#### AGREEMENT

THIS AGREEMENT is made and entered into by and between the CITY AND COUNTY OF DENVER, a municipal corporation of the State of Colorado (the "City" or "Customer") and FEDERAL SIGNAL CORPORATION, a Delaware corporation whose address is 2645 Federal Drive, University Park, IL 60484 ("Contractor") collectively "the Parties."

#### **RECITALS:**

The City desires to obtain an **Emergency Siren Warning System and Indoor Warning System** and associated equipment and Contractor desires to provide that equipment and installation services to the City.

This Agreement is accompanied by a financed companion agreement which will be paid for with borrowed funds ("Financed Agreement"). This Agreement and the Financed Agreement will share a scope of work and equipment list and other exhibits and together constitute one project.

The parties agree as follows:

1. <u>COORDINATION AND LIAISON</u>: Contractor agrees that during the term of this Agreement it shall fully coordinate the performance of this Agreement with the City, including the Director of the Mayor's Office of Emergency Management ("Manager") or as otherwise directed by the authorized personnel of the City. Contractor understands that the Manager or its designee is the City's representative or Project Manager under this Agreement through whom the Contractor's obligations performed under this Agreement shall be coordinated.

#### 2. <u>SERVICES TO BE PERFORMED</u>:

- **a.** As the Manager directs, the Contractor shall diligently undertake, perform, and complete all of the services and produce all the deliverables set forth on **Exhibit A**, the **Scope of Work**, to the City's satisfaction.
- **b.** The Contractor is ready, willing, and able to provide the services required by this Agreement.
- **c.** The Contractor shall faithfully perform the services in accordance with the standards of care, skill, training, diligence, and judgment provided by highly competent individuals performing services of a similar nature to those described in the Agreement and in accordance with the terms of the Agreement.
- **3.** <u>TERM</u>: The term of this Agreement shall commence upon July 16, 2012, and expire on July 15, 2013.

#### 4. COMPENSATION AND PAYMENT:

- **a.** <u>Fee</u>: The City shall pay and the Contractor shall accept as the sole compensation for products delivered and services rendered and costs incurred under the Agreement \$609,907.00. Amounts billed may not exceed the amounts or rates set forth in **Exhibit A**.
- **b.** <u>Reimbursable Expenses</u>: There are no reimbursable expenses allowed under the Agreement. All of the Contractor's expenses are contained in the rates in Exhibit A.
- **c.** <u>Invoicing</u>: Contractor shall provide the City with a monthly invoice in a format and with a level of detail acceptable to the City including all supporting documentation required by the City. The City's Prompt Payment Ordinance, §§ 20-107 to 20-118, D.R.M.C., applies to invoicing and payment under this Agreement. The Contractor may invoice the City for warranty of products upon delivery of those products.

### d. Maximum Contract Amount:

- (1) Notwithstanding any other provision of the Agreement, the City's maximum payment obligation will not exceed **SIX HUNDRED AND TEN THOUSAND FIVE HUNDRED AND SEVENTY-SEVEN DOLLARS** (\$610,577.00) (the "Maximum Contract Amount"). The City is not obligated to execute an Agreement or any amendments for any further services, including any services performed by Contractor beyond that specifically described in **Exhibit A**. Any services performed beyond those in **Exhibit A** are performed at Contractor's risk and without authorization under the Agreement.
- (2) The City's payment obligation, whether direct or contingent, extends only to funds appropriated annually by the Denver City Council, paid into the Treasury of the City, and encumbered for the purpose of the Agreement. The City does not by the Agreement irrevocably pledge present cash reserves for payment or performance in future fiscal years. The Agreement does not and is not intended to create a multiple-fiscal year direct or indirect debt or financial obligation of the City.
- **5. STATUS OF CONTRACTOR:** The Contractor is an independent contractor retained to perform professional or technical services for limited periods of time. Neither the Contractor nor any of its employees are employees or officers of the City under Chapter 18 of the Denver Revised Municipal Code, or for any purpose whatsoever

#### 6. TERMINATION:

**a.** The City has the right to terminate the Agreement with cause upon written notice effective immediately, and without cause upon twenty (20) days prior written notice to the Contractor. However, nothing gives the Contractor the right to perform services under the Agreement beyond the time when its services become unsatisfactory to the Manager.

- **b.** Notwithstanding the preceding paragraph, the City may terminate the Agreement if the Contractor or any of its officers or employees are convicted, plead *nolo contendere*, enter into a formal agreement in which they admit guilt, enter a plea of guilty or otherwise admit culpability to criminal offenses of bribery, kick backs, collusive bidding, bid-rigging, antitrust, fraud, undue influence, theft, racketeering, extortion or any offense of a similar nature in connection with Contractor's business. Termination for the reasons stated in this paragraph is effective upon receipt of notice.
- **c.** Upon termination of the Agreement, with or without cause, the Contractor shall have no claim against the City by reason of, or arising out of, incidental or relating to termination, except for compensation for work duly requested and satisfactorily performed as described in the Agreement.
- **d.** If the Agreement is terminated, the City is entitled to and will take possession of all materials, equipment, tools and facilities it owns that are in the Contractor's possession, custody, or control by whatever method the City deems expedient. The Contractor shall deliver all documents in any form that were prepared under the Agreement and all other items, materials and documents that have been paid for by the City to the City. These documents and materials are the property of the City. The Contractor shall mark all copies of work product that are incomplete at the time of termination "DRAFT-INCOMPLETE."
- **7. EXAMINATION OF RECORDS:** Any authorized agent of the City, including the City Auditor or his or her authorized representative, has the right to access and the right to examine any pertinent books, documents, papers and records of the Contractor, involving transactions related to the Agreement until the latter of three (3) years after the final payment under the Agreement or expiration of the applicable statute of limitations.
- **8.** WHEN RIGHTS AND REMEDIES NOT WAIVED: In no event will any payment or other action by the City constitute or be construed to be a waiver by the City of any breach of covenant or default that may then exist on the part of the Contractor. No payment, other action, or inaction by the City when any breach or default exists will impair or prejudice any right or remedy available to it with respect to any breach or default. No assent, expressed or implied, to any breach of any term of the Agreement constitutes a waiver of any other breach.

### 9. **INSURANCE**:

**a.** General Conditions: Contractor agrees to secure, at or before the time of execution of this Agreement, the following insurance covering all operations, goods or services provided pursuant to this Agreement. Contractor shall keep the required insurance coverage in force at all times during the term of the Agreement, or any extension thereof, during any warranty period, and for three (3) years after termination of the Agreement. The required insurance shall be underwritten by an insurer licensed or authorized to do business in Colorado and rated by A.M. Best Company as "A-"VIII or better. Each policy shall contain a valid provision or endorsement requiring notification to the City in the event any of the required policies be canceled or non-renewed before the expiration date thereof. Such written notice shall be sent to the parties identified in the Notices section of this Agreement. Such notice shall

reference the City contract number listed on the signature page of this Agreement. Said notice shall be sent thirty (30) days prior to such cancellation or non-renewal unless due to non-payment of premiums for which notice shall be sent ten (10) days prior. If such written notice is unavailable from the insurer, contractor shall provide written notice of cancellation, non-renewal and any reduction in coverage to the parties identified in the Notices section by certified mail, return receipt requested within three (3) business days of such notice by its insurer(s) and referencing the City's contract number. If any policy is in excess of a deductible or self-insured retention, the City must be notified by the Contractor. Contractor shall be responsible for the payment of any deductible or self-insured retention. The insurance coverages specified in this Agreement are the minimum requirements, and these requirements do not lessen or limit the liability of the Contractor. The Contractor shall maintain, at its own expense, any additional kinds or amounts of insurance that it may deem necessary to cover its obligations and liabilities under this Agreement.

- b. Proof of Insurance: Contractor shall provide a copy of this Agreement to its insurance agent or broker. Contractor may not commence services or work relating to the Agreement prior to placement of coverage. Contractor certifies that the certificate of insurance attached as Exhibit B, preferably an ACORD certificate, complies with all insurance requirements of this Agreement. The City requests that the City's contract number be referenced on the Certificate. The City's acceptance of a certificate of insurance or other proof of insurance that does not comply with all insurance requirements set forth in this Agreement shall not act as a waiver of Contractor's breach of this Agreement or of any of the City's rights or remedies under this Agreement. The City's Risk Management Office may require additional proof of insurance, including but not limited to policies and endorsements.
- **c.** <u>Additional Insureds:</u> For Commercial General Liability, Auto Liability and Excess Liability/Umbrella, Contractor and subcontractor's insurer(s) shall name the City and County of Denver, its elected and appointed officials, employees and volunteers as additional insured.
- **d.** <u>Waiver of Subrogation:</u> For all coverages, Contractor's insurer shall waive subrogation rights against the City.
- e. <u>Subcontractors and Subconsultants:</u> All subcontractors and subconsultants (including independent contractors, suppliers or other entities providing goods or services required by this Agreement) shall be subject to all of the requirements herein and shall procure and maintain the same coverages required of the Contractor. Contractor shall include all such subcontractors as additional insured under its policies (with the exception of Workers' Compensation) or shall ensure that all such subcontractors and subconsultants maintain the required coverages. Contractor agrees to provide proof of insurance for all such subcontractors and subconsultants upon request by the City.
- **d.** Workers' Compensation/Employer's Liability Insurance: Contractor shall maintain the coverage as required by statute for each work location and shall maintain Employer's Liability insurance with limits of \$100,000 per occurrence for each bodily injury claim, \$100,000 per occurrence for each bodily injury caused by disease claim, and \$500,000

aggregate for all bodily injuries caused by disease claims. Contractor expressly represents to the City, as a material representation upon which the City is relying in entering into this Agreement, that none of the Contractor's officers or employees who may be eligible under any statute or law to reject Workers' Compensation Insurance shall effect such rejection during any part of the term of this Agreement, and that any such rejections previously effected, have been revoked as of the date Contractor executes this Agreement.

- **f.** <u>Commercial General Liability:</u> Contractor shall maintain a Commercial General Liability insurance policy with limits of \$1,000,000 for each occurrence, \$1,000,000 for each personal and advertising injury claim, \$2,000,000 products and completed operations aggregate, and \$2,000,000 policy aggregate.
- **g.** <u>Business Automobile Liability:</u> Contractor shall maintain Business Automobile Liability with limits of \$1,000,000 combined single limit applicable to all owned, hired and non-owned vehicles used in performing services under this Agreement

# h. Additional Provisions:

- (a) For Commercial General Liability and Excess Liability, the policies must provide the following:
  - (i) That this Agreement is an Insured Contract under the policy; and
  - (ii) A provision that coverage is primary and non-contributory with other coverage or self-insurance maintained by the City.
  - (b) For claims-made coverage:
    - (i) The retroactive date must be on or before the contract date or the first date when any goods or services were provided to the City, whichever is earlier
  - (c) Contractor shall advise the City in the event any general aggregate or other aggregate limits are reduced below the required per occurrence limits. At their own expense, and where such general aggregate or other aggregate limits have been reduced below the required per occurrence limit, the Contractor will procure such per occurrence limits and furnish a new certificate of insurance showing such coverage is in force.

### 10. <u>DEFENSE AND INDEMNIFICATION:</u>

**a**. Contractor hereby agrees to defend, indemnify, reimburse and hold harmless City, its appointed and elected officials, agents and employees for, from and against all liabilities, claims, judgments, suits or demands for damages to persons or property arising out of, resulting from, or relating to the work performed under this Agreement ("Claims"), unless such Claims have been specifically determined by the trier of fact to be the sole negligence or willful misconduct of the City. This indemnity shall be interpreted in the broadest possible manner to indemnify City for any acts or omissions of Contractor or its subcontractors either passive or

active, irrespective of fault, including City's concurrent negligence whether active or passive, except for the sole negligence or willful misconduct of City.

- **b**. Contractor's duty to defend and indemnify City shall arise at the time written notice of the Claim is first provided to City regardless of whether Claimant has filed suit on the Claim. Contractor's duty to defend and indemnify City shall arise even if City is the only party sued by claimant and/or claimant alleges that City's negligence or willful misconduct was the sole cause of claimant's damages.
- c. Contractor will defend any and all Claims which may be brought or threatened against City and will pay on behalf of City any expenses incurred by reason of such Claims including, but not limited to, court costs and attorney fees incurred in defending and investigating such Claims or seeking to enforce this indemnity obligation. Such payments on behalf of City shall be in addition to any other legal remedies available to City and shall not be considered City's exclusive remedy.
- **d.** Insurance coverage requirements specified in this Agreement shall in no way lessen or limit the liability of the Contractor under the terms of this indemnification obligation. The Contractor shall obtain, at its own expense, any additional insurance that it deems necessary for the City's protection.
- **e.** This defense and indemnification obligation shall survive the expiration or termination of this Agreement.
- 11. <u>TAXES, CHARGES AND PENALTIES</u>: The City is not liable for the payment of taxes, late charges or penalties of any nature, except for any additional amounts that the City may be required to pay under the City's prompt payment ordinance D.R.M.C. § 20-107, *et seq.* The Contractor shall promptly pay when due, all taxes, bills, debts and obligations it incurs performing the services under the Agreement and shall not allow any lien, mortgage, judgment or execution to be filed against City property
- 12. ASSIGNMENT; SUBCONTRACTING: The Contractor shall not voluntarily or involuntarily assign any of its rights or obligations, or subcontract performance obligations, under this Agreement without obtaining the Manager's prior written consent. Any assignment or subcontracting without such consent will be ineffective and void, and shall be cause for termination of this Agreement by the City. The Manager has sole and absolute discretion whether to consent to any assignment or subcontracting, or to terminate the Agreement because of unauthorized assignment or subcontracting. In the event of any subcontracting or unauthorized assignment: (i) the Contractor shall remain responsible to the City; and (ii) no contractual relationship shall be created between the City and any sub-consultant, subcontractor or assign.
- 13. <u>INUREMENT</u>: The rights and obligations of the parties to the Agreement inure to the benefit of and shall be binding upon the parties and their respective successors and assigns, provided assignments are consented to in accordance with the terms of the Agreement.

