

MASTER SERVICES AGREEMENT  
FOR COUNTYWIDE DISASTER RELATED DEBRIS MONITORING SERVICES

**THIS AGREEMENT** is made this \_\_\_\_\_ day of \_\_\_\_\_, 2024, by and between **Williamson County, Texas**, located at 100 Wilco Way, Suite P101, Georgetown, TX 78626 (hereinafter referred to as ("CLIENT")) and **Tetra Tech, Inc.** (hereinafter referred to as ("CONTRACTOR")), located at 2301 Lucien Way, Suite 120, Maitland, FL 32751.

**WHEREAS**, Client has issued RFP No. 24RFP36 for Countywide Disaster Related Debris Monitoring Services which is attached hereto as **Exhibit A**.

**WHEREAS**, Client has reviewed Contractor's response to RFP No. 24RFP36 and wishes to enter into a contractual agreement with Contractor to provide countywide disaster related debris monitoring services which the Technical Approach and Rate Schedule are attached hereto as **Exhibit B and C**.

**NOW, THEREFORE** in consideration of the promises herein and for other good and valuable consideration, the parties agree as follows:

1. **Scope of Services:** Contractor and Client agree Contractor will perform countywide disaster related debris monitoring services as described in Exhibit A and B (Client's RFP and Contractor's Technical Approach), attached hereto. Task Orders shall be issued for specific deliverables under this Agreement. Such deliverables to be provided by Contractor will be determined by Client and specified in writing on each Task Order.
2. **Term:** The term of this Agreement shall begin on the date written above and be in effect for four (4) years with the option to renew for up to two (2) additional periods of one (1) year each by mutual consent.
3. **Independent Contractor:** Contractor is an independent contractor and is not an employee of Client. Services performed by Contractor under this Agreement are solely for the benefit of the Client. Nothing contained in this Agreement creates any duties on the part of Contractor toward any person not a party to this Agreement.
4. **Standard of Care:** Contractor will perform services under this Agreement with the degree of skill and diligence normally practiced by professional engineers or contractors performing the same or similar services. No other warranty or guarantee, expressed or implied, is made with respect to the services furnished under this Agreement and all implied warranties are disclaimed.
5. **Federal Requirements:** Contractor must comply with all applicable federal regulations from 2 C.F.R. § 200.326 and 2 C.F.R. Part 200, Appendix II which are attached hereto as Exhibit D.
6. **Uncontrollable Forces:** Neither the Client nor Contractor shall be considered to be in default of this Agreement if delays in or failure of performance shall be due to Uncontrollable Forces, the effect of which, by the exercise of reasonable diligence, the non-performing party could not avoid. The term "Uncontrollable Forces" shall mean any event which results in the prevention or delay of performance by a party of its obligations under this Agreement and which is beyond the reasonable control of the nonperforming party. It includes, but is not limited to fire, flood, earthquakes, explosion, strike, transportation, or equipment delays, act of war, Act of God, lightning, epidemic, war, riot, civil disturbance, sabotage, acts of terrorism and governmental actions outside the control of the Client. The schedule or payment under the Agreement shall be equitably adjusted, if necessary, to compensate Contractor for any additional costs due to the delay.

Neither party shall, however, be excused from performance if nonperformance is due to forces which are foreseeable, preventable, removable, or remediable, and which the nonperforming party

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could have, with the exercise of reasonable diligence, prevented, removed or remedied with reasonable dispatch. The nonperforming party shall, within a reasonable time of being prevented or delayed from performance by an uncontrollable force, give written notice to the other party describing the circumstances and uncontrollable forces preventing continued performance of the obligations of this Agreement.

7. **Fee for Services:** The fee for the services under this Agreement will be based on the actual hours of services furnished multiplied by Contractor's Billing Rates plus all authorized project related expenses reimbursed to Contractor as set forth below and in **Exhibit C**.

**Authorized Expenses:** In the event County authorizes, in advance and in writing, reimbursement of non-labor expenses related to the services subject of this Contract, County will pay such actual non-labor expenses in strict accordance with the Williamson County Vendor Reimbursement Policy (as amended), which is incorporated into and made a part of this Contract by reference. The Williamson County Vendor Reimbursement Policy can be found at: [WilliamsonCountyVendorReimbursementPolicyMarch2023.pdf](#) (wilco.org). Invoices requesting reimbursement for authorized non-labor expenses must be accompanied by copies of the provider's invoice and clearly set forth the actual cost of the expenses, without markup.

The hourly rates shall remain firm for the initial term of the agreement. The hourly rates for any extended terms shall be subject to an annual adjustment based on the latest yearly percentage increase of the Consumer Price Index for All Urban Consumers (CPI-U) (All Items) as published by the Bureau of Labor Statistics, U.S. Department of Labor.

8. **Compensation:** Payment for goods and services shall be governed by Chapter 2251 of the Texas Government Code. An invoice shall be deemed overdue the 31st day after the later of (1) the date the Client receives the goods under the agreement; (2) the date the performance of the service under the agreement is completed; or (3) the date the Williamson County Auditor receives an invoice for the goods or services. Interest charges for any overdue payments shall be paid by the Client in accordance with Texas Government Code Section 2251.025. More specifically, the rate of interest that shall accrue on a late payment is the rate in effect on September 1 of the Client's fiscal year in which the payment becomes due. The said rate in effect on September 1 shall be equal to the sum of one percent (1%); and (2) the prime rate published in the Wall Street Journal on the first day of July of the preceding fiscal year that does not fall on a Saturday or Sunday.

*All invoices shall be delivered to:*  
*Williamson County Auditor*  
*710 Main Street*  
*Suite 101*  
*Georgetown, TX 78626*

*Payment shall be made to and delivered to:*  
*Tetra Tech, Inc.*  
*PO Box 911642*  
*Denver, CO 80291-1642*

9. **Indemnity:** Contractor shall save harmless the Client from all claims and liability due to activities of itself, its agents, or employees, performed under this Agreement to the extent caused by the negligent act, error or omission of the Contractor or of any person employed by the Contractor. Contractor shall also save harmless the Client from reasonable attorney fees which might be incurred

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by the Client in litigation or otherwise resisting said claims or liabilities which might be imposed on the Client as result of such activities by the Contractor, its agents, or employees.

10. **Insurance:** During the course of performance of the services under this agreement, Contractor will maintain the following insurance coverages:

Worker's Compensation	Statutory
Employer's Liability	U.S. \$1,000,000 per occurrence
Commercial General Liability	U.S. \$1,000,000 per occurrence U.S. \$2,000,000 aggregate
Comprehensive General Automobile	U.S. \$1,000,000 combined single limit
Professional Liability	U.S. \$1,000,000 per claim and in the aggregate

Before beginning any work, Contractor shall deliver to Client, a Certificate of Insurance evidencing that the above coverages are in effect as well as naming Client as an Additional Insured. An Additional Insured Endorsement must accompany the Certificate of Insurance. Such coverage will not be canceled or materially changed without thirty (30) days written notice.

11. **Work Product:** Client shall have the unrestricted right to use the documents, analyses and other data prepared by Contractor under this Agreement ('Work Products'); provided, however Client shall not rely on or use the Work Products for any purpose other than the purposes under this Agreement and the Work Products shall not be changed without the prior written approval of Contractor. If Client releases the Work Products to a third party, other than Client's auditors, without Contractor's prior written consent, or changes or uses the Work Products other than as intended hereunder, (a) Client does so at its sole risk and discretion, and (b) Contractor shall not be liable for any claims or damages resulting from the change or use or connected with the release or any third party's use of the Work Products.
12. **Limitation of Liability:** No employee of Contractor shall have individual liability to Client. To the extent permitted by law, the total liability of Contractor, its officers, directors, shareholders, employees and Subcontractors for any and all claims arising out of this Agreement, including attorneys' fees, and whether caused by negligence, errors, omissions, strict liability, breach of contract or contribution, or indemnity claims based on third party claims, shall not exceed the greater of one million dollars (U.S. \$1,000,000) or the amount actually paid to Contractor under this Agreement.
13. **No Consequential Damages:** In no event and under no circumstances shall Contractor be liable to Client for any principal, interest, loss of anticipated revenues, earnings, profits, increased expense of operation or construction, loss by reason of shutdown or non-operation due to late completion, or for any other economic, consequential, indirect or special damages.
14. **Information Provided by Others:** Client shall provide to Contractor in a timely manner any information Contractor indicates is needed to perform the services hereunder. Contractor may reasonably rely on the accuracy of information provided by Client and its representatives.
15. **Safety and Security:** Contractor has established and maintains programs and procedures for the safety of its employees. Unless specially included as a service to be provided under this Agreement, Contractor specially disclaims any authority or responsibility for job site safety and safety of persons other than Contractor's or Subcontractor's employees.

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16. **Termination:** Either party may terminate this Agreement upon thirty (30) days prior written notice to the other party. Client shall pay Contractor for all services rendered to the date of termination plus reasonable expenses for winding down the services. If either party defaults in its obligations under this Agreement, the non-defaulting party, after giving ten (10) days written notice of its intention to terminate or suspend performance under this Agreement, may, if cure of the default is not commenced and diligently continued by the defaulting party, terminate this Agreement or suspend performance under this Agreement.
17. **Dispute Resolution:** Contractor and Client shall attempt to resolve conflicts or disputes under this Agreement in a fair and reasonable manner, and that if resolution cannot be made, the parties agree to attempt to mediate the conflict by a professional mediator. If mediation does not settle any dispute or action which arises under this Agreement, either party may pursue litigation after notifying the other party of its intentions.
18. **Successors and Assigns:** This Agreement is binding upon and will inure to the benefit of Client and Contractor and their respective successors and assigns. Neither party may assign its rights or obligations hereunder without the prior written consent of the other party.
19. **Notices:** Any notice required or permitted by this Agreement to be given shall be deemed to have been duly given if in writing and delivered personally or five (5) days after mailing by first-class, registered, or certified mail, return receipt requested, postage prepaid and addressed as follows:

**Client:**

Williamson County Judge  
710 S. Main Street  
Ste. 101  
Georgetown, TX 78626

**Contractor:**

Contracts Department  
Tetra Tech, Inc.  
2301 Lucien Way, Suite 120  
Maitland, FL 32751  
(407) 803-2551 (Betty Kamara)  
TDR.Contracts@tetrattech.com

20. **Severability:** The invalidity, illegality, or unenforceability of any provision of this Agreement, or the occurrence of any event rendering any portion or provision of this Agreement void, shall in no way affect the validity or enforceability of any other portion or provision of the Agreement. Any void provision shall be deemed severed from the Agreement and the remainder of the Agreement shall be construed and enforced as if the Agreement did not contain the particular portion or provision held to be void. The parties further agree to reform the Agreement to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this section shall not prevent the entire Agreement from being void should a provision which is of the essence of the Agreement be determined to be void.
21. **Governing Law and Venue:** This Agreement shall be construed under and governed by the laws of the State of Texas without giving effect to its principles on conflicts of law and applicable federal laws and regulations. Any disputes arising thereunder may only be brought in the appropriate state court in Williamson County, TX.
22. **Access and Audits:** County's Right to Audit: Contractor agrees that County or its duly authorized representatives shall, until the expiration of three (3) years after final payment under this Agreement, have access to and the right to examine and photocopy any and all books, documents, papers and records of Contractor which are directly pertinent to the services to be performed and amounts expended under this Agreement for the purposes of making audits, examinations, excerpts, and transcriptions. Contractor agrees that County shall have access during normal working hours to

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all necessary Contractor facilities and shall be provided adequate and appropriate workspace in order to conduct audits in compliance with the provisions of this section. County shall give Contractor reasonable advance notice of intended audits.

23. **Non-Discrimination:** The Contractor warrants and represents that all of its employees will be treated equally during employment without regard to race, color, religion, gender, age or national origin.
24. **Waiver:** A waiver by either the Client or Contractor of any breach of this Agreement shall not be binding upon the waiving party unless such waiver is in writing. In the event of a written waiver, such a waiver shall not affect the waiving party's rights with respect to any other or further breach. The making or acceptance of a payment by either party with knowledge of the existence of a default or breach shall not operate or be construed to operate as a waiver of any subsequent default or breach.
25. **Modification:** The Agreement may not be modified unless such modifications are evidenced in writing and signed by both the Client and Contractor. Such modifications shall be in the form of a written Amendment executed by both parties.
26. **Contingent Fees:** The Contractor warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Contractor to solicit or secure this Agreement and that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for the Contractor, any fee, commission, percentage, gift or any other consideration contingent upon or resulting from the award or making of this Agreement.
27. **Confidentiality:** No reports, information, computer programs, documentation, and/or data given to, or prepared or assembled by the Contractor under this Agreement shall be made available to any individual or organization by the Contractor without prior written approval of the Client unless such disclosure is required by a federal or Texas law or regulation.
28. **Miscellaneous:** Client expressly agrees that all provisions of the Agreement, including the clause limiting the liability of Contractor, were mutually negotiated. In any action to enforce or interpret this Agreement, the prevailing party shall be entitled to recover, as part of its judgment, reasonable attorneys' fees and costs from the other party.
29. **Counterparts:** This Agreement may be executed in multiple counterparts, each of which shall be deemed to be an original instrument, but all of which taken together shall constitute one instrument.
30. **No Waiver of Sovereign Immunity:** Nothing in this Agreement shall be deemed to constitute a waiver of sovereign immunity of powers of the Client.
31. **Public Information:** Tetra Tech understands that Client will comply with the Texas Public information Act as interpreted by judicial ruling and opinions of the Attorney General of the State of Texas. Information, documentation, and other material in connection with this Agreement may be subject to public disclosure pursuant to the Texas Public Information Act.


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**IN WITNESS WHEREOF**, the Contractor has caused this Agreement to be signed in its corporate name by its authorized representative, and the Client has caused this Agreement to be signed in its legal name by persons authorized to execute this Agreement as of the day and year first written above.

**CONTRACTOR:  
TETRA TECH, INC.**

  
\_\_\_\_\_  
By: Jonathan Burgiel  
Title: Business Unit President

**ATTEST:**

  
\_\_\_\_\_  
Kayla Lemaire, Contract Administrator I

**CLIENT:  
WILLIAMSON COUNTY, TX**

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

**ATTEST:**

\_\_\_\_\_

**ATTACHMENTS:**

- Exhibit A: Client RFP No. 24RFP36 for Countywide Disaster Related Debris Monitoring Services
- Exhibit B: Tetra Tech Technical Approach
- Exhibit C: Tetra Tech Fee Schedule
- Exhibit D: Federal Provisions (2CFR200)

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EXHIBIT A

**Williamson County, TX RFP #24RFP36 for Countywide Disaster Related Debris Monitoring Services**

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**EXHIBIT B**

**Tetra Tech Technical Approach**



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**EXHIBIT C**

**Tetra Tech Fee Schedule**

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**EXHIBIT D  
FEDERAL PROVISIONS**

**FEMA CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY UNDER FEDERAL AW ARDS REQUIRED  
BY 2 C.F.R. §200.326 APPENDIX II TO 2 CFR §200**

**REMEDIES**

(For all awarded contracts with a value greater than \$150,000.00)

Any violation or breach of terms of this contract on the part of the Contractor or the Contractor's subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this contract. The duties and obligations imposed by the contract documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. Any violation or breach of terms of this contract of the Contractor or the Contractor's sub-contractors will be subject to the remedies, including liquidated damages, described in the bid specifications or Request for Proposal and the Client rules and regulations and special conditions which are incorporated herein by reference in their entirety.

**TERMINATION FOR CAUSE AND CONVENIENCE**

(For all awarded contracts with a value greater than \$10,000.00)

The Client reserves the right to terminate this contract for cause or convenience pursuant to the rules and regulations and special conditions which are incorporated herein by reference in their entirety.

**EQUAL EMPLOYMENT OPPORTUNITY**

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3) ***Contractor must complete enclosed certification***

During the performance of this contract, the contractor agrees as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:  
Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
3. The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post

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copies of the notice in conspicuous places available to employees and applicants for employment.

5. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
6. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
7. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
8. The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency 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 vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

**DAVIS-BACON ACT AND COPELAND "ANTI-KICKBACK" ACT**

(The Davis-Bacon Act only applies to the Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Nonprofit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. It DOES NOT apply to other FEMA grant and cooperative agreement programs, including the Public Assistance Program.

1. *Minimum wages.*

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- i. All laborers and mechanics employed or working upon the site of the work ( or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account ( except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits ( or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.
- Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in §5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.
- ii. (A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination, and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
- 1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
  - 2) The classification is utilized in the area by the construction industry; and
  - 3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

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(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(l)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

- i. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- ii. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. *Withholding.*

The Federal Agency and/or Client shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work ( or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. *Payrolls and basic records.*

- i. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1 (b) (2) (B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(l)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- ii. (A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the federal agency if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the federal agency. The payrolls submitted shall set out

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accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (*e.g.*, the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the federal agency if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the federal agency, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- 1) That the payroll for the payroll period contains the information required to be provided under §5.5 (a) (3) (ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a) (3) (i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
- 2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
- 3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

- i. The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the federal agency or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. *Apprentices and trainees-*

- i. *Apprentices.* Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide

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apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractors registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- ii. *Trainees.* Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- iii. *Equal employment opportunity.* The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

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5. *Compliance with Copeland Act requirements.*

The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. *Subcontracts.*

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a) (l) through (10) and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. *Contract termination: debarment.*

A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. *Compliance with Davis-Bacon and Related Act requirements.*

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. *Breach.*

A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

10. *Disputes concerning labor standards.*

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

11. *Certification of eligibility.*

- 1) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis Bacon Act or 29 CFR 5.12(a)(l).
- 2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(l).
- 3) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

**CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

(For all awarded contracts related to "mechanics and laborers" with a value greater than \$100,000.00)

- 1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- 2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause



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set forth in paragraph (b)(1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

- 3) Withholding for unpaid wages and liquidated damages. The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
- 4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

**RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT**

(This requirement **does not apply** to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households - Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of "funding agreement." If FEMA federal award meets definition of "funding agreement" under 37 CFR §401.2(a), for all awarded contracts related to experimental, developmental, or research work type contracts)

(a) Definitions

- (1) *Invention* means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of *et seq.*
- (2) *Subject invention* means any invention of the *contractor* conceived or first actually reduced to practice in the performance of work under this *contract*, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401 (d)) must also occur during the period of *contract* performance.
- (3) *Practical Application* means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or government regulations, available to the public on reasonable terms.
- (4) *Made* when used in relation to any invention means the conception or first actual reduction to practice of such invention.
- (5) *Small Business Firm* means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3- 12, respectively, will be used.
- (6) *Nonprofit Organization* means a university or other institution of higher education or an organization of the type described in section 501 (c) {3} of the Internal Revenue Code of 1954 (26 U.S.C. 501(c) and exempt from taxation under section 501(a) of the Internal Revenue Code (25 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

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(b) Allocation of Principal Rights

The *Contractor* may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the *Contractor* retains title, the Federal government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

(c) Invention Disclosure, Election of Title and Filing of Patent Application by *Contractor*

- (1) The *contractor* will disclose each subject invention to the *Federal Agency* within two months after the inventor discloses it in writing to *contractor* personnel responsible for patent matters. The disclosure to the agency shall be in the form of a written report and shall identify the *contract* under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the *agency*, the *Contractor* will promptly notify the *agency* of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the *contractor*.
- (2) The *Contractor* will elect in writing whether or not to retain title to any such invention by notifying the *Federal agency* within two years of disclosure to the *Federal agency*. However, in any case where publication, on sale or public use has initiated the one-year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the *agency* to a date that is no more than 60 days prior to the end of the statutory period.
- (3) The *contractor* will file its initial patent application on a subject invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The *contractor* will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application or six months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.
- (4) Requests for extension of the time for disclosure, election, and filing under subparagraphs (1), (2), and (3) may, at the discretion of the *agency*, be granted.

