STATEMENT OF WORK (SOW) N40192-23-2-8005

JOINT REGION MARIANAS (JRM) NATURAL RESOURCES (NR) STEWARDSHIP OUTREACH & PUBLIC ENGAGEMENT PROGRAM

LAST UPDATED 03/29/2023

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A. INTRODUCTION

The Natural Resources (NR) divisions within the Naval Facilities Engineering Systems Command support the Joint Region Marianas (JRM) promotion of environmental education, outreach and awareness for military families, civilians, contractors to the government, and the public as detailed in the JRM Integrated Natural Resource Management Plan (INRMP). Implementation of successful outreach programs not only increase awareness, but also promote healthy ecosystem management within the Joint Region Marianas (JRM) Area of Responsibility (AOR).

B. PURPOSE

The purpose of this project is to provide environmental education, outreach and awareness to targeted populations within the JRM AOR. This Agreement includes the following requirements:

1. This Project will assist in the development and implementation of the JRM Stewardship Outreach and Education Program within the JRM AOR

C. LOCATION

The location for the performance of this Agreement is on Department of Defense (DoD) lands within the JRM AOR.

D. DESIGNATED REPRESENTATIVES

The Grants Officer (GO) is Eugene Diaz, Acquisition Director, Naval Facilities Engineering Command, Marianas, PSC 455, Box 195, FPO AP GU 96540-2937, email: eugene.diaz9.civ@us.navy.mil.

The Cooperative Agreement Contract Specialist is Thelman Mark Fontenot, Acquisition Director, Naval Facilities Engineering Command (NAFVAC) Marianas Guam, PSC 455, Box 195, FPO AP GU 96540-2937, email: thelman.m.fontenot.civ@us.navy.mil.

The Cooperative Agreement Technical Representative (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 shall be the first point of contact of the Recipient of the Agreement concerning issues/concerns regarding any of the requirements and specifications of this agreement, including base access and project site issues. The CATR for this agreement shall be Megan Parker, Natural Resources Specialist, NAVFAC Marianas Guam, PSC 455 PO Box 190; FPO, AP 96540; Telephone: (671) 339-2344; email: Megan.A.Parker11.civ@us.navy.mil.
E. PERIOD OF PERFORMANCE

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 may include up to 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 to extend the term of the Agreement.

F. MATERIAL FOR REVIEW

1. CATR will provide products previously designed within an earlier Cooperative Ecosystems Study Unit, (CESU) completed in fiscal year 2022, including but not limited to:
   a. Mariana Environmental Stewards website
   b. Tinian Turtle educational slides
   c. Tinian Turtle educational signage
   d. Tinian Turtle materials for distribution to students and faculty
   e. The JRM Integrated Natural Resources Management Plan (JRM INRMP)

G. GENERAL REQUIREMENTS

1. The Recipient shall visit the designated project areas as often as necessary and as agreed upon with the CATR, within the limits stated below to accomplish the purpose of this Agreement. It is the Recipient’s responsibility to obtain security and entrance clearances and camera passes for himself/herself and his/her personnel and take munitions and explosives of concern training (~1 hour). The Recipient must comply with all Installation security rules, regulations, requirements, and day-to-day operational changes thereto.

2. The Recipient shall provide all transportation, meals, and lodging for himself/herself and his/her personnel and all equipment and facilities necessary to complete the work, with the exception of travel to and from Tinian, CNMI in support of the Turtle Education Task. All equipment utilized on Base is subject to inspection by and approval of the Installation Safety Officer.

3. The Recipient shall conduct field investigations and interviews with experts and authorities as necessary to accomplish the work described below. The Recipient may utilize information from local offices and personnel of the United States Fish and Wildlife Service (USFWS), Guam Department of Agriculture Division of Aquatic and Wildlife Resources (Guam DAWR), and the Commonwealth of the Northern Mariana Islands Department of Fish and Wildlife (CNMI DFW).

4. The Recipient shall coordinate field methods with the CATR to ensure approved methodology and protocols are followed.

5. The Recipient shall coordinate all field activities with the CATR to minimize conflict with other research, restoration, and mission activities.

6. The Recipient shall submit a draft Accident Prevention Plan (APP) for Government review
and comments. All Government comments, additions or revisions shall be incorporated into the final APP. The Government considers the Recipient to be the controlling authority for all work site safety and health of any party performing work on this Agreement. Recipient is responsible for informing all parties performing work on the Agreement of the safety provisions under the terms of the Agreement and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and for inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person who has authority to bind the firm) preparing the APP, the Recipient, the on-site superintendent, the designated site safety and health officer and any designated Certified Safety Professional (CSP) and/or Corporate Industrial Hygienist (CIH). Activity Hazard Analyses (AHAs) shall be updated as specified in the final APP.

7. 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, inventory, analysis, and quality control of outreach materials.

