

STATEMENT OF WORK (SOW)
State Historic Preservation Officer Liaison
N40192-19-R-8002

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A. INTRODUCTION

The Department of the Navy (DON) entered into a Programmatic Agreement (PA) with the Guam State Historic Preservation Office (SHPO) in 2011. Section IX of the PA covers the Liaison position.

The goal of the project is to provide a liaison to assist SHPO in its mission to advise the DON pertaining to planning and consultation associated with the military buildup. To this end, the DON intends to enter into a Cooperative Ecosystem Studies Unit (CESU) with an appropriate agency (hereinafter the Recipient) to investigate the most appropriate model and approach of third-party support to the SHPO to stimulate the public purpose of supporting Guam's historical research and preservation activities.

B. PURPOSE

This CESU, a Cooperative Agreement (hereinafter Agreement), is proposed to provide a liaison experienced in Section 106 process to serve as the principal point of contact and to assist with coordination, communication, and documentation preparation and review during the construction phase associated with the 2011 PA. The Recipient's technical approach in performing this Agreement will stimulate the public purpose of creating a historic preservation / archaeological support model that can be applied to other jurisdictions in the Marianas. The objective problem of resource constraints and shortfall in technical capability can be mitigated by a system combining applied technology, workload leveling and timely deployment of research and technical review capabilities. The liaison shall be duty-stationed to assist the SHPO no less than 20 hours per week and shall be responsible for ensuring that all DON requests for review and/or concurrence by the SHPO staff are sufficiently documented by Department of Defense (DoD) per 36 CFR §800.11(e) and (f). In addition, the liaisons shall consolidate and coordinate DoD cases for SHPO review (PA Section IX.A.1.).

C. LOCATION

The location for the performance of these tasks will be at the SHPO office in Agana Heights, Guam. However, the Liaison may work remotely if that is agreeable to the SHPO and Cooperative Agreement Technical Representative (CATR).

D. DESIGNATED REPRESENTATIVES

1. The Grants Officer is Eugene Diaz, Acquisition Director, Naval Facilities Engineering Command, Marianas, PSC 455, Box 195, FPO AP GU 96540-2937, and email: Eugene.Diaz@fe.navy.mil.
2. The Cooperative Agreement Administrator (CAA) is Thelman Mark Fontenot, Naval Facilities Engineering Command, Marianas, PSC 455, Box 195, FPO AP GU 96540-2937, email: thelman.fontenot@fe.navy.mil.
3. The CATR is officially designated by the Grants Officer, and is responsible for monitoring the Recipient's performance, in accordance with the terms and conditions of the Agreement. The CATR is Sandra Yee, Marine Corps Activity Guam, Public Works Department PSC 455, Box 195, FPO AP GU 96540-2937, email: Sandra.Yee@fe.navy.mil.
4. The Alternate CATR is: Ronnie Rogers, Marine Corps Activity Guam, Public Works Department PSC 455, Box 195, FPO AP GU 96540-2937, email: Ronnie.Rogers@fe.navy.mil.
5. Recipient of the Agreement: The Recipient of the Agreement is responsible for implementing the scope of the Agreement. The Recipient of the Agreement shall direct all communications to the CATRs. Unless otherwise directed by the CATR, the Recipient of the Agreement may directly channel technical archaeological or Geographic Information System (GIS) issues that need clarification from the Alternate CATRs identified in this agreement, but the CATR shall be concurrently notified for awareness.

E. PERIOD OF PERFORMANCE

The period of performance will depend upon the individual proposals received, but the Government anticipates an initial period of performance for the Agreement to be twelve (12) months starting from the date of award. After completion of the initial period of performance, the total performance period can include four (4) option periods of twelve (12) months each dependent upon the availability of funds and the unilateral election of the Government to exercise an option. The total duration of this Cooperative Agreement, including the Option Years and any cost modifications shall not exceed 60 months. The end date is the anticipated date that the Final Report is accepted by the Government. In the event that an option year(s) is exercise, a cumulative report consisting of the base and all option years will be the Final Report.

Estimated Value and Funding: Approximately \$50,000 is expected to be available to support this project.

Anti-Deficiency Act: The Department of Navy's obligation to pay or reimburse any costs hereunder is subject to the availability of appropriated funds and limited by funds obligated and nothing in this Agreement will be interpreted to require obligations or

payments by the Federal Government in violation of the Anti-Deficiency Act, 31 U.S.C. §1341.

F. MATERIAL FOR REVIEW

DON and SHPO will provide materials (research or reference) as well as requisite templates, databases, etc. that will be required of the Liaison to utilize in the performance of their assigned duties.

G. GENERAL REQUIRMENTS

1. The Recipient shall provide all labor, management, supervision, tools, materials, equipment, transportation, meals, and lodging for him/herself and his/her personnel.
2. The Recipient shall provide all equipment (unless otherwise stated) and analyses necessary to complete the work described within this Agreement. All data (raw and associated files), photographs, and equipment > \$5000 per unit in value and supplies > \$5,000 in aggregate value purchased with Agreement funds (including computer software) shall become the property of the DON at the end of the Agreement. Equipment is defined as “tangible nonexpendable personal property including exempt property charged directly to the award having a useful life of more than one year.” Supplies are defined as “All personal property excluding equipment, intangible property, and debt instruments, and inventions of a cooperator conceived or first actually reduced to practice in the performance of work under a funding agreement ("subject inventions"), as defined in 37 CFR part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements." (DoD Grant and Agreement Regulations, DoD 3210.6-R#).
3. The Recipient shall manage the total work effort and assure fully adequate and timely completion of services required under this Agreement. Included in this function shall be a full range of management duties including, but not limited to, planning, scheduling, document production, analysis, and quality control.

All work conducted in support of this Agreement shall comply with all federal and state laws.

4. The Recipient shall coordinate with the CATR to be substantially involved in the Recipient's activity. This includes participation in meetings to develop management strategies, developing the plan of actions and milestones, participating in the review process for the deliverables, and identifying data gaps in baseline information. The CATR and Alternate CATR shall be directly involved in ensuring the specific requirements relating to archaeology and GIS are met.
5. Photography may be restricted. The Recipient may be required to submit all information to the CATR required to obtain a photo pass. Only photographs of Agreement-related activities will be permitted.

