USDA FOREST SERVICE, R-4
PARADISE GUARD STATION ROOFING PROJECT

SECTION 011250 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Measurement and payment for contract work will be made only for and under those pay items included in the Schedule of Items. All other work, labor, materials, equipment, and incidentals necessary to successfully complete the project will be considered as included in the payment for items shown. This section defines the method of measurements and basis of payment for work items listed in the Schedule of Items.

B. When more than one class, size, type, thickness, etc. is specified in the Schedule of Items for any pay item, suffixes will be added to the item number to differentiate between the pay items.

1.2 DETERMINATION OF QUANTITIES

A. The following measurements and calculations shall be used to determine contract quantities for payment.

1. For individual construction items, longitudinal and lateral measurements for area computations shall be made horizontally or corrected to horizontal measurement unless otherwise specified. Measurements for geotextiles, netting and erosion control blankets shall be along slope lines.
2. For excavation or embankment volumes, the average end area method shall be used to compute volumes. However, if in the judgment of the Contracting Officer (CO), the average end area method is impractical, measurement shall be made by volume in hauling vehicles or by other three-dimensional methods.
3. For Structures, they shall be measured according to neat lines shown on the drawings or as altered by the CO, in writing, to fit field conditions.
4. For items that are measured by the linear foot, such as pipe culverts, fencing, guardrail, piping, utilities, and underdrains, measurements shall be made parallel to the base or foundation upon which the structures are placed.
5. For aggregates weighed for payment, the tonnage shall not be adjusted for moisture content, unless otherwise provided for.
6. For standard manufactured items (such as fence, wire, plates, rolled shapes, pipe conduits) identified by gauge, weight, section dimensions, and so forth, such identifications shall be considered the nominal weights or dimensions. Unless controlled by tolerances in cited specifications, manufacturer's tolerances shall be accepted.

B. Earthwork Tolerances - Adjustments of horizontal or vertical alignment, within the tolerances specified in this contract, or shifts of balance points up to 100 feet shall be made by the contractor as necessary to produce the designed sections and to balance earthwork. Such adjustments shall not be considered as "Changes."

1.3 UNITS OF MEASUREMENT

A. Payment shall be by units defined and determined according to U.S. Standard measure and by the following:

1. Acre: Make longitudinal and transverse measurements for area computations horizontally.
2. 50lb Bag: Measurement will be for the actual number of 50lb bags of standard bentonite grout.
3. 94lb Bag: Measurement will be for the actual number of 94lb bags of standard cement or grout.
4. Cubic Yard (CY): A measurement computed by one of the following methods:

    a. Excavation, Embankment, or Borrow. The measurement computed by the average end area method from measurements made longitudinally along a centerline or reference line.
    b. Material in Place or Stockpile. The measurement computed using the dimensions of the in-place material.
    c. Material in the Delivery Vehicle. The measurement computed using measurements of material in the hauling vehicles at the point of delivery. Vehicles shall be loaded to at least their water level capacity. Leveling of the loads may be required when vehicles arrive at the delivery point.

5. Each (EA): One complete unit, which may consist of one or more parts.
6. Gallons (GAL): The quantity shall be measured by any of the following methods:

    a. Measured volume in container.
    b. Metered volume by approved metering system.
    c. Commercially package volume.

7. Hour (HR): Measurement will be for the actual number of hours (or fraction thereof) ordered by the Contracting Officer and performed by the contractor.
8. Linear Foot (LF): Measurement of work along its length from point-to-point; parallel to the base or foundation. Do not measure overlaps.
9. Lump Sum (LS): One complete unit.
10. Mile: Measured horizontally along the centerline of each roadway, approach, or ramp.
11. Pound (LB): For sacked or packaged material, measurement will be the net weight as packed by the manufacturer.

12. Square Foot (SF): Measured on a plane parallel to the surface being measured.
13. Square Yard (SY): Measured on a plane parallel to the surface being measured.
14. Ton: Measured as a short ton consisting of 2,000 pounds.

1.4 METHOD OF MEASUREMENT

A. One of the following methods of measurement for determining final payment is designated on the Schedule of Items for each pay item:

1. ACTUAL QUANTITIES (AQ) - These quantities are determined from actual measurements of completed work.
2. DESIGNED QUANTITIES (DQ) - These quantities denote the final number or units to be paid for under the terms of the contract. They are based upon the original design data available prior to advertising the project. Original design data include the preliminary survey information, design assumptions, calculations, drawings, and the presentation in the contract. Changes in the number of units shown in the Schedule of Items may be authorized under any of the following conditions:

   a. As a result of changes in the work authorized by the CO.
   b. As a result of the CO determining that errors exist in the original design that cause a pay item quantity to change by 15 percent or more.
   c. As a result of the Contractor submitting to the CO a written request showing evidence of errors in the original design that cause a pay item quantity to change by 15 percent or more. The evidence must be verifiable and consist of calculations, drawings, or other data that show how the designed quantity is believed to be in error.

