

**Request for Proposals**  
**Tunnel Picnic Area Toilet Replacement**  
**Arapaho & Roosevelt National Forests & Pawnee National Grassland,**  
**Canyon Lakes Ranger District**  
**Colorado**

**Background and Statement of Work:** National Forest Foundation, in partnership with the USFS Arapaho & Roosevelt National Forests and Pawnee National Grassland (ARP), seeks contractor services to install a new vault toilet on the Canyon Lakes Ranger District of the ARP. This project consists of the removal of an existing fire damaged stick-built toilet, then transporting and installing one prefabricated concrete toilet and associated site work at the Tunnel Picnic Site. The location of the toilet will be in the same general location as the current one. Toilet orientation will be identified in the field and approved before installation. The backside of the current toilet burned in the Cameron Peak Fire, has structural damage, and needs to be replaced. The toilet construction will include, but is not limited to, quality control, clearing and grubbing, removal and disposal of the existing toilet building, removal and disposal of existing vault, structure excavation, bedding and compaction, backfilling, site grading, and providing and installing a prefabricated concrete toilet. The existing vault hole shall be utilized and modified to accommodate the new toilet, as necessary.

**Information Requested**

If interested in submitting a bid for this project, please provide a proposal for the above statement of work by providing:

- technical approach
- work experience
- cost
- capacity for this project
- experience in similar projects

Specific requirements are detailed below.

**I. PROJECT OVERVIEW AND REQUIREMENTS**

## General Specifications

- (a) Description of Work – This Request for Proposals is for services related to vault toilet replacement including the following:

### Proposed Toilet - Tunnel Picnic Area

1. Demolish and remove the existing toilet building debris and vault:
  - a) Building Size: Approximate measurements are 12'x10'
  - b) Existing building and vault are to be removed and disposed of offsite in a State approved landfill.
  - c) Grades, elevation, and orientation of new toilet shall match existing toilet.
  - d) No tree removal is expected at this site.
2. Purchase, transport and install the following precast concrete building or approved equal:
  - a) CXT Double Rocky Mountain w/o chase with the following specifics:
    - i. Two tone concrete color combination: Roof – Rich Earth color, Ribbed Metal. Walls – Golden Beige Color, Horizontal Lap Siding texture.
    - ii. Signage: two men/women with Accessible Sign (same sign on both sides) all genders can use both sides
    - iii. Wall Vent Locations: Right and Left Room–Back Wall.
    - iv. Door Opener: Double Pull / Slide Bolt
    - v. Deadbolt Lock: Government Furnished deadbolt lock. Contractor to Install.
    - vi. Lockable Toilet Paper Dispensers
    - vii. Roof: Simulated Rib Steel
    - viii. Building Exterior Wall: Simulated Horizontal Lap Board and Bat
    - ix. Other Options: Include touch-up paint kit.
  - b) Site work:
    - i. Grade site so the disturbed areas are sloped away from the new toilet at a max 2% grade.
    - ii. Ensure the graded area is smooth.
    - iii. Provide an accessible, compacted gravel path to the toilet and toilet approach apron.
  - c) The location, orientation, and the Finished Floor Elevation of the new toilet will be staked in field by the Forest Service.
    - i. Following placement and installation, contractor shall install barrier boulders and re-seed the area as specified by the NFF, in partnership with the USFS

The Contractor shall identify what they can supply in terms of materials, labor, equipment, supplies, supervision, quality control, and incidentals required to complete the work described. The Contractor shall perform all work in a safe and conscientious manner.

- (b) Project Location – Larimer County, Colorado - Canyon Lakes Ranger District

- (c) Work Schedule – Anticipated period of performance is October 2024 through November 2024. If work cannot commence in the fall, the alternative period of performance is May

2025 through July 5 depending on site conditions. Normal fire restrictions may apply to activities associated with this project.

### **Other Project Requirements and Specifications**

- (a) Utilities – In many locations there will be no or limited sanitation, water, electrical or housing services available. The Contractor shall make its own arrangements for temporary facilities if needed.
- (b) Specifications – Project work shall be accomplished in accordance with the following:
- Appendix 1 Statement of Work
  - Appendix 2- Specifications for Tunnel Picnic Area Toilet
  - Appendix 3 Schedule of Items
  - Appendix 4 Federal Flowdown Provisions

### **Insurance Requirements**

Upon selection of the winning bid, the Contractor agrees that it has and shall maintain the following insurance coverage indicated below. The effective date of all coverage shall precede the start of any work.

- a. State minimum workers' compensation insurance coverage for its employees, if any.
- b. Broad form general liability, property damage, and automotive liability insurance in the minimum amount of \$1,000,000 for bodily injury, death, or damage to property of any person and \$2,000,000 for bodily injury, death, or damage to property of more than one person. The Contractor shall name NFF an Additional Named Insured and provide NFF with a certificate of insurance evidencing such coverages, prior to the initiation of the Scope of Services.
- c. If the Scope of Services includes professional services as identified herein, Contractor shall also provide professional errors and omissions liability insurance. Professional services for purposes of this section include, but are not limited to performing architecture, engineering, landscape architecture, land surveying or planning, preparation and signing or stamping of drawings, maps, surveys or construction specifications, or design and development of computer software, programs or websites by the Contractor or by subcontractors on behalf of the Contractor, for which professional liability insurance would typically be required. The minimum coverage limits required are \$1,000,000 for each claim and \$1,000,000 annual aggregate.

### **Prohibited Telecommunications Services and Equipment**

If required, the Contractor is responsible for compliance with the prohibition on certain telecommunications and video surveillance services or equipment identified in 2 CFR 200.216.

### **Payment/Performance Security**

Contractor shall post cash, a letter of credit, bond, or other financial security that is easily convertible into cash in a form acceptable to the NFF, in its sole determination, to assure completion of the work required under any subsequent agreement and payment of all amounts lawfully due to all persons supplying or furnishing to the Contractor or Contractor's subcontractors with labor, laborers, materials, rental machinery, tools or equipment used or to perform the work. Contractor may incorporate required associated costs into mobilization costs or other approved expenses.

- a. Work that is classified as construction in accordance with the Miller Act or Little Miller Act or if required per conditions of the funding source, payment and performance bonding will be required in the full amount of any Agreement. For the purposes of this Request for Proposal, construction is defined as "any contract greater than \$100,000 for the construction, alteration, or repair of any public building or public work where the federal government is the owner", or
- b. If Contractor is not self-performing at least 85% of the total contract value or if the cost of materials is in excess of the larger of \$100,000 or 50% of the contract total, payment and performance bonding will be required in the full amount of the agreement, or
- c. If the value of the agreement is in excess of \$250,000, Contractor will be required to post financial security in a form acceptable to the NFF in the amount of 5% of the total agreement value up to \$250,000 in total financial security.

### **Federal Exclusion Verification**

The selected Contractor will be required to affirm that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

### **Federal Flowdown Provisions**

Flowdown Requirements: Any Agreement associated with this RFP may be subject to flowdown requirements under associated federal or state funding agreements, which are included and attached as Appendix 4.

### **Competitive Range**

The expected competitive range for bids to this solicitation is \$100,000.00 to \$200,000.00

## II. REQUIRED COMPONENTS

### Technical Proposal

Please provide a detailed technical approach to the work.

### Contractor Qualifications

- (a) Past Experience – Please provide a brief explanation of previous work experience with land management agencies.
- (b) References – Please provide three professional references that can speak to past performance.

### Pricing Schedule

Contractor shall price work according to the schedule below. Prevailing wages are required per conditions of funding sources.

|     | Task/Item  | Method of Measurement | Quantity         | Unit Cost | Extended Cost |
|-----|--|-----------------------|------------------|-----------|---------------|
| (a) | Mobilization   | Lump Sum              | 1                |           |               |
| (b) | Demolish and remove existing toilet building and vault   | Lump Sum<br>Quantity  | 1                |           |               |
| (c) | Supply and installation of precast concrete toilet including final site work   | Lump Sum<br>Quantity  | 1                |           |               |
| (d) | ADA Pathway – Includes all materials, equipment and labor to prepare the site, supply, and install ADA accessible aggregate pathways for toilet. Includes seeding disturbed areas. | Linear Feet           | 50               |           |               |
| (e) | Barrier Boulder Installation   | Lump Sum              | 1                |           |               |
| (f) | Seeding of all Disturbed Areas (GNFF/USFS furnished seed)  | Sq. Ft.               | 1000             |           |               |
|     |  |                       | <b>Total Bid</b> |           |               |

The Pricing Schedule is a general listing of Scope of Work items and may not be fully inclusive of the specified Scope of Work. It is the Contractor's responsibility to separately enumerate any and all Scope of Work items that are excluded from their Proposal. All work items, including base bids, will be awarded at the discretion of the NFF, as budgetary obligations allow.