6. All parties involved in this Agreement agree to comply with all applicable laws and regulations pertaining to the provision of safe and respectful workplace and to provide a work environment free of harassment and intimidation for such party's own employees and third parties.
7. Vehicle operators may not use cell phones unless the vehicle is in a designated parking zone or completely off the road with the vehicle engine off. Drivers may not hold, dial, text, or adjust the phone while the vehicle is in motion. Installation Security personnel can issue military motor vehicle citations to operators in violation of this policy.
8. All field notes, field data forms, electronic storage of field data, photographs, etc. collected and produced as part of this Agreement are the property of the DON. Legible copies of the field notes, data forms and other information shall be provided to the CATR upon request.
9. The data obtained during this Agreement shall be scientifically defensible. All methods of data collection and analyses shall use acceptable methods as determined in current scientific literature(s).
10. The Recipient shall inform the CATR via e-mail of any unusual activity observed while conducting surveys in the field (e.g. trespassers or persons in unauthorized areas, UXO). Information should include (a) location, (b) date, (c) time, and (d) any detailed facts regarding the activity. (note: field survey not part of Liaison duties)
11. The Recipient shall inform the CATR and Alternate CATR via e-mail of any unusual species observed while conducting surveys in the field (e.g. species which are federally listed). Information should include (a) location, (b) date, (c) time and (d) any detailed facts about the sighting. (note: field survey not part of Liaison duties).
12. Throughout the term of this Agreement the CATR and Alternate CATR shall be afforded the opportunity by the Recipient to periodically observe the Recipient's activities, to review computer or paper files of raw data, prepared data (such as data analyses, summaries, maps, figures, tables, GIS files, spreadsheets, etc.), or any record deemed appropriate by the CAA in establishing the Recipient's performance in fulfilling the requirements of this Agreement.
13. The DON, via the CAA, may request updated data presented on maps, figures and/or tables whenever the DON's need to obtain this information is before the next report required by this Agreement. The Recipient shall forward the requested data electronically within ten (10) days from the date of request. If the requested data cannot be provided within this time frame, the Recipient shall forward electronically the most updated raw data to the CAA, via the CATR. The DON

understands that facilitating the requested most updated data may reduce the amount of work that would normally be accomplished during the period of time required to complete the request.

14. Rights of Entry. The Government shall obtain all rights-of-entry. It shall be the responsibility of the Recipient to provide the Government with the required identification information of its employees and sub awardees and the necessary documents for work vehicles in the study area.
15. **Substantial Involvement by the Government.** In reference to this Agreement, substantial involvement is required between the DON and Recipient during the period of performance based on the requirements prescribed in the scope of work. The anticipated involvement between the CATR and Principal Investigator (PI) is deemed appropriate to carry out the public purpose of supporting Guam's historical research and preservation activities. Anticipated involvement includes:
 - a. Advising Recipient, as needed, in preparing scientific articles destined for peer-reviewed journals;
 - b. Providing relevant maps and information pertaining to study sites, to include data and literature generated from previous similar projects;
 - c. Assisting with field activities and coordination with Base security to ensure safety procedures are met;
 - d. Facilitating access to DON lands and facilitate any required passes;
 - e. Assisting with plan of action and milestones (POAM) development;
 - f. Accompanying Recipient during operations as often as necessary, to ensure quality control, efficacy of actions; and
 - g. Conducting quarterly meetings with Recipient to determine if milestones are met.

H. SPECIFIC REQUIREMENTS

RECIPIENT TASKS:

Task 1: Project Planning –

- 1) The Recipient shall participate in a kick-off meeting prior to the start of work to become acquainted with the various parties involved with the project; to discuss the statement of the proposed work including scheduling, coordination, and to define channels of communication and points of contact. The kickoff meeting will be held on Guam (location to be determined) or via conference call.
- 2) The Recipient shall be responsible for documenting the discussions (meeting minutes). Meeting minutes shall be provided to the CATR within 5 days after the kick-off meeting.
- 3) The Recipient shall be responsible for presenting a plan of action and milestones (POAM) for timely completion of the work. The POAM will be provided to the CATR at least 1 week prior to the kick-off meeting. CATR will comment on POAM and Recipient will incorporate comments before POAM is finalized.
- 4) The Recipient shall ask any questions related to the successful completion of the

work.

- 5) The Recipient shall provide project status and schedule updates, and coordinate desktop analysis activities and deliverables throughout the duration of the Agreement.

Task 2: Project Management -

- 1) The Recipient shall provide project oversight and coordination for all technical requirements and tasks. This will include: maintaining budget coordination, tracking, and reporting, as appropriate.
- 2) The recipient is responsible for providing monthly updates to the CATR and the updates shall include implementation accomplishments, budget drawdowns, technical aspects, any project coordination difficulties, safety concerns, adaptive management proposals or actions, agreement's quality control and assurance activities and their successful implementation.

Task 3: Liaison Tasks -

- 1) Assist SHPO in actions related to management of SHPO workload as related to the 2011 PA and other requirements with the mutual agreement of the SHPO and the DON.
- 2) Maintain and provide GIS data to support consultations between SHPO and DON, and/or additional parties.
- 3) Coordinate with DON, CATR, MCAG, and Installation GIS Managers as needed to provide accurate, up-to-date GIS data for SHPO review.
- 4) Serve as principal point of contact between SHPO and DON. Principal Point of Contact at DON shall be the CATR.
- 5) Assist with coordination, communication, preparation and review of documentation.
- 6) Be responsible for ensuring that all DON requests for review and/or concurrence by the SHPO staff are sufficiently documented by DON per 36 CFR 800.11(e) and (f).
- 7) Consolidate and coordinate DON cases for SHPO review.
- 8) Provide monthly reports (brief email reports are appropriate) to MCAG CATR on accomplishments and problems encountered during the reporting period with proposed solutions to problems. After review by the CATR, the monthly reports are to be provided to the SHPO. Serious issues are to be reported immediately (Copy MCAG CATR on reports delivered per Task 2.1.).

The Recipient shall assign a PI for this Agreement, who shall be responsible for overseeing on a day-to-day basis necessary activities of the project. The PI's oversight of the project includes monitoring and controlling project costs, assigning personnel consistent with requirements (if the PI cannot provide GIS/Archaeology expertise), understanding and assuring compliance with applicable Federal, DoD, and DON historic resource and environmental policies and regulations and other applicable or relevant and appropriate requirements, shall be the first in line of control in ensuring that information/data obtained for the project are of high quality and accuracy, and shall be responsible in keeping quality control and assurance inspections activities and record keeping of these inspections. Due to the complexity of work, the Recipient shall provide the following key personnel with the following minimum qualifications:

- 1) **Principal Investigator** –The PI will, at a minimum, have a graduate degree in anthropology, archaeology, or a closely related field.
- 2) **Liaison(s)** –
 - a. **GIS** - The liaison position must be experienced using ESRI GIS projects and must provide evidence of expertise in the form of training certificates, demonstrated competence and experience using the current industry standard ESRI GIS product (10.x).
 - b. **Archaeology** – in order to qualify to review Sec. 106 documents, the liaison must meet 36 CFR 61 qualifications (Secretary of Interior qualifications, i.e., hold an advanced degree in archaeology, anthropology, or closely related field and meet the experience requirements, including having attended a field school and having experience in the Pacific region – preferably in the Marianas).
 - c. **Liaising Skill** – The liaison position shall render assistance in the most sensitive and discrete manner. Interactions with the SHPO shall be professional and respectful and performed on a non-interference basis. Individuals assigned to directly interact with the SHPO must have excellent communication and conflict resolution skills.

