GOLDEN GATE NATIONAL RECREATION AREA
SAUSALITO, CALIFORNIA

Replace Fort Cronkhite, Fort Baker,
and Fort Barry Water Meters GOGA
PMIS# 340407, 350434

PROJECT SPECIFICATIONS

National Park Service
Pacific West Region

June 2026

DIVISION 01 - GENERAL REQUIREMENTS

01 11 00 ..... Summary of Work
01 26 01 .....Contract Modification Procedures
01 27 00……..... Definition of Contract Line Items
01 31 00……..... Project Management & Coordination
01 32 16…..... Construction Schedule
01 33 23…..... Submittal Procedures
01 35 23…..... Safety Requirements
01 40 00…..... Quality Requirements
01 45 00…..... Environmental Protection
01 57 19.12…….Noise and Exterior Light Management
01 67 00…… .Product Requirements
01 73 40…..... Execution
01 74 19…..... Construction Waste Management and Disposal
01 77 00…..... Closeout Procedures
Submittal List

DIVISION 02 – 48 – TECHNICAL SPECIFICATIONS

33 10 00……..….Water Meters

SECTION 01 11 00 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Work covered by the Contract Documents.
2. Work under other contracts.
3. Government Furnished Materials.
4. Contractor use of the site
5. Contractor access and use of site
6. Work Restrictions.
7. Special Construction Requirements.
8. Field Verification

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Location: The project location is in the Golden Gate National Recreation Area (GOGA). Marin Headlands, Fort Baker, Fort Barry, and Fort Cronkhite.

B. The Work consists of the following:

1. Replacement of existing water meters throughout Fort Cronkhite, Fort Baker, and Fort Barry with lead-free cold water ultra sonic water meters. Water meters will include two-way endpoint for mobile reading and data collection along with some replacement of Crissy boxes where needed. Base bid includes 84 water meters at Fort Baker and Fort Barry and 36 meters at Fort Cronkhite.

C. Legally dispose of/recycle all demolished materials.

D. Project will be constructed under a single Contract.

E. Contractor shall provide all labor, materials, tools and other equipment, services and supervision required to complete the work described below. The scope of this project includes only the items listed in the contract line items and will be bid according to the contact line items in section 01 27 00. No other restroom facilities nearby or within Golden Gate Recreation area are included in this project scope. No surrounding parking lots or auxiliary structures are included in this project scope.

F. A Construction Schedule laying out project start and completion dates along with scope tasks shall be submitted per the Spec Section 01 32 16 “Construction Schedule.”

G. **The Contractor is responsible for verifying quantities, measurements, and existing site conditions**. All interested parties are strongly encouraged to do a site visit to familiarize themselves with local conditions that may affect the cost of contract performance. Interested parties may coordinate the site visit through the CO.

1.3 WORK UNDER OTHER CONTRACTS

A. General: The National Park Service and/or facilities-based partners of the National Park Service may, during the course of this Contract, have other construction work in progress within the park and near this project site. The Contractor shall work with the Contracting

Officer and others as necessary to minimize impacts and coordinate activities of the work.

1.4 PERIOD OF PERFORMANCE

A. The period of performance shall be 120 days after Notice to Proceed (NTP).

B. Contractor shall submit written certification that the project is substantially complete, and final inspection is requested. The Contracting Officer's Representative will complete an inspection within seven (7) business days of receipt of request.

C. When the COR determines that the work is substantially complete, he will prepare a list of deficiencies to be corrected before final acceptance, and a Letter of Substantial Completion will be issued by the CO.

D. Contractor shall coordinate manufacturer warranty inspection. Warranty documents shall be provided to the COR within 30 days of project completion.

1.5 GOVERNMENT-FURNISHED MATERIALS:

A. There will be no government furnished materials, and all materials shall be contractor furnished from outside the park.

1.6 CONTRACTOR USE OF SITE

A. The Contractor's use of the premises is restricted to the designated work area. Materials and equipment must be stored inside a designated exterior storage area. Maintain all equipment and materials within lockable trailer.

B. Temporary facilities include portable toilets rented by the contractor and cleaned on a weekly or as-needed basis by the contractor.

C. Storage of Materials: Confine storage of materials to the pre-approved staging areas.

D. Protection of Historic Features: The Golden Gate National Recreation Area contains many project locations which are highly sensitive sites and contains historical resources. The Contractor shall closely follow the plans shown and alert the Contracting Officer immediately of any major deviations. A short start-up meeting with the Contracting Officer will be required prior to beginning work. Confine all operations to work limits of the project. Prevent damage to historic features that lie within the work limits, including but not limited to historic buildings and features, archeological resources including features both above and below grade, cultural landscapes and features including plantings, manhole covers, gutters, paving, drainage features, utilities, walkways, etc. Protect historic features from damage due to the work of this contract. Application of spray paint or any permanent markings to site features is prohibited. (Only chalk-based paint or crayon should be used).

E. Preservation of Natural Features:

1. Prevent damage to natural surroundings. Restore damaged areas as directed and approved by the Contracting Officer, at no additional expense to the Government.
2. Do not remove, injure, or destroy trees or other plants without prior approval. Consult with Contracting Officer and remove agreed-on roots and branches that interfere with construction.
3. Do not fasten ropes, cables, or guys to existing trees.
4. Carefully supervise excavating, grading, filling, and other construction operations near trees to prevent damage.

5. Take measures to prevent equipment from compacting soils adjacent to or within the construction zone that will not be displaced by a constructed facility such as the parking lot.
6. All geologic and fossil materials within the park are protected. Avoid disturbing soils or rock within or outside the project are, except as specified in the contract documents or as directed by the Contracting Officer.

F. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Government, Government's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
1. Schedule deliveries to minimize use of driveways and entrances.
2. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

G. Construction Camp: Establishment of a camp within the park will not be permitted.

H. Hauling Restrictions: Comply with all legal load restrictions in the hauling of materials. Load restrictions on park roads are identical to the state load restrictions with such additional regulations as may be imposed by the Park Superintendent. Information regarding rules and regulations for vehicular traffic on park roads may be obtained from the Office of the Park Superintendent. A special permit will not relieve Contractor of liability for damage which may result from moving of equipment.

I. Contractor shall provide OSHA and other required postings regard safety at the site.

J. All Contractor employees and subcontractor employees shall be advised of the rules and regulations of the National Park Service.

K. Contractor and subcontractor vehicles not required on the worksite itself shall be parked in a location to be reviewed and approved by NPS.

1.7 PUBLIC USE OF SITE

A. Contractor shall at all times conduct his operations to ensure the least inconvenience to the public. Building or road closures may be permitted, when required, upon specific approval of Contracting Officer. Submit closure request to Contracting Officer at least **30** calendar days in advance of requested closure date. Closure may be permitted for a maximum of 3 calendar days at a time.

B. Emergency Vehicle Access: Contractor must maintain access for emergency vehicles at all times unless specifically exempted as a condition within the project contract. Any exemption should be limited to minimal temporary delays and include notification to park dispatch. Contractor will stop all work as necessary to allow passage of emergency vehicles and direct traffic flow to accommodate immediate passage of these vehicles. For those projects in which trenching is required, the Contractor shall have a sufficient number of steel plates on hand to bridge any gap necessary for emergency vehicle access.

1.8 OCCUPANCY REQUIRMENTS FOR BUILIDINGS

A. Existing Buildings
1. Government and Park Partner Occupancy: Government and Park Partners will occupy the premises during entire construction period. Cooperate with Government and Park

Partners during construction operations to minimize conflicts and facilitate Government and Park Partner usage. Perform the Work so as not to interfere with Government and Park Partner's operations. Maintain existing exits, unless otherwise indicated.

a. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from the CO.
b. Maintain existing building in a weather tight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.
c. The contractor will be required to shut water off from buildings while replacing meters. Water lines must be bled and service must be on at all buildings at the end of each work day.

1.9 CONDUCT OF OPERATIONS

A. Contractor personnel shall comply with all Federal and State law and regulations, including the Golden Gate National Recreation Area Superintendent's Compendium. Any exception must be specifically justified and approved in writing by the Contracting Officer.
   1. The Superintendent's Compendium can be found at this internet address: https://www.nps.gov/goga/learn/management/lawsandpolicies.htm

B. No signs or advertisements (except those specified herein) shall be displayed on the construction site or within the park unless approved by the Contracting Officer.

1.10 WORK RESTRICTIONS

A. On Site Work Hours: The 40-hour work week shall be generally performed during normal businessworking hours of 7 a.m. to 5:30p.m., Monday through Friday.

B. Work will be permitted in the evenings or on Saturdays by prior authorization of the NPS Contracting Officer. Submit requests 48 hours in advance of the work to the Contracting Officer for approval.

C. No onsite work shall be performed during federal holiday periods unless otherwise directed by the Contracting Officer.

D. Early Morning Hours: See section 01 57 19.12 Noise and Exterior Lighting Management.

E. Hours for Core Drilling, other noisy activity. See section 01 57 19.12 Noise and Exterior Lighting Management.

F. Existing Utilities
   1. Existing Utilities: Notify Contracting Officer and utility companies of proposed locations and times for excavation.
   2. Contractor shall be responsible for locating and preventing damage to known utilities. If damage occurs, repair utility at no additional expense to the Government.
   3. Existing Utilities: USA Notification & Utility Field Meeting
      a. The Contractor shall contact Underground Service Alert (USA) (1-800-642-2444) seven (7) calendar days prior to start of each ground disturbing phase and shall be responsible for maintaining a valid USA location tag through

renewal during the construction. The Contractor shall schedule a utility field meeting prior to any excavation. This shall be so stated in the USA notification. The Contractor shall be responsible to coordinate the utility field meeting at which time he shall explain the limits and impacts to USA member utilities.

b. The majority of the utilities within the Marin Headlands are owned by NPS. As such, very few utilities will actually be marked out by USA. It is the Contractor's responsibility to field locate & mark all utilities within the project work area. Field location and marking shall be performed a minimum of three (3) days prior to ground disturbance; notify CO upon completion of field location and marking for CO review and approval. No trenching shall be performed prior to CO approval.

4. Water and Wastewater Systems: The Contractor is not authorized to open/close valves, operate pumps and/or de-energize the utility water or wastewater system; An NPS USRO must do or be onsite to observe. This does not apply to individual housing units.

5. See Spec Section 01 73 40, Article 3.2 "Execution" for utility marking and coordination with other utility providers.

G. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Government or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated.

H. Notify Contracting Officer not less than **seven** working days in advance of proposed utility interruptions.

1. Do not proceed with utility interruptions without Contracting Officer's written permission.

2. Hours for Utility Shutdowns: Government's restrictions when outages are allowed and the maximum length of time for the outage is **12 hours**.

I. All buildings are occupied. Overnight outages are not allowed. If water cannot be reconnected by the end of the workday, it is incumbent on the contractor to install temporary water.

J. Smoking: Smoking is not permitted, except in park designated smoking areas.

1.11 FIELD VERIFICATION

A. See Section 01 73 40 Execution.

1.12 SPECIAL CONSTRUCTION REQUIREMENTS

A. Hot Work Permit: A hot work permit is required for any cutting, welding or heat gun work. No open flame torch work will be allowed. The NPS Fire Inspection office will issue the permit to the Contractor. Permit will be good through completion of work. The Contractor will be responsible for ensuring that all workers and subcontractors follow permit conditions.

END OF SECTION

SECTION 01 26 01 CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. The work of this section consists of administrative and procedural requirements for contract modifications.