(d) Conditions When the Government May Obtain Title

The *contractor* will convey to the *Federal agency*, upon written request, title to any subject invention-

- (1) If the *contractor* fails to disclose or elect title to the subject invention within the times specified in (c), above, or elects not to retain title; provided that the *agency* may only request title within 60 days after learning of the failure of the *contractor* to disclose or elect within the specified times.
- (2) In those countries in which the *contractor* fails to file patent applications within the times specified in (c) above; provided, however, that if the *contractor* has filed a patent application in a country after the times specified in (c) above, but prior to its receipt of the written request of the *Federal agency*, the *contractor* shall continue to retain title in that country.
- (3) In any country in which the *contractor* decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.

(e) Minimum Rights to *Contractor* and Protection of the *Contractor* Right to File

- (1) The *contractor* will retain a nonexclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the *contractor* fails to disclose the invention within the times specified in (c), above. The *contractor's* license extends to its domestic

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subsidiary and affiliates, if any, within the corporate structure of which the *contractor* is a party and includes the right to grant sublicenses of the same scope to the extent the *contractor* was legally obligated to do so at the time the *contract* was awarded. The license is transferable only with the approval of the *Federal* to which the invention pertains.

- (2) The *contractor's* domestic license may be revoked or modified by the *funding Federal agency* to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR part 404 and *agency* licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the *contractor* has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the *funding Federal agency* to the extent the *contractor*, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.
- (3) Before revocation or modification of the license, the *funding Federal agency* will furnish the *contractor* a written notice of its intention to revoke or modify the license, and the *contractor* will be allowed thirty days (or such other time as may be authorized by the *funding Federal agency* for good cause shown by the *contractor*) after the notice to show cause why the license should not be revoked or modified. The *contractor* has the right to appeal, in accordance with applicable regulations in 37 CFR part 404 and *agency* regulations (if any) concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

(f) *Contractor* Action to Protect the Government's Interest

- (1) The *contractor* agrees to execute or to have executed and promptly deliver to the *Federal agency* all instruments necessary to
  - (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the *contractor* elects to retain title, and
  - (ii) convey title to the *Federal agency* when requested under paragraph (d) above and to enable the government to obtain patent protection throughout the world in that subject invention.
- (2) The *contractor* agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the *contractor* each subject invention made under *contract* in order that the *contractor* can comply with the disclosure provisions of paragraph (c), above, and to execute all papers necessary to file patent applications on subject inventions and to establish the government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by (c) (i), above. The *contractor* shall instruct such employees through employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.
- (3) The *contractor* will notify the *Federal agency* of any decisions not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than thirty days before the expiration of the response period required by the relevant patent office.
- (4) The *contractor* agrees to include, within the specification of any United States patent applications and any patent issuing thereon covering a subject invention, the following statement, "This invention was made with government support under (identify the *contract*) awarded by (identify the Federal agency). The government has certain rights in the invention."

(g) Subcontracts

- (1) The *contractor* will include this clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental or research work. The subcontractor will retain all rights provided for the *contractor* in this clause, and the *contractor* will not, as part of the

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consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

- (2) In the case of subcontracts, at any tier, when the prime award with the Federal agency was a contract (but not a grant or cooperative agreement), the *agency*, subcontractor, and the contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and the Federal agency with respect to the matters covered by the clause; provided, however, that nothing in this paragraph is intended to confer any jurisdiction under the Contract Disputes Act in connection with proceedings under paragraph (i) of this clause.

(h) Reporting on Utilization of Subject Inventions

The *Contractor* agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the *contractor* or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the contractor, and such other data and information as the *agency* may reasonably specify. The *contractor* also agrees to provide additional reports as may be requested by the *agency* in connection with any march-in proceeding undertaken by the *agency* in accordance with paragraph (i) of this clause. As required by 35 U.S.C. 202(c) (5), the *agency* agrees it will not disclose such information to persons outside the government without permission of the *contractor*.

(i) Preference for United States Industry

Notwithstanding any other provision of this clause, the *contractor* agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject inventions in the United States unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the *Federal agency* upon a showing by the *contractor* or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(j) March-in Rights

The *contractor* agrees that with respect to any subject invention in which it has acquired title, the *Federal agency* has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the *agency* to require the *contractor*, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the *contractor*, assignee, or exclusive licensee refuses such a request the *Federal agency* has the right to grant such a license itself if the *Federal agency* determines that:

- (1) Such action is necessary because the *contractor* or assignee has not taken or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use.
- (2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the *contractor*, assignee or their licensees;
- (3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the *contractor*, assignee or licensees; or
- (4) Such action is necessary because the agreement required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(k) Special Provisions for *Contracts* with Nonprofit Organizations If the *contractor* is a nonprofit organization, it agrees that:

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- (1) Rights to a subject invention in the United States may not be assigned without the approval of the *Federal agency*, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the *contractor*;
- (2) The *contractor* will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when the agency deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;
- (3) The balance of any royalties or income earned by the *contractor* with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific research or education; and
- (4) It will make efforts that are reasonable under the circumstances to attract licensees of subject invention that are small business firms and that it will give a preference to a small business firm when licensing a subject invention if the *contractor* determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the *contractor* is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the *contractor*. However, the *contractor* agrees that the Secretary applicants, and the *contractor* will negotiate changes to its licensing policies, procedures, or practices with the Secretary when the Secretary's review discloses that the *contractor* could take reasonable steps to implement more effectively the requirements of this paragraph (k)(4).

(l) Communication

Any communications to be given hereunder by either party to the other shall be deemed to be duly given if set forth in writing and personally delivered or sent by mail, registered or certified, postage prepaid with return receipt requested, as follows:

**CONTRACTOR**

Tetra Tech, Inc.

2301 Lucien Way, Suite 120

Maitland, FL 32751

**CLIENT**

Williamson County, TX

710 S. Main Street, Ste. 101

Georgetown, TX 78626

Written notices hereunder delivered personally shall be deemed communicated as of actual receipt; mailed notices shall be deemed communicated five (5) days after deposit in the mail, post prepaid, certified, in accordance with this Paragraph.

**CLEAN AIR ACT**

(For all awarded contracts with a value greater than \$150,000.00)

- (m) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- (n) The contractor agrees to report each violation to the (name of applicant entering into the contract) and understands and agrees that the (name of the applicant entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
- (o) The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

**FEDERAL WATER POLLUTION CONTROL ACT**

(For all awarded contracts with a value greater than \$150,000.00)

- (1) The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 etseq.
- (2) The contractor agrees to report each violation to the (name of the applicant entering into the

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contract) and understands and agrees that the (name of the applicant entering into the contract) will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

- (3) The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

**DEBARMENT AND SUSPENSION**

***Contractor must complete enclosed certification***

- (1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (3) This certification is a material representation of fact relied upon by Client. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

**BYRD ANTI-LOBBYING AMENDMENT**

(For all awarded contracts with a value greater than \$100,000.00. ***Contractor must complete enclosed certification***

Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended) Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

The Contractor certifies, to the best of his or her knowledge and belief that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than federally appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the contractor shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) Contractor will include language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$150,000.00 shall certify and disclose

**MASTER SERVICES AGREEMENT  
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accordingly.

**PROCUREMENT OF RECOVERED MATERIALS**

(The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired by the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.)

- (1) In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA designated items unless the product cannot be acquired:
  - a) Competitively within a timeframe providing for compliance with the contract performance schedule;
  - b) Meeting contract performance requirements; or
  - c) At a reasonable price.
- (2) Information about this requirement is available at EPA's Comprehensive Procurement Guidelines web site, <http://www.epa.gov/cpg/>. The list of EPA-designate items is available at <http://www.epa.gov/cpg/products.htm>.
- (3) The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

**ACCESS TO RECORDS**

The following access to records requirements apply to this contract:

- (1) The Contractor agrees to provide the Client, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
- (2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
- (3) The Contractor agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.
- (4) In compliance with the Disaster Recovery Act of 2018, the Client and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

**CHANGES**

To be eligible for FEMA assistance under the non-Federal entity's FEMA grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope.

FEMA recommends, therefore, that a non-Federal entity include a changes clause in its contract that describes how, if at all, changes can be made by either party to alter the method, price, or schedule of the work without breaching the contract. The language of the clause may differ depending on the nature of the contract and the end-item procured.

**DHS SEAL, LOGO, AND FLAGS**

The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

**COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS**

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This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives.

**NO OBLIGATION BY FEDERAL GOVERNMENT**

The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

**PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS**

The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract.

**PROHIBITION ON CONTRACTING FOR COVERED TELECOMMUNICATIONS EQUIPMENT OR SERVICES**

2 C.F.R. § 200.216, as implemented by FEMA Policy 405-143-1, prohibits the Contractor from using equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

**DOMESTIC PREFERENCES FOR PROCUREMENTS**

As appropriate and to the extent consistent with law, the Contractor agrees, to the greatest extent practicable, prefer the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products).

**AFFIRMATIVE SOCIOECONOMIC STEPS**

If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2\_C.F.R. § 200.321(b)(1)-(5) to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

**COPYRIGHT AND DATA RIGHTS**

"License and Delivery of Works Subject to Copyright and Data Rights"

The Contractor grants to the Client a paid-up, royalty-free, nonexclusive, irrevocable, worldwide license in data first produced in the performance of this contract to reproduce, publish, or otherwise use, including prepare derivative works, distribute copies to the public, and perform publicly and display publicly such data. For data required by the contract but not first produced in the performance of this contract, the Contractor will identify such data and grant to the Client or acquires on its behalf a license of the same scope as for data first produced in the performance of this contract. Data, as used herein, shall include any work subject to copyright under 17 U.S.C. § 102, for example, any written reports or literary works, software and/or source code, music, choreography, pictures or images, graphics, sculptures, videos, motion pictures or other audiovisual works, sound and/or video recordings, and architectural works. Upon or before the completion of this contract, the Contractor will deliver to the Client data first produced in the performance of this contract and data required by the contract but not first produced in the performance of this contract in formats acceptable by the Client."

**BUILD AMERICA, BUY AMERICA ACT**

Contractors and their subcontractors who apply or bid for an award for an infrastructure project subject to the domestic preference requirement in the Build America, Buy America Act ("BABAA") shall file the required certification to the non-federal entity with each bid or offer for an infrastructure project, unless a domestic preference requirement is waived by FEMA. Contractors and subcontractors certify that no federal financial assistance funding for infrastructure projects will be provided unless all the iron, steel, manufactured projects, and construction materials used in the project are produced in the United States. BABAA, Pub. L. No. 117-58, §§ 70901-52. Contractors and subcontractors shall also disclose any use of federal financial assistance for infrastructure projects that does not ensure compliance with BABAA domestic preference requirement. Such disclosures shall be forwarded to the recipient who, in turn, will forward the disclosures to FEMA, the federal awarding agency; subrecipients will forward disclosures to the pass-through entity, who will, in turn, forward the disclosures to FEMA.



**MASTER SERVICES AGREEMENT  
FOR COUNTYWIDE DISASTER RELATED DEBRIS MONITORING SERVICES**

**BYRD ANTI-LOBBYING CERTIFICATION**

Certification for Contracts, Grants, Loans, and Cooperative Agreements-The undersigned certifies, to the best of his or her knowledge and belief, that:

- 1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- 3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, Tetra Tech, Inc., certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C.Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

  
\_\_\_\_\_  
**Signature of Contractor's Authorized Official**

Jonathan Burgiel, Business Unit President  
\_\_\_\_\_  
**Name and Title of Contractor's Authorized Official**

6/3/2024  
\_\_\_\_\_  
**Date**

MASTER SERVICES AGREEMENT  
FOR COUNTYWIDE DISASTER RELATED DEBRIS MONITORING SERVICES

**DEBARMENT/SUSPENSION CERTIFICATION**

Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (No procurement Debarment and Suspension).

This requirement applies to all FEMA grant and cooperative agreement programs.

Federal Executive Order (E .O.) 12549 "Debarment" requires that all contractors receiving individual awards, using federal funds, and all sub recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government. By signing this document, you certify that your organization and its principals are not debarred. Failure to comply or attempts to edit this language may disqualify your bid. Information on debarment is available at the following websites: [www.sam.gov](http://www.sam.gov) and <https://acquisition.gov/far/index.html> see section 52.209-6.

The Contractor, Tetra Tech, Inc., certifies or affirms by your signature that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

  
\_\_\_\_\_  
**Signature of Contractor's Authorized Official**

Jonathan Burgiel, Business Unit President  
\_\_\_\_\_  
**Name and Title of Contractor's Authorized Official**

6/3/2024  
\_\_\_\_\_  
**Date**

**MASTER SERVICES AGREEMENT  
FOR COUNTYWIDE DISASTER RELATED DEBRIS MONITORING SERVICES**

**CIVIL RIGHTS COMPLIANCE PROVISIONS**

1. EQUAL EMPLOYMENT OPPORTUNITY (Equal Opportunity Clause)

(For all awarded contracts that meet the definition of "federally assisted construction contract" provided in 41 CFR Part 60-1.3)

During the performance of this contract, the contractor agrees as follows:

- 1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:  
Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- 2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- 3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- 4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- 5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- 6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- 7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or order this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- 8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by

**MASTER SERVICES AGREEMENT  
FOR COUNTYWIDE DISASTER RELATED DEBRIS MONITORING SERVICES**

rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency 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 vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.



\_\_\_\_\_  
**Signature of Contractor's Authorized Official**

Jonathan Burgiel, Business Unit President  
**Name and Title of Contractor's Authorized Official**

6/3/2024  
**Date**

**MASTER SERVICES AGREEMENT  
FOR COUNTYWIDE DISASTER RELATED DEBRIS MONITORING SERVICES**

**BUILD AMERICA BUY AMERICA ACT SELF-CERTIFICATION**

The undersigned certifies, to the best of their knowledge and belief, that: The Build America, Buy America Act (BABAA) requires that no federal financial assistance for “infrastructure” projects is provided “unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States.” section 70914 of Public Law No. 117-58, §§ 70901-52. The undersigned certifies that the iron, steel, manufactured products, and construction materials used in this contract are in full compliance with the BABAA requirements including:

1. All iron and steel used in the project are produced in the United States. This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
2. All manufactured products purchased with FEMA financial assistance must be produced in the United States. For a manufactured product to be considered produced in the United States, the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55% of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.
3. All construction materials are manufactured in the United States. This means that all manufacturing processes for the construction material occurred in the United States.

The Contractor, Tetra Tech, Inc., certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

  
\_\_\_\_\_  
**Signature of Contractor's Authorized Official**

Jonathan Burgiel, Business Unit President  
\_\_\_\_\_  
**Name and Title of Contractor's Authorized Official**

6/3/2024  
\_\_\_\_\_  
**Date**

# Implementation Strategy and Approach to the County's Scope of Work

## Project Understanding

Williamson County is located in the Austin-Round Rock-Georgetown metropolitan area of Texas. Williamson County has seen rapid growth in population due to its proximity to Austin and large tech employers moving their headquarters to the area. The County is also home to the Inner Space Caverns, one of the most well-preserved caves in the State of Texas, which brings in locals as well as numerous visitors. Over the years, the County has seen severe damage and flooding caused by disasters such as the severe winter storm in early 2023 and the 1997 tornado outbreak, just to name a few.



## Risk Factors and Unique Challenges for Williamson County

Due to its geography, County may face unique challenges, including:

- Tornadoes
- Winter Storms
- Severe Weather

## Our Understanding of the Services Required by Williamson County

Tetra Tech has carefully reviewed the scope of work requested in the request for proposal (RFP) and can assure the County that we have the experience, understanding, and knowledge to successfully perform all aspects of the scope of work including execution of the following tasks:

- Documentation Efforts (pg. D-41)
- Debris Management Plan (pg. D-31)
- Emergency Push Documentation (pg. D-16)
- ROW Debris Monitoring (pg. D-13)

Tetra Tech is prepared to provide the services defined in the County's RFP. With more than 56 years of experience behind the company, Tetra Tech has the expertise, resources, and proven skills to support Williamson County.

**As the County knows, the County is obligated to its residents and businesses to be ready to respond to disaster events. This responsibility covers an array of areas, including:**

- 1. Having the necessary preparedness plans and policies in place**
- 2. Ensuring that County staff are trained and have had practice in exercising the emergency scenarios**
- 3. Identifying additional resources that the County may need in case the County is affected**
- 4. Partnering with a responsible partner who can help the County maximize state and federal grant funding**
- 5. Building more resilient and sustainability infrastructure to mitigate future risks.**

**With Tetra Tech, the County has a partner that is renowned in all the above areas and has the resources and expertise to support County.**

# Monitoring

## Debris Management Site Identification/Pre-Approval

Tetra Tech has industry-leading experience assisting local and state governments with locating and permitting TDSR sites before a disaster event as well as post-disaster. Based on State environmental agency guidelines, TDSR sites typically require baseline soil testing before use. We work with municipalities to pre-approve potential debris sites with environmental agencies.

## Right of Entry Gathering for Private/Gated Road Debris Removal

Our team has administered many of the largest private property debris removal (PPDR) programs in U.S. history. We work with each client to follow their process, should they already have one in place, when managing debris generated from private property and gated communities. Tetra Tech assists communities with ensuring they have the legal authority via local and state ordinances to enter onto private property. We also assist with preparing submittal packages for FEMA to approve the program, promoting the right-of-entry (ROE) program with homeowners' associations and residents, and ensuring the program is properly documented.

## Right of Way Monitoring

Our *RecoveryTrac*™ ADMS technology allows the County to view debris collection points, truck locations, monitor locations, damage, incidents, and daily metrics at any given time. The additional geospatial reporting capabilities are made possible through the Tetra Tech approach to field monitoring. For the County's private/gated communities, we return to the ROEs that were collected in the Preparedness phase; for any communities that did not have the pre-work completed, we then work with them to get the paperwork completed.