Other Requirements

Work locations will be determined in consultation with SHPO and DON. It is likely that, in addition to work done at SHPO, the liaison will need to conduct research at one or more of the military installations on the island. The process requires that the applicant provide personal information, which is then vetted for approval. Allow at least two weeks for processing the application form, which may be obtained from the Visitor Control Center website.

I. MEETINGS/COORDINATION

The Recipient must meet with the DON archaeologists and the Guam SHPO for basic briefing on tasks and responsibilities. The SHPO is anticipated to provide specific taskers as part of the implementation in accordance with the Statement of Work.

1. The Recipient or his/her designee will attend (via telephone) a kick-off meeting with the CATR, Alternate CATRs, the Guam SHPO and key points of contacts, to assist in the baseline information collection/analysis effort. The CATR shall arrange the meeting.
2. The Recipient shall be available for coordination meetings with the CATR, as required.
3. Meeting Minutes: The Recipient of the Agreement shall be responsible in taking the minutes of the meetings specified in this Agreement. The Recipient of the Agreement shall submit the draft meeting minutes within ten days from the date

when the meeting was held. Final meeting minutes are due within five days of government comments.

J. SUBMITTALS and SCHEDULES

1. The Recipient of the Agreements shall submit a plan of action and milestones (POAM) for timely completion of the work. The POAM shall be task-specific for liaison duties. The Recipient of the Agreement shall submit a POAM that will show in reasonable detail the technical approach (including the project's work schedule milestones with dates) that will be taken to successfully accomplish the requirements and specifications of Agreement. The POAM shall include a tabled schedule of field activities and deliverable submittals.
 - i. The Recipient of the Agreement shall submit the Draft POAM fifteen days prior from the date of the project's kickoff meeting.
 - ii. The Recipient of the Agreement shall submit the Final POAM ten days after the receipt of Government comments.
 - iii. The Recipient of the Agreement shall append to the POAM the list of personnel that will be involved in the project with their respective short version of resume. Personnel date of birth, address and social security number shall not be included in the resume. The maximum number of pages for resume shall be 5 pages with font size no smaller than 11.
2. The Recipient of the Agreement shall develop and maintain a safety program in compliance with EM 385-1-1 US Army Corps of Engineers Safety & Health Requirements Manual, OSHA, Navy Facilities Engineering Command Safety Notices 5100 and Air Force Safety AFI -90-0203, local laws, regulations and requirements. The Recipient will be required to develop an Activity Hazard Analysis (AHA) for all tasks reasonably anticipated to be performed as part of this scope of work.
 - a. Include an Activity Hazard Analysis (AHA) for all tasks reasonably anticipated to be performed as part of this scope of work. Format and instructions for the AHA is in section 1 of the EM 385-1-1. As a minimum, references used to develop the AHA are: EM 385-1-1 US Army Corps of Engineers Safety & Health Requirements Manual, and Local Activity safety plans and standard operating procedures. When developing the AHA, address all sections that are deemed appropriate for performing the work in this Cooperative Agreement and incorporate Navy Safety Regulations that are applicable to the execution of this project, while ensuring a safe work environment for all personnel involved. The draft AHA has to be reviewed by the GDA (SW EV Safety Office, PM, ROICC/FEAD, CATR) prior to start of work activities.

The AHA will provide a safe and healthful environment for all personnel involved as well as personnel working near the sites for the DON. The Recipient shall certify to CATR that the final AHA has been reviewed with each Agreement employee working on this Cooperative Agreement prior to mobilization and start of fieldwork activities.

- b. A Draft AHA will be submitted fifteen days prior to the kickoff meeting. The final AHA shall be submitted 15 days prior to initiation of field activities and immediately accessible to the Site Safety and Health Officer (SSHO) and Project Manager at all times during the project, and a copy shall be available in every vehicle utilized for work under this Cooperative Agreement. The SSHO is required to have completed the 10-hour OSHA Safety Training.
- c. The Recipient of the Agreement's professional safety staff, whose signature shall be in the draft/final AHA, shall include a job/field site hazard analysis for all tasks reasonably anticipated by the contract's requirements and address all sections that are deemed appropriate for performing this contract, while ensuring a safe work environment for all personnel involved. References used to develop the site-specific plan include: 29 CFR 1-910.120 (Hazardous Waste Operations & Emergency Response), EM 385-1-1 US Army Corps of Engineers Safety & Health Requirements Manual, and Local Activity safety plans and standard operating procedures.
- d. Man-hour reporting is also required by the EM 385-1-1 and the Unified Facilities Guide Specifications (UFGS) -01 35 26, (February 2012) change 2, 08/13. The recipient will provide a Monthly Exposure Report (MER) and attach to the monthly billing request. The CATR will submit a copy of the MER to the SW EV Safety Office.
- e. The Recipient of the Agreement shall implement safety measures for all work carried for the project consistent with the project's Final AHA.
- f. The Recipient of the Agreement personnel shall work in a safe manner in the field and comply with all applicable safety regulations. The AHA shall be immediately accessible to the Recipient of the Agreement's Site Safety Officer and PI at all times during the project, and a copy shall be available in all water and land vehicles utilized for work under this Agreement. Recipient of the Agreement safety records shall be available upon request by the Government's Cooperative Agreement Administrator or the CATR or the Base's Security and Safety Officer.

3. Monthly Progress Reports (MPR).The Recipient of the Agreement shall provide an MPR that would detail any work completed during the previous quarter, their implementation accomplishments as specified in this Agreement. The MPR shall also include information on the Recipient of the Agreement's quality control and assurance activities and their implementation of the AHA plan.
4. Liaison Annual Reports: The Recipient shall provide a draft annual report for review by the CATR.