1.2 DEFINITIONS AND ALLOWANCES

A. Home Office Overhead: Those costs incurred in support of all of a contractor's projects and not attributable to a specific job. The cost for home office overhead is only allowed as a percentage of all direct work excluding profit. The following items represent allowable home office overhead costs identified in Part 31 of the Federal Acquisition Regulation (FAR):

1. Rent
2. Utilities
3. Furnishings
4. Office equipment
5. Executive and management staff not exclusively assigned to the project
6. Support, accounting, and administrative staff
7. Preparation of cost proposals, estimating, and schedule analyses connected with Modifications
8. Estimating and preconstruction services
9. Mortgage costs
10. Real estate and corporate taxes
11. Automobile maintenance and travel costs for home office personnel
12. Home office insurances i.e. structure, automotive, umbrella, flood, etc.
13. Depreciation of equipment and other assets
14. Home office supplies (paper, staples, etc.)
15. Legal services
16. Accounting and data processing
17. Professional fees/registration

B. General Conditions (Overhead): Management and administrative costs incurred on site for the designated project. Costs associated with the preparation of modifications will not be allowed. The costs for these items are to be included only in the general conditions of the modification estimate. Only in the case of a contract time extension are additional general conditions included in modifications. The following items, if applicable, are considered allowable costs for calculating General Conditions:

1. Project Manager, Assistant Project Manager
2. Superintendent, Assistant Superintendent
3. Quality Control, Safety Officer, Environmental Manager, etc.
4. Scheduling
5. Personal vehicles i.e. Superintendent Pickup trucks

C. General Requirements: These are costs directly associated with the project and are necessary to perform the actual work of the modification. These costs shall be shown as direct costs in the estimate. The following items, if applicable, are considered allowable costs for calculating General Requirements:
   1. Material handling
   2. Trash removal, dumpsters
   3. Barricades
   4. Small tools
   5. Safety supplies

D. Personnel Costs: Costs included in the modification must only be for General Conditions staff and workers actually present and working on the project site. Modification costs for salaried workers are only allowed within the structure of a 40 hour week and no overtime or holiday pay will be allowed.
   1. Worker Hourly Rates are costs directly associated with the individual worker and consist of the following:
      a. Base Rate: This is the hourly rate paid directly to the worker

      b. Labor Burden: Employer payments of all applicable burdens, this includes insurance and taxes that the business must pay on behalf of the worker to government entities and educational forums, such as:
         1) Social Security
         2) Medicare
         3) Workers Compensation- Policy and company calculation to be made available.
         4) FUTA- Cap Rate and percentage to be proportionally allocated over one year.
         5) SUTA- Cap Rate and percentage to be proportionally allocated over one year.
         6) Union agreement costs - Other costs required under an enforceable collective bargaining agreement.
      c. Fringe Benefits: Various non-wage compensations provided to employees such as:
         1) Health Care Insurance Premiums
         2) Cell Phone
         3) Clothing
         4) 401K and Pensions
         5) Vehicle allowances
         6) Gas allowance
         7) Life insurance premiums
         8) Disability insurance

9) Other Fringe Benefits required under an enforceable collective bargaining agreement

E. Bonuses or Deferred Compensation: No Bonus or Deferred Compensation will be allowed within any components of pricing including Home Office Overhead, General Conditions, General Requirements, Hourly Worker Rates, or the direct costs of work.

F. General Liability Insurance: An insurance policy that protects the contractor from claims resulting from bodily injury or property damage to a third party. Include this as a separate line item within all modification proposals and provide a current insurance quote upon request.

G. Performance and Payment Bonds: A performance bond is a surety bond issued by an insurance company or bank to guarantee satisfactory completion of a project. The Payment Bond guarantees that the contractor will pay the labor and material costs they have incurred. Banks and Insurance companies charge a premium for each individual project based on a sliding scale which relates to the size of the project. Include this as a separate line item in modification proposals and provide current company bonding rates upon request.

H. Builder's Risk Insurance: This covers the contractor's loss due to fire, high winds, or other natural forces. This is not reimbursed by the National Park Service (NPS) and shall not be included in modification proposals.

1.3 MODIFICATION PROPOSAL PRICING REQUIREMENTS

A. General:

1. Your proposal must be received in the format and within the time frame specified in the Request for Proposal letter. Costs or delays resulting from failure of contractor to submit within the time frame specified will not be compensable.
2. The proposal must be detailed with itemized lists of equipment, materials, labor, production rates, overhead, profit, and bond markup for each item. Labor costs must be itemized by craft and hourly rate, including Fringe Benefits and Labor Burden. If the costs of Fringe Benefits and Labor Burden are not itemized, it is assumed that that they are included in the hourly rate shown, or contractor is not requesting reimbursement. Contractor may utilize the government provided Contractor Estimate Form, or their own form, provided that it contains the same information and level of detail as the Gov't provided form. The government form is available at: http://www.nps.gov/dscw/upload/ContractorEstimateForm_1-24-13.xls
3. Requests for extensions of contract time as a result of this change must be justified with a Time Impact Analysis (TIA). TIA and associated costs must be received with the proposal by the date shown within the Request for Proposal letter. Contractor's failure to submit within the specified time frame will be construed as the Contractor waiving the right for additional time and no time extension will be allowed.
4. All supporting documentation used to justify the proposed modification will be made available to the Contracting Officer upon request.
5. Contractor must review and approve all subcontractor/supplier pricing in detail for proper format, scope, production rates, and pricing prior to submission to the NPS. All

delay costs associated with not reviewing and approving subcontractor/supplier pricing will be borne by the Contractor.

6. All pricing and production rates within the estimate must be based on fair and reasonable pricing and cannot include built-in contingency.

B. Labor:

1. Contractor shall estimate the cost of labor by itemizing each craft involved, indicating worker hourly rate (base rate + labor burden + fringe benefits) for each and itemizing the hours required for each craft that will be directly engaged in modification work. Any work proposed that will require overtime work or premium pay shall be itemized separately. All rates shall be in accordance with the Davis-Bacon Act as incorporated herein. Labor Burden may include payroll taxes, Social Security, unemployment insurances, workers compensation insurance, FICA, FUTA, and other direct costs resulting from Federal, State or local laws.
2. Itemize labor costs for equipment operators separate from equipment costs.
3. The labor cost for foremen shall only be costs for related work required for the modification.

C. Materials:

1. The estimated cost for materials shall include quotes from multiple sources. Material prices must include all applicable fees and credits, including but not limited to, sales tax, freight and delivery charges, and tax rebates.
2. No markup shall be applied to any material provided by the NPS.

D. Equipment:

1. Equipment used for the project must be appropriately sized for the work being performed.
2. Do not include costs for "miscellaneous tools and equipment", in your proposal for a replacement value of $500 or less. Costs shown in excess of $500 must be broken out separately.
3. Regardless of ownership, the rates to be used in determining equipment rental costs shall be the lowest cost from one of the following sources:
   a. U.S. Army Corps of Engineers, Ownership and Operating Expense Schedule (use latest edition and applicable region)
   b. Construction Blue Book
   c. Local equipment rental rates, documented by actual invoice charges, or itemized vendor quotes.
4. The estimated rental rates shall include the cost of all fuel, oil, lubrication, supplies, small tools, necessary attachments, ground engaging components, tires & tracks, routine repairs and maintenance (cost of major overhaul is not included), depreciation, storage, insurance, and all incidentals. Mobilization, if applicable, may be included for equipment solely used on the modification work but must be listed separately.
5. Estimate the full rate for equipment only for the duration that the equipment will be utilized to accomplish the work of the modification.
6. Standby unit rates used are to be in accordance with paragraph 1.3, D, 2, above. If the US Army Corp of Engineers is utilized, then their standby rates prevail. If Bluebook or local equipment pricing is accepted, then ½ of the equipment costs minus any operating costs will be accepted.
7. If equipment is in standby mode due solely to a documented NPS delay, the

established standby rate shall apply from the first day of the delay.

8. Equipment that is not used and on the jobsite for up to five consecutive days may be classified at standby rates, provided that the equipment is or has been used solely to perform work on the modification and will be necessary to complete additional modification work. Equipment that is still on the jobsite but not in use after five consecutive days will not be considered in the modification pricing.
9. Requests for compensation for equipment stand by time must be justified, documented and itemized separately.
10. The estimated timeframe (daily, weekly, monthly) for use of the equipment must reflect the lowest cost to the Government.

E. Establishment and Application of Overhead and Profit Percentages:

1. Home Office Overhead and Profit (OH&P) shall be applied to direct costs only. Profit shall not be applied to overhead amounts; and overhead shall not be applied to profit. Home office overhead shall contain only allowable, allocable, and reasonable costs per the contract documents and FAR Part 31. Profit percentages are based on risk factors found in FAR Part 31which have been applied to the specific type of work included in this project.

   Overhead……10%
   Profit……...10%
2. Total aggregate limit of markup (OH&P) for contractor and subcontractors on modification work shall not exceed 25%. The NPS will not be responsible for allocation of percentages between contractor and subcontractors at any tier.
3. If contractors form a partnership, then the partnership may only receive home office overhead and profit in the same amount as an individual contractor (refer to par 1.3.E.1 above). It is the responsibility of the partners to decide on the division of revenue.
4. Combined Increases and Decreases: On proposals involving both increases and decreases in the Contract Price, the overhead and profit mark-ups are required on the net increases and deducted on net decreases.
5. At no time can profit be calculated on Overhead or itself, it must be calculated on direct costs of work only.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION (Not used)

END OF SECTION

SECTION 01 27 00 - DEFINITION OF CONTRACT LINE ITEMS

PART 1 – GENERAL

1.1 SUMMARY

A. The intent of this section is to explain, in general, what is and what is not included in a contract line item, and the limits or cut-off points where one item ends and another begins.

B. If no contract line item exists for a portion of the work, include the costs in a related item.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST OF CONTRACT LINE ITEMS

A. Contract Line Item No 1.
   1. Remove and dispose of existing water meters and any associated apparatuses at Fort Cronkhite. Replace water meters with new. Replace any associated fittings necessary for proper and leak-free meter system. Buildings in this CLIN: 1010, 1011, 1012, 1013, 1033, 1034, 1035, 1042, 1044, 1045, 1046, 1049, 1050, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1073, 1076, 1077, 1301, Marine Mammal Center (36 Total Meters)
   2. **Contractor is responsible for confirming sizes for each meter.** There are approximately three 5/8”, thirteen 1”, seven 1.5”, twelve 2”, and one 6” meters. All 36 need transmitters with approximately 4 needing Crissy Box replacements. The meter for building 1046 will be new, as there is no existing meter.
   3. Payment will be made at the contract lump sum price.

B. Contract Line Item No 2.
   1. Remove and dispose of existing water meters and any associated apparatuses at Fort Baker. Replace water meters with new. Replace any associated fittings necessary for proper and leak-free meter system. Buildings in this CLIN: 405, 407, 435, 507, 513, 519 NW, 519 Rear, 522, 523, 527, 529, 530, 531, 533, 546, 547, 549, 557, 561, 562, 567, 601 N, 601 S, 602 W, 602 E, 603, 604, 605, 606, 607, 623, 629, 631, 636, 637, 644, 645, 679, 686, 1003, 1550, 1552, 1553, 1556, 1557, 1559, 1560 IRR, 1560, 1561, 1562, 1563, Dock-USCG, Ramp - Travis AFB #1, Ramp - Travis AFB #2, Vista Point GGB, NPS IRR High Parade Ground, NPS IRR Low Parade Ground, IRR 4 N, IRR 5 S, Parking Lodge IRR #2, Parking Lodge IRR #3 (61 Total Meters)
   2. **Contractor is responsible for confirming sizes for each meter**. There are approximately two 5/8”, two ¾”, twelve 1”, thirteen 1.5”, twenty-eight 2”, and four 3-4” meters. All 61 need transmitters with approximately 10 needing Crissy Box replacements. The meter at building 435 needs a manhole replacement cover approximately 3’5” in diameter. Building 513 will need a new meter, as there is no existing meter.
   3. Payment will be made at the contract lump sum price.