### III. SUBMISSION, EVALUATION, AND CONTACTS

#### Contractor Selection Process

This is a request for proposals only and bids furnished are not offers from the National Forest Foundation. This request does not commit the National Forest Foundation to pay any costs incurred in the preparation or submission of the proposal or to contract for supplies or services.

The NFF will use the Evaluation Factors below to review each submitted bid. Based on the outcomes of that selection process, the NFF will notify successful and unsuccessful bidders by September 17, 2024 and will prepare a separate contract document.

#### Evaluation Factors and Relative Importance

The following criteria will be used in the evaluation of submitted proposals, ordered from highest weighting (level 3) to lowest weighting (level 1).

##### Level 3 Criteria

- Price / cost
- Equipment and contractor capability
- Timing of when contractor can begin and/or finish the project
- Past performance, references, and USFS feedback

##### Level 2 Criteria

- Technical proposal / proposed approach to project
- Overall strategic benefits to meeting NFF goals and grant needs, requirements, and timelines

##### Level 1 Criteria

- Benefits to the local community
- Relationship to local community

#### Point of Contact

Please submit any questions about the project in writing to the Point of Contact.

Shayna Jones, Rocky Mountain Program Manager  
National Forest Foundation  
sjones@nationalforest.org

Responses will be shared with known interested parties by email or otherwise posted at <https://www.nationalforests.org/rfp>.

#### Bid Submission

Submit bids via email to sjones@nationalforest.org by September 9, 2024.

#### Equal Opportunity Provider

In accordance with Federal law and U.S. Department of Agriculture policy, the National Forest Foundation is prohibited from discriminating on the basis of race, color, national origin, sex, age, religion, political beliefs, or disability.

## **APPENDIX 1**

# **National Forest Foundation (NFF) Statement of Work**

Tunnel Picnic Area Toilet Replacement  
Arapaho & Roosevelt National Forests & Pawnee National Grassland

**SCOPE OF CONTRACT:** This project consists of transporting and installing one prefabricated concrete toilet to replace and remove the existing burnt toilet and the associated site work at Tunnel Picnic Site. The location of the toilet will be in the same location the current one is located. The backside of the current toilet burned in the Cameron Peak Fire, has structural damage, and needs to be replaced. The toilet construction will include, but is not limited to, quality control, clearing and grubbing, removal, and disposal of the existing toilet building, removal and disposal of existing vault, structure excavation, bedding and compaction, backfilling, site grading, and providing and installing a prefabricated concrete toilet. The existing vault hole shall be utilized and modified to accommodate the new toilet, as necessary.

**PROJECT OBJECTIVES:** The primary objective is to deliver and install quality facilities that are attractive, functional, safe, and economical to operate and maintain, and which comply with applicable codes, standards and principles of sustainability and accessibility standards at the requested site.

### **Proposed Toilet**

#### **Tunnel Picnic Area**

1. Demolish and remove the existing toilet building debris and vault:
  - a. Building Size: Approximate measurements are 12'x10'
  - b. Existing building and vault are to be removed and disposed of offsite in a State approved landfill.
  - c. Grades, elevation, and orientation of new toilet shall match existing toilet.
  - d. No tree removal is expected at this site.
  
2. Purchase, transport and install the following precast concrete building or approved equal:
  - a. **CXT Double Rocky Mountain w/o chase with the following specifics:**
    - i. Two tone concrete color combination: Roof – Rich Earth color, Ribbed Metal. Walls – Golden Beige Color, Horizontal Lap Siding texture.
    - ii. Signage: two men/women with Accessible Sign (same sign on both sides) all genders can use both sides
    - iii. Wall Vent Locations: Right & Left Room–Back Wall.
    - iv. Door Opener: Double Pull / Slide Bolt
    - v. Deadbolt Lock: Government Furnished deadbolt lock. Contractor to Install
    - vi. Lockable Toilet Paper Dispensers
    - vii. Roof: Simulated Rib Steel
    - viii. Building Exterior Wall: Simulated Horizontal Lap Board and Bat
    - ix. Other Options: Include touch-up paint kit.
  - b. Site work:
    - i. Grade site so that the disturbed areas are sloped away from the new toilet at a max 2% grade.



- ii. Ensure that the graded area is smooth.
  - iii. Provide an accessible, compacted gravel path to the toilet and toilet approach apron.
- 3. National Forest Foundation, in partnership with USFS, is using the CSI Specifications for Construction of Facilities. The CSI Specifications are included in this project package.



*Tunnel Picnic Area toilet damage*

Tunnel Picnic Area Site Map A

# Tunnel Picnic Area Site Map A



Tunnel Picnic Area Site Map B



Tunnel Picnic Area Site Map C



## **LOCATION:**

**Tunnel Picnic Site** – This site is located at the Tunnel Picnic Site is approximately 1 hour and 20 minutes northwest of Fort Collins on the south side of Highway 14 on the Canyon Lakes Ranger District of the Arapaho and Roosevelt National Forest. From Fort Collins, CO head North on US-287 N. In approximately 6 miles, turn left or West on CO-14W. In approximately 57 miles you will turn left into the entrance for the picnic site.

**SITE VISIT AND SITE LOCATION INFORMATION:** No site visit will be conducted as part of the procurement. Any questions about the location and/or logistics can be asked during the solicitation period.

**CONTRACT TIME/PERIOD OF PERFORMANCE:** The preferred anticipated period of performance is October 2024 through November 2024. If work cannot commence in the fall, the alternate period of performance is May 2025 through July 5, 2025. Depending on conditions, normal fire restrictions may apply to activities associated with this project.

## **GENERAL SITE CONDITIONS AND WEATHER**

The elevation of the Tunnel Picnic Site is approximately 8000 feet above sea level. The construction site experiences heavy snowfall and extremely cold temperatures, with snow on the ground typically from December through April.

In-depth soil surveys have not been performed; however, rocks at the ground surface are evident throughout the area. The Contractor should expect to encounter such rock during excavation and grubbing operations. Blasting of rocks will not be permitted without special permission.

In-depth water table surveys have not been performed; however, if water is encountered during excavation, the Contractor shall perform adequate dewatering to keep the excavation free from water and dispose of the water without damage to property.

## **USE OF PREMISES**

General: Contractor shall have full use of premises for construction operations, including use of project site, during construction period. Contractor's use of premises is limited only by the NFF and/or USFS's right to perform work or to retain other contractors on portions of Project.

Contractor shall, always, conduct his or her operations to ensure the least inconvenience to the public and employees. Road closures will be permitted, when required, upon written approval of the National Forest Foundation Project Manager.

Confine storage of materials to areas as approved by the NFF Project Manager.

Contractor shall provide adequate signing and barricades and take necessary safety measures to protect the public during all construction operations. Contractor shall minimize disturbance of all undisturbed areas.

Preservation of Natural Features: Confines all operations to work limits of the project. Prevent damage to natural surroundings. Restore damaged areas, repairing or replacing damaged trees and plants, at no additional expense to the National Forest Foundation.

1. Provide temporary barriers to protect existing trees and plants and root zones.
2. Do not remove, injure, or destroy trees or other plants without prior approval. Consult with National Forest Foundation 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.

Existing Utilities: There are no overhead or underground powerlines near the work sites. Therefore, the utilities on location should not pose any constraints, but notify the NFF Project manager of proposed locations and times for excavation.

1. Contractor shall be responsible for locating and preventing damage to known utilities. If damage occurs, repair utility at no additional expense to the Government.
2. Interruption of Existing Utility Service: Notify NFF Project Manager, 48 hours in advance of any interruption of existing utilities.

## **WASHING OF EQUIPMENT**

Pollutants such as fuels, lubricants, bitumen, raw sewage, and other harmful materials shall not be discharged on the ground; into or nearby rivers, streams, or impoundments; or into natural or man-made channels. Wash water or waste from concrete or aggregate operations shall not be allowed to enter live streams prior to treatment by filtration, settling, or other means sufficient to reduce the sediment content to not more than that of the stream into which it is discharged.

The Contractor shall wash all equipment except for hauling vehicles prior to entering National Forest Land. Remove all soil which could contain noxious weed seed. Remove grease and oil from drive mechanisms which would be discharged into the stream when equipment is operating. Prior to transporting

equipment to the site, assure that the equipment's hydraulic, lubrication and fuel systems are free from leaks.

### **ARCHAEOLOGICAL OR HISTORIC SITES**

If a previously unidentified archaeological or historic site(s) is encountered, the Contractor shall discontinue work in the general area of the site(s) and notify the Contracting Officer immediately.

### **CAMPING**

With approval by the NFF Project Manager and USFS, National Forest Service lands may be used by the Contractor to have one fully contained recreation vehicle which may remain at this site for security. Approval is not guaranteed.

### **PERMITS**

Special permits for electrical work or any other permits required by County, State, or Federal laws or regulations shall be obtained by the Contractor.