**ROW Monitoring following Hurricane Sally, Baldwin County, Alabama**

At each debris collection point, the field collection monitor marks the waypoint or location of the debris pile to collect GPS coordinates. The map on the following page displays the waypoints associated with each collection ticket issued in the field. The waypoint collection report is updated in real time and can be filtered by date. Through *RecoveryTrac™* ADMS, we have the ability to overlay road layers on the map to track pickup collections on County-maintained roads, as well as State roads once the Department of Transportation has completed their pass through.

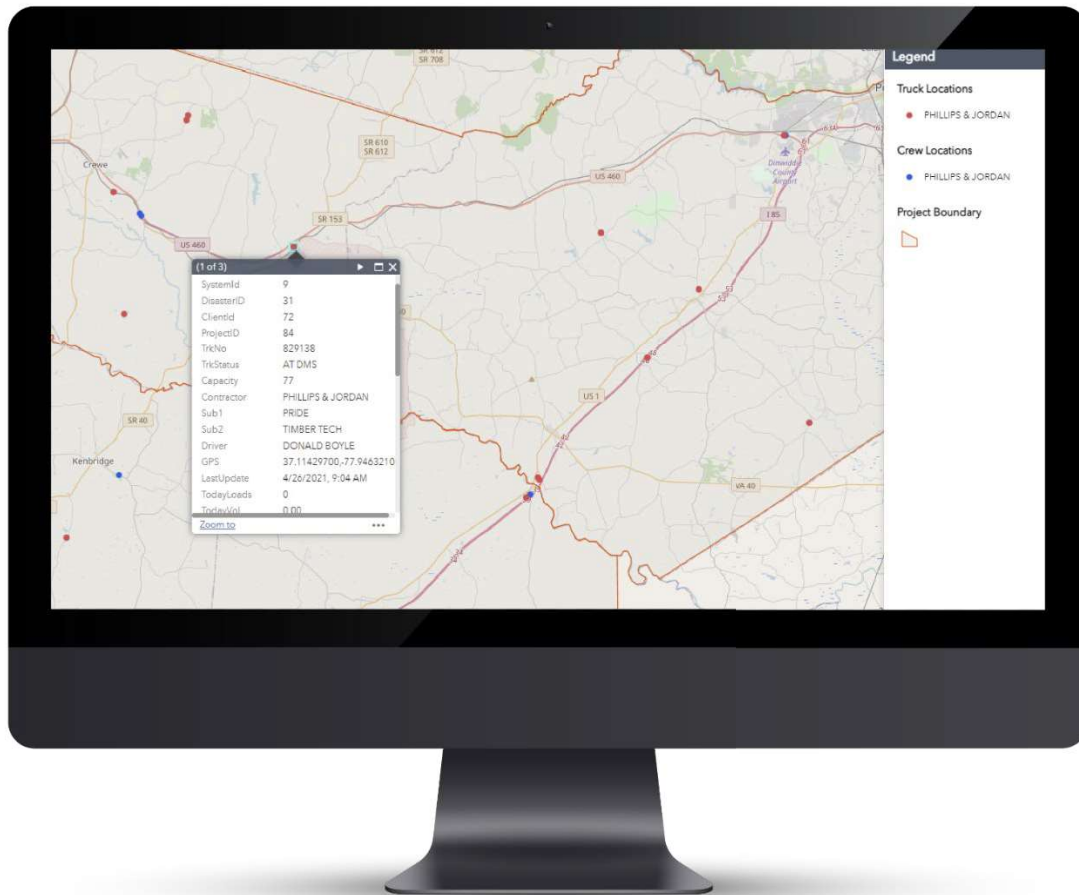
### Waypoint Collection/Hazardous Tree Maps





An additional feature of our ADMS technology is that each handheld device reports back the location of the device regularly. By leveraging this location information, Tetra Tech can view monitor locations and truck locations in real time, as demonstrated below.

### Truck Locations



### Emergency Roadway Push

During the emergency push period, debris removal contractors coordinate with Williamson County crews to clear blocked roadways for emergency vehicle passage. Tetra Tech can support the County with emergency push efforts. Tetra Tech services may include the following:

- Document blocked roads that require immediate clearance
- Help staff maintain maps or databases to track road clearance progress and other essential tasks, as requested
- Administer the sign-in and sign-out of labor and equipment to track time and materials (T&M) charges
- Maintain reimbursement documentation of emergency push work
- Coordination with the County to conduct preliminary damage assessments and road closures
- Establish public information protocols to respond to concerns and comments

## Truck Certification

Tetra Tech uses the *RecoveryTrac™* system to electronically certify all trucks used in an activation. Our team follows a proven vehicle certification procedure that complies with FEMA guidelines and results in maximum reimbursement. Our certification includes:

- Unique truck numbers for contractor crews and equipment
- Automated truck certification form, including:
  - FEMA guidelines on truck certification documentation and volume calculations
  - Barcode for automated ticket scanning
- Vehicle notations on the truck certification form and vehicle placard, informing tower monitors of sideboards, tailgates, or other modifications
- Photographs of vehicles, vehicle cavities, and drivers
- Periodic spot checks and recertification of trucks to identify trucks altered after initial certification

### Truck Certification Report

RecoveryTrac Truck Certification Report 9/22/2019

HARRIS COUNTY TX TROPICAL STORM IMELDA ROW COLLECTION - Truck Certification Summary

	Tot Trucks Certified	Tot Certified Capacity	Avg Certified Capacity
Contractor: CERES	52	3709	71.33
<b>Totals:</b>	<b>52</b>	<b>3709</b>	<b>71.33</b>

HARRIS COUNTY TX TROPICAL STORM IMELDA ROW COLLECTION - Truck Certification Details

Contractor: CERES  
Sub-Contractor 1: CREEL BROTHERS

Sub-Contractor 2	Truck No.	Capacity	Cert Date	Status	Vehicle Tag	Vehicle Type	Vehicle Features
N/A	810959	55	09/22/2019 11:41 AM	ACTIVE	P244760 (LA)	SELF-LOADING TRUCK	

Primary Box (L x W x H): 212x100x96 = 2035200 0 ( + )  
Type: Box (L x W x H): 56x100x74 = 414400 0 ( + )  
Type: Box (L x W x H): 67x100x17 = 113900 0 ( + )  
Type: Box (L x W x H): 4x100x21 = 8400 0 ( + )  
Total Volume: 2571900 0 Cu Inches (46656)= 55.12 CuYds

Driver-Placard View      Side View      Back-Interior View      Front View

## Hazardous Tree/Stump Monitoring

Guidance established by FEMA requires supporting photo documentation for each ticket issued for hazardous tree or hanger removal services. The previous standard for monitoring firms was to take supporting photographs with a digital camera and manually associate the photos to each tree ticket. Tetra Tech utilizes ADMS technology to automatically associate photographs for all hazardous tree and hanger removal operations, which eliminates the potentially extensive labor associated with this task. Additionally, our ADMS technology and software is designed to manage photo documentation by compressing and securely storing photos for field validations and audits in real time. The ability to associate photo documentation to unit rate tickets is critical for FEMA reimbursement, QA/QC, and fraud deterrence.

As work in the field is completed, the information and supporting photos are uploaded directly to our database for QA/QC checks. A QA/QC manager verifies that the photographs comply with FEMA regulations and that all measurements meet the County's contractual agreement with the contractor.

## Hazardous Tree Mobile Suite



## Real-Time Ticket Report

RecoveryTrac Incident Summary Report

Project Incident Summary: CITY OF VICTORIA HURRICANE HARVEY ROW COLLECTION

Incident Type	Total	Active	Closed	Pct Compl	Avg Day Out	Hi Pri	Emp Invl	Contr Invl	Own Invl
OBSERVATIONS	1	1	0	0.0	1242	0	0	0	0
<b>Totals</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0.0</b>	<b>1242.0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Project Incident Details: CITY OF VICTORIA HURRICANE HARVEY ROW COLLECTION

OBSERVATIONS (Count: 1)

OTHER (Count: 1)

Incident No.	Status	Priority	Date	Emp Invl	Contr Invl	Own Invl	Location	Reporting/Monitor
00-2017-03944	Active	Normal	12/04/2017 1:42 PM	NO	NO	NO	2204 ALLENDALE STREET (20.803076, -95.989945)	FRANCISCO RAMOZ (8216250)

CREW (TREE-R-US) REMOVED STUMP  
NO WATER LEAKS.  
CITY CREW AT SITE

**Unit RateTicket**

**Ticket Information**

Ticket Date/Time: 12/15/2018 10:52 AM  
 Applicant: CITY OF LYNN HAVEN  
 Disaster: FL - HURRICANE MICHAEL  
 Contractor: ASHBRIITT  
 Sub-Contractor: TRI-RIVERS - ARBORPRO  
 Crew No.: 710380  
 Supervisor: JONATHAN COLLINS

**Hazard Information**

Hazard Type: 1A - HAZARDOUS HANGERS REMOVAL  
 GPS(Lat,Lng): 30.221035, -95.057865  
 Address: 812 BRADFORD CIRCLE  
 Measure: 5.00  
 Unit Count: 1.00  
 Start Time: 12/15/2018 10:35 AM  
 EndTime: 12/15/2018 10:52 AM  
 Monitor Name (Id): JOELLY HARVEY (P232188)

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## Spotlight On: ANSI A300 Tree Care Standards

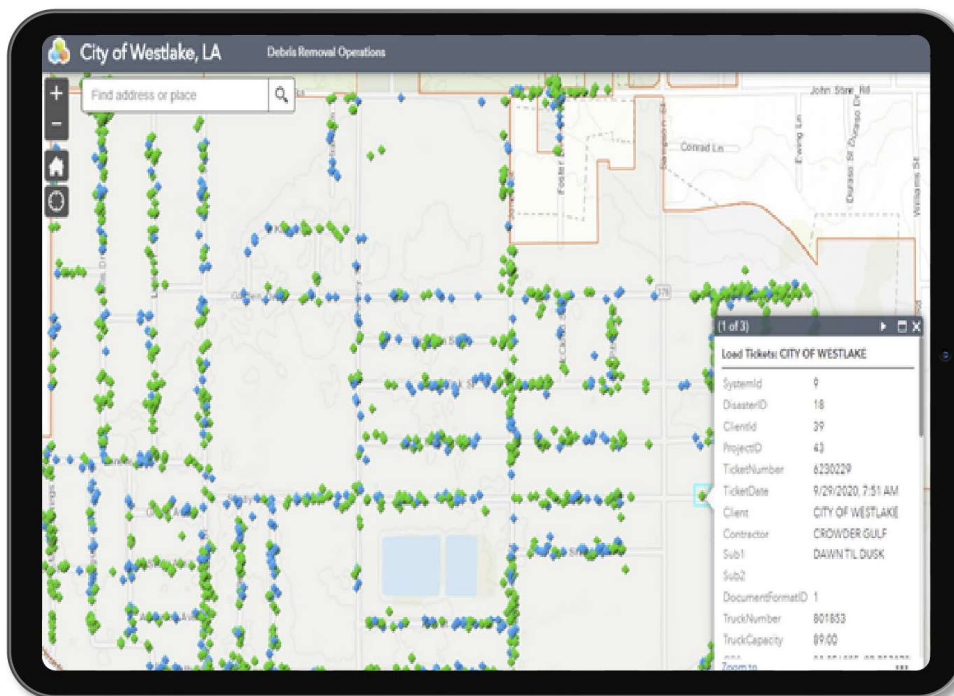
Tetra Tech recognizes the importance of complying with the ANSI 300 standards to ensure the health of the trees and the surrounding environment. Tetra Tech supports many local, state, and provincial governments and federal regulators, completing projects on their behalf that require an understanding of the latest agency policies and guidance. Our work includes field compliance oversight; permit development, review, and deficiency notifications; document review; and litigation support.



### Unit Rate Ticket Geoportal Report

As monitors complete unit rate tickets for hazardous trees or hangers, their locations are logged and collected. The map below displays locations where hazardous tree or hanger removals were documented in the field. Clicking on the marker allows the user to review the data and photos collected by the field monitor (see example below). The unit rate ticket report is updated in real-time.

Unit Rate Ticket Map



## Staffing Plan

Tetra Tech has assembled a team of debris removal monitoring experts with direct experience responding to recent disasters. **Our dedicated project management team is deeply familiar with the policies, procedures, and requirements associated with delivering successful disaster debris monitoring services.**

Our staff members have **managed the removal of and reimbursement for over 179 million cubic yards (CYs) of debris as well as the demolition of over 22,000 uninhabitable residential and commercial structures.** Our team has monitored and obtained FEMA, FHWA, and NRCS reimbursement on over 30 debris removal projects in excess of 1 million CYs of debris and understands the significant resource commitment and effort that is necessary to manage and monitor large-scale debris removal operations for local governments.

Our record of success includes serving over 300 state and local government clients in response to over 90 presidential disaster declarations over the last decade. Our team has obtained **over \$50 billion in reimbursement funds** for our clients from federal agencies.

Tetra Tech is committed to providing the County an experienced project manager and consistent project management team that will expedite recovery efforts by establishing a coordinated and organized approach to debris removal. Our dedicated team is available to the County 365 days per year.

## Proposed Team

Tetra Tech has assembled a project team with the qualifications and expertise necessary to support the County following a disaster. The individuals selected for this project not only have national expertise from having worked on every major disaster in the past decade, but also have **hands-on experience working on prior (or current) Texas-based projects.** As a result, our staff has an in-depth understanding of how disaster response and recovery works in Texas.

### Senior Management and Advisory Team

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Our senior management and advisory team will provide expert oversight and assistance at critical junctures. This team is prepared to provide both tactical and strategic guidance for the duration of any disaster recovery operation. These individuals bring decades of disaster debris monitoring and reimbursement expertise. **Résumés for project management and advisory staff have been provided at the end of this section.**



**Mr. Ralph Natale** is the Director of Post-Disaster Programs for Tetra Tech. He leads the practice by developing programs, providing daily project support, and providing oversight and guidance to his team of project managers and projects. Mr. Natale is an expert in FEMA-PA Grant Program reimbursement policies and has administered nearly 70 projects in his 15-year career. Mr. Natale has served as a principal in charge, project manager, data manager, and operations manager in response to some of the country's largest debris-generating disasters, including Hurricanes Matthew, Katrina, Ike, and Sandy. Mr. Natale has led operations that resulted in the removal of over 66 million CYs of debris and over 1.7 million hazardous trees, the program management of over 35,000 demolitions, and over \$4.5 billion of reimbursed invoices.



**Mr. John Buri**, Texas resident and Senior Advisor for Disaster Grants Programs, will provide subject matter expertise and guidance for the County based on experience supporting clients across more than \$5 billion in disaster-related grants. Mr. Buri is a versatile disaster mitigation, response, and recovery and grant management professional. Mr. Buri has provided senior management oversight on 22 major disasters declarations for over 100 clients since 2007, representing over \$5 billion in disaster-related grants. He has responded to numerous large-scale activations and engages with FEMA and state regulatory agencies and debris contractors in addition to providing FEMA PA consulting for tasks and activities associated with each disaster recovery operation.



**Mr. Nick Russo**, Regional Project Manager, is a Texas resident and an environmental services expert with over 20 years of experience in disaster recovery, environmental resources, and water management. He joined Tetra Tech in early 2022 after spending 19 years with the Harris County, TX Engineering Department. He has vast experience in coordinating environmental, sustainability, and regulatory programs at the local, state, and federal levels. Mr. Russo worked on numerous federally declared disasters including Hurricane Ike, the Tax Day Flood, Hurricane Harvey, Tropical Storm Imelda, and the COVID-19 Pandemic where he conducted damage assessments, debris removal, and program management in coordination with FEMA and other regulatory agencies.

**Contact Information:** [nick.russoiii@tetrattech.com](mailto:nick.russoiii@tetrattech.com)

## Project Field Operations Team

Tetra Tech has identified a team of field staff to support the County. We have selected team members who have previous experience in similar operations. Brief summaries of each team member’s experience are provided below. **Nearly all of our proposed staff have previous experience working with Williamson County. Résumés for project field operations staff have been provided at the end of this section.**

Proposed Staff	Summary of Qualifications	Key Areas of Expertise
<b>Scott Simpson</b> Project Manager  <b>Previous Experience with Williamson County</b>	Mr. James Scott Simpson is an experienced professional providing program management services for response and recovery. He has supported projects in the states of California, Louisiana, North Carolina, and Texas, where he was responsible for supervision and scheduling of staff and daily safety briefings. In addition, Scott has previous knowledge of working in construction / plant maintenance, and has experience in interpreting and reading blueprints, diagrams, and drawings.  <b>Contact Information:</b> <a href="mailto:scott.simpson2@tetrattech.com">scott.simpson2@tetrattech.com</a>	<ul style="list-style-type: none"> <li>• QA/QC</li> <li>• OSHA Standards</li> <li>• Disposal Site Operations</li> <li>• Debris Operations</li> <li>• Welding Safety</li> <li>• Crane/Hoist</li> <li>• Waterways</li> </ul>
<b>Roderick Moore</b> Debris Monitor Supervisor  <b>Previous Experience with Williamson County</b>	Mr. Roderick Moore performs load calls for trucks delivering debris, maintains records, confirms address/codes, accurately enters information into required databases, communicates with management and other site personnel to de-escalate issues, and documents any issues and statuses following project requirements and instructions.	<ul style="list-style-type: none"> <li>• Disaster Debris Monitoring</li> <li>• Supervision of Field Operations</li> <li>• Truck Certification</li> </ul>
<b>George Economos</b>	Mr. Economos has more than 11 years of experience, 6 of which have been in disaster recovery services. Throughout his time working on debris projects, he has served in roles such as air monitoring, division supervision, logistics, and	<ul style="list-style-type: none"> <li>• Hazardous Tree Removal</li> <li>• Air Monitoring</li> </ul>

Debris Monitor Supervisor	task force leadership. Mr. Economos has worked on a wide variety of disasters including wildfires, severe weather, and train derailment. Mr. Economos directly assisted the City of Austin as well as Williamson County in response to the severe winter weather of 2023.	<ul style="list-style-type: none"> <li>• OSHA and HAZMAT Safety Standards</li> </ul>
<p><b>Previous Experience with Williamson County</b></p> <p><b>Nick Dragon</b></p>	<p>Mr. Dragon has over 13 years of experience on over 8 disasters in environmental remediation, cleanup, and debris removal monitoring. Mr. Dragon has responded to several major hurricanes (Hurricanes Laura, Florence, Irma, Harvey, and Ike), and California Camp Fire for clients involving over 250,000 CYs of debris, including: Virginia Department of Transportation; Calcasieu Parish, LA; Harris County, TX; City of Houston, TX on 2 projects and Miami-Dade County, FL. He has experience verifying eligibility and compliance; overseeing collection and disposal operations, and coordinating directly with debris contractors, data managers, and project managers to facilitate the success of fast-moving debris operations projects. Projects have included some of the nation's largest debris monitoring projects in recent history including serving as project manager for Calcasieu Parish, Louisiana's Hurricane Laura response, which accounted for nearly 7 million cubic yards of debris. He also served as project manager assisting the City of Beaufort, NC following Hurricane Florence. In addition to debris management experience, Mr. Dragon has over eight years of experience overseeing emergency commercial and residential emergency water and fire damage remediation work.</p>	<ul style="list-style-type: none"> <li>• Field Operations and Oversight</li> <li>• QA/QC</li> <li>• Environmental Remediation</li> <li>• Debris Monitoring</li> <li>• Project Management</li> <li>• Scheduling and Dispatch</li> <li>• Truck Certification</li> <li>• Automated Debris Management System (ADMS)</li> <li>• Environmental Cleanup</li> </ul>
<p><b>Previous Experience with Williamson County</b></p> <p><b>Ricardo Bosques</b></p>	<p><b>Alternate Contact Information:</b> nicky.dragon@tetrattech.com</p> <p>Mr. Bosques is a data and automated debris management system (ADMS) technology specialist for Tetra Tech, where his understanding of Federal Emergency Management Agency (FEMA) eligibility and documentation requirements for public assistance debris removal programs have aided him in quality control and oversight of multiple projects. Mr. Bosques is responsible for the implementation of Tetra Tech's <i>RecoveryTrac</i>™ ADMS technology as well as oversight and management of field data managers and invoice analysts. He supports the implementation of ADMS in the field, as well as establishing quality assurance and project reporting standards for disaster debris monitoring operations. Mr. Bosques has focused on providing complete auditable datasets that maximize reimbursement and are project worksheet ready.</p>	<ul style="list-style-type: none"> <li>• Disaster Debris Management</li> <li>• Data Collection, Utilization, and Validation</li> <li>• Data Management</li> <li>• Report designs</li> <li>• Reimbursement Policies and Procedures</li> <li>• Public Relations</li> <li>• Invoice Reconciliation</li> </ul>
<p><b>Casey Ogden</b></p> <p>GIS Analyst</p>	<p>Mr. Casey Ogden has more than 20 years of experience in Geographic Information Systems (GIS), with experience with the ESRI suite of products. He holds a Master's degree from the Florida State University with a Certificate of Emergency Management, as well as, a Bachelor's Degree from Louisiana State University in the field of Geography. As the geospatial applications manager, Mr. Ogden manages</p>	<ul style="list-style-type: none"> <li>• GIS Programming</li> <li>• ESRI Enterprise Geodatabase and Services</li> <li>• GNSS Survey Grade Data Collection</li> </ul>

a team of five GIS personnel and is responsible for developing GIS applications that are efficient, accurate, and cutting edge.