- 14. NO THIRD PARTY BENEFICIARY: Enforcement of the terms of the Agreement and all rights of action relating to enforcement are strictly reserved to the parties. Nothing contained in the Agreement gives or allows any claim or right of action to any third person or entity. Any person or entity other than the City or the Contractor receiving services or benefits pursuant to the Agreement is an incidental beneficiary only.
- **15. NO AUTHORITY TO BIND CITY TO CONTRACTS**: The Contractor lacks any authority to bind the City on any contractual matters. Final approval of all contractual matters that purport to obligate the City must be executed by the City in accordance with the City's Charter and the Denver Revised Municipal Code.
- **16. SEVERABILITY**: Except for the provisions of the Agreement requiring appropriation of funds and limiting the total amount payable by the City, if a court of competent jurisdiction finds any provision of the Agreement or any portion of it to be invalid, illegal, or unenforceable, the validity of the remaining portions or provisions will not be affected, if the intent of the parties can be fulfilled.

# 17. CONFLICT OF INTEREST:

- **a.** No employee of the City shall have any personal or beneficial interest in the services or property described in the Agreement. The Contractor shall not hire, or contract for services with, any employee or officer of the City that would be in violation of the City's Code of Ethics, D.R.M.C. §2-51, et seq. or the Charter §§ 1.2.8, 1.2.9, and 1.2.12.
- **b.** The Contractor shall not engage in any transaction, activity or conduct that would result in a conflict of interest under the Agreement. The Contractor represents that it has disclosed any and all current or potential conflicts of interest. A conflict of interest shall include transactions, activities or conduct that would affect the judgment, actions or work of the Contractor by placing the Contractor's own interests, or the interests of any party with whom the Contractor has a contractual arrangement, in conflict with those of the City. The City, in its sole discretion, will determine the existence of a conflict of interest and may terminate the Agreement in the event it determines a conflict exists, after it has given the Contractor written notice describing the conflict.
- **18.** <u>NOTICES</u>: All notices required by the terms of the Agreement must be hand delivered, sent by overnight courier service, mailed by certified mail, return receipt requested, or mailed via United States mail, postage prepaid, if to Contractor at the address first above written, and if to the City at:

Office of Emergency Management and Homeland Security 1437 Bannock St Room 3A Denver, CO 80202

With a copy of any such notice to:

Denver City Attorney's Office

1437 Bannock St., Room 353 Denver, Colorado 80202

Notices hand delivered or sent by overnight courier are effective upon delivery. Notices sent by certified mail are effective upon receipt. Notices sent by mail are effective upon deposit with the U.S. Postal Service. The parties may designate substitute addresses where or persons to whom notices are to be mailed or delivered. However, these substitutions will not become effective until actual receipt of written notification.

# 19. NO EMPLOYMENT OF ILLEGAL ALIENS TO PERFORM WORK UNDER THE AGREEMENT:

- **a.** This Agreement is subject to Division 5 of Article IV of Chapter 20 of the Denver Revised Municipal Code, and any amendments (the "Certification Ordinance").
  - **b.** The Contractor certifies that:
    - (1) At the time of its execution of this Agreement, it does not knowingly employ or contract with an illegal alien who will perform work under this Agreement.
    - (2) It will participate in the E-Verify Program, as defined in § 8-17.5-101(3.7), C.R.S., to confirm the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement.
  - **c.** The Contractor also agrees and represents that:
    - (1) It shall not knowingly employ or contract with an illegal alien to perform work under the Agreement.
    - (2) It shall not enter into a contract with a sub-consultant or subcontractor that fails to certify to the Contractor that it shall not knowingly employ or contract with an illegal alien to perform work under the Agreement.
    - (3) It has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement, through participation in either the E-Verify Program.
    - (4) It is prohibited from using either the E-Verify Program procedures to undertake pre-employment screening of job applicants while performing its obligations under the Agreement, and that otherwise requires the Contractor to comply with any and all federal requirements related to use of the E-Verify Program including, by way of example, all program requirements related to employee notification and preservation of employee rights.
    - (5) If it obtains actual knowledge that a sub-consultant or subcontractor performing work under the Agreement knowingly employs or contracts with an illegal alien, it will notify such sub-consultant or subcontractor and the City within three (3) days. The Contractor will also then terminate such sub-consultant or subcontractor if within three (3) days after such notice the sub-consultant or subcontractor does not stop

- employing or contracting with the illegal alien, unless during such three-day period the sub-consultant or subcontractor provides information to establish that the sub-consultant or subcontractor has not knowingly employed or contracted with an illegal alien.
- (6) It will comply with any reasonable request made in the course of an investigation by the Colorado Department of Labor and Employment under authority of § 8-17.5-102(5), C.R.S., or the City Auditor, under authority of D.R.M.C. 20-90.3.
- d. The Contractor is liable for any violations as provided in the Certification Ordinance. If Contractor violates any provision of this section or the Certification Ordinance, the City may terminate this Agreement for a breach of the Agreement. If the Agreement is so terminated, the Contractor shall be liable for actual and consequential damages to the City. Any such termination of a contract due to a violation of this section or the Certification Ordinance may also, at the discretion of the City, constitute grounds for disqualifying Contractor from submitting bids or proposals for future contracts with the City.
- **20. <u>DISPUTES</u>**: All disputes between the City and Contractor arising out of or regarding the Agreement will be resolved by administrative hearing pursuant to the procedure established by D.R.M.C. § 56-106(b)-(f). For the purposes of that administrative procedure, the City official rendering a final determination shall be the Manager as defined in this Agreement.
- 21. GOVERNING LAW; VENUE: The Agreement will be construed and enforced in accordance with applicable federal law, the laws of the State of Colorado, and the Charter, Revised Municipal Code, ordinances, regulations and Executive Orders of the City and County of Denver, which are expressly incorporated into the Agreement. Unless otherwise specified, any reference to statutes, laws, regulations, charter or code provisions, ordinances, executive orders, or related memoranda, includes amendments or supplements to same. Venue for any legal action relating to the Agreement will be in the District Court of the State of Colorado, Second Judicial District.
- **22. NO DISCRIMINATION IN EMPLOYMENT**: In connection with the performance of work under the Agreement, the Contractor may not refuse to hire, discharge, promote or demote, or discriminate in matters of compensation against any person otherwise qualified, solely because of race, color, religion, national origin, gender, age, military status, sexual orientation, gender variance, marital status, or physical or mental disability. The Contractor shall insert the foregoing provision in all subcontracts.
- **23.** <u>COMPLIANCE WITH ALL LAWS</u>: Contractor shall perform or cause to be performed all services in full compliance with all applicable laws, rules, regulations and codes of the United States, the State of Colorado; and with the Charter, ordinances, rules, regulations and Executive Orders of the City and County of Denver.
- **24.** <u>LEGAL AUTHORITY</u>: Contractor represents and warrants that it possesses the legal authority, pursuant to any proper, appropriate and official motion, resolution or action passed or taken, to enter into the Agreement. Each person signing and executing the Agreement on behalf of Contractor represents and warrants that he has been fully authorized by Contractor to execute the Agreement on behalf of Contractor and to validly and legally bind Contractor to

- all the terms, performances and provisions of the Agreement. The City shall have the right, in its sole discretion, to either temporarily suspend or permanently terminate the Agreement if there is a dispute as to the legal authority of either Contractor or the person signing the Agreement to enter into the Agreement. Should the City temporarily suspend or permanently terminate this Agreement, the Contractor will be paid for costs incurred and completed work prior to the termination notice.
- **25. NO CONSTRUCTION AGAINST DRAFTING PARTY**: The parties and their respective counsel have had the opportunity to review the Agreement, and the Agreement will not be construed against any party merely because any provisions of the Agreement were prepared by a particular party.
- **26.** ORDER OF PRECEDENCE: In the event of any conflicts between the language of the Agreement and the exhibits, the language of the Agreement controls.
- 27. <u>SURVIVAL OF CERTAIN PROVISIONS</u>: The terms of the Agreement and any exhibits and attachments that by reasonable implication contemplate continued performance, rights, or compliance beyond expiration or termination of the Agreement survive the Agreement and will continue to be enforceable. Without limiting the generality of this provision, the Contractor's obligations to provide insurance and to indemnify the City will survive for a period equal to any and all relevant statutes of limitation, plus the time necessary to fully resolve any claims, matters, or actions begun within that period.
- 28. <u>ADVERTISING AND PUBLIC DISCLOSURE</u>: The Contractor shall not include any reference to the Agreement or to services performed pursuant to the Agreement in any of the Contractor's advertising or public relations materials without first obtaining the written approval of the Manager. Any oral presentation or written materials related to services performed under the Agreement will be limited to services that have been accepted by the City. The Contractor shall notify the Manager in advance of the date and time of any presentation. Nothing in this provision precludes the transmittal of any information to City officials.
- **29.** <u>CITY EXECUTION OF AGREEMENT</u>: The Agreement will not be effective or binding on the City until it has been fully executed by all required signatories of the City and County of Denver, and if required by Charter, approved by the City Council.
- **30.** AGREEMENT AS COMPLETE INTEGRATION-AMENDMENTS: The Agreement is the complete integration of all understandings between the parties as to the subject matter of the Agreement. No prior, contemporaneous or subsequent addition, deletion, or other modification has any force or effect, unless embodied in the Agreement in writing. No oral representation by any officer or employee of the City at variance with the terms of the Agreement or any written amendment to the Agreement will have any force or effect or bind the City.
- 31. <u>USE, POSSESSION OR SALE OF ALCOHOL OR DRUGS</u>: The Contractor shall cooperate and comply with the provisions of Executive Order 94 and its Attachment A concerning the use, possession or sale of alcohol or drugs. Violation of these provisions or refusal to cooperate with implementation of the policy can result in contract personnel being barred from City facilities and from participating in City operations.
- **32.** <u>COUNTERPARTS OF THE AGREEMENT</u>: The Agreement may be executed in counterparts, each of which is an original and constitute the same instrument.

33. ELECTRONIC SIGNATURES AND ELECTRONIC RECORDS: Contractor consents to the use of electronic signatures by the City. The Agreement, and any other documents requiring a signature hereunder, may be signed electronically by the City in the manner specified by the City. The Parties agree not to deny the legal effect or enforceability of the Agreement solely because it is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of the Agreement in the form of an electronic record, or a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

#### **35.** PREVAILING WAGES:

- **a.** Employees of the Contractor or the Contractor's subcontractors are subject to the payment of prevailing wages pursuant to § 20-76 *et seq.*, D.R.M.C.
- **b.** The Contractor shall pay every Covered Worker, as defined in § 20-76(a) D.R.M.C., a living wage as provided in § 20-76, D.R.M.C. Prevailing Wage schedule incorporated herein as Exhibit C.
- **c.** In accordance with § 20-76(b) and (d), D.R.M.C., the following mandatory provisions are included:
- 1. The minimum wages to be paid for every Covered Worker shall be not less than the scale of wages from time to time determined under § 20-76(b) and (c) to be the prevailing wages.
- 2. The Contractor or its subcontractor shall pay Covered Workers employed directly upon the site of the work the full amounts accrued at time of payment, computed at wage rates not less than those stated or referenced in the specifications, and any addenda thereto, on the actual date of bid or proposal opening, or in effect on the date of grant of permit for performance of such work under D.R.M.C. Section 49-171 et seq., or on the date of the written purchase order for contracts let by informal procedure under D.R.M.C. Section 20-63(b), regardless of any contractual relationship which may be alleged to exist between the contractor or subcontractor and the Covered Workers. Increases in prevailing wages subsequent to the date of the contract for a period not to exceed one (1) year shall not be mandatory on either the Contractor or subcontractors. Future increases in living wages on contracts whose period of performance exceeds one (1) year shall be mandatory for the Contractor and subcontractors only on the yearly anniversary date of the contract. Decreases in prevailing wages subsequent to the date of the contract for a period not to exceed one (1) year shall not be permitted. Decreases in prevailing wages on contracts whose period of performance exceed one (1) year shall not be effective except on the yearly anniversary date of the contract.
- 3. The Contractor and its subcontractors shall pay all Covered Workers at least once a week the full amounts of wages accrued at the time of payment, except that the contractor and subcontractor shall make such payments to non-construction workers such as janitorial or custodial workers at least twice per month.

