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**REGION 4 UTAH ACQUISITION SUPPORT CENTER INSTRUCTIONAL COVER SHEET**

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ISSUING OFFICE:

USDA-FOREST SERVICE  
UTAH ACQUISITION SUPPORT CENTER  
2222 WEST 2300 SOUTH  
SALT LAKE CITY, UT 84119-2020  
FAX 801-975-3483

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SOLICITATION NO. **AG-84N8-S-16-0047**

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PROPOSALS ARE SOLICITED FOR: **COWPUNCHER GUARD STATION CONCRETE\_DIXIE NATIONAL FOREST**

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SET-ASIDE: **SMALL BUSINESS**

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IMPORTANT –OFFEROR SHALL SUBMIT THE FOLLOWING DOCUMENTS WITH THEIR RESPONSE TO THIS SOLICITATION:

1. SF 1442 (Complete, date, and sign Page 2)
  2. Schedule of Items (Page 4 & 5)
  3. Representations and Certifications – Complete registration at System for Award Management database, website: [www.sam.gov](http://www.sam.gov)
  4. Experience Questionnaire (Attachment 1, Page 32-34)
  5. AGAR 104B (Attachment 2, Page 35)
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IT IS REQUIRED THAT YOU WRITE THE SOLICITATION NUMBER ON THE OUTSIDE OF YOUR ENVELOPE.

FAXED QUOTES WILL BE ACCEPTABLE: FAX 801-975-3483, Attn: Lu Fowler

EMAIL WILL BE ACCEPTED: [efowler@fs.fed.us](mailto:efowler@fs.fed.us)

Return to:

Utah Acquisition Support Center  
2222 West 2300 South  
Salt Lake City, UT 84119-2020  
Solicitation No. AG-84N8-S-16-0047, Attn: Lu Fowler

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IT IS REQUIRED THAT ALL CONTRACTORS BE REGISTERED IN THE SYSTEM FOR AWARD MANAGEMENT DATABASE AND BE REGISTERED UNDER THE NAICS CODE THAT THIS SOLICITATION IS BEING ISSUED UNDER PRIOR TO AWARD UNDER THIS SOLICITATION: [WWW.SAM.GOV](http://WWW.SAM.GOV)

EFFECTIVE APRIL 22, 2012 – REMEMBER TO COMPLETE/UPDATE YOUR NEW CERTIFICATION FAPIIS THROUGH SAM.

OMB APPROVAL NO. 2700-0042

<b>SOLICITATION, OFFER, AND AWARD</b> <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NO. AG-84N8-S-16-0047	2. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED March 15, 2016	PAGE OF PAGES
	<b>IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.</b>			

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO. 791573	6. PROJECT NO.
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7. ISSUED BY  Utah Acquisition Support Center 2222 West 2300 South Salt Lake City, UT 84119-2020	CODE 84N8	8. ADDRESS OFFER TO  Utah Acquisition Support Center ATTN: Elouise Fowler 2222 West 2300 South Salt Lake City, UT 84119-2020
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9. FOR INFORMATION CALL:	A. NAME Elouise Fowler (Contracting) Paul Dastrup (Technical)	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS) 801-975-3367 435-676-9352
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**SOLICITATION**

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder."

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS (Title, identifying no., date):

Cowpuncher Guard Station Concrete, Escalante Ranger, Dixie National Forest, Escalante, Garfield County, Utah

The magnitude estimated price range is: less than \$25,000

**REPLY DUE DATE: April 1, 2016 @ 1:00P.M. (Local Time)**

11. The Contractor shall begin performance within 10 calendar days and complete it within 10 calendar days after receiving  
 award,  notice to proceed. This performance period is  mandatory,  negotiable. (See \_\_\_\_.)

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS?(If "YES," indicate within how many calendar days after award in Item 12B.)  <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	12B. CALENDAR DAYS  30
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13. ADDITIONAL SOLICITATION REQUIREMENTS:

- A. Quotes/Offer to perform the work required are due at the place specified in Item 8 by **1:00 p.m. local time on April 1, 2016**. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.
- B. An offer guarantee  is,  is not required.
- C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.
- D. Offers providing less than 60 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

**OFFER** (Must be fully completed by offeror)

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)	15. TELEPHONE NO. (Include area code)
	16. REMITTANCE ADDRESS (Include only if different than Item 14)
CODE	FACILITY CODE

17. The offeror agrees to perform the work at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government within \_\_\_\_ calendar days after the date offers are due. (Insert any number equal to or greater than the minimum requirement stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)

AMOUNTS

18. The offeror agrees to furnish any required performance and payment bonds.

**19. ACKNOWLEDGMENT OF AMENDMENTS**

The offeror acknowledges receipt of amendments to the solicitation -- give number and date of each

AMENDMENT NO.									
DATE									
20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)					20B. SIGNATURE				20C. OFFER DATE

**AWARD** (To be completed by Government)

21. ITEMS ACCEPTED:

22. AMOUNT	1. ACCOUNTING AND APPROPRIATION DATA		
24. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO <input type="checkbox"/> 10 U.S.C. 2304(e)( ) <input type="checkbox"/> 41 U.S.C. 253(e)( )	
26. ADMINISTERED BY	CODE	27. PAYMENT WILL BE MADE BY	

**CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE**

<input type="checkbox"/> 28. NEGOTIATED AGREEMENT (Contractor is required to sign this document and return ____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all work, requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications or incorporated by reference in or attached to this contract.	<input type="checkbox"/> 29. AWARD (Contractor is not required to sign this document.) Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.
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30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type or print)	31A. NAME OF CONTRACTING OFFICER (Type or print)		
30B. SIGNATURE	30C. DATE	31B. UNITED STATES OF AMERICA BY	31C. AWARD DATE

**SECTION B - Supplies or Services and Prices/Costs Schedule of Items**

<b>SCHEDULE OF ITEMS</b>						
<b>Cowpuncher Guard Station Concrete Escalante Ranger District, Dixie National Forest Garfield County, Escalante, Utah</b>						
<b>Base Bid – Concrete Foundation for Cabin</b>						
ITEM NUMBER	DESCRIPTION	METHOD OF MEAS	UNIT	QTY	PRICE	SUB TOTAL
011900	Mobilization	LSQ	LS	1		\$
033000-1	Concrete Foundation for Cabin	LSQ	LS	1		\$
						\$
<b>TOTAL</b>						\$

<b>Bid Option 1 – Concrete for Garage</b>						
ITEM NUMBER	DESCRIPTION	METHOD OF MEAS	UNIT	QTY	PRICE	SUB TOTAL
033000-2	Concrete Foundation & Floor for Garage	LSQ	LS	1		\$
2	Restroom Plumbing	LSQ	LS	1		\$
						\$
<b>TOTAL</b>						\$

\* Designated Method of Measurement: DQ - Designed Quantities, AQ - Actual Quantities, LSQ - Lump Sum Quantities, SQ - Staked Quantities, CQ - Contract Quantities

Price Range. Government Cost Estimate, per FAR 36.204, is under \$25,000.

This solicitation and any resulting contract is a firm-fixed price type of contract, which under the definition in FAR 16.202-1, “this type of contract provides for a price that is not subject to any adjustment on the basis of the contractor’s cost experience in performing the contract. This contract type places upon the contractor maximum risk and full responsibility for all costs and resulting profit or loss.”

Prices on the Schedule shall reflect Contractor’s full cost for materials, labor, supervision, overhead costs, and incidental items.

The Government shall issue a contract to the Contractor who offers the best value to the Government. Best Value will be based on the evaluation factors listed in the Evaluation Factors listed in Section M.

Contract Time: 30 Calendar Days  
Estimated Start Date: April 15, 2016  
Point of Contacts: Paul Dastrup, COR, 435-636-3552, [pdastrup@fs.fed.us](mailto:pdastrup@fs.fed.us)  
Elouise (Lu) Fowler, CO, 801-975-3367, [efowler@fs.fed.us](mailto:efowler@fs.fed.us)

**Notice to Offerors:** Funds have been reserved but are not presently available for this project. No Award will be made under this solicitation until funds are available. The Government reserves the right to cancel this solicitation, either before or after the closing date. In the event the Government cancels this solicitation, the Government has no obligation to reimburse an offeror for any costs.

**Business Name:** \_\_\_\_\_

**Offeror's Name & Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Dun's Number:** \_\_\_\_\_

### Section C - Description/Specifications/Statement of Work

- C-1** Attachment 1 \_ “General Specs\_Cowpuncher Guard Station Concrete”  
Attachment 2 \_ “Signed Cowpuncher Drawings”

#### C- 2 Biobased Product Utilization

The Contractor must comply with the Agricultural Act of 2014; the Food, Conservation and Energy Act of 2008 (FCEA), 7 U.S.C. 8102; the Farm Security and Rural Investment Act of 2002 (FSRIA), 7 U.S.C. 8102; the Federal Acquisition Regulation; Executive Order (EO) 13514, “*Federal Leadership in Environmental, Energy and Economic Performance*,” dated October 5, 2009; EO 13423, “*Strengthening Federal Environmental, Energy, and Transportation Management*,” dated January 24, 2007; and Presidential Memorandum, “*Driving Innovation and Creating Jobs in Rural America through Biobased and Sustainable Product Procurement*,” dated February 2012, to provide biobased products.

The Contractor shall utilize products and material made from biobased materials to the maximum extent possible without jeopardizing the intended end use or detracting from the overall quality delivered to the end user. All supplies and materials shall be of a type and quality that conform to applicable Federal specifications and standards. All supplies and materials to be used in the performance of work described herein are subject to the approval of the Contracting Officer’s Representative (COR).

The following is an example list of products that may be used in this contract for which biobased products are available. The list is not all inclusive. It is desirable that Contractors be able to supply the greatest number of biobased products listed meeting the health and environmental specifications.

#### (\*Sample of biobased products for construction projects)

Grease Removers	Insulating Foam	Roof Coatings
Composite Panels	Fluid-filled Transformers	Wood and Concrete
SealersHydraulic Fluid	Adhesive and Mastic Removers	Carpets
Water Tank Coatings	Concrete & Asphalt Release Fluids	

#### (\*Sample of biobased products for building mtce – light construction projects (Operations and Maintenance))

Hydraulic Fluids	Penetrating Lubricants	Degreasers
Absorbents	Diesel Fuel Additives	Greases
Dust Suppressants	2-Cycle Engine Oil	Wood and Concrete Sealers
Fertilizers	Roof Coatings	Water Tank Coatings
Adhesive and Mastic Removers	Cleaners	Sorbents
Floor Finish	Floor Stripper	Composite Panels
Insulating Foam	Sealers	Carpet
Metalworking Fluids	Graffiti and Grease Removers	Stain Removers
De-icers	Concrete & Asphalt Release Fluids	

Biobased products that are designated for preferred procurement under USDA’s Biopreferred Program must meet the required minimum biobased content as stated in the USDA Final Rule available at [www.biopreferred.gov](http://www.biopreferred.gov). The Contractor should provide data for their biobased products such as biobased content and source of biobased material.

In addition to the biobased products designated by the U.S. Department of Agriculture in the Biopreferred Program, the Contractor is encouraged to use other commercially available biobased products.

The Contractor shall submit with the initial proposal a complete list of biobased products, indicating the name of the manufacturer, cost of each material, and the intended use of each of the materials that are to

be used in carrying out the requirements of this contract (see Experience Questionnaire, pages \*\*).

Additionally, the winning Contractor on each anniversary date of the contract shall compile a complete list of biobased products, including the information above, purchased to carry out the contract requirements. The Contractor shall list volume to be used and total cost for each individual product. This information will be used for reporting purposes (see Section I, FAR Clause 52.223-2).

Within thirty (30) days of contract award, the Contractor shall submit an Operation Plan. This submittal will be approved by the COR in writing. The Contractor shall not commence work until this submittal is approved by the COR in writing. The Plan must be reviewed and updated annually, and as required by the COR. The Plan must contain and define the following elements:

- The Contractor's written policy stating its commitment to the use of biobased products, employee health and safety, and sound environmental management practices.
- Detail on how the Contractor intends to keep abreast of the development and increasing availability of designated and non-designated biobased products and how any new or improved products will be incorporated on an ongoing basis into contract performance.
- Proposed biobased construction products which must be selected in accordance with the criteria included above. At a minimum, the Plan must identify products by brand name for each of the product types.

NOTE: A Contractor may propose more than one product within a product category and/or propose a product or products addressing more than one product category.

- The product guides which define standard operating procedures for instructing staff in the proper use, storage, and disposal of biobased products; proper maintenance of equipment; and other procedures/instructions to accomplish work under this contract.

The Contractor shall provide data on the quantity and dollar values of biobased products used in this contract. The data shall be submitted to the COR quarterly.

A demonstration of proper use, an effective training program, and technical assistance are essential to the success of the purchase and use of some biobased products that may function differently than a conventional product.

### **C- 3 Government Property**

**C- 4 Standard Specifications** -See C-1 Attachment 1 "General\_Specs\_Cowpuncher Guard Stations Concrete" for the list of Standard Specifications that are incorporated into this solicitation and any resultant contract.

**C- 6 Drawings** – See C-1 Attachment 2 "Signed Cowpuncher Drawings" for the listing of drawings that are incorporated into this solicitation and any resultant contract.

## **SECTION D - Packaging and Marking**

{For this Solicitation, there are NO clauses in this Section}

**SECTION E - Inspection and Acceptance**

**E-1 52.252-2 Clauses Incorporated by Reference (FEB 1998)**

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

Federal Acquisition Regulations: <http://www.acquisition.gov/far>

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

**E-2 52.246-12 Inspection of Construction (AUG 1996)**

**SECTION F - Deliveries or Performance**

**F-1 52.252-2 Clauses Incorporated by Reference (FEB 1998)**

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

Federal Acquisition Regulations - <http://www.acquisition.gov/far>

**FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES**

52.242-14 Suspension of Work (APR 1984)

**F-2 52.211-10 Commencement, Prosecution, and Completion of Work (APR 1984)**

The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use 10 calendar days after the date the contractor receives the notice to proceed. The time stated for completion shall include final cleanup of the premises.

**F-3 AGAR 452.236-75 Maximum Workweek – Construction Schedule (NOV 1996)**

Within  tbd  calendar days after receipt of a written request from the Contracting Officer, the Contractor must submit the following information in writing for approval:

- (a) A schedule as required by FAR clause 52.236-15, Schedules for Construction Contracts, and
- (b) The hours (including the daily starting and stopping times) and days of the week the Contractor proposed to carry out the work.

The maximum workweek that will be approved is to be negotiated if needed.

## SECTION G - Contract Administration Data

### G-1 CONTRACTING OFFICE

The Utah Acquisition Support Center of the United States Forest Service, Department of Agriculture is responsible for this solicitation, award and administration of the contract. All written correspondence shall reference the contract number and/or solicitation number.

Communications shall be directed to:

Contracting Officer  
USDA-FS, Utah Acquisition Support Center  
2222 West 2300 South, 2<sup>nd</sup> Floor  
Salt Lake City, UT 84119-2020

### G-2 CONTRACTING OFFICER'S REPRESENTATIVE

An awarded contract **will** have a Contracting Officer's Representative (COR). Such designations will be made by appointment letter.

### G-3 SUBCONTRACTS

Before entering into a subcontract covering any part of the work called for, the Contractor shall inform the Contracting Officer and submit information required by the Contracting Officer.

### G-4 INVOICES

All invoices will be processed using the Department of Treasury's Invoice Processing Platform (IPP), visit <http://www.ipp.gov> to learn more. Contractors must follow the instructions on how to register and submit invoices via IPP.

## SECTION H - Special Contract Requirements

### H-1 52.252-2 Clauses Incorporated by Reference (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

Federal Acquisition Regulations - <http://www.acquisition.gov/far>

AGRICULTURE ACQUISITION REGULATION (48 CFR CHAPTER 4) CLAUSES

### H-2 AGAR 452.236-72 Use of Premises

The Contractor shall comply with the regulations governing the operation of premises which are occupied and shall perform the contract in such a manner as not to interrupt or interfere with the conduct of Government business.

### H-3 52.236-4 PHYSICAL DATA (APR 1984)

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations by visual inspection and physical measurements.

(b) Weather conditions n/a.

(c) Transportation facilities n/a.

(d) n/a

### H-4 AGAR 452.237-74 Key Personnel (FEB 1988)

(a) The Contractor shall assign to this contract the following key personnel: Superintendent/Project Manager

### H-5 FIRE PRECAUTIONS

This plan outlines the channels of responsibility for fire prevention and suppression activities and sets up an attack procedure in the event of fire within the Project Area. The Project Area is defined as that area which is in and adjacent to the project rights-of-way and work areas and all roads used in connection with the work.

## I. RESPONSIBILITIES

### A. Contractor

### Fire Suppression

1. It is understood and agreed that the Contractor will do all in his power to prevent and suppress fires on or adjacent to the Project Area, as stipulated in the contract.

2. Is responsible for and will direct all fires activities on the project until relieved by a Forest Officer and will insure that prevention and suppression action are in accordance with contract requirements, including this fire plan. He will delegate the next higher in authority on the job to be responsible for the above activities when he is not on the project.

3. In line with this agreement, men will be supplied from the Contractor's crew to fight fires on the project area up to the total number of men employed by the Contractor as they are needed by the Fire Boss. The Forest Service will make every effort to avoid calling on the Contractor for action on fires outside the Contract project area except in emergencies and will call out all needed available help to control fires in the general area.

4. The Contractor issues that this Fire Plan will be complied with by him and his employees for the duration of the contract.

### B. Forest Service District Ranger

1. Is responsible for all fire activities on the Ranger District on which the contract project is located. He or his representative will discuss the fire plan with the Contractor and will discuss with him the equipment and manpower action to be taken when a fire occurs. He will notify the Contractor through the Contracting Officer's Representative (COR) to take correction measures when fire requirements are not complied with.

## II. CONTRACTOR'S RESPONSIBILITY WHEN A FIRE OCCURS WITHIN THE CONTRACT PROJECT AREA

A. He will immediately send the entire contract crew with tools and equipment to the fire and take initial-attack suppression action.

B. Immediately notify the nearest Forest Service Fire Control Officer or other Forest Service employee of fire location and action taken

C. Designate a man to act as dispatcher who will handle messages and initiate action upon request until relieved.

## III. CONTRACTOR FURNISHED MANPOWER, TOOLS, AND EQUIPMENT REQUIRED ON ALL CONTRACTS (PROJECTS) DURING FIRE SEASON

A. The Contractor shall furnish to the COR a list of manpower and equipment used on the contract on forms furnished by the Forest Service. Changes in Contractor's personnel shall be reflected in amendment to the list.

### Fire Prevention

Smoking. Will be prohibited in the woods during the fire season, May 10 through October 20, except in areas agreed upon by the Contractor and Contracting Officer's Representative. No smoking is permitted while walking or working in the woods.

Refueling Chainsaw/Soil Auger. Refueling will be confined to a six-foot diameter cleared to mineral earth. Chainsaws/soil auger sparks arrester shall be U.S. Forest Service approved, and will be cleaned daily. A size "0" or larger round-pointed shovel with a minimum of a 38-1/2" handle and a fire extinguisher shall be within 10 feet of actual point of chainsaw/soil auger operation.

Burning, Blasting, or Welding. Permit will be required and will contain special stipulations pertinent to the particular job.

Spark Arresters. All internal combustion power equipment used by the Contractor on the project shall be equipped with an approved spark arrester as set forth in the publication of the USDA Forest Service, entitled "Standard 5100-1a for Spark Arresters for Internal Combustion Engines" as amended under date of July 1970, and be listed in the most recent "Spark Arrester Guide" as having been approved as meeting above standard. They shall be cleaned regularly and maintained in satisfactory working condition. The following are exempt from the requirements of the rule:

- (a) Turbo-charged internal combustion engines in which 100 percent of the exhaust gasses pass through a turbo-charged;
- (b) Engines of passenger carrying vehicles and light trucks equipped with a muffler with baffles that are kept in good repair (glass packs are not an approved muffler for wildland work);
- (c) Water pumping equipment used in firefighting.

Spark arresters must comply with all State and Federal fire requirements.

Lunch and Warming Fires. Cooking and warming fires will not normally be permitted and then only by written permit by the COR which contain stipulations regulating use of such fires.

Hand Tools. The Contractor shall furnish one size "0" shovel (38-1/2" handle minimum) or larger, one axe, or pulaski with 26" handle or larger, and one 5 BC or larger rated pressurized fire extinguisher for each truck, each personal vehicle, each tractor, and each grader. For each welder he shall furnish one size "0" shovel and one backpump pump. For each gasoline power tools (power saw, soil auger, etc.), one shovel (38-1/2" handle minimum) and one 8-ounce or larger BC rated chemical-pressurized fire extinguisher.

Contractor shall also furnish any other equipment called for elsewhere in the contract. The shovel and fire extinguisher will be located within 10 feet of the operating chainsaw/power auger.

Storage and Parking Areas. Equipment service area, parking area, and gas and oil drum storage areas will be cleared of all flammable material for a radius of at least fifty feet. These areas must be approved in writing by the Contracting Officer's Representative in advance of use. Small stationary engine sites shall be cleared of flammable material for a radius of at least fifteen feet from such engine.

Fire Tool Box. A red fire tool box will be required to be on each work site while work is being performed. This fire tool box will contain sufficient tools to equip all persons engaged in Contractor's operation. Fire tools shall be used only for suppressing wildfires. Tools shall be stored in fireboxes provided by the Contractor and readily available to employees. Each tool box shall be marked, "Tools for Fire Only." The COR will inspect the fire tool box and then seal the box.

**H- 6 Incidental Payment Items**

The intent of the contract is to provide for the complete construction of the project described in the contract. Unless otherwise provided, the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies and perform all work required to complete the project in accordance with drawings, specifications, and provisions of the contract. Payment for contract work will be made only for and under those pay items included in the Schedule of Items. All other work and materials will be considered as incidental to and included in the payment for items shown.

**H- 7 Conformity with Drawings and Specifications**

Unless working tolerances are specified, all work performed and materials furnished shall be in reasonably close conformity with lines, grades, cross sections, dimensions, and material requirements shown on the drawings, indicated in the specifications, or designated on the ground. "Reasonably close conformity" is compliance with reasonable and customary manufacturing and construction tolerances.

**H- 8 Samples, Tests, Cited Specifications**

Reference made in the contract to specifications, standards, or test methods adopted by AASHTO, ASTM, GSA, or other recognized National technical associations, shall mean specifications, standards, or test methods (including interim or tentative issues) which are in effect on the date of the solicitation.

**H-9 Invoice Processing Platform (IPP)**

The Forest Service is utilizing the Invoice Processing Platform (IPP) for the electronic submission and tracking of contracts/purchase orders, invoices, and payment information. IPP is a secure Government-wide, Web-based invoice processing service. Visit <http://www.ipp.gov> to learn more.

**Upon award of a contract**, Contractors must enroll at <https://www.ipp.gov/vendors/enrollment-vendors.htm>. Contractors shall submit all invoices electronically via IPP. Paper copies of invoices will no longer be accepted.

**H-10 Prework Conference**

Prior to commencement of work, the Contracting Officer will arrange a meeting with the Contractor to discuss the contract terms and work performance requirements. Also at this meeting such things as work progress schedule and fire prevention and suppression plans shall be developed and established in writing.

