Software, connecting cables and proprietary equipment, necessary for the maintenance, testing, and reprogramming of the equipment shall be furnished to the Contracting Officer. Two spare fuses of each type and size required shall be furnished. Two percent of the total number of each different type of detector, but no less than two each, shall be furnished. Spare fuses shall be mounted in the fire alarm panel.

2.8 TRANSMITTERS

2.8.1 Radio Alarm Transmitters

Transmitters shall be compatible with proprietary supervising station receiving equipment. Each radio alarm transmitter shall be the manufacturer's recognized commercial product, completely assembled, wired, factory tested, and delivered ready for installation and operation. Transmitters shall be provided in accordance with applicable portions of NFPA 72, NFPA 1221, and 47 CFR 15. Transmitter electronics module shall be contained within the physical housing as an integral, removable assembly. The proprietary supervising station receiving equipment is as indicated and the transceiver shall be fully compatible with this equipment. At the contractors option, and if UL listed, the transmitter may be housed in the same panel as the fire alarm control panel.

2.8.1.1 Transmitter Power Supply

Each radio alarm transmitter shall be powered by a combination of locally available 120-volt ac power and a sealed, lead-calcium battery.

a. Operation: Each transmitter shall operate from 120-volt ac power. In the event of 120-volt ac power loss, the transmitter shall automatically switch to battery operation. Switchover shall be accomplished with no interruption of protective service, and shall automatically transmit a trouble message. Upon restoration of ac power, transfer back to normal ac power supply shall also be automatic.

b. Battery Power: Transmitter standby battery capacity shall provide sufficient power to operate the transmitter in a normal standby status for a minimum of 72 hours and be capable of transmitting alarms during that period.

2.8.1.2 Radio Alarm Transmitter Housing

Transmitter housing shall be NEMA Type 1. The housing shall contain a lock that is keyed identical to the fire alarm system for the building. Radio alarm transmitter housing shall be factory painted with a suitable priming coat and not less than two coats of a hard, durable weatherproof enamel.

2.8.1.3 Antenna

The Contractor shall provide antennas as indicated for radio alarm transmitters with a driving point impedance to match transmitter output.

The antenna and antenna mounts shall be corrosion resistant and designed to withstand wind velocities of 100 mph. Antennas shall not be mounted to any portion of the building roofing system.

2.8.2 Master Fire Alarm Boxes

Master fire alarm boxes shall be of the coded noninterfering type with succession features having a compatible auxiliary tripping device, and of the prewound, open-door, pull-lever type. Mechanism shall be housed in a weatherproof cottage shell type of housing with metallic or rigid plastic code number plate mounted on the exterior face of the cottage shell. Operation of the actuating pull lever shall cause the box to transmit four complete rounds of code to gongs, recorders, and other devices on the same circuit. Driving springs shall have the capability to transmit not less than eight complete four-round groups of code before being rewound. Boxes shall be designed for operation of 100 milliamperes dc, but with capability of full operation of 70 milliamperes and up to 120 milliamperes. Activation of box when a single open fault is present on exterior fire alarm circuit shall have box to idle for one complete round only, then immediately transmit four complete code rounds via the box earth ground connection. Each box shall be equipped with manual signaling key, telephone jack, silent test device, and box shunt device. Box shall be mounted as indicated with center of box 61 inches above grade, and provided with lighting fixture. Mounting bolts, brackets, fastenings, and conduit shall be copper alloy, cadmium, or zinc-coated steel. Code wheel shall be metallic and box code shall be as directed. Electrically powered master fire alarm boxes shall have standby sealed, lead calcium battery capacity for a minimum of 72 hours and be capable of transmitting alarms during that period.

2.8.3 Telephonic Reporting System

Transmitters shall be compatible with existing receiving equipment at the Supervising Station and shall comply with applicable requirements of UL 632/ANSI C33.41. Transmitter shall respond to the actuation of the fire alarm control panel and shall be of the electric motor-driven or prewound spring mechanism type; it shall transmit not less than four rounds of code. When motor-driven transmitters are provided, the motor shall be connected to a supervised circuit in a control panel. Metallic or rigid plastic code number plates on the exterior face of transmitters shall be provided. Transmitters shall be designed to provide the same features as the fire alarm boxes for electrically-supervised, coded noninterfering type and shall have the ability to transmit signals on grounded or open circuits. Activation of box when a single open fault is present on exterior fire alarm circuit shall have box to idle for one complete round only, then immediately transmit four complete code rounds via the box earth ground connection. Transmitter shall have a compatible auxiliary tripping device. Code wheel shall be metallic and box code shall be as directed. Wiring shall be extended to the indicated telephone terminating location and connected to specific twisted pair cable identified by the COR in the field.