- 4. The Contractor shall post in a prominent and easily accessible place at the site of the work the scale of wages to be paid by the Contractor and all subcontractors working under the Contractor.
- 5. If the Contractor or any subcontractor shall fail to pay such wages as are required by the contract, the Auditor shall not approve any warrant or demand for payment to the Contractor until the Contractor furnishes the Auditor evidence satisfactory to the Auditor that such wages so required by the contract have been paid.
- 6. The Contractor shall furnish to the Auditor each week during which work is in progress under the contract, a true and correct copy of the payroll records of all Covered Workers employed under the contract, either by the Contractor or subcontractors. Such payroll records shall include information showing the number of hours worked by each Covered Worker employed under the contract, the hourly pay of such Covered Worker, any deductions made from pay, and the net amount of pay received by each Covered Worker for the period covered by the payroll.
- 7. The copy of the payroll record shall be accompanied by a sworn statement of the Contractor that the copy is a true and correct copy of the payroll records of all Covered Workers working under the contract either for the Contractor or subcontractors, that payments were made to the Covered Workers as set forth in the payroll records, that no deductions were made other than those set forth in such records, and that all Covered Workers employed on work under the contract, either by the Contractor or by any subcontractor, have been paid the prevailing wages as set forth in the contract specifications.
- 8. If any Covered Worker employed by the Contractor or any subcontractor under the contract has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid as aforesaid, the City may, by written notice to the Contractor, suspend or terminate the Contractor's right to proceed with the Work, or such part of the Work as to which there has been a failure to pay the required wages, and in the event of termination may prosecute the Work to completion by contract or otherwise, and the Contractor and any sureties shall be liable to the City for any excess costs occasioned the City thereby.

#### **36. AIRPORT SECURITY:**

a. It is a material requirement of this Agreement that the Consultant shall comply with all rules, regulations, written policies and authorized directives from the City and/or the Transportation Security Administration with respect to Airport security. The Consultant shall conduct all of its activities at the Airport in compliance with the Airport security program, which is administered by the Security Section of the Airport Operations Division, Department of Aviation. Violation by the Consultant or any of its employees, subcontractors or vendors of any rule, regulation or authorized directive from the City or the Transportation Security Administration with respect to Airport Security shall be grounds for immediate termination by the City of this Agreement for cause.

- b. The Consultant shall promptly upon notice of award of this Agreement, meet with the Airport's Assistant Security Manager to establish badging and vehicle permit requirements for the Consultant's operations under this Agreement. The Consultant shall obtain the proper access authorizations for all of its employees, subcontractors and vendors who will enter the Airport to perform work or make deliveries, and shall be responsible for each such person's compliance with all Airport rules and regulations, including without limitation those pertaining to security. Any person who violates such rules may be subject to revocation of his/her access authorization. The failure of the Consultant or any subcontractor to complete any required services hereunder shall not be excused on account of the revocation for good cause of access authorization of any person.
- c. The security status of the Airport is subject to change without notice. If the security status of the Airport changes at any time during the term of this Agreement, the Consultant shall take immediate steps to comply with security modifications which occur as a result of the changed status. The Consultant may at any time obtain current information from the Airport Security Office regarding the Airport's security status in relation to the Consultant's operations at the Airport.
- **d.** The Consultant shall return to the City at the expiration or termination of this Agreement, or upon demand by the City, all access keys or access badges issued to it or any subcontractor for any area of the Airport, whether or not restricted. If the Consultant fails to do so, the Consultant shall be liable to reimburse the City for all the City's costs for work required to prevent compromise of the Airport security system. The City may withhold funds in the amount of such costs from any amounts due and payable to the Consultant under this Agreement.

### **37.** CONSTRUCTION CONDITIONS:

- a. The installation shall be in complete compliance with City of Denver Building and Fire Codes. The City shall at all times have the right to inspect the work and materials used in the construction of the improvements. The Contractor shall furnish all reasonable aid and assistance required for the proper examination of the work and all parts thereof. The Contractor shall regard and obey directions and instructions of the City's Manager of Office of Emergency Management or his/her authorized inspectors, when such directions or instructions are consistent with the plans and specifications for the improvements to be constructed hereunder; provided, however, that should the Contractor object to any order given by the City's authorized inspector, they may make a written application to the City's Manager of Office of Emergency Management for his/her decision, which decision shall be final and conclusive. Such inspection shall not relieve the Contractor from the obligation to construct the improvements strictly in accordance with the approved plans and specifications or any approved modification thereof.
- b. The Contractor shall assume full responsibility and expense for restoring the siren sites as they were prior to arrival. The Contractor shall give reasonable written notice in advance to the Department of the City having charge of any property or utilities owned by the City when they will be affected by the work to be performed under the Agreement. Premises shall be kept clean and neat. Materials, scrap and equipment not having further use at the site

shall be promptly removed from the job site. Disposal of Contractor's waste materials in the City's containers is prohibited unless prior permission has been granted.

- c. The Contractor shall be familiar with and operate within the guidelines as set forth by the Occupational Safety and Health Act. For all operations requiring the placement and movement of the Contractor's equipment, Contractor shall observe and exercise and compel his/her employees to observe and exercise all necessary caution and discretion so as to avoid injury to persons, damage to property of any and all kinds, and annoyance to or undue interference with the movement of the public and City personnel. All ladders, scaffolding or other devices used to reach the surface of objects not otherwise accessible, shall be of sound construction, firm and stable, and shall be maintained in good condition. All such equipment shall be moved onto the areas where they are required, placed, shifted where necessary, and removed from the areas in such manner as to provide maximum safety to persons and property and cause the least possible interference with the normal usage of such areas by the public and City personnel.
- d. Contractor shall furnish all necessary labor, tools, equipment and supplies to perform the required services at the sites designated. The Manager of Office of Emergency Management or his/her authorized representative will decide all questions which may arise as to the quality and acceptability of any work performed under the contract. If, in the opinion of the Manager of Office of Emergency Management or his/her authorized representative, performance becomes unsatisfactory, the City shall notify the Contractor in writing. The Contractor will have 14 calendar days from the time to correct any specific instances of unsatisfactory performance. In the event the unsatisfactory performance is not corrected within the time specified above, the City shall have the immediate right to complete the work to its satisfaction and shall deduct the cost to cover from any balances due or to become due the Contractor. Repeated incidences of unsatisfactory performance will result in cancellation of the agreement for default.

APPENDIX NO. 1 STANDARD FEDERAL ASSURANCES
APPENDIX NO. 3 NONDISCRIMINATION IN AIRPORT EMPLOYMENT
OPPORTUNITIES
EXHIBIT A EQUIPMENT AND SCOPE OF WORK
EXHIBIT B CERTIFICATE OF INSURANCE
EXHIBIT C PREVAILING WAGES
EXHIBIT D TITLE AND ACCEPTANCE OF EQUIPMENT AND MATERIALS
ATTACHMENT-1 City of Denver Preliminary Test Plan

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#### APPENDIX NO. 1 STANDARD FEDERAL ASSURANCES

NOTE: As used below the term "contractor" shall mean and include the "Party of the Second Part," and the term "sponsor" shall mean the "City".

During the term of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

- 1. Compliance with Regulations. The contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- 2. Nondiscrimination. The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, sex, creed or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- 3. Solicitations for Subcontractors, Including Procurements of Materials and Equipment. In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- 4. Information and Reports. The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration (FAA) to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the sponsor of the FAA, as appropriate, and shall set forth what efforts it has made to obtain the information.
- 5. Sanctions for Noncompliance. In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the sponsor shall impose such contract sanctions as it or the FAA may determine to be appropriate, including, but not limited to:
  - a. Withholding of payments to the contractor under the contract until the contractor complies, and/or

- b. Cancellation, termination, or suspension of the contract, in whole or in part.
- 6. Incorporation of Provisions. The contractor shall include the provisions of paragraphs 1 through 5 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the sponsor or the FAA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the sponsor to enter into such litigation to protect the interests of the sponsor and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

#### APPENDIX NO. 3

#### NONDISCRIMINATION IN AIRPORT EMPLOYMENT OPPORTUNITIES

The Party of the Second Part assures that it will comply with pertinent statutes, Executive Orders and such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from Federal assistance. This Provision obligates the Party of the Second Part or its transferee for the period during which Federal assistance is extended to the airport program, except where Federal assistance is to provide or is in the form of personal property or real property or an interest therein or structures or improvements thereon. In these cases, this Provision obligates the Party of the Second Part or any transferee for the longer of the following periods: (a) the period during which the property is used by the sponsor or any transferee for a purpose for which Federal assistance is extended, or for another purpose involving the provision of similar services or benefits; or (b) the period during which the airport sponsor or any transferee retains ownership or possession of the property. In the case of contractors, this Provision binds the contractors from the bid solicitation period through the completion of the contract.

It is unlawful for airport operators and their lessees, tenants, concessionaires and contractors to discriminate against any person because of race, color, national origin, sex, creed, or handicap in public services and employment opportunities.

# EXHIBIT A SCOPE OF WORK

# EXHIBIT B CERTIFICATE OF INSURANCE

# EXHIBIT A SCOPE OF WORK CASH

### 6784 Emergency Public Warning System Contract Scope

The purpose of this project is to upgrade the City's outdoor public warning system, hereinafter referred to as "the System." The System shall utilize electronic or electro-mechanical high power sirens capable of providing siren warning throughout 360 degrees. The System shall be a two-way radio controlled system that shall provide positive feedback of activation, as well as silent testing of each siren.

All installation must be completed without interfering with the operation of the City's existing siren system until the new system has been tested and accepted by the City.

\*Accompanying this Scope of Work is an Excel Spreadsheet ("Spreadsheet"). This Spreadsheet contains the combined deliverables between the two agreements of the parties, one financed and the other to be paid in cash. The items that are listed under the columns marked "DIA," "911," and "Cash" shall be associated with the cash agreement wherein the City will pay for the deliverables directly with cash upon completion and invoicing from the Contractor. The items listed in the Column marked as "Leased Amount" will be paid for through an agreement between the City and a lender and shall be paid for in total upon final completion and acceptance of the project as described in this Scope of Work and the Agreements.

CONTRACTOR SHALL PERFORM THE FOLLOWING FUNCTIONS AND SERVICES AND DELIVER THE PRODUCTS DESCRIBED AS THEY RELATE TO THIS AGREEMENT:

<u>Delivery and Storage point</u>: For purposes of this Agreement the City will make available 5440 Roslyn St, Denver CO 80216 as a products delivery and storage point for the project.

## Installation of new sirens (installation paid with cash):

Contractor shall install 56 new electromechanical sirens at locations identified by the City. Sirens shall be capable of providing 360 degree warning. Sirens shall be placed on 50' wooden poles sunk 10' in the ground. Sirens shall be battery operated, and recharged by solar panels. Sirens shall be activated by a two-way radio controlled system that shall provide positive feedback for silently testing each siren.

Locations will be identified by the City; the Contractor will advise the City if the identified locations provide less than optimal coverage, and will work with the City to identify acceptable locations if needed. Poles must be placed at least 2 ft from the curb and must leave at least 5 ft clearance for pedestrian passage. They will be located behind the sidewalk where possible. If the street or sidewalks are disturbed, they must be restored to City standards by Contractor. A street occupancy permit and utility plan review will be required, but there will not be a charge to the Contractor for this permit.

The System shall include all elements necessary for efficient operation of an outdoor warning siren system, to include but not limited to: siren speaker arrays, speaker cable, siren controllers, antenna cables, encoder(s), pole, pole mounting brackets, lightning arrestors, batteries and solar panels. All System components furnished for this project shall be new and currently manufactured products currently listed in the recommended Manufacturer sales literature. The manufacture and installation of all equipment shall comply with all applicable government regulatory standards, at least but not limited to: FEMA, FCC, OSHA, and City & County of Denver.

The electrical path between the speaker system's power amplifiers and speaker drivers shall be hardwired. Each siren shall be capable of 360 degree coverage, either through rotation or multiple directional speaker cells. The speaker array shall be designed to withstand harsh environments, to include winds up to 120mph. A lightning arrestor shall be provided for each siren. All pole-mounted equipment must be located above ground level to prevent tampering.

The sirens shall be activated by VHF simplex radio operating on 155.955 MHz, broadcast from three base station transmitters. (See Activation Points, below) This frequency is currently licensed to the City, however installation of the base station transmitters is included in this contract. Costs for testing the existing antenna systems are included with this contract. Siren activation must not be dependent on the City network or other infrastructure.

# <u>Upgrade of existing sirens</u>:

The Contractor shall upgrade 11 existing newer-model sirens, set out below, and integrate them into the new system. The Contractor shall be responsible for ensuring complete integration of all 21 upgraded sirens into the new System, meeting all the specifications listed herein and that all sirens and System be completely compatible.