3. LUMP SUM QUANTITIES (LSQ) - These quantities denote one complete unit of work as required by or described in the contract, including necessary materials, equipment, and labor to complete the job. They shall not be measured.
4. STAKED QUANTITIES (SQ) - These quantities are determined from staked measurements prior to construction.
5. VEHICLE QUANTITIES (VQ) - These quantities are measured or weighed in hauling vehicles.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION 011250
May 2016

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SECTION 011900 - MOBILIZATION

PART 1 - GENERAL

1.1 SUMMARY

A. This item is intended to compensate the Contractor for operations including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for payment of premiums for bonds and insurance for the project; and for any other work and operations which must be performed or costs that must be incurred incident to the initiation of meaningful work at the site and for which payment is not otherwise provided for under the contract.

1.2 MEASUREMENT AND PAYMENT

A. The measurement shall be lump sum for mobilization. Payment shall be as follows:

1. Bond premiums will be reimbursed after receipt of the evidence of payment.
2. 50% of the lump sum, not to exceed 5% of the original contract amount, will be paid following completion of 5% of the original contract amount not including mobilization and bond premiums.
3. Payment of the remaining portion of the lump sum, up to 10% of the original contract amount, will be paid following completion of 10% of the original contract amount not including mobilization and bond premiums.
4. Any portion of the lump sum in excess of 10% of the original contract amount will be paid after final acceptance.
5. Progress payments for mobilization and preparatory work shall be subject to retainage.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 011900
February 2016

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals. See Table 013300-1 for a summary of required submittals.

B. See other specification section within this package for additional requirements on submittal.

1.2 SUBMITTAL PROCEDURES

A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. 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. The Contracting Officer (CO) reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

B. Processing Time: Allow enough time for submittal review, including time for re-submittals, as follows. Time for review shall commence on CO's receipt of submittal.

1. Initial Review: Allow 14 days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. CO will advise Contractor when a submittal being processed must be delayed for coordination.
2. If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Allow 14 days for processing each re-submittal.
4. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.

C. Identification: Place a permanent label or title block on each submittal for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Provide a space on label or beside title block to record Contractor's review and approval markings and action taken by CO.

3. Include the following information on label for processing and recording action taken:

    a. Project name.
    b. Date.
    c. Name and address of Contractor.
    d. Name of manufacturer.
    e. Unique identifier, including revision number.
    f. Number and title of appropriate Specification Section.
    g. Drawing number and detail references, as appropriate.
    h. If more than one item is shown on submittal sheet, identify item.

D. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals.

E. Additional Copies: Unless additional copies are required for final submittal, and unless CO observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.

F. Use for Construction: Use only final submittals with mark indicating action taken by CO in connection with construction.

1.3 MEASUREMENT AND PAYMENT

A. No separate measurement and/or payment will be made for this section. Payment shall be included with work shown in the schedule of items.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS – (Submittals requiring CO approval)

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

1. Number of Copies: Submit three copies of each submittal, unless otherwise indicated. CO will return two copies. Mark up and retain one returned copy as a Project Record Document.

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 copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

    a. Manufacturer's written recommendations.
    b. Manufacturer's product specifications.

c. Manufacturer's installation instructions.
d. Manufacturer's catalog cuts.
e. Wiring diagrams showing factory-installed wiring.
f. Compliance with recognized trade association standards.
g. Compliance with recognized testing agency standards.

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.

1. Preparation: 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. Notation of dimensions established by field measurement.

2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.

D. Contractor's Construction Schedule: The contractor shall submit a Construction Schedule, for approval by CO, in accordance with the contract provisions within 5 day of commencement of work.

E. Samples: Prepare physical units of materials or products, including the following:

1. 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.

2.2 INFORMATIONAL SUBMITTALS – (Submittals NOT requiring CO approval)

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

1. Number of Copies: Submit three copies of each submittal, unless otherwise indicated. CO will not return copies.
2. Certificates and Certifications: Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
3. Test and Inspection Reports: Comply with requirements in Section 014100 "Quality Control."

B. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.

C. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.

D. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment.

E. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.