## SECTION I - Contract Clauses

### I- 1    52.252-2            Clauses Incorporated by Reference (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

Federal Acquisition Regulations - <http://www.acquisition.gov/far>

#### FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

52.202-1	Definitions. (NOV 2013)
52.203-3	Gratuities (APR 1984)
52.203-5	Covenant Against Contingent Fees. (MAY 2014)
52.203-6	Restrictions on Subcontractor Sales to the Government. (SEP 2006)
52.203-7	Anti-Kickback Procedures. (MAY 2014)
52.209-6	Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment. (OCT 2015)
52.211-18	Variation in Estimated Quantity. (APR 1984)
52.219-6	Notice of Total Small business Set-Aside (NOV 2011)
52.219-8	Utilization of Small Business Concerns. (OCT 2014)
52.222-7	Withholding of Funds. (MAY 2014)
52.222-8	Payrolls and Basic Records. (MAY 2014)
52.222-9	Apprentices and Trainees. (JUL 2005)
52.222-10	Compliance with Copeland Act Requirements. (FEB 1988)
52.222-11	Subcontracts (Labor Standards). (MAY 2014)
52.222-12	Contract Termination - Debarment. (MAY 2014)
52.222-13	Compliance with Construction Wage Rate Requirements and Related Regulations (MAY 2014)
52.222-14	Disputes Concerning Labor Standards. (FEB 1988)
52.222-15	Certification of Eligibility. (MAY 2014)
52.222-21	Prohibition of Segregated Facilities. (APR 2015)
52.222-26	Equal Opportunity (APR 2015)
52.222-27	Affirmative Action Compliance Requirements for Construction (APR 2015)
52.222-50	Combating Trafficking in Persons (MAR 2015)
52.222-55	Minimum Wages Under Executive order 13658 (DEC 2015)
52.223-2	Affirmative Procurement of Biobased Products Under Service and Construction Contracts. (SEP 2013)
52.223-5	Pollution Prevention and Right-to-Know Information. (May 2011)
52.223-6	Drug-Free Workplace. (MAY 2001)
52.223-18	Contractor Policy to Ban Text Messaging While Driving. (AUG 2011)
52.224-1	Privacy Act Notification (APR 1984)
52.225-13	Restrictions on Certain Foreign Purchases. (JUN 2008)
52.225-25	Prohibition on Engaging in Sanctioned Activities Relating to Iran-Certification. (OCT 2015)
52.227-4	Patent Indemnity--Construction Contracts (DEC 2007)
52.232-5	Payments under Fixed-Price Construction Contracts. (MAY 2014)
52.232-18	Availability of Funds (APR 1984)

52.232-23	Assignment of Claims (MAY 2014)
52.232-27	Prompt Payment for Construction Contracts. (MAY 2014)
52.232-33	Payment by Electronic Funds Transfer—System for Award Management (JUL 2013)
52.232-39	Unenforceability of Unauthorized Obligations (JUN 2013)
52.233-1	Disputes. (MAY 2014)
52.233-3	Protest after Award. (AUG 1996)
52.233-4	Applicable Law for Breach of Contract Claim (OCT 2004)
52.236-2	Differing Site Conditions. (APR 1984)
52.236-3	Site Investigation and Conditions Affecting the Work. (APR 1984)
52.236-5	Material and Workmanship. (APR 1984)
52.236-6	Superintendence by the Contractor. (APR 1984)
52.236-7	Permits and Responsibilities. (NOV 1991)
52.236-8	Other Contracts. (APR 1984)
52.236-9	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements. (APR 1984)
52.236-10	Operations and Storage Areas. (APR 1984)
52.236-11	Use and Possession Prior to Completion. (APR 1984)
52.236-12	Cleaning Up. (APR 1984)
52.236-13	Accident Prevention. (NOV 1991)
52.236-14	Availability and Use of Utility Services. (APR 1984)
52.236-15	Schedules for Construction Contracts. (APR 1984)
52.236-16	Quantity Surveys (APR 1984)
52.236-17	Layout of Work. (APR 1984)
52.236-21	Specifications and Drawings for Construction. (FEB 1997)
52.243-5	Changes and Changed Conditions. (APR 1984)
52.245-1	Government Property (APR 2012)
52.245-9	Use and Charges (APR 2012)
52.246-21	Warranty of Construction. (MAR 1994)
52.249-1	Termination for Convenience of the Government (Fixed-Price)(Short Form)(APR 1984)
52.249-10	Default (Fixed-Price Construction). (APR 1984)

#### AGRICULTURE ACQUISITION REGULATION (48 CFR CHAPTER 4) CLAUSES

452.224-70	Confidentiality of Information (FEB 1988)
452.236-71	Prohibition Against the Use of Lead-Paint (NOV 1996)
452.236-76	Samples and Certificates (FEB 1988)

#### **I- 2    52.204-13    System for Award Management Maintenance (JUL 2013)**

(a) *Definitions.* As used in this clause—

“Data Universal Numbering System (DUNS) number” means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities, which is used as the identification number for Federal contractors.

“Data Universal Numbering System+4 (DUNS+4) number” means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional SAM records for identifying alternative Electronic Funds Transfer (EFT) accounts (see the FAR at subpart [32.11](#)) for the same concern.

“Registered in the System for Award Management (SAM) database” means that—

(1) The Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, the Contractor and Government Entity (CAGE) code, as well as data required by the Federal Funding Accountability and Transparency Act of 2006 (see [Subpart 4.14](#)), into the SAM database;

(2) The Contractor has completed the Core, Assertions, Representations and Certifications, and Points of Contact sections of the registration in the SAM database;

(3) The Government has validated all mandatory data fields, to include validation of the Taxpayer Identification Number (TIN) with the Internal Revenue Service (IRS). The Contractor will be required to provide consent for TIN validation to the Government as a part of the SAM registration process; and

(4) The Government has marked the record “Active”.

“System for Award Management (SAM)” means the primary Government repository for prospective Federal awardee and Federal awardee information and the centralized Government system for certain contracting, grants, and other assistance-related processes. It includes—

(1) Data collected from prospective Federal awardees required for the conduct of business with the Government;

(2) Prospective contractor-submitted annual representations and certifications in accordance with FAR [Subpart 4.14](#); and

(3) Identification of those parties excluded from receiving Federal contracts, certain subcontracts, and certain types of Federal financial and non-financial assistance and benefits.

(b) The Contractor is responsible for the accuracy and completeness of the data within the SAM database, and for any liability resulting from the Government’s reliance on inaccurate or incomplete data. To remain registered in the SAM database after the initial registration, the Contractor is required to review and update on an annual basis, from the date of initial registration or subsequent updates, its information in the SAM database to ensure it is current, accurate and complete. Updating information in the SAM does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(c) (1) (i) If a Contractor has legally changed its business name, *doing business as* name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in subpart [42.12](#), the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to—

(A) Change the name in the SAM database;

(B) Comply with the requirements of subpart [42.12](#) of the FAR; and

(C) Agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor shall provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (c)(1)(i) of this clause, or fails to perform the agreement at paragraph (c)(1)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the SAM information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the “Suspension of Payment” paragraph of the electronic funds transfer (EFT) clause of this contract.

(2) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the SAM record to reflect an assignee for the purpose of assignment of claims (see FAR subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the SAM. Information provided to the Contractor’s SAM record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the “Suspension of Payment” paragraph of the EFT clause of this contract.

(3) The Contractor shall ensure that the DUNS number is maintained with Dun & Bradstreet throughout the life of the contract. The Contractor shall communicate any change to the DUNS number to the Contracting Officer within 30 days after the change, so an appropriate modification can be issued to update the data on the contract. A change in the DUNS number does not necessarily require a novation be accomplished. Dun & Bradstreet may be contacted

(i) Via the internet at <http://fedgov.dnb.com/webform> or if the contractor does not have internet access, it may call Dun and Bradstreet at 1-866-705-5711 if located within the United States; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(d) Contractors may obtain additional information on registration and annual confirmation requirements at <http://www.acquisition.gov>.

### **I-3 52.204-18 Commercial and Government Entity Code Maintenance. (Jul 2015)**

(a) *Definition.* As used in this clause—

“Commercial and government Entity (CAGE)” means—

(1) An identifier assigned to entities located in the United States or its outlying areas by the Defense Logistics Agency (DLA) Contractor and Government Entity (CAGE) Branch to identify a commercial or Government entity, or

(2) An identifier assigned by a member of the North Atlantic Treaty Organization (NATO) or by the NATO Support Agency (NSPA) to entities located outside the United States and its outlying areas that the DLA Contractor and Government Entity (CAGE) Branch records and maintains in the CAGE master file. This type of code is known as the NCAGE code.

(b) Contractors shall ensure that the CAGE code is maintained throughout the life of the contract. For contractors registered in the System for Award Management (SAM), the DLA Contractor and Government Entity (CAGE) Branch shall only modify data received from SAM in the CAGE master file if the contractor initiates those changes via update of its SAM registration. Contractors undergoing a novation or change-of-name agreement shall notify the contracting officer in accordance with subpart 42.12. The contractor shall communicate any change to the CAGE code to the contracting officer within 30 days after the change, so that a modification can be issued to update the CAGE code on the contract.

(c) Contractors located in the United States or its outlying areas that are not registered in SAM shall submit written change requests to the DLA Contractor and Government Entity (CAGE) Branch. Requests for changes shall be provided on a DD Form 2051, Request for Assignment of a Commercial and Government Entity (CAGE) Code, to the address shown on the back of the DD Form 2051. Change requests to the CAGE master file are accepted from the entity identified by the code.

(d) Contractors located outside the United States and its outlying areas that are not registered in SAM shall contact the appropriate National Codification Bureau or NSPA to request CAGE changes. Points of contact for National Codification Bureaus and NSPA, as well as additional information on obtaining NCAGE codes, are available at <http://www.dlis.dla.mil/nato/ObtainCAGE.asp>.

(e) Additional guidance for maintaining CAGE codes is available at [http://www.dlis.dla.mil/cage\\_welcome.asp](http://www.dlis.dla.mil/cage_welcome.asp).

#### **I-4 AGAR 452.209-71 Assurance Regarding Felony Conviction or Tax Delinquent Status for Corporate Applicants (FEB 2012) Alternate I (FEB 2012)**

(a) This award is subject to the provisions contained in sections 433 and 434 of the Consolidated Appropriations Act, 2012 (P.L. No. 112-74), Division E, as amended and/or subsequently enacted, regarding corporate felony convictions and corporate federal tax delinquencies. Accordingly, by accepting this award the contractor acknowledges that it –

(1) does not have a tax delinquency, meaning that it is not subject to any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, and

(2) has not been convicted (or had an officer or agent acting on its behalf convicted) of a felony criminal violation under any Federal law within 24 months preceding the award, unless a suspending and debarment official of the United States Department of Agriculture has considered suspension or debarment of the awardee, or such officer or agent, based on these convictions and/or tax delinquencies and determined that suspension or debarment is not necessary to protect the interests of the Government.

(b) If the awardee fails to comply with these provisions, the Forest Service may terminate this contract for default and may recover any funds the awardee has received in violation of sections 433 or 434, amended and/or subsequently enacted.

#### **I-5 52.211-10 Commencement, Prosecution, and Completion of Work. (APR 1984)**

The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 10 calendar days after the date the contractor receives the notice to proceed. The time stated for completion shall include final cleanup of the premises.

#### **I-6 52.219-28 Post-Award Small Business Program Rerepresentation (JUL 2013)**

(a) *Definitions.* As used in this clause—

*Long-term contract* means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has been extended for a cumulative period not to exceed six months under the clause at 52.217-8, Option to

Extend Services, or other appropriate authority.

*Small business concern* means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (c) of this clause. Such a concern is “not dominant in its field of operation” when it does not exercise a controlling or major influence on a national basis in a kind of business activity in which a number of business concerns are primarily engaged. In determining whether dominance exists, consideration shall be given to all appropriate factors, including volume of business, number of employees, financial resources, competitive status or position, ownership or control of materials, processes, patents, license agreements, facilities, sales territory, and nature of business activity.

(b) If the Contractor represented that it was a small business concern prior to award of this contract, the Contractor shall rerepresent its size status according to paragraph (e) of this clause or, if applicable, paragraph (g) of this clause, upon the occurrence of any of the following:

(1) Within 30 days after execution of a novation agreement or within 30 days after modification of the contract to include this clause, if the novation agreement was executed prior to inclusion of this clause in the contract.

(2) Within 30 days after a merger or acquisition that does not require a novation or within 30 days after modification of the contract to include this clause, if the merger or acquisition occurred prior to inclusion of this clause in the contract.

(3) For long-term contracts—

(i) Within 60 to 120 days prior to the end of the fifth year of the contract; and

(ii) Within 60 to 120 days prior to the date specified in the contract for exercising any option thereafter.

(c) The Contractor shall rerepresent its size status in accordance with the size standard in effect at the time of this rerepresentation that corresponds to the North American Industry Classification System (NAICS) code assigned to this contract. The small business size standard corresponding to this NAICS code can be found at <http://www.sba.gov/content/table-small-business-size-standards>.

(d) The small business size standard for a Contractor providing a product which it does not manufacture itself, for a contract other than a construction or service contract, is 500 employees.

(e) Except as provided in paragraph (g) of this clause, the Contractor shall make the rerepresentation required by paragraph (b) of this clause by validating or updating all its representations in the Representations and Certifications section of the System for Award Management (SAM) and its other data in SAM, as necessary, to ensure that they reflect the Contractor’s current status. The Contractor shall notify the contracting office in writing within the timeframes specified in paragraph (b) of this clause that the data have been validated or updated, and provide the date of the validation or update.

(f) If the Contractor represented that it was other than a small business concern prior to award of this contract, the Contractor may, but is not required to, take the actions required by paragraphs (e) or (g) of this clause.

(g) If the Contractor does not have representations and certifications in SAM, or does not have a

representation in SAM for the NAICS code applicable to this contract, the Contractor is required to complete the following rerepresentation and submit it to the contracting office, along with the contract number and the date on which the rerepresentation was completed:

The Contractor represents that it  is,  is not a small business concern under NAICS Code \_\_\_\_\_ assigned to contract number \_\_\_\_\_.

[Contractor to sign and date and insert authorized signer's name and title].

**I-7 52.222-55 Minimum Wages Under Executive Order 13658. (Dec 2015)**

(a) *Definitions.* As used in this clause--

"United States" means the 50 states and the District of Columbia.

"Worker"—

(1) Means any person engaged in performing work on, or in connection with, a contract covered by Executive Order 13658, and—

(i) Whose wages under such contract are governed by the Fair Labor Standards Act (29 U.S.C. chapter 8), the Service Contract Labor Standards statute (41 U.S.C. chapter 67), or the Wage Rate Requirements (Construction) statute (40 U.S.C. chapter 31, subchapter IV);

(ii) Other than individuals employed in a bona fide executive, administrative, or professional capacity, as those terms are defined in 29 CFR part 541; and

(iii) Regardless of the contractual relationship alleged to exist between the individual and the employer.

(2) Includes workers performing on, or in connection with, the contract whose wages are calculated pursuant to special certificates issued under 29 U.S.C. 214(c).

(3) Also includes any person working on, or in connection with, the contract and individually registered in a bona fide apprenticeship or training program registered with the Department of Labor's Employment and Training Administration, Office of Apprenticeship, or with a State Apprenticeship Agency recognized by the Office of Apprenticeship.

(b) *Executive Order Minimum Wage rate.*

(1) The Contractor shall pay to workers, while performing in the United States, and performing on, or in connection with, this contract, a minimum hourly wage rate of \$10.10 per hour beginning January 1, 2015.

(2) The Contractor shall adjust the minimum wage paid, if necessary, beginning January 1, 2016, and annually thereafter, to meet the applicable annual E.O. minimum wage. The Administrator of the Department of Labor's Wage and Hour Division (the Administrator) will publish annual determinations in the Federal Register no later than 90 days before the effective date of the new E.O. minimum wage rate. The Administrator will also publish the applicable E.O. minimum wage on [www.wdol.gov](http://www.wdol.gov) (or any successor Web site) and a general notice on all wage determinations issued under the Service Contract Labor Standards statute or the Wage Rate Requirements (Construction) statute, that will provide information on the E.O. minimum wage and how to

obtain annual updates. The applicable published E.O. minimum wage is incorporated by reference into this contract.

(3)

(i) The Contractor may request a price adjustment only after the effective date of the new annual E.O. minimum wage determination. Prices will be adjusted only for increased labor costs (including subcontractor labor costs) as a result of an increase in the annual E.O. minimum wage, and for associated labor costs (including those for subcontractors). Associated labor costs shall include increases or decreases that result from changes in social security and unemployment taxes and workers' compensation insurance, but will not otherwise include any amount for general and administrative costs, overhead, or profit.

(ii) Subcontractors may be entitled to adjustments due to the new minimum wage, pursuant to paragraph (b)(2). Contractors shall consider any subcontractor requests for such price adjustment.

(iii) The Contracting Officer will not adjust the contract price under this clause for any costs other than those identified in paragraph (b)(3)(i) of this clause, and will not provide duplicate price adjustments with any price adjustment under clauses implementing the Service Contract Labor Standards statute or the Wage Rate Requirements (Construction) statute.

(4) The Contractor warrants that the prices in this contract do not include allowance for any contingency to cover increased costs for which adjustment is provided under this clause.

(5) A pay period under this clause may not be longer than semi-monthly, but may be shorter to comply with any applicable law or other requirement under this contract establishing a shorter pay period. Workers shall be paid no later than one pay period following the end of the regular pay period in which such wages were earned or accrued.

(6) The Contractor shall pay, unconditionally to each worker, all wages due free and clear without subsequent rebate or kickback. The Contractor may make deductions that reduce a worker's wages below the E.O. minimum wage rate only if done in accordance with 29 CFR 10.23, Deductions.

(7) The Contractor shall not discharge any part of its minimum wage obligation under this clause by furnishing fringe benefits or, with respect to workers whose wages are governed by the Service Contract Labor Standards statute, the cash equivalent thereof.

(8) Nothing in this clause shall excuse the Contractor from compliance with any applicable Federal or State prevailing wage law or any applicable law or municipal ordinance establishing a minimum wage higher than the E.O. minimum wage. However, wage increases under such other laws or municipal ordinances are not subject to price adjustment under this subpart.

(9) The Contractor shall pay the E.O. minimum wage rate whenever it is higher than any applicable collective bargaining agreement(s) wage rate.

(10) The Contractor shall follow the policies and procedures in 29 CFR 10.24(b) and 10.28 for treatment of workers engaged in an occupation in which they customarily and regularly receive more than \$30 a month in tips.

(c)

(1) This clause applies to workers as defined in paragraph (a). As provided in that definition--

(i) Workers are covered regardless of the contractual relationship alleged to exist between the contractor or subcontractor and the worker;

(ii) Workers with disabilities whose wages are calculated pursuant to special certificates issued under 29 U.S.C. 214(c) are covered; and

(iii) Workers who are registered in a bona fide apprenticeship program or training program registered with the Department of Labor's Employment and Training Administration, Office of Apprenticeship, or with a State Apprenticeship Agency recognized by the Office of Apprenticeship, are covered.

(2) This clause does not apply to--

(i) Fair Labor Standards Act (FLSA)-covered individuals performing in connection with contracts covered by the E.O., i.e. those individuals who perform duties necessary to the performance of the contract, but who are not directly engaged in performing the specific work called for by the contract, and who spend less than 20 percent of their hours worked in a particular workweek performing in connection with such contracts;

(ii) Individuals exempted from the minimum wage requirements of the FLSA under 29 U.S.C. 213(a) and 214(a) and (b), unless otherwise covered by the Service Contract Labor Standards statute, or the Wage Rate Requirements (Construction) statute. These individuals include but are not limited to--

(A) Learners, apprentices, or messengers whose wages are calculated pursuant to special certificates issued under 29 U.S.C. 214(a).

(B) Students whose wages are calculated pursuant to special certificates issued under 29 U.S.C. 214(b).

(C) Those employed in a bona fide executive, administrative, or professional capacity (29 U.S.C. 213(a)(1) and 29 CFR part 541).

(d) *Notice.* The Contractor shall notify all workers performing work on, or in connection with, this contract of the applicable E.O. minimum wage rate under this clause. With respect to workers covered by the Service Contract Labor Standards statute or the Wage Rate Requirements (Construction) statute, the Contractor may meet this requirement by posting, in a prominent and accessible place at the worksite, the applicable wage determination under those statutes. With respect to workers whose wages are governed by the FLSA, the Contractor shall post notice, utilizing the poster provided by the Administrator, which can be obtained at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts), in a prominent and accessible place at the worksite. Contractors that customarily post notices to workers electronically may post the notice electronically provided the electronic posting is displayed prominently on any Web site that is maintained by the contractor, whether external or internal, and customarily used for notices to workers about terms and conditions of employment.

(e) *Payroll Records.*

(1) The Contractor shall make and maintain records, for three years after completion of the work, containing the following information for each worker:

- (i) Name, address, and social security number;
- (ii) The worker's occupation(s) or classification(s);
- (iii) The rate or rates of wages paid;
- (iv) The number of daily and weekly hours worked by each worker;
- (v) Any deductions made; and
- (vi) Total wages paid.

(2) The Contractor shall make records pursuant to paragraph (e)(1) of this clause available for inspection and transcription by authorized representatives of the Administrator. The Contractor shall also make such records available upon request of the Contracting Officer.

(3) The Contractor shall make a copy of the contract available, as applicable, for inspection or transcription by authorized representatives of the Administrator.

(4) Failure to comply with this paragraph (e) shall be a violation of 29 CFR 10.26 and this contract. Upon direction of the Administrator or upon the Contracting Officer's own action, payment shall be withheld until such time as the noncompliance is corrected.

(5) Nothing in this clause limits or otherwise modifies the Contractor's payroll and recordkeeping obligations, if any, under the Service Contract Labor Standards statute, the Wage Rate Requirements (Construction) statute, the Fair Labor Standards Act, or any other applicable law.

(f) *Access.* The Contractor shall permit authorized representatives of the Administrator to conduct investigations, including interviewing workers at the worksite during normal working hours.

(g) *Withholding.* The Contracting Officer, upon his or her own action or upon written request of the Administrator, will withhold funds or cause funds to be withheld, from the Contractor under this or any other Federal contract with the same Contractor, sufficient to pay workers the full amount of wages required by this clause.

(h) *Disputes.* Department of Labor has set forth in 29 CFR 10.51, Disputes concerning contractor compliance, the procedures for resolving disputes concerning a contractor's compliance with Department of Labor regulations at 29 CFR part 10. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. These disputes include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the Department of Labor, or the workers or their representatives.

(i) *Antiretaliation.* The Contractor shall not discharge or in any other manner discriminate against any worker because such worker has filed any complaint or instituted or caused to be instituted any proceeding under or related to compliance with the E.O. or this clause, or has testified or is about to testify in any such proceeding.

(j) *Subcontractor compliance.* The Contractor is responsible for subcontractor compliance with the requirements of this clause and may be held liable for unpaid wages due subcontractor workers.

(k) *Subcontracts.* The Contractor shall include the substance of this clause, including this paragraph (k) in all subcontracts, regardless of dollar value, that are subject to the Service Contract Labor Standards statute or the Wage Rate Requirements (Construction) statute, and are to be performed in whole or in part in the United States.

**I-8 52.222-6 Davis-Bacon Act. (MAY 2014)**

General Decision Number: UT160092 dated 03/04/2016 UT92 applies to the residential work on this project.

**I-9 52.223-2 Affirmative Procurement of Biobased Products Under Service and Construction Contracts (SEPT 2013)**

(a) In the performance of this contract, the contractor shall make maximum use of biobased products that are United States Department of Agriculture (USDA)-designated items unless—

(1) The product cannot be acquired—

(i) Competitively within a time frame providing for compliance with the contract performance schedule;

(ii) Meeting contract performance requirements; or

(iii) At a reasonable price.

(2) The product is to be used in an application covered by a USDA categorical exemption (see 7 CFR 3201.3(e)). For example, all USDA-designated items are exempt from the preferred procurement requirement for the following:

(i) Spacecraft system and launch support equipment.

(ii) Military equipment, *i.e.*, a product or system designed or procured for combat or combat-related missions.

(b) Information about this requirement and these products is available at <http://www.biopreferred.gov>.

(c) In the performance of this contract, the Contractor shall—

(1) Report to <http://www.sam.gov>, with a copy to the Contracting Officer, on the product types and dollar value of any USDA-designated biobased products purchased by the Contractor during the previous Government fiscal year, between October 1 and September 30; and

(2) Submit this report no later than—

(i) October 31 of each year during contract performance; and

(ii) At the end of contract performance.