5. Table 1. Summary of deliverables/submittals:

Deliverable	Copies	Submittal Date/Timing
Draft AHA	Electronic copy (word-format)	15 days prior to kick-off meeting
Final AHA	Electronic copy (word-format and pdf-format)	15 days prior to initiation of field activities
Draft POAM	Electronic copy (word-format)	15 days prior to kick-off meeting
Final POAM	Electronic copy (word-format and pdf-format)	Ten days after receipt of Govt comments on draft POAM
Draft Kickoff Meeting Minutes	Electronic copy (word-format)	10 days from the date of kickoff meeting
Final Kickoff Meeting Minutes	Electronic copy (word-format and pdf-format)	Five days after Govt comments on draft meeting minutes
Monthly Progress Reports/Meetings	Electronic copy (word-format)	Monthly; proposed monthly MPR schedule to be submitted by Recipient and agreed to by the Govt
Draft Annual Report of Liaison activities (combine progress reports)	Electronic copies (word-format and pdf-format)	15 days after completion of work
Final Annual Report of Liaison activities (combine progress reports)	Electronic copies (word-format and pdf-format), 4 CD's and 4 color hard copies	15 days after receiving Govt comments

K. DELIVERABLE STANDARDS

1. All submittals/deliverables are expected to be of the highest professional quality and may be rejected if any of the following exist:

- typographical errors, spelling, or grammar mistakes; or
 - results and discussion are not tied directly and continually to natural resource management concerns of the Marine Corps and JRM; or
 - the document is not organized in a manner that flows well; or
 - the document does not provide appropriate context, background, literature review, and comparison to other relevant studies, locations, and similar species; or
 - document is not fully formatted (e.g. functional table of content links, consistent fonts/styles throughout document, accurate page numbers, accurate and complete stand-alone appendices [if applicable], accurate and functional figure titles, table titles, section headers, and table of contents need to be complete and accurate); or
 - abbreviations and acronyms are not consistent throughout each submitted document; references/literature not cited fully cross-checked between what is in the document vs. what is presented in the references section; data in tables shall be checked for consistency if information is repeated throughout the document or referenced in other documents, figure titles shall be checked against what is presented in the figures; appendices/figures shall be for the current project and not a copy/paste from another project, prior to submittal for client review.
2. The draft report shall be a complete document that has been proofread for spelling and grammatical errors and contains all text, figures, graphics, photographs and tables provided for review.
 3. All raw data, data sheets and electronic databases (including GIS data) shall be submitted as appendices or supplemental information with the draft Annual Report. If too large to be included with the other draft submittals, the Electronic databases shall be submitted on a labeled CD-ROM. The final versions of these databases will be included on the CD-ROM's attached to the final reports.
 4. Digital standards – See the Attachment B to this SOW which provides further details for electronic deliverables.

L. DATA AND PUBLICATION

1. This Agreement is subject to, and Recipient shall comply with, 2 CFR 200.315 concerning “Intangible Property,” which includes use of research data. Any information or data protected by federal law will be identified by the Government prior to being provided to Recipient and the Government will notify the Recipient in advance of applicable limitations on such information. Except as to information so identified and limited, there are no restrictions on reporting or publishing reports based upon the fundamental research that is the subject of this Agreement.

The Government has the right to obtain, reproduce, publish or otherwise use the data first produced under this Agreement and authorize others to receive, reproduce, publish, or otherwise use such data for Federal purposes. The DON acknowledges and agrees that the Recipient's fundamental consideration in performing the research under this Agreement shall be Recipient's right to publish the results of such research

for academic and scientific purposes. The Recipient shall submit, for review and comment, any proposed professional, scientific or non- scientific report, paper or note published or unpublished or be part of any technical or non-technical presentation or be provided to anyone not a party to this Agreement to the DON thirty (30) days prior to the submission of the work mentioned above.

2. The acknowledgements for any paper or presentation resulting from this work shall include the following statement: "This research was funded by the DON." Any publications resulting from this work shall be provided at no cost to the DON in quantities jointly determined by the DON's representative and the Recipient at the time of publication.
3. The Recipient shall be responsible for ensuring all personnel participating in activities under this Agreement have read and acknowledged the DATA AND PUBLICATION provisions of this Agreement.

M. RELEASE OF INFORMATION

1. The Recipient shall not respond to any inquiries about this Cooperative Agreement from the news media or non-governmental organizations or other persons during the term of this Cooperative Agreement unless it has first consulted with the Government and a determination appropriately made by the cognizant Government representative concerning release of information pursuant to the authority (Federal or State) cited by the requester. All inquiries shall be directed to the Public Affairs Officer at Marine Corps Activity Guam (MCAG) PWD through the CATR, and CAA.

N. HOLD HARMLESS

1. The Government shall not be responsible for the loss of or damage to property of the Recipient and/or his/her representatives, or for personal injuries to the Recipient and/or his/her representatives arising from or incident to the use of government facilities or equipment. Recipient shall indemnify, hold harmless, defend and save Government harmless and shall pay all costs, expenses, and reasonable attorney's fees for all trial and appellate levels and post-judgment proceedings in connection with any fines, suits, actions, damages, liability and causes of action of every nature whatsoever arising or growing out of, or in any manner connected with, the occupation or use of Government Premises by Recipient, its employees, servants, agents, guests, invitees, and cooperators. This includes, but is not limited to, any fines, claims, demands and causes of action of every nature whatsoever that may be made upon, sustained or incurred by the Government by reason of any breach, violation, omission or non-performance of any term, covenant or condition hereof on the part of the Recipient, its employees, servants, agents, guests, invitees, or cooperators. This indemnification also applies to claims arising out of the furnishings of any utilities or services by the Government or any interruption therein or failure thereof, occasioned by the negligence or lack of diligence of Recipient or its respective officers, agents, servants or employees. However, this indemnity shall not extend to damages due to the sole fault of the Government or its employees, agents, servants, guests, invitees or cooperators. This covenant shall survive the termination of this Cooperative Agreement.

2. In the event of damage, including damage by contamination, to any Government property by the Recipient, its officers, agents, servants, employees, or invitees, the Recipient, at the election of the Government, shall promptly repair, replace, or make monetary compensation for the repair or replacement of such property to the satisfaction of the Government.

O. INSURANCE

1. At the commencement of this Cooperative Agreement, the Recipient shall obtain, from a reputable insurance company or companies satisfactory to the Government, comprehensive general liability insurance. The insurance shall provide an amount not less than a minimum combined single limit of \$1,000,000.00 for any number of persons or claims arising from any one incident with respect to bodily injuries or death resulting therefrom, property damage or both, suffered or alleged to have been suffered by any person or persons resulting from or related to the presence or operations of the Recipient, its employees, agents or contractors under this Cooperative Agreement. The Recipient shall require the insurance company or companies to furnish the Government with a certified copy of the policy or policies, or certificates of insurance evidencing the purchase of such insurance. Each policy of insurance required under this Paragraph shall contain an endorsement reading as follows:

“The insurer waives any right of subrogation against the United States of America which might arise by reason of any payment made under this policy.”

2. All insurance required of the Recipient hereunder shall be in such form, for such periods of time and with such insurers as the Government may require or approve. All policies or certificates issued by the respective insurers for public liability and property insurance shall name the United States of America as an additional insured, and shall provide that no cancellation, reduction in amount or any material change in coverage thereof shall be effective until at least 30 calendar days after receipt by the Government of written notice thereof, regardless of any prior act or failure to act or negligence of the Recipient or the Government or any other person concerning such amount or change in coverage.
3. The Recipient at its sole cost and expense, may insure its activities in connection with this Cooperative Agreement by maintaining a program of self-insurance that complies with the requirements of this Section N, including coverages specified in Attachment A hereof. Recipient shall also provide a copy of the exempting statute cited in support of its claim of self-insurance pursuant to Section 2 of Attachment A to this Cooperative Agreement. (The self-insurance clause is applicable only to appropriate state and local governments and qualifying institutions of higher education who provide evidence of a self-insurance program in accordance with this Section and Attachment A, Section 2.)
4. During the entire period the Cooperative Agreement shall be in effect, the Recipient shall require its contractors or agents or any contractor performing work at the

Recipient's or agent's request on the affected Government Premises to carry and maintain the insurance required below:

“Comprehensive general liability insurance in the amount of 1,000,000.00.”