C. Contract Line Item No 3.
   1. Remove dispose of existing water meters and any associated apparatuses at Fort Barry. Replace water meters with new. Replace any associated fittings necessary for proper

and leak-free meter system. Buildings in this CLIN: 934A, 934B, 936, 937A, 937B, 939A, 939B, 940, 941, 942, 944, 945, 960, 981, 983, 984, 986, 901A, 901B, 955A, 955B, 956A, 956B (23 Total Meters)

2. **Contractor is responsible for confirming sizes for each meter.** There are approximately two 5/8”, one ¾”, twelve 1”, two 1.5”, and five 2”. All 23 need transmitters with approximately 1 needing a Crissy Box replacement.
3. Payment will be made at the contract lump sum price.

END OF SECTION 01 27 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
   1. Construction Coordination.
   2. Submittals
   3. Requests for Information (RFIs).
   4. Project meetings.
   5. Environmental Coordination.
   6. Permits

B. Related Requirements:
   1. Section 01 32 16 "Construction Schedule" for preparing and submitting Contractor's construction schedule.
   2. Section 017340 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
   3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

1.2 CONSTRUCTION COORDINATION

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, which depend on each other for proper installation, connection, and operation.
   1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
   2. Coordinate water shutdowns with the Contracting Officer and COR. Notification must be given no less than **one week** in advance.

B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
   1. Preparation of Contractor's Construction Schedule.
   2. Preparation of the Schedule of Values.
   3. Delivery and processing of submittals.
   4. Pre-installation conferences.
   5. Project closeout activities.

1.3 SUBMITTALS

A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components, or if coordination is required for installation of products and materials fabricated by separate entities.
   1. Content: Project-specific information, drawn accurately to scale. Do not base Coordination Drawings on reproductions of the Contract Documents or standard printed data. Include the following information, as applicable:
      a. Indicate dimensions shown on the Contract Drawings and make specific note

of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to the Contracting Officer (CO) for resolution of such conflicts.

b. Indicate required installation sequences.

2. Number of Copies: Submit one electronic copy of each submittal. Contracting Officer will return **one electronic** copy.

B. Division 01 documents: The following items shall be submitted a minimum of one week prior to the Preconstruction Conference. Contracting Officer will notify Contractor of tentative date for the Pre-Construction Conference.

1. Letter designating Project Superintendent.
2. Construction Schedule.
3. A comprehensive breakdown of the Schedule of Values.
4. Site-Specific Safety Plan.
5. A list of Subcontractors for this project.
6. Written statements from subcontractors certifying compliance with applicable labor standard clauses (SF 1413).
7. Satisfactory evidence of liability insurance coverage and workman's compensation for the Contactor and all subcontractors.
8. Proof of Performance Bond.

C. All items listed must be provided to the Contracting Officer before the Pre-Construction Conference is held. If all of these documents have not been received one week prior to the scheduled Pre-Construction Conference date, the conference will be cancelled, Notice to Proceed will not be issued, and the Contracting Officer will consider other contractual remedies. Work shall not commence until written Notice to Proceed has been issued.

1.4 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI electronically utilizing the NPS standard RFI format, with attachments in either Word or Adobe .pdf format as necessary.

1. CO will not respond to RFIs submitted by other entities controlled by Contractor.
2. Coordinate and submit RFIs in a prompt manner to avoid delays in the work.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. RFI number, numbered sequentially.
2. Date.
3. RFI subject.
4. Specification Section number and title and related paragraphs, as appropriate.
5. Drawing number and detail references, as appropriate.
6. Field dimensions and conditions, as appropriate.
7. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
8. Contractor's signature.
9. Requested date for response.
10. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

a. Include building numbers, dimensions, thicknesses, structural grid references,

and details of affected materials, assemblies, and attachments on attached sketches.

C. Contracting Officer's Action: CO will review each RFI, determine action required, and respond. CO will determine the critical nature of each RFI and issue a response accordingly.
   1. The following are not considered to be RFIs and will receive no action:
      a. Requests for approval of submittals.
      b. Requests for approval of substitutions.
      c. Requests for approval of Contractor's means and methods.
      d. Requests for coordination information already indicated in the Contract Documents.
      e. Requests for adjustments in the Contract Time or the Contract Sum.
      f. Requests for interpretation of Architect's actions on submittals.
      g. Incomplete RFIs or inaccurately prepared RFIs.
   2. CO's action may include a request for additional information, in which case time for response will date from time of receipt of additional information.
   3. CO's action on RFIs may result in the need for a change to the Contract Time or the Contract Sum. All contract changes will be processed following the terms and conditions of the contract.

1.5 PROJECT MEETINGS

A. Preconstruction Conference: Before start of construction, Contracting Officer will arrange an on-site meeting with Contractor.

B. Attending shall be the following:
   1. CO and COR
   2. Contractor's Project Manager
   3. Contractor's Superintendent
   4. Major subcontractors
   5. NPS Project Manager
   6. Others as appropriate

C. The meeting agenda will include the following as a minimum:
   1. Roles & Responsibilities/ Lines of Authority.
   2. Park rules and regulations.
   3. Jobsite Safety.
   4. Workplan & Schedule
   5. Resolution of comments on required Division 01 documents.
   6. Coordination of Subcontractors.
   7. Labor law application.
   8. Modifications.
   9. Payments to Contractor.
   10. Payroll reports.
   11. Contract time.
   12. Liquidated damages.
   13. Contractor Performance Evaluation.
   14. Display of Hotline posters.
   15. Notice to proceed.
   16. Correspondence procedures.
   17. Acceptance/rejection of work.
   18. Progress meetings.
   19. Submittal procedures.

20. NPS Final Accessibility Inspection.
21. Environmental requirements.
22. As-constructed drawings/operation and maintenance (O&M) manuals.
23. Saturday, Sunday, holiday and night work.
24. Reference materials.
25. Value engineering.

D. Progress Meetings: The Contracting Officer will schedule progress meetings at agreed upon regular intervals.
   1. Attendees: In addition to Government Representatives, each Contractor, Subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work.
   2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. The meeting agenda will include the following:
      a. Approval of minutes of previous meetings.
      b. Safety items/ 'toolbox' safety meeting topic.
      c. Submittal status.
      d. Review of off-site fabrication and delivery schedules.
      e. Requests for information (RFI) and other issues.
      f. Modifications.
      g. Work in progress and projected.
         1) Status of required inspections (Special Inspections, Accessibility, etc.)
      h. Inspections of work in progress and projected (Special inspections,
      i. Construction Schedule update (provide updated CPM).
      j. Status of Project Record Drawings and O&M manuals.
      k. Other business relating to work.
      l. Permit requirements.
   3. Contractor shall:
      a. Prepare agenda for Progress meetings in format approved by the Contracting Officer.
      b. Distribute written notice of each Progress meeting 4 business days in advance of meeting date, except for meetings scheduled at established intervals.

E. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
   1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise CO of scheduled meeting dates.
   2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
      a. Contract Documents.
      b. Options.
      c. Related Change Orders.
      d. Purchases.
      e. Deliveries.
      f. Submittals,
      g. Possible conflicts.

h. Time schedules.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION (Not used)

END OF SECTION

SECTION 01 32 16 - CONSTRUCTION SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section consists of Construction Schedule requirements including but not limited to the following:
   1. Schedule of Values
   2. Construction Schedule Requirements.
   3. Construction Schedule Updates.
   4. Time Impact Analysis.

B. Purpose: The purpose of the Construction Schedule is to ensure adequate planning, coordination, scheduling, and reporting during execution of the work by the Contractor. The Construction Schedule will assist the Contractor and Contracting Officer in monitoring the progress of the work, evaluating proposed changes, and processing the Contractor's monthly progress payment.

1.2 SUBMITTALS

A. Electronic Copies: All schedules and reports submitted as noted in paragraphs B through H below, shall be submitted to NPS in the native electronic file format. A pdf version of the schedule shall also be provided on 11x17 sheets in a manner that is clearly readable one page at a time. It is the intent of the Government to limit the number of printed reports to only those reports determined by the project team to be essential.

B. Schedule of Values:
   1. After contract award and before the Pre-Construction conference submit a schedule of dollar values based on the Contract Price Schedule. Include bond costs, mobilization, general condition costs, overhead, and profit, and each major category of work.
   2. The total cost of all items shall equal the contract sum. The Schedule of Values will form the basis for progress payments as provided for in the General Conditions.

C. Construction Baseline Schedule: After contract award and before the Pre-Construction conference, submit **PDF** of baseline schedule, large enough to show entire schedule for entire construction period.

D. Construction Schedule Updates: On or before the 7th day preceding the progress payment request date, submit estimates of the percentage completion of each schedule activity and necessary supporting data. Provide two paper copies.

E. Construction Schedule Revisions and Time Impact Analysis: For each Construction Schedule revision submit copies of a Time Impact Analysis. Each Time Impact Analysis shall include a Fragmentary Network (Fragnet), incorporated into the currently accepted Construction Schedule, demonstrating how the Contractor proposes to incorporate a modification, change, delay, or Contractor request.

F. Construction Schedule
   1. Submit PDF of Construction Schedule in critical path (CPM) format showing starting and completion dates for each activity or item of work. Precedence Diagramming

Method (PDM) shall be used in preparing the CPM diagrams. CPM schedule shall show work items properly sequenced and intermeshed. Prepare a separate sub-network for each major area of work: drilling, concrete form, concrete pour, steel erection, rough carpentry. Schedule submittals shall include NPS-provided references to special events, activities, and park partners

2. The level of detail shall be such that construction field work is divided into activities for each individual water meter. This is required for adequate tenant notice of water shutdowns.
3. In developing the logic diagram, ensure that all work, reviews and approvals are included in the logic diagram, and that the work sequences are logical and that the diagram shows a coordinated plan of work.
4. Provide an updated three-week look ahead for each meeting.

G. Schedule of Values:
1. After contract award and before the Pre-Construction conference submit a schedule of dollar values based on the Contract Price Schedule. Include bond costs, mobilization, general condition costs, overhead, and profit, and each major category of work.
2. The total cost of all items shall equal the contract sum. The Schedule of Values will form the basis for progress payments as provided for in the General Conditions.

1.3 QUALITY ASSURANCE

A. The Contractor shall meet with the Contracting Officer on the day of the preconstruction conference to go over the following:

Review software limitations, content and format for reports.

1. Verify availability of qualified personnel needed to develop and update schedule.
2. Discuss constraints, including phasing, work stages, area separations, interim milestones and partial Government occupancy.
3. Review schedule for work of separate Government contracts.
4. Review time required for review of submittals and re-submittals.
5. Review requirements for tests and inspections by independent testing and inspecting agencies.
6. Review time required for completion and startup procedures.
7. Review time required for obtaining and activating permits.
8. Review and finalize list of construction activities to be included in schedule.
9. Review baseline schedule comments, resolve issues and progress on incorporating them
10. Review procedures for updating schedule.
11. Discuss reporting requirements and establish a protocol for naming and transmitting electronic schedules.

1.4 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate Contractors.

B. Coordinate Construction Baseline Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
1. In developing the Construction Baseline Schedule, ensure that the Subcontractor's work at all tiers, as well as the prime Contractor's work, is included and coordinated.

2. Secure time commitments for performing critical elements of the Work from parties involved.

PART 2 - PRODUCTS

2.1 SCHEDULE OF VALUES

A. Breakdown each lump-sum item into component work activities used in the schedule, for which progress payments may be requested. The work activities broken out within the schedule of values shall be integrated into and made a logical part of the construction baseline schedule submitted under this specification. The total costs for the component work activities shall equal the contract price for that lump-sum item. The Contracting Officer may request data to verify accuracy of dollar values. Include mobilization, general condition costs, overhead and profit in the total dollar value of unit price items and in the component work activities for each lump-sum item. Do not include mobilization, general condition costs, overhead or profit as a separate item.