### **MEALS AND LODGING**

Meals and lodging are commercially available in the City of Walden (approximately 40 miles West of the construction sites) or in Fort Collins. Meals or lodging will not be available at Forest Service facilities.

### **GOVERNMENT FURNISHED PROPERTY/MATERIAL: None**

**TECHNICAL QUALIFICATIONS:** The contractor shall have extensive experience in manufacturing and installing prefabricated concrete toilet buildings.

**REPORT REQUIREMENTS:** None.

### **ATTACHED DOCUMENTS:**

Specifications  
Schedule of Items  
Federal Flowdown



## APPENDIX 2

### Summary of NFF Toilet Specifications

1. Section 010150 – General Requirements
2. Section 016440 – National Forest Foundation (NFF)/USFS Furnished Materials
3. Section 024116 – Structure Demolition
4. Section 024119 – Selective Demolition
5. Section 133128 – Prefabricated Building Modules
6. Section 311100 – Clearing and Grubbing
7. Section 312250 – Earthwork
8. Section 312500 – Temporary Erosion Control
9. Section 321123 – Aggregate
10. Section 329219 – Revegetation

SECTION 010150  
GENERAL REQUIREMENTS

PART 1 – SUMMARY OF WORK

1.1 DESCRIPTION

- A. The intent of this section is to provide a general outline of the work required under this contract and identify special project conditions and/or requirements. It is not intended to provide detailed specifications for materials, labor, and workmanship. These are covered in other sections of these specifications.
- B. The Tunnel Picnic area is located in the Poudre Canyon along Colorado Highway 14 on the Canyon Lakes Ranger District. The existing toilet that supports the picnic area was burned in the Cameron Peak fire and has received structural damage that warrants replacement of the entire structure. This project consists of transporting and installing one prefabricated concrete toilet to replace and remove the existing burnt toilet and the associated site work at Tunnel Picnic Site.

1.2 LOCATION

- A. This site is located at the Tunnel Picnic Site is approximately 1 hour and 20 minutes northwest of Fort Collins on the south side of Highway 14 on the Canyon Lakes Ranger District of the Arapaho and Roosevelt National Forest. From Fort Collins, CO head North on US-287 N. In approximately 6 miles, turn left or West on CO-14W. In approximately 57 miles you will turn left into the entrance for the picnic site.

1.3 SPECIFICATIONS

- A. The specifications establish the construction procedures and materials to be employed throughout.

1.4 GENERAL SITE CONDITIONS AND WEATHER

- A. The elevation of the Tunnel Picnic Site is approximately 8000 feet above sea level. The construction sites experience heavy snowfall and extremely cold temperatures, with snow on the ground typically from December through April.

1.5 SITE ACCESS

- A. Directions to Tunnel Picnic Site from Fort Collins, CO: Head North on US-287 N. In approximately 6 miles, turn left or West on CO-14W. In approximately 57 miles you will turn left into the entrance for the picnic site.

## 1.6 USE OF FACILITIES AND UTILITIES

- A. Water is not available on site.
- B. Cell phone coverage is limited and there is no land-line phone at any of the sites.
- C. Vault toilets will not be available for contractor use in the area during the project.
- D. Electrical service is not available in these areas.

## 1.7 STAGING AREA

- A. An area at or near the project sites will be made available for use as a staging area. Staging areas shall be approved by the National Forest Foundation Project Manager (NFF), in partnership with the USFS Representative, prior to use. Camping at the site is available upon approval from the contracting officer. Security and clean-up of this area shall be the responsibility of the Contractor.

## 1.8 WORK RESTRICTIONS

- A. Nonsmoking Buildings: Smoking is not permitted within any buildings or within 25 feet (8 m) of entrances.

## 1.9 SCHEDULE

- A. The Contractor shall submit, at the pre-work conference, a construction schedule showing the proposed scheduling of all project's work items.
- B. Work will not be allowed during the weekends or on holidays.

## 1.10 PROTECTION OF PUBLIC

- A. Install and maintain suitable barriers to ensure the protection of the public, employees, and facilities.
  - 1. Fence, barricade, or otherwise block off the immediate work area to prevent unauthorized entry to the work area.

2. Erect and maintain barricades and warning signs in accordance with ANSID6.1.
3. Material may be new or used but shall be suitable for intended purpose.
4. Fences and barriers shall be structurally adequate and neat in appearance.

#### 1.11 CONTRACTOR'S RESPONSIBILITIES

- A. Confine storage of materials to areas as approved by the NFF Project Manager.
- B. Provide adequate signing and barricades and take necessary safety measures to protect the public during all construction operations. Minimize disturbance of all undisturbed areas.
- C. All construction signage shall be in accordance with Manual on Uniform Traffic Control Devices (MUTCD).
- D. The Contractor at the Contractor's expense shall repair Existing Forest Service roads and parking areas disturbed by construction activities. Repair includes any work needed to return the roads and parking areas to their existing condition before construction began and shall include replacing road aggregate if necessary.
- E. All areas where the existing grass vegetation is removed or damaged, or destroyed due to construction activities, shall be recontoured and seeded. Contractor shall apply all seed in accordance with specifications. NFF shall furnish all seed via its partnership with the USFS ARP.
- F. The Contractor shall be responsible for all damage that results from the Contractor's action during completion of the project work. Any damage that occurs due to action of the Contractor shall be repaired at the Contractor's expense.
- G. Protect trees and vegetation within project area from damage. Areas within the drip-zone or root zone, shall not be disturbed unless authorized by the NFF.

#### 1.12 UTILITY LOCATIONS

- A. No utilities are known to exist at the site however, the Contractor shall be responsible for hiring a locating service to locate all utility lines including but not limited to electrical, water, and phone. This includes the Forest Service utilities and lines.

#### 1.13 CONSTRUCTION WASTE DISPOSAL FACILITIES

- A. Provide waste-collection containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste. All waste that can be considered a bear or wildlife attractant shall be stored or disposed of in commercially labeled bear-proof containers.

1.14 SITE CLEANUP AND DISPOSAL AREA

- A. The Contractor shall cleanup construction debris at the completion of each day's work. Disposal of construction debris shall be at an established Sanitary Landfill, with all permits and related costs of disposal being the responsibility of the Contractor. The Contractor and the CO shall mutually agree to the frequency of disposal. The Contractor shall not use existing on-site trash receptacles for disposal or interim storage of construction debris.

Burning of construction debris shall not be allowed on lands administered by the Forest Service.

#### 1.15 FIELD VERIFICATION

- A. Contractor shall field verify all new and existing dimensions affecting the work of this contract before ordering products.

#### 1.16 PERMITS

- A. Obtain permits required by County, State, or Federal laws or regulations. This will include but not limited to Road and Bridge permits for hauling the toilet structures to the sites.

### PART 2 – DEFINITION OF ITEMS AND PAYMENT

#### 2.1 DESCRIPTION

- A. This section explains what is and what is not included in each pay item; the limits or cut- off points where one item ends, and another begins; and basis of payment for work items listed in the Schedule of Items (SOI).
- B. Payment: For each individual item listed here and in the Schedule of Items, payment shall be full compensation for all work related to the particular item in accordance with these specifications.

#### 2.2 SCHEDULE OF ITEMS

- A. Schedule of Items: The project Schedule of Items includes several sections to organize the work into Base Items and Optional Items.
  - 1. Provide pricing for all items listed in the Schedule of Items.
  - 2. Contract award will be made for all Base Items.
  - 3. Optional Items will be awarded based on available project funding.
- B. Determination of Quantities:
  - 1. The contractor shall perform, or cause to be performed, all measurement of quantities of materials incorporated into the work processes that are to be measured under the provisions of the contract.
  - 2. Quantity Measurements:
    - a. The Contractor shall make all measurements for computation of quantities for all work items except those specified for payment by Actual Quantify (AQ), Designed Quantity (DQ) or Lump Sum Quantity (LSQ).
    - b. The contractor shall compute the quantities for periodic progress payments; the Contracting Officer shall compute the quantities for the final payment based on measurements taken by the Contractor.

- c. All Contractor measurements are subject to verification.

- d. The Contractor shall submit all field notes, calculation sheets, and other data used to determine quantities.
- e. The Contractor shall certify in writing as to the accuracy of the measurements and computations submitted.

C. Units of Measurement:

1. Payment shall be by units defined and determined according to U.S. Standard measure and by the following:
  - a. Actual Quantities (AQ): Estimated quantities which are determined from actual measurements of completed work.
  - b. Linear Feet (LF): Linear feet measured horizontally.
  - c. 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.
  - d. Each: One complete unit, which may consist of one or more parts.