- ArcGIS Pro / ArcMap Operation and Support
- ArcGIS Server and AGOL Administration
- Accounting
- Fixed Assets
- Oracle
- Peoplesoft

**Geoff Reinhart**  
Billing/Invoice Analyst

Mr. Geoff Reinhart is an experienced CPA with both public and private sector experience. As a billing and invoice analyst at Tetra Tech, Mr. Reinhart is responsible for reconciling contractor invoices and performing quality control on data to ensure that all FEMA guidelines for debris removal monitoring are successfully fulfilled.

**Previous Experience with Williamson County**

Most recently, Mr. Reinhart has been providing billing and invoicing analysis services to all Tetra Tech’s projects related to Hurricane Ian. Following the disaster, Tetra Tech was activated by more than 40 clients. Mr. Reinhart has been performing cost/budget and margin analyses and reviewing invoices and accruals.

**Macy Moore**  
Project Coordinator

Ms. Macy Moore is an accomplished Regional Project Coordinator with five years of experience in the disaster recovery industry. Since joining Tetra Tech in 2017, she has supported projects in California, as well as multiple states along the Gulf and East coasts following hurricanes, tornadoes, and wildfires. Ms. Moore is responsible for onboarding, training, and assisting with the oversight of PC teams to ensure that projects run smoothly and efficiently.

- Project Coordination
- Project Setup
- Staff Training
- Organization
- QA/QC
- Scheduling and Dispatch
- Adherence to State Labor Laws

## Scalability and Additional Resources

Our scalable disaster recovery operations are staffed by a deep bench of experienced disaster recovery professionals that includes:



This core team provides management and oversight to our disaster response and recovery operations. They are seasoned experts in their field, with experience managing disaster recovery projects in response to hurricanes, floods, tornadoes, fires, ice storms, and straight-line wind events in 20 states and simultaneous activations in nine states.

While the Tetra Tech senior management team has worked together for more than 15 years, the firm also frequently welcomes new talent to meet client needs. Positions will be filled using Tetra Tech’s vast network of disaster recovery professionals, including full-time employees and local hires.

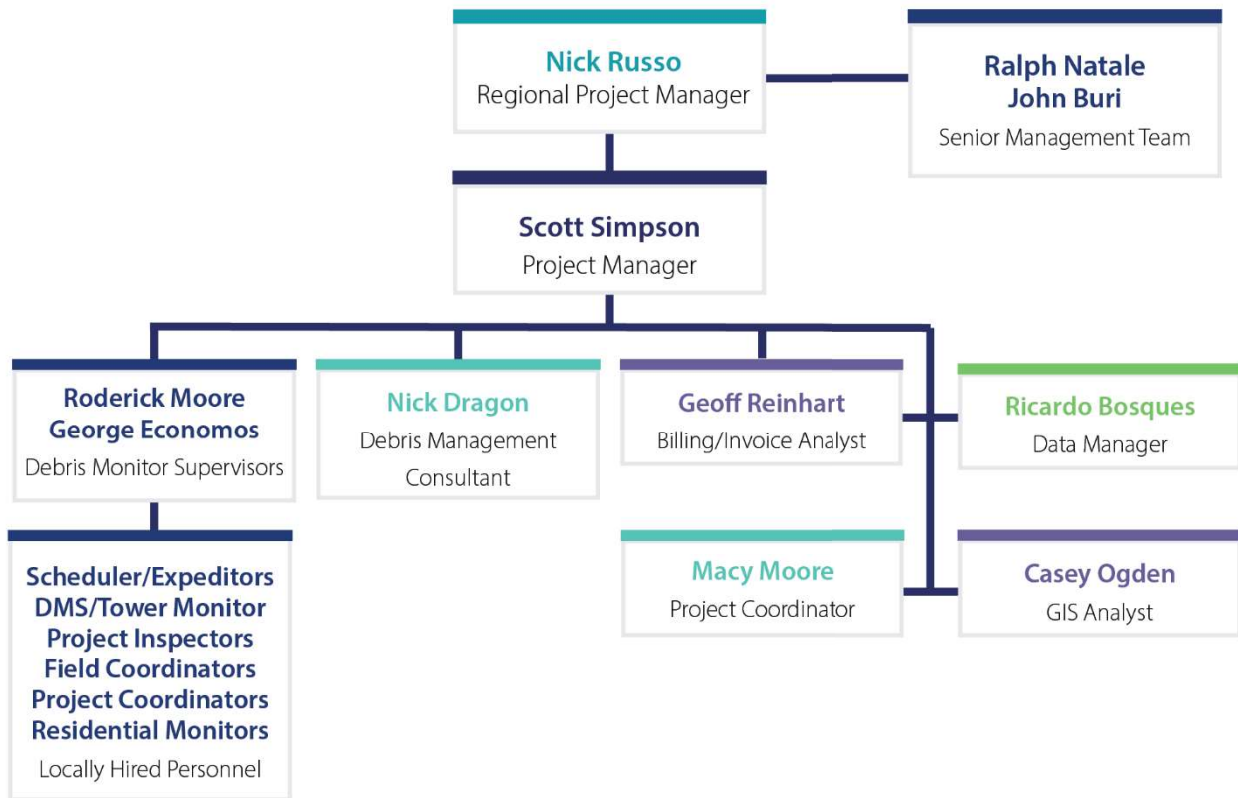
## Organizational Chart

The proposed organization structure is based on industry best practices and an understanding of geography and the distinct management responsibilities of each position. Our proposed organizational structure ensures orderly communication, distribution of information, effective coordination of activities, and accountability. Tetra Tech’s project team can scale as needed, coordinate response, establish common processes for planning and managing resources, and adapt organizational structure to match the needs and complexities of projects. **Resumés have been included at the end of this section.**



**Tetra Tech Key Staff**  
Organizational Chart

**Williamson County, TX**



**Incident Command Structure**

Tetra Tech’s emergency management professionals, many of whom are certified ICS instructors, provide guidance to our disaster recovery staff on how to effectively organize and respond to disasters. Our debris project managers have spent many hours in emergency operations centers across the country and understand how ICS works at the local and state level. Our debris project managers know how to apply IC-100, 200, 700, and 800 training in the field.

We understand the value ICS has in organizing for disasters, so we strive to implement these principles into our business processes. Per ICS, during disaster response operations, our structure includes an incident commander and section chiefs for operations, logistics, action planning, and finance and administration. We establish twice daily calls using Microsoft Teams with the incident command team and section chiefs to establish our incident action plan, identify resources needs, and plan for any deficiencies. We have a dedicated health and safety officer who oversees the operation and coordinates with health and safety personnel at each project location.

**Staffing Numbers**

Tetra Tech will comply with the County’s staffing requirements and coordinate with the County and the debris removal contractor’s project manager to estimate the number of field monitors that will be required for the following day. To be responsive and mitigate overstaffing, Tetra Tech requests that the debris removal contractor release the next day’s schedule by 5 p.m. so that our project manager can dispatch the appropriate number of field monitors.

## Staff Résumés

Resumes for our proposed staff can be found attached to the end of this section.

## Roles and Responsibilities

The following pages provide a brief overview of the responsibilities for key positions in our project structure. [Detailed information about the staff selected for these positions can be found in the resumes at the end of this section.](#)

### Project Management and Advisory

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- **Project Manager.** Our project manager, Scott Simpson, will be responsible for managing and supervising debris monitoring services as tasked by the County. He is also responsible for program oversight, task order preparation, forecasting, and quality assurance. The project manager will serve as a consistent point of contact for the County's debris managers and will provide a bridge between any preparedness and post-disaster response activities.
- **Debris Management Consultant.** Nick Dragon will be responsible for managing the interactions with the County during times of normalcy, including any pre-season meetings and trainings. Mr. Dragon will also serve as a consistent point of contact for the County's debris managers and will provide a bridge between any preparedness and post-disaster response activities.
- **Debris Monitor Supervisor.** During debris removal operations, our debris monitor supervisors, Roderick Moore and George Economos, are responsible for the quality control of supervising monitors, debris site/tower monitors, field coordinators, and project inspectors and verifying that documentation that is being captured is FEMA-compliant. He will verify that monitors retain their training and will respond to issues as they occur in the field.
- **Project Coordinator.** Macy Moore will be responsible for managing all staffing-related issues, such as daily staffing levels, time and expense reporting, obtaining field supplies, scheduling, and other coordination duties.

### Quality Assurance and Training

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- **Billing/Invoice Analyst.** Geoff Reinhart will work with our data manager to enter, tabulate, and organize collection and disposal data into FEMA-required formats. She will develop regular updates on the quantities and types of debris collected and will provide QA/QC processes for the review and verification of field and debris contractor-provided data in support of invoices.
- **GIS Analyst.** GIS analysts, such as Casey Ogden, are responsible for managing customized GIS applications within *RecoveryTrac*™ ADMS and manipulating data to achieve the County's programmatic goals. GIS analysts compile and integrate cartographic data, as well as providing necessary support to integrate collected data into geospatial reports.
- **Data Managers.** Tetra Tech data managers, including Ricardo Bosques, are responsible for multiple functions during debris removal activities, including reporting and quality assurance/quality control of all ADMS documentation in the field along with storing the documentation in preparation for future audits. Data managers will validate documentation and metrics being reported as accurate and on-schedule.

### Field Operations

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- **Supervising Monitors.** Supervising monitors are the bridge between our field operations and project management functions. Supervising monitors are tasked with the management of locally hired staff and field monitors, project timeline, and current tasking.
- **Loading Site Monitors.** Loading site monitors will use *RecoveryTrac*™ to track and record the metrics used to manage the project and document debris being collected from roadways. Monitors will also use *RecoveryTrac*™

to document missed piles, ineligible piles, homeowner interaction, safety concerns, contractor equipment, contractor damages, and more.

- **Debris Management Site Monitors.** Debris site/tower monitors are responsible for tracking and documenting debris as it enters a DMS or final disposal site using *RecoveryTrac*™. They will be making volumetric load calls using the methodology provided in our proposal. Debris site/tower monitors will also be required to keep backup logs and assist in truck certification as needed.
- **Roving Monitors.** Roving monitors are responsible for verifying that only eligible debris is being removed from eligible property within assigned debris pick-up zones. In addition, roving monitors support the hazardous tree documentation and removal processes throughout the three zones.

## Mobilization Capabilities

Based on the workforce planning standards described in the County’s request for proposal (RFP) and our numerous experiences working with local governments following debris-generating events, the following matrix illustrates our workforce mobilization following activation by the County. **Tetra Tech is committed to providing adequate staff within 24 hours of activation.**

Many of our mobilization requirements are directly proportional to the debris haulers needs. For example, as the debris hauler “ramps-up” during the initial two weeks of operations, Tetra Tech will respond accordingly with additional staff, and as the debris hauler scales back operations during project closeout, the need for Tetra Tech staff will diminish.

Tetra Tech is committed to working with the City to understand these staffing changes and the impact on the total dollar amount of the project. As a component of the Tetra Tech Monitoring Plan, we will estimate total staffing needs on a week-by-week basis over the duration of the project.

**Exhibit 4-2: Tetra Tech Mobilization Matrix**

Title	Industry Standards	Debris Hauler Mobilization	Mobilization Requirements
<b>Supervisors</b>			
<b>Project Manager</b>	1 per project	N/A	<b>1 full time employee (FTE)</b>
<b>Debris Management Consultant</b>	1 per project	N/A	<b>1 FTE</b>
<b>Operations Manager</b>	1 per project	N/A	<b>1 FTE</b>
<b>Mobilization Operations</b>			
<b>GIS Analyst</b>	1 per project	N/A	<b>1 FTE</b>
<b>Truck Certification</b>	3 per project	150 dump bodies	<b>3 FTE</b>
<b>Environmental Specialist</b>	as needed	N/A	<b>1 FTE</b>
<b>Collection Operations</b>			
<b>Project Coordinator</b>	1:50 monitors	N/A	<b>1 FTE</b>
<b>Field Supervisors</b>	1:10 monitors	N/A	<b>3 FTE</b>
<b>Field Coordinator (Crew Monitors)</b>	1/loading unit	30 loading units	<b>30 FTE</b>
<b>Project Inspector (Citizen Drop-Off Monitors)</b>	as needed	N/A (2 per each residential drop off site)	<b>10 FTE</b>
<b>Disposal Operations</b>			
<b>Disposal Supervisor</b>	1:5 Sites	N/A	<b>1 FTE</b>

<b>Debris Site/Tower Monitors</b>	2 per TDSRS location	2 TDSRS locations	<b>4 FTE</b>
<b>Data Operations</b>			
<b>Billing/Invoice Analyst</b>	1 per project	N/A	<b>1 FTE</b>
<b>Automated Ticketing Specialist</b>	<b>1 per project</b>	<b>N/A</b>	<b>1 FTE</b>

## Project Management Oversight

### Tetra Tech’s Time-Tested Approach to Debris Management

**Tetra Tech’s project management principles include five critical pillars:** transparency, resources, compliance, efficiency, and mitigation.

**Transparency:** Maintaining visibility of the project’s contractual scope, prioritization, schedule, budget, and cost areas.

Real-time data sharing creates a common operating platform and allows the County, its debris removal contractors, and our team to access the same accurate information, which markedly improves their ability to execute efficiently.

**Resources:** Ensuring availability and proper distribution of staff and equipment.

We have never failed to respond to a client, regardless of the size of the project. Our resources include the largest pool of qualified environmental and disaster recovery professionals in the nation.

**We are committed to providing a consistent and coordinated project team** to perform the scope of work upon activation. Our project team will dedicate themselves to the County’s needs throughout the year, not just during times of activation.

**Compliance:** Maximizing reimbursement funding as well as documenting and managing potential issues.

Tetra Tech’s *RecoveryTrac*™ ADMS enables consistency, efficiency, and compliance in the documentation process. Tetra Tech field teams strictly adhere to funding agency requirements with up-to-the-minute awareness of changes in legislation, in-process quality controls, and guidance from our leadership team. As a result, the County benefits from maximum potential for reimbursement.

**Efficiency:** Keeping pace with scheduled goals and milestones throughout project work.

We maintain the industry’s largest staff of disaster professionals to facilitate immediate mobilization. *RecoveryTrac*™ ADMS reports real-time data, and our QA/QC team checks documentation as work is being completed. The County will have real-time access to data and can geospatially visualize work activities, whether in our system or as an export to their own system. Throughout project execution, Tetra Tech project managers monitor and adhere to project timelines and milestones to ensure pace with the County’s expectations.

**Mitigation:** Identifying risks, managing the project risk matrix, and documenting risks encountered.

Tetra Tech provides a unique understanding of the various critical functions of debris monitoring (project management, environmental, logistics, data, grant management, etc.). This experience allows our team members to proactively identify risks, appropriately develop and document mitigation measures, and continually improve.

## General Response Timeline

Based on Tetra Tech’s understanding of the County and their needs, we have developed a draft mobilization schedule with key project management tasks in chronological order. The timeline is based on a typical activation; however, Tetra Tech is prepared to work with the County to adjust the timing of the specific elements below to meet the County’s needs.

Prior to an event with warning (such as a hurricane), our team will begin monitoring the landfall of any tropical system at H-96 and will coordinate via conference call with the County. Following an event without warning (such as tornadoes or flooding), Tetra Tech will begin response at H-0.