8. Non-native invasive species can be purposefully or inadvertently introduced via equipment, foot traffic, vehicles and vessels, and packing materials. In order to address this issue, the Recipient shall submit a site-specific Hazard Analysis and Critical Control Point (HACCP) Plan to ensure that invasive species are not moved, or introduced in association with applied control techniques. The site-specific HACCP is subject to approval by the CATR.

9. Due to the complexity of the work, the Recipient shall provide the following key personnel with the following minimum qualifications:

   a. Principal Investigator (PI): Throughout performance of the Agreement, the Recipient shall be able to provide the natural resources services required by this Agreement. The PI’s oversight of the project includes monitoring and controlling project costs, assigning personnel consistent with the Agreement requirements, understanding and assuring compliance with applicable Federal, DoD and Navy natural resource and environmental policies.

   b. The Principal Investigator shall have, at the minimum:

      i. A doctoral degree in biology, botany, natural resources, conservation biology or similar field.

      ii. A minimum of six (6) years of experience managing multiple concurrent projects as a senior scientist or project manager working with biological studies and any other environmental related work.

      iii. Experience ensuring compliance with the agreement terms and conditions; review of project documents to ensure product consistency, assigning personnel consistent with agreement requirements and performing as the
agreement’s representative.

iv. Experience ensuring management of natural resources with all federal and local regulations, their state counterparts, and other applicable or relevant and appropriate requirements.

v. Ability to provide technical oversight to Project Manager and Project Assistants.

c. Project Manager (PM): The Recipient shall assign a PM for this Agreement, who shall be responsible for overseeing on a day-to-day basis necessary activities of the project. The PM’s oversight of the project includes monitoring and controlling project costs, assigning personnel consistent with the Agreement’s 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. The PM shall have a thorough understanding of Navy natural resource and environmental policies and regulations and their state counterparts, and other applicable or relevant and appropriate requirements.

d. The PM shall have, at the minimum:

i. A Master’s degree in biological sciences, natural resources management or similar related fields or equivalent experience from an accredited four (4) year college or university.

ii. Specific knowledge and experience of endangered species management and/or natural resources management in the Pacific Islands or island ecosystems, as demonstrated by at least three (3) years of previous field work or research experience to be documented well and acquired under the employment of an academic institution, governmental agency, private company, or non-profit organization in the appropriate field.

iii. Prior experience in monitoring and controlling and/or developing protocols for the management of native and non-native species.

iv. Ability to be deployable to supervise Project Assistant(s) at various study/project areas within the JRM AOR.

v. At least two (2) years of experience managing environmental outreach programs and/or events.

e. Project Assistant(s): In working with the PM, these individuals shall: assist with developing and designing graphics and layouts for outreach materials, provide administrative services, manage the project’s files; assist in the preparation of materials for project meetings; and other duties as assigned.
f. The PAs shall have, at the minimum:

i. A high school diploma or equivalent.

ii. One (1) year of work experience in with natural resources or at least one (1) year of experience in educational outreach graphic design and publication development. Experience needs to be well-documented and acquired under the employment of an academic institution, governmental agency, private company, or non-profit organization in the appropriate field.

iii. Experience conducting fieldwork, and accurately recording, entering, and proofing data

iv. Experience maintaining scientific records of their observations in the form of field reports.

v. Good physical condition, and capable of walking several consecutive miles while carrying gear and performing manual labor in a hot tropical environment on uneven terrain for multiple hours.

vi. Ability to take photographs and collect samples of plants, insects, and animals for identification.

vii. Ability to use compass, maps, data tablets, and GPS.

viii. A valid driver’s license.

ix. Ability to obtain all local and federal permits required to conduct services, as required for each required task under the Agreement.

x. Ability to be deployable to study/project areas within the JRM AOR.

10. The recipient shall provide the Grants Officer (via the CATR) the names of persons and copies of their resumes being considered for work under this Agreement. After resume submission, the Recipient shall not replace or substitute any submitted personnel member without requesting to substitute, providing name and copy of resume for proposed substitute and receiving prior written approval by the Grants Officer for the substitution.

11. Substantial Involvement by the Government. In reference to this Agreement, substantial involvement is required between the DoD and Recipient during the period of performance based on the requirements prescribed in the scope of work. The anticipated involvement between the CATR and PI is deemed appropriate to carry out a public purpose of support to include a direct benefit to the Government. Government involvement includes:

a. Advising Recipient, as needed, in preparing information for any published work;

b. Providing relevant maps and information pertaining to environmental resources and
programs for the production of needed materials;

c. Assisting with coordination with Base security to ensure safety procedures are met;

d. Facilitating access to DoD lands and facilitate any required passes as needed;

e. Assisting with plan of action and milestones (POAM) development;

f. Accompanying Recipient during project operations as often as necessary, to ensure quality control, efficacy of actions;

g. Conducting meetings with Recipient to determine if milestones are met.

12. All work conducted in support of this Agreement shall comply with all laws, regulations, and other requirements applicable to JRM.

13. At no cost to the Government, the Recipient shall obtain and maintain all necessary permits or certifications necessary to conduct the activities stipulated in the Agreement.