PART 3 - EXECUTION

3.1 GENERAL

A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to CO.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

C. CO will not review submittals that do not bear Contractor's approval stamp and will return them without action.

D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

E. Substitutions – Whenever materials, products, and equipment are listed by name or brand in the specifications and/or on the drawings, it is used as a measure of quality, utility, or standard. If the Contractor prefers to use any other brand or manufacturer of same quality, appearance and utility to that specified, he shall request substitution as provided below, not less than 30 days before the planned installation of the item. The Contracting Officer will approve or disapprove the request for substitution.

F. Requests for substitutions will only be considered if contractor submits the following:

1. Complete technical data including drawings, complete performance specifications, test data, samples and performance tests of the article proposed for substitution. Submit additional information if required by Contracting Officer. All items in the above information shall be circled, tagged, or marked in some way to indicate all deviations or differences which the proposed item differs from the originally specified item.

2. Similar data as above for item originally specified. All items shall be marked to identify where/how the proposed substitution will differ.
3. A statement by the Contractor that the proposed substitution is in full compliance with the contract documents, applicable codes, and laws.
4. The Contractor shall be responsible for any effect upon related work in the project for any substitution and shall pay any additional costs generated by any substitutions.

3.2 SUBMITTAL SCHEDULE – Submittals shall be made as required by and called for in the drawings and specifications. The following table is a summary of the required submittals for the project - the table is to assist the Contractor and may not be all inclusive – additional submittals may be required by specific specifications:

TABLE 013000-1

Spec. Section	Section Title	Subsection	Required Submittal
013300	Submittal Procedures	2.1D	Construction Schedule
013591	Historic Treatment Procedures	1.3A	Historic Treatment Process
024134	Work Involving Lead Based Paint	1.5A	Certified Lead Renovator Certificate
024134	Work Involving Lead Based Paint	1.5B	Landfill Records
024134	Work Involving Lead Based Paint	1.5C	Health and Safety Plan
073110	Wood Shingles and Preparation		Product Data

END OF SECTION 013300
May 2016

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SECTION 013591 - HISTORIC TREATMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes special procedures for historic treatment on Project including, but not limited to, the following: Storage and protection of existing historic materials.

1. Temporary protection of historic materials during construction.
2. Protection during application of chemicals.
3. Protection during use of heat-generating equipment.
4. Historic treatment procedures.

1.2 DEFINITIONS

A. "Preservation": To apply measures necessary to sustain the existing form, integrity, and materials of a historic property. Work may include preliminary measures to protect and stabilize the property.

B. "Rehabilitation": To make possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural, or architectural values.

C. "Restoration": To accurately depict the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and the reconstruction of missing features from the restoration period.

D. "Reconstruction": To reproduce in the exact form and detail a building, structure, or artifact as it appeared at a specific period in time.

E. "Stabilize": To apply measures designed to reestablish a weather-resistant enclosure and the structural reinforcement of an item or portion of the building while maintaining the essential form as it exists at present.

F. "Protect and Maintain": To remove deteriorating corrosion, reapply protective coatings, and install protective measures such as temporary guards; to provide the least degree of intervention.

G. "Repair": To stabilize, consolidate, or conserve; to retain existing materials and features while employing as little new material as possible. Repair includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials. Within restoration, repair also includes limited replacement in kind, rehabilitation, and reconstruction, with compatible substitute materials for deteriorated or missing parts of features when there are surviving prototypes.

H. "Replace": To duplicate and replace entire features with new material in kind. Replacement includes the following conditions:

1. Duplication: Includes replacing elements damaged beyond repair or missing. Original material is indicated as the pattern for creating new duplicated elements.
2. Replacement with New Materials: Includes replacement with new material when original material is not available as patterns for creating new duplicated elements.
3. Replacement with Substitute Materials: Includes replacement with compatible substitute materials. Substitute materials are not allowed, unless otherwise indicated.

I. "Remove": To detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.

J. "Remove and Reinstall": To detach items from existing construction, repair and clean them for reuse, and reinstall them where indicated.

K. "Existing to Remain" or "Retain": Existing items of construction that are not to be removed and that are not otherwise indicated to be removed and salvaged, or removed and reinstalled.

L. "Material in Kind": Material that matches existing materials, as much as possible, in species, cut, color, grain, and finish.

1.3 SUBMITTALS

A. Historic Treatment Program: Describe in detail materials, methods, and equipment to be used for each phase of work.

B. Alternative Methods and Materials: If alternative methods and materials to those indicated are proposed for any phase of work, provide a written description including evidence of successful use on other, comparable projects, and program of testing to demonstrate effectiveness for use on this Project.