### Operational Response Timeline for Debris-Generating Events

Time	Task	Deliverables/Milestones
<b>Pre-Event Planning</b>		
Pre-event (normal conditions)	<b>Meet with the County to review plans and documents</b>	<ul style="list-style-type: none"> <li>Conduct annual pre-event meeting with the County and debris contractor</li> <li>Review the County's disaster recovery contracts for FEMA compliance</li> <li>Update critical documents and files, including any GIS files</li> <li>Contact the County and initiate daily conference call</li> </ul>
H-96	<b>Review capabilities and resources</b>	<ul style="list-style-type: none"> <li>Determine resource requirements from debris model</li> <li>Review the County's emergency policies and contracts</li> <li>Establish contact with the County's debris hauler and ensure Tetra Tech has the most up to date copy of the debris hauler contract</li> </ul>
<b>Incident Planning</b>		
H-72	<b>Execute responsibilities and activate contracts</b>	<ul style="list-style-type: none"> <li>Review possible critical areas of concern, hospitals, major transit systems, historic districts, environmental issues, and critical infrastructure</li> <li>Review protocols for private property, gated communities, and public drop-off sites</li> <li>Review debris management site (DMS) locations and follow up with the State on permitting procedures</li> <li>Estimate equipment requirements and DMS capacity to haul and stage debris</li> <li>Prepare ADMS technology for mobilization</li> <li>Conduct regular meetings with County staff as requested</li> <li>Confirm staging location and begin mobilization of resources</li> </ul>
H-48	<b>Monitor storm track and continue preparations</b>	<ul style="list-style-type: none"> <li>Mobilize project assets and begin base camp coordination and logistics (food, water, housing, etc.) with the County and Tetra Tech headquarters (if necessary)</li> <li>Review list of priority roads and the operational plan</li> <li>Obtain GIS files for municipalities that the County will assist with debris removal</li> <li>Continue to update and gather updates from the County's debris hauler</li> <li>Save all critical documents and files to the network drive, USB drive, and laptop hard drive</li> </ul>
H-24	<b>Prepare final reports</b>	<ul style="list-style-type: none"> <li>Certify emergency road clearance equipment (in coordination with the County's debris hauler)</li> <li>Determine emergency road clearance priorities</li> </ul>
<b>H-0 ARRIVAL OF NOTICE EVENT/INITIATE RESPONSE TO NO-NOTICE EVENT</b>		
<b>Execution</b>		
H +24	<b>Emergency push</b>	<ul style="list-style-type: none"> <li>Receive notice to proceed with not to exceed</li> <li>Begin emergency push</li> <li>Maintain time and materials (T&amp;M) logs for push equipment</li> <li>Coordinate with the County to conduct preliminary damage assessments and road closures (if requested)</li> <li>Supervisors report to pre-designated locations and prep staff on project</li> <li>Begin establishing ADMS infrastructure</li> <li>Begin recruiting and training monitors, project coordinators, and data staff</li> </ul>

Time	Task	Deliverables/Milestones
H +48	<b>Emergency push/ damage assessment</b>	<ul style="list-style-type: none"> <li>• Initiate opening of DMS locations</li> <li>• Follow up with State-level environmental regulations on debris permits (if required)</li> <li>• Work with the County to establish public information protocols to respond to concerns and comments</li> <li>• Continue emergency push</li> <li>• Continue preliminary damage assessment</li> <li>• Develop debris cost estimate required for presidential disaster declaration</li> <li>• Develop operational plan for disaster-specific issues</li> <li>• Refine health and safety plan for disaster-specific issues</li> </ul>
H +72	<b>Disaster debris vehicle certification/ site preparation</b>	<ul style="list-style-type: none"> <li>• Begin hauling truck certification</li> <li>• Install ADMS tower monitor infrastructure</li> <li>• Train monitors on policies, ADMS, and safety</li> <li>• Open public drop-off sites as requested</li> <li>• Assign monitors to trucks</li> </ul>
H +96	<b>Begin debris collection monitoring</b>	<ul style="list-style-type: none"> <li>• Assign supervisors to monitors</li> <li>• Hold morning and afternoon meeting with County staff and debris hauler</li> <li>• Implement QA/QC procedures</li> <li>• Continue ROW collection</li> <li>• Address household hazardous waste (HHW) issues (if critical)</li> </ul>
Week 1+	<b>Right-of-way (ROW) debris collection monitoring</b>	<ul style="list-style-type: none"> <li>• Issue daily reports/GIS maps</li> <li>• Hold daily meetings with the County, hauler, and/or State/FEMA as required</li> <li>• Staff citizens debris management hotline (if requested)</li> <li>• Define supplemental programs required (private roads, HHW) and prepare eligibility request</li> </ul>
Week 1+	<b>Data management and invoice reconciliation</b>	<ul style="list-style-type: none"> <li>• Provide ADMS reports and real-time monitoring access</li> <li>• Establish client GeoPortal to provide insight into project progress</li> <li>• Review truck metrics provided by <i>RecoveryTrac</i>™ ADMS</li> <li>• Initiate weekly reconciliation</li> <li>• Initial payment recommendations with retainage</li> </ul>
Week 1+	<b>Reimbursement support/grant administration (FEMA, NRCS)</b>	<ul style="list-style-type: none"> <li>• Prepare damage/cost estimates</li> <li>• Compile supporting documentation (debris permits, debris contracts, etc.)</li> <li>• Liaise with local FEMA region officers, state-level emergency management representatives, U.S. Army Corps of Engineers (USACE), etc.</li> </ul>
Week 2+	<b>Special projects (if required)</b>	<ul style="list-style-type: none"> <li>• Waterway debris removal</li> <li>• Private property debris removal (PPDR)</li> <li>• Public drop-off sites</li> <li>• HHW</li> <li>• Mud/silt/sand removal (from storm drains, ditches, etc.)</li> <li>• Identify areas of operational concern and make disaster-specific recommendations to FEMA to improve efficiency</li> </ul>
Week 3+	<b>Financial recovery assistance staff engaged (if requested)</b>	<ul style="list-style-type: none"> <li>• Facilitate kickoff meetings with primary stakeholders</li> <li>• Draft a PA work plan</li> <li>• Conclude/review preliminary damage assessments</li> <li>• Gather documentation for project worksheet (PW) development</li> <li>• Identify opportunities for mitigation</li> <li>• Conduct site visits</li> </ul>
<b>Project Closeout</b>		
Project completion	<b>Document turnover/closeout</b>	<ul style="list-style-type: none"> <li>• Final reconciliation</li> <li>• Retainage release</li> <li>• Release hard copy files</li> <li>• Provide electronic database</li> <li>• Assist with PW development</li> <li>• Assist the County with long-term reimbursement</li> <li>• Audit assistance</li> <li>• Appeal support if necessary</li> </ul>

## Debris Management Plan Development and Review

The goal of a disaster debris management plan (DDMP) is to better prepare state and local governments to respond to and recover from a debris-generating event. DDMPs help communities restore public services and streamline public health and safety efforts in the aftermath of a disaster by outlining the coordination and debris removal management operations and integrating with the overall emergency management plan. DDMPs also provide the organizational structure, guidance, and standardized procedures for the clearance, removal, and disposal of debris caused by a major debris-generating event and outline pre-event preparations during times of normalcy, operations immediately prior to a known disaster threat, operations following the disaster event, and demobilization and closeout following completion of debris removal efforts.

As a leading provider of emergency management services, Tetra Tech knows what it takes to respond effectively and initiate recovery activities almost simultaneously while maintaining transparency for the public and elected officials. Our active involvement in response and recovery efforts enables us to develop realistic plans that can be effectively implemented during a response. Tetra Tech offers the County support with the various phases of debris management planning, development, and review, including:

- Vulnerability assessment
- Identification of management team organizational structure
- Working with leadership and stakeholders to establish and define roles and responsibilities
- Development of pre-event, immediate threat, response, and recovery checklists
- Development of public information programs for the various stages of response and recovery
- Debris estimation
- Analysis and identification of TDSR sites
- Development and evaluation of debris removal and disposal contracts

## EOC Staff Augmentation

Tetra Tech stands ready to serve as a force multiplier for Williamson County's staff in the event of an emergency, disaster, or preplanned special event by providing appropriate staff augmentation services as well as administrative support to the EOC. Tetra Tech's cadre of trained, credentialed, and experienced emergency management professionals have real-world experience in almost every EOC position from executive leadership to administrative support. Many of our team members have served on Incident Management Teams (IMT) or are former state and federal executive leaders who can provide proven expertise gained via real-world disaster response and recovery experience to serve in operational, advisory, liaison, and advocacy roles. All emergency management staff proposed to support SEOC operations have direct EOC management and operations experience.

Having served over 300 state and local government clients in response to over 90 declared presidential disasters, our staff has the experience to begin operations in multiple EOC roles on day 1 of this contract. Our work includes rapidly deploying professionals to support EOCs, logistic staging areas (LSA), FEMA's Joint Operations Centers (JOC), or Forward Operating Bases (FOB). During response operations, Tetra Tech fulfills command and general staff positions or direct support to the mission. We routinely support the following activities:

- Incident Action Plan (IAP) and Situation Report (SitRep) development
- Emergency and Recovery Support Function coordination
- Geographic Information System (GIS) Dashboard preparation
- Resource management and disaster logistics
- Preliminary damage assessment
- Finance/Administration Section support
- Joint information system/center support

Tetra Tech understands that running an EOC requires ample resources coupled with established relationships and an understanding of local, regional, and state nuances. Tetra Tech is prepared to be flexible in the support provided in an EOC environment. While Tetra Tech team members are fully capable of staffing executive leadership positions, we

understand that contractors are sometimes best used in roles supporting existing agency/department staff to help build internal capacity. The table on the following page provides examples of the types of assistance Tetra Tech could provide for each of the EOC positions/sections listed. This is not an exhaustive list.

## The Tetra Tech Advantage

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In an EOC environment, where teamwork and established relationships are critical, Tetra Tech can offer our clients a cadre of existing team members who have experience working together as a cohesive unit to support our clients. Additionally, we prioritize providing staff who already have established relationships with clients and their stakeholders in times of crisis to allow for maximum integration into the client's EOC structure and process.

## Public Information

Tetra Tech is prepared to assist with developing a means for the County to manage inquiries from residents regarding the debris removal process. Tetra Tech has staffed debris hotlines for some of the largest disasters that have impacted the United States and can help the County establish and staff a debris hotline (including supplying equipment, phone lines, etc.) to respond to public inquiries and concerns.

Public information for debris operations should focus on two components: safety for handling debris and proper set-out procedures. Many hurricane-related injuries and deaths occur after the incident because citizens do not safely address disaster damage and debris. Some of these deaths and injuries could be avoided if residents were provided timely information on how to safely address disaster-related damage to their homes. Public information for residents should include safety precautions for assessing their damaged homes and operating dangerous equipment to remove debris. In addition to safety instructions, proper set-out procedures are critical to ensure that the County can maximize recycling opportunities, reduce impacts to landfill capacity, and maintain efficient debris removal operations.

Public information should include instructions for residents to properly separate their debris streams such as HHW, electric waste, construction and demolition debris, vegetative debris, and white goods. Public information should provide residents with specific instructions for separating and bundling their debris and include any information for citizen drop-off locations.

Public messages must meet the needs of the community to ensure all populations receive and understand critical information in a culturally appropriate and effective manner. Tetra Tech will coordinate with the County public information officer to ensure the correct information regarding debris operations is provided to the public in a format that is accessible to the County diverse population, in a language all can understand.

## Call Center Operations

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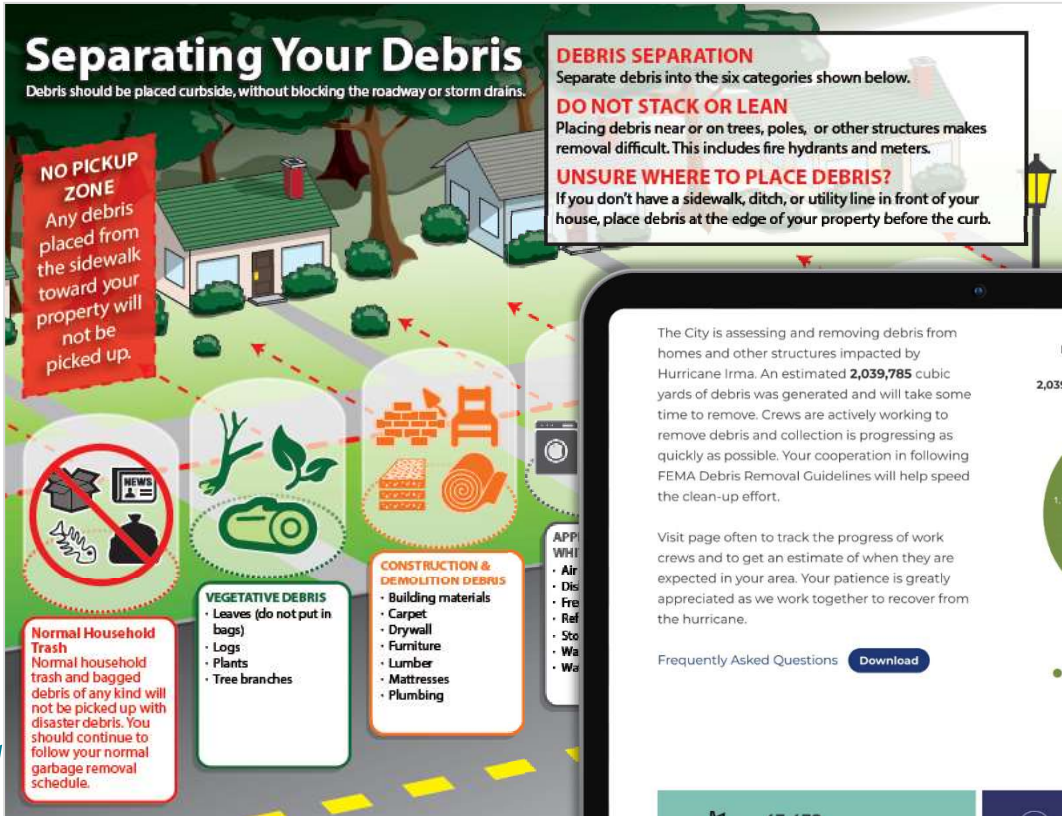
Emergency events place tremendous stress on public information centers. Tetra Tech routinely provides call center operations to our clients following natural disaster events. We can deploy a remote call center with trained staff if needed by the County. With our experienced team and advanced technical infrastructure, Tetra Tech can quickly assess needs and provide an end-to-end solution that includes a communications plan, toll-free numbers, operator staffing, call documentation, and reporting. Providing this service allows our clients to focus on the problems at hand, while staying connected and responsive to the community's need for information. Tetra Tech has provided these services to communities impacted by some of the worst disasters of our time.

Tetra Tech successfully operated a call center for Harris County OHSEM following Hurricane Harvey in 2017 and stood it up within 24 hours of a Notice to Proceed. We have also provided this service to Osceola and Polk County, FL following Hurricane Irma; and the City of Houston, City of Galveston, Galveston County, and Montgomery County, Texas, following Hurricane Ike.



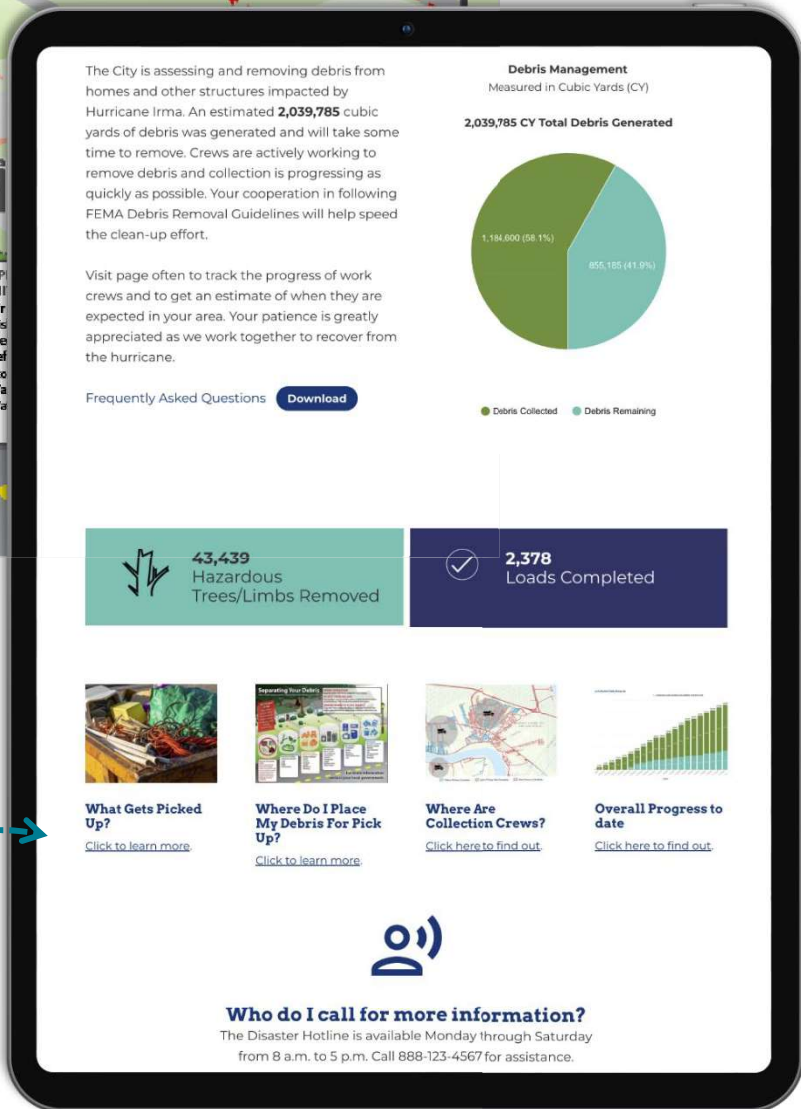


## Public Information Campaigns



Flyer detailing debris separation and placement guidance for residents.

Public-facing website detailing collection information, debris removal status, and more.