**I-10 52.225-9 Buy American--Construction Materials (MAY 2014)**

(a) *Definitions.* As used in this clause--

“Commercially available off-the-shelf (COTS) item”—

(1) Means any item of supply (including construction material) that is--

(i) A commercial item (as defined in paragraph (1) of the definition at FAR 2.101);

(ii) Sold in substantial quantities in the commercial marketplace; and

(iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and

(2) Does not include bulk cargo, as defined in 46 U.S.C 40102(4), such as agricultural products and petroleum products.

"Component" means any article, material, or supply incorporated directly into construction materials.

"Construction material" means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

"Cost of components" means--

(3) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the end product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(4) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

"Domestic construction material" means--

(1) An unmanufactured construction material mined or produced in the United States;

(2) A construction material manufactured in the United States, if—

(i) The cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic; or

(ii) The construction material is a COTS item.

"Foreign construction material" means a construction material other than a domestic construction material.

"United States" means the 50 States, the District of Columbia, and outlying areas.

(b) *Domestic preference.*

(1) This clause implements 41 U.S.C. chapter 83, Buy American, by providing a preference for domestic construction material. In accordance with 41 U.S.C. 1907, the component test of the Buy American statute is waived for construction material that is a COTS item (See FAR 12.505(a)(2)). The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) This requirement does not apply to information technology that is a commercial item or to the construction materials or components listed by the Government as follows:

None

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(3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that--

(i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American statute is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

(ii) The application of the restriction of the Buy American statute to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) *Request for determination of inapplicability of the Buy American statute.*

(1) (i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including--

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American statute

applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American statute applies, use of foreign construction material is noncompliant with the Buy American statute.

(d) *Data*. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison			
<u>Construction Material Description</u>	<u>Unit of Measure</u>	<u>Quantity</u>	<u>Price (Dollars)*</u>
<i>Item 1:</i>			
Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____
<i>Item 2:</i>			
Foreign construction material	_____	_____	_____
Domestic construction material			

[List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]  
 [Include other applicable supporting information.]  
 [\* Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).]

**I-11 52.233-2 Service of Protest. (SEP 2006)**

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO) shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from Elouise Fowler, 2222 West 2300 South, Salt Lake City, UT 84119-2020.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

**I-12 52.236-1 Performance of Work by the Contractor. (APR 1984)**

The Contractor shall perform on the site, and with its own organization, work equivalent to at least twenty (20) percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage

of the Government.

**I-13 52.236-7 Permits and Responsibilities (NOV 1991)**

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

**I-14 52.236-26 Preconstruction Conference. (FEB 1995)**

If the Contracting Officer decides to conduct a preconstruction conference, the successful offeror will be notified and will be required to attend. The Contracting Officer's notification will include specific details regarding the date, time, and location of the conference, any need for attendance by subcontractors, and information regarding the items to be discussed. Date and time to be determined, normally within 10 day of issuance of Notice To Proceed.

**I-15 52.252-6 Authorized Deviations in Clauses (APR 1984)**

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION):" after the date of the clause.

(b) The use in this solicitation or contract of any Agriculture Acquisition Regulation (48 CFR Chapter 4) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

**I-16 Order of Precedence--Construction**

Any inconsistency in this solicitation or contract shall be resolved by giving precedence in the following order:

- (a) The Schedule (excluding the Specifications) (Sections A-H).
- (b) The representations and other instructions (Sections K and L).
- (c) Contract clauses (Section I).
- (d) Special Project Specifications.
- (e) General Specifications.
- (f) Drawings and Exhibits (Section J).

### SECTION J - List of Documents, Exhibits, and Other Attachments

**Wage Rate Requirements (Construction) Statute:** If this is a contract in excess of \$2,000, the Wage Rate Requirements (Construction) statute requires the Contractor to pay certain minimum wages and benefits to employees working under this contract. These required minimum wages are stated in the attached Wage Decision. **Pursuant to Executive Order 13658, the minimum hourly wage rate required to be paid to workers performing on, or in connection with, contracts and subcontracts subject to FAR Subpart 22.19, is at least \$10.10 per hour beginning January 1, 2015, and beginning January 1, 2016, and annually thereafter, an amount determined by the Secretary of Labor. See FAR Subpart 22.19.**

**The following attachments are a part of this solicitation and any resulting contract (see separate document(s)).**

Document 1	Experience Questionnaire	Page 32-34
Document 2	AGAR 104B	Page 35
Document 3	Wage Determination UT160092 03/04/2016, UT92	Page 36-39
Document 4	Contractor Camping Permit	Page 40

Attachment 1	General Specs	---
Attachment 2	Signed Cowpuncher Drawings	---

USDA Forest Service <b>DOCUMENT 1</b>  <p style="text-align: center;"><b><u>EXPERIENCE QUESTIONNAIRE</u></b></p> Instructions: See Box 11, Remarks, if extra space is needed to answer any item below, Mark "X" in appropriate boxes.	1. Contractor Name, Address, and Telephone Number	
2. Submitted to (Office Name and Address)	3. Business <input type="checkbox"/> Company <input type="checkbox"/> Co-partnership <input type="checkbox"/> Corporation <input type="checkbox"/> Individual <input type="checkbox"/> Non-profit Organization	4. How many years do you or your firm have in the line of work contemplated by this solicitation?

5. How many years experience have you or your business had as a (a) prime contractor \_\_\_\_ and/or (b) sub-contractor \_\_\_\_?

6. List below the projects your business has completed within the last three years:

Contract Amount	Type of Project	Date Completed	Name, Address, and Telephone No. of Owner/Person to Contact for Project Information

7. List below all of your firm's contractual commitments running concurrently with the work contemplated by this solicitation:

Contract Number	Dollar Amt. of Award	Name, Address, and Telephone No. of Business/Government Agency Involved	Awarded (Units)	Percent Completed	Date Contract Complete

8a. Have you ever failed to complete any work awarded to you?     Yes     No

8b. Has work ever been completed by performance bond?             Yes     No

8c. Did you look at the project site(s) on-the-ground?                 Yes     No

8d. If "Yes" to either item 8a. or 8b., specify location(s) and reason(s) why:

**EXPERIENCE QUESTIONNAIRE CONTINUED**

9. Employees and equipment that will be available for this project:

- a. (1) Minimum number of employees: \_\_\_\_\_ and (2) Maximum number of employees: \_\_\_\_\_
- b. Are employees regularly on your payroll:     Yes     No
- c. Specify equipment available for this contract: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- d. Estimate rate of progress below (such as 2.0 acres/man/day):  
 (1) Minimum progress rate: \_\_\_\_\_ and (2) Maximum progress rate: \_\_\_\_\_

10. List below the experience of the principal individuals of your business (Who will directly be involved in this contract?)

Individual's Name	Present Position	Years of Experience	Magnitude and Type of Work

11. Remarks -- Specify Box Numbers (*Attach sheets if extra space is needed to fully answer any above question.*):

**NOTE: PLEASE PROVIDE ANY ADDITIONAL INFORMATION THAT WILL HELP EVALUATE YOUR ABILITY TO SUCCESSFULLY COMPLETE THIS PROJECT.**

<p><b>CERTIFICATION</b></p> <p><b>I certify that all of the statements made by me are complete and correct to the best of my knowledge, and that any persons named as references are authorized to furnish the Forest Service with any information needed to verify my capability to perform this project.</b></p>	12a. CERTIFYING OFFICIAL'S NAME AND TITLE	
	12b. SIGNATURE (sign in ink)	12c. DATE

**EXPERIENCE QUESTIONNAIRE CONTINUED**

\*(Biobased Products: See FAR Subpart 23.4; – required in operations and maintenance (bldg. mtce) procurements as well as all construction procurements. Also see list of designated items at <http://www.biopreferred.gov>.) – CO’s edit as needed

**The following is added:**

**Biobased Products**

Offeror shall identify the biobased products to be purchased and used under this contract. For each biobased product, specify the name of the manufacturer, cost of each product, and the intended use of each of the materials that are to be used in carrying out the requirements of the contract. For each biobased product, the Offeror shall specify the percentage of biobased content, and for the USDA-designated biobased content products, the Offeror shall demonstrate that the products to be used under this contract will contain the percentage specified in the USDA recommendations or the highest level of biobased material practicable, consistent with USDA’s recommended percentages of biobased content.

The Offeror shall document prior experience in specifying, purchasing, using, and installing biobased products. The Offeror shall provide a list of all relevant contracts over the past 3 years involving the specification, purchase, and/or use of biobased products. The Offeror shall include a list of the biobased products specified, purchased, used, and installed.

The above information shall be provided for all proposed subcontractors in the same format and level of detail as prescribed for the Offeror.

Attach additional sheets, as necessary.

**AGAR Procurement Advisory 104 B**

**DOCUMENT 2**

**AGAR 452.209-70 Representation by Corporations Regarding an Unpaid Delinquent Tax Liability or a Felony Conviction Under Any Federal Law – Fiscal Year 2015 Appropriations and Beyond (Deviation 2015-01)**

(Contractor is required to fill out this form and return with any quote submitted for this solicitation)

(a) In accordance with sections 744 and 745 of Division E, Title VII, of the Consolidate and Further Continuing Appropriations Act, 2015 (Pub.L.113-235), none of the funds made available by this or any other act may be used to enter into a contract with any corporation that –

- (1) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless the agency has considered suspension or debarment of the corporation and has made a determination that this further action is not necessary to protect the interests of the Government; or
- (2) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless a Federal agency has considered suspension or debarment of the corporation and has made a determination that this further action is not necessary to protect the interest of the Government.

(b) The Offeror represents that –

- (1) It is [ ], is not [ ] (check one) a corporation that has any unpaid Federal liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collection the tax liability,
- (2) It is [ ], is not [ ] (check one) a corporation that was convicted of a felony criminal violation under a Federal law within the preceding 24 months. (end of provisions)

Name of Company:	Date:
Name of Company Representative (print):	
Signature of Representative:	
Duns No:	

**Document 3 – Wage Determination**

General Decision Number: UT160092 03/04/2016 UT92  
 Superseded General Decision Number: UT20150092  
 State: Utah  
 Construction Type: Building  
 County: Garfield County in Utah.

**BUILDING CONSTRUCTION PROJECTS** (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/08/2016
1	03/04/2016

BOIL0004-001 01/01/2014		
	Rates	Fringes
BOILERMAKER.....	\$ 32.22	27.07
-----		
ELEC0354-003 06/01/2015		
	Rates	Fringes
ELECTRICIAN (Excluding Low Voltage Wiring).....	\$ 30.39	11.35
-----		
* SFUT0669-003 01/01/2016		
	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 31.14	17.70
-----		
SHEE0312-001 07/01/2014		
	Rates	Fringes
SHEET METAL WORKER (HVAC Duct Installation Only)...	\$ 32.11	11.40
-----		
SUUT2012-003 07/29/2014		
	Rates	Fringes
BRICKLAYER.....	\$ 23.88	0.00
CARPENTER (Acoustical Ceiling Installation Only).....	\$ 20.64	0.80
CARPENTER, Excludes Acoustical Ceiling Installation.....	\$ 19.51	4.71
CEMENT MASON/CONCRETE FINISHER.....	\$ 21.11	0.00
ELECTRICIAN (Low Voltage Wiring Only).....	\$ 23.36	6.06
INSTALLER - SIDING (METAL/ALUMINUM/VINYL).....	\$ 14.75	0.00
INSULATOR - BATT.....	\$ 13.77	0.00
IRONWORKER, REINFORCING.....	\$ 15.00	0.00

IRONWORKER, STRUCTURAL.....	\$ 17.41	6.13
LABORER: Common or General.....	\$ 10.03	0.00
LABORER: Mason Tender - Brick.....	\$ 16.54	0.00
OPERATOR:		
Backhoe/Excavator/Trackhoe.....	\$ 16.41	0.79
PLUMBER.....	\$ 24.00	4.62
TILE FINISHER.....	\$ 17.00	0.00
TILE SETTER.....	\$ 19.40	0.00

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

**Union Rate Identifiers**

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

**Survey Rate Identifiers**

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

**Union Average Rate Identifiers**

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE:

UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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**Document 04 Contractor Camping Permit**

USDA-FS NATIONAL FOREST  
CONTRACTOR CAMPING PERMIT – SAMPLE

\* \_\_\_\_\_ Ranger District  
This permit is revocable and non-transferable.

This permit is issued pursuant to the provisions of the \*,  
Contract number \* \_\_\_\_\_.

Permission is hereby granted to \_\_\_\_\_, of \* \_\_\_\_\_, hereinafter called the permittee, to camp,  
subject to the conditions set out below, on the following

National Forest lands: \_\_\_\_\_. See attached map.

1. Occupancy and use under this permit shall begin \* \_\_\_\_\_ (Date).
2. The permittee shall maintain all improvements and premises to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the forest officer in charge.
3. The permittee shall provide sanitary facilities to accommodate all camp refuse, toilet requirements, and equipment servicing refuse. The debris shall be disposed of on a timely schedule by the permittee in an approved county or municipal garbage dump off National Forest lands.
4. Unless otherwise agreed, no camping shall be permitted within developed recreation sites or along primary recreation roads.
5. No camping will be permitted within 100 feet of live streams.
6. The permittee, in exercising the privileges granted by this permit, shall comply with the regulations of the Department of Agriculture and all Federal, State, county, and municipal laws, ordinances, or regulations which are applicable to the area or operations covered by this permit.
7. The permittee shall take all reasonable precautions to prevent and suppress forest fires. No material shall be disposed of by Burning in open fires during the closed season established by law or regulation without a written permit from the forest officer In charge or his authorized agent.
8. Upon abandonment, termination, revocation, or cancellation of this permit, the permittee shall remove within a reasonable time all structures and improvements except those owned by the United States, and shall restore the site, unless otherwise agreed upon in writing or in this permit. If the permittee fails to remove all structures or improvements within a reasonable period, they shall become the property of the United States, but that will not relieve the permittee of liability for the cost of their removal and restoration of the site.
9. This permit shall terminate on \_\_\_\_\_, unless extended in writing by the Forest Service. It may be terminated upon breach of any condition herein or at the discretion of the forest officer in charge.
10. This permit is accepted subject to the conditions set forth above and to conditions N/A to \* \_\_\_\_\_, attached hereto and made a part of this permit.

Signature of Officer Issuing Permit: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

(I)(We) have read the foregoing permit and agree to accept and abide by its terms and conditions.

Signature of Permittee: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

**SECTION K - Representations, Certifications, and Other Statements of Offerors****K-1 52.204-8 -- Annual Representations and Certifications. (Feb 2016)**

(a)

(1) The North American Industry classification System (NAICS) code for this acquisition is 238110.

(2) The small business size standard is \$15.0.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b)

(1) If the provision at 52.204-7, System for Award Management, is included in this solicitation, paragraph (d) of this provision applies.

(2) If the provision at 52.204-7 is not included in this solicitation, and the offeror is currently registered in the System for Award Management (SAM), and has completed the Representations and Certifications section of SAM electronically, the offeror may choose to use paragraph (d) of this provision instead of completing the corresponding individual representations and certification in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

(i) Paragraph (d) applies.

(ii) Paragraph (d) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c)

(1) The following representations or certifications in SAM are applicable to this solicitation as indicated:

(i) 52.203-2, Certificate of Independent Price Determination. This provision applies to solicitations when a firm-fixed-price contract or fixed-price contract with economic price adjustment is contemplated, unless—

(A) The acquisition is to be made under the simplified acquisition procedures in Part 13;

(B) The solicitation is a request for technical proposals under two-step sealed bidding procedures; or

(C) The solicitation is for utility services for which rates are set by law or regulation.

(ii) 52.203-11, Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. This provision applies to solicitations expected to exceed \$150,000.

(iii) 52.204-3, Taxpayer Identification. This provision applies to solicitations that do not include the provision at 52.204-7, System for Award Management.

(iv) 52.204-5, Women-Owned Business (Other Than Small Business). This provision applies to solicitations that—

(A) Are not set aside for small business concerns;

(B) Exceed the simplified acquisition threshold; and

(C) Are for contracts that will be performed in the United States or its outlying areas.

(v) 52.209-2, Prohibition on Contracting with Inverted Domestic Corporations—Representation.

(vi) 52.209-5; Certification Regarding Responsibility Matters. This provision applies to solicitations where the contract value is expected to exceed the simplified acquisition threshold.

(vii) 52.209-11, Representation by Corporations Regarding Delinquent Tax Liability or a Felony Conviction under any Federal Law. This provision applies to all solicitations.

(viii) 52.214-14, Place of Performance--Sealed Bidding. This provision applies to invitations for bids except those in which the place of performance is specified by the Government.

(ix) 52.215-6, Place of Performance. This provision applies to solicitations unless the place of performance is specified by the Government.

(x) 52.219-1, Small Business Program Representations (Basic & Alternate I). This provision applies to solicitations when the contract will be performed in the United States or its outlying areas.

(A) The basic provision applies when the solicitations are issued by other than DoD, NASA, and the Coast Guard.

(B) The provision with its Alternate I applies to solicitations issued by DoD, NASA, or the Coast Guard.

(xi) 52.219-2, Equal Low Bids. This provision applies to solicitations when contracting by sealed bidding and the contract will be performed in the United States or its outlying areas.

(xii) 52.222-22, Previous Contracts and Compliance Reports. This provision applies to solicitations that include the clause at 52.222-26, Equal Opportunity.

(xiii) 52.222-25, Affirmative Action Compliance. This provision applies to solicitations, other than those for construction, when the solicitation includes the clause at 52.222-26, Equal Opportunity.

(xiv) 52.222-38, Compliance with Veterans' Employment Reporting Requirements. This provision applies to solicitations when it is anticipated the contract award will exceed the simplified acquisition threshold and the contract is not for acquisition of commercial items.

(xv) 52.223-1, Biobased Product Certification. This provision applies to solicitations that require the delivery or specify the use of USDA-designated items; or include the clause at 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts.

(xvi) 52.223-4, Recovered Material Certification. This provision applies to solicitations that are for, or specify the use of, EPA- designated items.

(xvii) 52.225-2, Buy American Certificate. This provision applies to solicitations containing the clause at 52.225-1.

(xviii) 52.225-4, Buy American--Free Trade Agreements--Israeli Trade Act Certificate. (Basic, Alternates I, II, and III.) This provision applies to solicitations containing the clause at 52.225- 3.

(A) If the acquisition value is less than \$25,000, the basic provision applies.

(B) If the acquisition value is \$25,000 or more but is less than \$50,000, the provision with its Alternate I applies.

(C) If the acquisition value is \$50,000 or more but is less than \$77,533, the provision with its Alternate II applies.

(D) If the acquisition value is \$79,507 or more but is less than \$100,000, the provision with its Alternate III applies.

(xix) 52.225-6, Trade Agreements Certificate. This provision applies to solicitations containing the clause at 52.225-5.

(xx) 52.225-20, Prohibition on Conducting Restricted Business Operations in Sudan--Certification. This provision applies to all solicitations.

(xxi) 52.225-25, Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran—Representation and Certification. This provision applies to all solicitations.

(xxii) 52.226-2, Historically Black College or University and Minority Institution Representation. This provision applies to solicitations for research, studies, supplies, or services of the type normally acquired from higher educational institutions.

(2) The following representations or certifications are applicable as indicated by the Contracting Officer:

(i) 52.204-17, Ownership or Control of Offeror.

(ii) 52.222-18, Certification Regarding Knowledge of Child Labor for Listed End Products.

(iii) 52.222-48, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Certification.

(iv) 52.222-52 Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services--Certification.

(v) 52.223-9, with its Alternate I, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (Alternate I only).

(vi) 52.227-6, Royalty Information.

(A) Basic.

(B) Alternate I.

(vii) 52.227-15, Representation of Limited Rights Data and Restricted Computer Software.

(d) The offeror has completed the annual representations and certifications electronically via the SAM Web site accessed through <https://www.acquisition.gov> . After reviewing the SAM database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically that apply to this solicitation as indicated in paragraph (c) of this provision have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [*offeror to insert changes, identifying change by clause number, title, date*]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR Clause	Title	Date	Change

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on SAM.

## SECTION L - Instructions, Conditions, and Notices to Offerors or Respondents

### L-1 52.252-1 Solicitation Provisions Incorporated by Reference. (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

Federal Acquisition Regulations [www.acquisition.gov/far/](http://www.acquisition.gov/far/)

#### FEDERAL ACQUISITION REGULATIONS (48 CFR CHAPTER 1)

52.204-13	Contractor Code of Business Ethics and Conduct. (OCT 2015)
52.215-1	Instructions to Offerors - Competitive Acquisition. (JAN 2004)
52.236-28	Preparation of Proposals – Construction (Oct 1997)
452.204-70	Inquiries. (FEB 1988)

Inquiries and all correspondence concerning this solicitation should be submitted in writing to the Contracting Officer. Offerors should contact only the Contracting Officer issuing the solicitation about any aspect of this requirement prior to contract award.

### L-2 52.215-5 Facsimile Proposals (OCT 1997)

(a) *Definition.* "Facsimile proposal," as used in this provision, means a proposal, revision or modification of a proposal, or withdrawal of a proposal that is transmitted to and received by the Government via facsimile machine.

(b) Offerors may submit facsimile proposals as responses to this solicitation. Facsimile proposals are subject to the same rules as paper proposals.

(c) The telephone number of receiving facsimile equipment is: \* 801-975-3483, Attn: Lu Fowler  
Email will be accepted: [efowler@fs.fed.us](mailto:efowler@fs.fed.us)

(d) If any portion of a facsimile proposal received by the Contracting Officer is unreadable to the degree that conformance to the essential requirements of the solicitation cannot be ascertained from the document-

(1) The Contracting Officer immediately shall notify the offeror and permit the offeror to resubmit the proposal;

(2) The method and time for resubmission shall be prescribed by the Contracting Officer after consultation with the offeror; and

(3) The resubmission shall be considered as if it were received at the date and time of the original unreadable submission for the purpose of determining timeliness, provided the offeror complies with the time and format requirements for resubmission prescribed by the Contracting Officer.

(e) The Government reserves the right to make award solely on the facsimile proposal. However, if requested to do so by the Contracting Officer, the apparently successful offeror promptly shall submit the complete original signed proposal.

**L-3 52.216-1 Type of Contract. (APR 1984)**

Firm fixed-price contract resulting from this solicitation.

**L-4 52.222-5 Construction Wage Rate Requirements—Secondary Site of the Work (MAY 2014)**

(a) (1) The offeror shall notify the Government if the offeror intends to perform work at any secondary site of the work, as defined in paragraph (a)(1)(ii) of the FAR clause at 52.222-6, Construction Wage Rate Requirements, of this solicitation.

(2) If the offeror is unsure if a planned work site satisfies the criteria for a secondary site of the work, the offeror shall request a determination from the Contracting Officer.

(b) (1) If the wage determination provided by the Government for work at the primary site of the work is not applicable to the secondary site of the work, the offeror shall request a wage determination from the Contracting Officer.

(2) The due date for receipt of offers will not be extended as a result of an offeror's request for a wage determination for a secondary site of the work.

**L-5 52.222-23 Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity for Construction. (FEB 1999)**

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade

5.1%

Goals for Female Participation for Each Trade

6.9%

These goals are applicable to all of the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the *Federal Register* in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2)

specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the –

- (1) Name, address, and telephone number of the subcontractor;
- (2) Employer's identification number of the subcontractor;
- (3) Estimated dollar amount of the subcontract;
- (4) Estimated starting and completion dates of the subcontract; and
- (5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is **Utah (State), Garfield County, Escalante (City of)**.  
(End of provision)

**L- 6    52.225-10    Notice of Buy American Requirement--Construction Materials (MAY 2014)**

(a) *Definitions.* "Commercially available off-the-shelf (COTS) item," "construction material," "domestic construction material," and "foreign construction material," as used in this provision, are defined in the clause of this solicitation entitled "Buy American--Construction Materials" (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) *Requests for determinations of inapplicability.* An offeror requesting a determination regarding the inapplicability of the Buy American statute should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of the Buy American statute before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) *Evaluation of offers.*

(1) The Government will evaluate an offer requesting exception to the requirements of the Buy American statute, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) *Alternate offers.*

(1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

- (i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or
- (ii) May be accepted if revised during negotiations.