1.4 QUALITY ASSURANCE

A. Historic Treatment Preconstruction Conference: Conduct conference at Project site.

B. When providing historic preservation or rehabilitation services (e.g., repairing siding, doors and windows), the treatment will be reviewed and approved by the Forest Archeologist or Forest Service Regional Architectural Historian who meet the Secretary of the Interior’s Professional Qualification Standards.

1.5 STORAGE AND PROTECTION OF HISTORIC MATERIALS

A. Removed and Reinstalled Historic Materials:

1. Clean and repair historic items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

B. Existing Historic Materials to Remain: Protect construction indicated to remain against damage and soiling during historic treatment. When permitted by the Contracting Officer's Representative items may be removed to a suitable, protected storage location during historic treatment and cleaned and reinstalled in their original locations after historic treatment operations are complete.

C. Storage and Protection: When removed from their existing location, store historic materials within a weathertight enclosure where they are protected from wetting by rain, snow, or ground water, and temperature variations. Secure stored materials to protect from theft.

1. Identify removed items with an inconspicuous mark indicating their original location.

1.6 PROJECT-SITE CONDITIONS

A. Exterior Cleaning and Repairing:

1. Proceed with the work only when forecasted weather conditions are favorable.

a. Wet Weather: Do not attempt repairs during rainy or foggy weather. Do not apply primer, paint, putty, or epoxy when the relative humidity is above 80 percent. Do not remove exterior elements of structures when rain is forecast or in progress.
b. Do not perform exterior wet work when the air temperature is below 40 deg F.
c. Do not begin cleaning, patching, or repairing when there is any likelihood of frost or freezing.
d. Do not begin cleaning when either the air or the surface temperature is below 45 deg F unless approved means are provided for maintaining a 45 deg F temperature of the air and materials during, and for 48 hours subsequent to, cleaning.

2. Perform cleaning and rinsing of the exterior only during daylight hours.

1.7 MEASUREMENT AND PAYMENT

A. No separate measurement and/or payment will be made for this Section. Refer to the Schedule of Items.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION, GENERAL

A. Comply with manufacturer's written instructions for precautions and effects of products and procedures on adjacent building materials, components, and vegetation.

B. Ensure that supervisory personnel are present when work begins and during its progress.

C. Temporary Protection of Historic Materials during Construction:

1. Protect existing materials during installation of temporary protections and construction. Do not deface or remove existing materials.
2. Attachments of temporary protection to existing construction shall be approved by the Contracting Officer’s Representative prior to installation.

D. Protect landscape work adjacent to or within work areas as follows:

1. Provide barriers to protect tree trunks.
2. Bind spreading shrubs.
3. Use coverings that allow plants to breathe and remove coverings at the end of each day. Do not cover plant material with a waterproof membrane for more than 8 hours at a time.
4. Set scaffolding and ladder legs away from plants.

3.2 PROTECTION DURING APPLICATION OF CHEMICALS

A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm or damage resulting from applications of chemical cleaners and paint removers.

B. Cover adjacent surfaces with materials that are proven to resist chemical cleaners selected for Project unless chemicals being used will not damage adjacent surfaces. Use covering materials that contain only waterproof, UV-resistant adhesives. Apply masking agents to comply with manufacturer's written instructions. Do not apply liquid masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.

C. Do not clean surfaces during winds of sufficient force to spread cleaning solutions to unprotected surfaces.

D. Neutralize and collect alkaline and acid wastes and dispose of off Government’s property.

E. Dispose of runoff from chemical operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.

3.3 PROTECTION DURING USE OF HEAT-GENERATING EQUIPMENT

A. Comply with the following procedures while performing work with heat-generating equipment, including welding, cutting, soldering, brazing, paint removal with heat, and other operations where open flames or implements utilizing heat are used:

1. Obtain the Contracting Officer's approval for operations involving use of open-flame or welding equipment.

   a. Notification shall be given for each occurrence and location of work with heat-generating equipment.

2. As far as practical, use heat-generating equipment in shop areas or outside the building.
3. Before work with heat-generating equipment commences, furnish personnel to serve as a fire watch (or watches) for location(s) where work is to be performed.
4. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
5. Remove and keep the area free of combustibles, including, rubbish, paper, waste, etc., within area of operations.

   a. If combustible material cannot be removed, provide fireproof blankets to cover such materials.

6. Where possible, furnish and use baffles of metal or gypsum board to prevent the spraying of sparks or hot slag into surrounding combustible material.
7. Prevent the extension of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.
8. Inspect each location of the day's work not sooner than 30 minutes after completion of operations to detect hidden or smoldering fires and to ensure that proper housekeeping is maintained.