D. Base Items (BI):

1. Base Item No. 1 – Tunnel Picnic Area Toilet Mobilization
  - a. This base item consists of all preparatory work and operations necessary for the movement of personnel, equipment, supplies, and incidentals to the project site, and for all other work and operations that must be performed or that cause costs to be incurred prior to beginning work on the various items on the project site (this includes bonding). This base item applies to work included in the base items only. Profit and overhead should be included in other line items.
  - b. Payment shall be made at the contract lump-sum price.
2. Base Item No 2. - Tunnel Picnic Area Toilet Site Demolition
  - a. This base item consists of demolition work associated with the project site as it is described in the specifications. Work includes demolition of the existing toilet structure and existing site amenities. Disposal to an approved landfill is included in this pay item.
  - b. Payment shall be made at the contract lump-sum price.
3. Base Item No 3 – Tunnel Picnic Area Toilet Procurement and Installation
  - a. This base item consists of all materials, personnel, equipment, and supplies to procure and install a prefabricated CXT toilet or an approved equal. This includes site preparation, excavation, bedding, backfill, final site grading, and revegetation of disturbed areas.
  - b. This base item consists of all materials, personnel, equipment, and supplies to construct all toilet access trails. This includes site preparation, excavation, aggregate placement, final site grading, and revegetation of disturbed areas.
  - c. Payment shall be made at the contract lump sum price.



4. Base Item No 4 – Tunnel Picnic Area ADA Pathway Installation
  - a. This base item consists of construction work associated with constructing an ADA compliant pathway to the toilet structure. This includes site preparation, placing compactable aggregate, and leveling.
  - b. Payment shall be made per linear feet of trail installed.
  
5. Base Item No 5 – Tunnel Picnic Area Seed Dispersal
  - a. This base item consists of all work associated with spreading government furnished seed on all disturbed areas as it is described in the specifications.
  - b. Payment shall be made per square feet of area.

### PART 3 – ACCIDENT PREVENTION

#### 3.1 DESCRIPTION

- A. This section consists of establishing an effective accident prevention plan and providing a safe environment for personnel and visitors.

#### 3.2 SUBMITTALS

- A. Accident Prevention Plan: Before on-site work begins, submit a company approved accident prevention plan. This plan will be posted in the contract file. Design the plan to address Federal, State, and Local Occupational Safety and Health requirements that apply to this project. No progress payments will be processed until the plan is received. At a minimum, the plan shall include:
  1. Name, position title and contact information of company executive responsible for approving the Accident Prevention Plan.
  2. Name and contact information of supervisor responsible to carry out the plan.
  3. Outline of each phase of the work, the hazards associated with each major phase, and the methods proposed to ensure property protection and safety of the public, government personnel, and the Contractor's employees. Identify the work included under each phase by reference to specification section or division numbers.
  4. Contingency plans for emergency situations such as medical, fire, hazard material spills and other contract assessed hazard prevention and abatement requirement needs that apply to this project.
  
- B. Certificates: Provide certificates from a mechanic that all mechanical equipment has been inspected and meets OSHA requirements.
  
- C. Submit a copy of test reports, as required by OSHA, for personnel working with hazardous materials.
  
- D. Submit a brief report of safety meetings and of inspections.

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

### 3.3 QUALITY ASSURANCE

- A. Clauses entitled "Accident Prevention" and "Permits and Responsibilities" of the General Provisions: 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: Ensure employees are physically qualified to perform assigned duties in a safe manner.

### 3.4 ACCIDENT REPORTING

- A. Reportable Accidents: A reportable accident is defined as death, occupational disease, traumatic injury to employees or the public, property damage by accident in excess of \$100, and fires. Within 7 calendar days of a reportable accident, fill out and forward to the CO a CA-1 form, which may be obtained from NFF Project Manager.
- B. All Other Accidents: Report all other accidents to the NFF Project Manager as soon as possible and assist the CO and other officials as required in the investigation of the accident.

### 3.5 FIRST AID FACILITIES

- A. Provide adequate facilities for the number of employees and the type of construction at the site.

### 3.6 PERSONNEL PROTECTIVE EQUIPMENT

- A. Meet requirements of NIOSH and MSHA, where applicable, as well as ANSI.
- B. Inspect personal protective equipment daily and maintain in a serviceable condition. Clean, sanitize, and repair, as appropriate, personal items before issuing them to another individual.
- C. Inspect and maintain other protective equipment and devices before use and on a periodic basis to ensure safe operation.

### 3.7 EMERGENCY INSTRUCTIONS

- A. Post telephone numbers and reporting instructions for ambulance, physician, hospital, fire department, and police in conspicuous locations at the work site.

### 3.8 SAFETY MEETINGS

- A. As a minimum, conduct weekly 15-minute "toolbox" safety meetings. These meetings shall be conducted by a foreman and attended by all construction personnel at the worksite.

### 3.9 HARD HATS AND PROTECTIVE EQUIPMENT AREAS

- A. It is the Contractor's responsibility to require all those working on or visiting the site to wear hard hats and other necessary protective equipment at all times.

### 3.10 TRAINING

- A. First Aid: Provide adequate training 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. Hazardous materials are defined as explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful substances that could cause death or injury.

## PART 4 – SUBMITTAL PROCEDURES

### 4.1 DESCRIPTION

- A. This section includes administrative and procedural requirements for submittals.
- B. Submittals may be rejected for not complying with requirements.

### 4.2 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires NFF Project Manager's responsive action.
- B. Informational Submittals: Written information that does not require NFF approval.

### 4.3 PROCEDURES

- A. Submittal Register: Contractor shall provide submittal register which identifies all required submittals listed in specifications for review by NFF prior to submission of any other submittals.
- B. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on NFF receipt of submittal.
  - 1. Initial Review: Allow 10 working days for initial review of each submittal.
    - a. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. NFF 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 10 working 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 approximately 2 by 3 inches on label or beside title block to record Contractor's review and approval markings and action taken by NFF.
  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. Other necessary identification.
- 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 NFF 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 NFF in connection with construction.
- G. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to NFF.
- H. 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.
- I. NFF will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- J. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

4.4 ACTION SUBMITTALS

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

1. Number of Copies: Submit four copies of each submittal, unless otherwise indicated. NFF 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.

#### 4.5 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. NFF will not return copies.
  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.
- B. Contractor's Construction Schedule: Provide a construction schedule that incorporates the full contract period.
- C. Cost Breakdown: Following award provide a cost breakdown schedule listing main types of work with associated costs for each bid item in CSI format.

### PART 5 – EXECUTION REQUIREMENTS

#### 5.1 DESCRIPTION

- A. This section consists of general procedural requirements governing execution of the Work including, but not limited to, the following:
1. General installation of products.

2. Progress cleaning.



3. Protection of installed construction.
4. Correction of the Work.

## 5.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly.
- B. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to NFF. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

## 5.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated. Make vertical work plumb and make horizontal work level.
- B. Comply with manufacturer's written instructions and recommendations for installing products.
- C. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

## 5.4 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Dispose of materials lawfully.
  1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
  3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- 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.
- D. 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.

## 5.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

5.6 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.

## PART 6 – CLOSEOUT PROCEDURES

### 6.1 DESCRIPTION

- A. This section consists of administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Inspection procedures.
  - 2. Project Record Documents.
  - 3. Final cleaning.

### 6.2 SUBSTANTIAL COMPLETION

- A. Definition of Substantial Completion: The Date certified by NFF when construction is sufficiently complete, in accordance with the Contract Documents, so the Government can occupy or utilize the Work or designated portion thereof for the use for which it is intended, as expressed in the Contract Documents.
- B. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Advise NFF of pending insurance changeover requirements.
  - 3. Submit specific warranties, workmanship bonds, final certifications, and similar documents.
  - 4. Obtain and submit releases permitting Government unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, and similar final record information.
  - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Government. Label with manufacturer's name and model number where applicable.
  - 7. Complete startup testing of systems.
  - 8. Submit changeover information related to Government occupancy, use, operation, and maintenance.
  - 9. Complete final cleaning requirements, including touchup painting.
  - 10. Touch up and otherwise repair and restore marred exposed finishes to

eliminate visual defects.

- C. Inspection: Submit a written request for inspection for Substantial Completion at least 24 hours before inspection is needed. On receipt of request, NFF will either proceed with inspection or notify Contractor of unfulfilled requirements. NFF will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by NFF, which must be completed or corrected before certificate will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  - 2. Results of completed inspection will form the basis of requirements for Final Completion.

### 6.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
  - 1. Submit certified copy of NFF's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by NFF. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  - 2. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  - 3. Instruct Government personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance at least 24 hours before inspection is needed. On receipt of request, NFF will either proceed with inspection or notify Contractor of unfulfilled requirements. NFF will prepare a final payment after inspection or will notify Contractor of construction that must be completed or corrected before payment will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

### 6.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

### 6.5 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for NFF's reference during normal working hours.

## 6.6 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. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
- C. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
  - 1. 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.
  - 2. Remove tools, construction equipment, machinery, and surplus material from Project site.
  - 3. 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.
- D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on USFS property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 010150

SECTION 016440  
GOVERNMENT FURNISHED MATERIALS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section applies to materials that shall be provided by the NFF and installed by the Contractor. Contractor shall be responsible for labor, equipment, and incidentals necessary to acquire these materials and for placement in accordance with the plans and specifications.