**L-7 52.236-27 Site Visit (Construction). (FEB 1995) - Alternate I (FEB 1995)**

**If you have any questions or concerns or to schedule a site visit, please contact the Technical Person to:**

**Technical:** Paul Dastrup, 435-676-9352, [pdastrup@fs.fed.us](mailto:pdastrup@fs.fed.us)  
**Contractual:** Elouise Fowler, 801-975-3367, [efowler@fs.fed.us](mailto:efowler@fs.fed.us)

**L-8 52.252-5 Authorized Deviations in Provisions (APR 1984)**

(a) The use in this solicitation of any Federal Acquisition Regulation (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the provision.

(b) The use in this solicitation of any Agriculture Acquisition Regulation (48 CFR Chapter 4) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

## SECTION M - Evaluation Factors for Award

**EVALUATION CRITERIA INSTRUCTIONS** - Award will be made to the offeror whose proposal is technically acceptable, has the demonstrated competence, and qualifications necessary for the satisfactory performance of this type of contract. Technical capabilities and past performance (non-price factors), when combined will be approximately equal to cost or price.

The technical/price trade-off will not be based on spread between the technical scores but rather on what, in the judgment of the Contracting Officer, specific advantages have been proposed and the value of the advantages as compared to price differentials between offers. The degree of importance of cost as a factor could become greater depending upon the quality of the proposals for other factors evaluated. Where competing proposals are determined to be substantially equal, total cost and other cost factors would become the controlling factors. The critical factor in making any cost/technical trade-offs is not the spread between technical rating, but is rather what it would cost the Government to take advantage of that difference.

This means that award may not necessarily be made to the offeror submitting the lowest proposed price but to an offeror proposing technical advantages that would appear to exceed those needed for the successful performance of the work. Thus the Government reserves the right to make technical/price trade-offs that are in the best interest and to the advantage of the Government.

Proposals should be submitted initially on the most favorable terms from a price and technical standpoint, which the offeror can submit to the Government. However, the Government may, after evaluation of proposals, conduct further oral or written discussions as appropriate, with all offerors whose proposals are within a competitive range.

### M-1 EVALUATION FACTORS

The following evaluation factors are listed in descending order of importance.

Failure to adequately address any item or sub-item could remove proposal from consideration and/or reduce your rating.

#### 1. Technical Capability

- a. Technical Approach: Proposal of the contractor's approach that demonstrates the advantages of his/her technical capabilities, including:
  - 1) Schedule for work to ensure timely delivery of specified products and materials to the job site allowing for submittal approval, fabrication, and delivery time to the job site.
  - 2) Strategy to accomplish the work within the time allotted that coincides with acquisition and equipment plans, including timelines, tables, and/or gantt charts showing the proposed progression of the project.
  - 3) Project specific quality control plan for all phase of the project to ensure that the quality required in the specifications is met, including testing and testing frequencies if they exceed contract requirements.
  - 4) Equipment and availability.

b. Experience of Firm and Key Personnel

- 1) Description of the firm's technical abilities, how those abilities were acquired, including experience, training, and education.
- 2) Key Personnel - Descriptions of the availability of key personnel and their ability to perform the work, including relevant experience and technical knowledge, and:
  - a) Name and résumé of superintendent to be assigned to the job;
  - b) Applicable education, training and experience.
  - c) Number of equipment operators. Include applicable training, education, qualifications, and experience.
  - d) Number of laborers, including skilled laborers (welders, electricians, plumbers, etc.). Include applicable training, education, certification, licensing, and experience.
- 3) Subcontracting Plan specifying how subcontractors are to be utilized, each subcontractor's specific skills to be utilized for this project shall be included.

**2. Past Performance**

- a) Relationships & cooperation with customers, including identification and resolution of problems, and concern for customer interest.
- b) Recent relevant contracts which support performance over the past three (3) years.
- c) Minimum of three references who can confirm past performance.

The Government may also obtain past performance information from other than the sources identified by the offeror. Information obtained from the Past Performance Information Retrieval System (PPIRS) database located at <http://www.ppirs.gov> is one of the sources that may be utilized. PPIRS functions as the central warehouse for performance assessment reports received from several Federal performance information collection systems and is sponsored by the DOD E-Business Office and administered by the Naval Sea Logistics Center Detachment Portsmouth.

***NOTE:** In accordance with FAR 15.305, in the case of an offeror without a record of relevant past performance or for whom information on past performance is not available, the offeror will not be evaluated either favorably or unfavorably in this area, but instead will receive a neutral rating in the area of past performance. Offerors that have relevant past performance and plan to supply references, please provide the following: Contractor's name, phone number and relevant work required in this solicitation.*

**3.Price:** Technical capability and past performance when combined are approximately equal to price.

**Section C - Description/Specifications/Statement of Work**  
**GENERAL SPECIFICATIONS**  
**COWPUNCHER GUARD STATION CONCRETE**

1.1 SCOPE OF CONTRACT

- A. This project includes constructing the concrete foundation for the Cowpuncher Guard Station.
- B. The work includes excavation of the crawl space and foundation, providing all equipment, labor and materials necessary to construct the foundation, installing sleeves for water and sewer lines, backfilling around the outside of the structure, and disposal of the excess excavated material on site by spreading and shaping to drain away from the structure.
- C. Optional work that may be awarded includes all work described above associated with:
  - 1. Option 1 – Garage Foundation. This work will include excavation for the footings, providing all equipment, labor and materials necessary to construct the foundation, installation of water and DWV plumbing under the slab, and backfilling and shaping the area adjacent to the garage.
- D. Quantities associated with these options are identified in the Schedule of Items.

1.2 PROJECT LOCATION

- A. The project is located in the Escalante Ranger District of the Dixie National Forest, Garfield County, Utah, in Section 35, T 32S, R 2 E. It is located approximately 19 miles N of Escalante, Utah. The project may be accessed from State Highway 12 and Forest Road 153.

1.3 SITE INFORMATION AND LIMITATIONS

- A. The following site conditions are considered incidental to the contract and the contractor will not be paid directly for any of the following items:
  - 1. Construction sites will be closed to the public during construction. The Forest Service will issue a closure order to the public. The Contractor will be responsible for signing and limiting public access.
  - 2. All construction equipment shall be pressure washed before entering National Forest System lands. The removal of mud and debris from treads, tracks and undercarriage, with emphasis on axles, frame, cross-members, motor mounts, and underneath steps, running boards, and front bumper/brush-guard assemblies will be required. The purpose is to reduce or eliminate the transportation of noxious weeds, which is required by Federal and State regulations.
  - 3. Water is available at the site for construction purposes. There is no power available at the site.

1.4 TRAFFIC CONTROL AND CONSTRUCTION SIGNING

- A. No work that endangers, interferes, or conflicts with traffic or access to work sites shall be performed until a plan for satisfactory warning and handling of traffic has been submitted by the contractor and approved by the COR and Utah Department of Transportation. Construction signing for traffic control shall conform to the Manual of Uniform Traffic Control Devices (MUTCD). All traffic control signs will be placed in areas adequate for a truck pulling a fifth wheel trailer to be turned around. Contractor shall not be paid directly for this item, rather it will be considered incidental to other items of work listed in the Schedule of Items.

#### 1.5 WORK CAMPS, STAGING AND STORAGE AREAS

- A. Areas for staging operations and storage of materials shall be approved by the CO. The Contractor must request in writing for approval from the CO to stage trailers on site.

#### 1.6 INSPECTION OF WORKSITE

- A. The contractor acknowledges they have taken the necessary steps to ascertain the nature and location of work, and have investigated and satisfied themselves as to the general and local conditions that can affect the work or its cost. Any failure of the contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from the responsibility of estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expenses to the government.

#### 1.7 START DATE

- A. April 2016

#### 1.8 CONTRACT TIME

- A. Base Bid: 30 Calendar Days
- B. Option A: 10 additional Calendar Days

#### 1.9 SPECIFICATIONS

- A. The following specifications are attached. Some sections in the schedule of items refer to other sections not listed and are subsidiary to, or are included in payment for other pay items in this contract. These items are considered incidental and no additional compensation will be made.

Section 011250 - Measurement And Payment  
Section 011900 - Mobilization  
Section 013300 - Submittal Procedures  
Section 014100 - Quality Control  
Section 024100 - Waste Material Disposal  
Section 033000 - Cast-In-Place Concrete  
Section 312000 - Earthwork

Section 321204 - Crushed Aggregate Base Or Surface Course

END OF SECTION C  
March 2016

USDA FOREST SERVICE, R-4  
COWPUNCHER GUARD STATION

SECTION 011250 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Measurement and payment for contract work will be made only for and under those pay items included in the Schedule of Items. All other work, labor, materials, equipment, and incidentals necessary to successfully complete the project will be considered as included in the payment for items shown. This section defines the method of measurements and basis of payment for work items listed in the Schedule of Items.
- B. When more than one class, size, type, thickness, etc. is specified in the Schedule of Items for any pay item, suffixes will be added to the item number to differentiate between the pay items.

1.2 DETERMINATION OF QUANTITIES

- A. The following measurements and calculations shall be used to determine contract quantities for payment.
  - 1. For individual construction items, longitudinal and lateral measurements for area computations shall be made horizontally or corrected to horizontal measurement unless otherwise specified. Measurements for geotextiles, netting and erosion control blankets shall be along slope lines.
  - 2. For excavation or embankment volumes, the average end area method shall be used to compute volumes. However, if in the judgment of the Contracting Officer (CO), the average end area method is impractical, measurement shall be made by volume in hauling vehicles or by other three-dimensional methods.
  - 3. For Structures, they shall be measured according to neat lines shown on the drawings or as altered by the CO, in writing, to fit field conditions.
  - 4. For items that are measured by the linear foot, such as pipe culverts, fencing, guardrail, piping, utilities, and underdrains, measurements shall be made parallel to the base or foundation upon which the structures are placed.
  - 5. For aggregates weighed for payment, the tonnage shall not be adjusted for moisture content, unless otherwise provided for.
  - 6. For standard manufactured items (such as fence, wire, plates, rolled shapes, pipe conduits) identified by gauge, weight, section dimensions, and so forth, such identifications shall be considered the nominal weights or dimensions. Unless controlled by tolerances in cited specifications, manufacturer's tolerances shall be accepted.
- B. Earthwork Tolerances - Adjustments of horizontal or vertical alignment, within the tolerances specified in this contract, or shifts of balance points up to 100 feet shall be

made by the contractor as necessary to produce the designed sections and to balance earthwork. Such adjustments shall not be considered as "Changes."

### 1.3 UNITS OF MEASUREMENT

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

1. Acre: Make longitudinal and transverse measurements for area computations horizontally.
2. 50lb Bag: Measurement will be for the actual number of 50lb bags of standard bentonite grout.
3. 94lb Bag: Measurement will be for the actual number of 94lb bags of standard cement or grout.
4. Cubic Yard (CY): A measurement computed by one of the following methods:
  - a. Excavation, Embankment, or Borrow. The measurement computed by the average end area method from measurements made longitudinally along a centerline or reference line.
  - b. Material in Place or Stockpile. The measurement computed using the dimensions of the in-place material.
  - c. Material in the Delivery Vehicle. The measurement computed using measurements of material in the hauling vehicles at the point of delivery. Vehicles shall be loaded to at least their water level capacity. Leveling of the loads may be required when vehicles arrive at the delivery point.
5. Each (EA): One complete unit, which may consist of one or more parts.
6. Gallons (GAL): The quantity shall be measured by any of the following methods:
  - a. Measured volume in container.
  - b. Metered volume by approved metering system.
  - c. Commercially package volume.
7. Hour (HR): Measurement will be for the actual number of hours (or fraction thereof) ordered by the Contracting Officer and performed by the contractor.
8. Linear Foot (LF): Measurement of work along its length from point-to-point; parallel to the base or foundation. Do not measure overlaps.
9. Lump Sum (LS): One complete unit.
10. Mile: Measured horizontally along the centerline of each roadway, approach, or ramp.
11. Pound (LB): For sacked or packaged material, measurement will be the net weight as packed by the manufacturer.
12. Square Foot (SF): Measured on a plane parallel to the surface being measured.
13. Square Yard (SY): Measured on a plane parallel to the surface being measured.
14. Ton: Measured as a short ton consisting of 2,000 pounds.

### 1.4 METHOD OF MEASUREMENT

- A. One of the following methods of measurement for determining final payment is designated on the Schedule of Items for each pay item:
1. ACTUAL QUANTITIES (AQ) - These quantities are determined from actual measurements of completed work.
  2. DESIGNED QUANTITIES (DQ) - These quantities denote the final number or units to be paid for under the terms of the contract. They are based upon the original design data available prior to advertising the project. Original design data include the preliminary survey information, design assumptions, calculations, drawings, and the presentation in the contract. Changes in the number of units shown in the Schedule of Items may be authorized under any of the following conditions:
    - a. As a result of changes in the work authorized by the CO.
    - b. As a result of the CO determining that errors exist in the original design that cause a pay item quantity to change by 15 percent or more.
    - c. As a result of the Contractor submitting to the CO a written request showing evidence of errors in the original design that cause a pay item quantity to change by 15 percent or more. The evidence must be verifiable and consist of calculations, drawings, or other data that show how the designed quantity is believed to be in error.
  3. LUMP SUM QUANTITIES (LSQ) - These quantities denote one complete unit of work as required by or described in the contract, including necessary materials, equipment, and labor to complete the job. They shall not be measured.
  4. STAKED QUANTITIES (SQ) - These quantities are determined from staked measurements prior to construction.
  5. VEHICLE QUANTITIES (VQ) - These quantities are measured or weighed in hauling vehicles.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION 011250

March 2016

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COWPUNCHER GUARD STATION  
SECTION 011900 - MOBILIZATION

PART 1 - GENERAL

1.1 SUMMARY

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

1.2 MEASUREMENT AND PAYMENT

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

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 011900  
March 2016

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SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals. See Table 013300-1 for a summary of required submittals.
- B. See other specification section within this package for additional requirements on submittal.

1.2 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  - 1. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. The Contracting Officer (CO) reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Processing Time: Allow enough time for submittal review, including time for re-submittals, as follows. Time for review shall commence on CO's receipt of submittal.
  - 1. Initial Review: Allow 14 days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. CO will advise Contractor when a submittal being processed must be delayed for coordination.
  - 2. If intermediate submittal is necessary, process it in same manner as initial submittal.
  - 3. Allow 14 days for processing each re-submittal.
  - 4. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
- C. Identification: Place a permanent label or title block on each submittal for identification.
  - 1. Indicate name of firm or entity that prepared each submittal on label or title block.
  - 2. Provide a space on label or beside title block to record Contractor's review and approval markings and action taken by CO.
  - 3. Include the following information on label for processing and recording action taken:
    - a. Project name.

- b. Date.
  - c. Name and address of Contractor.
  - d. Name of manufacturer.
  - e. Unique identifier, including revision number.
  - f. Number and title of appropriate Specification Section.
  - g. Drawing number and detail references, as appropriate.
  - h. If more than one item is shown on submittal sheet, identify item.
- D. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals.
  - E. Additional Copies: Unless additional copies are required for final submittal, and unless CO observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.
  - F. Use for Construction: Use only final submittals with mark indicating action taken by CO in connection with construction.

### 1.3 MEASUREMENT AND PAYMENT

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

## PART 2 - PRODUCTS

### 2.1 ACTION SUBMITTALS – (Submittals requiring CO approval)

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
  - 1. Number of Copies: Submit three copies of each submittal, unless otherwise indicated. CO will return two copies. Mark up and retain one returned copy as a Project Record Document.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
  - 2. Mark each copy of each submittal to show which products and options are applicable.
  - 3. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Manufacturer's catalog cuts.
    - e. Wiring diagrams showing factory-installed wiring.
    - f. Compliance with recognized trade association standards.
    - g. Compliance with recognized testing agency standards.

- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
  - 1. Preparation: Include the following information, as applicable:
    - a. Dimensions.
    - b. Identification of products.
    - c. Fabrication and installation drawings.
    - d. Roughing-in and setting diagrams.
    - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
    - f. Notation of dimensions established by field measurement.
  - 2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
- D. Contractor's Construction Schedule: The contractor shall submit a Construction Schedule, for approval by CO, in accordance with the contract provisions within 5 day of commencement of work.
- E. Samples: Prepare physical units of materials or products, including the following:
  - 1. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

## 2.2 INFORMATIONAL SUBMITTALS – (Submittals NOT requiring CO approval)

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
  - 1. Number of Copies: Submit three copies of each submittal, unless otherwise indicated. CO will not return copies.
  - 2. Certificates and Certifications: Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
  - 3. Test and Inspection Reports: Comply with requirements in Section 014100 "Quality Control."
- B. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
- C. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.
- D. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment.

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

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to CO.
- B. **Approval Stamp:** Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
- C. CO will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.
- E. **Substitutions –** Whenever materials, products, and equipment are listed by name or brand in the specifications and/or on the drawings, it is used as a measure of quality, utility, or standard. If the Contractor prefers to use any other brand or manufacturer of same quality, appearance and utility to that specified, he shall request substitution as provided below, not less than 30 days before the planned installation of the item. The Contracting Officer will approve or disapprove the request for substitution.
- F. Requests for substitutions will only be considered if contractor submits the following:
  - 1. Complete technical data including drawings, complete performance specifications, test data, samples and performance tests of the article proposed for substitution. Submit additional information if required by Contracting Officer. All items in the above information shall be circled, tagged, or marked in some way to indicate all deviations or differences which the proposed item differs from the originally specified item.
  - 2. Similar data as above for item originally specified. All items shall be marked to identify where/how the proposed substitution will differ.
  - 3. A statement by the Contractor that the proposed substitution is in full compliance with the contract documents, applicable codes, and laws.
  - 4. The Contractor shall be responsible for any effect upon related work in the project for any substitution and shall pay any additional costs generated by any substitutions.

- 3.2 **SUBMITTAL SCHEDULE –** Submittals shall be made as required by and called for in the drawings and specifications. The following table is a summary of the required

submittals for the project - the table is to assist the Contractor and may not be all inclusive  
 – additional submittals may be required by specific specifications:

TABLE 013000-1

Spec. Section	Section Title	Subsec-tion	Required Submittal
013300	Submittal Procedures	2.1D	Construction Schedule
014100	Quality Control	1.3 A	Contractor quality control plan
014100	Quality Control	1.3 B	Permits, Licenses, and Certifi-cates
014100	Quality Control	1.3 C	Test and inspection reports
033000	Cast-in-Place Concrete	1.3A	Product Data
033000	Cast-in-Place Concrete	1.3B	Design Mix
033000	Cast-in-Place Concrete	1.3C	Shop Drawings
033000	Cast-in-Place Concrete	1.3D	Samples
033000	Cast-in-Place Concrete	1.3E	Qualification Data
033000	Cast-in-Place Concrete	1.3F	Material Test Reports
033000	Cast-in-Place Concrete	1.3G	Material Certificates

END OF SECTION 013300  
 March 2016

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COWPUNCHER GUARD STATION

SECTION 014100 - QUALITY CONTROL

PART 1 - GENERAL

1.1 This work shall consist of providing quality control in conformance with the inspection, testing, and product certification requirements of this contract to ensure compliance with the drawings and specifications. The Contractor shall provide all personnel, equipment, tests, and reports necessary to meet the requirements of the contract.

1.2 QUALITY CONTROL

- A. The Contractor shall provide and maintain a quality control system that will ensure all services, supplies, and construction work required under this contract conforms to the contract requirements. The Contractor shall perform, or cause to be performed, the sampling, inspection, and testing required to substantiate that all services, supplies, and construction conform to the contract requirements.
- B. Special Tests and Inspections: Contractor will engage a testing agency to conduct required special tests and inspections. The Contractor shall authorize the testing agency to perform the required testing and inspections on the work completed. The authority shall include:
  - 1. Testing agency will interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
  - 2. Testing agency will re-test and re-inspect corrected work.
- C. Retesting/Reinspecting: Contractor shall provide quality-control services for retesting and reinspection for replaced construction work or for work that failed to comply with the requirements under the contract.

1.3 SUBMITTALS

- A. Contractor Quality Control Plan
- B. Permits, Licenses, and Certificates
- C. Test and Inspection Reports
- D. As-Built Drawings

1.4 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for the work included under this section; rather payment shall be considered to be included in the items of work listed in the Schedule of Items.

## PART 2 - PRODUCTS (Not Applicable)

## PART 3 - EXECUTION

### 3.1 QUALITY CONTROL SYSTEM

- A. General: Perform required testing, inspections, sampling, and similar services per direction specified in the contract drawings and specifications and in accordance with established industry standards.

### 3.2 CONTRACTOR QUALITY CONTROL PLAN

- A. At the time of the preconstruction conference, the Contractor shall submit for approval a written Contractor Quality Control Plan.
  - 1. If the plan requires any revisions or corrections, the Contractor shall resubmit the plan within 10 days.
  - 2. The Government reserves the right to require changes in the plan during the contract period as necessary.
  - 3. No change in the approved plan may be made without written concurrence by the Contracting Officer.
  - 4. At a minimum, the plan shall include the following:
    - a. A list of personnel responsible for quality control and assigned duties. Include each person's qualifications.
    - b. A copy of a letter of direction to the Contractor's Quality Control Supervisor outlining assigned duties.
    - c. Names, qualifications, and descriptions of laboratories to perform sampling and testing, and samples of proposed report forms.
    - d. Methods of performing, documenting, and enforcing quality control of all work.
    - e. Methods of monitoring and controlling environmental pollution and contamination as required by all applicable regulations and laws.

### 3.3 TEST AND INSPECTION REPORTS

- A. Submit three copies of complete test results no later than three calendar days after the test was performed.
- B. Submit failing test results and proposed remedial actions within four hours of noted deficiency.
- C. Testing and Inspection Reports shall include the following:
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, and telephone number of testing agency.
  - 4. Dates and locations of samples, tests, or inspections.
  - 5. Names of individuals performing tests and inspections.

6. Reference Specification Section(s).
7. Complete test or inspection data.
8. Test and inspection results and an interpretation of test results.
9. Ambient conditions at time sample was taken, tested, or inspected.
10. Comments or professional opinion on whether tested or inspected work complies with the Contract Document requirements.
11. Name and signature of laboratory inspector.
12. Recommendations on retesting and reinspecting.

### 3.4 PERMITS, LICENSES, AND CERTIFICATES

- A. For Contracting Officer's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations relevant to the on performance of the work.

### 3.5 AS-BUILT DRAWINGS

- A. The Contractor shall maintain a set of the contract drawings depicting as-built conditions. These drawings shall be maintained in a current condition and shall be available for review. All variations from the original contract drawings shall be indicated in red on the drawings. Upon completion of the contract work, as-built drawings shall be submitted to the Contracting Officer.

### 3.6 SAMPLING, TESTING, AND CERTIFICATION REQUIREMENTS

- A. Sampling, testing, and Certification requirements and frequency for specific items shall be as specified in the drawings and specification. The following table is a summary of the required sampling, testing, and certification for the project - the table is to assist the Contractor, but may not be all inclusive – additional submittals may be required by specific specification section:
- B. See Specifications for Specific Tests and Procedures not shown or listed here:

TABLE 014100-1			
Item	Subsection	Certification or Test Required	Frequency
033000	2.12	Mixing and Delivery	Each Truck
033000	3.13	Concrete – Slump, Air, Temperature	1 composite per 20 cubic yards delivered
033000	3.13	Concrete - Compression Test Specimens	at 7 days and 28 days (see spec)

END OF SECTION 014100  
March 2016

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COWPUNCHER GUARD STATION

SECTION 024100 - WASTE MATERIAL DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the loading, handling, hauling, and placing of excess excavation material, unsuitable excavation material, clearing and grubbing debris, and construction and demolition debris.

1.2 MEASUREMENT AND PAYMENT

- A. There will be no separate measurement or payment for work in this Section. Waste material disposal is considered incidental to other items of work shown in the Schedule of Items.

PART 2 - PRODUCTS – NOT APPLICABLE

PART 3 - EXECUTION

3.1 WASTE MATERIAL TO BE HAULED TO A DISPOSAL AREA

- A. All excavated material shall be used on site.
  - 1. Excess excavation from foundations shall be placed around the building site at an elevation of approximately 1.5' below finished floor grade of the building and graded away from the building to drain. Grading around the building shall be at 5% for 10' distance from the building.
- B. All unsuitable excavated material and oversize boulders may be stockpiled on site.