5. The Recipient and any of its contractors or agents shall deliver or cause to be delivered promptly to the Cooperative Agreement Administrator, a certificate of insurance or a certified copy of each renewal policy evidencing the insurance required by this Cooperative Agreement and shall also deliver no later than thirty (30) calendar days prior to expiration of any such policy, a certificate of insurance evidencing each renewal policy covering the same risks.
6. In the event that any item or part of the premises or facilities shall require repair, rebuilding, or replacement resulting from loss or damage, the risk of which is assumed under ~~this~~ Section N, the Recipient shall promptly give notice thereof to the Government and, to the extent of its liability as provided in ~~this~~ Section N, shall, upon demand, either compensate the Government for such loss or damage, or rebuild, replace or repair the item or items of the premises or facilities so lost or damaged, as the Government may elect. If the cost of such repair, rebuilding, or replacement exceeds the liability of the Recipient for such loss or damage under ~~this~~ Section N, the Recipient shall effect such repair, rebuilding, or replacement if required so to do by the Government, and such excess of cost shall be reimbursed to the Recipient by the Government. In the event the Recipient shall have effected any repair, rebuilding, or replacement which the Recipient is required to effect pursuant to ~~this~~ Section N, the Government shall direct payment to the Recipient of so much of the proceeds of any insurance carried by the Recipient and made available to the Government on account of loss of or damage to any item or part of the premises or facilities as may be necessary to enable the Recipient to effect such repair, rebuilding or replacement. In event the Recipient shall not have been required to effect such repair, rebuilding, or replacement, and the insurance proceeds allocable to the loss or damage which has created the need for such repair, rebuilding or replacement have been paid to the Recipient, the Recipient shall promptly refund to the Government the amount of such proceeds.

P. PAYMENTS

1. Partial payments equal to the amount of work accomplished may be made quarterly after submission of completed schedules and deliverables in Section J. Recipient shall prepare itemized invoices according to costs incurred during the reporting period and submit the itemized invoices to the Government for payment. Partial payments shall not exceed 85 percent of the total funding for the Agreement for any individual period of performance.
2. The final payment of 15 percent of the Cooperative Agreement overall value shall be paid when the final report and all other submittals listed in Section H have been received and accepted by the CATR.
3. Any requirement for the payment or obligation of funds, under the terms of this Agreement, shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the

Anti-Deficiency Act, 31 USC § 1341 et seq. Nothing in this Agreement shall be construed as implying that Congress will, at a later time, appropriate funds sufficient to meet deficiencies.

4. Payments will be made in accordance with Defense Federal Acquisition Regulation (DFAR) 252.232-7006 Wide Area Work Flow Payment Instruction. See Attachment C WAWF Instructions for instructions on payment procedures.

Q. EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT REPORTING

Section 2(d) of the Federal Funding Accountability and Transparency Act of 2006 (Pub. L. No. 109-282), as amended by section 6202 of the Government Funding Transparency Act of 2008 (Pub. L. 110-252), requires the Cooperator to report information on subcontract awards. The law requires all reported information be made public, therefore, the Cooperator is responsible for notifying its sub awardees that the required information will be made public.

Unless otherwise directed by the Contracting Officer, by the end of the month following the month of award of a first-tier subcontract with a value of \$25,000 or more, (and any modifications to these subcontracts that change previously reported data), the Cooperator shall report the following information at <http://www.fdrs.gov> for each first-tier subcontract:

- (a) Unique identifier (DUNS Number) for the subcontractor receiving the award and for the subcontractor's parent company, if the subcontractor has one.
- (b) Name of the subcontractor.
- (c) Amount of the subcontract award.
- (d) Date of the subcontract award.
- (e) A description of the products or services (including construction) being provided under the subcontract, including the overall purpose and expected outcomes or results of the subcontract.
- (f) Subcontract number (the subcontract number assigned by the Contractor).
- (g) Subcontractor's physical address including street address, city, state, and country. Also include the nine-digit zip code and congressional district.
- (h) Subcontractor's primary performance location including street address, city, state, and country. Also include the nine-digit zip code and congressional district.
- (i) The prime contract number, and order number if applicable.
- (j) Awarding agency name and code.

- (k) Funding agency name and code.
- (l) Government contracting office code.
- (m) Treasury account symbol (TAS) as reported in FPDS.
- (n) The applicable North American Industry Classification System (NAICS) code.

By the end of the month following the month of a contract award, and annually thereafter, the Cooperator shall report the names and total compensation of each of the five most highly compensated executives for the Cooperator's preceding completed fiscal year at <http://www.ccr.gov>, if –

- (a) In the Cooperator's preceding fiscal year, the Cooperator received –
 - (i) 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and
 - (ii) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and
- (b) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>).

Unless otherwise directed by the Contracting Officer, by the end of the month following the month of a first-tier subcontract with a value of \$25,000 or more, and annually thereafter, the Cooperator shall report the names and total compensation of each of the five most highly compensated executives for each first-tier subcontractor for the subcontractor's preceding completed fiscal year at <http://www.fsrs.gov>, if

- (a) In the Subcontractor's preceding fiscal year, the Subcontractor received –
 - (i) 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and
 - (ii) \$25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and subgrants) and cooperative agreements; and

- (b) The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>).

If the Cooperator in the previous tax year had gross income, from all sources, under \$300,000, the Cooperator is exempt from the requirement to report subcontractor awards. Likewise, if a subcontractor in the previous tax year had gross income from all sources under \$300,000, the Cooperator does not need to report awards to that subcontractor.

END

ATTACHMENT A

SELF-INSURANCE REQUIREMENTS FORM

**INSURANCE MUST CONFORM TO ALL THE REQUIREMENTS LISTED BELOW PRIOR TO
RECIPIENT BEING PERMITTED TO USE OR OCCUPY GOVERNMENT PREMISES OR
PROPERTY PURSUANT TO THE COOPERATIVE AGREEMENT**

1. PUBLIC LIABILITY AND PROPERTY DAMAGE

a. Required minimum amounts of insurance listed below:

\$ N/A Fire and Extended Coverage

\$ 1,000,000 Third Party Property Damage

\$ 1,000,000 Third Party Personal Injury Per Person

\$ 1,000,000 Third Party Personal Injury Per Accident

2. SELF-INSURANCE REQUIREMENTS: If your organization is self-insured, please provide evidence of self- insurance which meets or exceeds the insurance liability amounts in Item # 1.