14. All parties involved in this Agreement agree to comply with all applicable laws, regulations, and other requirements 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.

15. Vehicle and vessel operators shall comply with all base installation rules, regulations, and laws.

16. All notes, forms, electronic storage of publications, photographs, graphic designs/logos, etc. collected and produced as part of this Agreement are property of the DoD and shall be provided to the CATR upon request.

17. The materials obtained during this Agreement shall not be copy-righted, shall be suitable for publication, and shall be reproducible for educational purposes by JRM in perpetuity. The Grants Officer shall approve (via the CATR) in advance any changes to previously used NAVFAC, JRM, Installation, or DoD designs/logos, methods of publication development, and production units of specified outreach materials, which shall be provided in the Recipient’s required Work Plan. The CATR, at their discretion, may subject draft Work Plans, draft designs, or draft publications to external peer review.

18. The Recipient shall inform the CATR via phone, text, and/or e-mail of any unusual activity observed while on DoD lands (e.g. trespassers or persons in unauthorized areas). Information should include (a) location, (b) date, (c) time, and (d) any detailed facts regarding the activity.

19. The Recipient shall inform the CATR via phone, text, and/or e-mail of any endangered, threatened, or rare animal or plant species observed while on DoD lands (e.g. species which are federally listed or are Territorial Species of Special Concern). Information
should include (a) location, (b) date, (c) time and (d) any detailed facts about the sighting.

20. Throughout the term of this Agreement the CATR shall be afforded the opportunity by the Recipient to periodically observe the Recipient’s field activities, to review computer or paper files of raw data, prepared publications or displays, or any record deemed appropriate by the Government in establishing the Recipient’s performance in fulfilling the requirements of this Agreement.

21. The DoD, via the Government, may request updated data presented on maps, figures and/or tables whenever the DoD’s need to obtain this information is before the next report required under Section J of 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 period of time, the Recipient shall forward, electronically, the most updated raw data to the Government, via the CATR. The DoD understands that facilitating the most updated requested data may reduce the amount of work that would normally be accomplished during the period of time required to complete the request. The Recipient shall document the amount of efforts and its translated cost estimate that would have been incurred by the Recipient to complete the request for updated data. This document shall be electronically forwarded to the Government (via the CATR) to review so that the DoD will have a firm understanding on the amount of work displaced that would have normally been accomplished during the period of time required to complete the request.

22. Work areas within the installations may have Unexploded Ordnance (UXO) from World War II. Recipient field personnel will be requested to attend the Naval Facilities Engineering Command (NAVFAC) Marianas UXO Awareness Training prior to conducting any fieldwork. No ground disturbing activities are to take place unless authorized by the CATR.

H. SPECIFIC REQUIREMENTS

1. This Agreement requires the Recipient to develop and implement two (2) technical requirement(s) and two (2) tasks during the performance period, as follows:

   a. Technical Requirements:
      i. Maintenance and updates to the Marianas Environmental Stewards website
      ii. Development and implementation of Sea Turtle Educational Outreach and Art Contest in Tinian, CNMI

   b. Tasks:

   **Task 1: Maintenance and updates to the Natural Resources (NR) stewardship focused website**

   Maintenance and updates of a currently developed website that includes the following:
   - 6-9 key feature pages as needed
   - Text search capability
   - Dashboard landing page with widgets and notifications
- Ability to email CATR or Recipient with inquiries/issues
- Calendar capability (with push notifications for specific events)
- Information, photos, and 360 degree trail photos for the Public Access Program
- Booking ability for the Public Access Program
- Social sharing of calendar events or notices
- Multilingual capabilities
- User Admin pages- ability to add/remove/suspend users
- Moderation/content approval
- CMS integration
- User analytics
- Performance monitoring and crash reporting
- SSL certificate based security
- Dos protection

Admin login information and designed pages provided by CATR.

Task 2: Development and Implementation of Outreach Activity in Tinian, CNMI

Sub-Task 2.1: Development of Educational Materials and Tools

The CATR and relevant Subject Matter Experts (SMEs) will provide The Recipient with previously designed outreach materials as well as information from ongoing NR sea turtle project descriptions. The Recipient will use this information to design and develop educational materials and tools to be used in a sea turtle education program for Tinian, CNMI students.