END OF SECTION 024100

March 2016

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COWPUNCHER GUARD STATION

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

1.2 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Design Mixtures: For each concrete mixture. Indicate amounts of mixing water to be withheld for later addition at Project site.
- C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
- D. Samples: For vapor retarder.
- E. Qualification Data: For testing agency.
- F. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:
  - 1. Aggregates. Include service record data indicating absence of deleterious expansion of concrete due to alkali aggregate reactivity.
- G. Material Certificates: For each of the following, signed by manufacturers:
  - 1. Cementitious materials.
  - 2. Admixtures.
  - 3. Form materials and form-release agents.
  - 4. Steel reinforcement and accessories.
  - 5. Fiber reinforcement.
  - 6. Waterstops.
  - 7. Curing compounds.
  - 8. Floor and slab treatments.

9. Bonding agents.
10. Adhesives.
11. Vapor retarders.
12. Semirigid joint filler.
13. Joint-filler strips.
14. Repair materials.

H. Field quality-control test and inspection reports.

#### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.
- B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
  1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- C. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated, as documented according to ASTM E 548.
  1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-01 or an equivalent certification program.
  2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade I. Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician - Grade II.
- D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.
- E. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
  1. ACI 301, "Specification for Structural Concrete, "Sections 1 through 5.e."
  2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
- F. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage. Avoid damaging coatings on steel reinforcement.

## 1.6 MEASUREMENT AND PAYMENT

- A. Except as listed otherwise in the section, no separate measurement or payment will be made for work in this section. Payment will be included at the contract unit price for items shown on the Schedule of Items. Except for the following item listed in the Schedule of Items.

## PART 2 - PRODUCTS

### 2.1 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
  - 1. Plywood, metal, or other approved panel materials.
  - 2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
    - a. Structural 1, B-B or better; mill oiled and edge sealed.
    - b. B-B (Concrete Form), Class 1 or better; mill oiled and edge sealed.
- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
- C. Forms for Cylindrical Columns, Pedestals, and Supports: Metal, glass-fiber-reinforced plastic, paper, or fiber tubes that will produce surfaces with gradual or abrupt irregularities not exceeding specified formwork surface class. Provide units with sufficient wall thickness to resist plastic concrete loads without detrimental deformation.
- D. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
- E. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
  - 1. Furnish units that will leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.
  - 2. Furnish ties with integral water-barrier plates to walls indicated to receive dampproofing or waterproofing.

### 2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars, Stirrups, Ties, and Bent Bars/Dowels: ASTM A 615/A 615M, Grade 60, deformed.
- B. Deformed-Steel Wire: ASTM A 496.

## 2.3 REINFORCEMENT ACCESSORIES

- A. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60, plain-steel bars, cut bars true to length with ends square and free of burrs.
- B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
  - 1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar supports.

## 2.4 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
  - 1. Portland Cement: ASTM C 150, Type II.
- B. Normal-Weight Aggregates: ASTM C 33, graded, from a single source.
  - 1. Maximum Coarse-Aggregate Size: 1 1/2 inch nominal.
  - 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- C. Water: ASTM C 94/C 94M and potable.
- D. Fly ash, ground iron blast-furnace slag, or silica fume may partially replace cement in any mix as follows:
  - 1. Fly Ash:
    - a. Class F – Not more than 20 percent of the minimum mass of portland cement may be replaced with class F fly ash.
    - b. Class C – Not more than 25 percent of the minimum mass of portland cement may be replaced with class C fly ash.
  - 2. Ground Iron Blast-Furnace Slag: Not more than 25 percent of the minimum mass of portland cement may be replaced with ground iron blast-furnace slag.
  - 3. Silica Fume (microsilica): Not more than 10 percent of the minimum mass of portland cement may be replaced with silica fume.
  - 4. Additionally, fly ash, slag, and silica fume will constitute no more than 50 percent of the total replacement weight.

## 2.5 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
- B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding

those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
2. Retarding Admixture: ASTM C 494/C 494M, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.
7. Retarding Admixture: ASTM C 494/C 494M, Type B.

## 2.6 VAPOR RETARDERS

- A. Plastic Vapor Retarder: ASTM E 1745, Class B. Include manufacturer's recommended adhesive or pressure-sensitive tape.
  1. Available Products:
    - a. Fortifiber Corporation; Moistop Ultra.
    - b. Raven Industries Inc.; Vapor Block 10.
    - c. Stego Industries, LLC; Stego Wrap, 15 mils.
    - d. Approved equal
- B. Granular Fill: Clean mixture of crushed stone or crushed or uncrushed gravel; ASTM D 448, Size 57, with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.

## 2.7 CURING MATERIALS

- A. Water: Potable.
- B. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating or nondissipating. Liquid Membrane-Forming Compounds. Material shall be certified by curing compound manufacturer to not interfere with bonding of floor covering.

## 2.8 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork.
- B. Semirigid Joint Filler: Two-component, semirigid, 100 percent solids, epoxy resin with a Type A shore durometer hardness of 80 per ASTM D 2240.
- C. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- D. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements, and as follows:

1. Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.
- E. Dovetail Anchor Slots: Hot-dip galvanized steel sheet, not less than 0.0336 inch thick, with bent tab anchors. Temporarily fill or cover face opening of slots to prevent intrusion of concrete or debris.

## 2.9 REPAIR MATERIALS

- A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch and that can be feathered at edges to match adjacent floor elevations.
1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
  2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
  3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by underlayment manufacturer.
  4. Compressive Strength: Not less than 4100 psi at 28 days when tested according to ASTM C 109/C 109M.

## 2.10 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
- B. Limit water-soluble, chloride-ion content in hardened concrete to 0.06 percent by weight of cement.
- C. Admixtures: Use admixtures according to manufacturer's written instructions.
1. Use water-reducing, high-range water-reducing, or plasticizing admixture in concrete, as required, for placement and workability.
  2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
  3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.
  4. Use corrosion-inhibiting admixture in concrete mixtures where indicated.

## 2.11 CONCRETE MIXTURES FOR BUILDING ELEMENTS

- A. Footings and Foundations: Proportion normal-weight concrete mixture as follows:
1. Minimum Compressive Strength: 4000 psi at 28 days.
  2. Maximum Water-Cementitious Materials Ratio: 0.45, in accordance with ACI 318.

3. Slump Limit: 4 plus or minus 1 inch.
4. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch nominal maximum aggregate size.

B. Slabs-on-Grade (Exterior): Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 4000 psi at 28 days.
2. Minimum Cementitious Materials Content: 564 lb/cu. yd.
3. Slump Limit: 4 inches, plus or minus 1 inch.
4. Air Content: 5 percent, plus or minus 1 percent at point of delivery for 1-inch nominal maximum aggregate size.

## 2.12 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

## 2.13 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.

1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
2. For mixer capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd..
3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixture time, quantity, and amount of water added. Record approximate location of final deposit in structure.

## PART 3 - EXECUTION

### 3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

- C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
  - 1. Class A, 1/8 inch for smooth-formed finished surfaces.
  - 2. Class B, 1/4 inch for rough-formed finished surfaces.
- D. Construct forms tight enough to prevent loss of concrete mortar.
- E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
  - 1. Install keyways, reglets, recesses, and the like, for easy removal.
  - 2. Do not use rust-stained steel form-facing material.
- F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- H. Chamfer or round exterior corners and edges of permanently exposed concrete.
- I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
- J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- K. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- L. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

### 3.2 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
  - 1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."
  - 2. Install dovetail anchor slots in concrete structures as indicated.

### 3.3 REMOVING AND REUSING FORMS

- A. General: Formwork for sides columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 48 hours after placing concrete, if concrete is hard enough to not be damaged by form-removal operations and curing and protection operations are maintained.
  - 1. Leave formwork for structural elements that supports weight of concrete in place until concrete has achieved at least 70 percent of its 28-day design compressive strength.
  - 2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.
- B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.
- C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Contracting Officer.

### 3.4 SHORES AND RESHORES

- A. Comply with ACI 318 and ACI 301 for design, installation, and removal of shoring and reshoring.

### 3.5 VAPOR RETARDERS

- A. Plastic Vapor Retarders: Place, protect, and repair vapor retarders according to ASTM E 1643 and manufacturer's written instructions.
  - 1. Lap joints 6 inches and seal with manufacturer's recommended tape.
- B. Granular Course: Cover vapor retarder with granular fill, moisten, and compact with mechanical equipment to elevation tolerances of plus 0 inch or minus 3/4 inch.
  - 1. Place and compact a 1/2-inch-thick layer of fine-graded granular material over granular fill.

### 3.6 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
  - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

1. Weld reinforcing bars according to AWS D1.4, where indicated.
- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- E. Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

### 3.7 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by the Contracting Officer.
  1. Maximum spacing of contraction joints shall be 10 feet on center.
  2. Expansion joints shall be placed at maximum spacing of 60 feet along continuous concrete sections, at intersection with other concrete construction, and at intersections with sidewalks and structures.
  3. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
  4. Form keyed joints as indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.
  5. Locate joints for beams, slabs, joists, and girders in the middle third of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
  6. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
  7. Space vertical joints in walls as indicated. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
  8. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
  9. Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
- C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:
  1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/4 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
  2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/4-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before

concrete develops random contraction cracks. **No Sawed Joints are allowed on concrete exposed to freezing.**

- D. Isolation/Expansion Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
  - 1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.
  - 2. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.
- E. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt coat one-half of dowel length to prevent concrete bonding to one side of joint.

### 3.8 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by the Contracting Officer.
- C. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
  - 1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
  - 2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
  - 3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- D. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
  - 1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
  - 2. Maintain reinforcement in position on chairs during concrete placement.
  - 3. Screed slab surfaces with a straightedge and strike off to correct elevations.
  - 4. Slope surfaces uniformly to drains where required.

5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.
- E. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
1. When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
  2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
  3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
- F. Hot-Weather Placement: Comply with ACI 301 and as follows:
1. Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
  2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

### 3.9 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces not exposed to view.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces exposed to view, or to be covered with a coating or covering material applied directly to concrete.
- C. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete:
1. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.

- D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

### 3.10 FINISHING FLOORS AND SLABS

- A. General: Comply with ACI 302.1R recommendations for screeding, restraighening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes to produce a profile amplitude of 1/4 inch in 1 direction.
  - 1. Apply scratch finish to surfaces indicated and to receive mortar setting beds for bonded cementitious floor finishes.
- C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraighening until surface is left with a uniform, smooth, granular texture.
  - 1. Apply float finish to surfaces to receive trowel finish and to be covered with fluid-applied or sheet waterproofing.
- D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
  - 1. Apply a trowel finish to surfaces to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane.
  - 2. Finish and measure surface so gap at any point between concrete surface and an unleveled, freestanding, 10-foot- long straightedge resting on 2 high spots and placed anywhere on the surface does not exceed 1/8 inch.
- E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces indicated. While concrete is still plastic, slightly scarify surface with a fine broom.
  - 1. Comply with flatness and levelness tolerances for trowel finished floor surfaces.
- F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated.
  - 1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Contracting Officer before application.

### 3.11 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In: Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.
- B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.
- C. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on Drawings. Set anchor bolts for machines and equipment at correct elevations, complying with diagrams or templates from manufacturer furnishing machines and equipment.

### 3.12 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.
- D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.
- E. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
  - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
    - a. Water.
    - b. Continuous water-fog spray.
    - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
  - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
    - a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.

- b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
  - c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project..
- 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
  - a. After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound will not interfere with bonding of floor covering used on Project.
- 4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

### 3.13 LIQUID FLOOR TREATMENTS

- A. Penetrating Liquid Floor Treatment, where indicated: Prepare, apply, and finish penetrating liquid floor treatment according to manufacturer's written instructions.
  - 1. Remove curing compounds, sealers, oil, dirt, laitance, and other contaminants and complete surface repairs.
  - 2. Do not apply to concrete that is less than three days' old.
  - 3. Apply liquid until surface is saturated, scrubbing into surface until a gel forms; rewet; and repeat brooming or scrubbing. Rinse with water; remove excess material until surface is dry. Apply a second coat in a similar manner if surface is rough or porous.
- B. Sealing Coat: Uniformly apply a continuous sealing coat of curing and sealing compound to hardened concrete by power spray or roller according to manufacturer's written instructions.
- C. Coordinate with Division 09 Section "High-Performance Coatings" for slab requirements for epoxy floor coating.

### 3.14 JOINT FILLING

- A. Prepare, clean, and install joint filler according to manufacturer's written instructions.
  - 1. Defer joint filling until concrete has aged at least one month. Do not fill joints until construction traffic has permanently ceased.

- B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joint clean and dry.
- C. Install semirigid joint filler full depth in saw-cut joints and at least 2 inches (50 mm) deep in formed joints. Overfill joint and trim joint filler flush with top of joint after hardening.

### 3.15 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Contracting Officer. Remove and replace concrete that cannot be repaired and patched to Contracting Officer's approval.
- B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.
- C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
  - 1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension in solid concrete, but not less than 1 inch in depth. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
  - 2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
  - 3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Contracting Officer.
- D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
  - 1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
  - 2. After concrete has cured at least 14 days, correct high areas by grinding.
  - 3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
  - 4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according

to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.

5. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.
6. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
7. Repair random cracks and single holes 1 inch or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.

- E. Perform structural repairs of concrete, subject to Contracting Officer's approval, using epoxy adhesive and patching mortar.
- F. Repair materials and installation not specified above may be used, subject to Contracting Officer's approval.

### 3.16 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Contractor will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Inspections:
  1. Steel reinforcement placement.
  2. Steel reinforcement welding.
  3. Headed bolts and studs.
  4. Verification of use of required design mixture.
  5. Concrete placement, including conveying and depositing.
  6. Curing procedures and maintenance of curing temperature.
  7. Verification of concrete strength before removal of shores and forms from beams and slabs.
- C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
  1. Testing Frequency: Obtain one composite sample set for each truck of concrete (or portion thereof) delivered to the project. A composite sample set consists of three

compressive test cylinders, one slump test, one air entrainment test, and one temperature test.

2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample. Perform additional tests when concrete consistency appears to change or water is added.
  3. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample.
  4. Concrete Temperature: ASTM C 1064/C 1064M; one test for each composite sample.
  5. Compression Test Specimens: ASTM C 31/C 31M. Cast and laboratory cure one set of three standard cylinder specimens for each composite sample.
    - a. Compressive-Strength Tests: ASTM C 39/C 39M; test one of three laboratory-cured specimens at 7 days and one specimen at 28 days. If either previous tests fail, test third specimen at 28 days.
    - b. Strength of each batch delivered will be satisfactory if 28-day compressive-strength tests equals or exceeds specified compressive strength.
- D. Test results shall be reported in writing to Contracting Officer and Contractor within 48 hours of testing. Reports shall contain project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
- E. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- F. Correct deficiencies in the work that test reports and inspections indicate does not comply with the Contract Documents.
- G. Measure floor and slab flatness and levelness according to ASTM E 1155 within 24 hours of finishing.

END OF SECTION 033000  
OCTOBER 2015

USDA FOREST SERVICE, R-4  
COWPUNCHER GUARD STATION

SECTION 071113 - BITUMINOUS DAMPPROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Cold-applied, emulsified-asphalt dampproofing for below grade concrete surfaces.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated. Include recommendation for method of application, primer, number of coats, coverage or thickness.

1.3 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit dampproofing to be performed according to manufacturers' written instructions.
- B. Ventilation: Provide adequate ventilation during application of dampproofing in enclosed spaces. Maintain ventilation until dampproofing has cured.

1.4 MEASUREMENT AND PAYMENT:

A. There will be no separate measurement or payment for work in this section. Payment will be included at the contract unit price for items shown on the Schedule of Items.

PART 2 - PRODUCTS

2.1 COLD-APPLIED, EMULSIFIED-ASPHALT DAMPPROOFING

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. ChemMasters Corp.
2. Degussa Building Systems; Sonneborn Brand Products.
3. Gardner Gibson, Inc.
4. Henry Company.
5. Karnak Corporation.
6. Koppers Inc.
7. Malarkey Roofing Products.
8. Meadows, W. R., Inc.
9. Tamms Industries, Inc.

- B. Trowel Coats: ASTM D 1227, Type II, Class 1.
- C. Fibered Brush and Spray Coats: ASTM D 1227, Type II, Class 1.
- D. Brush and Spray Coats: ASTM D 1227, Type III, Class 1.

## 2.2 MISCELLANEOUS MATERIALS

- A. Emulsified-Asphalt Primer: ASTM D 1227, Type III, Class 1, except diluted with water as recommended by manufacturer.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for surface smoothness and other conditions affecting performance of work.
  - 1. Proceed with dampproofing application only after substrate construction and penetrating work have been completed and unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Protection of Other Work: Mask or otherwise protect adjoining exposed surfaces from being stained, spotted, or coated with dampproofing. Prevent dampproofing materials from entering and clogging weep holes and drains.
- B. Clean substrates of projections and substances detrimental to work; fill voids, seal joints, and apply bond breakers if any, as recommended by prime material manufacturer.
- C. Apply patching compound for filling and patching tie holes, honeycombs, reveals, and other imperfections.

### 3.3 APPLICATION, GENERAL

- A. Comply with manufacturer's written recommendations unless more stringent requirements are indicated or required by Project conditions to ensure satisfactory performance of dampproofing.
- B. Apply dampproofing to footings and foundation walls where opposite side of wall faces building interior.
  - 1. Apply from finished-grade line to top of footing, extend over top of footing, and down a minimum of 6 inches (150 mm) over outside face of footing.
  - 2. Extend 12 inches (300 mm) onto intersecting walls and footings, but do not extend onto surfaces exposed to view when Project is completed.
- C. Apply dampproofing to provide continuous plane of protection on interior face of above-grade, exterior concrete walls unless walls are indicated to receive direct application of paint.

### 3.4 COLD-APPLIED, EMULSIFIED-ASPHALT DAMPPROOFING

- A. On Concrete Foundations: Apply 2 brush or spray coats at not less than 1.5 gal./100 sq. ft. (0.6 L/sq. m) for first coat and 1 gal./100 sq. ft. (0.4 L/sq. m) for second coat, 1 fibered brush or spray coat at not less than 3 gal./100 sq. ft. (1.2 L/sq. m), or 1 trowel coat at not less than 4 gal./100 sq. ft. (1.6 L/sq. m).

### 3.5 INSTALLATION OF PROTECTION COURSE

- A. Where indicated, install protection course over completed-and-cured dampproofing. Comply with dampproofing material manufacturer's written recommendations for attaching protection course.
  - 1. Support protection course with spot application of adhesive of type recommended by protection board manufacturer over cured coating.

END OF SECTION 071113

January 2010

USDA FOREST SERVICE, R-4  
COWPUNCHER GUARD STATION

SECTION 312000 - EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
  - 1. Preparing subgrades for slabs-on-grade.
  - 2. Excavating and backfilling for buildings and structures.
  - 3. Excavating and backfilling for utility trenches.
- B. Related Sections include the following:
  - 1. Section 329206 "Seeding."

1.2 DEFINITIONS

- A. Backfill: Soil materials used to fill an excavation.
- B. Borrow or Select Borrow: Satisfactory soil material used for embankment, backfill, or fill construction that is either imported from off-site or excavated from designated locations at the site.
- C. 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 Contracting Officer. 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 Contracting Officer. Unauthorized excavation, as well as remedial work directed by Contracting Officer, 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.
- D. Fill: Soil materials used to raise existing grades.
- E. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

- F. 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, or topsoil materials.
- G. 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 Contracting Officer for approval source of aggregates and backfill materials and certified sieve analysis. Materials from Government Sources are exempt from this requirement.

### 1.4 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Government or others unless permitted in writing by Contracting Officer and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Contracting Officer not less than two days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Contracting Officer's written permission.
  - 3. Contact utility-locator service for area where Project is located before excavating.
- B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

### 1.5 MEASUREMENT AND PAYMENT

- A. There will be no separate measurement or payment for work in this Section. Payment will be included in the contract unit price as shown on the Schedule of Items.

## PART 2 - PRODUCTS

### 2.1 BACKFILL MATERIALS, GENERAL

- A. Excavated material may be processed and used for backfill if the Contractor can show compliance with the material specified herein to the satisfaction of the Contracting Officer. If excavated material is not sufficient to meet requirements, Contractor shall import needed material.
- B. 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 3 inches (75 mm) in any dimension, debris, waste frozen materials, vegetation, and other deleterious matter.
- C. 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.

D. Backfill and Fill: Satisfactory soil materials.

1. Remove rocks over 8 inches in maximum dimension, ice or frozen earth, muck, debris, and earth with high void content.
2. Remove rocks over 4 inches in maximum dimension for backfill placed within 12 inches of foundation.

## 2.2 BACKFILL MATERIALS, UTILITY TRENCHES

A. Pipe Zone Material

1. Backfill material for electrical cable and all types of pipe, except ductile iron pipe and galvanized steel pipe, shall consist of soil, sand, or fine granular material free of  $\frac{3}{4}$  inch or larger stones, and free of organic material.
2. Backfill material for all ductile iron or galvanized steel pipe shall consist of soil, sand, or rock smaller than two inches in largest dimension and free of organic material.
3. Frozen material will not be allowed.
4. Backfill material shall be trench-excavated material whenever it meets specification requirements. Whenever material meeting the requirements for pipe zone backfill is not readily available from trench excavation, the Contractor will be required to import pipe zone material from a designated or approved source. Imported pipe zone material shall be paid for as such.

B. Above-Pipe-Zone Material

1. Backfill material shall be free from brush, perishable material, trash, rocks, or boulders larger than 6 inches in greatest dimension, or frozen material.
2. Backfill material shall be trench-excavated material whenever it meets specification requirements. Whenever trench excavated material contains less than 10 percent of oversized material, the Contractor will be required to remove rocks larger than 6 inches from the trench excavated material at no additional compensation and utilize it as backfill material. If, after all suitable trench excavated material has been used as backfill, the trench is not filled to the required grade, the Contractor shall delay his backfill operations until the Contracting Officer can obtain profile elevations of the top of the partially filled trench. These elevations shall be used in computing the cubic yards for which payment will be made for imported material. Whenever material meeting the specification requirements for backfill above the pipe zone is not available from trench excavation, the Contractor will be required to import material from a designated or approved source. Imported above-pipe-zone material shall be paid for as such.

C. Special Bedding – Imported

1. Special bedding material shall consist of rounded river gravel or crushed, free-draining material, meeting the following gradation, as determined by ASTM C 136 and ASTM C 117.

SPECIAL BEDDING GRADATION	
Sieve Designation Square Openings	Percentage by Weight Passing Sieve
1"	100
3/4"	90 – 100
1/2"	20 – 55
3/8"	0 – 15
No. 4	0 - 5

### 2.3 ENGINEERED FILL

- A. Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1 1/2 inch sieve and not more than 12 percent passing a No. 200 sieve.

### 2.4 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
  1. Red: Electric.
  2. Yellow: Gas, oil, steam, and dangerous materials.
  3. Orange: Telephone and other communications.
  4. Blue: Water systems.
  5. Green: Sewer systems.
- B. Tracer Wire: #14 copper wire, covered.

## PART 3 - EXECUTION

### 3.1 LOCATION, ALIGNMENT AND GRADE

- A. The location of all structures shall be staked out and grades established by the Contractor. Locations shall be approved by the Contracting Officer before excavation is started.

### 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 SUPPORT AND PROTECTION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards that could develop during excavation.
- B. Design, furnish, install, monitor, and maintain excavation support and protection system capable of supporting excavation sidewalls and resisting soil and hydrostatic pressures and superimposed and construction loads.
- C. The contractor shall meet State General Safety Orders and the provisions of the Occupational Safety and Health Administration (OSHA) pertaining to excavation support and protection, including 29 CFR 1926 Subpart P.
- D. Walls of excavations 5 feet or more in depth shall be supported by shoring and bracing methods or the walls shall be sloped at one and a half to one.
- E. Remove excavation support and protection systems when construction has progressed sufficiently to support excavation and bear soil and hydrostatic pressures. Remove in stages to avoid disturbing underlying soils or damaging structures, pavements, facilities, and utilities.