B. Do not break down unit price items. Use only the contract price for unit price items.

C. The total cost of all items shall equal the contract price. The Schedule of Values will form the basis for progress payments.

D. An acceptable Schedule of Values shall be agreed upon by the Contractor and Contracting Officer before the first progress payment is processed.

2.2 CONSTRUCTION SCHEDULE REQUIREMENTS

A. Construction Baseline Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the preliminary CPM network diagram, prepare a skeleton network to identify probable critical paths.

1. Activities: Indicate the estimated duration for each meter.
2. Time Frame: Proposed duration assigned to each activity shall be the Contractor's best estimate of time required to complete the activity considering the scope and resources planned for the activity.

Activity Duration: Define activities so no activity is longer than 1 day, except for non-construction activities including mobilization, shop drawings and submittals, fabrication and delivery of materials and equipment.

a. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 calendar days, as separate activities in the schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.

B. Joint Review, Revision, and Acceptance:

1. Within seven calendar days of receipt of the Contractor's proposed Construction Baseline Schedule, the Contracting Officer and Contractor shall meet for joint review, correction, or adjustment of the initial Construction Baseline Schedule. Any areas which, in the opinion of the Contracting Officer, conflict with timely completion of the project shall be subject to revision by the Contractor.
2. Within seven calendar days after the joint review between the Contractor and Contracting Officer, the Contractor shall revise and resubmit the Construction Baseline Schedule in accordance with agreements reached during the joint review.

3. In the event the Contractor fails to define any element of work, activity, or logic, and the Contracting Officer review does not detect this omission or error, such omission or error, when discovered by the Contractor or Contracting Officer, shall be corrected by the Contractor within seven calendar days and shall not affect the contract period.
4. Upon acceptance of the Construction Baseline Schedule by the Contracting Officer, save the schedule as a baseline and update on a monthly basis. The construction schedule update will be used to evaluate the Contractor's monthly applications for payment based upon information developed at the monthly Construction Schedule update meeting.

PART 3 - EXECUTION

3.1 CONSTRUCTION SCHEDULE UPDATES

A. Progress Meeting Updates: Provide in PDF format **3** week look-ahead schedule, derived from the currently accepted schedule, before each weekly progress meeting. Utilize the look-ahead schedule to facilitate and take notes on discussions held during the progress meeting.

END OF SECTION

SECTION 01 33 23 - SUBMITTAL PROCEDURES *(ELECTRONIC)*

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals. This section refers solely to electronic submittals and submittal procedures

1.2 DEFINITIONS

A. Action Submittals: Written, graphic information, and physical samples that require Government's responsive action.

B. Informational Submittals: Written information that does not require Government's responsive action. Submittals may be rejected for not complying with the requirements.

C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.3 GENERAL SUBMITTAL PROCEDURES

A. General: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual specific sections.
   1. Contracting Officer reserves the right to require submittals in addition to those called for in individual sections.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Review them for legibility, accuracy, completeness, and compliance with Contract Documents.
   1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
   2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
      a. Contracting Officer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Submittal List: A submittal list has been attached to the end of this Specification Section. The intent is to provide an overall summary of submittal requirements and not a comprehensive list. The requirements of the individual Specification Sections, terms and conditions of the Contract still apply regardless of what is shown on the submittal list.

D. Processing Time: Allow enough time for submittal review, including time for re-submittals, as follows. Time for review shall commence when an e-mail notification is received by the Contracting Officer (or designee) indicating the submittal has been sent via email and is ready for review. When the Contracting Officer has completed their review, an e-mail notification will be sent to the Contractor indicating the submittal has been processed. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.
   1. Action Submittals
      a. Initial Review: Allow 15 days for initial review of each submittal. Allow

additional time if coordination with subsequent submittals is required.

b. Re-submittal Review: Allow 14 days for review of each re-submittal.

2. Informational submittals

a. Review: Allow 10 days for review of each submittal.

E. Approved Equals:

1. For each item proposed as an "approved equal," submit supporting data, including:

a. Drawings and samples as appropriate.

b. Comparison of the characteristics of the proposed item with that specified.

c. Changes required in other elements of the work because of the substitution.

d. Name, address, and telephone number of vendor.

e. Manufacturer's literature regarding installation, operation, and maintenance, including schematics for electrical and hydraulic systems, lubrication requirements, and parts lists. Describe availability of maintenance service, and state source of replacement materials.

2. A request for approval constitutes a representation that Contractor:

a. Has investigated the proposed item and determined that it is equal or superior in all respects to that specified.

b. Will provide the same warranties for the proposed item as for the item specified.

c. Has determined that the proposed item is compatible with interfacing items.

d. Will coordinate the installation of an approved item and make all changes required in other elements of the work because of the substitution.

e. Waives all claims for additional expenses that may be incurred as a result of the substitution.

F. Electronic Submittals**:** Identify and incorporate information in each electronic submittal file as follows:

1. CM-16 Transmittal Form: All submittals shall be transmitted using National Park Service form CM-16 form. No action will be taken on a submittal item unless accompanied by the CM-16 transmittal form.

a. Complete the general information at the top of the form.

b. Provide all required information based on the submittal type

c. Attach all related documents.

d. Sign the CM-16 form in the contractor section at the bottom of the form, and email to the CO and COR when complete.

2. Physical samples: Complete the CM-16 as described above. Deliver the physical sample to the CO (or designee) on site for processing. All comments and actions will be documented on the CM-16 form.

G. Identification: Submittal number or other unique identifier, including revision identifier.

1. Submittal number shall use a sequential number (e.g., .001). Re-submittals shall include an alphabetic suffix after another decimal point (e.g., 001.A).

H. Re-submittals: Make re-submittals using the same process used with the initial submittal.

1. Note date and content of previous submittal.

2. Note date and content of revision in the title block on the CM-SPE and clearly indicate the extent of revision.

3. Re-submit submittals until they are marked "Approved" or "Approved with notations".

I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, and others as necessary for performance of construction activities.

J. Use for Construction: Use only final submittals with mark indicating "Approved" or "Approved with notations". Ensure all notations have been incorporated and, at a minimum, keep one copy of the final approved submittal on site for use during construction.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual Specification Sections.

1. Contracting Officer reserves the right to require submittals in addition to those called for in individual sections.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each submittal to show which products and options are applicable.
3. Include the following information, as applicable:
   a. Manufacturer's product specifications.
   b. Manufacturer's installation instructions: When Contract Documents require compliance with manufacturer's printed instructions, provide one complete set of instructions to Contracting Officer and keep another complete set of instructions at the project site until substantial completion.
   c. Manufacturer's catalog cuts: Submit **only** pertinent pages; mark each page of standard printed data to identify specific products proposed for use.
   d. Wiring diagrams showing factory-installed wiring.
   e. Printed performance curves.
   f. Operational range diagrams.
   g. Compliance with specified referenced standards.
   h. Testing by recognized testing agency.
4. Submit product data in PDF file format before or concurrent with samples.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal of CAD Drawings is otherwise permitted.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
   a. Dimensions.
   b. Identification of products.
   c. Fabrication and installation drawings.
   d. Roughing-in and setting diagrams.
   e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
   f. Shopwork manufacturing instructions.
   g. Templates and patterns.
   h. Schedules.

i. Notation of coordination requirements.
j. Notation of dimensions established by field measurement.
k. Relationship to adjoining construction clearly indicated.
l. Seal and signature of professional engineer if specified.
m. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.

2. Submit shop drawings as a PDF electronic file.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Complete and email the CM-16 on the for processing and documentation of action on submitted samples.
3. Identification: Attach label on unexposed side of Samples that includes the following:
   a. Generic description of Sample.
   b. Product name and name of manufacturer.
   c. Sample source.
   d. Submittal Number and title of appropriate Specification Section.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
   a. Number of Samples: Submit **two** full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Contracting Officer will return submittal with options selected.
6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
   a. Number of Samples: Submit four sets of Samples. Contracting Officer will retain two Sample sets; remainder will be returned. Retain Sample set as a Project Record Sample.

E. Construction Materials: The Contractor is encouraged to submit for approval products made of recycled or environmentally responsible material consistent with Section 016700 Product Requirements. Every effort will be made by the National Park Service to approve these materials.

2.2 INFORMATIONAL SUBMITTALS

A. General: Prepare and submit Informational Submittals required by individual Specification Sections.

1. Post informational submittals as PDF electronic files directly to the NPS SharePoint website.

2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
3. Informational submittals that do not comply with the requirements specified in the Contract Documents will be rejected and one copy will be returned.

B. Contractors Construction Schedule: Comply with the requirements specified in Section 01 32 16 "Construction Schedule."

C. Site Specific Safety and Health Plan: Comply with the requirements specified in Section 01 35 23 "Safety Requirements."

D. Schedule of Values: Comply with the requirements specified in Section 01 32 16 "Construction Schedule."

E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions.

3.2 CONTRACTING OFFICER'S ACTION

A. General: Submittals will be disapproved without technical review if identification information is missing, not filled in, or if placed on the back of the submittal; an incorrect format of submittals is provided; the transmittal form is incorrectly filled out; submittals are not coordinated; or submittals do not show evidence of Contractor's approval.
1. Any work done or orders for materials or services placed before approval shall be at the Contractor's own risk.

B. Action Submittals: Contracting Officer will review each submittal, generate comments on corrections or modifications required, and indicate the appropriate action on the CM-SPE Transmittal Form. The submittal will be marked in one of three ways as defined below:
1. APPROVED: Acceptable with no corrections.
2. APPROVED WITH NOTATIONS: Minor corrections or clarifications required. All comments are clear and no further review is required. The Contractor shall address all review comments when proceeding with the work.
3. DISAPPROVED - RESUBMIT: Rejected as not in accordance with the contract or as requiring major corrections or clarifications. The Contracting Officer will identify the reasons for disapproval. The Contractor shall revise and resubmit with changes clearly identified.

C. Informational Submittals: Contracting Officer will review each submittal and will either accept or reject it.

D. Partial submittals are not acceptable, will be considered non-responsive, and will be returned without review.

END OF SECTION

SECTION 01 35 23 - SAFETY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This section includes establishing an effective accident prevention program and providing a safe environment for all personnel and visitors. Refer to the GOGA Health And Safety Plan review checklist for reference.

B. Hazardous Materials: The project site may contain hazardous materials and contaminated soil beyond that specifically noted in the drawings and specifications. The safety plan shall address appropriate training for all workers with any potential for exposure. See Specification Section 013530 Hazardous Materials.

C. Site Specific Safety Plan:

1. A Site-Specific Safety Plan shall be prepared covering on-site work to be performed by the contractor and all subcontractors.
2. The prime contractor shall be responsible for development, implementation, and oversight of the site-specific plan. The site-specific safety plan shall establish in detail, the protocols necessary for recognition, evaluation, and control of hazards associated with each task performed. The plan shall address site specific safety requirements and procedures based upon site specific conditions. The level of detail provided in the site-specific safety plan shall be tailored to the type of work, complexity of operations to be performed, and hazards anticipated. The site-specific safety plan shall address, in as much detail as possible, anticipated tasks, their related hazards, and anticipated control measures.

1.2 SUBMITTALS

A. Site Specific Safety Plan (SSSP): After contract award and before the Pre-Construction conference, submit for review a Site-Specific Safety Plan. The Contracting Officer (CO) will review the proposed Plan. If the plan requires any revisions or corrections, the Contractor shall resubmit the Plan within 10 days. No field work or progress payment will be allowed until Plan is accepted.