Projects with relevant information to Sub-Task 2.1:
- NR Project Information: Sea Turtle Nesting on Tinian MLA
- NR Project Information: Beach Cleanup on Tinian MLA
- Previously designed sea turtle safety and biological signage
- Sea turtle informational presentation

Sub-Task 2.2: Development and Implementation of Art Contest

Using information in Sub-Task 2.1, the Recipient will develop a Sea Turtle Safety Art Contest to be implemented at local schools on Tinian, CNMI. Items to take into account for implementation of the Art Contest:

- Various aged children and teens (grades K to 12) will participate in presentations and educational games to learn about sea turtle biology, life cycle, and threats.
- Various aged children and teens will design artistic ideas using various mediums to display at the school in support of sea turtle safety and education
- A panel of local teachers, staff from the recipient, and Government SME’s will select winning art designs
- Winners of the art contest will have designs displayed on two already created sea turtle safety signs created in a previous contract
- The recipient will create an additional sea turtle safety sign based on current signage created in a previous contract
- Additional information detailing the presentations, contest, and winners will be designed and produced as part of the display on the opposite side of the current and new signage
- The recipient will coordinate, ship, and install current signage along with new signage in pre-selected locations on sea turtle nesting beaches in Tinian
- The recipient will be responsible for coordinating any Munitions and Explosives of Concern (MEC) needs prior to installation

I. MEETINGS/COORDINATION

1. The Recipient or their designee will arrange (either on site, via video-conferencing, or via telephone) a kick-off meeting within 15 days of award receipt. The Recipient will invite The CATR and/or other necessary parties to ensure coordination of activities.

2. The Recipient will coordinate meetings on a regular basis (to be determined at Kick-Off) and as needed with the CATR and/or other necessary partied to ensure milestones are met and any arising issues handled in a timely manner.

J. SUBMITTALS and SCHEDULES

1. Hard and electronic copies of all submittals/schedules/deliverables (examples include, but are not limited to, draft/final brochures, posters, signs, calendars, designs/logos, banners, pop-up displays, and outreach materials) will be provided to the CATR for retention in the official Agreement file.

2. The Recipient shall submit the following:
   a. POAM: The Recipient shall submit a POAM that will ensure timely completion of the work, at least five (5) days prior to the kick-off meeting. The final POAM shall be submitted five (5) days after receipt of Government comments. Activities cannot proceed until the Final POAM has been reviewed and approved by the Government.
   b. Draft/Final Work Plan: The Recipient shall submit a Draft/Final Work Plan that will show in reasonable detail the approach (including the project’s work schedule milestones with dates) that will be taken to successfully accomplish the requirements and specifications of the Agreement. The Draft Work Plan can be submitted alongside the POAM (5 days prior to the kick-off) and the Final Work Plan can be submitted alongside the Final POAM for Government comment. Activities cannot proceed until the Final Work Plan has been reviewed and approved by the Government.
   c. Meeting Minutes: The Recipient shall be responsible for documenting discussions
conducted during the kick-off meeting and other status review meetings as described in Section I of this Agreement. The Recipient shall submit the draft meeting minutes within five (5) days from the date when the meeting was held.

d. Monthly Progress Reports: The Recipient shall provide monthly progress reports via email or other file sharing platforms that detail their progress as specified in the Agreement and final work plan. These progress reports shall also include information on the Recipient’s quality control and assurance activities. The Recipient shall submit progress reports within ten (10) business days following the end of each month of work. If no work was performed during the reporting period, the monthly PR shall describe the reason and the plan for work resumption.

e. Outreach Materials: The Recipient shall provide all outreach materials produced as required by this Agreement as specified in Section H. Each outreach material shall be provided within five (5) days after production of all units for that particular material has been completed.

f. Digital Project Files: To submit digital files, The Recipient will notify the CATR when digital files are ready for submission. The CATR will provide the Recipient with a DoD Safe Link(s) for submission. Digital files include, but are not limited to: graphic designs, layouts for brochures, booklets, and/or posters, and photos.

g. Related Requirements and Information- The Recipient shall solely be responsible for providing all study design, labor, transportation, equipment, material, tools, supplies, supervision, and administration services required to complete the requirements of this SOW.

h. If unforeseen conditions warrant any deviations from these methods the Recipient must consult with the CATR.

i. Work will be conducted according to the schedule documented in the POAM. The Recipient shall notify the CATR within two business days of any problems that occur to prevent the scheduled work. It is recognized that weather conditions, equipment failures and site conditions can interfere with work and create unforeseen unsafe working conditions. The Recipient will also immediately report any problems or concerns encountered at the work sites.

j. The Recipient shall submit the following deliverables:

<table>
<thead>
<tr>
<th>Task Deliverables</th>
<th>Copies</th>
<th>Submittal Date/Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft Work Plan</td>
<td>Electronic-word doc (email)</td>
<td>5 days before kick-off meeting</td>
</tr>
<tr>
<td>Final Work Plan</td>
<td>Electronic-pdf format (email)</td>
<td>Finalize 5-days after receipt of Government comments</td>
</tr>
<tr>
<td>Draft POAM</td>
<td>Electronic-pdf format (email)</td>
<td>5 days before kickoff meeting</td>
</tr>
<tr>
<td>Deliverable</td>
<td>Format/Method</td>
<td>Timeframe</td>
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</tr>
<tr>
<td>Final POAM</td>
<td>Electronic-pdf format (email)</td>
<td>Finalize 5-days after receipt of Government comments</td>
</tr>
<tr>
<td>Kickoff meeting minutes</td>
<td>Electronic-pdf format (email)</td>
<td>5 days after kickoff meeting</td>
</tr>
<tr>
<td>Monthly Progress Reports</td>
<td>Electronic-pdf format (email)</td>
<td>Monthly</td>
</tr>
<tr>
<td>Draft and Final Outreach Materials</td>
<td>Physical or Electronic copies- depending on the material</td>
<td>Final design completed within 14 days of Government comments. Procurement and installation of final designs will occur within 30 days after production</td>
</tr>
<tr>
<td>Digital Project Files</td>
<td>Electronic via DoD Safe</td>
<td>After all other deliverables completed</td>
</tr>
</tbody>
</table>