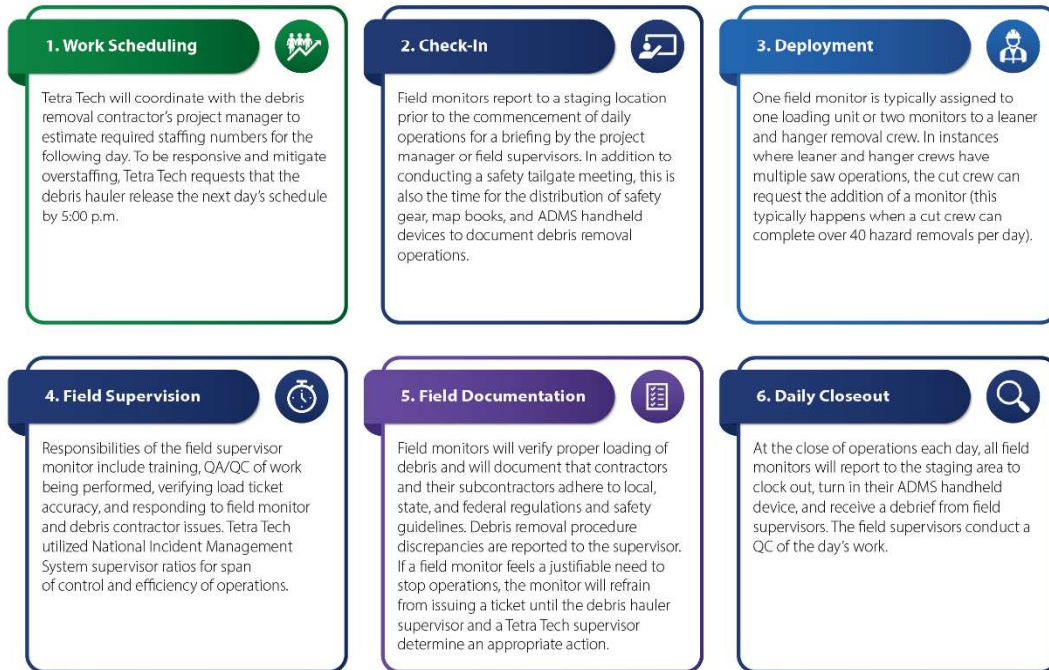


# Field Collection Monitoring

## Field Operations

The Tetra Tech debris monitoring program includes the following:

### Tetra Tech Daily Field Operations



Potential Delay	Tetra Tech Strategy
<b>Inability of a debris contractor to respond with sufficient equipment</b>	Tetra Tech will provide burn rate analysis to verify the proper equipment is being provided. This will be adjusted as more accurate debris estimates are available.
<b>Leapfrogging by the contractor (cherry picking work being performed)</b>	Leapfrogging can be detrimental to the efficiency of operations and will be reported by Tetra Tech.
<b>Delayed invoices by the contractor</b>	Tetra Tech will work to make the contractors aware of an appropriate timeframe for invoicing and will communicate with the County if deadlines are not being met.
<b>Not adjusting deadlines for collecting debris and work schedule that is based on an update-to-date estimated work to be completed</b>	As damage estimates become more accurate (as is typical throughout the process), Tetra Tech will work with County officials to adjust the timeline to appropriately reflect the changing estimates.

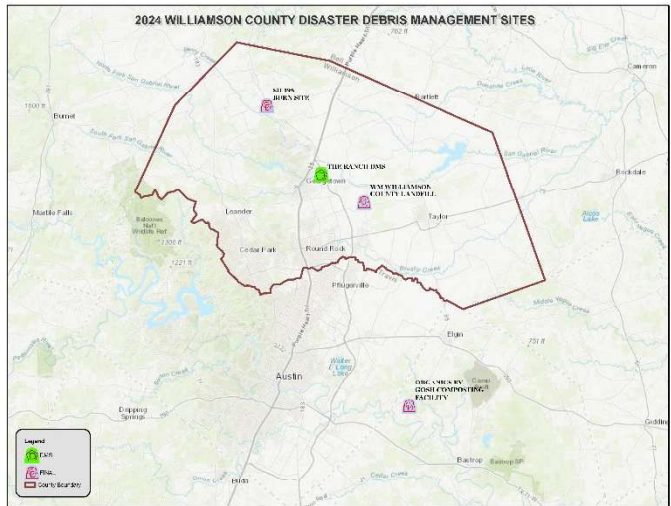
In addition, there are events out of the control of all parties that could negatively impact a debris removal operation (for example, inclement weather). In the event any of these circumstances occur, Tetra Tech will work closely with the County to refine timelines and support an expeditious recovery for the County.

# Temporary Debris Storage and Reduction Site Monitors

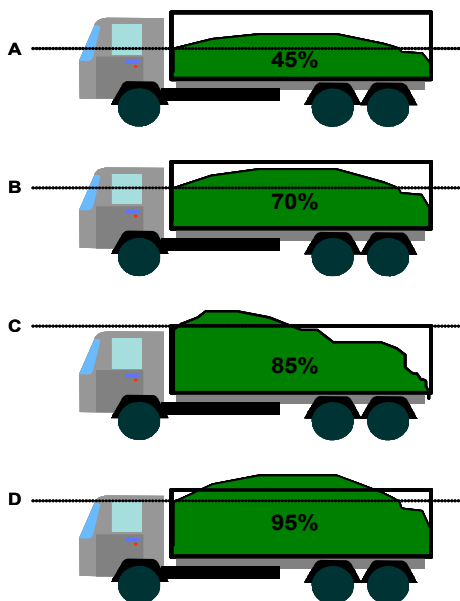
## Debris Management Site Monitoring

As TDSR are activated, Tetra Tech will provide a minimum of two (2) disposal monitors per site, which may scale depending on site layout and operational needs. The disposal monitors will verify that the debris contractor passes through the TDSR, analyze the drive time of the contractor, and verify accurate and complete documentation. Several daily audits will be performed by project managers and supervisors to verify that load call data is consistent and accurate. Documentation kept by Tetra Tech TDSR disposal monitors includes:

- **Load Ticket.** Documents that debris removal complies with all FEMA requirements.
- **Disposal Monitor Log.** Used as backup documentation as required by FEMA.
- **Scale Manifest Tickets.** For weight-based debris hauling contracts, Tetra Tech will digitize and catalog scale tickets.
- **Incident Report.** Tetra Tech will document property damage, arguments, unsafe practices, and injuries.
- **Photographic Documentation.** Tetra Tech disposal supervisors will photograph a TDSR frequently to create a visual timeline of the site.
- **QA/QC of Field Tickets.** Disposal monitors review and verify collection monitors' work in the field.



### Load Call Estimate Examples



**Example A.** The mounded portion of the load offsets the areas where the load drops below the fill line. Because the load includes light and medium debris, the load percentage estimate is 45 percent.

**Example B.** The mounded portion of the load offsets the areas where the load drops below the fill line. Because the load includes light and medium debris, the load percentage estimate is 70 percent.

**Example C.** The mounded portion at the front of the load offsets the area in the back where the load drops below the fill line. Because the load includes light and medium debris, the load percentage estimate is 85 percent.

**Example D.** The mounded portion of the load offsets the areas where the load drops below the fill line. Because the load includes light and medium debris, the load percentage estimate is 95 percent.

Following the completion of work at the TDSR, the baseline soil testing is used to verify site remediation is complete.

## Residential Drop-Off Sites

Residential drop-off sites can be beneficial by allowing residents to address disaster debris on their property. However, to be eligible by FEMA, the County must verify that only their residents are using the drop-off site and prevent commercial debris contractors from disposing of debris at the residential drop-off site. Tetra Tech can assist the County in monitoring residential drop-off sites and verifying Williamson County residence before a resident unloads debris at the site.

## Load Tickets

The load ticket is used to document debris removal. This ticket documents the material receiving facility name, date, time of disposal, quantity of debris received for disposal (volume or weight), crew leader name, manifest number, and scale ticket number.

If tasked by the County, Tetra Tech is able to provide a driver a secure barcode to pass along to the final disposal monitor when arriving at the final disposal destination. A scan of that ticket and verification of debris type that was listed leaving the site are equivalent to completion of the debris ticket and verification of that load for FEMA reimbursement.

## Documentation Efforts

Throughout the duration of our project, various task areas such as technology, health and safety, and reporting are integrated seamlessly into Tetra Tech's workflow. Our daily efforts are supported by *RecoveryTrac*™ automated debris management system (ADMS) software and other technology that evolves continuously, requiring constant updates and adaptations to meet project needs. Similarly, health and safety protocols are consistently monitored and adjusted to ensure the well-being of all involved. Ongoing reporting entails regular documentation to track progress and address any emerging challenges, ensuring transparency and accountability at every stage of the project. These processes occur concurrently, reflecting the dynamic nature of our project environment.

## Technology

In the realm of a response following a disaster, our effectiveness is intricately linked to the technological resources at our disposal. The quality and capabilities of our response are directly proportional to the advanced tools and systems we employ, enabling us to mitigate the aftermath of any disaster scenario swiftly and efficiently. For Tetra Tech, that technology is *RecoveryTrac*™ – the industry-leading software that powers our response activities.

## *RecoveryTrac*™ Automated Debris Management System

Our team has spent years on research and development to streamline the debris collection documentation process, with a focus on minimizing the cost to our clients while improving the visibility of debris project operations. *RecoveryTrac*™ ADMS is the result of these efforts. *RecoveryTrac*™ ADMS is a scalable and fully featured disaster management application designed to address the operational challenges faced during a disaster recovery project.

**Our proprietary *RecoveryTrac*™ ADMS technology was validated by the U.S. Army Corps of Engineers (USACE) in 2015 and again in 2023.** The system provides real-time collection of data and offers multiple solutions to data management, reporting, invoice reconciliation, and project controls that cannot be achieved with a paper-based program.

Ticket Image Export

**Load Ticket**

**RecoveryTrac 6980321**

**Load Ticket**

---

**Ticket Information**

Ticket Date/Time: 10/03/2022 10:17 AM  
Applicant: [REDACTED]  
Disaster: [REDACTED]  
Contractor: [REDACTED]  
Truck No: 821210  
Capacity: 77.00  
Driver: [REDACTED]

---

**Collection**

GPS(Lat,Lng): [REDACTED]  
Address: [REDACTED]  
Debris Type: CONSTRUCTION&DEMOLITION  
Loading Date/Time: 10/03/2022 9:35 AM  
Monitor Name (id): JUL [REDACTED]

---

**Disposal**

Ticket Date/Time: 10/03/2022 10:17 AM  
GPS(Lat,Lng): [REDACTED]  
Disposal Site: [REDACTED]  
Lead Call: 50%  
Disposal Date/Time: 10/03/2022 10:17 AM  
Scale Ticket No.: N/A  
Weight(Tons): N/A  
Monitor Name (id): [REDACTED]  
Notes: [REDACTED]

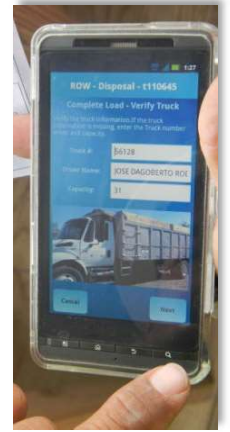
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**Tetra Tech has implemented *RecoveryTrac™* ADMS technology on our last 200 FEMA PA-eligible projects.** On these projects, our clients and FEMA found this state-of-the-art technology to increase efficiency and improve the management of debris removal efforts.

Tetra Tech's *RecoveryTrac™* ADMS system is regarded as the #1 debris tracking system in the industry for the following reasons:

- **Most Broadly Tested ADMS in the Industry** – *RecoveryTrac™* ADMS is a proven system that has been used to execute the largest USACE activations involving ADMS technology, including the State of California NORCAL Fire response and the State of Georgia Hurricane Michael statewide activations. During simultaneous response to Hurricanes Harvey and Irma in 2017, Tetra Tech deployed approximately 6,000 ADMS devices to collect and manage data for over 100 projects. **No other system has tracked and documented as much debris as *RecoveryTrac™*.**
- **Stable and Secure ADMS System** – *RecoveryTrac™* ADMS is the industry leader in secure data systems. The *RecoveryTrac™* system is securely hosted in the Microsoft Azure Government high-availability, cloud-based data center with restricted access and transaction-level auditing. The database is continually backed up and immediately replicated to an off-site location. The database is geospatially based and is maintained and synchronized with the reporting database in near real-time to maximize system performance, availability, and security.
- **Unmatched Flexibility to Meet the Needs of Any Client** – The system is designed to be fully customizable and allows for multiple data collection methods to streamline the debris collection documentation process with a focus on minimizing the cost to our clients and improving the visibility and transparency of debris project operations.
- **Unrestricted by Hardware** – Because *RecoveryTrac™* ADMS utilizes readily available hardware, there are no restrictions to the amount of ADMS units our team can provide. Our team stocks thousands of units and can expand to fit any client's needs, including multiple simultaneous activations.



### Benefits of *RecoveryTrac™* ADMS

**Ability to Respond.** Combined with the on-hand inventory of thousands of handheld devices and the ability to rapidly procure additional equipment through preferred vendor relationships, the County can rely on our mobilization strategy for zero-day activations in disasters covering large areas with little or no-notice. **The on-hand inventory can be on-site and ready to use within 24 hours of a notice to proceed,** and additional needs can be met quickly (in most cases, 72 hours or less).

**Simple and Intuitive.** A key foundation of our mobilization strategy is the ability to quickly hire and train local residents and begin debris removal operations. The mobile application is simple to understand and intuitive, allowing most users to begin using the device once the standard monitor training is completed.

**Cost Effective.** *RecoveryTrac™* ADMS combines the advantage of automation and the desire of our customers to control costs by utilizing widely available commercial equipment and increasing the simplicity of operations.

**Reliable and Stable.** Based on the Android operating system, *RecoveryTrac™* ADMS is secure and reliable. This minimizes the interruptions in field operations due to technical difficulties and reduces the number of support personnel required to maintain the system.

### *RecoveryTrac™* ADMS Key Facts

- Owned and operated by Tetra Tech
- Thousands of mobile units on-hand and ready for state-wide multi-district mobilizations
- Meets USACE specifications for electronic debris monitoring handhelds
- Real-time situation awareness of field resources and efficient direction to support the County's priorities
- Real-time GIS web services for EOC information and visualization systems
- Capable of collecting data regardless of cellular service
- Automated photograph and GPS capture
- Provides reports and pass map tracking in real-time
- Minimizes chance of fraud through real-time monitoring
- Minimizes data entry and human error
- Expedites invoice reconciliation
- Intuitive and user-friendly

**Technical Support.** *RecoveryTrac™* ADMS is designed to be self-repairing when possible; most support needs are resolved by field supervisors who are able to reach field monitors within 15–30 minutes in most cases. In addition, we have dedicated technicians at disposal sites and provide a field service center to maintain and repair equipment.

**Truck Tracking.** Our system is capable of providing with real-time location data for debris hauler assets. This translates into the ability to manage assets to those hardest hit locations or distribute assets more evenly based on issues such as first-pass completion, traffic patterns, and hot spots.

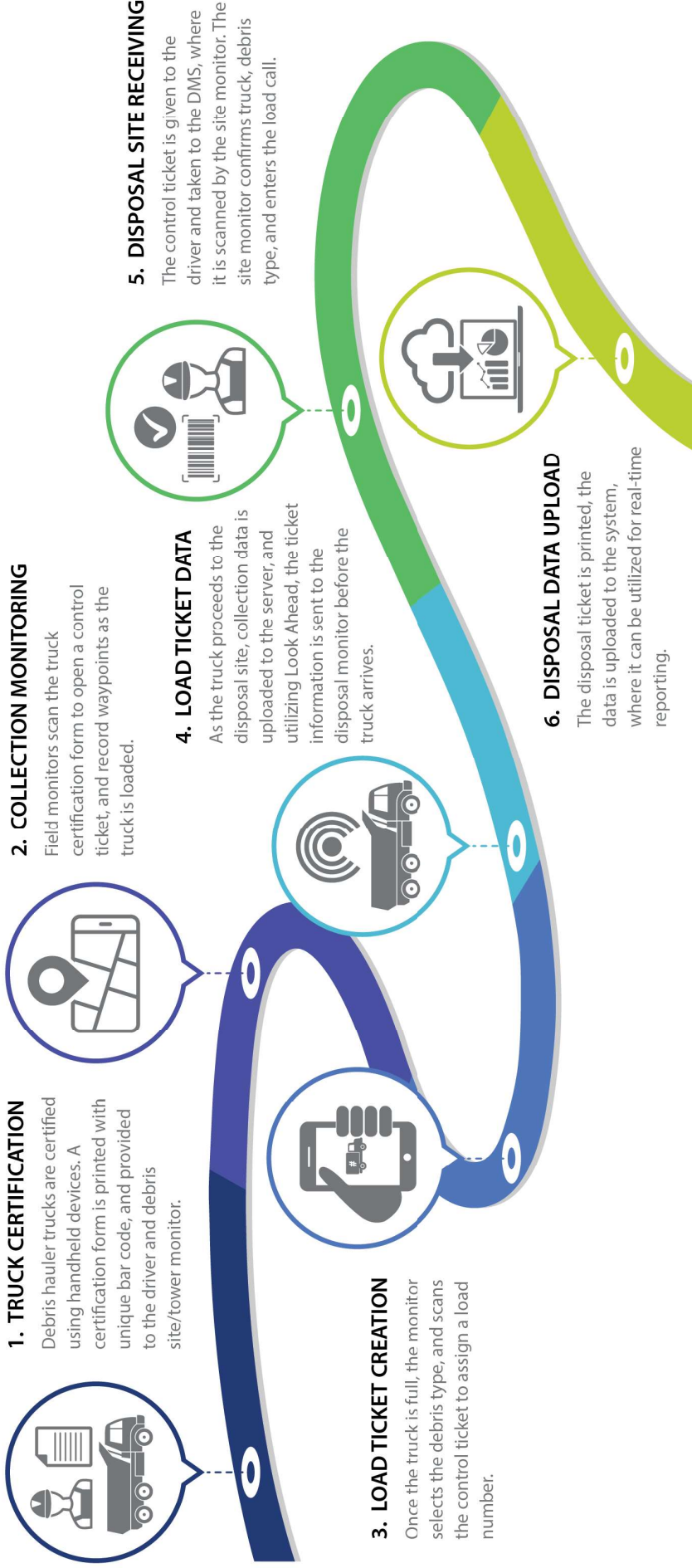
**Real-Time, Customized Reporting.** The key to successful management of a debris project is the timely availability of relevant information needed to make sound decisions and respond to anomalies before they become issues. Our powerful reporting engine allows the user to monitor contractor performance, track damages, track street-by-street debris removal progress, and identify and resolve potential problems as they happen. The geospatial reporting systems within *RecoveryTrac™* provide real-time information that raises the bar for post-disaster project management.

The demo at the QR code to the right walks you through the new *RecoveryTrac™* mobile data collection tool called Flex. The demo highlights the Form Builder, Mobile Data Collection App, Completed Form Processing, and final Email Delivery. Another intuitive side of *RecoveryTrac™* suite, users can easily push the required forms out to end users in the field. Once the field worker completes the form, the form is automatically uploaded when Internet connection is available.



## The RecoveryTrac™ Process

The steps of the RecoveryTrac™ ADMS process are as follows:



**Even when there is no cellular connection, the handheld devices continue to operate in connected mode; however, the data is stored on the device until a data connection is restored.** The device periodically searches for this connection, and when services are device automatically uploads the stored ticket data.

## RecoveryTrac™ ADMS Features

Tetra Tech brings significant experience and understanding in the design and build of disaster debris removal data management systems that offer data collection, storage, sharing, analysis, and reporting.