Below is the list of the existing 11 Federal Signal 2001DC Sirens to be upgraded (line items #1 and #2 installation only):

Num	Quad	Name	Address
1	NE	Machebeuf High School P/M	458 N. Uinta Way
2	NE	Noel Middle School P/M	5290 N. Kittredge
3	NE	DIA 1	East of old Toll Plaza
4	NE	DIA 2	Dobbs Building
5	NE	DIA 3	ARFF 1
6	NE	DIA 4	East end of B Concourse
7	NE	DIA 5	SE of Continental Hangar
8	NE	DIA 6	South of Fuel Farm
9	NE	DIA 7	West end of B Concourse
10	NE	DIA 8	Signature
11	NE	DIA 9	TRACON

Sirens 1 & 2 are pole-mounted, battery-operated and solar charged. The Contractor shall ensure proper working condition of the sirens and components, and install the new activation radios.

Sirens 3-11, located at Denver International Airport, are pole-mounted and run off AC power. These sirens currently have two separate activation radios, one for DIA and one for the main citywide system. The Contractor shall ensure proper working condition of the sirens and components, and replace the one activation radio for the Citywide system, leaving the DIA activation radio in place. These sirens shall NOT have solar panels or batteries installed, and will continue to run off of AC power.

#### Base Stations and Control Consoles:

The system shall be activated from three control consoles located at the following sites:

- 1. Denver 911 Dispatch Center at 950 Josephine St, Denver, CO 80204.
- 2. Denver 911 Back-up Center at 303 W Colfax St, Denver, CO 80202.
- 3. Denver Emergency Operations Center at 1437 Bannock St, Denver, CO 80202.

Each site shall have its own base station transmitter and antenna operating on 155.955 MHz, and shall be fully capable of operating independent of the other activation points.

Each console must be capable of activating sirens citywide, in pre-defined zones, or by individual sirens. Operation shall be quick, intuitive, and user-friendly. The system shall be capable of generating reports after each activation/test, detailing performance for each siren and the system overall; this report shall be downloadable via a USB port or similar method. The activation software will have a "training mode" so users can practice operating the system without sounding sirens. All software and hardware systems will be provided by the Contractor.

The activation system shall be capable of two-way communication with the sirens, in order to report siren performance information for each siren location. Each siren shall report the status of each activation or test back, via radio frequency, to the control consoles. The system shall also be capable of conducting an inaudible test of the system, or of individual sirens. The system shall have a high degree of fault tolerance to ensure operation during severe weather or disasters.

The existing activation console in the DIA Communications Center shall remain in place and retain the ability to activate the 9 DIA sirens, but will not be integrated into the citywide system.

#### Removal of old sirens:

Contractor shall be responsible for removing 55 existing sirens.

- Contractor will remove fifty-five (55) existing siren heads, disable power to each siren by shutting off the breaker, and cap any AC power wires that are exposed as a result of siren head removal.
- Contractor will not remove anything from the rooftop surface that would create an
  exposed hole in the rooftop. Any holes in siren attachment channels or poles, caused by
  siren head removal, will be sealed.
- Any City of Denver verification or inspection of siren head removals will need to be coordinated, in advance, with Contractor's installer. Installer will not wait for any

- inspector to arrive on site following removal. Inspection will need to be done before the installer completes removal work and leaves site. Photos will be taken of siren site area both before and after siren head removal work is completed.
- Contractor shall work in such a manner to minimize disruption to roof, building, grounds and operations at building.

The sirens for removal are currently located on buildings throughout the City and County of Denver, plus one siren in the City of Glendale. The new sirens will be located and placed in areas different than those for removal. Contractor is responsible for all costs of removing equipment, including any cranes, scaffolding, and other equipment, supplies and permitting necessary. Additionally, Contractor is responsible for restoring roof, building, and grounds to original condition.

The City will contact the appropriate personnel at each location to notify them that they will be contacted by the Contractor to remove the siren at that location. The Contractor will then be responsible for working directly with the appropriate personnel at each location and obtain any necessary permission to enter onto those sites. Contractor will make a total of three (3) attempts to schedule the removal of said siren at each location. After two (2) attempts solely made by Contractor, Contractor will notify the City. The City will be responsible for coordinating access to existing sirens. If after the third (3) and final attempt Contractor is unsuccessful the Contractor's responsibility will be considered complete.

Below is the list of the existing 55 Signals and their locations for removal:

	Quad	Name	Siren Type	Address
1	NW	Beach Court School	Model 5AT	4950 Beach Court
2	NW	Brown School	Model 5AT	2550 Lowell Blvd
3	NW	Cowell School	Model 5AT	4540 W. 10th Ave.
4	SW	Fire Station 23	Model 5AT	850 S. Federal blvd.
5	NW	Fire Station 6	Model 5AT	1515 13th St.
6	NE	Garden Place School	Model 5AT	4425 Lincoln St.
7	SW	Johnson School	Model 5AT	1850 S. Irving St.
8	SW	Knapp School	Model 5AT	500 S. Utica St.
9	NE	Montclair School	Model 5AT	1151 Newport St.
10	NW	Presentation School	Model 5AT	660 N. Julian St.
11	SE	Ellis School P/M	Model SD-10	1651 S. Dahlia St.
12	SE	JFK Golf Course P/M	Model SD-10	10500 E. Hampden Ave.
13	SW	Loretto Heights College	Model SD-10	3001 S. Federal Blvd.
14	SE	Bonnie Brae P/M	Thunderbeam	740 S. University
15	NE	Carson School P/M	Thunderbeam	5420 East 1st Ave.
16	NE	Comm. Center P/M	Thunderbeam	1000 Elizabeth St.
17	NE	Fire Station 29 T/M	Thunderbeam	4800 Himalaya St.
18	SW	Fire Station 30 T/M	Thunderbeam	4898 S. Dudley
19	SW	Ruby Hill P/M	Thunderbeam	Mexico and Pecos
20	NE	Safeway P/M	Thunderbeam	43rd and Dahlia

	Quad	Name	Siren Type	Address
21	NE	Union Pacific P/M	Thunderbeam	40th and Williams
22	NW	Willis Case P/M	Thunderbeam	50th and Vrain St.
23	NE	Ashley School	Thunderbolt	1914 Syracuse St.
24	NW	Barnum School	Thunderbolt	85 Hooker St.
25	NE	Barrett Elementary	Thunderbolt	2900 Richard Allen Ct.
26	NW	Cheltenham School	Thunderbolt	1580 Julian
27	NE	Cole Junior High	Thunderbolt	3240 Humbolt St.
28	NW	Federal Building	Thunderbolt	1961 Stout St.
29	NE	Fire Station 26	Thunderbolt	7045 E. 38th Ave.
30	NE	Fire Station 27	Thunderbolt	12927 E. Albrook Dr.
31	SW	Fort Logan Hospital	Thunderbolt	S. Perry and Oxford St.
32	SE	George Washington High	Thunderbolt	655 S. Monaco Pkwy
33	SW	Goldrick School	Thunderbolt	1050 S. Zuni St.
34	NW	Greenlee School	Thunderbolt	1150 Lipan St.
35	SE	Hamilton School	Thunderbolt	8600 E. Dartmouth St.
36	SW	JFK High School	Thunderbolt	2855 S. Lamar St.
37	NE	Kaiser Medical Building	Thunderbolt	2045 Franklin St.
38	SE	Key Bank	Thunderbolt	3600 S. Yosemite St.
39	SW	Kunsmiller School	Thunderbolt	2250 S. Quitman St.
40	SE	Lincoln School	Thunderbolt	715 S. Pearl St.
41	SE	Merrill School	Thunderbolt	1551 S. Monroe St.
42	NE	Montbello Senior High	Thunderbolt	14100 Crown Blvd.
43	NW	North High School	Thunderbolt	2840 N. Speer Blvd.
44	NE	Palmer School	Thunderbolt	995 Grape St.
45	SE	Place Middle School	Thunderbolt	7125 Cherry Creek Dr. North
46	SE	Rosedale School	Thunderbolt	2330 S. Sherman St.
47	NW	Skinner Junior High	Thunderbolt	3435 W. 40th Ave.
48	SE	Slavens School	Thunderbolt	3000 S. Clayton
49	NE	Smiley Junior High	Thunderbolt	2540 Holly St.
50	NE	Teller School	Thunderbolt	1150 Garfield
51	SE	Thomas Jefferson High	Thunderbolt	3950 S. Holly St.
52		City of Glendale	Whelan 2800	999 S. Clairmont St.
53		Bryant-Webster School	5AT	3653 Quivas
54		Pole Mount	SD10	W. 46 <sup>th</sup> Lipan
55		Weiker Warehouse	5AT	2100 E. Colfax

### **Testing**:

The Contractor shall conduct system-wide testing to demonstrate that the system is fully operational before it is accepted by the City. Once each siren is installed and programmed, each siren can be quiet tested and polled and should show up in the system with a green dot indicating it passes all tests. Contractor will save screen shots of each siren's status display screen as proof it is functioning properly. The attached test plan shows the test plan steps, a screen shot example

and an Installation Check List, which shows the site testing done after siren installation. Contractor will submit a list of newly installed sirens and supporting documentation to prove functionality.

#### **Training**:

The Contractor shall conduct at least two training sessions lasting a minimum of one hour for up to 30 personnel on the function and operation of all controls. Additional training shall be included for up to 10 City technical personnel on maintenance and repair of all system hardware and software. Both these trainings shall be conducted in-person at locations specified by the City.

The Contractor shall supply operations manuals and related documentation for all system hardware and software through provided training.

#### Final Acceptance:

The City shall consider the System to be completed and accepted in total when the following items have been completed in compliance with Attachment 1:

- New siren system including upgrade of 21 existing newer-model sirens is completely installed/upgraded, optimized, and ready for use.
- New indoor notification units are completely installed, optimized and ready for use.
- City and County of Denver personnel are trained on the new system.
- The Quiet Test referenced in the test plan can be used to demonstrate that a given siren is functioning properly. This is not a true "quiet" test as the motor in the 2001-130 electromechanical sirens (which the City of Denver has) ramps up the wail sound. The result is about a 10 second tone with increasing volume that shuts off after about 10 seconds. Nearby residents who are outside will hear this but it's not typically disconcerting due to its short length and fact that it's not sounding at full power.
- Contractor's technician will print screen shots for each siren site. Once each siren is installed and programmed, each siren will be quiet tested and polled and show up in the system with a green dot indicating it passes all tests. Screen shots of each siren's status display screen as proof it is functioning properly. The attached test plan shows the test plan steps, a screen shot example and an Installation Check List, which shows the site testing done after siren installation.
- Contractor will decide how the 32 indoor notification units (Informers) need to be tested. These will also show up in the system with screen dots and a display screen to show status.
- The legacy sirens are removed and their locations restored from their locations throughout the City.
- Completion of the City of Denver Test Plan-Attachment 1

Because the completion of the System involves two agreements it is acknowledged that there will be one Final Acceptance.

# Warranty:

Warranty of the system shall be a minimum of twenty-four (24) months for all equipment from Final Acceptance. The cost of repairing any parts shall be included in the 24-month warranty, to include any labor costs for removing and replacing the defective parts at any of the individual siren locations throughout the City. All other items necessary for turnkey installation, but not covered under Manufacturer's warranty of system proposed, shall be warranted by the Contractor for a period of twenty-four (24) months, including any labor costs associated.