The following information, written on your organization's letterhead, is also required:

- A brief description of your organization's self-insurance program, with reference to statutory or regulatory authority establishing the self-insurance program.
- The name and telephone number of your organization's self-insurance program administrator.
- Reference the appropriate military facility and cooperative agreement number.

3. IF YOUR SELF-INSURANCE PROGRAM DOES NOT MEET THE ABOVE MINIMUM REQUIREMENTS:

- Provide evidence of Excess Liability Insurance in the amount necessary to meet or exceed the minimum requirements in Item #1 above.

- The following endorsements are required for Excess Liability insurance policies:

a. "The insurer waives any right of subrogation against the United States of America which might arise by reason of any payment made under this policy."

b. "The Commanding Officer, Naval Facilities Engineering Command Marianas, Guam shall be given thirty (30) days written notice prior to making any material change in or the cancellation of the self-insurance program."

c. "The United States of America (Department of the Navy) is added as an additional insured in operations of the policyholder at or from the premises licensed/leased from the United States".

d. "This insurance certificate is for use of facilities at Joint Region Marianas, Guam under this Cooperative Agreement, No. N40192-19-R-8002."

4. NOTICE: "RIGHT TO USE" DOCUMENTS WILL NOT BE FULLY EXECUTED UNTIL CERTIFICATE IS RECEIVED WITH PROPER ENDORSEMENTS.

ATTACHMENT A (Continued)
NON SELF-INSURED REQUIREMENTS FORM

INSURANCE MUST CONFORM TO ALL THE REQUIREMENTS LISTED BELOW PRIOR TO RECIPIENT BEING PERMITTED TO USE OR OCCUPY GOVERNMENT PREMISES OR PROPERTY PURSUANT TO THE COOPERATIVE AGREEMENT

1. PUBLIC LIABILITY AND PROPERTY DAMAGE

a. Required minimum amounts of insurance listed below:

\$	N/A	Fire and Extended Coverage
\$	1,000,000	Third Party Property Damage
\$	1,000,000	Third Party Personal Injury Per Person
\$	1,000,000	Third Party Personal Injury Per Accident

2. THE CERTIFICATE OF INSURANCE MUST CONTAIN THE FOLLOWING ENDORSEMENTS:

a. "The insurer waives any right of subrogation against the United States of America which might arise by reason of any payment made under this policy."

b. "The Commanding Officer, Naval Facilities Engineering Command, Facilities Engineering Command, shall be given thirty (30) days written notice prior to making any material change in or the cancellation of the policy."

c. "The United States of America (Dept. of the Navy) is added as an additional insured in operations of the policyholder at or from the premises **licensed/leased** from the United States."

d. "This insurance certificate is for use of facilities at NAVFAC SW under this Cooperative Agreement, No. N40192-19-R-8002."

e. Loss, if any, under this policy shall be adjusted with Recipient and the proceeds, at the direction of the Government, shall be payable to Recipient, and proceeds not paid to Recipient shall be payable to the Treasurer of the United States of America."

3. NOTICE: "RIGHT TO USE" DOCUMENTS WILL NOT BE FULLY EXECUTED UNTIL CERTIFICATE IS RECEIVED WITH PROPER ENDORSEMENTS.

ATTACHMENT B
DRAFT AND FINAL REPORT FORMAT

The Annual Report shall follow the formats described by Messmer, T.A and M.L. Morrison 2006, in “Unified Manuscript Guidelines for the Wildlife Society Peer-Reviewed Publications in the Journal of Wildlife Management, volume 70, issue 1; pages 304-320, as appropriate, with the following outline:

1. Title page showing the title, date, and CATR representative location and Cooperative Agreement Number
- ii. Sub-title page showing:
 - (a) Title
 - (b) “Prepared by” listing with affiliations
 - (c) “Under contract to” listing, and shall include the CATR representative location
 - (d) Date
 - (e) Recommended citation
- iii. Table of contents, arranged as follows:
 - (a) Table of contents
 - (b) List of tables
 - (c) List of figures (photographs are considered figures)
 - (d) References/literature cited
 - (d) List of appendices
- iv. Abstract
- v. Introduction
- vi. Study Area
- vii. Methods
- viii. Results

ATTACHMENT B (Continue)
DRAFT AND FINAL REPORT FORMAT

ix. Discussion/Recommendations.

xi. Acknowledgments

xii. Appendices

xiii. Electronic Appendices.

Where JWM Manuscript Guidelines do not provide sufficient direction, as appropriate, follow the standards provided in Scientific Style and Format; The CSE Manual Authors, Editors, and Publishers, Seventh Edition, Style Manual Committee Council of Science Editors, <http://www.scientificstyleandformat.org/Home.html> .

ATTACHMENT C
WAWF INSTRUCTIONS

252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (JUN 2012)

(a) Definitions. As used in this clause—

Department of Defense Activity Address Code (DoDAAC) is a six position code that uniquely identifies a unit, activity, or organization.

Document type means the type of payment request or receiving report available for creation in Wide Area WorkFlow (WAWF).

Local processing office (LPO) is the office responsible for payment certification when payment certification is done external to the entitlement system.

(b) Electronic invoicing. The WAWF system is the method to electronically process vendor payment requests and receiving reports, as authorized by DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports.

(c) WAWF access. To access WAWF, the Contractor/Recipient shall—

(1) Have a designated electronic business point of contact in the Central Contractor Registration at <https://www.acquisition.gov>; and

(2) Be registered to use WAWF at <https://wawf.eb.mil/> following the step-by-step procedures for self-registration available at this Web site.

(d) WAWF training. The Contractor/Recipient should follow the training instructions of the WAWF Web-Based Training Course and use the Practice Training Site before submitting payment requests through WAWF. Both can be accessed by selecting the “Web Based Training” link on the WAWF home page at <https://wawf.eb.mil/>.

(e) WAWF methods of document submission. Document submissions may be via Web entry, Electronic Data Interchange, or File Transfer Protocol.

(f) WAWF payment instructions. The Contractor/Recipient must use the following information when submitting payment requests and receiving reports in WAWF for this contract/order: N40192-19-R-8002.

(1) Document type. The Recipient shall use the following document type(s).
NAVY CONSTRUCTION/FACILITIES MANAGEMENT INVOICE

ATTACHMENT C (Continue)
WAWF INSTRUCTIONS

(2) Inspection/acceptance location. The Contractor/Recipient shall select the following inspection/acceptance location(s) in WAWF, as specified by the contracting officer.

(3) Document routing. The Contractor/Recipient shall use the information in the Routing Data Table below only to fill in applicable fields in WAWF when creating payment requests and receiving reports in the system.