3 EXECUTION

3.1 INSTALLATION

All work shall be installed as shown and in accordance with the manufacturer's diagrams and recommendations, unless otherwise specified. **All devices shall be installed per NFPA 72; 4.4.4.1 and 4.4.4.2.4 to meet the**

requirements of voltage, temperature and humidity variation. All addressable devices shall be identified with the address number with a machine-made label. Smoke detectors shall not be installed until construction is essentially complete and the building has been thoroughly cleaned.

3.1.1 Power Supply for the System

A single dedicated circuit connection for supplying power from a branch circuit to each building fire alarm system shall be provided. The power shall be supplied as shown on the drawings. The power supply shall be equipped with a locking mechanism and marked in red with the words "FIRE ALARM CIRCUIT CONTROL".

3.1.2 Wiring

Conduit size for wiring shall be in accordance with NFPA 70. Wiring for the fire alarm system shall not be installed in conduits, junction boxes, or outlet boxes with conductors of lighting and power systems. Not more than two conductors shall be installed under any device screw terminal. The wires under the screw terminal shall be straight when placed under the terminal then clamped in place under the screw terminal. The wires shall be broken and not twisted around the terminal. Circuit conductors entering or leaving any mounting box, outlet box enclosure, or cabinet shall be connected to screw terminals with each terminal and conductor marked in accordance with the wiring diagram. Connections and splices shall be made using screw terminal blocks. The use of wire nut type connectors in the system is prohibited. Wiring within any control equipment shall be readily accessible without removing any component parts. The fire alarm equipment manufacturer's representative shall be present for the connection of wiring to the control panel.

3.1.3 Control Panel

The control panel and its assorted components shall be mounted so that no part of the enclosing cabinet is less than 12 inches nor more than 78 inches above the finished floor. Manually operable controls shall be between 36 and 42 inches above the finished floor. Panel shall be installed to comply with the requirements of UL 864.

3.1.4 Detectors

Detectors shall be located and installed in accordance with NFPA 72. Detectors shall be connected into signal line circuits or initiating device circuits as indicated on the drawings. Detectors shall be at least 12 inches from any part of any lighting fixture. Detectors shall be located at least 3 feet from diffusers of air handling systems. Each detector shall be provided with appropriate mounting hardware as required by its mounting location. Detectors which mount in open space shall be mounted directly to the end of the stubbed down rigid conduit drop. Conduit drops shall be firmly secured to minimize detector sway. Where length of conduit drop from ceiling or wall surface exceeds 3 feet, sway bracing shall be provided. Detectors installed in concealed locations (above ceiling, raised floors, etc.) shall have a remote visible indicator LED/LCD.

3.1.5 Notification Appliances

Notification appliances shall be mounted 80 inches above the finished floor or 6 inches below the ceiling, whichever is lower.

3.1.6 Annunciator Equipment

Annunciator equipment shall be mounted where indicated on the drawings.

3.1.7 Addressable Initiating Device Circuits Module

The initiating device circuits module shall be used to connect supervised conventional initiating devices (water flow switches, water pressure switches, manual fire alarm stations, high/low air pressure switches, and tamper switches). The module shall mount in an electrical box adjacent to or connected to the device it is monitoring and shall be capable of Style B supervised wiring to the initiating device. In order to maintain proper supervision, there shall be no T-taps allowed on style B lines. Addressable initiating device circuits modules shall monitor only one initiating device each. Contacts in suppression systems and other fire protection subsystems shall be connected to the fire alarm system to perform supervisory and alarm functions as specified in Section 13930 WET PIPE SPRINKLER SYSTEM, FIRE PROTECTION or 13935 DRY PIPE SPRINKLER SYSTEM, FIRE PROTECTION.

3.1.8 Addressable Control Module

Addressable and control modules shall be installed in the outlet box or adjacent to the device they are controlling. If a supplementary suppression releasing panel is provided, then the monitor modules shall he mounted in a common enclosure adjacent to the suppression releasing panel and both this enclosure and the suppression releasing panel shall be in the same room as the releasing devices. All interconnecting wires shall be supervised unless an open circuit or short circuit abnormal condition does not affect the required operation of the fire alarm system. If control modules are used as interfaces to other systems, such as HVAC or elevator control, they shall be within the control panel or immediately adjacent to it. Control modules that control a group of notification appliances shall be adjacent to the first notification appliance in the notification appliance circuits. Control modules that connect to devices shall supervise the notification appliance circuits. Control modules that connect to auxiliary systems or interface with other systems (non-life safety systems) and where not required by NFPA 72, shall not require the secondary circuits to be supervised. Contacts in suppression systems and other fire protection subsystems shall be connected to the fire alarm system to perform required alarm functions as specified in Section 13930 WET PIPE SPRINKLER SYSTEM, FIRE PROTECTION or 13935 DRY PIPE SPRINKLER SYSTEM, FIRE PROTECTION.