item No.	Qty.	Federal Part No.	Description	Simple Description	Uni	it Price	Total	DIA	5	911		Cash	1	Leased Amount
1			2001-130 SIREN (NEW)							711		Сази	303	Amount
2	55	2001-130	SIREN,DC,ROTATING, 130 dB	Siren on top of pole	\$	4,914	\$ 270,270	s -	5	-	\$		\$	270,270
3	55	DCFCTBD	CNTRL., DIGITAL, NO RADIO	Siren controller on pole	\$	3,339	\$ 183,645	\$ -	\$	-	\$	-	\$	183,645
4		ES-RADIO	CDM750 40W, VHF - 288838A-02	Siren radio on pole	\$	615	\$ 33,825	\$ -	\$	-	\$	-	\$	33,825
5	55	PVS220W-48	SOLAR POWER OPTION, DC	Solar Panels on pole	\$	2,802	\$ 154,110	\$ ~	\$	-	\$	-	\$	154,110
İ						***************************************			1		Ė		<del></del>	
6	55	AM8-P	ANTENNA MOUNTING BRACKET, POLE	VHF Antenna bracket on pole	\$	74	\$ 4,070	\$ -	\$	-	\$	-	\$	4,070
7	55	YAGI2	ANTENNA^150-174 Mhz^VHF B	VHF Antenna on pole	\$	222	\$ 12,210	\$ -	\$	-	\$	-	\$	12,210
8	55		50' Class 2 Wood Pole	Wood mounting pole	\$	750	\$ 41,250		s	-	\$	-	\$	41,250
					<u> </u>		, , , , , , , , , , , , , , , , , , , ,	· · · · · · · · · · · · · · · · · · ·	† <u>`</u>	~	1		<del>                                     </del>	74,420
		1	2001 AC-DC Install, 4 Std Batteries, 50'	Install all equipment on pole including	ļ									
9	55	TK-1-2001AD	Class 2 Wood Pole & Solar Panel	batteries.	\$	5,685	\$ 312,675	\$ -	\$	-	\$	312,675	s	-
			STD WARRANTY W/ FIELD SERVICE						† <u> </u>		Ť	/	Ť	
10	55	FS-W-FSS	COVERAGE	Warranty	\$	1,000	\$ 55,000	ς .	\$		S	55,000	s	
11.			2001-130 SIREN (NEW) N60	FEET AND COMMENT OF STREET		1 7 11	SANGAR GUAR	E-11000000	1		T .	33,000	-	
12	1	2001-130	SIREN,DC,ROTATING, 130 dB	Siren on top of pole	\$	4,914	\$ 4,914	\$ -	\$		\$		\$	4,914
13	1	DCFCTBD	CNTRL, DIGITAL, NO RADIO	Siren controller on pole	\$	3,339	\$ 3,339		\$	-	\$	-	\$	3,339
14	1	ES-RADIO	CDM750 40W, VHF - 288838A-02	Siren radio on pole	\$		\$ 615	\$ -	\$	-	\$	-	\$	615
15	1	PVS220W-48	SOLAR POWER OPTION, DC	,	\$	2,802		\$ -	Š	-	\$		5	2,802
					Ť	2,002	y 2,002		+-		1-		-	2,002
16	1	AMB-P	ANTENNA MOUNTING BRACKET, POLE	VHF Antenna bracket on pole	\$	74	\$ 74	s -	s		s		\$	7,
17	1	YAGI2	ANTENNA^150-174 Mhz^VHF B	VHF Antenna on pole	\$	222	\$ 222	\$ .	\$		\$		\$	74
18	1		50' Class 2 Wood Pole	Wood mounting pole	\$	750								222
		1		The state of the s	<del>                                     </del>	/30	/ /30	\$ -	\$		\$		\$	750
			2001 AC-DC install, 4 Std Batteries, 50'	Install all equipment on pole including										
19	1	TK-1-2001 AD	Class 2 Wood Pole & Solar Panel	batteries.	e	5 605		ć	1.					w
		CZOVIMU	STD WARRANTY W/ FIELD SERVICE	partelles.	\$	5,685	\$ 5,685	\$ -	15	-	<b>—</b>	***************************************	\$	5,685
20	1	FS-W-FSS	,	14/					1.		١.			
21	1		COVERAGE RECR MOD VHF, NARROW	Warranty	\$	1,000	\$ 1,000	\$ -	\$	-	\$	1,000		-
22		10A3	<del>• • • • • • • • • • • • • • • • • • • </del>	High power radio option.	\$	390	\$ 390		\$		\$	-	\$	390
23	1	RP164	CABLE,25' PL259 MALE & ADPT	Antenna cable	\$	46	\$ 46		\$	-	\$	-	\$	46
23	+	HP104	ANT, GROUNDING PLANE	Antenna ground plane on pole	\$	98	\$ 98	\$ -	\$	-	\$	-	\$	98
			ANTENNA MOUNTING BRACKET FOR						1				1	
24	1	AMB-RP164	RP164 POLE OR WALL	VHF Antenna bracket on pole	\$	38	\$ 38	\$ -	\$	-	\$	-	\$	38
25			DIGITAL CONTROLLER UPGRADES W/SO	(	127									
26		DCFCTBD	CNTRL, DIGITAL, NO RADIO	Siren controller on pole	\$	<del></del>	\$ 33,390		\$	_	\$	-	\$	33,390
27	10	ES-RADIO	CDM750 40W, VHF - 288838A-02	Siren radio on pole	\$	615	\$ 6,150	\$ -	\$	-	\$	-	\$	6,150
28	10	PVS220W-48	SOLAR POWER OPTION, DC	Solar Panels on pole	\$	2,802	\$ 28,020	\$ -	\$	_	\$	-	\$	28,020
		ì											1	
29	10	AMB-P	ANTENNA MOUNTING BRACKET, POLE	VHF Antenna bracket on pole	\$	74	\$ 740	\$ -	\$		\$	-	\$	740
30	10	YAGI2	ANTENNA^150-174 Mhz^VHF B	VHF Antenna on pole	\$	222	\$ 2,220	\$ -	\$		\$	-	\$	2,220
				Replace old siren controllers with new										***************************************
			Remove existing DC Controllers, install	siren controllers and install solar panels					i				ĺ	
31	10	TK-I-DCCTR-2	new controls and install solar	on pole.	\$	2,782	\$ 27,820	\$ -	\$	-			\$	27,820
			STD WARRANTY EXTENDED 2 YEAR											· · · · · · · · · · · · · · · · · · ·
32	10	FS-W-EXTW	W/FIELD SERVICE AGREEMENT	Warranty	\$	1,000	\$ 10,000	\$ -	\$		\$	10,000	\$	-
33		A	DIGITAL CONTROLLER UPGRADES NO SC	LAR	17.5					Gêr V	40,7	<b>7</b> 7	Je y	
34	2	DCFCTBD	CNTRL, DIGITAL, NO RADIO	Siren controller on pole	\$	3,339	\$ 6,678	\$ -	\$	-	\$	*	\$	6,678
35	2	ES-RADIO	CDM750 40W, VHF - 288838A-02	Siren radio on pole	\$	615	\$ 1,230	\$ -	\$	-	\$		s	1,230
											<u> </u>	***************************************		
36	2	AMB-P	ANTENNA MOUNTING BRACKET, POLE	VHF Antenna bracket on pole	\$	74	\$ 148	\$ -	\$	-	s		s	148
37	2	YAGI2	ANTENNA^150-174 Mhz^VHF B	VHF Antenna on pole	\$	222	\$ 444	\$ -	Ś	-	Ś	_	\$	444
			Remove existing DC Controllers, install				***************************************		+		7		<u> </u>	
			new controls and upgrade electrical	Replace old siren controllers with new	ŀ								i	
38	2	TK-I-DCCTR-2		siren controllers.	\$	2,515	\$ 5,030	\$ -	\$		\$	5,030	4	-
			STD WARRANTY EXTENDED 2 YEAR		<u> </u>	,	-,	. <u></u>	<del>                                     </del>		<u> </u>	3,030	, <del>-</del> -	
39	2	FS-W-EXTW	W/FIELD SERVICE AGREEMENT	Warranty	\$	1,000	\$ 2,000	\$ -	\$		\$	2,000	٠	
40	76.		NARROWBAND/DUAL RADIO UPGRADES		Ť	2,550	2,000	<u>.</u>	Ť	-	000	2,000		
41	9	DCFCTBD	CNTRL, DIGITAL, NO RADIO	Siren controller on pole	\$	3,339	\$ 30,051	\$ 30,051	14	-	\$		\$	
42	9	ES-RADIO	CDM750 40W, VHF - 288838A-02	Siren radio on pole	\$	615	\$ 5,535	\$ 5,535	4	-	\$		\$	
					<u> </u>	313	÷ 2,233	y 2,253	+-				~	
43	9	AMB-P	ANTENNA MOUNTING BRACKET, POLE	VHF Antenna bracket on pole	\$	74	\$ 666	\$ 666			٠		i e	
44	9	YAGI2	ANTENNA^150-174 Mhz^VHF B	VHF Antenna on pole	\$	222					\$	-	<del>2</del>	<del></del>
			DCFC/UV Controller Only Install w/	yanaama on poie	,	444	\$ 1,998	\$ 1,998	13	-	\$	-	\$	-
45	9	TK-I-DCCTR-7	Batteries Zone 3	Installation including batteries.	\$	2 050	6 25.535	ė 30 cm:	1.		_ ا			
			STD WARRANTY EXTENDED 2 YEAR		- ا	2,959	\$ 26,631	\$ 26,631	\$	-	\$		\$	
46	9	FS-W-FXTWA	W/FIELD SERVICE AGREEMENT	Warranty		,	ė	¢	1.		,			
47		1004026	ACTIVATION POINTS (3 SITES)	Warranty	\$	1,000	\$ 9,000	\$ 9,000	\$		\$		\$	-
		· · · · · · · · · · · · · · · · · · ·	COMMANDER				e franciský čladbařa							
48	1	SFCD255	SOFTWARE, PRGMNG, 255 SITES	Control coffuges for since:	,			^	l.					
			Codespear Server Software for	Control software for sirens.	\$	5,130	\$ 5,130	\$ -	\$		\$		\$	5,130
49	1	CS-SERVER-I	Informer-IP	Control coffmus f 1 1 1	,		_		l.					
		CO-SCHVER-		Control software for internal alerts.	\$	300	\$ 300	\$ -	\$	-	\$	-	\$	300
50	1	ATTMINESER	AT&T NATURAL VOICE SOFTWARE LIC. FOR UP TO 255 UNITS	Construction of the Constr										
~~		AT HYBRE 233		Synthesized voice software license.	\$	315	\$ 315	\$ -	\$	-	\$	-	\$	315
٠,	1	TD ::	TELCO BASE, LANDLINE (ROC											
51	11	TB-LL	ACTIVATION POINT)	Remote extender for encoder.	\$	1,932	\$ 1,932	\$ -	\$	-	\$	-	\$	1,932
_			TELCO BASE REMOTE (ROC						]					
52	1	18-REMOTE	ACTIVATION POINT)	Remote extender for encoder.	\$	1,463	\$ 1,463	\$ -	\$	-	\$		\$	1,463
			DELL POWER EDGE R210 II RACK						I					
		1	MOUNT SERVER, 22" with						1					
						3.050	A		L					
		ES-PART	MONITOR, MOUSE, KEYPAD	Activation point computer.	\$	3,650	\$ 10,950	\$ -	\$	7,300	\$	- [	\$	3,650
			MONITOR, MOUSE, KEYPAD SMART UPS 120 VOLT	Activation point computer. Activation point power supply.	\$			\$ - \$ -	\$	7,300 1,752	\$	-		3,650
53 54 55													\$	