1.2 INSPECTION

- A. The Contractor shall notify the NFF at least 15 calendar days prior to picking up or returning NFF furnished materials.
- B. The Contractor and NFF shall jointly inspect all materials during the loading operation at the storage area, and at the project site.

1.3 LIABILITY

- A. The Contractor's liability for NFF-furnished material shall start at the time they accept the materials at the storage area and shall terminate upon completion and final acceptance of the work.
  - 1. It shall be implied that the Contractor has accepted NFF-furnished materials prior to the materials being loaded and ready for transportation from the storage area to the worksite.
  - 2. The Contractor shall provide all labor, equipment, and incidentals necessary to load, unload, and transport NFF furnished materials between the worksite and the specified storage area.

1.4 REPLACEMENT AND/OR SUPPLEMENTAL MATERIALS

- A. Any defective materials discovered prior to the Contractor's acceptance of the materials will be replaced by the NFF.
- B. If the quantity of NFF furnished material accepted by the Contractor is insufficient to complete the specified work, supplemental materials complying with these specifications shall be provided by the NFF at no expense to the Contractor.
- C. The NFF shall not replace any materials that, in the opinion of the Contracting Officer, are damaged or lost due to the Contractor's negligence after the Contractor accepts the materials. Such materials shall be replaced at the Contractor's expense.



## 1.5 SURPLUS MATERIAL

- A. After completion and final acceptance of the work, surplus NFF furnished materials shall be returned to the specified storage area in the same mechanical and physical condition as originally accepted.
- B. Damaged surplus materials shall be replaced at the Contractor's expense.
- C. The Contractor's liability for surplus materials shall terminate upon unloading at the storage area.

## PART 2 – PRODUCTS

### 2.1 NFF FURNISHED MATERIALS

- A. NFF furnished materials shall be limited to:
  - 1. Forest Service locks and keys for toilets.
  - 2. Seed for revegetation.

### 2.2 NFF FURNISHED MATERIAL LOCATION

- A. NFF furnished materials will be delivered to the site by the Forest Service.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Installation and testing of NFF furnished materials shall comply with the applicable contract specifications covering work requiring the use of such materials.

END OF SECTION

SECTION 024116  
STRUCTURE  
DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. This item shall consist of removal and disposal of all materials and components of the existing vault toilet structure in accordance with the specifications.

PART 2 – PRODUCTS- NOT APPLICABLE

PART 3 – EXECUTION

3.1 REMOVAL

- A. The Contractor shall contact the NFF to receive approval before any demolition begins. The vaults must be entirely pumped out before removal and disposal begins.
- A. The Contractor may use any means they may elect to remove the structure as long as they provide for the safety of the public and preservation of existing vegetation.
- B. All above grade concrete shall be broken into sufficiently small pieces to enable handling and disposal off site.

3.2 DISPOSAL

- A. Unless specifically directed in writing, no attempt will be made to salvage for reuse any of the materials comprising the existing structure.
- B. The existing vault and other associated materials shall be removed from the site and disposed of off National Forest lands at an approved landfill.
- C. The vault toilet waste shall be pumped by a commercial hauler with equipment for pumping and hauling human waste. Hauler shall have the necessary equipment to add water to the tank and break up solids in order to pump waste. Add water, and 'rinse' the tank. This water shall be pumped out also.

- D. Disposal of vault waste shall be at any state approved sewage treatment facility. The Contractor shall be responsible to obtain permission to dump the waste in the treatment facilities and pay any fees required.

### 3.3 FINISHING AND CLEANUP

- A. The disturbed area shall be finish graded and revegetated to present a natural appearance and cleaned up by removing all debris and materials left from the removal of the toilet structures.

END OF SECTION

SECTION 133128  
PREFABRICATED BUILDING MODULES

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes the installation of a pre-engineered concrete vault toilet structure. The work includes moving, excavation, placement of aggregate base, backfill, and final site grading.

1.2 LOCATIONS

- A. Install the toilet structures at the location marked in the field and as approved by the NFF.

1.3 CODE AND COMPLIANCE STANDARDS

- A. All work and materials shall comply with the latest industry building codes and regulations, including but not limited to the following:
  - 1. Uniform Building Code
  - 2. National Electrical Code
  - 3. Uniform Plumbing Code

1.4 DELIVERY AND STORAGE

- A. Pre-engineered units, accessories and other manufactured items shall be delivered to the site. Materials shall be handled, transported, and erected to prevent damage and/or deformation of materials.
- B. Contractor supplied material stored at the project site shall be protected from weather.
- C. Delivery to the site shall be made on normal highway trucks and trailers. Ensure that delivery conditions and access at the site is not hazardous or unsuitable for truck and equipment due to weather, physical constraints, roadway width or grade to provide a safe and quality installation.

1.5 BUILDING DESCRIPTIONS

- A. All building orders shall be approved by NFF, prior to submitting to prefabricated building manufacturer.
- B. Base Item - Tunnel Picnic Area Toilet Site shall be:
  - 1. Double Unit Vault Toilet: Double Rocky Mountain w/o Chase as produced by CXT Incorporated, Precast Concrete Products, Spokane,

WA (800) 696-5766, or approved equal.

- a. **CXT Double Rocky Mountain W/O Chase with the following specifics:**
  - i. Two tone concrete color combination: Roof – Rich Earth color. Ribbed Metal. Walls – Golden Beige color. Horizontal Lap Siding texture.
  - ii. Signage: two men/women with Accessible Sign (same sign on both sides) all genders can use both sides
  - iii. Wall Vent Locations: Right & Left Room–Back Wall.
  - iv. Door Opener: Double Pull / Slide Bolt
  - v. Deadbolt Lock: Government Furnished deadbolt lock. Contractor to Install
  - vi. Lockable Toilet Paper Dispensers
  - vii. Roof: Simulated Rib Steel
  - viii. Building Exterior Wall: Simulated Horizontal Lap Board and Bat
  - ix. Other Options: Include touch-up paint kit.

## PART 2 – PRODUCTS

### 2.1 EXCAVATION, BEDDING MATERIALS AND BACKFILL

- A. See toilet structure manufacturers specifications and installation requirements.
- B. See Section 312250 and 312317 for excavation, bedding and backfill

materials. PART 3 - EXECUTION

### 3.1 GENERAL

- A. Obtain manufacturer's supplied materials necessary to complete construction of the prefabricated toilet structure as listed in the manufacturer's supplied installation manuals and specifications.
- B. Excavate hole for building to accommodate the fill for the base large enough to be workable and allow the floor of the building to fit on the fill for the base when placed.
- C. Compact the bottom of the area for the building after it has been excavated to a minimum bearing pressure of 1,500 psf.

- D. Construct building aggregate base in accordance with manufacturer's recommendations.
- E. Complete adjacent site work. Grade site to obtain positive drainage away from structure.
- F. Thoroughly clean all surfaces, interior and exterior, making facilities ready for use.

END OF SECTION

SECTION 311100  
CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 SUMMARY

- A. This work consists of clearing, grubbing, trimming, removing, and disposing of, or treatment of, live and dead timber, construction slash, and debris within the areas designated on the ground. Areas may include but are not limited to recreation sites, roads, trails, parking areas, picnic sites, and other areas to be graded. This work shall include the removal and disposal of designated trees outside the clearing limits. Also included is the protection from injury or defacement of vegetation and other objects designated to remain and treatment or removal of damaged trees.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 CLEARING

- A. Clearing Limits:
  - 1. Paths, Roads, Recreation Sites, and Parking Areas: as outlined on the ground.
  - 2. Areas to be graded: 2 feet past the intersection of the existing ground with the cut slope and to the toe of fill as applicable.
- B. Remove all trees, down timber, snags, underbrush, rubbish, and other objectionable materials within the clearing limits.
- C. Existing trees, within the clearing limits, shall be left standing and uninjured unless otherwise approved by NFF.
- D. Protect existing trees and other vegetation indicated to remain in place, against unnecessary cutting, breaking, or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line.
- E. Provide temporary guards to protect trees and vegetation to be left standing.
- F. Where any trees are damaged, or where limbs are required to be trimmed or removed because of operations under this contract, or because of interference with new construction, any cutting or removal of limbs or branches shall be done only with prior approval of NFF.



- G. Solvents, oils, and other material which may be harmful to plant life shall be disposed of in containers and removed from the site. At the completion of the work, any contaminated soil shall be removed and replaced with topsoil.
- H. Trees shall be felled into the area being cleared when ground conditions, tree lean, and shape of clearing permit. Controlled felling shall be used that will ensure the direction of fall to prevent damage to property, structures, trees designated to remain, or traffic. Trees shall be limbed to allow the bole or main trunk of the tree to lay flat on the ground. Stumps shall be cut flush with the surrounding grade up to 6" in height.
- I. Felling, cutting, and trimming methods shall not cause bark damage to standing timber. Trees with major roots exposed by construction that are rendered unstable shall be felled and disposed of in accordance with the above paragraphs.