3.4 HISTORIC TREATMENT PROCEDURES

A. The principal aim of preservation work is to halt the process of deterioration and stabilize the item's condition, unless otherwise indicated. Repair is required where specifically indicated. The following procedures shall be followed:

1. Retain as much existing material as possible; repair and consolidate rather than replace.
2. Use additional material or structure to reinforce, strengthen, prop, tie, and support existing material or structure.
3. Use reversible processes wherever possible.
4. Use traditional replacement materials and techniques.
5. Record the work before the procedure with preconstruction photos and during the work with periodic construction photos.

B. Prohibit smoking by personnel performing work on or near historic structures.

C. Obtain Contracting Officer's review and written approval in the form of a Constructive Change Directive or Supplemental Instruction before making changes or additions to construction or removing historic materials.

D. Notify Contracting Officer of visible changes in the integrity of material or components whether due to environmental causes including biological attack, UV degradation, freezing, or thawing; or due to structural defects including cracks, movement, or distortion.

1. Do not proceed with the work in question until directed by Contracting Officer.

E. Where Work requires existing features to be removed, cleaned, and reused, perform these operations without damage to the material itself, to adjacent materials, or to the substrate.

F. Identify new or replacement materials and features with inconspicuous, permanent marks to distinguish them from original materials. Record the legend of identification marks and the locations of these marks on Record Drawings.

G. When cleaning, match samples of existing materials that have been cleaned and identified for acceptable cleaning levels. Avoid over-cleaning to prevent damage to existing materials during cleaning.

END OF SECTION 013951
May 2016

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SECTION 024134- WORK INVOLVING LEAD-BASED PAINT (LBP)

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK:

A. Work under this section includes those engineering controls which are necessary for surface preparation of materials to be resurfaced, or demolition/removal of materials, that are coated with lead-based paint (LBP).

B. This is a notification that the work under this contract will bring the Contractor into contact with LBP materials that may require worker protection.

C. The project is being performed at a dwelling unit subject to the U.S. Environmental Protection Agency's (EPA's) Renovation, Repair and Painting (RRP) Rule (40 CFR 745 Subpart E). All sections of the Rule shall be followed, except that information distribution requirements (40 CFR 745.84) are simplified because there are currently no occupants. As Utah does have primacy for the RRP program, the Firm and Renovator certifications must adhere to all State requirements.

1.2 NOTICE OF HAZARD:

A. Due to the age of the facility, interior and exterior surface coatings are assumed to be lead-based paint. Testing on facility surface coatings will be at the discretion of the Contractor. If the Contractor chooses to complete such testing, the testing will be completed by the Contractor and results supplied to the U.S. Forest Service.

B. Exposure to airborne lead contaminants is a recognized hazard to human health. The Contractor shall assume that all painted surfaces on which work is required are coated with LBP.

1.3 SUBMITTALS:

A. Health and Safety Plan:

1. The Contractor shall provide a Health and Safety Plan for review and acceptance by the Contracting Officer. No work will commence until acceptance of the plan by the Contracting Officer.

2. The Health and Safety Plan will address, but not be limited to, the health-related standards and protective measures proposed to be utilized by the Contractor during work involving exposure to airborne lead contaminants.

3. The Health and Safety Plan will also identify the engineering and work practice controls proposed to be implemented by the Contractor. Such controls will be identified to assure the Government that there will be no

release to the environment of lead contamination for which liability may be imposed on the Government.

B. RRP Records (40 CFR 745.86):

1. The Contractor shall provide a copy of the Firm Certification and the lead Certified Renovator before work commences.

2. Upon completion of the work, the Contractor shall provide a copy of all other records required by 40 CFR 745.86.

1.4 WORKER PROTECTION:

OSHA requirements for worker protection shall be followed in accordance with 29 CFR 1926.62, Lead Exposure in Construction.

1.5 WASTE ANALYSIS AND MANAGEMENT:

A. This project is being conducted at a residence. The wastes generated as part of this project's LBP activities are considered household waste, and such wastes are excluded from RCRA's hazardous waste management and disposal regulations. The Contractor shall be responsible for managing and disposing the LBP waste using best management practices described herein.

B. The Contractor shall segregate dust and small debris which may contain LBP. Such waste shall be double bagged, secured with tape.

C. Paint debris shall not be placed on unprotected ground and shall be shielded adequately to prevent dispersion by wind or rainwater.