### 3.6 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavation to subgrade elevations regardless of the character of surface and subsurface conditions encountered, including rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
  - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

- B. Topsoil shall be removed from the area to be excavated and from the area where excavated material will be piled, prior to excavation. Topsoil shall be stored as specified below.
- C. 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.
- D. Excavations left open at the end of the working day shall be fenced to protect the public.

### 3.7 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, Basins, Pump Houses and Utility Boxes: 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.

### 3.8 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated cross sections, elevations, and grades.

### 3.9 EXCAVATION FOR UTILITY TRENCHES

- A. All trench excavation shall conform, as near as possible, to the lines and grades illustrated on the drawings.
- B. Classification of Excavation Material - Excavation will be unclassified as to materials and shall include all materials which are encountered in the required excavation. Any information that has been obtained by the USDA Forest Service concerning possible ground conditions is available at the Supervisor's Office for the Forest where the project is located to interested parties upon request.
- C. Unsatisfactory Material - During excavation, if material which does not meet the backfill requirements of Article 2 (such as structurally unstable material, solid rock, over-sized rock, angular or sharp rock), as determined by the Contracting Officer, is encountered at the grade line for the pipe or cable, the unsatisfactory material shall be removed to a minimum depth of 6 inches below the utility line. Trenching shall be performed by any acceptable method, including the use of explosives, as permitted by the Contract General Provisions. In addition to the General Provisions, the Contractor shall provide skilled blasting operators and precautions shall be taken to avoid damage to adjacent property.
- D. Trenching by Machine or by Hand - The use of trench digging machines will be permitted except in places where machines may cause damage to existing structures, utilities, or

trees, in which case hand methods shall be employed. Areas specifically to be trenched by hand will be as indicated on the drawings and paid for separately. Machines shall be of the proper size to operate within the specified working limits. In areas being excavated by machine, any hand digging necessary to locate or cross utilities will not be paid for as hand trenching.

- E. Depth - Trench excavation shall provide a uniform (for all utilities) or gently changing (for all utilities except gravity flow sewer lines) flow line.
- F. Width of Trenches - The bottom width that will be used in arriving at pay quantities that are paid on the basis of volume shall be the design bottom width, as shown on the Schedule of Items, or as shown on the trench cross-section detail on the drawings. The width of trench allowed when computing excavation and/or backfill quantities shall be vertical lines for trenches less than 4 feet and for trenches greater than 4 feet shall be computed on 1/2 to 1 side slopes. In circumstances where trench sides will not stand or are not considered safe when sloped at 1/2 to 1, a slope will be determined in the field by the Contracting Officer for which pay quantities will be computed, and the slopes shall be laid back to the stable slope determined.
- G. The Contractor may excavate the trench narrower or wider than the design width shown on the drawings; however, the design width of the trench will be used to calculate the number of cubic yards of all excavated volume and volume of imported material that is paid for by unit volume.
- H. Any over excavation (width) performed by the Contractor for his convenience shall be at his own expense.
- I. Alignment and Grade - The location of all pipelines and structures will be staked out and grades established by the Contracting Officer before excavation is started. All trenches shall conform with the lines and grades illustrated on the drawings or staked on the ground. The Contractor shall set batter boards and shall establish grade lines and levels necessary for the work from dimensions and elevations shown on the drawings and as established in the field. Any shifting or change from the indicated alignment and grade must receive prior approval by the Contracting Officer in writing. Alignment and grade shall also meet the requirements of Sections governing the utilities which are being installed in the trench.

### 3.10 APPROVAL OF SUBGRADE

- A. Notify Contracting Officer when excavations have reached required subgrade.
- B. If Contracting Officer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof roll subgrade below the building slabs and pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof roll wet or saturated subgrades.
- D. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Contracting Officer.

### 3.11 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill may be used when approved by Contracting Officer.
  - 1. Fill unauthorized excavations under other construction or utility pipe as directed by Contracting Officer.

### 3.12 STORAGE OF SOIL MATERIALS

- A. Stockpile, borrow materials 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.
- B. Topsoil shall be kept separate from trench-excavated material by either stockpiling or by windrowing on the opposite side of the trench from which the trench excavated material will be placed. Topsoil will be reused after backfilling on those areas from which it came.

### 3.13 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 and storage tanks.
  - 4. Removing concrete formwork.
  - 5. Removing trash and debris.
  - 6. Removing temporary shoring and bracing, and sheeting.
  - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place and compact fills and backfills adjacent to structures in such a manner as to prevent wedging action or eccentric lodging upon or against the structures.
- C. Place backfill in horizontal layers not more than 12 inches thick with proper moisture content for the required degree of compaction. Flooding or puddling is not allowed. Compact each layer as specified. Backfill layers under concrete flatwork shall be not more than 6 inches thick
- D. Do not place backfill against any concrete footings or structure without prior permission of the Contracting Officer and in no case less than 4 days after placement of concrete.
- E. Heavy equipment shall not be operated within four feet of any structure.

- F. Provide for anticipated settlement and shrinkage of the backfill and for the finished grades required.

### 3.14 UTILITY TRENCH BACKFILL

- A. Backfilling will be permitted only after all inspections of piping and/or cable have been performed and tests completed and the work to be covered has been approved by the Contracting Officer. Backfill which has been improperly placed and/or compacted shall be corrected, if directed by the Contracting Officer, by reopening the trench to the depth required to obtain proper compaction. Then the trench shall be refilled and compacted according to specifications.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.
- C. Backfill at Pipe Zone
  1. Any backfill in trench bottom where over excavation was performed by the Contractor for his convenience, shall be brought back to the pipe grade indicated at his own expense. If the trench bottom is prepared in wet conditions, special bedding conforming to Article 2 shall be used if determined necessary by the Contracting Officer.
  2. The bottom of trenches shall be accurately graded to provide uniform bearing and support for each section of the pipe along its entire length, except for portions of the pipe sections where it is necessary to excavate for pipe joints. Depressions for joints shall be made in accordance with the recommendations of the manufacturers for the particular joint used. The bedding shall be a minimum of 6 inches in depth under the pipe and be of either special bedding or pipe zone material as conditions dictate. Trench bottom preparation shall be such that when final placement of pipe has been made, pipe will be true to line and grade. All adjustment to line and grade shall be made by scraping away or filling in with pipe zone material or special bedding material, as conditions dictate, under the body of the pipe and not by wedging or blocking.
  3. After pipe is placed as called for in applicable Sections governing the utilities being placed in the trench, pipe zone material shall be deposited in the trench uniformly on both sides of the pipe for the full width of the trench in 6-inch horizontal layers (loose measurement) and compacted from the bottom of the trench to a depth of 1 foot over the top of the pipe.
  4. An exception to this is on water lines and sewer lines where the Contractor elects to hydrostatically pressure test the pipe. Joints, couplings, fittings, and valves shall then be left uncovered until after the pipe has been tested. After testing proves the pipe installation to be satisfactory, pipe zone material shall then be placed carefully and compacted around the joints, couplings, fittings, and valves to a depth of 1 foot above the pipe, after which the remainder of the trench shall be backfilled. On gravity flow sewer lines, the Contractor may elect to pressure test the pipe with air. In this case, the entire trench is to be properly backfilled prior to the acceptance test.
  5. Where electrical conduit is buried in the same trench as the waterline or sewer line, the backfill procedure for the conduit shall be performed as outlined in the

preceding paragraphs. Location with respect to other utilities in a trench shall be as indicated on the trench cross-section detail as shown on the drawings.

6. When an electrical conduit is buried singly in a trench, or if only conduit is buried in a trench, the bedding shall be a minimum of 2 inches in depth under the conduit. After the conduit is placed, pipe zone material shall be deposited in the trench uniformly for the full width of the trench and compacted from the bottom of the trench to a depth of 4 inches over the top of the conduit.
7. **Compaction and Testing:** All compaction within the pipe zone (electrical conduit area is considered as pipe zone), shall meet the following: Material shall be compacted to not less than 95 percent of the maximum dry unit weight, as determined by AASHTO T 99, Method D, or ASTM D 698, Method D. Ascertain adequate compaction during the backfill operation by performing in-place density tests in accordance with one or more of the following standard test procedures: ASTM D 1556, D 2167, or D 2922, or AASHTO T 191, or T 205.

D. Backfill Above-Pipe-Zone

1. When shown on the drawings as being required, marking tape shall be installed eight inches below the ground surface and shall run the full length of the trenches.
2. Backfill in trenches in areas other than under roadways and parking areas shall be placed in horizontal layers 12 inches thick or less (loose measurement). Layers shall be compacted before the succeeding lift is placed with at least three passes of an approved mechanical compaction device.
3. **Compaction and Testing:** Backfill in trenches under roadways and parking areas shall be maintained, wetted, or dried to optimum moisture for maximum compaction, placed in the trench in horizontal layers not to exceed 6 inches in thickness (loose measurement), and compacted to not less than 95 percent of maximum dry unit weight, as determined by AASHTO T 99, Method D, of ASTM D 698, Method D. Ascertain adequate compaction during the backfill operation by performing in-place density tests in accordance with one or more of the following standard test procedures: ASTM D 1556, D 2167, or D 2922, or AASHTO T 191, or T 205.

E. Special Bedding – Imported

1. Special bedding shall be placed, as directed by the Contracting Officer, in trenches, as necessary, to provide a minimum of 6 inches firm bedding on which to set the pipe in areas where relatively unstable conditions exist, due to seeping ground water or mud caused by ground water, or by water from any other source which cannot be diverted. After the material is placed in the trench, leveled, and consolidated, it shall be trimmed to proper sub grade and shaped to receive the pipe.
2. The Contractor shall construct restrictive sections (dams) in the special bedding material at least every 200 feet to minimize the possibility of excessive ground water flows undercutting the pipe. The dam shall extend across the entire width of the trench, be a minimum of 3 feet long, and shall extend to the top of the pipe zone material.

F. Imported Material

1. Any trench excavated material that can be transported less than 300 feet to other areas along the trench and used, in accordance with specifications, shall not be considered as imported material. When the Contractor is required to import material, it shall be from a designated or approved source.

G. Trenches in Embankments

1. When pipelines are to be placed in trenches excavated in embankments, the excavation of each trench shall be performed after the embankment has been constructed to an elevation at least 3 feet over the pipe or to finish grade, whichever is least.

H. Surface Restoration in Areas Other Than Roads

1. All surfaces shall be restored to the required grade (usually original ground line), mounded over or smoothed off as directed, and left in a uniform and neat condition, to the satisfaction of the Contracting Officer. Surface drainage shall be diverted so that it will not flow along a trench. In areas where natural revegetation is designated (no planting to be done), the Contractor shall scarify all disturbed or compacted areas and right-of-ways such that the surface of the ground is loose to a depth of at least one inch. In areas to be seeded, the area shall be prepared in accordance with Section 329206 "Seeding."

I. Warning Tape and Tracer Wire:

1. Warning Tape: Install directly above utilities, as shown on the Drawings.
2. Tracer Wire: Wrap all buried, non-metallic, nonperforated piping with tracer wire.
  - a. Conductivity Testing: Conductivity to be tested before and maintained while backfilling trench. After backfilling, the contractor shall perform a continuity test to the satisfaction of the Contracting Officer.
  - b. Access: Extend tracer wire at least 12-inches above grade at junctions, valves, hydrants and ends of new lines. Attach tracer wire to object or structure where possible. Fold or wrap remaining wire so it is accessible to owner, but not generally visible to the public.

3.15 FILL

- A. Preparation: Remove vegetation, topsoil, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface before placing fills.
- B. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- C. Place and compact fill material in layers to required elevations as follows:
  1. Under grass and planted areas, use satisfactory soil material.
  2. Under sidewalks, concrete slabs and pavements, use satisfactory soil material.
  3. Under steps and ramps, use engineered fill.
  4. Under building slabs, use engineered fill.
  5. Under footings and foundations, use engineered fill.

### 3.16 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.

### 3.17 COMPACTION OF BACKFILLS AND FILLS

- A. The minimum degree of compaction required shall be a percent of the maximum laboratory density obtained by the standard proctor test AASHTO T99 or ASTM D698. The in-place field density shall be determined by AASHTO T238 or ASTM D2922. The minimum compaction requirements are:
  - 1. For Utility Trenches, see “Utility Trench Backfill” article above.
  - 2. Under structures, water and septic tanks, utility boxes, 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.
  - 3. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill material at 90 percent.
  - 4. Under lawn or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill material at 85 percent.

### 3.18 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 (25 mm).
  - 2. Walks: Plus or minus 1 inch (25 mm).
  - 3. Pavements: Plus or minus 1/2 inch (13 mm).
- C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch (13 mm) when tested with a 10-foot (3-m) straightedge.

### 3.19 AGGREGATE BASE COURSE [SUBBASE AND BASE COURSES]

- A. Under pavements and walks, place subbase course on prepared subgrade and as follows:
  - 1. Place base course material over subbase.

2. Subbase and base course compaction required shall be 95 percent of the maximum laboratory density obtained by the standard proctor test AASHTO T99 or ASTM D698. The in-place field density shall be determined by AASHTO T238 or ASTM D2922.
3. Shape subbase and base to required crown elevations and cross-slope grades.
4. When thickness of compacted subbase or base course is 6 inches (150 mm) or less, place materials in a single layer.
5. When thickness of compacted subbase or base course exceeds 6 inches (150 mm), place materials in equal layers, with no layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick when compacted.

### 3.20 FIELD QUALITY CONTROL

- A. Testing Agency: Contractor will engage a qualified independent geotechnical engineering testing agency to perform field quality control testing.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work complies with requirements.
- C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design-bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Contracting Officer.
- D. Testing agency will test compaction of soils in place according to ASTM D 2922. Tests will be performed at the following locations and frequencies:
  1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2000 sq ft (186 sq. m) or less of paved area or building slab, but in no case fewer than three tests.
  2. Foundation Wall Backfill: At each compacted backfill layer, at least one test for each 100 feet (30 m) or less of wall length, but no fewer than two tests.
- E. When testing agency reports that subgrades, fills or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.
- F. 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.
- G. The correction and retesting of unacceptable work shall be paid by the Contractor at no expense to the Government.

### 3.21 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 Contracting Officer, 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.

### 3.22 SURFACE FINISH

- A. In unpaved areas all surfaces shall be restored to the original ground line or elevations shown on the drawings and left in a uniform and neat condition. Any stockpiled topsoil shall be smoothly distributed over disturbed areas to elevations shown on the drawings.
- B. In paved areas, apply surface treatment as specified and shown on the drawings.

### 3.23 WASTE MATERIAL

- A. According to Section 24100 "Waste Material Disposal."

END OF SECTION 312000

March 2016

USDA FOREST SERVICE, R-4  
COWPUNCHER GUARD STATION

SECTION 321204 - CRUSHED AGGREGATE BASE OR SURFACE COURSE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes furnishing, hauling and placing one or more courses of aggregate base or surface course material on roadways, parking areas, concrete pads and pathways. In addition, may include furnishing, hauling, and placing crushed aggregate for bedding and backfill.

1.2 SUBMITTALS

- A. Aggregate source, gradation, and material properties.
  - 1. Submit target values within the gradation ranges shown in Table 321204-1 and /or 321204-2 for the required grading. After reviewing the Contractor's proposed target values the CO will determine the final values for the gradation and notify the Contractor in writing.
- B. Compaction density test results and proctor.

1.3 MEASUREMENT AND PAYMENT

- A. Crushed Aggregate: Number of Cubic Yards of material supplied and installed measured in place to the lines and grades shown on the Drawings. Crushed aggregate shall be used for the construction of roadways, parking areas, pathways and other items as shown on the Drawings.
- B. No adjustment in a contract unit price will be made for variations in quantity due to differences in the specific gravity or moisture content.

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. General: Furnish aggregate Subbase, Base, or Surface Courses meeting the gradation ranges shown in Table 321204-1 and Table 321204-2. Aggregate grade selection shall be as shown on the Drawings and in the Schedule of Items.
- B. Materials shall be obtained from an approved source. Furnish aggregates that consist of hard, durable particles or fragments of crushed stone, crushed slag, or crushed gravel meeting the appropriate gradation and conforming to the following:
  - 1. Los Angeles abrasion, AASHTO T 96 ..... 40% max
  - 2. Sodium sulfate soundness loss (five cycles), AASHTO T 104 ..... 12% max

3. Durability index, AASHTO T 210 ..... 35 min
4. Fractured faces, ASTM D 5821 (Subbase or Base).....50% min
5. Fractured faces, ASTM D 5821 (Surface Course)..... 75% min
6. Free from organic matter and lumps or balls of clay.

C. Obtain the aggregate gradation by crushing, screening, and blending processes as necessary.

## 2.2 AGGREGATE GRADATION

Table 321204-1, Crushed Aggregate Grading Requirements for Subbase and Base.

Percent Passing (AASHTO T27 and T11)					
Sieve	Grading A (Subbase)	Grading B (Subbase)	Grading C (Base)	Grading D (Base)	Grading E (Base)
2 1/2 -inch	100				
2-inch	97-100	100	100		
1-1/2-inch		97-100			
1-inch	65-79 (6)		80-100 (6)	100	
3/4-inch			60-94 (6)	86-100 (6)	100
1/2-inch	45-59 (7)				
3/8-inch			40-69 (6)	51-82 (6)	62-90 (6)
No. 4	28-42 (6)	40-60 (8)	31-54 (6)	36-64 (6)	36-74 (6)
No. 40	9-17 (4)			12-26 (4)	12-26 (4)
No. 200	4-8 (3)	4-12 (4)	4-7 (3)	4-7 (3)	4-7 (3)

() The value in the parentheses is the allowable deviation (+ / - ) from the target values.  
Liquid Limit, AASHTO T89 = 25 max. Plastic Limit, AASHTO T-90 = nonplastic.

Table 321204-2, Crushed Aggregate Grading Requirements for Surface Course.

Percent Passing (AASHTO T27 and T11)		
Sieve	Grading F (Surface Course)	Grading G (Surface Course)
1-1/2-inch	100	
1-inch	97-100	100
3/4-inch	76-89 (6)	97-100
1/2-inch		
3/8-inch	56-68 (6)	70-80 (6)
No. 4	43-53 (7)	51-63 (7)
No. 8		
No. 16	23-32 (6)	28-39 (6)
No. 40	15-23 (5)	19-27 (5)
No. 200	10-16 (4)	10-16 (4)

( ) The value in the parentheses is the allowable deviation (+ / - ) from the target values. Liquid Limit, AASHTO T 89 = 35 max, Plastic Index, AASHTO T90 = 2 to 9 if percent passing the No. 200 sieve is less than 12% and less than 2 if the percent passing the No. 200 sieve is greater than 12%.

If the plasticity index (PI) is greater than 0, the TV range for the No. 200 sieve size is 8-12 (4).

### PART 3 - EXECUTION

#### 3.1 GENERAL

- A. Verify that subgrade is dry and in suitable condition, locate areas that are unstable or that require further compaction.
- B. Proceed with aggregate placement only after unsatisfactory conditions have been corrected and subgrade is approved in writing by the Contracting Officer (CO).

#### 3.2 PREPARATION OF SUBGRADE

- A. The subgrade shall be prepared in accordance with requirements of other specifications sections.
- B. The subgrade shall conform to the lines and grades shown on the Drawings. Suitable material shall be utilized in the preparation of the subgrade. When embankment or fill is necessary, subgrade shall be placed in compacted layers not exceeding 6 inches. Unless specified otherwise, subgrade shall be compacted to 95 percent of AASHTO T 99, method C or D.

- C. Suitable material for subgrade shall be granular material or fine compatible soil free of excess moisture, muck, frozen lumps, roots, sod, and other deleterious material. Remove all rock particles and hard earth clods larger than 3 inches in the longest dimension.

### 3.3 MIXING AND SPREADING

- A. Mix the aggregate and adjust the moisture content to obtain uniform moisture. Spread and shape the mixture on the prepared surface in a uniform layer not to exceed 6 inches in compacted thickness.
- B. Route hauling equipment uniformly over the full width of the surface to minimize rutting or uneven compaction.

### 3.4 COMPACTING

- A. Compact each layer of aggregate full width. Compact each layer to a density of at least 95 percent of the maximum density as determined by AASHTO T 99 method C or D.
- B. Testing shall be at intervals specified in tables shown in Section 014100 "Quality Control."

### 3.5 SURFACE AND CONSTRUCTION TOLERANCES

- A. Shape the surface to the required template and as staked. Surface shall be graded and shaped smooth to within ½-inch in 10 feet.
- B. Maintain the aggregate course to the correct lines, grade, and cross-section by blading, watering, and rolling until placement of the next course.
- C. Upon completion of full placement and after haul trucks have completed their haul across section of the road, the road shall be finish bladed, watered, and rolled.
- D. Aggregate shall be placed as shown on the drawings and as staked. Tolerance for thickness of aggregate shall be +/- ½-inch and for width shall be + 1-foot.

### 3.6 ACCEPTANCE

- A. Aggregate shall be accepted following placement when shown to meet material quality, gradation, compaction requirements, required depth and width, and finish blading.