**Because of our previous experience, we have several ready-to-use components already built and ready to deploy.** These components can be quickly repurposed saving time and cost while ensuring field work starts quickly. Some examples of these existing capabilities and tools include:

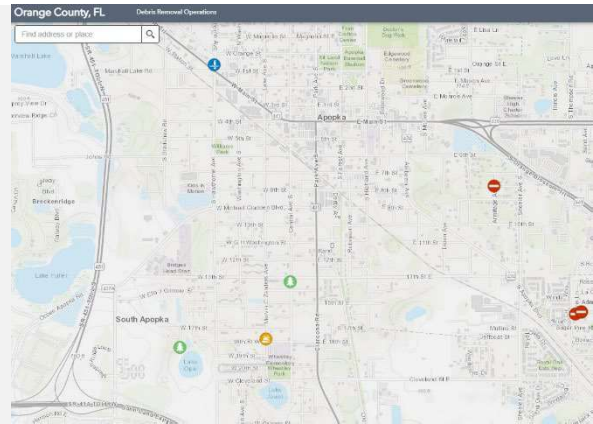
Our operational and data experience with disaster debris monitoring, combined with the best GIS and data professionals in the industry, results in **top-shelf solutions to the most complicated data and tracking needs.**

Industry-standard ArcGIS Feature Services allows us to transmit *RecoveryTrac™* ADMS data as GIS layers by way of internet and serves as a foundational building block for client applications.

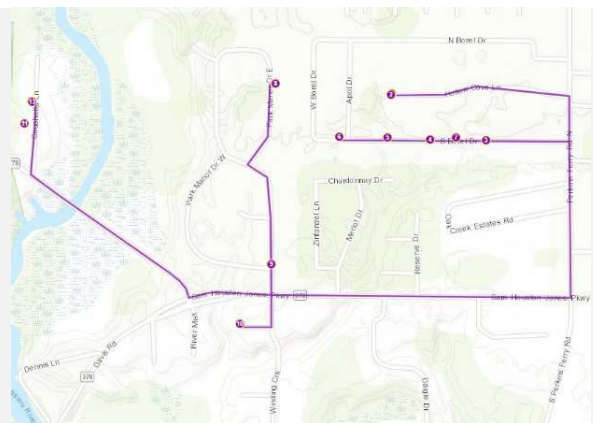
### Services:

- [RT/RecoveryTrac\\_DebrisAuditData\\_RT2020](#) (FeatureServer)
- [RT/RecoveryTrac\\_DebrisAuditData\\_RT2020](#) (MapServer)
- [RT/RecoveryTrac\\_DebrisRemovalData\\_RT2020](#) (FeatureServer)
- [RT/RecoveryTrac\\_DebrisRemovalData\\_RT2020](#) (MapServer)
- [RT/RecoveryTrac\\_MonitorLocations\\_v1](#) (MapServer)
- [RT/RT2018\\_ProjectBoundaryData\\_v1](#) (FeatureServer)
- [RT/RT2018\\_ProjectBoundaryData\\_v1](#) (MapServer)
- [RT/RT2018\\_ProjectZoneData\\_v1](#) (FeatureServer)
- [RT/RT2018\\_ProjectZoneData\\_v1](#) (MapServer)
- [RT/RT2018\\_SiteObservationsIncidentData\\_v1](#) (FeatureServer)
- [RT/RT2018\\_SiteObservationsIncidentData\\_v1](#) (MapServer)
- [RT/RT2020\\_ProjectZoneData\\_v1](#) (FeatureServer)
- [RT/RT2020\\_ProjectZoneData\\_v1](#) (MapServer)

**Initial Work Surveys** document results of initial surveys to quickly collect, display, and summarize data into actionable operations planning. This data, including photographs, can be used to organize and deploy resources to improve speed and efficiency of the operation.

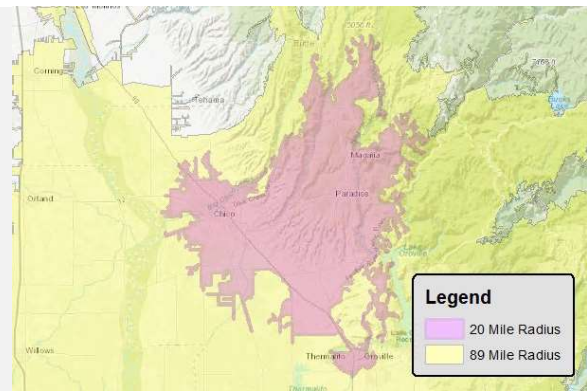


Work lists and **optimized routes** can be generated by the *RecoveryTrac™* system. As the routes are completed, the locations are marked complete.

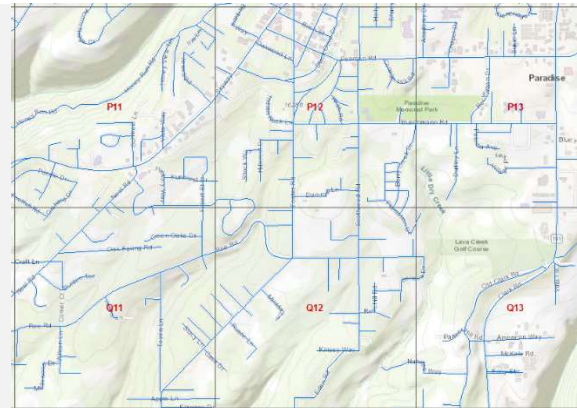




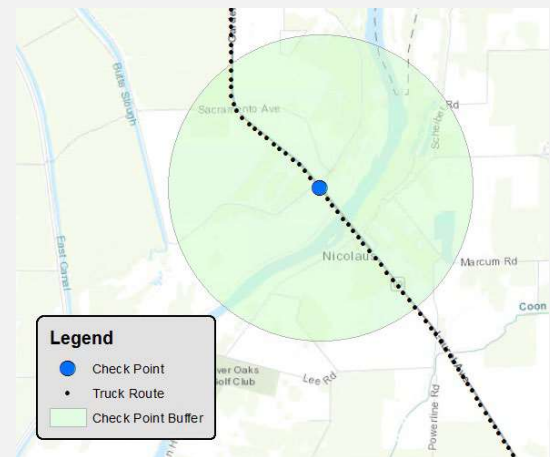
The **Driving Distance Analysis** tool is used to calculate estimated distance and drive time based on the existing road network. This planning tool is used as a parameter to design the shortest route, work list planning, and other operational factors.



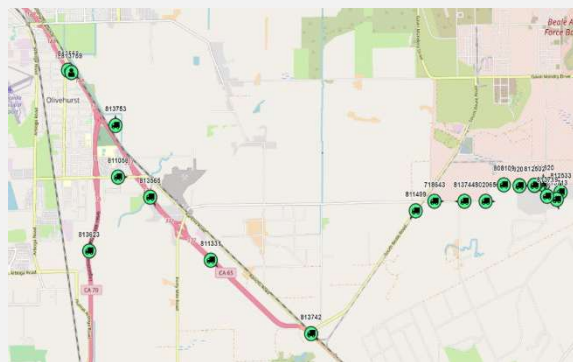
The **Standardized ROW Grid Index** layout is available in several formats, including GIS Mapping applications, mobile data collection apps, and hard copy maps. Map segment areas are configurable for size and allow attribute modification for tasks, including contractor, quality, and safety review tasks.



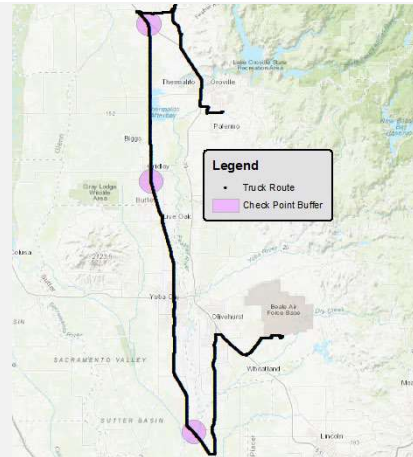
An **automation tool** built to validate routes taken to TDSRS/DMS. When a vehicle enters a checkpoint buffer area, the position record is annotated as passing the checkpoint. Route maps can be created, along with custom reporting as specified by operational requirements.



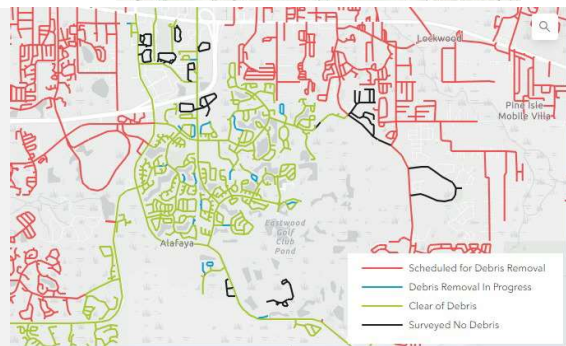
**Fleet tracking** is a powerful platform to manage mission resources, monitor and report on compliance. A key benefit of the *RecoveryTrac™* solution is the ability to start tracking simply and quickly without the need for expensive equipment installations, service contracts and other expenses of commercial tracking systems.



Fleet tracking data provides **complete route information**. The data can be made available to show live tracking or view route history. Transportation analysis services are available, or data exports can be provided for the County's requests.



An automated method of assigning **road pass status** to roadways. When a pick-up location is logged into the system, spatial analysis is performed to determine which roadways have been visited and which ones have yet to be cleared of debris.



**Road Surveys** are performed to determine if there is any remaining debris along the roadways. The extent and exact location of the frame is extracted and shown on the map as the video plays from the starting point until end point.



## Health and Safety

As part of our on-site operations, Tetra Tech puts the health and safety of our staff first. Tetra Tech's employees are the foundation of our business and protecting them at all work sites is our highest priority. The company subscribes to the philosophy that all occupational incidents can be prevented and that no incident is treated as an acceptable event when we execute our work. To achieve this, the company's health and safety processes are a vital and integral part of our work.

Health and safety addressed in our operations and management systems is supported by strong leadership. Tetra Tech's leaders understand their responsibility and accountability to plan for safety and to ensure that safety measures are implemented. Preventing incidents also relies on a management system that regularly evaluates performance and identifies necessary adjustments to target continual improvement. The principal objectives of our program are codified in our written health and safety policy, which is endorsed and regularly monitored by the highest levels of our management team.

## Industry Metrics for 2023 Health and Safety Performance

**0.54**

US Experience Modification Rate (EMR) - average industry workers' compensation claims

**0.24**

2023 Enterprise-Wide Total Recordable Injury Rate (TRIR)

**0.08**

2023 Enterprise-Wide Lost Workday Incident Rate (LWDIR)

Tetra Tech is committed to workplace safety. As such, a project-specific health and safety plan will be developed for the scope of work. Field staff assigned to the project will be trained on the health and safety plan. Additionally, Tetra Tech project managers are well-trained and have completed courses such as OSHA HAZWOPER 40-Hour course and several FEMA independent study certifications.



### Commitment to Safety

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As a company that is committed to providing and maintaining a healthy and safe work environment for our employees, Tetra Tech's Health & Safety program is designed to address the hazards associated with our business and prevent injury and illness in the workplace. Tetra Tech intends to meet its responsibilities for health and safety by committing to the following:

- Complying with applicable standards, laws, and regulations
- Designating personnel accountable for implementing health and safety programs
- Communicating health and safety programs and practices throughout the organization
- Mitigating potential risks through hazard identification and assessment, employee training, and safe work practices
- Allocating sufficient resources to the program
- Implementing enforcement and accountability measures
- Establishing health and safety performance standards
- Management is responsible for ensuring that Tetra Tech workplaces are safe and that risks, hazards, and safety violations brought to their attention are investigated and promptly corrected.

Tetra Tech employees are responsible for complying with Tetra Tech's health and safety policy, programs and standards, and conducting their work safely and without detriment to themselves, other employees, or property. Compliance with health and safety program requirements are mandatory.

## Reporting

### Daily Report

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Tetra Tech has a suite of reports that are automated from *RecoveryTrac*™ ADMS and available in real-time via PC, tablet, or smart phone. Although the reports are available at any time to the County, Tetra Tech will submit a daily status report that includes daily cubic yards/tons collected by material and program, cumulative cubic yard/tons collected, number of debris monitors in the field, cumulative cubic yards/tons hauled to final disposal, and daily/cumulative hazard removals. Below is a sample of this report created for a recent project. Additionally, Tetra Tech takes pride in the customization of reports to meet our client's specific needs and provided reports tailored to any metrics not captured in the generic reports.

## Data Management/Invoice Reconciliation

The *RecoveryTrac*™ system significantly reduces the amount of time needed for a contractor to generate an invoice and for the subsequent invoice reconciliation with Tetra Tech.

To expedite contractor invoice reconciliation efforts, Tetra Tech requires copies of contracts for all primary debris contractors. After reviewing the necessary contract(s), Tetra Tech sets up the *RecoveryTrac*™ database to generate transactions applicable to contract terms for tickets issued to each debris contractor. Prior to the start of debris removal operations, Tetra Tech will meet with the debris contractor(s) to review:

- The invoicing processes
- Contract services established in our database
- Tetra Tech data tools available for their use
- Any other accounting needs as tasked by the County

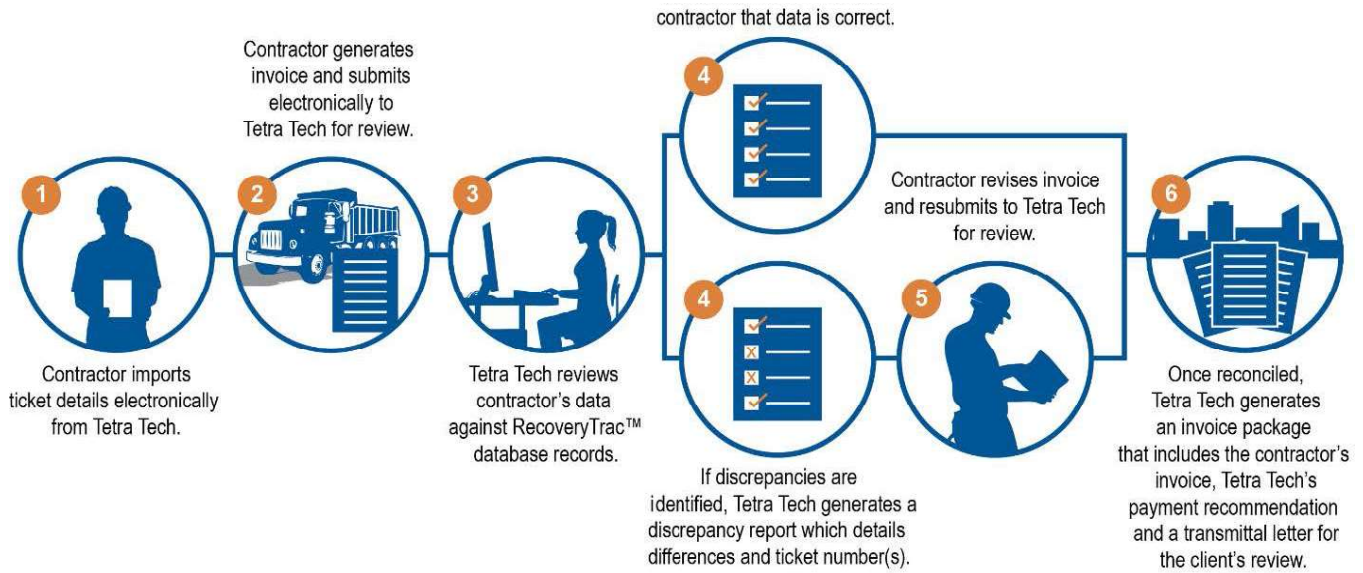
If *RecoveryTrac*™ ADMS will be used to document the debris contractor's work, Tetra Tech will review the automated reports generated by the system to verify that the dataset is sufficient to reconcile with that contractor's subcontractors, and to generate invoices for payment by the County. If another cost tracking system will be used to document the debris contractor's work, Tetra Tech will review the work that has to be documented to verify that our staff will be able to capture the information needed for accounting and invoice review.

**Our invoicing process includes several real-time QA/QC checks throughout the day**, and a final daily comprehensive data analysis is performed at the close of operations. A final QA/QC check is completed when the debris contractor sends the invoice dataset to Tetra Tech for reconciliation. Incongruencies in the debris contractor's data are flagged for review and must be resolved prior to the issuance of a final invoice.

Whether using *RecoveryTrac*™ ADMS or paper logs, Tetra Tech will use our *RecoveryTrac*™ database to store and review data generated in the field documenting debris contractor work. Several QA and QC checks of data will occur before the dataset is ready for reconciliation with the contractor. Services related to debris contractor work order or change order charges are also tracked within the system.

Tetra Tech will submit invoices within the timeframes determined by the County. The process for contractor invoice reconciliation is as follows:

## Summary of Contractor Invoice Reconciliation Process



Tetra Tech's Payment Recommendation Reports provide summarized and reconciled totals for contractor invoices.