3.2 OVERVOLTAGE AND SURGE PROTECTION

3.2.1 Power Line Surge Protection

All equipment connected to alternating current circuits shall be protected from surges per IEEE C62.41 B3 combination waveform and NFPA 70. Fuses shall not be used for surge protection. The surge protector shall be rated for a maximum let thru voltage of 350 Volts ac (line-to-neutral) and 350 Volt ac (neutral-to-ground).

3.2.2 Low Voltage DC Circuits Surge Protection

All IDC, NAC, and communication cables/conductors, except fiber optics, shall have surge protection installed at each point where it exits or enters a building. Equipment shall be protected from surges per IEEE C62.41 B3 combination waveform and NFPA 70. The surge protector shall be rated to protect the 24 Volt dc equipment. The maximum dc clamping voltages shall be 36 V (line-to-ground) and 72 Volt dc (line-to-line).

3.2.3 Signal Line Circuit Surge Protection

All SLC cables/conductors, except fiber optics, shall have surge protection/isolation circuits installed at each point where it exits or enters a building. The circuit shall be protected from surges per IEEE C62.41 B3 combination waveform and NFPA 70. The surge protector/isolator shall be rated to protect the equipment.

3.3 GROUNDING

Grounding shall be provided by connecting to building ground system.

3.4 SUPERVISING STATION PROVISIONS

The supervising equipment shall be as defined in Delivery Order.

3.4.1 Revisions to Existing Facilities

Existing supervising components shall be modified as indicated on the drawings and programming shall be updated if required to accommodate the revised configuration. Acceptance testing shall include procedures that would demonstrate that operation of existing equipment has not been degraded and that the revised configuration plus interfacing components operates compatibly with the new fire alarm system at the protected premises. Work on existing equipment shall be performed in accordance with the manufacturer's instructions or under supervision of the manufacturer's representative.

3.4.2 Additions to Existing Facilities

Supplemental components shall be added to the existing supervising equipment as required to accommodate the new fire alarm system to be installed at the protected premises or as indicated on the drawings. All present functions shall be extended, including recording and storage in memory, and programming shall be updated if required to accommodate the revised configuration. Acceptance testing shall include procedures that would demonstrate that operation of existing equipment has not been degraded and that the expanded configuration operates compatibly with the new fire alarm system.

3.5 TESTING

The Contractor shall notify the Contracting Officer at least 10 days before the preliminary and acceptance tests are to be conducted. The tests shall be performed in accordance with the approved test procedures in the presence of the Contracting Officer. The control panel manufacturer's representative shall be present to supervise tests. The Contractor shall furnish instruments and personnel required for the tests.

3.5.1 Preliminary Tests

Upon completion of the installation, the system shall be subjected to functional and operational performance tests including tests of each installed initiating and notification appliance, when required. Tests shall include the meggering of system conductors to determine that the system is free from grounded, shorted, or open circuits. The megger test shall be conducted prior to the installation of fire alarm equipment. If deficiencies are found, corrections shall be made and the system shall be retested to assure that it is functional. After completing the preliminary testing the Contractor shall complete and submit the NFPA 72, Certificate of Completion.

3.5.2 Acceptance Test

Acceptance testing shall not be performed until the Contractor has completed and submitted the Certificate of Completion. Testing shall be in accordance with NFPA 72. The recommended tests in NFPA 72 shall be considered mandatory and shall verify that previous deficiencies have been corrected. The Contractor shall complete and submit the NFPA 72, Inspection and Testing Form. The test shall include all requirements of NFPA 72 and the following:

a. Test of each function of the control panel.

b. Test of each circuit in both trouble and normal modes.

c. Tests of each alarm initiating devices in both normal and trouble conditions.

d. Tests of each control circuit and device.

e. Tests of each alarm notification appliance.

f. Tests of the battery charger and batteries.

g. Complete operational tests under emergency power supply.

h. Visual inspection of wiring connections.

i. Opening the circuit at each alarm initiating device and notification appliance to test the wiring supervisory feature.

j. Ground fault

k. Short circuit faults

l. Stray voltage

m. Loop resistance

3.6 TRAINING

Training course shall be provided for the operations and maintenance staff. The course shall be conducted in the building where the system is installed or as designated by the Contracting Officer. The training period for systems operation shall consist of 1 training days (8 hours per day) and

shall start after the system is functionally completed but prior to final acceptance tests. The training period for systems maintenance shall consist of 2 training days (8 hours per day) and shall start after the system is functionally completed but prior to final acceptance tests. The instructions shall cover items contained in the operating and maintenance instructions. In addition, training shall be provided on performance of expansions or modifications to the fire detection and alarm system**, i.e. adding or deleting devices, programming or editing software, use of factory technical support.** The training period for system expansions and modifications shall consist of at least 1 training days (8 hours per day) and shall start after the system is functionally completed but prior to final acceptance tests.

END OF SECTION