Routing Data Table*

Field Name in WAWF Data to be entered in WAWF

Pay Official DoDAAC N68732
Issue By DoDAAC N40192
Admin DoDAAC N40192
Inspect By DoDAAC N40192
Ship To Code N/A
Ship From Code N/A
Mark For Code N/A
Service Approver (DoDAAC) N/A
Service Acceptor (DoDAAC) N40192
Accept at Other DoDAAC N/A
LPO DoDAAC N40192
DCAA Auditor DoDAAC N/A
Other DoDAAC(s) N/A

(4) Payment request and supporting documentation. The Contractor/Recipient shall ensure a payment request includes appropriate contract line item and subline item descriptions of the work performed or supplies delivered, unit price/cost per unit, fee (if applicable), and all relevant back-up documentation, as defined in DFARS Appendix F, (e.g. timesheets) in support of each payment request.

(1) WAWF email notifications. The Contractor/Recipient shall enter the email address identified below in the “Send Additional Email Notifications” field of WAWF once a document is submitted in the system.

(g) Christopher.Santos@fe.navy.mi, WAWF point of contact. (1) The Contractor/Recipient may obtain clarification regarding invoicing in WAWF from the following contracting activity's WAWF point of contact.

NOT APPLICABLE

- (1) For technical WAWF help, contact the WAWF helpdesk at 866-618-5988.
(End of clause)

ATTACHMENT D
NAVFAC Standards for Geographic Information System (GIS)

1. Overview:

The GeoReadiness Center (GRC) is the single, authoritative source and distribution point for all geospatial shore installation data within the region. The GRC houses the most current geospatial information for the entire region and provides access to the comprehensive data set and analysis tools to Regional and DOD decision makers/managers, sponsored contractors, and other sponsored individuals via a secure government Internet site.

2. Basic Deliverable Requirements:

a. Submittals, Government Review and Acceptance:

- i. All data used and developed under contract is intellectual property of the U.S. Government, and shall be turned over to the U.S. Navy upon completion of this amendment.
- ii. All submittals shall be reviewed for accuracy, structure and completeness by a GeoReadiness representative before acceptance. Contractors shall submit data and documentation samples at 25% and 75% project completion to avoid the rejection of final deliverables.
- iii. All source code (e.g. Python scripts, html files, etc.) and map files (ESRI ArcGIS .mpk) shall be provided to the government.
- iv. Failure to adhere to any of the stated delivery specifications could result in rejection of deliverables and nonpayment.

b. GIS Data Format: NAVFAC's GIS data is ERSI Geodatabase format, **version 10.1 as of May 2014**. All ESRI format data submittals must also be in version 10.1.

- i. All GIS/geospatial projects (i.e., MPK) shall be delivered containing all related source files in a specific project file, including extension, graphics, photos, CAD, source code (non-encrypted, Visual Basic) based on version of ArcGIS Desktop specified for the task order. Submittal format shall be determined by the COR.
- ii. Spatial Data (GIS Map Themes): Spatial data shall be delivered as an ArcGIS file geodatabase. File geodatabases are relational databases that contain geographic information. File geodatabases contain feature classes and tables. The names of these geodatabases should reflect the location of the geographic information it contains at the appropriate level of detail (region, special area, activity). The general format of personal geodatabase names is as follows:

ATTACHMENT D (Continue)
NAVFAC Standards for GIS

Location_yyyymmdd.gdb

- iii. Location = Location of the geographic information, defined to the appropriate level of detail. Names begin at the regional level, using the 2-digit country code from iNFADS (e.g. HI=Hawaii, GQ=Guam, JA=Japan, etc.) and may narrow into an area of interest within the region (e.g. Pearl Harbor, Yokosuka, Apra Harbor, etc.). The location can be further narrowed down to the activity level where the geodatabase can be identified by the activity's UIC (N68032, N58003, etc.)
 - iv. yyyymmdd= Date that the geodatabase was created or amended, as expressed in year (yyyy), month (mm), and date (dd).
- c. Data Retention: all data (electronic and paper formats) must be removed from contractor equipment and possession and returned to the government at the end of the period of performance and before the final invoice is approved.
- d. Data Structure:
- i. Unless specifically directed otherwise, all data shall be structured according to the current version of the Spatial Data Standards (SDSFIE) in use by NAVFAC. **This is version NDM 3.03 as of December 2015.** Information on the SDSFIE data model can be found at: <https://sdsfie.org>, and a copy of the current data model implementation shall be provided to the contractor.
 - ii. If new data is being created and the corresponding SDSFIE data structure exists, the government shall provide unpopulated layers to the contractor structured per current NAVFAC standards.
 - iii. If new data is being created and the corresponding data structure does NOT yet exist, the contractor shall provide the GRC with a data dictionary identifying all of the SDSFIE Entity Types, attributes, and/or domain values associated with the new feature(s), the geographic area(s) covered by the data and Spatial extent information prior to the creation/editing of GIS data. Acceptable formats: MS Excel or MS Word. (Adobe PDF is not an acceptable format. New non-SDS compliant attributes (meeting SDSFIE criteria) will require precise schema definitions.

ATTACHMENT D (Continue)
NAVFAC Standards for GIS

- e. Government Source Data: The contractor will be provided access to any GIS data required for the project via a government computer, which will require
- f. Contractor Common Access Card (CAC). Government GIS repository is in an ESRI format. All data shall be returned in this format and structure unless the government specifies otherwise. A completed NAVFAC GIS Data Release form is required prior to data being released to the Contractor if editing is required to be completed on Contractor equipment.
- g. Attribute Population:
 - i. The contractor shall consult with the COR before populating attribute tables to ensure the results match the current GeoReadiness interpretation of the SDSFIE.
 - ii. The contractor shall identify the classification, type, location, ID number, and any other necessary attributes (specified by the Government) for all new/updated/edited features.
 - iii. For new field collected data, attribution must include the date collected in the following format.
 - 1. **Name:** Date
Description: Date that the feature was edited from its original or previous value.
Data Type: Date
Default Value: null

3. Data Integrity

- a. Data accuracy standards for all deliverables will be in accordance with those set forth in the section entitled 'Data Collection Procedures'. All deliverables should include an accuracy report in the metadata.
- b. The contractor shall employ appropriate QA/QC standards to ensure that data is topologically correct, accurate and complete (to include):
- c. No erroneous overshoots, undershoots, dangles or intersections in the line work
- d. Point and line features will be snapped together where appropriate to support networks. For example, do not break linear features for labeling or other aesthetic purposes.
- e. Lines should be continuous and point features should be digitized as points. For example, point features, such as manholes, should not be drawn using only a circle (polygon) to represent its location. Preferably, use an attribute block symbol that has an insertion point in the center of the manhole.