### 3.2 GRUBBING

- A. All debris, stumps, roots, and other protruding vegetative material within the clearing limits, not designated to remain, shall be grubbed, removed, and disposed of, except the following:
  - 1. Trails: On all trails, stumps within the trail bed shall be removed. Stumps located between the edge of the trail bed and the edge of the railway that cannot be cut flush with the finished slope, or are not tightly rooted, shall be removed.
  - 2. Roads and Parking Areas: Undisturbed stumps outside the roadway or in embankment areas, provided they can be cut flush above the original ground (measured from the uphill side) nor closer than 2 feet to the finished subgrade or 1 foot to any slope surface and they do not interfere with the placement or compaction of embankments.
  - 3. All roots over 3 inches in diameter within the roadbed area shall be grubbed to a minimum depth of 6 inches below subgrade. Roots over 1 inch in diameter protruding from the excavated slope shall be cut flush with the excavated slope surface.
  - 4. Branches on remaining trees or shrubs shall be trimmed to give a clear height of 14 feet above the roadbed. Tree limbs shall be trimmed as near flush with the trunk as practicable.
  - 5. When grubbing for structures, buildings, and areas to be landscape graded; grub and remove all stumps inside the clearing limits, Grub and remove all roots to a depth of at least 6 inches below the natural ground when fill is required for site grading. When excavation is required for site grading, grub and remove all roots to a depth of at least 6 inches below finished grade.
  - 6. Stumps, roots, and material developed in grubbing operations shall be scattered.

END OF SECTION

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SECTION 312250  
EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
1. Preparing subgrades for slabs-on-grade, walks, pavements, and plantings.
  2. Excavating and backfilling for buildings and structures.
  3. Handling of waste materials.

1.2 DEFINITIONS

- A. Backfill: Soil materials used to fill an excavation.
1. Initial Backfill: Backfill placed below and beside the toilet structure and vault.
  2. Subsequent Backfill: Backfill placed over initial backfill to fill the excavated vault hole.
- B. Aggregate Base Course: Layer placed between the subgrade and concrete slab, concrete walk, or structure.
- C. Borrow: Satisfactory soil from on-site for fill or backfill.
- D. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
1. Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by NFF. Additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
  2. Bulk Excavation: Excavations more than 10 feet (3m) in width and pits more than 30 feet (9m) in either length or width.
  3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction of the NFF. Unauthorized excavation, as well as remedial work directed by NFF, shall be without additional compensation.
  4. Unclassified Excavation: Excavation to subgrade elevation and to lines and dimensions indicated regardless of the character of surface and subsurface conditions encountered, including rock, soil materials, and obstructions.
  5. Rock Excavation: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material exceeding 2.5 cubic yards that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting when permitted.

- E. Fill: Soil materials used to raise existing grades.
- F. Topsoil: Soil materials that have been removed from areas with proposed construction and stockpiled on-site for later use in finishing soil surfaces. Soil materials consist of the top 6 to 8 inches from previously undisturbed areas and is considered "Topsoil" for the purposes of this project.
- G. Structures: Buildings, slabs, tanks, vaults, or other man-made stationary features constructed above or below the ground surface.
- H. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, aggregate base, drainage fill, initial or subsequent backfill materials.
- I. Utilities include on-site underground pipes, conduits, ducts, and cables, as well as underground services within building.

### 1.3 SUBMITTALS

- A. Contractor shall submit to the NFF for approval source of aggregate base and backfill materials and certified sieve analysis.

### 1.4 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Government or others unless permitted in writing by NFF and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify NFF not less than two days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without NFF's written permission.

## PART 2 - PRODUCTS

### 2.1 BACKFILL MATERIALS, GENERAL

- A. Excavated material from on-site shall be processed and used for backfill if the Contractor can show compliance with the material specified herein to the satisfaction of the NFF.

- B. Backfill shall be sourced from onsite excavation activities, onsite materials sources as approved by the NFF, or hauled in from a commercial site if there is not enough found on site.
  - C. Satisfactory Soils: ASTM D 2487 soil classification groups GW, GP, GM, SW, SP, and SM, or a combination of these group symbols; free of rock or gravel larger than 6 inches in any dimension, debris, waste frozen materials, vegetation, and other deleterious matter.
  - D. Unsatisfactory Soils: ASTM D 2487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH, and PT, or a combination of these group symbols.
    - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
  - E. Backfill and Fill: Satisfactory soil materials.
- 2.2 INITIAL BACKFILL
- A. Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve. Excavated material may be used if approved by the NFF.
- 2.3 SUBSEQUENT BACKFILL
- A. Subsequent backfill shall be excavated material or borrow material, free from rock larger than 6 inches in the greatest dimension, frozen material, clods, debris, or organic material. Borrow material used as subsequent backfill shall have a gradation and character suitable to achieve the compaction specified in this Section. Excavated material may be used if approved by the NFF.
- 2.4 AGGREGATE BASE
- A. As specified in Section 321123.
- 2.5 WARNING TAPE AND TRACER WIRE - NOT APPLICABLE
- 2.6 SHEETING AND SHORING
- A. Timber or metal members used by the Contractor shall provide adequate support of the soils during his work. The Contractor shall be responsible for selection of proper material to maintain adequate support.

## PART 3 - EXECUTION

### 3.1 LOCATION, ALIGNMENT AND GRADE

- A. The location of all structures shall be staked out by the NFF in partnership with the USFS. Grades shall be established by the Contractor.

### 3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Protect subgrades and foundation soils against freezing temperatures or frost. Provide protective insulating materials, as necessary.
- C. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

### 3.3 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
  - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
  - 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

### 3.4 EXPLOSIVES

- A. Do not use explosives.

### 3.5 EXCAVATION, GENERAL

- A. Maintain the excavations to guard against and prevent injury to employees and the public. Provide adequate shoring and bracing as required by OSHA and other local governing regulations.
- B. Excavations left open at the end of the working day shall be fenced to protect the public.

### 3.6 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within tolerance of plus or minus 1- inch. Extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
  - 1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
  - 2. Excavation for Underground Tanks and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended for bearing surface.
  
- 3.7 EXCAVATION FOR PATHS, PAVEMENTS AND CONCRETE WALKS – NOT APPLICABLE
  
- 3.8 EXCAVATION FOR UTILITY TRENCHES – NOT APPLICABLE
  
- 3.9 APPROVAL OF SUBGRADE
  - A. Notify NFF when excavations have reached required subgrade.
  - B. If NFF determines that unsatisfactory soil is present, continue excavation and replace with initial backfill material as directed.
  - C. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by NFF.
  
- 3.10 UNAUTHORIZED EXCAVATION- NOT APPLICABLE
  
- 3.11 STORAGE OF SOIL MATERIALS
  - A. Stockpile borrow materials, topsoil, and satisfactory excavated soil materials. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
    - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.



### 3.12 STRUCTURE BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
  - 1. Construction below finish grade including, where applicable, damp proofing, waterproofing, and perimeter insulation.
  - 2. Surveying locations of underground utilities for record documents.
  - 3. Inspecting and testing underground utilities.
  - 4. Removing concrete formwork.
  - 5. Removing trash and debris.
  - 6. Removing temporary shoring, bracing, and sheeting.
- B. Place and compact subsequent backfill adjacent to structures in such a manner as to prevent wedging action or eccentric lodging upon or against the structures.
- C. Do not place backfill against any concrete footings or structure without prior permission of the NFF and in no case less than 7 days after placement of concrete.
- D. Heavy equipment shall not be operated within four feet of any structure.
- E. Provide for anticipated settlement and shrinkage of the backfill and for the finished grades required.

### 3.13 UTILITY TRENCH BACKFILL - NOT APPLICABLE

### 3.14 FILL

- A. Preparation: Remove vegetation, topsoil, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface before placing fills.

### 3.15 MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content.
  - 1. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
  - 2. Remove and replace, or scarify and air-dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

### 3.16 COMPACTION OF BACKFILLS AND FILLS

- A. Compaction of backfills and fills shall be in accordance with the toilet structures manufacture's specifications.
- B. The minimum degree of compaction required shall be a percent of the maximum laboratory density obtained by the standard proctor test AASHTO T-99 or ASTM D698. The in-place field density shall be determined by AASHTO T238 or ASTM D2922. The minimum compaction requirements are:
  - 1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12-inches of existing subgrade and each layer of backfill or fill material at 95 percent.
  - 2. Under walkways, scarify and recompact top 6-inches below subgrade and compact each layer of backfill or fill material at 92 percent.
  - 3. Under unpaved areas, scarify and recompact top 6-inches below subgrade and compact each layer of backfill or fill material at 85 percent.
  - 4. In utility trenches, including each layer of backfill up to 1 ft. above the pipe, compact each layer of backfill material at 90 percent. Backfill material shall at a minimum reach the same compaction as the adjacent soil as determined by the CO.