k. Format for Deliverables:
   i. Physical Outreach Materials: As specified in the task deliverables

   ii. Electronic Copies: The electronic version/file of the draft and final after comments are addressed shall be submitted in both A) Microsoft Word (.doc, for drafts), and B) Adobe Acrobat (.pdf, for final) via a DoD Safe Link provided by the CATR. The PDF version of all final deliverables (other than raw analytical and databases) must be a complete, exact copy of any hardcopy documents provided, and include appendices, maps, signature pages, etc.

   iii. All documents provided must include the following:

   1. NAVFAC Marianas logo
   2. Recipient Logo
   3. Agreement Number Report Title
   4. Site
   5. Location
   6. Date Report finalized
   7. A footer indicating “UNCLASSIFIED DOCUMENT”

   iv. Photographs: The Recipient will document and record pertinent aspects of the work using color digital imagery. The Recipient will provide camera and all necessary equipment. Photographs of activities documented shall be included as separate, high quality, JPEG images. Photographs by me inserted into reports as necessary; HOWEVER, all photographs shall be sent to the CATR via a DoD safe link provided by the CATR as their most high quality version. All photographs will be properly identified with a file name to include:

   1. Date of Photo
All photographs shall become DoD property and be retained by the Government for appropriate use.

1. Submittal/Deliverable Standards: All submittals/deliverables are expected to be of the highest professional quality and may be rejected if any of the following exists:
   - There are typographical errors, spelling, or grammar mistakes;
   - Results and discussion are not tied directly and continually to the NR work in this project
   - The document is not organized in a manner that flows well;
   - The document does not provide appropriate context, background, literature review, and comparison to other relevant studies, locations, and similar species;
   - The appropriate style guide is not adhered to (in most cases this is the JWM or CSE).

**K. DATA AND PUBLICATION**

a. 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.

b. The Federal 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.

c. The acknowledgements for any paper or presentation resulting from this work shall include the following statement: “This research was funded by the Department of Defense on behalf of Joint Region Marianas, Guam and the Naval Facilities Engineering Systems Command Marianas.” Any publications resulting from this work shall be provided at no cost to the Department of the Navy in quantities jointly determined by the DoD’s representative and the Recipient at the time of
publication.

d. 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.

L. RELEASE OF INFORMATION

a. The Recipient shall not respond to any inquiries about this Agreement from the news media or non-governmental organizations or other persons during the term of this 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 JRM Public Affairs Officer at the Region and Public Affairs Officer at NAVFAC Marianas through the CATR.

M. SAFETY

a. The Recipient will be required to develop an APP following the format in Appendix A of the EM 385-1-1 05 July 2011 or latest edition. A Site Safety and Health Plan (SSHP) is also required if the work is potentially hazardous. Potentially hazardous activities include, but are not limited to:

- soil boring or digging test pits (excludes manual collection of de minimis surface soil samples)
- all field work on hazardous waste or munitions response sites
- work on, in, or near bodies of water where there a danger from drowning
- use of heavy equipment, e.g. backhoes, excavators, bulldozers, etc.
- excavation, backfilling, and compaction
- use of man lifts, ladders, and other climbing apparatus
- use of firearms, or other weapons
- well drilling and/or well pump repair or replacement
- construction, demolition, or repair of site improvements
- remediation of hazardous material or waste, i.e. asbestos, paint with lead, and polychlorinated biphenyl (PCB)
- work within 10 (ten) feet of high voltage lines, or high pressure gas, steam, or water lines

b. The minimum requirement for the SSHP is in Section 28 of the EM 385-1-1. Include an AHA for all tasks reasonably anticipated to be performed as part of this statement 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 APP, SSHP and 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 APP, SSHP and AHA, address all sections that are deemed appropriate for performing the work in this Agreement, while ensuring a safe work
environment for all personnel involved. The draft APP, SSHP and AHA have to be reviewed by the NAVFAC Marianas Safety Office prior to start of field work activities.

c. NOTE: AHA is an attachment required by the APP. SSHP is also an attachment required by the APP if a project includes potentially hazardous activities. Government PM should verify with the NAVFAC Marianas Safety Office prior to directing the recipient to prepare a SSHP. The APP, SSHP and 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 APP, SSHP and AHA have been reviewed with each Recipient employee working on this Agreement prior to mobilization and start of fieldwork activities.

d. A Draft and Final APP, SSHP and AHA will be submitted concurrently with the Draft Work Plan but shall be printed under a separate cover from the Work Plan. The final APP, SSHP and AHA shall be 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 Agreement. The SSHO is required to have completed the 10-hour OSHA Safety Training.

e. 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 NAVFAC Marianas Safety Office.