B. Submit a copy of test reports, as required by OSHA, for personnel working with hazardous materials.

C. Submit a report on safety meetings and of inspections.

D. Upon request, submit proof of employees' qualifications to perform assigned duties in a safe manner.

1.3 QUALITY ASSURANCE

A. Comply with contract clauses entitled "Accident Prevention" and "Permits and Responsibilities". In case of conflicts between Federal, State, and local safety and health requirements, the most stringent shall apply. Equipment or tools not meeting OSHA requirements will not be allowed on the project sites. Failure to comply with the requirements of this section and related sections may result in suspension of work.

B. Qualifications of Employees:

1. If hazardous materials or contaminated soils are present, all employees must have the level of HAZWOPER training appropriate for the potential for contact with hazardous

materials during the performance of their work.

2. All employees must be physically qualified and able to perform their assigned duties in a safe manner.
3. Do not allow employees to perform work whose ability or alertness is impaired because of prescription or illegal drug use, fatigue, illness, intoxication, or other conditions that may expose themselves or others to injury.
4. Operators of vehicles, hoisting equipment, and hazardous plant equipment shall be able to understand signs, signals, and operating instructions, and be fully capable of operating such equipment. Provide operating instructions for all equipment. Newly hired operators shall be individually tested by an experienced operator or supervisor to determine if they are capable of safely operating equipment. Retain copies of all operators' licenses and/or certifications onsite.

1.4 ACCIDENT REPORTING

A. Reportable Accidents: (per OSHA 29CFR 1904) A project reportable accident is defined as death, occupational disease, traumatic injury to employees or the public, fires, and property damage by accident more than $100. Notify Park Dispatch at 911 or 415-561-5656 to report the accident and request emergency assistance. In addition, Contractor will notify the Contracting Officer immediately in the event of a reportable accident. Within 7 days of a reportable accident, fill out and forward to Contracting Officer an Accident/Property Damage Report (Form CM-22). Form may be obtained from the Contracting Officer.

PART 2 - PRODUCTS

2.1 SITE SPECIFIC SAFETY PLAN (SSSP)

A. The Plan shall be written to comply with OSHA and project requirements **(a generic plan is not acceptable**) including but not limited to the following:
   1. Name of responsible supervisor to carry out the program.
   2. Weekly and monthly safety meetings.
   3. First aid procedures.
   4. Outline of each phase of the work, the hazards associated with each major phase, and the methods proposed to provide for property protection and safety of the public, National Park Service personnel, and Contractor's employees. Identify the work included under each phase.
   5. Training, both initial and continuing.
   6. Planning for possible emergency situations, such as floods, fires, cave-ins, slides, explosions, power outages, and wind storms. Such planning shall take into consideration the nature of construction, site conditions, and degree of exposure of persons and property.
   7. Outline of each phase of the work, the hazards associated with each major phase, and the methods proposed to provide for property protection and safety of the public, National Park Service personnel, and Contractor’s employees. Identify the work included under each phase by reference to specification section or division numbers. Specifically identify the methods of protecting workers and visitors from exposure to hazardous material.
   8. Training, both initial and continuing.
   9. Map to nearest medical facility.
   10. JHAs for each unique job activity.

2.2 FIRST AID FACILITIES

A. Provide adequate facilities for the number of employees and the hazards associated with the types of ongoing construction work at the site.

2.3 PERSONNEL PROTECTIVE EQUIPMENT

A. Meet requirements of applicable ANSI standards. Selection shall conform to OSHA 29CFR 1926.95 Subpart E.

PART 3 - EXECUTION

3.1 EMERGENCY INSTRUCTIONS

A. Post telephone numbers and reporting instructions for ambulances, physicians, hospitals, fire department, and police in conspicuous locations at the work site.

3.2 FIRE AND LIFE SAFETY

A. Comply with the requirements of the International Fire Code.

B. Store hazardous materials in accordance with manufacturers and OSHA recommendations. Maintain readily available, on site, SDS for each chemical.
   1. Immediately report all spills of hazardous materials to the park.
   2. Maintain a spill emergency response kit.
   3. Train employees how to respond to a spill and use the emergency response kit.

3.3 PROTECTIVE EQUIPMENT

A. Inspect personal protective equipment daily and maintain it in a serviceable condition. Clean, sanitize, and repair personal items, as appropriate, before issuing them to another individual.

B. Inspect and maintain other protective equipment and devices before use and on a periodic basis to ensure safe operation. Retain inspection documentation onsite.

3.4 SAFETY MEETINGS

A. As a minimum, conduct weekly 15-minute "toolbox" safety meetings. These meetings shall be conducted by a foreman or supervisor and attended by all construction personnel at the worksite. Topics need to coincide with work scheduled for the following week. Document and submit meeting minutes to the Contracting Officer within one day after the meeting.

B. Conduct monthly safety meetings for all levels of supervision. Meetings shall be attended by all contractors and subcontractors performing work on the site. Notify the Contracting Officer of meeting dates and times. These meetings shall be used to review the effectiveness of the Contractor's safety effort, to resolve current health and safety problems, to provide a forum for planning safe construction activities, and for updating the Site-Specific Safety Plan. The Contracting Officer will attend the meeting and enter the results of the meetings into the daily log. These meetings can be incorporated into weekly site meetings with the approval of the CO.

3.5 HARD HATS AND PROTECTIVE EQUIPMENT AREAS

A. A hard hat area will be designated by the Contractor. The hard hat area shall be posted by the Contractor in a manner satisfactory to the Contracting Officer.

B. If wearing a hard hat is required, it is the Contractor's responsibility to require all those working on or visiting the site to always wear hard hats and other necessary protective equipment during the visit.

3.6 EGRESS

A. Provide and maintain adequate egress at all times in accordance with the International Fire Code. No corridor, aisle, stairway, door, or exit shall be obstructed or used in a manner that interferes with egress.

3.7 TRAINING

A. First Aid: Provide adequate training to an adequate number of personnel to ensure prompt and efficient first aid.

B. Hazardous Material: Train and instruct each employee exposed to hazardous material in safe and approved methods of handling and storage. All employees must be provided with the level of Hazardous Waste Operations and Emergency Response Standards (HAZWOPER) training appropriate for the potential for contact with hazardous materials during the performance of their work. Hazardous materials are defined as explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful substances that could cause death or injury.

END OF SECTION

SECTION 01 40 00 QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

1.2 DEFINITIONS

A. Quality Assurance Services: Activities, actions, and procedures performed before and during execution of the work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality Control Services: Tests, inspections, procedures, and related actions during and after execution of the work to evaluate that actual products incorporated into the work and completed construction comply with requirements.

C. Product Testing: Tests and inspections that are performed by a Nationally Recognized Testing Laboratory (NRTL), a National Voluntary Laboratory Accreditation Program (NVLAP), or a testing agency qualified to conduct product testing, to establish product performance and compliance with industry standards.

D. Source Quality Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

E. Field Quality Control Testing: Tests and inspections that are performed on-site for installation of the work and for completed work.

F. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades people of the corresponding generic name.

1.3 CONFLICTING REQUIREMENTS

A. Reference Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Contracting Officer for a decision before proceeding.

B. Minimum Quality Levels: The quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Contracting Officer for a decision before proceeding.

1.4 SUBMITTALS

A. Contractor's Quality Control Daily Reports: Submit showing all inspections and tests on the first workday following the date covered by the report. Quality Control Supervisor shall

utilize the forms attached at the end of this Section.

B. If the Quality Control Daily Reports are not submitted as specified, the Contracting Officer may retain all payments until such time a plan is accepted and implemented or may retain payments for work completed on days there are no Quality Control Daily Reports.

C. Permits, Licenses, and Certificates: For NPS records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the work.

1.5 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

1.6 QUALITY CONTROL

A. The Contractor is responsible for all testing and inspections required by this scope of work. Inspect and test work as needed to ensure that the quality of materials, workmanship, construction, finish, and functional performance are in compliance with applicable specifications, drawings, and those required by the Building Code and Plumbing Code.

PART 2 - PRODUCTS-NOT USED

PART 3 - EXECUTION

3.1 DOCUMENTATION

A. Maintain Quality Control Daily Reports, Daily Test Report Information Sheets, and Accessibility Inspection Reports (attached) of quality control activities and tests.

B. Quality Control Daily Reports may not be substituted for other written reports required under clauses of the contract, such as Disputes, Differing Site Conditions, or Changes.

3.2 ENFORCEMENT

A. The Contractor shall stop work on any item or feature pending satisfactory correction of any deficiency noted by the quality control staff or the Contracting Officer.

3.3 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other

Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

CONTRACTOR'S QUALITY CONTROL DAILY REPORT

REPORT NO. --------- SHEET 1 OF ---------

PROJECT				CONTRACT NO.	DATE
PARK				CONTRACTOR'S REPRESENTATIVE ON THE JOB	
WEATHER (Rain, Snow, Cloudy, Windy, etc.)	RAINFALL Inches	TEMPERATURE MAX.	MIN.	GROUND CONDITIONS (Dry, Damp, Wet, Frozen, etc.)	

1. PRIME CONTRACTOR

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY PRIME CONTRACTOR:

MATERIALS DELIVERED	OFFICIAL VISITORS TO SITE

2A. SUBCONTRACTOR, ----------: (If more than one subcontractor use copies of following page.)

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY SUBCONTRACTOR:

3. SPECIFIC INSPECTIONS: (Inspections performed, results, and corrective actions)

4. TESTING: ☐1 Check if any testing was performed today. (Complete and attach Test Report Information Sheets.)
Type and Location of Testing: _____

5. VERBAL INSTRUCTION RECEIVED FROM GOVERNMENT ON CONSTRUCTION DEFICIENCIES OR RE-TESTING REQUIRED:

6. REMARKS:

7. CERTIFICATION:

I certify that the above report is complete and correct and that I, or my authorized representative, have inspected all work performed this day by the prime contractor and each subcontractor and determined that all materials, equipment, and workmanship are in strict compliance with the plans and specifications except as may be noted above.

_____
Contractor's Quality Control Representative

SUBCONTRACTOR WORK CONTINUED:	CONTRACT NO.	REPORT NO. ------- SHEET ---- OF ----

2 SUBCONTRACTOR,

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY SUBCONTRACTOR:

2 SUBCONTRACTOR,

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY SUBCONTRACTOR:

2 SUBCONTRACTOR,

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	Comments

WORK PERFORMED BY SUBCONTRACTOR:

2 SUBCONTRACTOR,

NO. EMPLOYEES BY JOB CATEGORIES	Hours	HEAVY EQUIPMENT ON JOB	NO. UNITS	HRS. WORKING		
				YES	NO	COMMENTS

WORK PERFORMED BY SUBCONTRACTOR:

DAILY TEST REPORT INFORMATION SHEET

CONTRACT NO._____ REPORT NO. _____

SHEET OF

1. Individual Making Inspection or Test:	
2. Testing Laboratory; Name:	Phone #:
Address:	
3. Description of Work and Test Method:	
4. Location of Samples and Tests or Inspections:	
5. Specification Section:	
6. Inspection or Test Data:	
7. Test Results and Interpretations of Test Results:	
8. Comments or Professional Opinion About Compliance of Inspected Work or Tested Work with contract Document Requirements:	
9. Recommendations:	
10. Corrective Actions Taken:	

CERTIFICATION:
I certify that the above testing report is complete and correct and that all testing performed this day for this contract is in strict compliance with the plans and specifications except as noted above.

_____
Signature of Inspector

SECTION 01 57 19.12 NOISE & EXTERIOR LIGHTING MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Special requirements for noise and lighting management during construction operations.