### Payment Recommendation Report

Thursday, December 8, 2022

#### Invoice Cover Information

Applicant: CHARLOTTE COUNTY  
 Contractor: ASHBRIIT  
 Disaster: FL - HURRICANE IAN  
 Invoiced Date Range: FROM 10/04/2022 TO 10/29/2022

Invoice Number: 2219-003A  
 Date Of Invoice: 11/06/2022  
 Gross Amount per Invoice: \$6,364,492.80  
 Amount Held in Retainage: \$0.00  
 Net Amount Invoiced for Payment: \$6,364,492.80

#### Supporting Electronic Backup Summary

Code	Matching Service Description	Invoiced Qty	Invoiced Rate	Invoiced Total
51A	C&D DEBRIS REMOVAL FROM ROW TO TDSRS	24,514.45	\$8.00	\$196,115.60
50A	VEG DEBRIS REMOVAL FROM ROW TO TDSRS	771,047.15	\$8.00	\$6,168,377.20
Total Amount of Supporting Electronic Backup Data (This amount pending reconciliation):				\$6,364,492.80
Amount Adjusted (Deducted) from Gross Invoice Total (Backup Difference):				\$0.00

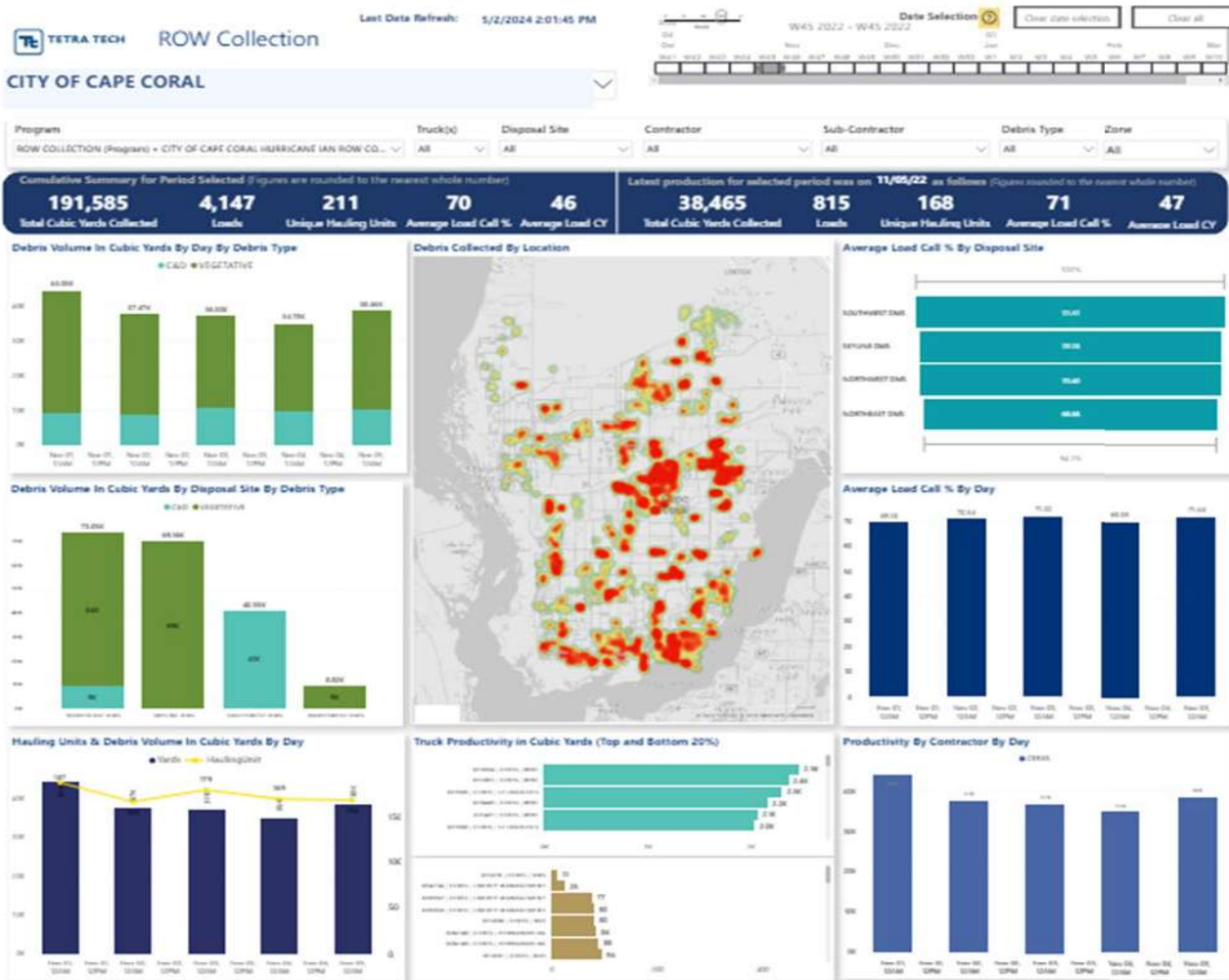
#### 100% Payable Transactions:

Ticket Item	Invoiced Qty	Invoiced Rate	Invoiced	Tetra Tech Match	Resolved Date	Resolved Qty	Rate	Resolved Value	Adjustment	Reason
8884001-1	47.45	\$8.00	\$379.60	8884001	10/04/2022	47.45	\$8.00	\$379.60	\$0.00	Verified and Approved
8884002-1	53.25	\$8.00	\$426.00	8884002	10/04/2022	53.25	\$8.00	\$426.00	\$0.00	Verified and Approved
8884331-1	40.70	\$8.00	\$325.60	8884331	10/05/2022	40.70	\$8.00	\$325.60	\$0.00	Verified and Approved
8884332-1	29.20	\$8.00	\$233.60	8884332	10/05/2022	29.20	\$8.00	\$233.60	\$0.00	Verified and Approved
8884341-1	11.10	\$8.00	\$88.80	8884341	10/05/2022	11.10	\$8.00	\$88.80	\$0.00	Verified and Approved

\$6,660,555

\$6,660,555

# Daily Report Sample



## Other Related Services

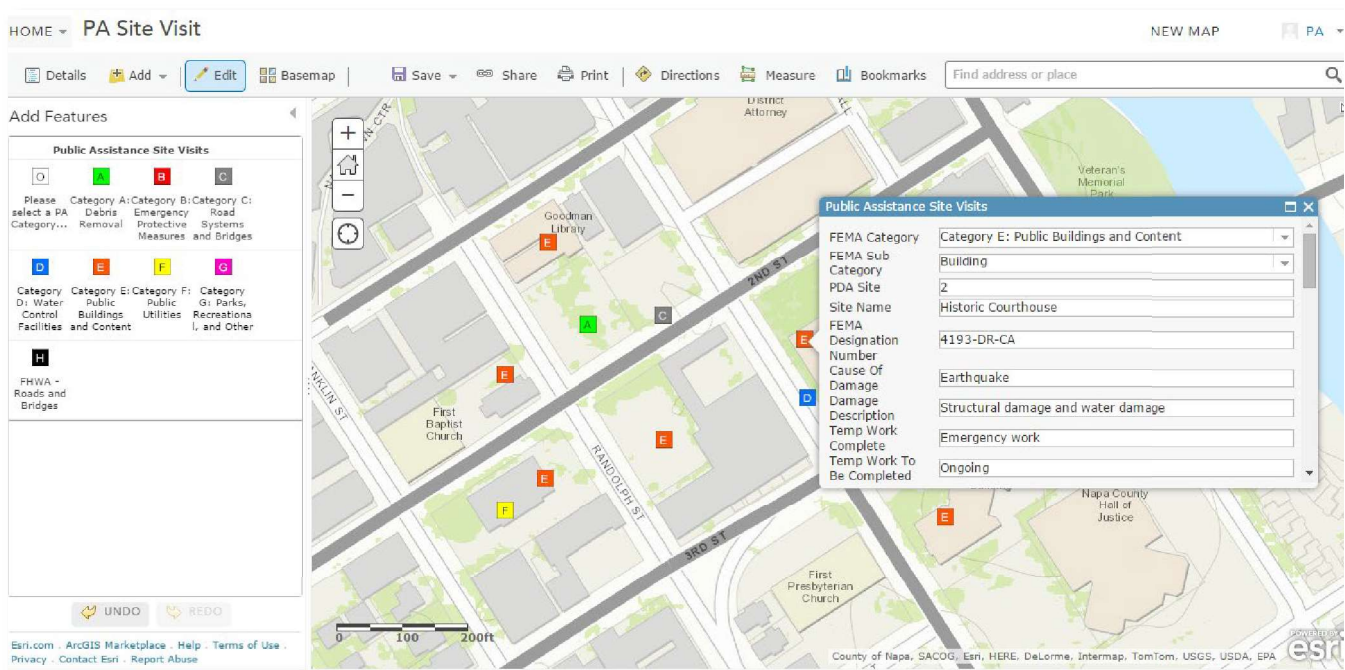
In the aftermath of a natural disaster or other event, swift action is imperative, with the first few days playing a pivotal role in the response. Upon receiving the Notice to Proceed, Tetra Tech's staff will swiftly deploy to the affected County. Their primary objective will be to set up the debris monitoring operations for success by rapidly mobilizing and training a local team, conducting damage assessments, securing the necessary permits, and more to aid in the recovery process.

### Damage Assessment (Debris Estimation)

It is critical to understand estimated quantities of debris to adequately plan for project operations and mobilization. Tetra Tech has found that rather than relying on a single approach, a combination of debris-estimating methodologies generally produces a more accurate estimate. Tetra Tech's *RecoveryTrac*™ ADMS technology would be used to conduct damage assessments and collect supporting data, including photo documentation of damages.

The collected information would be reported real-time through web-based maps that depict damage assessment progress. Tetra Tech has recently supported damage assessment efforts for local governments following Hurricane Harvey in Texas and Hurricane Maria in Puerto Rico. A sample image of Tetra Tech's web-based damage assessment report is provided below.

#### Damage Assessment Report



Tetra Tech uses the following debris-estimating methodologies:

- **Data-driven debris-estimating model.** Tetra Tech has developed a data-driven debris-estimating model that takes into consideration factors such as hurricane strength category, estimated storm surge, coastal households, amount of vegetative cover, dockage, and other unique factors to develop debris estimates for a community.

- **Field survey.** “Boots on the ground” Tetra Tech staff will also work to estimate the expected volume of debris. Tetra Tech’s experienced field staff complete windshield surveys, and the information collected is aggregated by an experienced project manager to generate field survey-based debris estimates.
- **Aerial surveys.** Finally, Tetra Tech can develop debris estimates using Unmanned Aircraft Systems (UAS, or more commonly drones) to estimate debris quantities from inaccessible areas. Tetra Tech drones can capture topographic survey data, including orthophoto, contour, digital terrain, and dense point cloud data to develop estimated volumes of debris within an impacted community.

Tetra Tech has utilized several methods to complete and document damage estimates and will work with the County to identify and deploy the preferred solution. In addition to the assessment conducted on the ground by both Williamson County and Tetra Tech personnel, potential tactics include:

- Public-accessible QR codes to report damage
- GIS mapping
- Social media mining to geotag photos of damages
- UAS/drone documentation to identify most heavily impacted areas

## Surveying Affected Areas for Special Situations or Emergencies

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Tetra Tech will customize the *RecoveryTrac*™ ADMS system to meet the data capture needs of the special situation or emergency surveys outlined in the RFP (including identifying tree stumps, root balls and associated cavities, hazardous trees, construction and demolition debris, or other potentially hazardous situations). Benefits of using digital data capture and custom electronic forms include:

- **Integration with applications:** The *RecoveryTrac*™ survey tool can be integrated into Survey123, iForms, Collector, and other standard geospatial survey tools typically used for surveying affected areas.
- **Implementation of required fields:** Tetra Tech will designate required fields that must be completed on forms before the user can move on to the next data capture event. This avoids incidents of failure to capture key information in the field due to user error.
- **Standardized data entry:** Tetra Tech will use drop-down menus and pick lists whenever practical to standardize data capture. This approach avoids use of synonyms and personalized nomenclature that can hinder data analysis and cause confusion during data interpretation.
- **Direct correlation with project-specific database:** Tetra Tech’s electronic forms and custom database are developed in concert, allowing for direct mapping between data fields captured in electronic forms and those used within the database. These tools facilitate rapid and accurate upload and storage of data, without requiring manipulation of data.

After surveying and logging findings of special situation or emergency surveys, Tetra Tech maintains a list of potentially hazardous locations and situations. The *RecoveryTrac*™ database is used to coordinate and track the appropriate dispatch of staff and equipment to remediate the hazard, as well as reporting to the County on the status of the hazard, actions taken, and post-event status.

## Debris Management Site Permitting

Once the activation has started, we work with the County to ensure we have the proper permits in place. We can assist the County in reaching out to environmental agencies to ask them to validate the pre-approval, as well as ensure a historical review is conducted. Once permits are issued, the hauling contractor can begin setting up the debris monitoring sites. We will work in conjunction with the haulers to ensure that our own operations are ready to go.



## Staff Training and Exercises

Tetra Tech will schedule annual training with County staff. The purpose of the training will be to ensure that Tetra Tech and the County are operating on a common operational platform and that the County is well prepared for the upcoming season. We will explain the documentation requirements of the FEMA Public Assistance Program and review the County's permitted debris management sites for appropriate use and capacity. In planning for each year's training, Tetra Tech and County staff will work out an agenda to include any pertinent topics that the County feels should be addressed.

## Aerial Photography

### Integrated Mapping Solutions – Unmanned Aircraft Systems

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Tetra Tech provides integrated mapping solutions using state-of-the-art mapping software, airborne and mobile sensors and camera systems, and a robust information technology infrastructure. Our clients receive accurate, innovative geospatial and mapping solutions for commercial, governmental, and defense applications.

Evidence of this innovation in action is our disaster response team's utilization of Unmanned Aircraft Systems (UAS or more commonly, "drones") in a variety of applications to enhance our documentation and provide our clients with increased visibility into project scope and operations.

Our team has used UAS technology to help conduct damage assessments in communities affected by disasters. Data and imagery provided via UAS not only provides a more complete visual than photos alone, but also allow our team to survey areas that may be inaccessible after an incident. We can leverage this technology to reduce time spent accumulating ground survey data for large areas, to collect higher resolution data, and to provide real-time data capture to our clients. In addition to damage assessments, the technology is used in a similar fashion to provide increased visibility into debris removal operations and is particularly helpful for documenting parcel demolition and site remediation to better illustrate work progression throughout the course of a project. Our project teams have also used aerial imagery obtained from UAS to illustrate the progression of debris processing and removal at TDSR locations.

UAS technology is especially useful in monitoring waterway disaster debris removal projects. Oftentimes, ease of accessibility can be an issue when working the length of some waterbodies. By using the data provided by UAS, our project team can assess the area and develop smart workplans. Furthermore, aerial images provided by UAS can demonstrate work progression on waterways where visibility from the shore is obscured.



Our ASPRS-certified photogrammetrists, FAA-certified UAS pilots, certified geographic information systems professionals, LiDAR analysts, and remote sensing and survey professionals work together to provide the latest tools and technologies to support our clients' goals and objectives. Tetra Tech's geomatic technologies professionals support our clients with a full suite of services—from air, land, water, and desktop.

## Training

In disaster response and recovery, training is not one-size-fits-all. Tetra Tech customizes formal trainings to the duties of each new employee, and hosts trainings in the Hiring Center with a Tetra Tech certified trainer. These trainings include modules specific to each client's needs and requirements, complete with information to ensure accurate field monitoring and ADMS implementation. By using interactive qualifying tools throughout training modules, Tetra Tech helps trainees better retain information while also screening and selecting the most qualified personnel as field monitors.

To properly instruct newly hired employees, Tetra Tech has developed a training program that includes modules specific to the County. These modules are complete with the information required to facilitate accurate field monitoring and ADMS implementation. Tools included in the training modules assist with the retention of the material and assist Tetra Tech in screening and selecting the most qualified personnel for the monitoring task. Training module topics include truck certification, load site monitor responsibilities, disposal monitor responsibilities, hazardous trees monitor responsibilities, and field supervisor responsibilities. Project managers, data managers, and operations managers follow standard operating procedures and protocols established in our concept of operations plan.

During a debris recovery operation, Tetra Tech project managers and supervisors routinely examine the safety of field and debris staging site operations and have the authority to shut down unsafe operations. Debris staging site monitors are equipped with the appropriate personal protective equipment, which may include hard hats, appropriate footwear, reflective vests, hearing protection, and eye protection. Additionally, Tetra Tech project managers conduct regular tailgate safety sessions with their field employees to alert them of potential work hazards and review safe work practices.

## Professional Certifications, Training, and Licensing

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Tetra Tech remains abreast of the latest guidance, issues being debated, and current best practices through participation in expert groups, attendance in training and conference sessions, and working with national experts in disaster recovery operations, emergency management, national security, information technology, public health, transportation, and critical infrastructure protection. **Our proposed team possesses key certifications that help them provide quality technical services and have attended numerous training courses related to debris operations and emergency management.**

Some of these include:

- Occupational Safety and Health Administration (OSHA) Disaster Site Worker Course
- OSHA 10-Hour Construction Safety Certification
- OSHA 40-Hour HAZWOPER Certification
- G-202: Debris Management
- IS 100: Introduction to Incident Command System
- IS-120: Introduction to Exercises
- IS 191: ICS/EOC Interface
- IS-200: Basic Incident Command
- IS 242: Effective Communication
- IS-288: Local Volunteer and Donations Management
- IS-230: Fundamentals of Emergency Management
- IS-547: Introduction to Continuity of Operations (COOP)
- IS-631: Public Assistance Operations I
- IS-632: Introduction to Debris Operations
- IS-634: Introduction to FEMA's Public Assistance Program
- IS-700: National Incident Management System
- IS-800: National Response Program
- ICS 300: Intermediate ICS for Expanding Incidents
- Intermediate Workzone Traffic Control (TxDOT)

Additionally, all collection and disposal monitors and field supervisors must attend a debris monitoring training session prior to working. In addition, our environmental health and safety training program helps our business operate in a manner that protects the health and safety of our employees, customers, business partners, community neighbors, and the environment. Our field teams attend daily safety sessions with field employees to discuss potential hazards and review safe work practices.

## Identification of Personnel

Tetra Tech's field personnel will be properly identified while onsite. Identification measures will include safety vests, vehicle placards, company logos, and any additional identification requested by the County.

# Equipment and Materials

Tetra Tech will meet the County’s requirements for materials, equipment, supplies, labor, and any additional services necessary to provide the County with its requested services.

## Equipment

Tetra Tech maintains a warehouse located in Orlando with over 120 fully stocked bays of debris monitoring supplies capable of supporting over 50 simultaneous recovery operations for over 90 days. *Tetra Tech has consistently deployed large-scale mobilizations of hundreds of staff and thousands of dollars’ worth of equipment to multiple clients in a matter of days and on very short notice.* The Exhibit lists available equipment and facilities readily available upon activation.

### Resource List

Resource	Quantity Available
ADMS Handheld Units	6,000
Time and Materials Forms	5,000
Truck Certification Forms	35,000
ADMS Ticket Stubs	1,800,000
Haul Out Ticket Stubs	300,000
Placards	5,500
<b>Kits</b>	
Project Manager Kits (1 Per 100 Monitors)	100
Project Coordinator Kits (1 Per 100 Monitors)	100
Human Resources Kits (1 Per 100 Monitors)	60
Collection Monitor Kits (1 Per 25 Monitors)	225
Disposal Monitor Kits (1 Kit Per Disposal Site)	165
Leaner/Hanger/Stump Kits (1 Per 50 Monitors)	140
<b>Equipment**</b>	
Laptops	700
Mifi (Mobile Wiireless)	90
High Speed Scanners	70
Printers	145
Mobile Command Office	2
Fuel Trucks	To Be Obtained from Pre-Contracted Vendor
Modular Work Locations	To Be Obtained from Pre-Contracted Vendor

Resource	Quantity Available
Generators	To Be Obtained from Pre-Contracted Vendor
Portable Facilities	To Be Obtained from Pre-Contracted Vendor

*\*All field documents are replenished as they are needed. Tetra Tech has several emergency vendors with the ability to provide more resources*

*\*\* ADMS units are readily available and can be ordered as needed on a 24-hour turnaround.*

# BID FORM

The following list of labor rates are to be fully burdened and all inclusive of all taxes, benefits, fringe benefits and profits, insurance, hand tools, supervision, fuel, and any other incidental costas in hourly labor rates

ITEM	DESCRIPTION		Unit	Unit Price
1	Project Manager		per hour	\$72.00
2	Debris Monitor Supervisor		per hour	\$45.00
3	Loading Site Monitor		per hour	\$34.00
4	Debris Management Site Monitor		per hour	\$34.00
5	Roving Debris Monitor		per hour	\$5.00
6	Debris Management Consultant		per hour	\$5.00
7	Clerical/Administrative Support		per hour	\$33.00
<b>Total</b>				<b>\$228.00</b>

In the event a rate increase adjustment is agreed to by the County, rates for the subsequent years after the first term of the agreement and any extension term years shall be subject to an annual adjustment on the anniversary date of the contract in accordance with the U.S. Consumer Price Index.