END OF SECTION 321204

March 2016



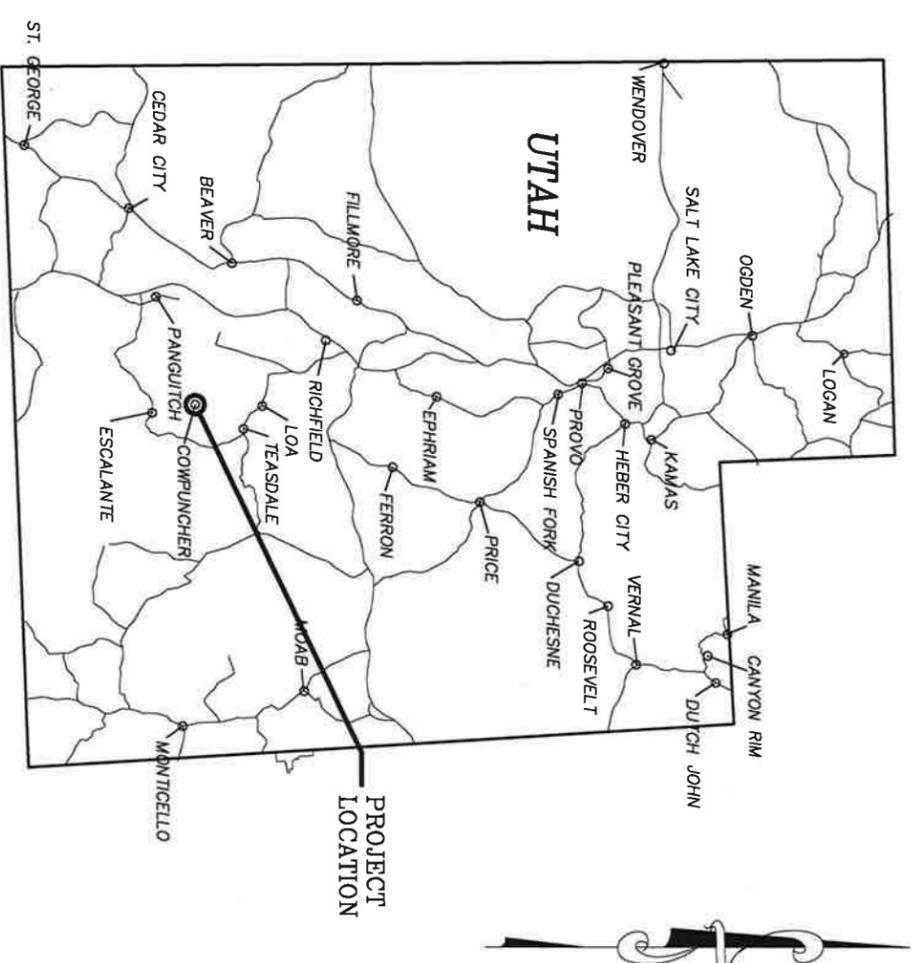
# COWPUNCHER GUARD STATION CONCRETE

DIXIE NATIONAL FOREST

ESCALANTE, UTAH

## LIST OF DRAWINGS

SHT.	DWG.	DESCRIPTION
GENERAL DRAWINGS		
1	G1	COVER SHEET
2	G2	VICINITY MAP, PROJECT DESCRIPTION, AND PROJECT LOCATION
SITE DRAWINGS		
3	S1	SITE PLAN
BUILDING, STRUCTURAL, AND ARCHITECTURAL DRAWINGS		
4	A01	CABIN FOOTING AND FOUNDATION PLAN
5	A02	CABIN FOOTING AND FOUNDATION SECTIONS
6	A03	CABIN FOOTING AND FOUNDATION DETAILS
7	A04	CABIN FOOTING AND FOUNDATION DETAILS
8	A05	GARAGE FOUNDATION PLAN & PLUMBING
9	A06	GARAGE FOUNDATION DETAILS



### RECOMMENDED

PUBLIC SERVICE STAFF OFFICER

*[Signature]*

DATE 3/1/16

FOREST ENGINEER

*[Signature]*

DATE 03/01/2016

DISTRICT RANGER

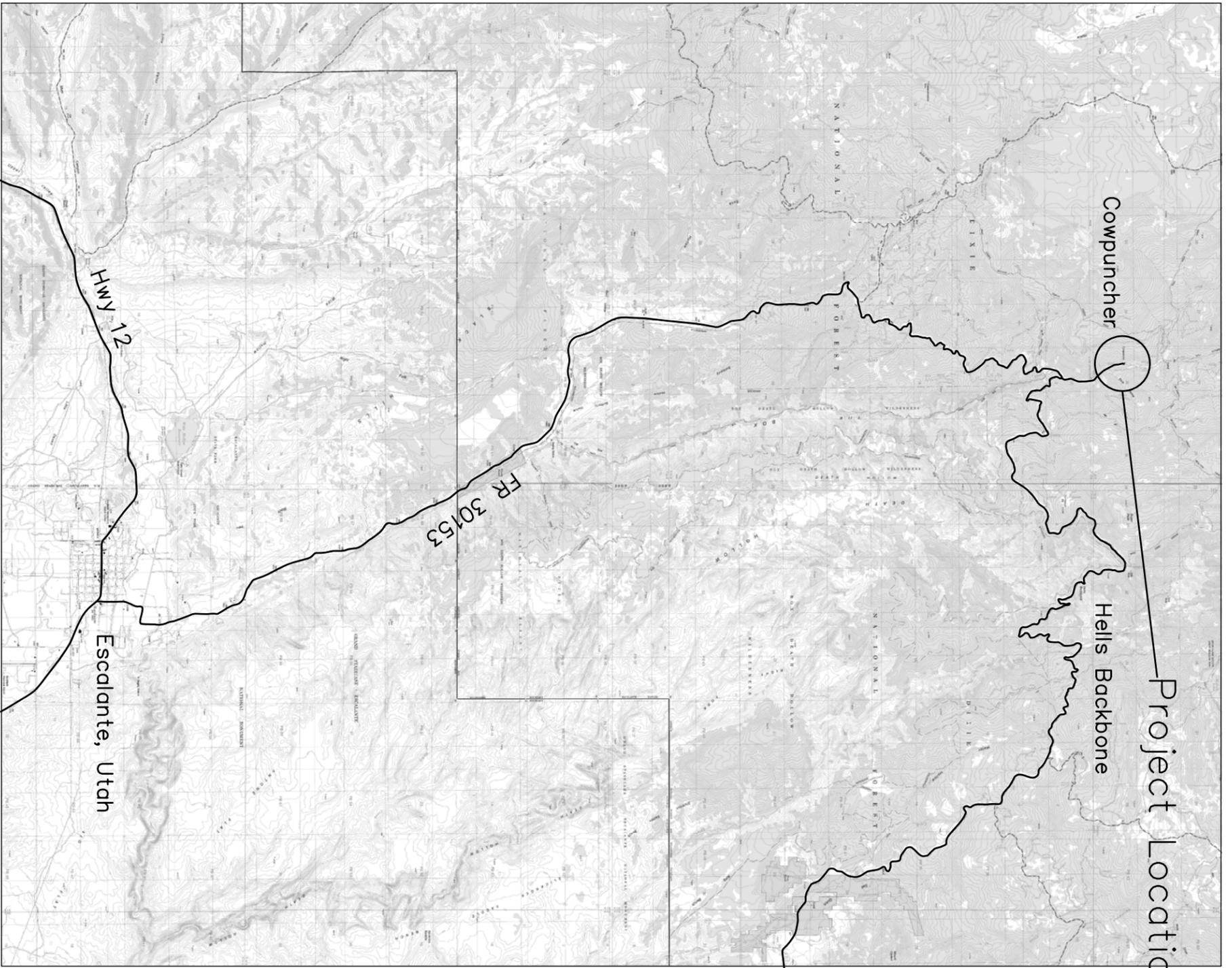
*[Signature]*

DATE 03/02/2016

APPROVED

*[Signature]*  
FOREST SUPERVISOR

DATE 03/02/2016



Project Location

Cowpuncher

Hells Backbone

FR 30153

Escalante, Utah

HWY 12

To Boulder, Utah

**PROJECT DESCRIPTION**

- A. This project consists of constructing a foundation for the Cowpuncher Guard Station cabin and garage.
- B. The work includes excavation as necessary to construct the footings, stem walls, and crawl spaces as shown on the drawings.
- C. The project will be set up as Base and Optional work and is described below:
  - 1. Base - Construction of the foundation for the cabin and the deck.
  - 2. Option 1 - Construction of the foundation and floor slab for the garage.
    - 2.1. Includes constructing waterline and DWV plumbing in the concrete floor for a future bathroom.

PROJECT No. 609  
DRAWING G2  
SHEET 2 of 9

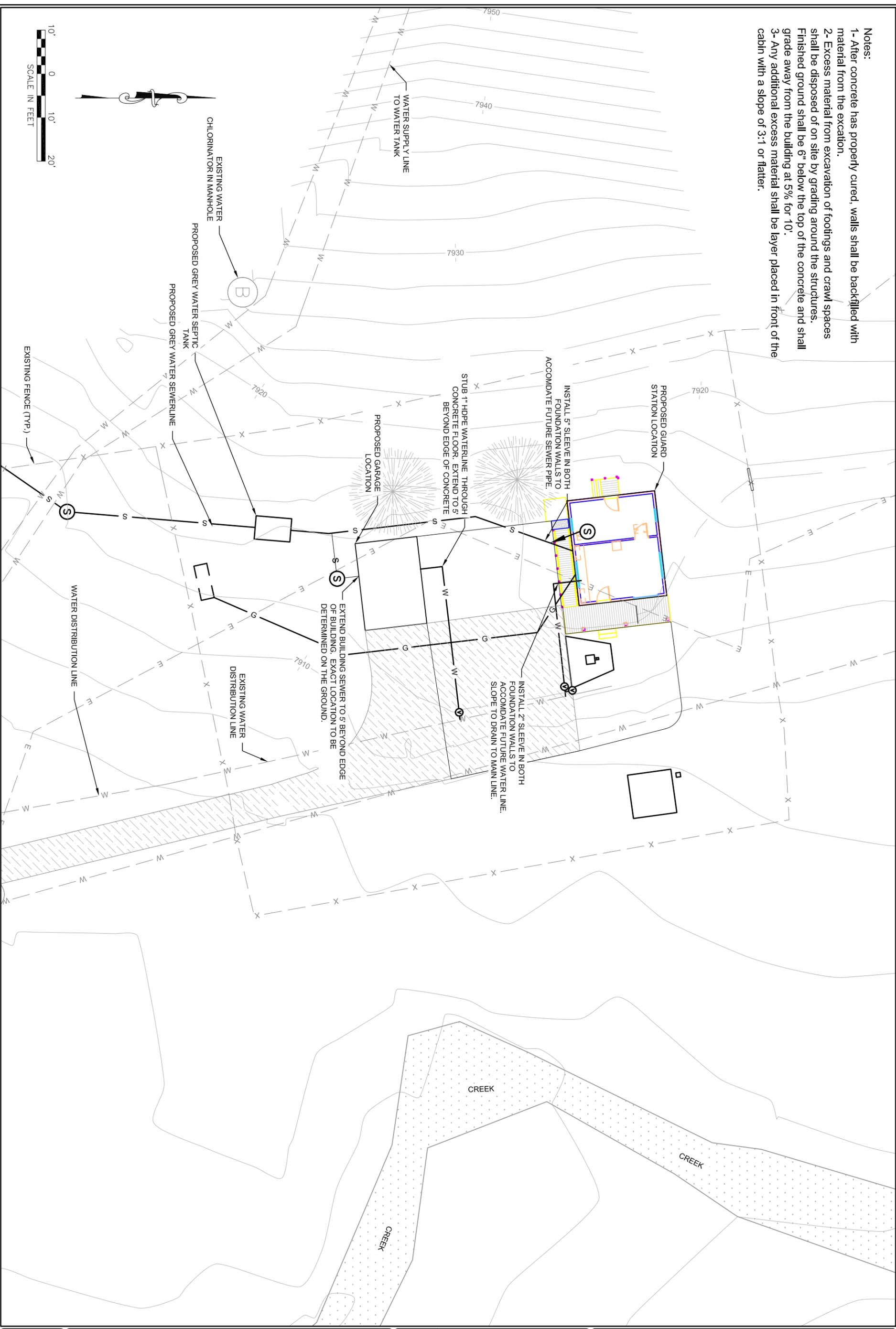
**COWPUNCHER GUARD STATION**  
VICINITY MAP, PROJECT DESCRIPTION,  
AND PROJECT LOCATION

DESIGN	BY:	
	CHECK:	
DRAWING	BY:	
	CHECK:	
APPROVED:	FOREST ENGINEER	DATE



U. S. Department of Agriculture  
**FOREST SERVICE**  
Intermountain Region 4 Engineering  
DIXIE NATIONAL FOREST

- Notes:
- 1- After concrete has properly cured, walls shall be backfilled with material from the excavation.
  - 2- Excess material from excavation of footings and crawl spaces shall be disposed of on site by grading around the structures. Finished ground shall be 6" below the top of the concrete and shall grade away from the building at 5% for 10'.
  - 3- Any additional excess material shall be layer placed in front of the cabin with a slope of 3:1 or flatter.



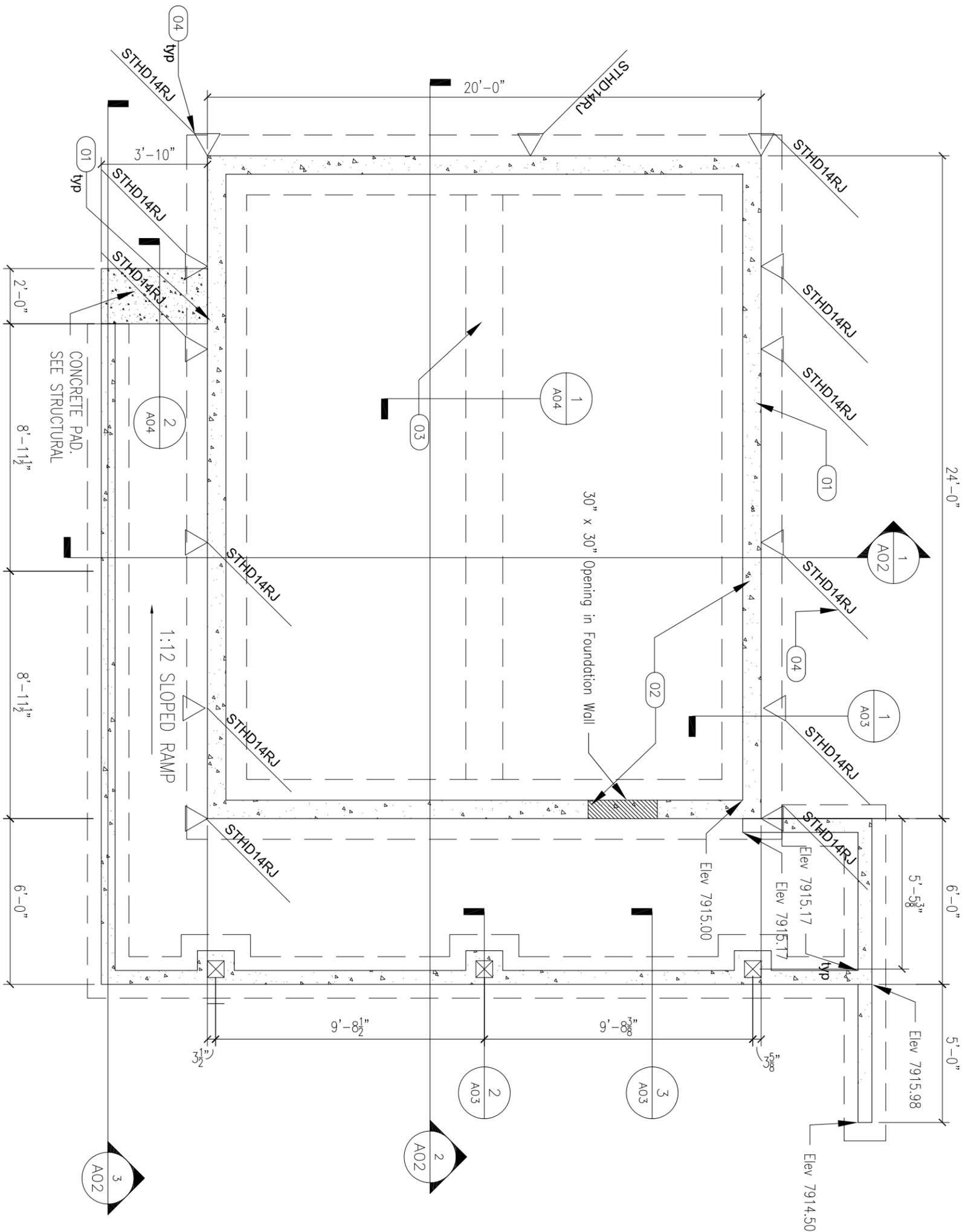
PROJECT No. 609  
 DRAWING S1  
 SHEET 3 P 9

**COWPUNCHER GUARD STATION**  
 SITE PLAN

DESIGN BY:	BY:
CHECK:	CHECK:
DRAWING BY:	BY:
CHECK:	CHECK:
APPROVED:	DATE



U. S. Department of Agriculture  
**FOREST SERVICE**  
 Intermountain Region 4 Engineering  
 DIXIE NATIONAL FOREST



**1**  
FOOTING FOUNDATION PLAN  
SCALE: 1/4" = 1'-0"

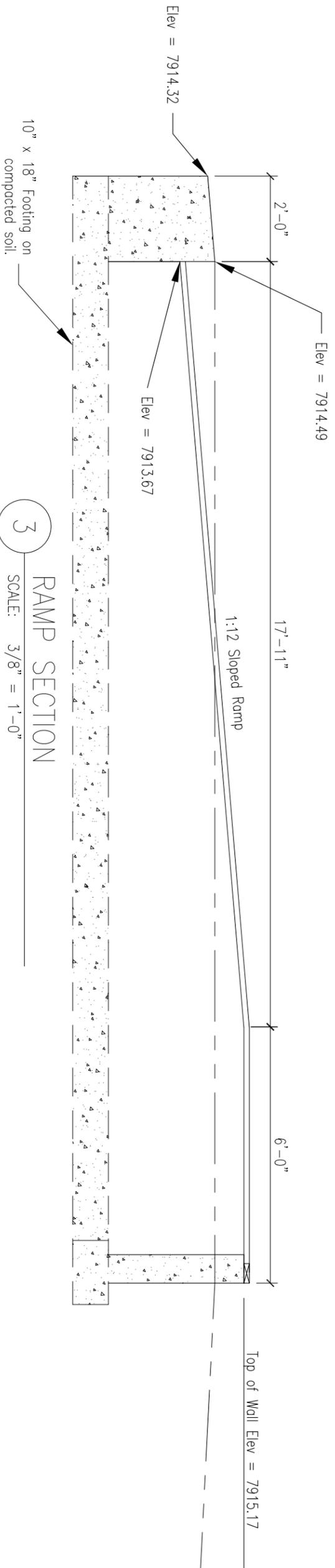
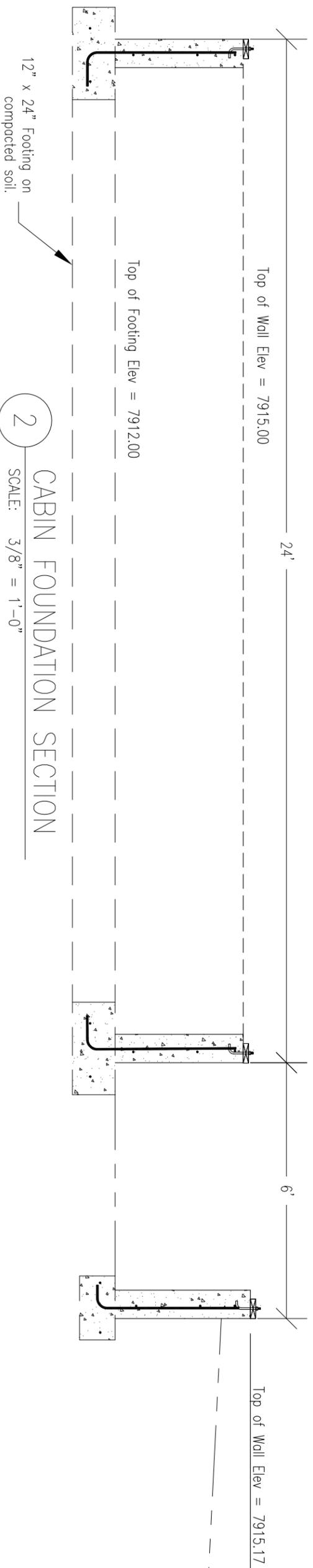
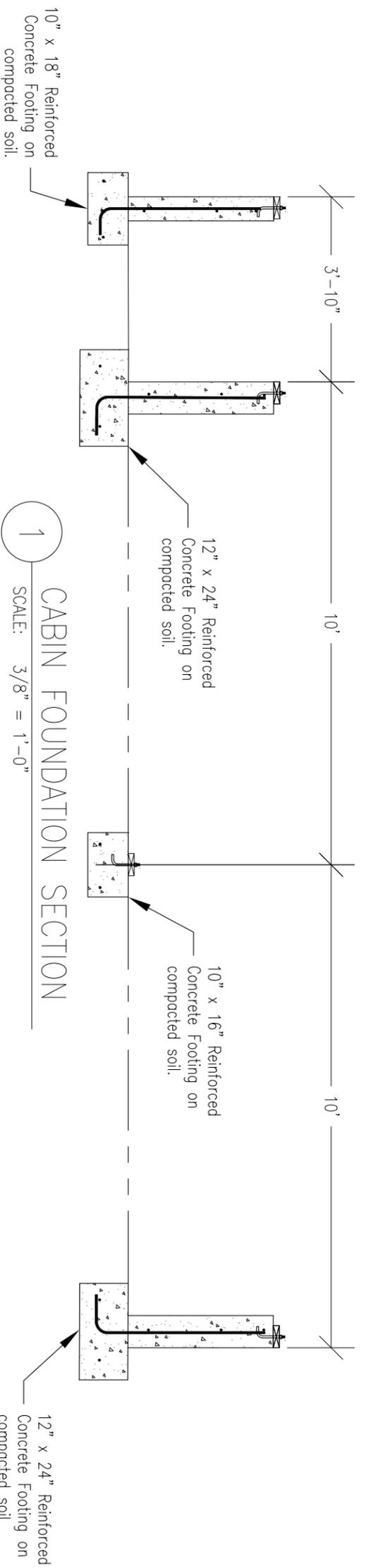
- Notes:
- 1 - Place STHD14RJ Strap Tie Holddown at locations identified on the drawings. Straps shall be located at locations that would line up on framing studs to be located at 16" OC.
  - 2 - 1/2" x 10" J-type anchor bolts shall be located in top of wall. Anchor bolts shall be located at spacing not to exceed 24" and shall be positioned to avoid the location of floor stringers located at 16" OC. Furnish washers and nuts for each anchor bolt.
  - 3 - Place 2" sleeve for future waterline and 5" sleeve for future sewerline in foundation walls. Exact location to be determined in the field.
  - 4 - Bottom of excavation shall be compacted with a minimum of 3 passes with mechanical compactor prior to setting forms.

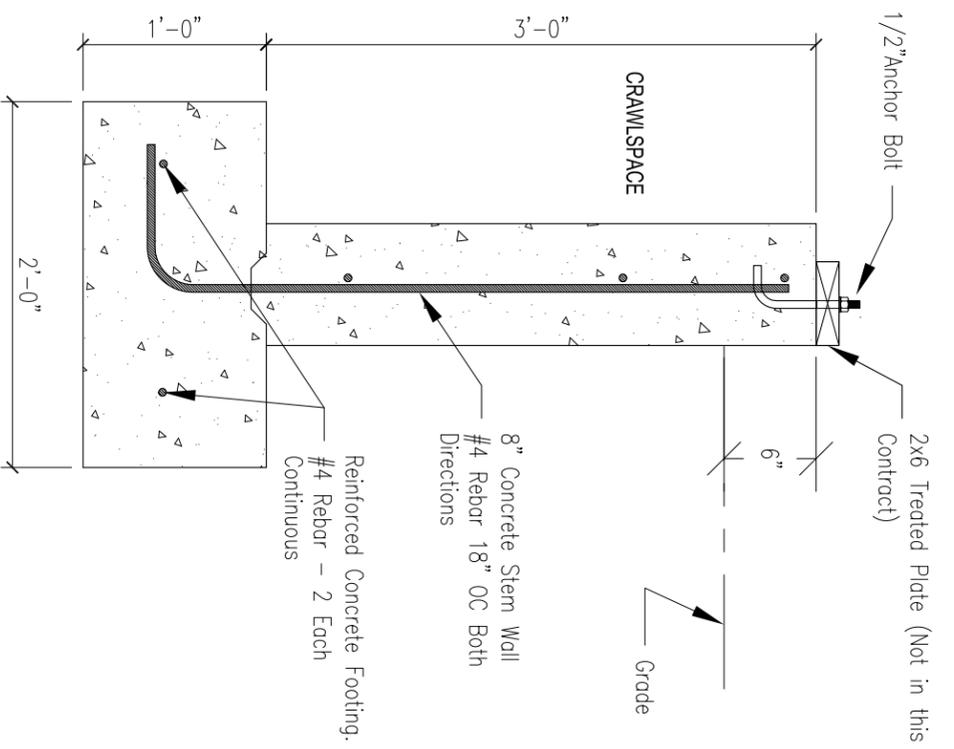
**KEYED NOTES**

- 01 REINFORCED CONCRETE CONTINUOUS FOOTING WITH 8" REINFORCED CONCRETE STEM WALL. SEE DETAILS FOR REINFORCING.
- 02 1/2" x 10" ANCHOR BOLTS 24" OC. ALL PERIMETERS.
- 03 REINFORCED CONCRETE CONTINUOUS SPREAD FOOTING WITH 1/2" x 10" ANCHOR BOLTS 24" OC.
- 04 HOLD DOWNS, TYPICAL.