D. The Contractor shall place lead-based paint chips, debris, and lead dust in double (4-mil) or single (6-mil) polyethylene bags that are air-tight and puncture-resistant.

E. Larger waste items which cannot be bagged shall be wrapped in plastic and secured with tape.

F. The Contractor will place all disposable cleaning materials, such as sponges, mop heads, filters, disposable clothing, and brooms in double (4-mil) or single (6-mil) plastic bags and seal.

G. The Contractor shall clean surfaces and equipment and bag large debris. The Contractor shall then remove plastic sheeting and tape from covered surfaces. Prior to removing the plastic sheeting, the Contractor shall lightly mist the sheeting in order to keep dust down and fold inward to from tight small bundles to bag for disposal. The Contractor shall place all plastic sheeting in double (4-mil) or single (6-mil) thick plastic bags and seal.

H. Contractor shall dispose of LBP waste in accordance with State solid waste regulations.

I. During the work, the Contractor shall not leave debris in the yard or nearby property, incinerate debris, dump waste by a road or in an unauthorized dumpster, or introduce lead-contaminated water into storm drains or sanitary sewers.

J. Waste shall be removed from the project site for proper disposal within one week of project completion. At no time will waste be allowed to accumulate on-site for a period of more than 30 days.

1.6 MEASUREMENT AND PAYMENT:

A. No separate measurement and/or payment will be made for this Section. This work will be included in a line item 073110.

PART 2 – PRODUCTS

2.1 MATERIALS:

A. Disposal bags and sheeting: Provide 4 mil or 6 mil thick plastic disposal bags and sheeting for wrapping LBP waste.

B. Disposal bins: Provide disposal bins for collection of waste prior to disposal by Contractor. All bins shall be secured when not in use to prevent deposit of unauthorized waste and debris.

C. Trisodium phosphate: Industry standard to mix with water for washing solutions on site.

PART 3 – EXECUTION

3.1 SITE PREPARATION:

A. The Contractor shall prepare the site in accordance with the Health and Safety Plan accepted by the Contracting Officer.

B. The Contractor is responsible for establishing and maintaining control measures sufficient to preclude any adverse effects to workers, Forest Service personnel and dependents, the public, and the environment.

3.2 REPAIR

A. The Contractor shall conduct all repair work in accordance with the Health and Safety Plan accepted by the Contracting Officer.

B. All waste will be handled in accordance with the provisions of this section 02094 and the directions of the Contracting Officer.

3.3 INSPECTION:

Contractor shall cooperate and coordinate all work with the Contracting Officer's inspection requirements. Inspection will center on compliance with the Health and Safety Plan accepted by the Contracting Officer.

3.4 CLEARANCE:

A. Contractor shall notify Contracting Officer of readiness for final inspection.

B. The visual inspection will occur no earlier than 24 hours after completion of the entire construction work.

C. Any visible debris will result in the Contractor recleaning the area at no additional cost to the Government.

3.5 DAILY CLEANUP

A. Daily cleanup shall be in accordance with the Health and Safety Plan accepted by the Contracting Officer. Any environmental cleanup caused by Contractor's failure to comply with the provisions of law, of this contract, or the accepted Health and Safety Plan shall be at Contractor's sole expense.

B. Do not allow any paint debris to enter industrial waste, storm drain or sanitary sewer lines.

3.6 HANDLING AND DISPOSAL OF NON-HAZARDOUS WASTE (AS DETERMINED BY TESTING)

A. The Contractor shall comply with all Federal, State and local regulations concerning proper disposal of non-hazardous, solid waste.

B. The Contractor shall place lead-based paint chips, debris, and lead dust in double (4-mil) or single (6-mil) polyethylene bags that are air-tight and puncture-resistant. Pieces of wood or other types of substrates that do not fit into plastic bags will be wrapped and labeled "DANGER, LEAD DUST".

C. The Contractor will place all disposable cleaning materials, such as sponges, mop heads, filters, disposable clothing, and brooms in double (4-mil) or single (6-mil) plastic bags and seal.

D. The Contractor shall clean surfaces and equipment and bag large debris. The Contractor shall then remove plastic sheeting and tape from covered surfaces. Prior to removing the plastic sheeting, the Contractor shall lightly mist the sheeting in order to keep dust down and fold inward to from tight small bundles to bag for disposal. The Contractor shall place all plastic sheeting in double (4-mil) or single (6-mil) thick plastic bags and seal.

E. The contractor shall bag and seal vacuum bags and filters in double (4-mil) or single (6-mil) thick plastic bags.

F. The Contractor shall place all contaminated clothing or clothing covers used during lead-based paint disturbing activities and during cleanup operations in plastic bags for disposal prior to leaving equipment room.