15   3   15-94-00   MT-3000 BASE 190W, Verification point retirem:   \$ 2,000   \$ 0,0	Item		Federal Part			Т		Т			T			l		T	Leased
3   MISCAMO   MICANDE CAMERANO   23   Activation point nicrophone   5   20   200   5   3   350   5     3   3   SAMPA   MISTAND ASSES (DW) W/P   Activation point nicrophone   5   70   200   5   3   350   5     3   3   SAMPA   MISTAND ASSES (DW) W/P   Activation point nicrophone   5   70   200   5   5   3   3   3     3   SAMPA   MISTAND ASSES (DW) W/P   Activation point nicrophone   5   20   3   66   5   5   444   5     4   SAMPA   MISTAND ASSES (DW) SAMPA   Activation point nicrophone   5   20   3   66   5   5   444   5     5   SAMPA   MISTAND ASSES (DR) SAMPA   Activation point nicrophone   5   20   3   60   5   5   60     5   SAMPA   MISTAND ASSES (DR) SAMPA   Activation point nicrophone   5   20   5   5   5   60     5   SAMPA   MISTAND ASSES (CAMERANIC)   Activation point nicrophone   5   20   5   5   5   60     6   SAMPA   MISTAND ASSES (CAMERANIC)   Activation point nicrophone   5   20   5   5   5   5   60     6   SAMPA   MISTAND ASSES (CAMERANIC)   Activation point nicrophone   5   20   5   5   5   5   5   5     6   SAMPA   MISTAND ASSES (CAMERANIC)   Activation point nicrophone   5   20   5   5   5   5   5   5     7   SAMPAN   ACTIVATION   Activation point nicrophone   5   20   5   5   5   5   5   5     8   SAMPAN   ACTIVATION   Activation point nicrophone   5   20   5   5   5   5   5     8   SAMPAN   ACTIVATION   Activation point nicrophone   5   3   3   3   3   3   3   3     8   SAMPAN   ACTIVATION   Activation point nicrophone   5   3   3   3   3   3   3   3   3   3					Simple Description	U	nit Price		Total	DIA		\$	911	(	Cash		Amount
38   3   3-9-000   APPENDEN AND STATE (DIV.) VIEW   Activation point rations   3   6,700   5   5   1,840   5   5   5   5   5   5   5   5   5		~~~~				\$	1,269	\$	3,807	\$	-	\$	2,538	\$		\$	1,269
30   30   Model					Activation point microphone.		80	\$	240	\$	-	\$	160	\$	-	\$	80
AMB-P   ANTERNA MOLUMINOS BANCET, POR   Persiste   5   7   5   222   5   5   148   5			· · · · · · · · · · · · · · · · · · ·				6,700	\$	20,100	\$	-	\$	13,400	\$	-	\$	6,700
50   3   MISE   ANTENNA MOUNTRO BRACET, POLE   Decide	59	3	OMNI-4	ANTENNA, 152-156MHZ VHF		\$	222	\$	666	\$	-	\$	444	\$	-	\$	22:
6.   Septime		_			_											Ι	
											-		148	\$	-	\$	74
System Optimization & Department on Apparent of the Company of t			<del></del>			_		_			-		-		-	\$	1,500
63   3   PK-SPLOP   Administration Chainman   Astivation open steps and training   \$   2,888   \$   8,644   \$   \$   \$   \$   \$   \$   \$   \$   \$	54	0	ES-PART		Antenna cable connectors.	\$	22	\$	132	\$		\$	88	\$	-	\$	44
6.6   3   NC-INCOOR   Concent invalid CUSTOM   Chrowder invalid Custom   Chrowder invalid Custom   Chrowder invalid Custom   Chrowder   Chr			****								-						
Section   Sect		***************************************				-			******		-		5,776	\$	-	\$	2,888
Service   Serv	***************************************					<del></del>	1,000	_	3,000		-		2,000	\$	1,000	\$	
Section   Sect	- 65	3	TK-I-BASANT	• · · · · · · · · · · · · · · · · · · ·	Activation point antenna install.	\$	2,490	\$	7,470	\$		\$	4,980	\$		\$	2,490
		_															
88   32   -9F	- Processor	3	IFS-W-EXTWA		Warranty	\$	1,000	\$	3,000	\$	-	\$	-	\$	3,000	\$	
25   SMC-2-36   DIRAY-SEROLUNG 27-09   Codesport Profiler Liberary   Codesport Profiler Libera			l							3.65						(3.5)	
2   STUDE     Park IV   Clear   Lucrose   Lu			<del></del>		The state of the s			-	10,176	\$	-	\$		\$	-	\$	10,176
Tell	69	32	I-SMD2-36			\$	507	\$	16,224	\$	- 1	\$	-	\$	-	\$	16,224
1   32   TK-10-CARN-Install & Setup (antenna   TK-10-CARN-Install ent included), 10 inter minimum (included), 10 inter minimum (in	70			,	1						$\neg$					Г	
71   32   TK-ID-TARNIM install not included], 10 site minimum Install internal alerting device.	70	32	CS-RTU-CLI	per RTU)	device.	\$	39	\$	1,248	\$	- 1	\$	-	\$	-	\$	1,248
1						İ										П	
22   32   TK-ID-CUSTM Intail scrolling message boards   Tattal Internal elect diplay   S   150   \$   4,800   \$   \$   \$   \$   \$   \$   \$   \$   \$						ļ					- 1						
13					The state of the s	+-						\$	-			\$	13,184
Service   Serv		32	rk-IO-CUSTII		Install internal alert display.	\$	150	\$	4,800	\$		\$	-			\$	4,800
SERVICES   2001-130 Siren removal/re-install from   Remove existing siren from Firestation   10 tower and re-install siren on S0"   7,431   5   7,431   5   5   5			TV IO FOUR		and the residence of the second second										. 15.74		1.00
2001-130 Siren removal/re-install from   Firen Station   10 one with 50 class   10 tower and re-install siren on 50 class   10 tower and re-install sire	***************************************	55	I K-IU-EQUIR		Removal of old siren equipment.	\$	1,350	\$	74,250	\$	_ ]	\$	-	\$	74,250		
TRAINCRUSTIT WOOD pole   Die	75				53 x 3 x	100						1.7					
The content of the								1			Т						
Select two preliminary sites for the Circ's approval: No more than two trips   Select two preliminary sites for the Circ's approval: No more than two trips   Select two preliminary sites for the Circ's approval: No more than two trips   Select two preliminary sites for the Circ's approval: No more than two trips   Select two preliminary sites for the Circ's approval: No more than two trips   Select two preliminary sites for the Circ's approval: No was siren site selections.   Select two preliminary sites for the Circ's approval: No was siren site selections.   Select two preliminary sites for the Circ's approval: No was siren site selections.   Select two preliminary sites for the Circ's approval: No was siren site selections.   Select two preliminary sites for the Circ's approval: No was siren site selections.   Select two preliminary sites for the Circ's approval: No was siren site selections.   Select two preliminary sites for the Circ's approval: No was siren site selections.   Select two preliminary sites for the Circ's approval: No was siren site selections.   Select two preliminary sites for the Circ's approval: No was siren site selections.   Select two preliminary sites for the Circ's approval: No was siren site selections.   Select two preliminary sites for the Circ's approval: No was siren site selections.   Select two preliminary sites for the Circ was siren sites selections.   Select two preliminary sites for	7.		THE IS SHEET!		li de la companya de la companya de la companya de la companya de la companya de la companya de la companya de						- 1						
City's approval No more than two trips		1	TK-10-CUSTI	wood pole	pole.	\$	7,431	\$	7,431	\$	:	\$	-			\$	7,431
City's approval No more than two trips			İ														
27   56   TK-IO-CUSTIND any one site before approval   New siren site selections.   5   250   5   14,000   5   5   5   5   14,000   5   5   5   5   5   7   7   7   7   7			1								ļ		- 1				
1   SE-DOC   DOCUMENTATION			Tri la susmi								- 1					1	
99 80 TKS-PROLIMOProject Management					New siren site selections.		******	<u> </u>	14,000	\$		\$		\$	14,000	\$	+
30   77   TK-S-SITEOP   Site Optimization			<del></del>				2,500			\$		\$	- ]	\$	2,500	\$	
State						-	T-1-1-1-1	-	16,000	\$		\$	-			\$	16,000
1	80	- //	TK-S-SITEOP	Site Optimization		\$	125	\$	9,625	\$	-	\$	-	\$	9,625	\$	-
1																	
Section   Sect			THUS COTOS						į							1	
6   148A147   F6 Fuse 200 amp	***********	1				\$	1,499	\$	1,499	\$		\$		\$	1,499	\$	-
6   54028073   Chrgr. Assy. 13V   S   150.00   S   900   S   S   S   S	84		-	,								100					
20 148154   F1,F2,F4,F7-F10, & F12 fuse AC in   10AMP   \$ 1.50 \$ 30 \$ . \$ . \$ . \$ . \$ . \$ . \$ . \$ . \$ . \$					- Allendar - Allendar			+		<del> </del>			- 1	\$		\$	252.00
20   148154   10AMP			84028073			\$	150.00	\$	900	\$		\$	-	\$	-	\$	900.00
10   148A107   F3 fuse, radio, 15 amp		20				ł					į						
10   148156   F5 fuse, 20 amp			<del></del>					+-					-	\$	_	\$	30.00
10   148A139   F11 fuse, 5 amp			<del></del>				-		10	\$	$\Box$	\$		\$	-	\$	10.00
10   148A142-01   F1 board fuse, automotive, 1 amp						_	4.00	\$	40	\$		\$	-	\$	-	\$	40.00
10   148A135   F2   board fuse, 1/2amp     5   1.00   5   10   5   5   5   5   5     10   148A142-09   F3   board fuse, automotive 1 amp     5   3.75   5   38   5   5   5     10   148A142-10   F4   board fuse, automotive, 2 amp     5   2.50   5   25   5   5   5   5     6   2001062   PCBA, chopper current sensor     5   134.00   5   804   5   5   5   5     6   2001062   PCBA, chopper current sensor     5   134.00   5   804   5   5   5   5     6   2005221   PCBA, rotation current sensor     5   100.00   5   600   5   5   5     7   2   288891-03   Antenna Lightnign protection N-type     5   140.00   5   280   5   5   5     8   2   1751224     Cable, antenna     5   42.75   5   86   5   5   5     9   2   2005023   PCBA, FC two-way     5   1,175.00   5   2,350   5   5   5     1   2   2005023   PCBA, FC two-way     5   1,175.00   5   2,350   5   5   5     1   2   2   288838-02   40W 136-174Nhz     5   950.00   5   1,900   5   5   5     1   3   402006   Chopper motor, 48 vdc siren     5   1,115.00   5   1,115   5   5   5     1   3   3   402002   Ring collector (outer)     5   5   5   5     1   3   402002   Ring collector (outer)     5   5   5   5   5     3   1   5   5   5   5   5   5     3   1   5   5   5   5   5   5     3   1   5   5   5   5   5   5     3   1   5   5   5   5   5   5     4   5   5   5   5   5   5     5   5   5								\$	10	\$		\$	-	\$	-	\$	10.00
10   148A142-09   F3 board fuse, automotive 1 amp					***************************************							\$	-	\$		\$	45.00
10 148A142-10 F4 board fuse, automotive, 2 amp								<del>-</del>	~	\$ .		\$		\$		\$	10.00
6 Q-DC conver {2005173-02 Pwr. Converter, 48:12vdc								<del></del>				\$	-	\$	-	\$	37.50
6 2001062 PCBA, chopper current sensor \$ 134.00 \$ 804 \$ .		10	148A142-10	F4 board fuse, automotive, 2 amp		\$	2.50	\$	25	\$ .		\$	-	\$	-	\$	25.00
6 2001062 PCBA, chopper current sensor \$ 134.00 \$ 804 \$ .		,	0.00	(2005172 02 5 5							Т						
6       2005221       PCBA, rotation current sensor       \$ 100.00       \$ 600       \$ - \$ - \$ 5 -									1,980	\$ -		\$	-	\$	-	\$	1,980.00
2 288691-03 Antenna Lightnign protection N-type		·····						_			J	\$	-	\$	•	\$	804.00
2 175902-10 Cable, antenna			2005221	PUBA, rotation current sensor		\$	100.00	\$	600	\$ -	$oldsymbol{oldsymbol{oldsymbol{oldsymbol{\Box}}}$	\$	-	\$	-	\$	600.00
2 175902-10 Cable, antenna	- 1	_	20000								T						
2   175902-10   Cable, antenna			· · · · · · · · · · · · · · · · · · ·						280	\$ .	_	\$		\$	-	\$	280.00
2   1751224   Cable radio to FC			<del></del>				42.75	\$	86	\$ .		\$			-	\$	85.50
2   2005023   PCBA, FC two-way							86.00	\$	172	\$ -					-	\$	172.00
Two-way VHF Motorola CDM750 radio   2 288838A-02   40W 136-174Nhz   5 950.00   5 1,900   5 -   5 -   5 -   5   -   1 8402144   Gear assembly   5 537.00   5 537   5 -   5 -   5 -   5 -   5   -   5		2	2005023			\$	1,175.00	\$	2,350	\$ -		\$			-	\$	2,350.00
1       8402144       Gear assembly       \$ 537.00 \$ 537.5 \$ . \$ . \$ . \$ . \$ . \$ . \$ . \$ . \$ . \$											1			***************************************			
1       8402144       Gear assembly       \$ 537.00       \$ 537.5       \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -						\$	950.00	\$	1,900	\$ -		\$	-	\$	-	\$	1,900.00
1       8402006       Chopper motor, 48 vdc siren       \$ 1,115.00       \$ 1,115.00       \$ 1,115.5       \$ 5.8.0						\$	537.00	\$				_			-	\$	537.00
1   3402019   Ring collector (outer)						\$	1,115.00	\$		\$ -					-	\$	1,115.00
1   8402C020   Ring collector (middle)								\$							-	\$	58.00
R81-10-01 0.1 oz grease, copper     E5-PART     Conductive   \$ 15.00   \$ 15   \$ - \$   \$		1	8402C020			\$	59.00	\$			_				-	\$	59.00
1       8402C024       Assembly, brush holder       \$ 15.00 \$ 15.5 \$ . \$ . \$ . \$ . \$ . \$ . \$ . \$ . \$ .				,							7					·	
2402C024   Assembly, brush holder   \$ 405.00 \$ 405 \$ - \$ - \$ - \$ - \$ - \$		~~~				\$	15.00	\$	15	\$ -		Ś	.	\$	_	\$	15.00
83   1			8402C024			_					+	Ś	<del></del>		-	Ś	405.00
S4   1   PERFORMANCE BOND   \$ 6,205   \$ - 5 - 5   \$ - 5   \$ 6,205   \$ - 5   \$ - 5   \$ 6,205   \$ - 5   \$ - 5   \$ - 5   \$ 6,205   \$ - 5   \$ -		*****													(1,000)	<u> </u>	-703,00
SS   1   ES-FREIGHT   SHIPPING FEES   \$ 52,577   \$ 52,577   \$ - \$ - \$ - \$ - \$ - \$   \$ - \$   \$   \$		1		PERFORMANCE BOND								-			6,205	4	
86         MSCELLATEOUS (not included in contract)           1         Closing Costs         \$ 500 \$ 500 \$ - \$ - \$ 50		1	ES-FREIGHT					_							0,203	\$	52,577
1 Closing Costs \$ 500 \$ 500 \$ - \$ - \$ 50	86		KEELENS	MISCELLANEOUS (not included in contrac		13			,-,-	1440800		411	13.5	<del>*</del>			//دید
1 CRIME TOTAL		1		Closing Costs		\$	500	\$	500	\$ -	1	\$		\$	500	4	
GRAND TOTAL \$ 1,596,595 \$ 73,881 \$ 38,742 \$ 497,20				GRAND TOTAL		<u> </u>				·					97,284		986,688



# CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:
Aon Risk Services Central, Inc. Chicago IL Office	PHONE (A/C. No. Ext): (866) 283-7122 FAX (A/C. No.): (847) 953-5390
200 East Randolph Chicago IL 60601 USA	E-MAIL ADDRESS:
	INSURER(S) AFFORDING COVERAGE NAIC #
INSURED	INSURER A: National Union Fire Ins Co of Pittsburgh 19445
Federal Signal Corporation 2645 Federal Signal Drive	INSURER B: New Hampshire Ins Co 23841
University Park IL 60466 USA	INSURER C: Insurance Company of the State of PA 19429
	INSURER D:
	INSURER E:
	INSURER F:
	0.10.100

COVERAGES CERTIFICATE NUMBER: 570045013493 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