### 3.17 GRADING

- A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
  - 1. Provide a smooth transition between adjacent existing grades and new grades.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
  - 1. Lawn or Unpaved Areas: Plus, or minus 1-inch.
  - 2. Walks: Plus, or minus 1-inch.
  - 3. Pavements: Plus, or minus ½-inch.
- C. Finishing Slopes: Finished slopes shall conform reasonably to the lines staked on the ground. The finished slope shall be left in a roughened condition to facilitate the establishment of vegetative growth. The finish associated with template and stringline, or hand-raking methods will not be allowed. Finished slopes shall not exceed 3:1 slope unless authorized by the NFF.

### 3.18 AGGREGATE BASE COURSE

- A. As specified in Section 321123.

3.19 FIELD QUALITY CONTROL

- A. Excessive settlement or other evidence of improper backfill shall be corrected by reopening the trench or excavation to the depth required for proper compaction and then shall be refilled and satisfactorily compacted.
- B. The correction and retesting of unacceptable work shall be paid by the Contractor at no expense to the Government.
- C. The NFF may reduce the testing frequency contingent upon the uniformity of material at the project site, compactive effort put forward by the Contractor, and previous test results for similar materials and compactive effort.

### 3.20 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specify tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
  - 1. Scarify or remove and replace soil material to depth as directed by NFF, reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
  - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

### 3.21 SURFACE FINISH

- A. In revegetation areas, surface finish shall have on-site previously removed, and stock- piled topsoil gently placed at a uniform depth across entire area and hand raked into approximately the top two to three inches of the finished grade soils to lightly blend or amend the two soil types.

### 3.22 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal on-site: Satisfactory soil and waste material may be placed on-site at locations determined by the NFF. This material shall be placed, contoured, and finish graded as to appear natural. This material shall be placed prior to the application of topsoil and final grading. This material shall be used as back fill when possible.

- B. Disposal off-site: Remove surplus unsatisfactory soil and waste material, including trash, and debris, and legally dispose of it off USFS's property.

END OF SECTION

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SECTION 312500  
TEMPORARY EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. Work Included. Furnish, install, maintain, and remove temporary erosion and sedimentation controls specified herein, or as required to complete the work.
- B. Related Sections include the following:
  - 1. Division 31 Section "Earthwork" for soil materials, site excavating, filling, and grading.
- B. Permits and Fees: Obtain and pay for all permits and fees required for the work of this section, including erosion and sediment control and water quality permits required by the authority having jurisdiction and the local Department of Public Health and Environment, Water Quality Control Division.
- C. Erosion Control: Provide erosion control on all exposed surfaces created by construction activities.

1.2 SUBMITTALS

- A. Submit an erosion control plan to the NFF no later than at the pre- construction meeting. The erosion control plan shall show the quantity and location of each erosion control measure on the project site plan.
- B. Submit documentation to the NFF from the manufacturer of each product based on laboratory and field tests that demonstrates the product meets the contract requirements.
  - 1. Erosion control wattles, logs, and rolls, if used (must be wood based products, no agricultural straw)
  - 2. Silt Fence
  - 3. Mulch, if used

1.3 QUALITY ASSURANCE:

- A. Regulatory Requirements: Comply with applicable local, State and Federal ordinances, rules and regulations concerning sedimentation control and storm water runoff.

- B. In case of conflict between the above codes, regulations, references and standards and these specifications, the more stringent requirements shall govern.
- C. Preconstruction Conference: Conduct conference at Project site as directed by Contracting Officer prior to start of construction.

#### 1.4 PROJECT/SITE CONDITIONS

- A. Existing Conditions: Verify all existing conditions affecting the work of this section prior to submitting bids or proposals. Additional compensation will not be allowed for revisions or modification of work resulting from failure to verify existing conditions.

#### 1.5 WARRANTY

- A. Temporary Erosion and Sediment Control measures shall be maintained until permanent measures are in place. All damaged, disturbed or devices filled with sediment, which may occur within the specified project warranty period, shall be corrected at no cost to the Government. Any devices damaged by erosion or sediment shall be restored to their original condition by the Contractor, at no cost to the Government.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Erosion and Sedimentation Control Materials: Provide one or more of the following materials, as applicable for site conditions:
  - 1. Sandbags.
  - 2. Silt fences.
  - 3. Biodegradable wood excelsior, or coconut-fiber mat enclosed in a photodegradable plastic mesh.
  - 4. Biodegradable twisted jute or spun-coir mesh, 0.92 lb./sy,
  - 5. minimum, with 50 to 65 percent open area.
  - 6. Drainage geotextile.
  - 7. Other materials proposed for use on-site.

### PART 3 - EXECUTION



### 3.1 PREPARATION

#### A. General:

1. Determine the existing ground elevations, drainage patterns, and changes to such patterns during excavation in order to satisfactorily plan and provide materials for adequate erosion and sediment control devices.

### 3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and rights-of-way according to requirements of authorities having jurisdiction.
- B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls, restore, and stabilize areas disturbed during removal.

### 3.3 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions under which the work of this section will be performed. Do not proceed with the work until unsatisfactory conditions have been corrected. Commencement of work implies acceptance of all areas and conditions.

### 3.4 INSTALLATION

- A. Erosion and Sedimentation Control Devices. Erosion and sedimentation control measures to be taken during construction include, but are not necessarily limited to the following:
  1. Apply soil stabilization within 14 days to all disturbed areas that are to be dormant for a period longer than 30 calendar days after reaching grade. Stabilize soil with mulch anchored per criteria of authorities having jurisdiction.
  2. Soils that will be stockpiled for more than 30 days must be mulched and seeded within 14 days after stockpile construction.

3. Prevent sediment from leaving the project site by installing a silt fence or other BMPs as indicated on the plans. Protect existing storm inlets adjacent to the site by an approved gravel filter.
4. Provide temporary erosion controls consisting of berms at the top of slopes and interceptor ditches at ends of berms and at those locations which will eliminate or minimize erosion during construction, along with temporary seeding, temporary diversion, chutes, and down pipes and lining of water courses.
5. Temporary sedimentation controls shall consist of silt dams, traps, silt fence, barriers, and appurtenances at the top of spoil and borrow area slopes and where runoff water exits the site.
6. Maintain the available silt holding capacity of silt dams, fence traps and barriers until no longer needed. The sediment capacity of sediment retainage areas shall be at a minimum, the capacity shown on the plans in conformance with Urban Drainage Criteria Manual, Volume 3. Prior to removal, obtain concurrence of the Contracting Officer and Engineer.
7. Remove accumulated sediment and debris from a BMP when the sediment level reaches one-half the height of the BMP, or at any time the sediment or debris adversely impacts the functioning of the BMP.
8. The erosion/sediment control plan shows the minimum required for the project. If it becomes apparent that additional controls are necessary, the Contractor shall install additional controls.

B. Chemicals and Pollutants:

1. Store construction materials and chemicals that could contribute pollutants to the runoff within an enclosure, container, or dike located around the perimeter of the storage area, to prevent discharge of these materials into runoff from the construction site.
2. Locate areas used for collection and temporary storage of solid and liquid waste away from the storm drainage system. Provide covering or fencing as required to prevent windblown materials; construct perimeter dike to contain liquid runoff. These measures may not be necessary if materials are immediately placed in covered waste containers.
3. Perform equipment maintenance in designated areas using measures such as drip pans to control petroleum products spillage.
4. Immediately clean up and properly dispose of spills of construction related materials such as paints, solvents, or other chemicals.

C. Final Stabilization and Long-Term Management:

1. Final stabilization shall be achieved through permanent vegetation and landscaping after construction of all buildings and paved surfaces.

2. With approval of NFF temporary erosion and sediment control measures may be removed within 30 days after final site stabilization is achieved or after temporary measures are no longer needed.
  3. Revegetated areas shall have permanent biodegradable erosion control blankets or matting installed, such as jute netting or excelsior matting. Product shall be approved by the NFF prior to final installation.
- A. Inspection and Maintenance: Inspect erosion and sediment control measures weekly during construction. In addition, inspect all facilities immediately after any significant runoff or snowmelt which results in runoff. Repair or otherwise mitigate any damage to the erosion and sediment control facilities at no additional cost to the Government.

### 3.5 CLEANING

- A. Removal of Controls: Remove controls upon completion of that portion of the work for which controls were furnished. Leave the site and work area in a clean condition.

END OF SECTION

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SECTION 321123  
AGGREGATE

PART 1 - GENERAL

1.1 SUMMARY

- A. The work of this section consists of furnishing and placing aggregate, crusher fines, and filler if required, on a prepared subgrade.