G. The Contractor shall place solvent residues and residues from strippers in drums made out of materials that cannot be dissolved or corroded by chemicals. Solvents will be tested by the contractor to determine if they are hazardous.

H. Solvents, caustic and acid wastes must be segregated and not stored in the same containers.

I. The Contractor shall contain and properly dispose of all liquid waste, including lead-dust contaminated wash water.

J. The Contractor shall HEPA vacuum the exterior of all liquid waste containers prior to removing the waste containers from the work area and shall wet wipe the containers to ensure that there is no residual contamination. Containers should then be moved out of the work area into the designated storage area.

K. The Contractor shall carefully place the containers into the truck or dumpster used for disposal.

L. The Contractor shall ensure that all waste is transported in covered vehicles to an appropriately permitted landfill which accepts waste containing lead.

M. If the Contractor subcontracts the removing of the lead-based paint waste, he shall insure that the company removing the waste material adequately covers all loads so as to assure that no dust or debris is released.

3.7 HANDLING AND DISPOSAL OF HAZARDOUS WASTE (AS DETERMINED BY TESTING)

A. The Contractor will be required to comply with the hazardous waste disposal regulations of RCRA Subtitle C, Managing Hazardous Waste.

B. If more than 220 pounds of hazardous waste will be generated from project activities during any calendar month, the Contractor shall apply for an EPA identification number from the appropriate Regional EPA office. If an EPA identification number application is required, it will be submitted on behalf of the US Forest Service; the US Forest Service will be listed as the generator and the generator's address will be the project site address. The U.S. Forest Service will assist the Contractor in contacting the appropriate EPA office to secure the identification.

C. Waste Containers: The Contractor will comply with EPA and DOT regulations for containers. The Contractor shall contact the state and local authorities to determine their criteria for containers. The more stringent regulation shall apply.

D. Waste Transportation: If the Contractor is not a certified hazardous waste transporter, a contract shall be entered into with a certified transporter to move the waste. The Contractor shall require the certified hazardous waste transport to follow RCRA regulation.

3.8 FINAL SITE CLEANUP

A. Clean all surfaces in the project area until no visible paint dust, debris, residue or chips remains.

B. Remove all dust and debris without dispersal and seal in heavy plastic bags.

C. Remove protective plastic sheeting and mist before folding it dirty side inward.

3.9 INSPECTION

A. Contractor shall notify Contracting Officer of readiness for final inspection.

B. Contractor's Certified Renovator, accompanied by the Contracting officer, shall perform a visual inspection of the entire project area to determine if any visible dust and debris are present in or beyond the boundaries of the project area.

C. Any visible debris will result in the Contractor recleaning the area at no additional cost to the Government.

END OF SECTION 024134
MARCH 2016

USDA FOREST SERVICE, R-4
PARADISE GUARD STATION ROOFING PROJECT

SECTION 073110 - WOOD SHINGLES AND PREPARATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Installation of new roof sheathing, ice and water shield, felt, “cedar breather”, drip edges and fire-retardant cedar shingles.

1.2 DEFINITIONS

A. Roofing Terminology: Refer to ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definitions of terms related to roofing work in this Section.

1.3 SUBMITTALS

A. Product Data and Samples: All products to be used.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain wood shingles through one source from a single manufacturer.

1.5 MEASUREMENT AND PAYMENT

A. Payment shall be lump sum for removal of existing wood shingles, installation of plywood roof sheathing, ice and water shield, felt, cedar breather, drip edges, fire retardant treated cedar shingles. Work also includes dealing with lead based paint on existing shingles.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials on pallets or other raised surfaces.

1. Handle, store, and place roofing materials in a manner to avoid significant or permanent damage to roof deck or structural supporting members.

1.7 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing to be performed according to manufacturer's written instructions and warranty requirements.

1.8 SUBMITTALS

A. Product Data for shingles, ice and water shield, felt, and cedar breather.

PART 2 - PRODUCTS

2.1 ROOF SHEATHING

A. Plywood Roof Sheathing: Exterior, Structural I Exterior Exposure 1 sheathing.

1. Span Rating: Not less than 32/16.
2. Nominal Thickness: Not less than 15/32 inch

B. Oriented-Strand-Board Roof Sheathing: Exposure 1, Structural I sheathing.

1. Span Rating: Not less than 32/16.
2. Nominal Thickness: Not less than 15/32 inch

2.2 UNDERLAYMENT MATERIALS

A. Felts: ASTM D 226, Type I (No. 30), asphalt-saturated organic felts. Applied over all plywood roof areas. Install over the top of Self Adhering sheet materials,

B. Self-Adhering Sheet Underlayment, Polyethylene Faced: ASTM D 1970, minimum of 40 mils thick; slip-resisting, polyethylene-film-reinforced top surface laminated to SBS-modified asphalt adhesive, with release-paper backing; cold applied.