N. HOLD HARMLESS

a. 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 Agreement and attendant occupation or use of Government Premises including but not limited to JRM AOR, by Recipient, its employees, servants, agents, guests, invitees, and contractors. 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 contractors. 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 contractors. This covenant shall survive the termination of this Agreement.

b. 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

a. At the commencement of this 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 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.”

b. 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.

c. The Recipient at its sole cost and expense, may insure its activities in connection with this Agreement by maintaining a program of self-insurance that complies with the requirements of this Section O, including coverages specified in Attachment A hereto. 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 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.)

d. During the entire period the 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.”

e. The Recipient and any of its contractors or agents shall deliver or cause to be delivered promptly to the Agreement Administrator, a certificate of insurance or a certified copy of each renewal policy evidencing the insurance required by this 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. If unable to provide the renewal policy within the prescribed period, promptly, and prior to the policy’s expiration, provide the Agreement Administrator with an explanation of good cause as to why it could not do so and provide a statement explaining the status of the renewal process.

f. 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 herein, the Recipient shall promptly give notice thereof to the Government and, to the extent of its liability as provided herein, 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 as provided herein, 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 as provided herein, 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

a. Partial payments equal to the amount of work accomplished may be made monthly 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.

b. The final payment of the balance of the Agreement funds for a period of performance or 15 percent of the period of performance funding for the Agreement, whichever is less, shall be paid when the final report and all other submittals and deliverables listed in Section J have been received and accepted by the CATR.

c. 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.

d. 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

a. 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 Contractor/Recipient to report information on subcontract awards. The law requires all reported information be made public; therefore, the Contractor/Recipient is responsible for notifying its subcontractors that the required information will be made public.

b. Unless otherwise directed by the Contracting Officer/Grants 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 Contractor/Recipient shall report the following information at http://www.fsrs.gov for each first-tier subcontract:

   c. Unique identifier (DUNS Number) for the subcontractor receiving the award and for the subcontractor's parent company, if the subcontractor has one.
      • Name of the subcontractor.
      • Amount of the subcontract award.
      • Date of the subcontract award.
      • 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.
      • Subcontract number (the subcontract number assigned by the Recipient).
      • Subcontractor's physical address including street address, city, state, and country. Also include the nine-digit zip code and congressional district.
• Subcontractor’s primary performance location including street address, city, state, and country. Also include the nine-digit zip code and congressional district.
• The prime Agreement number, and order number if applicable.
• Awarding agency name and code.
• Funding agency name and code.
• Government contracting office code.
• Treasury account symbol (TAS) as reported in FPDS.
• The applicable North American Industry Classification System (NAICS) code.

d. By the end of the month following the month of an Agreement award, and annually thereafter, the Recipient shall report the names and total compensation of each of the five most highly compensated executives for the Recipient’s preceding completed fiscal year at http://www.ccr.gov, if – In the Contractor’s/ Recipient’s preceding fiscal year, the Contractor/ Recipient received:
• 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and sub grants) and cooperative agreements; and

• $25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and sub grants) and cooperative agreements; and

e. 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).

f. 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 Contractor/ Recipient 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 - In the Subcontractor’s preceding fiscal year, the Subcontractor received:
• 80 percent or more of its annual gross revenues from Federal contracts (and subcontracts), loans, grants (and sub grants) and cooperative agreements; and

• $25,000,000 or more in annual gross revenues from Federal contracts (and subcontracts), loans, grants (and sub grants) and cooperative agreements; and

g. 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

h. If the Contractor/Recipient in the previous tax year had gross income, from all sources, under $300,000, the Contractor/Recipient 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 Contractor/Recipient 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

PUBLIC LIABILITY AND PROPERTY DAMAGE

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

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.

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:

- “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.”

- "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."
ATTACHMENT A (Continued)
"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”.

"This insurance certificate is for use of facilities at Joint Region Marianas, Guam under this Cooperative Agreement, No. N40192-21-R-8000.”

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

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

PUBLIC LIABILITY AND PROPERTY DAMAGE

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

THE CERTIFICATE OF INSURANCE MUST CONTAIN THE FOLLOWING ENDORSEMENTS:

"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."

"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 policy."

"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."

"This insurance certificate is for use of facilities at Joint Region Marianas, Guam under this Cooperative Agreement, No. N40192-21-R-8000.”

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.”

NOTICE: "RIGHT TO USE" DOCUMENTS WILL NOT BE FULLY EXECUTED UNTIL CERTIFICATE IS RECEIVED WITH PROPER ENDORSEMENTS.
ATTACHMENT B: WAWF INSTRUCTIONS
252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (JUN 2012)

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.

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.

WAWF access. To access WAWF, the Contractor/Recipient shall—

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


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/.