ATTACHMENT D (Continue)
NAVFAC Standards for GIS

- f. No sliver polygons
 - g. Digital representation of the common boundaries for all graphic features must be coincident, regardless of feature layer
 - h. Geometric network connectivity must be maintained for utility networks.
- Note: This excludes field collected “walked” survey transect data

A summary of the methods used to correct inconsistencies and any remaining errors by case should be included in the metadata under the ‘Logical Consistency Report’ and ‘Completeness Report’ sections.

4. CAD Format Deliverables:

- a. CAD drawings may be accepted as GIS deliverables, if COR approves.
- b. All files must be accurately georeferenced and adhere to the requirements regarding the coordinate system, metadata, and the specified data Quality Control and Quality Assurance requirements.
- c. The government shall specify whether files are to adhere to either the SDSFIE or A/E/C CAD standard.

5. Coordinate System:

All geospatial data, unless specified otherwise, shall be in the Geographic Coordinate System: GCS_WGS_1984, Datum: D_WGS_1984.

6. Metadata:

- a. **Feature Level Metadata:** Feature-level (record level) attribute metadata is required to be populated for each GIS feature/record, per the current SDSFIE version.

Attributes for version 3.03 are listed in **APPENDIX C**

- b. **Layer Level Metadata:** Layer level metadata is required for all deliverables, structured according to the FGDC Content Standard for Digital Geospatial Data (CSDGM). Details on the standard can be found at <http://www.fgdc.gov/metadata/geospatial-metadata-standards>.

7. Quality Control and Quality Assurance:

The contractor shall take all appropriate and needed QA/QC measures to ensure data is complete, topologically correct, accurate, structured correctly, and formatted correctly per the scope of work and complete (to include):

- a. ****All data shall be visually inspected before submittal to the government.****
- b. The numbers of records for all joined tables shall match, or the specific unmatched records shall be identified and explained to the satisfaction of the government.

ATTACHMENT D (Continue)
NAVFAC Standards for GIS

- c. All required attributes (per SDSFIE version 3.03 shall be populated.
- d. All domain constraints shall be adhered to, unless approved by the government, prior to submittal.
- e. No erroneous overshoots, undershoots, dangles or intersections in the line work.
- f. All area type features shall be closed polygons.
- g. Line features shall be snapped together where appropriate to support networks. For example, do not break linear features for labeling or other aesthetic purposes.
- h. Lines shall be continuous and point features shall be digitized as points. For example, point features, such as manholes, shall not be drawn using only a circle (polygon) to represent its location.
- i. No sliver polygons
- j. Digital representation of the common boundaries for all graphic features must be coincident, regardless of feature layer
- k. Geometric network connectivity shall be maintained for utility networks, where specified by the scope of work.

8. Field Collection

- a. Where field data collection is required, the contractor shall utilize conventional and other methods, such as a total station, or Global Positioning System (GPS) in accordance with the applicable Geospatial Positioning Accuracy Standards published by the Federal Geographic Data Committee (FGDC).
- b. At a minimum, the contractor shall provide resource grade GPS collection at an accuracy level of +/- < 1m and shall use differential correction to target accuracies of +/- .5 m.
- c. Where appropriate (as stipulated in the contract or as otherwise determined by the Government), the contractor shall use survey grade GPS, at an accuracy level of +/- 2 cm. Global Positioning System (GPS) data collection activities will be based on a post-processed environment using an accurately sighted base station. Base station files for post processing acquired locally (off-site CORS Continuous Operating Reference Station) will be verified for accuracy.

GPS data on the location of utility lines and other features shall be captured at a minimum every 50ft and at each turn or bend in the line and processed as a line feature type. GPS data on the location of utility points

ATTACHMENT D (Continue)
NAVFAC Standards for GIS

and other features shall be captured at the centroid of the feature unless signal obstruction or access prohibits; otherwise points will be captured at a uniform distance and direction from the centroid and the offset captured in the metadata for that feature. Data on polygon features shall be collected at every vertex of the feature and processed as a polygon.

- d. All survey-grade data collected shall be provided to the Government in a digital format with an attached Survey Report identifying survey method,
- e. equipment list, calibration documentation, survey layout, description of control points, control diagrams, quality control report and field survey data.
- f. A digital Survey Control Database (consisting of a survey marker database and a survey traverse database) will be produced for all survey control points established under this contract, including the horizontal and vertical order and coordinate location of each point.
- g. Digitizing/Conversion: Where Digitizing/Conversion is stipulated in the contract, the contractor shall digitize/convert features from designated sources (including remotely sensed data, hardcopy scans and vector data) to support various GIS applications. Digitizing/conversion routines will insure that 90 percent of all features will measure within 0.01 inches when reproduced at the scale of original imagery or data source

9. Photography.

- a. Photography on-base must be approved in advance of visiting the base, the Contractor shall identify the personnel designated as photographers for this contract and shall identify the proposed areas/facilities to be photographed and provide installation (via COR) with any required photographic equipment information.
- b. All photographs to be delivered/used in the final report must be geotagged with the UTM of the picture location

ATTACHMENT E

Specifications for GIS Layers and Attributes

The Recipient shall consult with the government points of contact to ensure data is placed into the appropriate layer.

This section lists:

- **SDSFIE Required Global Attributes:** These must be populated for each record in all layers
- **SDSFIE Required Global Metadata Attributes:** These must be populated for each record in all layers
- **Project Specific GIS Layer and Attribute Descriptions:** Specific to the scope of work, this section provides the full descriptions of each layer and available attributes. The contractor shall consult with the government points of contact to identify which specific non-required attributes to populate.

Name: FeatureName

Description: The common name of the feature.

Data Type: String (80)

Default Value: null

Domain: NA

Key: NA

Name: FeatureDescription

Description: A narrative describing the feature.

Data Type: vChar (MAX)

Default Value: null

Domain: NA

Key: NA

1. SDSFIE Required Global Metadata Attributes

These attributes must be populated in each record in all layers.

Name: editor

Description: Contractor or person that edited the feature attribution or geometry from its original or previous value. Last Name of the person and first initial. For example, Jane Smith would be attributed as SmithJ.

Data Type: String (20)

Default Value: null

Domain: NA

Key: NA

ATTACHMENT E (Continue) Specifications for GIS Layers and Attributes

Name: dateEdited

Description: Date that the feature was edited from its original or previous value.

Data Type: Date

Default Value: null

Domain: NA

Key: NA

Name: collectionSource

Description: Describes how the data was collected and verified. (Example: GPS Field Collected – Mapping Grade).

Data Type: String (75)

Default Value: null

Domain: CollectionSource

Key: NA

Name: locAccy

Description: Describes the location accuracy of the data that was collected and verified.

Data Type: String (50)

Default Value: null

Domain: NA

Key: NA

Name: metaNotes (** use only if needed)

Description: Describes other details about what was created or edited and why.

Data Type: String (255)

Default Value: null

Domain: NA

Key: NA