	CLUSIONS AND CONDITIONS OF SUCH						Lilling o	hown are as requested
NSR LTR	TYPE OF INSURANCE	ADDL	SUBR	POLICY NUMBER	(MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMI	rs
A	GENERAL LIABILITY			GL2704982	11/01/2011	11/01/2012	EACH OCCURRENCE	\$1,000,00
A	X COMMERCIAL GENERAL LIABILITY			GL Premise GL2704983	11/01/2011	11/01/2012	DAMAGE TO RENTED PREMISES (Ea occurrence)	\$1,000,00
	CLAIMS-MADE X OCCUR			GL Products			MED EXP (Any one person)	\$10,00
							PERSONAL & ADV INJURY	\$1,000,00
							GENERAL AGGREGATE	\$2,000,00
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	\$6,000,00
	X POLICY PRO- JECT LOC						Prod-Comp/Ops - Ea Occur	\$3,000,000
	AUTOMOBILE LIABILITY			CA4309665 AOS	11/01/2011	11/01/2012	COMBINED SINGLE LIMIT (Ea accident)	\$1,000,000
	X ANY AUTO			CA4309666	11/01/2011	11/01/2012	BODILY INJURY ( Per person)	
	ALL OWNED SCHEDULED			MA			BODILY INJURY (Per accident)	
1	AUTOS AUTOS HIRED AUTOS NON-OWNED AUTOS			CA4309667 VA	11/01/2011	11/01/2012	PROPERTY DAMAGE (Per accident)	
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE	
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	
	DED RETENTION							
В	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			WC015884340 AOS	11/01/2011	11/01/2012	X WC STATU- OTH-	
. 1	ANY PROPRIETOR / PARTNER / EXECUTIVE	N/A		WC015884345	11/01/2011	11/01/2012	E.L. EACH ACCIDENT	\$500,000
	(Mandatory In NH)		- 1	ND, WA,WI, WY			E.L. DISEASE-EA EMPLOYEE	\$500,000
	If yes, describe under DESCRIPTION OF OPERATIONS below			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			E.L. DISEASE-POLICY LIMIT	\$500,000
		$\neg \neg$						
- 1	1	- 1						
- 1			- 1				1	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

RE: Bidder's Proposal No. 6784, Emergency Public Warning System. City and County of Denver is included as Additional Insured as required by written contract, but limited to the operations of the Insured under said contract, per the applicable endorsement with respect to the General Liability and Automobile Liability policies. A Waiver of Subrogation is granted in favor of Certificate Holder as required by written contract but limited to the operations of the Insured under said contract, with respect to the General Liability, Automobile Liability and Workers' Compensation policies.

CER	TIF	CAT	E	HO	LDER

#### CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS

AUTHORIZED REPRESENTATIVE

City and County of Denver Dept. of General Services Purchasing Division 201 W. Colfax Ave., Dept. 304 Denver CO 80202 USA Aon Risk Services Contral Inc

Attachment to ACORD Certificate for Federal Signal Corporation

The terms, conditions and provisions noted below are hereby attached to the captioned certificate as additional description of the coverage afforded by the insurer(s). This attachment does not contain all terms, conditions, coverages or exclusions contained in the policy.

INS	

Federal Signal Corporation 2645 Federal Signal Drive University Park IL 60466 USA

INSURER	
INSURER	
INSURER	
INSURER	
INSURER	

#### ADDITIONAL POLICIES

If a policy below does not include limit information, refer to the corresponding policy on the ACORD certificate form for policy limits.

	certificate form for policy limits.							
INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER/ POLICY DESCRIPTION	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	WORKERS COMPENSATION							
С		N/A		WC015884344 MA	11/01/2011	11/01/2012		
С		N/A		WC015884343 OR	11/01/2011	11/01/2012		
В		N/A		WC015884342 FL	11/01/2011	11/01/2012		
В		N/A		WC015884341 CA	11/01/2011	11/01/2012		

Certificate No:

570045013493

#### **Career Service Authority**



201 W. Colfax, Department 412
Denver, CO 80202
p: 720.913.5751
f: 720.913.5720
www.denvergov.org/csa



TO: All Users of the City of Denver Prevailing Wage Schedules

FROM: Seth Duhon-Thornton, Staff Human Resources Professional

DATE: Friday March 2, 2012

SUBJECT: Latest Change to Prevailing Wage Schedules

Please be advised, prevailing wage rates for some building, heavy, and highway construction trades have not been updated by the United States Department of Labor (DOL) since March 1, 2002. The Career Service Authority Board, in their meeting held on April 21, 2011, approved the use of the attached supplemental wage rates until prevailing wage rates for these classifications of work are again published by the United States Department of Labor in accordance with the Davis-Bacon Act. The rates will be provided as a supplemental to the Davis-Bacon Building rates issued by CSA.

The attached Prevailing Wage Schedule is effective as of **Friday March 2**, **2012** and applies to the City and County of Denver for **BUILDING CONSTRUCTION PROJECTS** (does not include residential construction consisting of single family homes and apartments up to and including 4 stories) in accordance with the Denver Revised Municipal Code, Section 20-76(c).

General Wage Decision No. CO120004 Superseded General Decision No. CO20100004 Modification No. 3 Publication Date: 02-24-2012 (6 pages)

Unless otherwise specified in this document, apprentices shall be permitted only if they are employed pursuant to, and individually registered in, a bona fide apprenticeship program registered with the U.S. Department of Labor (DOL). The employer and the individual apprentice must be registered in a program, which has received prior approval, by the DOL. Any employer, who employs an apprentice and is found to be in violation of this provision, shall be required to pay said apprentice the full journeyman scale.

For questions call (720) 913-5009

Attachments as listed above.



General Decision Number: CO120004 02/24/2012 CO4

Superseded General Decision Number: CO20100004

State: Colorado

Construction Type: Building

County: Denver County in Colorado.

BUILDING CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments

up to and including 4 stories)

Modification	Number	Publication	Date
0		01/06/2012	
1		01/13/2012	
2		01/27/2012	
3		02/24/2012	

ASBE0028-001 07/01/2010

	Rates	Fringes
Asbestos Workers/Insulator (Includes application of all insulating materials, protective coverings, coatings and finishings to all types of mechanical systems)	\$ 30.23	11.53
BRC00007-001 01/01/2011		

	Rates	Fringes
BRICKLAYER	\$ 22.13	9.89
BRC00007-005 06/01/2011		
	Rates	Fringes
TILE SETTER	\$ 25.15	9.18

-----

CARP0001-004 05/01/2009

Rates Fringes

Carpenters:

Acoustical, Drywall Hanging/Framing and Metal Stud, Form Building/Setting.\$ 26.60

Stud, Form Buriaring/Secting. 7 20.00

CARP2834-001 05/01/2009

Rates Fringes

MILLWRIGHT	.\$ 27.60	10.65
ELEC0068-002 06/01/2011		
	Rates	Fringes
ELECTRICIAN  (Includes Low Voltage  Wiring and Installation of  Fire alarms, Security  Systems, Telephones,  Computers and Temperature  Controls)	.\$ 31.60	12.52
ELEV0025-002 01/01/2012		
	Rates	Fringes
Elevator Constructor	.\$ 39.34	23.535
FOOTNOTE: a. Employer contributes 8% of ba years' service and 6% basic ho years' service as Vacation Pay	urly rate for 6	
PAID HOLIDAYS: New Year's Day Day; Labor Day; Veterans Day; after Thanksgiving Day; and Ch	Thanksgiving Day	
ENGI0009-003 05/01/2011		
	Rates	Fringes
Power equipment operator - crane  141 tons and over	.\$ 23.82 .\$ 23.97	9.22 9.22 9.22 9.22 9.22
IRON0024-001 07/01/2011		
	Rates	Fringes
IRONWORKER, STRUCTURAL		10.91
LAB00720-003 05/01/2009		
	Rates	Fringes
Laborers: Concrete/Mason Tenders	.\$ 16.52	6.84
PAIN0079-002 08/01/2010	<b>_</b>	
	Rates	Fringes

Drywall Finisher/Taper		
Hand Tool		6.11 6.11
Painters:		6.11
PAPERHANGER		6.11
* PAIN0930-001 01/01/2012		
	5 .	- ·
	Rates	Fringes
GLAZIER		7.28
PLAS0577-001 05/01/2010		
	Rates	Fringes
Cement Mason/Concrete Finisher		10.10
Mason/Concrete Finisher		10.10
PLUM0003-001 01/01/2012		
	Rates	Fringes
PLUMBER		
(Excluding HVAC work)	\$ 32.68	11.44
PLUM0208-001 01/01/2012		
	Rates	Fringes
D.L. DE ELEMENT		2
PIPEFITTER (Including HVAC pipe)	\$ 32.60	11.52
SFC00669-001 04/01/2011		
01000000 001 01, 01, 1011		
	Rates	Fringes
SPRINKLER FITTER	\$ 32.76	16.90
SHEE0009-001 01/01/2011		
	Rates	Fringes
		٠- د
Sheet metal worker (Includes HVAC duct and		
installation of HVAC		
systems)		10.98
SUCO2001-011 12/20/2001		
	Rates	Fringes
		J
Carpenters: All Other Work	\$ 16.12	2.84
Ironworkers: Reinforcing	\$ 18.49	3.87

#### Laborers:

Brick Finisher/Tender.....\$ 12.78 1.41 Common......\$ 10.62 2.09

Power equipment operators:

Mechanic.....\$ 18.48

\_\_\_\_\_

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

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

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

\_\_\_\_\_

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

#### Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rate.

#### Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007

5/13/2010. SU indicates the rates are not union rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

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

#### WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

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

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

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

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

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

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

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

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

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

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

END OF GENERAL DECISION

# <u>Career Service Authority</u> <u>Supplemental to the Davis-Bacon Building Construction Project rates</u> (Specific to the Denver projects) Supp #100, Date: 03-02-2012

<u>Classification</u>		<u>Base</u>	<u>Fringe</u>
Boilermakers		\$30.97	\$21.45
Power Equipment Operators (Concrete Mixers):			
	Less than 1 yd	\$23.67	\$10.67
	1 yd and over	\$23.82	\$10.68
	Drillers	\$23.97	\$10.70
	Loaders over 6 cu yd	\$23.82	\$10.68
	Oilers	\$22.97	\$10.70
Soft Floor Layers		\$16.70	\$9.81
Ironworkers (Ornamental)		\$24.80	\$10.03
Plasters		\$24.60	\$12.11
Plaster Tenders		\$10.79	-
Laborers: Concrete Saw		\$13.89	-
Power Equipment Operators:			
	Backhoe	\$23.67	\$10.67
	Loader up to and incl 6 cu yd	\$23.67	\$10.67
	Motor Grader	\$23.97	\$10.70
	Roller	\$23.67	\$10.67
Truck Drivers (Dump Trucks):			
	6 to 14 cu yds	\$19.14	\$10.07
	15 to 29 cu yds	\$19.48	\$10.11
	Flatbed	\$19.14	\$10.07
	Semi	\$19.48	\$10.11

- To determine the Tile Setters-Marble Mason-Terrazzo mechanic rates—Use Davis Bacon-Building rates adopted by the Career Service Board.
- To determine the Tile Finisher-Floor Grinder-Base Grinder—Use current Career Service Prevailing Wage Schedules.
- Caulkers—Receive rate prescribed for craft performing operation to which caulking is incidental .i.e. glazier, painter, brick layer, cement mason.
- Use the "Carpenters—All Other Work" rates published by the federal Davis Bacon rates for batt insulation, pre-stress concrete and tilt up concrete walls, Roofers (including foundation waterproofing).
- Use the "Laborer—Common", rates published by the federal Davis Bacon rates for General Housekeeping, Final Cleanup and Fence Installer.

#### **EXHIBIT D**

#### TITLE AND ACCEPTANCE OF EQUIPMENT AND MATERIALS

Title to materials and equipment furnished and sold as part of this Agreement shall pass to the City, or the Financer, upon delivery to the City facilities as set out in Exhibit A - Scope of Work.

The authorized City representative shall have a period of not more than ten (10) business days to review and identify any discrepancies between inventories received and the pro-forma invoice/packing list accompanying the shipment. After this period, the shipment shall be deemed accepted by the City and the packing list shall be signed by the authorized representative and a signed copy returned to the Contractor.

For non-financed purchases, the City shall make payments in accordance with Net 35 day terms as established within this Agreement

The City agrees to accept the central control point(s) and individual siren installations as completed upon satisfactory review of agreed upon acceptance testing (as stated in Exhibit A) of each individual siren location, including confirmation of activation and status monitoring from the central control point(s). Contractor shall submit supplemental acceptance test plans for the central control point(s), individual siren installations, and overall system within thirty (30) business days of the contract execution, the terms of which shall be mutually agreed to by the parties and incorporated herein without a need for amendment of this Agreement. The City will approve individual siren installations on a weekly basis upon submission of test results by the Contractor, provided that the installations successfully meet the stated criteria for acceptance. For non-financed purchases, the City agrees to pay, in accordance with payment terms as stated herein, for equipment and materials upon receipt and individual siren installations upon approval of completed site testing.

The Contractor shall submit individual siren installation testing results for approval and acceptance by the City until completion of the entire siren system. The City agrees to review and approve individual siren installations upon submittal of successful test documentation. Upon Substantial Completion of the system, Contractor shall schedule a system acceptance test to be witnessed by the authorized personnel of the City. Upon satisfactory completion of the agreed test plan(s), the City shall accept the system as complete and authorize the payment under the financed Agreement.