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

WAWF payment instructions. The Contractor/Recipient must use the following information when submitting payment requests and receiving reports in WAWF for this contract/order: N40192-21-R-8000.
ATTACHMENT B (Continued) WAWF INSTRUCTIONS

Document type. The Recipient shall use the following document type(s).

NAVY CONSTRUCTION/FACILITIES MANAGEMENT INVOICE

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

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*

<table>
<thead>
<tr>
<th>Field Name in WAWF Data to be entered in WAWF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay Official DoDAAC N68732</td>
</tr>
<tr>
<td>Issue By DoDAAC N40192/IPTSVC Admin DoDAAC N40192/IPTSVC</td>
</tr>
<tr>
<td>Inspect By DoDAAC N40192/IPTSVC Ship To Code N40192/IPTSVC</td>
</tr>
<tr>
<td>Ship From Code Not Applicable Mark For Code Not Applicable</td>
</tr>
<tr>
<td>Service Approver (DoDAAC) N40192/IPTSVC Service Acceptor (DoDAAC) N40192/IPTSVC</td>
</tr>
<tr>
<td>Accept at Other DoDAAC Not Applicable</td>
</tr>
<tr>
<td>LPO DoDAAC N40192/IPTSVC</td>
</tr>
<tr>
<td>DCAA Auditor DoDAAC Not Applicable Other DoDAAC(s) N40192/IPTSVC</td>
</tr>
</tbody>
</table>

*Routing Data Table is used for WAWF document routing.
ATTACHMENT B (Continued) WAWF INSTRUCTIONS

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.

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.

Megan.A.Parker11.civ@us.navy.mil

The Contractor/Recipient may obtain clarification regarding invoicing in WAWF from the following contracting activity's WAWF point of contact. NOT APPLICABLE

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

Basic Deliverable Requirements:
Submittals, Government Review and Acceptance:

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. 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. All source code (e.g. Python scripts, html files, etc.) and map files (ESRI ArcGIS .mpk) shall be provided to the government. Failure to adhere to any of the stated delivery specifications could result in rejection of deliverables and nonpayment.

GIS Data Format: NAVFAC’s GIS data is an ERSI Geodatabase format, Check for the Navy approved current version of ArcGIS.

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.

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:

Location_yyyymmdd.gdb

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.)

yyyymmdd= Date that the geodatabase was created or amended, as expressed in year (yyyy), month (mm), and date (dd).

Data Retention: all proprietary 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.

Data Structure:
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 the current version of the Navy Data Model (NDM). 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. The data collection guide can be accessed at: http://datacollectionadvisor.com/
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.
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.

Government Source Data: The contractor will be provided access to any GIS data required for the project via a government computer, which will require 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.

Attribute Population:
The contractor shall consult with the COR before populating attribute tables to ensure the results match the current GeoReadiness interpretation of the SDSFIE.
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. For new field collected data, attribution must include the date collected in the following format.
Name: Date
Description: Date that the feature was edited from its original or previous value.
Data Type: Date
Default Value: null

Data Integrity

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.

The contractor shall employ appropriate QA/QC standards to ensure that data is topologically correct, accurate and complete (to include):

- No erroneous overshoots, undershoots, dangles or intersections in the line work
- 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.
- 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.
- No sliver polygons
- Digital representation of the common boundaries for all graphic features must be coincident, regardless of feature layer
- 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.

CAD Format Deliverables:
CAD drawings may be accepted as GIS deliverables, if COR approves.
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.

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CAD file conversions must have a unique identifier and a related table to link critical attribution normally found in GIS data. I.E: Pipe size, capacity, locational accuracy, etc.


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

Metadata:
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 the current version are listed in APPENDIX 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.

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):

**All data shall be visually inspected before submittal to the government.**

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.

All required attributes (per NDM current version shall be populated).

All domain constraints shall be adhered to, unless approved by the government, prior to submittal.

No erroneous overshoots, undershoots, dangles or intersections in the line work.

All area type features shall be closed polygons.

Line features shall be snapped together where appropriate to support networks. For example, do not break linear features for labeling or other aesthetic purposes.

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.

No sliver polygons
Digital representation of the common boundaries for all graphic features must be coincident, regardless of feature layer.

Geometric network connectivity shall be maintained for utility networks, where specified by the scope of work.

Field Collection

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).

At a minimum, the contractor shall provide resource grade GPS collection at an accuracy level of +/- 1 m and shall use differential correction to target accuracies of +/- .5 m.

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 +/- 3 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 at the beginning, end, and at each turn or bend in the line and processed as a line feature type. GPS data on the location of utility points 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.

All survey-grade data collected shall be provided to the Government in a digital format with an attached Survey Report identifying survey method, equipment list, calibration documentation, survey layout, description of control points, control diagrams, quality control report and field survey data.

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.

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.