1.2 DEFINITIONS

A. Ambient noise level: The total noise associated with a given environment, being usually a composite of normal or existing sounds from all sources near and far, excluding the noise source at issue.

B. Daytime: The hours from 8 a.m. to 6 p.m. on weekdays and 9 a.m. to 6 p.m. on weekends and holidays.

C. Nighttime: All non-daytime hours.

D. Receiving noise area: Any real property where people live or work and where noise is heard, excluding the project or source area

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 NOISE MANAGEMENT

A. Noise Control: Perform construction operations to minimize noise. Perform noise-producing work in less sensitive hours of the day or week as directed by the Contracting Officer.

B. Prior to 8 a.m. and after 6 p.m. on weekdays or 9 a.m. to 6 p.m. on weekends and holidays, no heavy equipment may operate, no equipment or trucks outfitted with OSHA-required safety warnings may back up, no motors or engines may operate, and no generators shall operate. The Contractor shall make all employees and operators and subcontractors aware of the need to maintain quiet on the premises until 8 a.m. and promptly at 6 p.m. each day of work to reduce impacts to adjacent residents. Contractor and all employees and subcontractors shall talk softly both before and after 8 a.m. and avoid calling or shouting across long distances.

C. Project specific noise management requirements may be prescribed by the Contracting Officer to protect wildlife, natural quiet, or visitor experience.

D. Gas or diesel generators shall not be used outside of standard work hours. If power generation is required outside of work hours, a battery storage system must be used.

3.2 EXTERIOR LIGHTING MANAGEMENT

A. The need for exterior temporary lighting shall be avoided or minimized. If nighttime work is required or approved by the Contracting Officer, the contractor shall provide specifications for the actual lighting to be used, and have Contracting Officer approval before bringing the lighting onto the site.

END OF SECTION

SECTION 01 45 00 - ENVIRONMENTAL PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

A. This section describes requirements related to certain federal, state and regional governmental agencies who have jurisdiction over portions of the Work or who have issued permits prior to theperformance of the Work which is in the jurisdiction of such governmental agency. The specificreferencing of such permits shall not limit or restrict the obligation of the Contractor to comply with the conditions of all permits affecting the Work, as set forth in the General Conditions.

B. Work activities shall beconducted in a manner to avoid impacts outside of work zones and to reduce impacts within a work zone unless required to accomplish the restoration design.

C. The work is conducted on land owned and managed by the National Park Service, which protectsnatural and archeological resources.

1.2 REFERENCES TO REGULATORY REQUIREMENTS

A. Codes, laws, ordinances, rules and regulations referred to shall have full force and effect as though printed in full in these specifications. Codes, laws, ordinances, rules and regulations are not furnished to the Contractor, since the Contractor is assumed to be familiar with theirrequirements. The listing herein of applicable codes, laws, and regulations for hazardous waste abatement work is supplied to the Contractor as a courtesy and shall not limit the Contractor's responsibility for complying with all applicable laws, regulations or ordinances having applicationto the Work. Where conflict among the requirements exists, the most stringent requirements shallbe used.

B. Precedence:

1. Where specified requirements differ from the requirements of applicable codes, ordinancesand standards, the more stringent requirements shall take precedence.

2. Where the Plans or Specifications require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, the Plans and Specifications shall take precedence so long as such increase is legal.

3. Where no requirements are identified in the Plans or Specifications, comply with all requirements of applicable codes, ordinances and standards of governing authorities havingjurisdiction.

1.3 LAWS, ORDINANCES, RULES AND REGULATIONS

A. Federal Laws which apply to the Contract Documents include, but are not limited to, thefollowing:

1. Federal Clean Water Act Section 404

2. Federal Rivers and Harbors Act Sections 9-10

3. Coastal Act of 1976 (Public Resources Code Sections 30000-30900)

4. Federal Endangered Species Act, Section 7 5.

5. Architectural Barriers Act

B. During prosecution of Work to be done under the Contract Documents, comply with

applicable laws, ordinances, rules and regulations, including, but not limit to Federal, State of California, andRegional and Local Agencies.

C. Other Applicable Laws, Ordinance and Regulations:

1. Work shall be accomplished in conformance with all rules and regulations of public utilities and utility districts.

2. Where such laws, ordinances rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Time and Contract Sum, except where changes in laws, ordinances, rules and regulations occur subsequent to the execution date of the Agreement.

1.4 CONFLICTS

A. Conflicts between referenced regulatory requirements: Comply with the one establishing the more stringent requirement.

B. Between referenced regulatory requirements and the Contact Documents: Comply with the one establishing the more stringent requirement and in accordance with the General Conditions.

1.5 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

A. Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Contracting Officer and mayrequire an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.6 NOTIFICATION

A. The Contracting Officer will notify the Contractor in writing of any observed noncompliance withFederal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all orpart of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

PART 2 - EXECUTION

2.1 WATER RESOURCES

A. The Contractor shall monitor construction activities to prevent pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation unless otherwiseindicated.

B. Contractor will ensure the following Park standards for stormwater management are implemented prior to start of work:

1. At the end of each workday, all debris must be contained, collected, and removed from

site, leaving the area visibly clean. Debris that moves downslope must be cleaned up and removed.

2. Non-stormwater discharges into storm drainage systems or waterways are prohibited.

2.2 AIR RESOURCES

A. Equipment operation: Activities or processes performed by the Contractor shall be in accordancewith all Federal and State air emission and performance laws and standards.

B. Dust/Particulates: Dust particles aerosols, and gaseous by-products from construction activities and processing and preparation of materials (such as from asphaltic batch plants) shall be controlled at all times, including weekends, holidays and hours when work is not in progress. TheContractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. The Contractor must have sufficient particulate control shall be performed as the work proceeds and whenever a particulate nuisanceor hazard occurs. The Contractor shall implement the following control measures for constructionemissions of PM10 per Bay Area Air Quality Management District (BAAQD), during construction:

1. Maintain a well-secured, wind-resistant cover over all stockpiles at all times, including both weekdays and weekends, except during the periods when equipment is actively addingto or extracting material from the stockpile.

2. Water all active construction areas as often as necessary to prevent dust.

3. Cover all trucks hauling soil, sand, and other loose materials

4. Limit traffic speeds on unpaved roads to 10 mph

5. Install sandbags or other erosion control measures to prevent silt runoff to public roadways

C. Odors: Odors from construction activities shall be controlled at all times. The odors shall not cause a health hazard and shall be in compliance with State regulations and/or local ordinances.

2.3 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

A. Waste water

1. Disposal of waste water shall be as specified below

a. Waste water from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, forms, etc. shall not be allowed to enter water ways or to be discharged prior to being treated to remove pollutants. The Contractor shall dispose of the constructionrelated waste water off-site in accordance with all Federal, State, Regional and Locallaws and regulations.

2.4 PROTECTION OF WILDLIFE RESOURCES AND SPECIES OF SPECIAL CONCERN

A. The Contractor shall at all times perform all work and take such steps required to prevent interference or disturbance to wildlife and species of special concern.

B. Wildlife: The Contractor shall also take measures to comply with the migratory Bird Treaty

Act.Migratory birds, eggs, and active nests shall be avoided.

PART 3 - EXECUTION (Not used)

END OF SECTION

SECTION 01 67 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for selection of products for use in this Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and environmental requirements.

1.2 DEFINITIONS

A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

C. Definitions pertaining to sustainable development: As defined in ASTM E2114.

D. Comprehensive Procurement Guidelines: The CPG program is authorized by Congress under Section 6002 of the Resource Conservation and Recovery Act (RCRA) and Executive Order 13423. EPA is required to designate products that are or can be made with recovered materials, and to recommend practices for buying these products. Once a product is designated, procuring agencies are required to purchase it with the highest recovered material content level practicable. See http://www.epa.gov/cpg

E. Environmentally preferable products (EPPs): Products and services that have a lesser or reduced effect on the environment in comparison to conventional products and services. Refer to EPA's Final Guidance on Environmentally Preferable Purchasing for more information http://www.epa.gov/epp/pubs/guidance/finalguidance.htm..

F. Stewardship: Responsible use and management of resources in support of sustainability.

G. Sustainability: The maintenance of ecosystem components and functions for future generations.

1. Regional Materials: Materials that are manufactured and extracted, harvested, or recovered within a radius of 500 miles from the Project location.

H. SUBMITTALS

1. Affirmative Procurement Reporting Form. Submit on form in Appendix A of this Section, or similar form as approved by Contracting Officer.
2. Submit environmental data in accordance with Table 1 of ASTM E2129 for the following products:
   a. Lead-Free Water Meters
3. Safety data sheets (SDS): For each product required by OSHA to have a SDS, submit an SDS. SDS shall be prepared **within the previous five years**. Include information for SDS Sections 1 - 16 in accordance with ANSI 2400.1 and as follows:
   a. Section 1: Chemical Product and Company Identification.
   b. Section 2: Composition/Information on Ingredients.
   c. Section 3: Hazards Identification.
   d. Section 4: First Aid Measures.
   e. Section 5: Fire Fighting Measures.
   f. Section 6: Accidental Release Measures.
   g. Section 7: Handling and Storage.
   h. Section 8: Exposure Controls/Person Protection.
   i. Section 9: Physical and Chemical Properties.
   j. Section 10: Stability and Reactivity Data.
   k. Section 11: Toxicological Information. Include data used to determine the hazards cited in Section 3. Identify acute data, carcinogenicity, reproductive effects, and target organ effects. Provide written description of the process used in evaluating chemical hazards relative to preparation of the SDS.
   l. Section 12: Ecological Information. Include data regarding environmental impacts during raw materials acquisition, manufacture, and use. Include data regarding environmental impacts in the event of an accidental release.
   m. Section 13: Disposal Considerations. Include data regarding the proper disposal of the chemical. Include information regarding recycling and reuse. Indicate whether or not the product is considered to be "hazardous waste" according the US EPA Hazardous Waste Regulations 40 CFR 261.
   n. Section 14: Transportation Information. Identify hazard class for shipping.
   o. Section 15: Regulatory Information. Identify federal, state, and local regulations applicable to the material.
   p. Section 16: Other Information. Include additional information relative to recycled content, biobased content, and other information regarding environmental and health impacts. Identify the date SDS was prepared.

1.3 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.4 PRODUCT DELINERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
5. Contractor is encouraged to obtain materials in biodegradable or recyclable/reusable packaging which uses the minimum amount of packaging possible.

C. Storage:
1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weather tight enclosure above ground, with ventilation adequate to prevent condensation.
4. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
5. Protect stored products from damage and liquids from freezing.

1.5 ENNIRONMENTALLY PREFERABLE PRODUCTS

A. Provide environmentally preferable products to the greatest extent possible.
1. To the greatest extent possible, provide products and materials that have a lesser or reduced effect on the environment considering raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, and/or disposal of the product.
2. Eliminate the use of ozone depleting compounds during and after construction where alternative environmentally preferable products are available, consistent with either the Montreal Protocol and Title NI or the Clean Air Act Amendments of 1990, or equivalent overall air quality benefits that take into account life cycle impacts.
3. Use products meeting or exceeding EPA's recycled content recommendations for EPA-designated products. Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project

1.6 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.

B. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 – PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options

are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.

3. Government reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.

B. Product Selection Procedures:
1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements or approved equal.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements or approved equal.
3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements or approved equal.
4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements or approved equal.
5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product, system, or approved equal.
8. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers, or approved equal. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named.
9. Nisual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Government's sample. Contracting Officers decision will be final on whether a proposed product matches.
    a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.
10. Nisual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.
    a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Contracting Officer will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.