1.2 SUBMITTALS

- A. As specified in Division 1 Section "Submittals".
- B. Two copies of certified weight tickets for each load of aggregate and crusher fines delivered to project site.
- C. If materials are obtained from a commercial source, submit certification from the supplier certifying that aggregate base course and crusher fines meet the requirements of this section.
- D. Submit all Material and Compaction Test results directly to NFF from testing services, with copy to Contractor.

1.3 QUALITY ASSURANCE

- A. Material Test and Compaction Test to be the responsibility of the Contractor. Compaction Test, Paragraph 3.03, and Material Test, listed in 2.01 shall be performed at the rate of one test for each 1,000 tons of aggregate and crusher fines delivered or fraction thereof with a minimum of one test per day of operation.

PART 2 - PRODUCTS

2.1 AGGREGATE

- A. 3/8" minus gray aggregate shall be used for prefabricated vault toilet structure bedding as well as toilet access paths.
- B. Clean, hard, durable fragments or particles of crushed stone, crushed slag, or crushed or natural gravel. Materials that break up due to freeze-thaw or wet-dry cycling shall not be used.
- C. Coarse Aggregate: AASHTO T96-77, percentage of wear of not more than 50.
- D. Fraction passing No. 40 sieve shall have a liquid limit not to exceed 25 and a plasticity index of not more than three, as determined by AASHTO T89-81 and T90-81, respectively.

E. Material, inclusive of filler, shall meet the requirements shown in the table below:

| <u>SIEVE DESIGNATION</u> | <u>PERCENT<br/>PASSING</u> |
|--------------------------|----------------------------|
| 1 inch                   | 100                        |
| ¾ inch                   | 80 - 100                   |
| ½ inch                   | 68-90                      |
| No. 4                    | 42-70                      |
| No. 8                    | 29-53                      |
| No. 40                   | 10 - 28                    |
| No. 200                  | 3 - 12                     |

E. Mineral filler or binder shall be added, to meet quality and/or gradation requirements. Mineral filler or binder shall be uniformly blended during crushing when a crusher operation is used.

## 2.2 CRUSHER FINES

A. Clean, hard, durable fragments or particles of crushed stone, crushed slag, or crushed or natural gravel. Materials that break up due to freeze-thaw or wet-dry cycling shall not be used.

B. Material, inclusive of filler, shall meet the requirements shown in the table below:

| <u>SIEVE DESIGNATION</u> | <u>PERCENT<br/>PASSING</u> |
|--------------------------|----------------------------|
| ¼ inch                   | 100                        |
| No. 8                    | 53-83                      |
| No. 16                   | 33-53                      |
| No. 40                   | 20-40                      |

C. Mineral filler or binder shall be added, to meet quality and/or gradation requirements. Mineral filler or binder shall be uniformly blended during crushing when a crusher operation is used.

D. Installed crusher fines surfacing shall meet or exceed current Forest Service Trail Accessibility Guidelines (FSTAG).

## PART 3 – EXECUTION

### 3.1 PLACING

A. If the required compacted depth of the aggregate base course or crusher fines exceeds six inches, place course in two or more layers of approximately equal thickness. The maximum compacted thickness of any one layer will not exceed six inches.

### 3.2 MIXING

- A. Mix the aggregate or crusher fines by any one of the three following methods:
  - 1. Stationary Plant Method: Mix aggregate base course or crusher fines and appropriate amount of water for compaction in an approved mixer. After mixing, transport aggregate to the job site while it contains the proper moisture content and place on the roadbed with an approved aggregate or crusher fines spreader. Before compaction, remove excess moisture.
  - 2. Travel Plant Method: After the material for each layer has been placed through an aggregate or crusher fines spreader or windrow-sizing device, it shall be uniformly mixed by a traveling mixing plant.
  - 3. Road Mix Method: After placing each layer, mix materials at optimum moisture content using motor graders or other approved equipment until the moisture is uniform throughout.

### 3.3 COMPACTION

- A. Compact each layer using mechanical compaction in 6" lifts until visible deformation no longer exists.
- B. Toilet structure bedding shall be compacted per the manufacturer's specifications.

### 3.4 SURFACE FINISHING

- A. Compacted base course surface shall be smooth and free from waves and other irregularities. Unsatisfactory portions of base course shall be torn up, reworked, re-laid, and rerolled, at no additional expense to Government.

### 3.5 MATERIAL ACCEPTANCE REQUIREMENTS

- A. Acceptance will be based on periodic samples and tests taken following mixing and before laying.

### 3.6 TOLERANCES

- A. Surface: Contractor will test finished surface of the base course with a 10-foot straightedge or other device. The variation between any two contacts, or different materials, with the surface shall not exceed one-half inch. Any areas not complying with these tolerances shall be reworked to obtain conformity.
- B. Width: Plan dimension, plus or minus two inches.
- C. Thickness: Plan dimension, plus or minus one-half inch.

### 3.7 MAINTENANCE

- A. Maintain base course in a satisfactory condition until surfaced or until final acceptance.



END OF SECTION

SECTION 329219  
REVEGETATION OR SEEDING

PART 1 - GENERAL

1.1 SUMMARY

- A. This work shall consist of spreading stockpiled on-site topsoil and seed at all disturbed areas. All disturbed areas shall be revegetated or seeded.

PART 2 - PRODUCTS

2.1 ON-SITE MATERIAL

- A. Strip the top 6 to 8 inches of soil from all on-site disturbed areas and stockpile, this material will be considered topsoil for the purposes of this contract. Cover stripped topsoil with gray lightly woven landscape fabric.
- B. Topsoil stripped from all on-site disturbed areas shall be stockpiled and replaced on areas to be restored or revegetated.
- C. Topsoil shall consist of loose, friable, free draining, free of clods, stumps, logs, brush, weeds, non-native plants, or other material that would be detrimental to the development of native vegetative growth. No rocks greater than 4" shall be in the topsoil and rocks must compose less than 5% of the topsoil material.

2.2 SEED

- A. All seed shall be supplied by the NFF, in partnership with USFS. The contractor shall request the seed no earlier than two weeks prior to revegetation or reseeded activities. Seed shall be stored in a cool dry location until spread.

PART 3 – EXECUTION

3.1 TOPSOIL - NOT APPLICABLE

3.2 SEEDING SEASONS

- A. Seeding season shall start no earlier than October 1<sup>st</sup> while ground is friable and no greater than 2 inches of snow covering the ground surface. Seeding materials shall not be applied if wind velocity exceeds 10 MPH or when the ground is excessively wet or muddy.

A. Material may be placed by the following methods:

1. Seed shall be applied using hand broadcasting at the specified application rate.

#### 3.4 REVEGETATION NETTING – NOT APPLICABLE

#### 3.5 CARE DURING CONSTRUCTION

- A. The Contractor shall be responsible for protecting and caring for seeded areas until final acceptance of the work. The Contractor shall repair all damage to seeded areas caused by his construction operations without additional compensation.

END OF SECTION

# APPENDIX 3

| SCHEDULE OF ITEMS (SOI)    |  |                       |          |                                       |        |
|----------------------------|--|-----------------------|----------|---------------------------------------|--------|
| National Forest Foundation |  |                       |          |                                       |        |
| Contractor Name:           |  | Project Title:        |          | Tunnel Picnic Area Toilet Replacement |        |
| Date:                      |  | Project Manger:       |          |                                       |        |
| BASE WORK ITEMS            |  |                       |          |                                       |        |
| Base Item(s)               | Description  | Method of Measurement | Quantity | Unit Cost                             | Amount |
| 1                          | Mobilization   | Lump Sum              | 1        |                                       |        |
| 2                          | Demolish and remove existing toilet buildings and vaults   | LSQ                   | 1        |                                       |        |
| 3                          | Supply and instilation of precast concrete toilet including final site work.   | LSQ                   | 1        |                                       |        |
| 4                          | ADA Pathway- Includes all materials, equipment, and labor to prepare the site, supply, and install ADA accessible aggregate pathways for the toilet. Includes seeding disturbed areas. | LF                    | 50       |                                       |        |
| 5                          | Barrier boulder installation   | Lump Sum              | 1        |                                       |        |
| 6                          | Seeding NFF/USFS furnished seed )  | SQ.FT.                | 1000     |                                       |        |
| <b>TOTAL BID</b>           |  |                       |          |                                       |        |

## **Appendix 4**

### **Federal Flowdown Provisions**

**NFF Funding Code: 1596027**

**NFF Funding Name: PA CO ARP Site Support**

**Funder Agreement ID: 22-PA-11021000-043**

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1. The recipient may not require its employees, contractors, or subrecipients seeking to report fraud, waste, or abuse to sign or comply with internal confidentiality agreements or statements prohibiting or otherwise restricting them from lawfully reporting that waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.
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4. If the Government determines that the recipient is not in compliance with this award provision, it:
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  - b. May pursue other remedies available for the recipient's material failure to comply with award terms and conditions.