Photography

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. All photographs to be delivered/used in the final report must be geotagged with the UTM of the picture location
ATTACHMENT D: Specifications for GIS Layers and Attributes

The contractor shall consult with the government points of contact to ensure data is placed into the appropriate layer. Please see [http://datacollectionadvisor.com/](http://datacollectionadvisor.com/) for full guidance. 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, the DCG 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. At minimum the following for and dataset must be populated.

<table>
<thead>
<tr>
<th>ATTRIBUTE</th>
<th>ATTRIBUTE DEFINITION</th>
<th>MANDATORY POPULATION GUIDANCE</th>
<th>DATA TYPE</th>
<th>FIELD SIZE</th>
<th>EXAMPLE VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>***IDPK</td>
<td>Primary Key. A unique, user defined identifier for each record or instance of an entity.</td>
<td>No</td>
<td>Populate with unique ID or ID series agreed upon prior to project start. DO NOT use the objectID</td>
<td>Text</td>
<td>40</td>
</tr>
<tr>
<td>InstallationID</td>
<td>The official code assigned by the Military Service (includes Washington Headquarters Services) to identify the Headquarters Services) to identify the site or group of sites that make up an installation. For the Navy it is site identifier as represented by the iNFADS Site Code.</td>
<td>Yes</td>
<td>Populate with the appropriate value from the SiteCode constraint table based on iNFADS or RPAO guidance.</td>
<td>Text</td>
<td>11</td>
</tr>
<tr>
<td>FeatureName</td>
<td>The name of the feature</td>
<td>Yes</td>
<td>For features that are not stored in iNFADS, populate with a common name of the feature if one exists, using Proper Case</td>
<td>Text</td>
<td>80</td>
</tr>
<tr>
<td>Feature</td>
<td>Description</td>
<td>No/YES</td>
<td>Text</td>
<td>Code</td>
<td>Location of host plant of 30 Dendrobium guamense an epiphytic species listed by USFW and found in a construction footprint J001B.</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
<td>--------</td>
<td>------</td>
<td>------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>FeatureDescription</td>
<td>The narrative describing the feature.</td>
<td>No</td>
<td>For any attribute being populated with the domain value of &quot;other&quot; include the attribute name along with the description, and separate each using a semicolon (e.g., natureOfConstruction: Plastic; purposeType: Recreation). In addition, where appropriate, populate with text that further describes the feature (e.g., a local common name such as Commercial Gate, or a physical label on a feature in the field such as &quot;Fly Navy&quot;).</td>
<td>Text</td>
<td>255</td>
</tr>
<tr>
<td>Owner</td>
<td>The DoD Component or other entity that owns the feature.</td>
<td>YES</td>
<td>Populate with the appropriate value from the Owner constraint table.</td>
<td>Text</td>
<td>17</td>
</tr>
<tr>
<td>Creator</td>
<td>The name of the department or contractor that collected the information for the feature for the first time. For example, NAVFAC SE GRC, attribute as NAVFACSEGRC</td>
<td>Yes</td>
<td>The name of the federal employee or name of the contracting company that created the information for the feature (e.g., Art Vandelay as &quot;VandelayA&quot; or Vandelay Industries as &quot;Vandelayindustries&quot;).</td>
<td>Text</td>
<td>20</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>DateCreated</td>
<td>The date the feature was created for the first time.</td>
<td>Yes</td>
<td>Populate with the date the feature was created (Geometry and Attribute).</td>
<td>Date</td>
<td>NA</td>
</tr>
<tr>
<td>CollectionMethod</td>
<td>The method used to collect the geometry of the feature.</td>
<td>Yes</td>
<td>Populate with the appropriate value from the CollectionMethod constraint table.</td>
<td>Text</td>
<td>28</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------------</td>
<td>-----</td>
<td>--------------------------------------------------------------------------------</td>
<td>------</td>
<td>----</td>
</tr>
<tr>
<td>LocationAccuracy</td>
<td>The location accuracy for the data that was collected and verified.</td>
<td>Yes</td>
<td>Populate with the accuracy value followed by a space and then the abbreviation of the unit of measurement in lower case.</td>
<td>Text</td>
<td>50</td>
</tr>
<tr>
<td>Editor</td>
<td>The contractor or person that edited the feature attribution or geometry from its original or previous value. This is to be stated as last name of the person and then their first initial. For example, Jane Smith would be attributed as SmithJ.</td>
<td>Yes</td>
<td>The name of the fed employee or name of the contracting company that last edited the info for the feature (e.g., Art Vandelay as &quot;VandelayA&quot;/Vandelay Industries as &quot;Vandelay Industries&quot;). If editing within Citrix M&amp;A Spatial Database Engine (SDE) environment, this attribute will be auto populated with the Citrix user name.</td>
<td>Text</td>
<td>20</td>
</tr>
<tr>
<td>DateEdited</td>
<td>The date that the feature was edited from its original or previous value.</td>
<td>Yes</td>
<td>If editing within the Citrix M&amp;A SDE environment, this attribute will be auto populated. Otherwise, populate with the date the feature was</td>
<td>Date</td>
<td>NA</td>
</tr>
</tbody>
</table>