2.2 COMPARABLE PRODUCTS

A. Conditions: Contracting Officer will consider Contractor's request for comparable product

when the following conditions are satisfied. If the following conditions are not satisfied, Contracting Officer will return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION

3.1 PROTECTION AFTER INSTALLATION

A. Provide adequate coverings as necessary to protect installed materials from damage resulting from natural elements, traffic, and subsequent construction. Remove when no longer needed.

END OF SECTION

SECTION 01 73 40 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
   1. General installation of products.
   2. Starting and adjusting.
   3. Protection of installed construction.
   4. Correction of the Work.

1.2 SUBMITTALS

A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal and for any landfill or recycling facility.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of site improvements, and other construction indicated as existing are not guaranteed.
   1. Before beginning work, investigate and verify the existence and location of water systems, existing meters, meter vaults, and other construction affecting the Work.
   2. Before construction, verify the location and points of connection of water meters.

B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
   1. Verify compatibility with and suitability of substrates.
   2. Examine roughing-in for water meters to verify actual locations of connections before equipment and fixture installation.
   3. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 COORDINATION WITH UTILITY SERVICE PROVIDERS

A. Coordination with Utility Service Providers: The existing water service is owned and operated by National Park Service.
      a. Construction Contractor Responsibilities: Contractor is responsible for water meters, flushing systems, and maintaining potable water..

3.3 PREPARATION

A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to the Contracting Officer in accordance with Division 01 Specification 01 31 00 "Project Management and Coordination".

3.4 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information. If discrepancies are discovered, notify Contracting Officer promptly.
   1. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
   2. Inform installers of lines and levels to which they must comply.
   3. Check the location, level and plumb, of every major element as the Work progresses.
   4. Notify the Contracting Officer when deviations from required lines and levels exceed allowable tolerances.

3.5 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
   1. Make vertical work plumb and make horizontal work level.
   2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
   3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
   4. Limit disturbance of existing structure to the greatest extent possible.
   5. Prior to the start of work, meet on site with the COR to discuss wiring and piping runs.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

3.6 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
   1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
   2. Do not hold materials for more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
   1. Remove liquid spills promptly.

2. Contractor shall provide progress cleaning that minimizes sources of food, water, and harborage available to pests.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
   1. Utilize non-toxic cleaning materials and methods.
      a. Comply with Green Seal GS 37 for general purpose cleaning and bathroom cleaning.
      b. Use natural cleaning materials where feasible. Natural cleaning materials include:
         1) Abrasive cleaners: substitute 1/2 lemon dipped in borax.
         2) Ammonia: substitute vinegar, salt and water mixture, or baking soda and water.
         3) Disinfectants: substitute 1/2 cup borax in gallon water.
         4) Drain cleaners: substitute 1/4 cup baking soda and 1/4 cup vinegar in boiling water.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

G. Flush water lines as necessary to remove debris and air.

H. Final Cleaning: At completion of Work, remove all remaining waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all exposed surfaces; leave Project clean and ready for occupancy.
   1. Provide final cleaning in accordance with ASTM E1971.

3.7 STARTING AND ADJUSTING

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust equipment for proper operation.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.8 CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
   1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Restore permanent facilities used during construction to their specified condition.

C. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

END OF SECTION

SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for the following:

1. Recycling nonhazardous demolition and construction waste.
2. Disposing of nonhazardous demolition and construction waste.

1.2 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Deconstruction: A process to carefully dismantle or remove and salvage usable materials from structures, as an alternative to demolition. It maximizes the recovery of building materials for reuse and recycling and minimizes the amount of waste going to a landfill. Typical deconstruction includes taking the building apart to reuse lumber, windows, doors, and other materials.

D. Solid Waste: Garbage, debris, sludge, or other discharged material (except hazardous waste) including solid, liquid, semisolid, or contained gaseous materials resulting from domestic, industrial, commercial, mining, oragricultural operations.

E. Debris: Non-hazardous solid waste generated during the construction, demolition, or renovation of a structure which exceeds 2.5 inch (60 mm) particle size that is: a manufactured object; plant or animal matter; or natural geologic material (e.g. cobbles and boulders). A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

F. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

G. Environmental Pollution and Damage: The presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; or degrade the utility of the environment for aesthetic, cultural, or historical purposes.

H. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

I. Hazardous Materials: Any material that is regulated as a hazardous material in accordance with 49 CFR 173,requires a Safety Data Sheet (SDS) in accordance with 29 CFR 1910.1200, or which during end use, treatment, handling, storage, transportation or disposal meets or has components which meet or have the potential to meet the definition of a Hazardous Waste in

accordance with 40 CFR 261.

J. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

K. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

1.3 PERFORMANCE REQUIREMENTS

A. General: This project shall minimize the creation of construction, deconstruction, and demolition waste to protect natural habitats and resources. Factors that contribute to waste such as over packaging, improper storage, ordering error, poor planning, breakage, mishandling, and contamination shall be minimized. A Waste Management Plan shall be developed to ensure that existing site and building materials are reused, salvaged,or recycled. Waste disposal in landfills shall be minimized.

B. Salvage /Recycle Requirements: Develop waste management plan that results in end-of-Project rates for salvage/recycling of 75% percent by weight of total waste generated by the Work. The following waste categories, at a minimum, shall be diverted from a landfill:

1. Clean dimensional wood, palettes
2. Cardboard, paper, packaging, newsprint
3. Metals (from banding, stud trim, piping, rebar, roofing, other trim, steel, iron, galvanized sheet steel,stainless steel, aluminum, copper, zinc, lead, brass, and bronze)
4. Other mixed construction and demolition waste as appropriate

C. The Contractor will ensure that wildlife does not have access to any garbage, debris, or other that contains organic waste products through use of covered, fully wildlife proof dumpsters or other trash receptacles. Open dumpsters are not allowed.

1.4 SUBMITTALS

A. Waste Management Plan: After awarding the contract and prior to the scheduled Pre-Construction Conference, the Contractor shall submit a draft Waste Management Plan to the Contracting Officer for approval. Revise and resubmit Plan as required by the Contracting Officer. Approval of the Contractor's Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations

B. Waste Reduction Calculations: Before request for Substantial Completion, submit digital copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.

D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recyclingand processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

G. Progress payment requirements:

1. With each Application for Payment, submit manifests, weight tickets, receipts, and invoicesspecifically identifying the Project and waste material.

H. Closeout Submittals

1. With Closeout Submittals, submit a summary worksheet of the Solid Waste Disposal and Diversionbased on form in Appendix B of this Section.

1.5 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

PART 2

2.1 WASTE MANAGEMENT PLAN

A. General: Develop plan consisting of waste identification and waste reduction work plan. Include section in plan for demolition and a separate section in plan for construction waste. Indicate anticipated quantities by weight or volume but use same units of measure throughout waste management plan. Use checklist and template in Appendix A.

B. Waste Identification: Indicate anticipated types and quantities of demolition and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.

2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.

3. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.

4. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.

5. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:

1. Landfill tip fees/ton.
2. If diverted, tip fee savings from landfill diversion.
3. Costs of recycling, salvage, or reuse.
4. Revenue from recycling, salvage, or reuse.
5. Total cost or savings from diversion (Calculate by using tip fee savings and subtracting costs of recycling or adding revenue from recycling).

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement waste management plan as approved by the Contracting Officer. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

B. Materials handling procedures: Materials to be recycled shall be protected from contamination and shall be handled, stored, and transported in a manner that meets the requirements set by the designated facilities for acceptance. Establish a defined area for the operations of each trade, especially woodcutting so that off-cuts will be kept in one area and can be sorted by dimension for future reuse.

3.2 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Receivers and Processors: Preference should be given to local waste haulers that accept co-mingled construction and demolition debris and can document the quantities diverted. List below is provided for information only; available recycling receivers and processors include, but are not limited to, the following:

1. Bay Area Construction & Demolition Recycling Facilities

Marin Resource Recovery	**Recology** (preferred vendor in San Francisco)
565 Jacoby Street	501 Tunnel Ave
San Rafael CA	San Francisco, CA
415-485-5646	1-888-404-4008 (debris box);
	415-330-1400 (transfer station)
Redwood Landfill and Recycling Center	**Redwood Empire Disposal**
8950 Redwood Highway	3400 Standish Avenue
Novato	Santa Rosa
415-892-2851	1-800-243-0291
Mill Valley Refuse Service	**Bay Cities Refuse Service** (required vendor in MarinHeadlands)
112 Front Street	2525 Garden Tract Road
San Rafael	Richmond
415-457-9760	415-332-3646

C. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.

D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate

recyclable waste by type at Project site to the maximum extent practical.

1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
   a. Inspect containers and bins for contamination and remove contaminated materials if found.
2. Store components off the ground and protect from the weather.
3. Remove recyclable waste off Governments property and transport to recycling receiver or processor.

3.3 RECYCLING DEMOLITION WASTE

A. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.

B. Metals: Separate metals by type.
   1. Structural Steel: Stack members according to size, type of member, and length.
   2. Remove and dispose of bolts, nuts, washers, and other rough hardware.

C. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.

3.4 RECYCLING CONSTRUCTION WASTE

A. Packaging:
   1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
   2. Polystyrene Packaging: Separate and bag materials.
   3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. Forpallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
   4. Crates: Break down crates into component wood pieces and comply with requirements for recyclingwood.

B. Wood Materials:
   1. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

3.5 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materialsfrom Project site and legally dispose of them in a landfill acceptable to authorities having jurisdiction.
   1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Transport waste materials off Governments property and legally dispose of them.

END OF SECTION 01 74 19

Appendix A. GGNRA Waste Management Plan Checklist

☐ **Analyze project waste**
- ☐ Estimate types and quantities of waste the project will generate at different stages

☐ **Check to see what can be recycled/reused onsite (wood, soil, rock, concrete, etc.)**

☐ **Decide how you will recycle**
- ☐ Can you arrange the job site to accommodate several containers?
- ☐ Do you have the equipment to self haul?
- ☐ How often might you need your containers picked- up?

☐ **Research recycling options**
- ☐ Check out the Construction Recycling Directory
- ☐ Call recyclers and ask them:
- ☐ What materials do you accept?
- ☐ Is co-mingled recycling available?
- ☐ What are my collection options & costs?
- ☐ If I self-haul, can I drop off, and if so, what about tipping fees?
- ☐ Do you provide receipts to track recyclables?
- ☐ Do you set up and provide training?

☐ **Decide what you will recycle at the jobsite**

☐ **Determine your costs**
- ☐ Compare the cost of disposing waste with the cost of recycling

☐ **Write out the waste management plan**
- ☐ Which materials will be salvaged or reused on site
- ☐ Which materials will be recycled
- ☐ How materials will get to the recycler
- ☐ Names of responsible crew member/team
- ☐ Your projected savings

☐ **Set up and monitor**
- ☐ Clearly designate recycling bins
- ☐ Post list of what is recyclable and what is not
- ☐ Keep bins close to where waste is generated but not in traffic pattern
- ☐ Provide hauler and crew with site plan
- ☐ Check recycling bins daily for contamination
- ☐ Keep dumpsters closed to discourage use by wildlife
- ☐ Check garbage dumpsters daily for misplaced recyclables
- ☐ Call for pick-up before boxes are full
- ☐ Require quantity and cost tickets to track results and savings

☐ **Make your program work**
- ☐ Start early: Incorporate a recycling program from the start to guarantee success
- ☐ Communicate your waste management plans to crews, subs and suppliers as they come on-site
- ☐ Include recycling requirements in all subcontracts and purchase orders
- ☐ Post quantities of materials reused and recycled
- ☐ Track your savings

- Encourage suggestions from supervisors and crew
- Reward employees
- Make use of available resources and directories

Resources:
http://www.sfenvironment.org/recyclewhere
http://earth911.com/recycling/

For additional information contact:

Laura Castellini, Golden Gate National Recreation Area Sustainability Coordinator
(415) 561-4789 or Laura_Castellini@nps.gov

Company:
Project:
Designated Recycling Coordinator:

Waste Management Goals:

☐ This project will recycle or salvage for reuse ___% [e.g. 75%] by weight of the waste generated on-site.