1. Products:

a. Grace, W. R. & Co.; Grace Ice and Water Shield.
b. Henry Company; Perma-Seal PE.
c. Owens Corning; WeatherLock M.
d. Protecto Wrap Company; Rainproof TM.

C. Cedar Breather: Benjamin Obdyke or Government approved equal. Available from “Roofer’s Supply” 3359 S 500 W, Salt Lake City, UT, (801)266-1311. To be applied over felt and ice and water shield. Three dimension matrix of # 6 nylon. Install without lapping product.

2.3 ROOF SHINGLES:

A. The contractor will evaluate existing materials and match the texture, thickness and exposure of the existing shingles.

1. Cedar Roof Shingles: Smooth-sawn fire retardant western red cedar shingles.

a. Grading Standards: UBC Standard 15-4.
b. Grade: No. 1 and starter courses of No.1 (if required.)
c. Size: 5/2, 16” perfect. 5” exposure. Site verify.

d. Fire Retardant Class: Class B

2.4 ACCESSORIES

A. Drip Edges: Fabricate from the following material:

1. Prepainted, Metallic-Coated Steel: 0.0217 inch thick. Color as chosen by Contracting Officer's Representative.

B. Roofing Nails: ASTM F 1667; stainless-steel or hot-dip galvanized steel wire nails, sharp-pointed, and of sufficient length to penetrate a minimum of 3/4 inch into skip sheathing.

1. Use box-type nails for wood shingles.
2. Where nails are in contact with metal flashing, use nails made from same metal as flashing.
3. **Do not staple shingles.**

B. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

1. For roof and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
2. Paint: Shall be in accordance with Specification 099113 Exterior Painting

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

1. Examine roof skip sheathing to verify that condition is suitable for installation of new sheathing and shingles. If decay or instability are present, consult the Contracting Officer's Representative.
2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and completely anchored; and that provision has been made for flashings and penetrations through roofing.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

A. Securely attach to substrate by fastening as indicated, complying with the following:
1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."

B. General: Comply with applicable recommendations in APA Form No. E30S, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.

C. Fastening Methods: Fasten panels as indicated below:

1. Wall and Roof Sheathing:
2. Nail or staple to wood framing.

a. 6” OC at edges, 12” OC in the field..
b. Space panels 1/8 inch apart at edges and ends.

3.3 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free, on roof sheathing. Comply with temperature restrictions of underlayment manufacturer for installation; use primer rather than nails for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Extend underlayment into gutter trough. Roll laps with roller. Cover underlayment within 14 days.

1. Install ice and water shield to 2’ beyond all interior walls on eaves and gable ends.

B Felt Underlayment: Install felt underlayment over ice and water shield on roof sheathing. Use adhesive for temporary anchorage. Apply at locations indicated on Drawings, in shingle fashion to shed water, with lapped joints of not less than 2 inches. Apply over the entire roof.

C. Cedar Breather: Apply as directed by manufacturer over felt, over the entire roof.

3.4 ROOF SHINGLE INSTALLATION

A. Install wood shingle roofing according to manufacturer's written instructions, recommendations in CSSB's "Design and Application Manual for New Roof Construction," and recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual."

B. Install metal drip edge at all eave and rake edges.

C. Install wood shingles to provide 5” exposure for 16” shingle to obtain triple coverage for historic roof.

1. The joints in any one course shall be spread not less than 1-1/2 inch from the joints in adjacent courses, offset joints between shingles in succeeding courses.
2. Shingles shall not exceed 8 inches in width. Space shingles a minimum of 1/4 inch and a maximum of 3/8 inch apart. Limit alignment of vertical joints in every third course to not exceed 10 percent of joints.
3. Fasten each shingle with 2 nails spaced 3/4 to 1 inch from edge of shingle and 1-1/2 to 2 inches above butt line of subsequent course if possible. Drive fasteners flush with top surface of shingles without crushing wood.
4. The starter course of shingles shall be triple at the eaves with the butts of the starter course projecting 1-1/2 inch beyond the first roof board.
5. Maintain weather exposure at 5 inch configuration.

END OF SECTION 073110

MARCH 2016