**Substantial Completion** shall mean the work has progressed to the point where the City can beneficially utilize the System for the purpose for which is intended and the work complies in all substantial respects with the Agreement, the Scope of Work, the Preliminary Test Plan and the supplemental test plan agreed to by the Parties. Excluded from Substantial Completion shall be any work for which the City has not been able to acquire site access or other permission, or designate alternative locations to install sirens after five months from the final execution of the Agreement. Where the

Contractor is prevented from installing any sirens for the foregoing reasons, the Contractor shall reimburse the City from the final financed payment for work or material not completed or delivered.

# SYSTEM ACCEPTANCE TEST OF THE WARNING SIREN SYSTEM FOR THE CITY OF DENVER, CO

August 7-8, 2012

DESTRUCTION NOTICE - DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

#### 1.1 Description

The City of Denver's Siren Warning System is expected to be comprised of the following sub-systems:

- 1. Fifty (54) new 2001-130 sirens and twenty-one (21) existing sirens
- 2. Three (3) new base stations (including radio, encoder, antenna, computer) and one (1) upgraded base station at Denver International Airport (DIA)
- 3. RF conventional network
- 4. SFCDWARE (Commander) siren software and Codespear Server software

Acceptance testing is sub-divided into three test categories:

- 1. A Functional Acceptance Test to demonstrate the functionality of all field equipment and compliance with the requirements
- 2. Screen shots from Commander showing that each siren site passes all tests.
- 3. Completed Installation Check Lists (ICLs) that show siren test results following installation.

#### 1.2 Estimated Test Duration

This test will take no more than two days to complete.

### 1.3 Setup

A trained Federal Signal technician will conduct and the City of Denver will observe testing from each of the system's three two-way base station computers, so each of the base stations can demonstrate its communication and functionality. The DIA one-way base station will also be tested to demonstrate communication and functionality with its nine sirens. All testing will take no more than one day to complete. If the customer desires additional testing, an additional fee will apply.

## 1.4 System Overview

The City of Denver siren warning system will consist of fifty-four (54) newly installed and twenty-one (21) existing siren sites. Each siren will be controlled from one of three base station computers (using the Federal Commander Digital System software) via radio frequency and a DCFCTBD siren controller cabinet at each siren site. The nine (9) existing sirens at Denver International Airport (DIA) will have one-way control from a base station at DIA and two-way control from the other three base stations.

# 1.5 Functional Acceptance Test Steps

NOTE: Test steps assume the use of SFCDWARE software at a base station computer

Table 1 - City of Denver Siren Test Instructions

		Siren Test			
	Subtest 1:	Siren Functional Test – Siren Sites	Expected Response	Actual Response	P/F
1.	Polling	Open the SFCDWARE screen, select RTU from the screen	All sirens in the system are visible		
2.	Polling	- Highlight and select a siren (RTU) and click "Poll" - In the Status Details screen, verify the component status	The status of each component indicates "Pass" except Pressure, Local Act, and System Fail		
3.	Quiet test	- Go to SFCDWARE and open the same siren used in step 2 - Open the Status Detail window for this siren - Activate a Quiet Test function by clicking "QUIET TEST" - Verify status	All sensors' status show "Pass"		
4.	Print Screen	Print a screen shot or save a copy of the screen that shows siren passed all tests	Production of proof that siren passed all tests		
5.		Repeat steps 2-4 for each siren	Proof that all sirens passed all tests		
	Subtest 2:	Siren Functional Test – RF Network			
	Note →	Complete Table 2 for each Siren location		See Table 2	

Table 2 - City of Denver Siren System Test Instructions

City of Denver Siren System Test Instructions					
Step	Notes	Operator Action	Expected Response	Actual Response	P/F
	Subtest 2:	Siren Functional Test – SFCDWARE			
1.		Hit the login button	Verify the user is logged out and the system is locked		
2.		Enter a valid Operator username and password	Verify user is logged in and can access the system		
3.		Master Reset all sirens from the RTU screen	Reset is sent		
4.		Wait 30 seconds. Poll all sirens from RTU screen.	All sirens report without any COM failures.		
5.		Monitor Status detail for selected Site	Verify Status is RESET.	Site 1 Site 2 Site 3	



Table 2 – City of Denver Siren System Test Instructions (cont.)

City of Denver Siren System Test Instructions					
Step	Notes	Operator Action	Expected Response	Actual Response	P/F
	Subtest 2:	Siren Functional Test – SFCDWARE			
6.		Quiet Test all sirens from the RTU screen.	Quiet Test is sent.		
7.		Wait 30 seconds and Poll selected Site	Poll is received.	Site 1 Site 2 Site 3	
8.		Monitor status detail for selected Site	Verify Quiet Test was run and all sensors PASS.	Site 1 Site 2 Site 3	
9.		Run Weekly Test All from the Activation Hotkey screen	Verify 30-second Steady tone sounds.	Site 1 Site 2 Site 3	
10.		View the System Log	Verify all transactions above are logged.	Site 1 Site 2 Site 3	
11.		Run a system log report for selected Site with the current date	Verify only Site data is shown with all transactions above.	Site 1 Site 2 Site 3	
12.		Repeat steps 3-11 for Sites 2 & 3			

Table 3 – City of Denver Siren System Base Station Test Steps

		BASE STATION Test Instructions			
Step	Notes	Operator Action	Expected Response	Actual Response	P/F
1.		Using the mouse at the Central Control Unit (CCU), click on the menus to verify point and click operation.	Expect to see that the CCU & SFCDWARE operate with a mouse using point and click operations.		
2		- At the CCU, activate a tone function on the individual siren.  1. Select activate button 2. Select manual activation button 3. Select individual site and add the site. 4. Select the steady function 5. Press send to activate - At the CCU, send the cancel command on the individual siren. 1. Select activate button 2. Select manual activation button 3. Select individual site and add the site. 4. Select cancel - At the CCU, activate a tone function on a zone. 1. Select activate button 2. Select manual activation button 3. Select zone and add the desired zone.	Expect to hear the tone function activation on the individual siren selected, zone when selected and all sirens when selected.	Site 1 Site 2 Site 3	



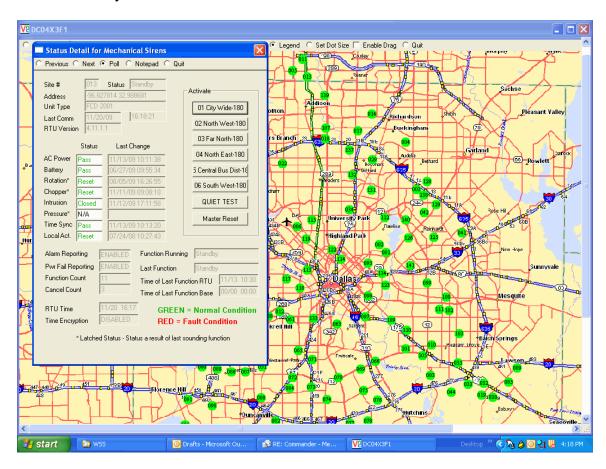
	BASE STATION Test Instructions				
Step	Notes	Operator Action	Expected Response	Actual Response	P/F
		4. Select the steady function 5. Press send to activate - At the CCU, send the cancel command on the zone.  1. Select activate button 2. Select manual activation button 3. Select the desired zone and add the zone. 4. Select cancel - At the CCU, activate the tone function on all sirens.			
3.		Update Zones by adding or removing sites from the zone.  1. With the mouse, click on the system setup button 2. click on the zone button 3. Select the desired zone to edit 4. add or remove sites 5. click quit and then save to exit system setup - Send the new program to the sirens changed in the zones.	Expect to see that the zones were changed with the new sirens.		
4.		- Activate a zone using the manual activation screen at the CCU.     1. select activate button     2. select manual activation button     3. select zone and add the desired zone.     4. select the steady function press send to activate	Expect to see that only the specified zone activates.		
5.		- Using the mouse, click on the report button - Select the System Log button - enter desired report parameters - click on display report	Expect to see that all siren system-related data is saved to the CCU hard drive and can be retrieved.  Expect to have report generated.		
6.		- In the SFCD software click on the Map button Click on siren site within the map to see status	Expect to see the customer-provided map displayed with the siren sites and status.		

Table 3 - City of Denver Siren System Base Station Test Steps (cont.)

	BASE STATION Test Instructions				
Step	Notes	Operator Action	Expected Response	Actual Response	P/F
7.		- Activate the Silent Test Function on an individual siren.  1. select activate button 2. select manual activation button 3. select individual site and add the site. 4. select the silent test function 5. press send to activate - Wait 30 seconds and then poll the siren to obtain the latest data.  1. Select the RTU button 2. highlight the desired RTU 3. select poll selected button 4. double click on the polled RTU to access the status monitoring screen 5. view sensor status and last function performed	Expect to not hear the silent test function. Expect to see that the last function performed is the Silent Test and that all status monitoring sensors pass.	Site 1 Site 2 Site 3	
8.		- Poll all sirens	All sirens will show they received the command		
9.		- Open Status Detail screen for Site 1	See that Site 1 passes all tests		
10.	Print Screen	- Print a screen shot or save a copy of the screen to show siren passed all tests	Proof that siren passed all tests		
11.		Repeat steps 2-4 for each siren	Proof that all sirens passed all tests		
12.		END			

#### 1.6 Screen Shot

An example of a Status Detail screen from Commander software is shown below. One screen shot per site will be provided, as part of the System Acceptance testing, to prove site functionality.



# 1.7 Installation Check List (ICL)

One ICL will be provided for each installed siren site to show test results following installation of equipment. An example of a completed ICL is shown below.



# **Site Installation Check List-DC**

Detailed instruction sheet to complete this form is available at http://www.federalwarningsystems.com/customer-care

Project Information	
<sup>1</sup> Customer Name:	<sup>2</sup> FS Order #:
<sup>3.</sup> Installation Company:	4. Tech: 5. Contact #:
Siren Information	
<sup>6</sup> Siren Controller Type: <sup>7</sup> Site #:	8. S/N: 9. Siren Head Type:
	ddress:
	H4
16. Charger 1: VDC 17. Charger 2: VDC	C 18. Charger 3: VDC 19. Charger 4: VDC
<sup>20</sup> . Battery 1: VDC <sup>21</sup> . Battery 2: VDC	<u> </u>
<sup>24</sup> Total Battery: VDC <sup>25</sup> 2001TRB:	VDC <sup>26</sup> Radio: VDC
	(D. C
27. Battery Model: 28. Manufact	\ 11 71 7
<sup>29.</sup> Radio Model:	30. Antenna Model: 31. Antenna Height:
VDC Load Test 48VDC to	57VDC
32. Battery Total: VDC AC off and siren sour	
<sup>34</sup> Audibly Sounded Siren: Yes No (If	no, document reason in notes section below.)
35. Desiccant Deployed: Yes No	36. Cleaned Cabinets: Yes No
37. Antenna Connectors Sealed: Yes No	38. Height Of Control Cabinet From Ground:
<sup>39.</sup> Conduit Sealed With RTV: Yes No	<sup>40.</sup> Backfill Of Hole/Site Cleaned Up: Yes No
41. Grounding Installed Per Manual: Yes No	42. Lightning Arrester Installed: Yes No
43. Antenna Installed Per Manual: Yes No	44. Rotation Sensor: Pass Fail
45. Pole Installed Per Manual: Yes No	46. Chopper Sensor: Pass Fail
<sup>47.</sup> AC, Battery And Radio On: Yes No	<sup>48.</sup> AC Disconnect/Breaker Location:
<sup>49.</sup> Security key:	50. Siren programmed: Yes No NA
51. Tested By:	52. Inspection Date:
Tested By.	inspection Bute.
53. Notes:	

<sup>54.</sup> When complete email to fwsinstaller@federalsignal.com or fax to 708-534-4874. Technical Support (800) 524-3021

Drawn by: AP Date: 11/9/09 Chk'd by: GSA Date: 11/9/09 Form number: ICL-DC Revision: A Page 1
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# 1.6 Acceptance Criteria

This test is considered successful (passed) if the actual results match the expected results within stated tolerances.

1.7 Comments / Notes / Discrepancies:	



#### 1.8 Verification

The testing procedures specified above were carefully conducted and completed and the required results were observed. Final acceptance of this test is contingent upon review of test output and satisfactory resolution of any noted test discrepancies.

City of Denver Test Representative:
Name/Title
(Signature & Date)
Federal Signal Test Representative:
Name/Title
(Signature & Date)

<b>Contract Control Number:</b>	
IN WITNESS WHEREOF, the parties h Denver, Colorado as of	ave set their hands and affixed their seals at
SEAL	CITY AND COUNTY OF DENVER
ATTEST:	By
APPROVED AS TO FORM:	REGISTERED AND COUNTERSIGNED
By	By
	By



Contract Control Number:	MOOEM-201205697-00
Contractor Name:	FEDERAL SIGNAL CORPORATION
Ву	v: Jacoba Die
Na	nme: John Von Thaden
	(please print)
Tit	tle: Vice President/GM (please print)
AT	TEST: [if required]
By	
Nai	ne:(please print)
Title	e:(please print)