Communication Plan:

_____

_____

_____

_____

_____

Expected Project Waste, Disposal, and Handling:

The following charts identify waste materials expected on this project, their disposal method, and handling procedures.

Deconstruction/Demolition Phase

Material	Quantity	Disposal Method	Handling Procedure

Construction Phase

Material	Quantity	Disposal Method	Handling Procedure

Appendix B: SAMPLE SUMMARY OF SOLID WASTE DISPOSAL AND DIVERSION

Project Name: _____ Project Number: _____

Contractor Name: _____ License Number: _____

Contractor Address: _____

Materials Disposed:

Solid Waste Material	**Date Material Disposed**	**Amount Disposed** (indicate ton or cubic yard)	**Municipal Solid Waste Facility** (name, address, & phone number)	**Comments** (if disposed, state why not diverted)

Materials Diverted:

Recycled Material	**Date Material Diverted**	**Amount Diverted** (indicate ton or cubic yard)	**Recycling Facility** (name, address, & phone number)	**Comments**

Hazardous Waste (not included in diversion rate)	**Date Material Disposed**	**Amount Disposed** (ton or cubic yard)	**Haz Waste Facility** (name, address, & phone number)	**Comments**

Signature: _____ Date: _____

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
   1. Closeout Submittals.
   2. Substantial Completion and Final Inspection.
   3. Final Acceptance of the Work.
   4. Warranties.

1.2 CLOSEOUT SUBMITTALS

A. A list of closeout requirements has been attached at the end of the Division 1 specifications for your convenience. The intent is to provide an overall summary of requirements and not a comprehensive list. The terms and conditions of the contract still require you to satisfy the requirements of the individual specification sections regardless of what is shown on the list. Submit the following before requesting final inspection:
   1. Submit specific warranties, guarantees, workmanship bonds, final certifications, and similar documents.
   2. Terminate and remove temporary facilities from Project site, along with construction tools, and similar elements.
   3. Complete final cleaning requirements, including touchup painting.
   4. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
   5. Instruct NPS personnel in operation, adjustment, and maintenance of products, equipment, and systems.

1.3 SUBSTANTIAL COMPLETION AND FINAL INSPECTION

A. When project, or designated portion of project, is substantially complete, request in writing a final inspection. Upon receipt of written request that project is substantially complete, the Contracting Officer will proceed with inspection within 10 days of receipt of request or will advise the Contractor of items that prevent the project from being designated as substantially complete.

B. If, following final inspection, the work is determined to be substantially complete, Contracting Officer will prepare a Punch List to be corrected before final acceptance and issue a Letter of Substantial Completion. Contractor shall complete the work described on the Punch List within 30 calendar days, as weather permits. If the Contractor fails to complete the work within this time frame, the Contracting Officer may either replace or correct the work with an appropriate reduction in the contract price or charge for re-inspection costs in accordance with the Inspection of Construction clause of the contract.

C. If, following final inspection, the work is not determined to be substantially complete; Contracting Officer will notify Contractor in writing. After completing work, Contractor shall request a new final inspection. All re-inspection costs may be charged against the Contractor in accordance with the Inspection of Construction clause of the contract.

1.4 CLOSEOUT SUBMITTALS

A. A list of closeout requirements has been attached at the end of the Division 1 specifications for your convenience. The intent is to provide an overall summary of requirements and not a comprehensive list.

1.5 FINAL ACCEPTANCE OF THE WORK

A. After all deficiencies have been corrected, a Letter of Final Acceptance will be issued.

1.6 WARRANTIES

A. Submittal Time: Submit written warranties on request of Contracting Officer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at the beginning of document

PART 2 - PRODUCTS-NOT USED

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.

b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.

c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.

d. Remove tools, construction equipment, machinery, and surplus material from Project site.

e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces

f. Remove labels that are not permanent.

g. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

h. Wipe surfaces of plumbing equipment and similar equipment. Remove excess lubrication, paint and other foreign substances.

i. Replace parts subject to unusual operating conditions.

j. Leave Project clean and ready for occupancy

C. Waste Disposal: Comply with requirements of Division 01 Section 01 74 19, "Construction Waste Management and Disposal."

END OF SECTION

Submittal List

Division One	Contractor's Schedule	
	Schedule of Values	
	Proof of Bonds and Insurance	
	SF 1413 (subcontractors)	
	Site Specific Safety Plan	
	Designation of PM and Superintendent	
Division Thirty-Three	Water Meters	
Close Out	Warranties	

SECTION 33 11 00 - WATER METERS

PART 1 – GENERAL

1.1 BASIS OF DESIGN

A. Badger E-Series G2 Ultrasonic Cold Water Meters

B. Badger Dynasonics U500wSS Cold Water Meters

C. Orion Cellular C transmitters compatible with all new water meters

1.2 SCOPE

A. This specification covers Cold Water Ultrasonic Meters in sizes 5/8, 3/4, 1. 1.5, 2, 4 and 6 inch, and the materials and workmanship employed in their fabrication. The meter must utilize ultrasonic transit time measurement technology and have no moving parts within the meter to wear or replace.

B. Ultrasonic meters shall meet or exceed the most recent revisions of AWWA C715 Standards. The lead-free bronze alloy ultrasonic meters shall comply with the lead-free provisions of the Safe Drinking Water Act and NSF/ANSI Standards 61 and 372.

1.3 MANUFACTURER

A. Ultrasonic meters shall be manufactured by a company with a minimum of ten (10) years' experience in the manufacture of residential ultrasonic technology and demonstrate market longevity through a minimum of fifty (50) years' experience in the manufacture of cold-water meters serving North American water utilities, including Positive Displacement Nutating Disc, Turbo and Compound type meters.

1.4 METER DESCRIPTION

A. Only meters using ultrasonic transit type technology shall be accepted. The ultrasonic meter shall be fully electronic with encapsulated and sealed circuitry, display and battery.

B. To ensure highest quality of design and to minimize the electronic complexity, the ultrasonic technology must be the intellectual property of the meter manufacturer and shall not utilize third-party ultrasonic technology.

1.5 METER MAIN CASE

A. Ultrasonic meters supplied under this specification shall operate to a pressure of 175 psi and to a temperature of 140° F without leakage or damage. The housing shall be constructed of a lead-free bronze alloy and shall be designed so that at a working pressure of 175 psi, any distortion will not affect the accuracy of the meter.

B. The metering tube shall not be repaired in any manner. The flow direction, meter size, and NSF-61 shall also be cast in the meter housing.

1.6 MEASURING ELEMENT

A. To provide high accuracy and a wide flow range with no mechanical wear, ultrasonic meters shall utilize no moving parts in the flow stream.

B. The measuring section shall be designed for an increased turn-down ratio and lower pressure loss.

C. The ultrasonic metering insert shall be self-contained within the meter flow tube, seated, and

not removable. The transducers extend through the housing and are sealed by O-rings.

D. The ultrasonic technology shall continuously sample at a minimum of 4 Hz to ensure accuracy during changes in flow rate or sharp transitions in flow.

1.7 ELECTRONIC METERING

A. The electronic circuit shall be microprocessor based and include nonvolatile memory capable of storing all programmable and accumulated data. The circuit shall control the ultrasonic transducers. The entire meter circuit and related components shall be fully potted and sealed from water intrusion.

B. The registration shall consist of an electronic local display combined with electronic circuitry to provide a high-resolution absolute encoder output. The electronic register assembly shall transmit a signal through properly shielded transmission wire for AMR/AMI connectivity.

C. High resolution absolute encoder registration shall be capable of sending a 9-digit encoder output to the endpoint as well as extended status messages. Reading resolution sent to the reading software is based on the output of the endpoint technology the meter is connected to.

1.8 REREGISTRATION

A. The size, model, and direction of flow shall be permanently visible on the topside of all meter displays.

B. The register shall be encased in non-corrosive plastic housing, with the circuit board, display, and battery completely potted and epoxy-sealed within to provide moisture resistance to flooded pit or submerged conditions. Ultrasonic meters shall meet and exceed IP 68 rating for submergence. Use of desiccants will not be allowed.

C. The registration enclosure face shall be slightly curved to prevent sediment buildup, and the registration housing shall have a molded-in clip to provide the option of mounting an approved endpoint to the side.

D. The LCD shall display
   1. 9-digit consumption with decimal and comma separator
   2. Icons for units of measure to represent total consumption and flow rate
   3. Icons to represent alarm conditions.
   4. Segmented lines above and below digits to represent standard visual billing units for manual reading purposes
   5. The digital display shall provide a totalized consumption resolution to 0.01 gallons, 0.001 cubic feet, or 0.0001 cubic meters for 5/8 through 1 inch meters and 0.1 gallons for larger than 1 inch meters.
   6. To conserve battery life, the display shall be off while in resting state. The display shall be activated by a change in light level through the infrared (IR) port. Meter shall not require special tools to activate the display. Opening/closing the lid or blocking/ unblocking the IR port will activate the display to cycle through display screens showing different meter information.

E. Ultrasonic meters shall be factory programmed to display the following screens.
   1. Standard Total Consumption
   2. Rate of Flow

3. Pressure programmable to psi or bar (available when meter configuration includes a pressure sensor)
4. Temperature includes water and ambient temperature, and is programmable to display in F or C.
5. Alarm and Operating Mode shall display current active alarms since the last transmission to the endpoint as well as any alarms that have latched during the specified threshold (35 days, for example). Operating Mode shall indicate the operating mode of the meter-Active, Transition, or Storage.
6. Firmware Version.
7. 4-20 mA Set Point (available when meter configuration includes a 4-20 output)
8. Scaled Pulse Set Point (available when meter configuration includes a scaled/unscaled output).

F. The display shall be field-programmable to allow the utility to determine which screens are active, including the optional Low-Resolution Total 6-digit Consumption Screen and meter Program Date. Programming shall be performed via an IR interface tool.

G. The ultrasonic meter shall be capable of displaying and reporting multiple alarm conditions. The alarms shall be displayed on the meter LCD, stored in memory for reporting through the encoder interface.

H. Meter shall maintain an alarm and programming log of alarm conditions and alarm clearings. Data shall be capable of being read through an IR interface and is extractable. The internal data-logging capacity of the meter shall be 160 days of hourly data, first in first out.

1.9 FIELD PROGRAMMABILITY

A. Ultrasonic meters shall come standard as factory-programmed for meter-specific settings and shall include the option for field programming the following settings.
1. Selection of displayed LCD information screens.
2. Visual billing segment lines.
3. Unit of measure for total and flow rate.
4. Output reading resolution sent from the meter.
5. Alarm thresholds and durations.
6. Clearing alarms.
7. Pressure units (if available at meters).
8. Temperature units.
9. Operation mode - Active, Transition, or Storage.
10. Programming shall be performed through the IR port on the registration face using an IR interface tool.
11. Meter serial numbers shall be permanently factory programmed. A 9-digit Year of Manufacturing serial number is preferred.

1.10 METER READING PIT MODULE

A. Pit module shall have compatibility with the following units:
1. Ultrasonic meter.
2. HR E high resolution encoder

B. Connection Point
1. Twist Tight connector for wire connections

C. Communication
1. Communicates with compatible reading devices programmed to read Industry

Standard ASCII protocols.

2. Transmits serial number and meter reading in no more than 2.5 seconds.

1.11 WARRANTY

A. 3 Year manufacturer's warranty

1.12 FIELD VERIFICATION

A. Contractor is responsible for field verifying meter sizes prior to ordering.

END OF SECTION