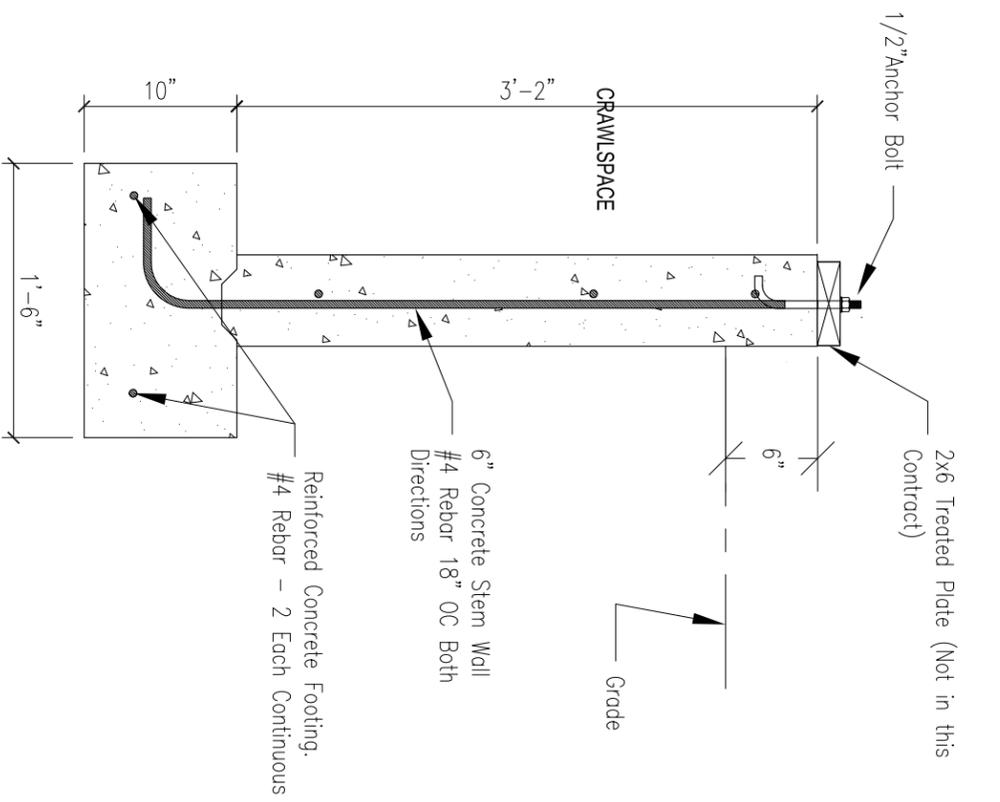
BASE BID QUANTITY ESTIMATE	
Location	CY
Cabin Footing	7.8
Cabin Walls	6.4
Deck Footings	3.2
Deck Walls	4.0
Deck Ramp Approach	1.0
Estimated Total	22.4

Quantity table is for information only. Bid will be lump sum. Contractor shall verify quantities. If significant discrepancies are noted, notify Contracting Officer. All quantities are based on neat line calculations and have been rounded up to the nearest 0.1 cubic yard.

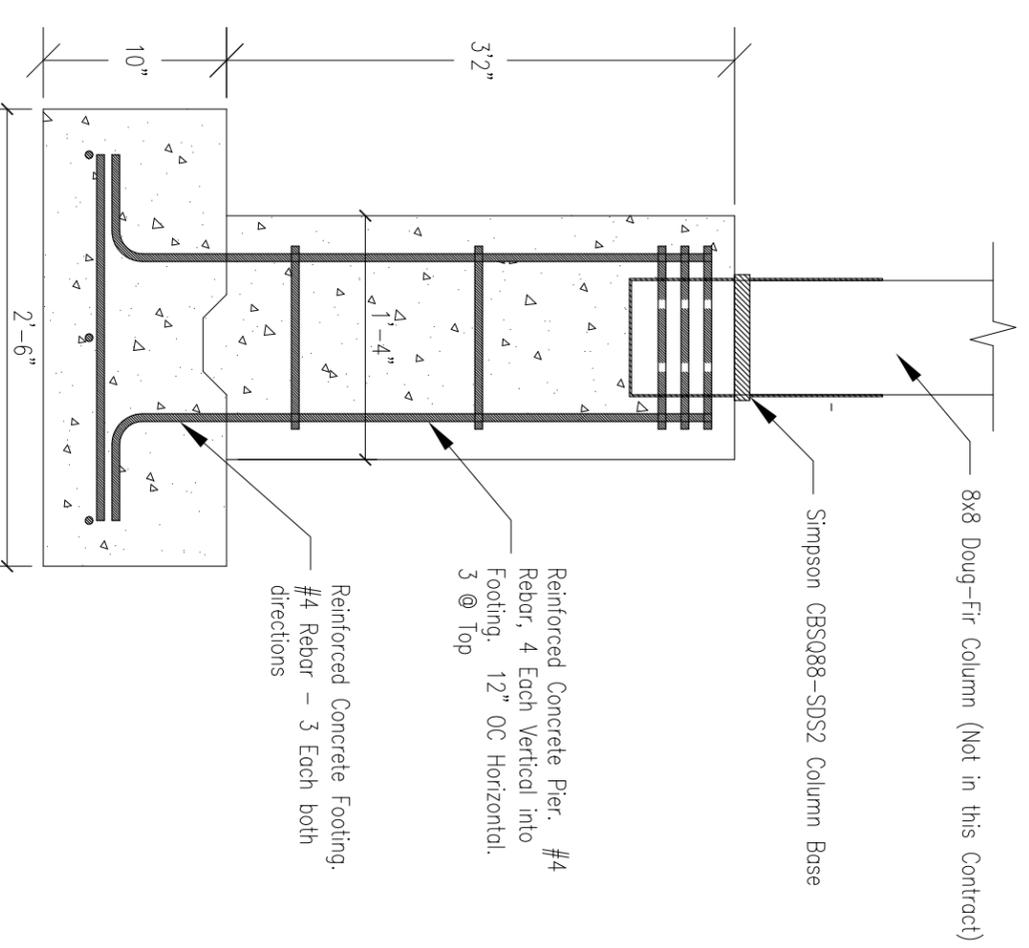




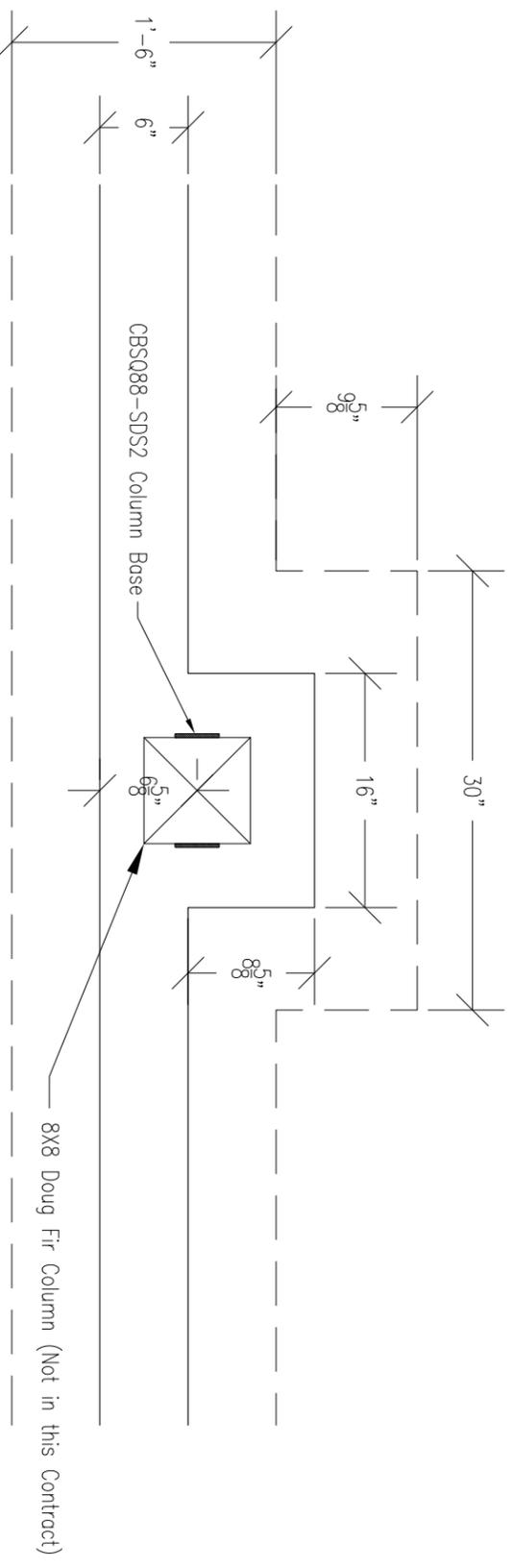
1  
**CABIN FOUNDATION DETAIL**  
NOT TO SCALE



2  
**DECK FOUNDATION DETAIL**  
NOT TO SCALE

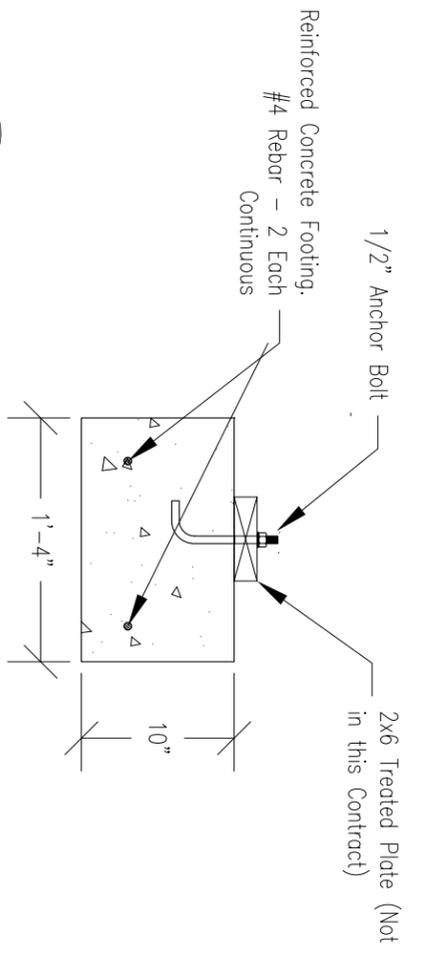


3  
**COLUMN FOUNDATION DETAIL**  
NOT TO SCALE



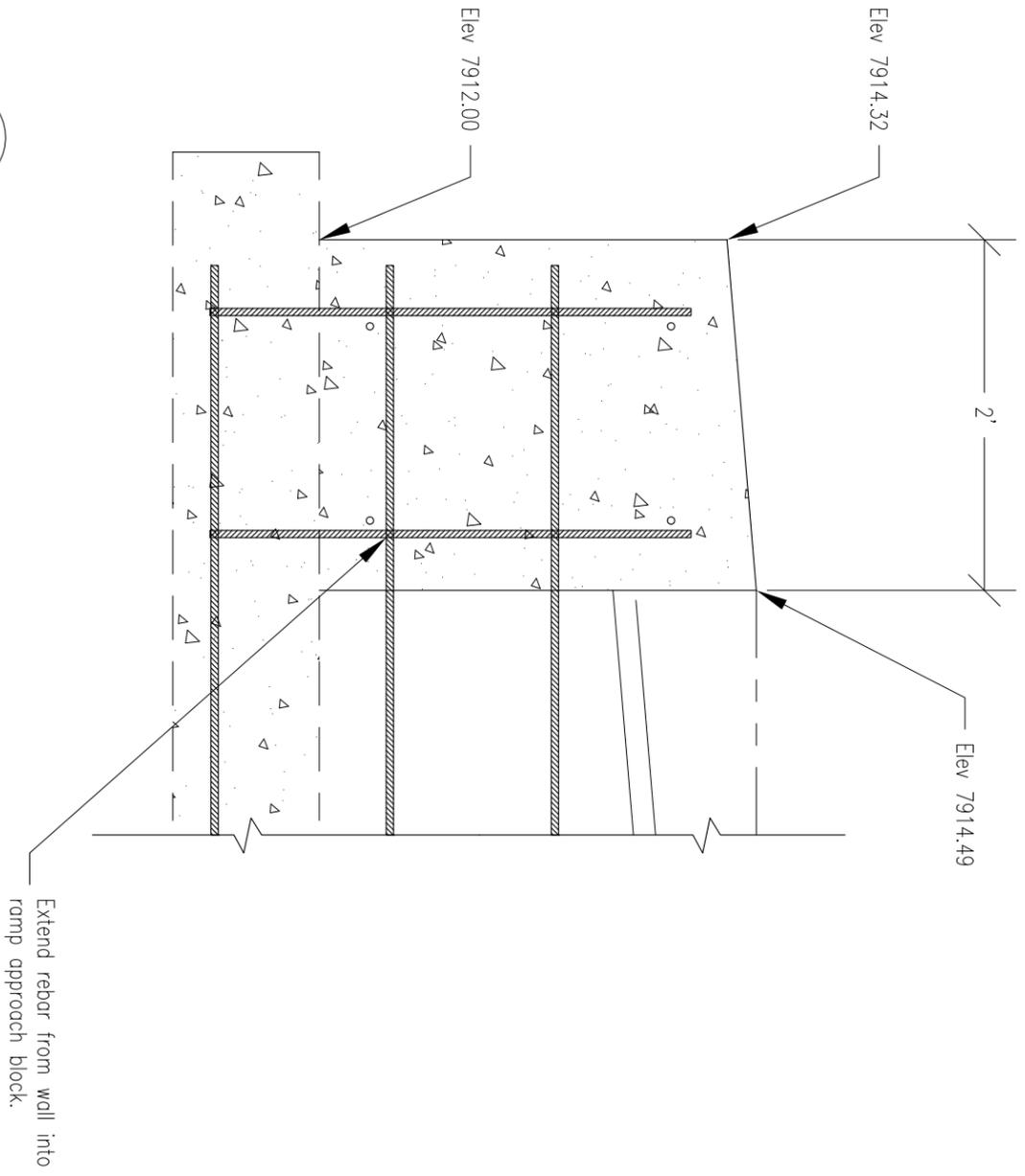
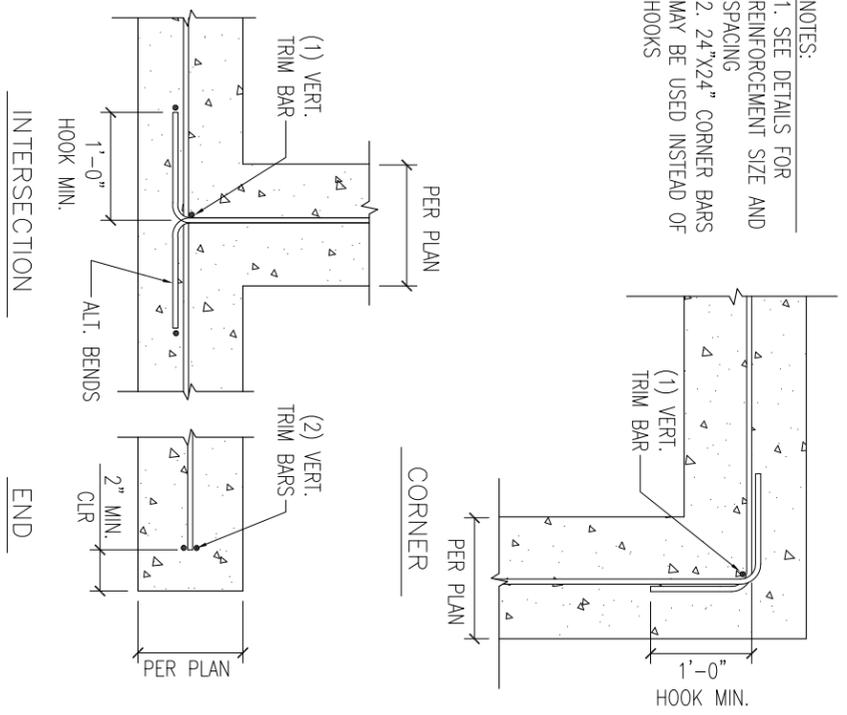
**PLAN VIEW COLUMN DETAIL**  
NOT TO SCALE





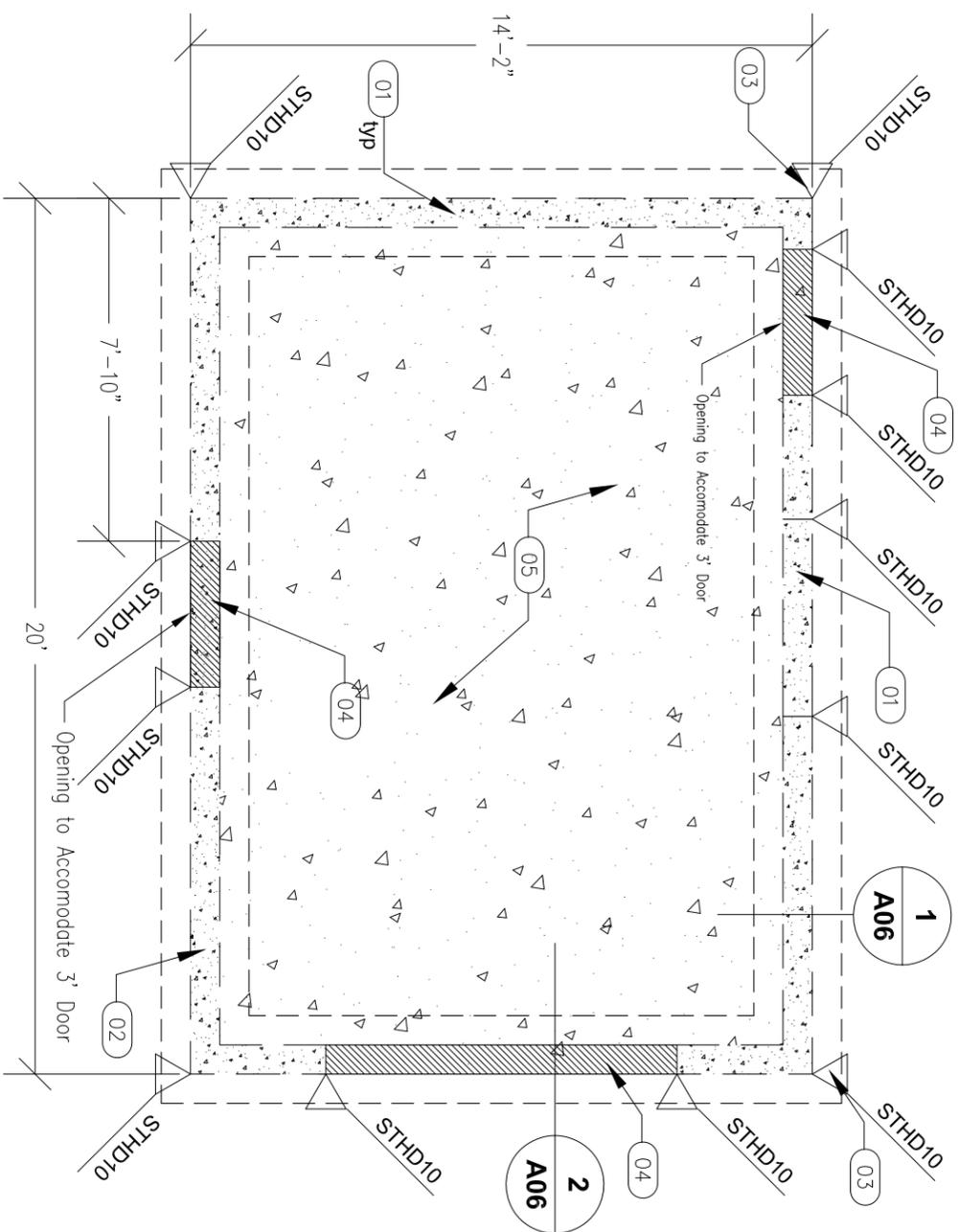
1  
**CENTER SUPPORT FOOTING DETAIL**  
NOT TO SCALE

NOTES:  
1. SEE DETAILS FOR REINFORCEMENT SIZE AND SPACING  
2. 24"x24" CORNER BARS MAY BE USED INSTEAD OF HOOKS



2  
**RAMP APPROACH DETAIL**  
NOT TO SCALE





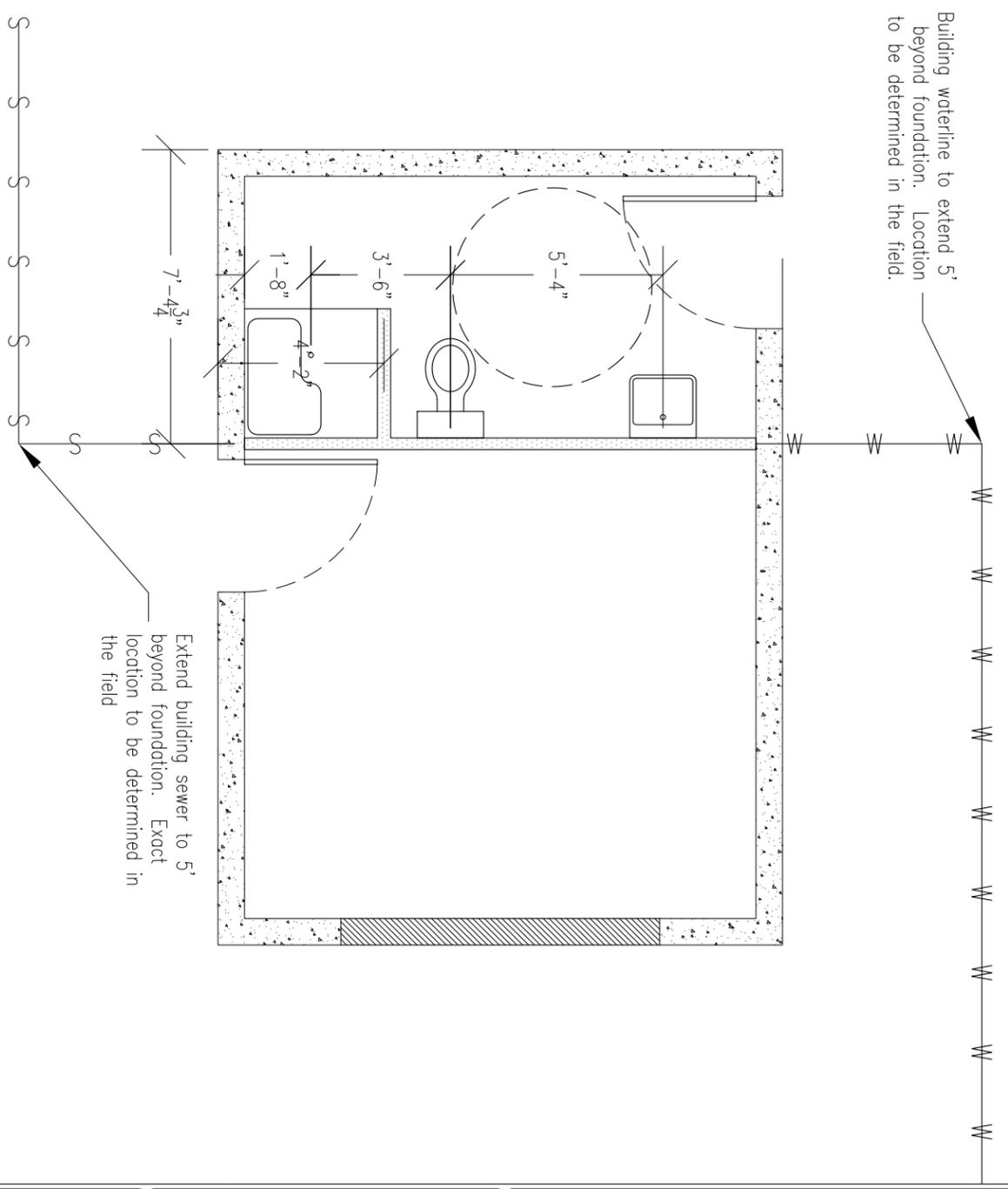
**1 GARAGE FOUNDATION & SLAB**  
SCALE: 1/4" = 1'-0"

**KEYED NOTES**

- 01 REINFORCED CONCRETE CONTINUOUS FOOTING WITH 8" REINFORCED CONCRETE STEM WALL. SEE DETAILS FOR REINFORCING.
- 02 1/2" x 10" ANCHOR BOLTS 24" OC, ALL PERIMETERS.
- 03 HOLD DOWNS, TYPICAL.
- 04 EXTEND SLAB OVER OPENINGS ALL DOORS.
- 05 4" THICK CONCRETE SLAB

OPTION 1 QUANTITY ESTIMATE	
Location	CY
Garage Footings	4.9
Garage Stem Walls	4.6
Garage Slab	3.0
Estimated Total	12.5

Quantity table is for information only. Bid will be lump sum. Contractor shall verify quantities. If significant discrepancies are noted, notify Contracting Officer. All quantities are based on net line calculations and have been rounded up to the nearest 0.1 cubic yard.

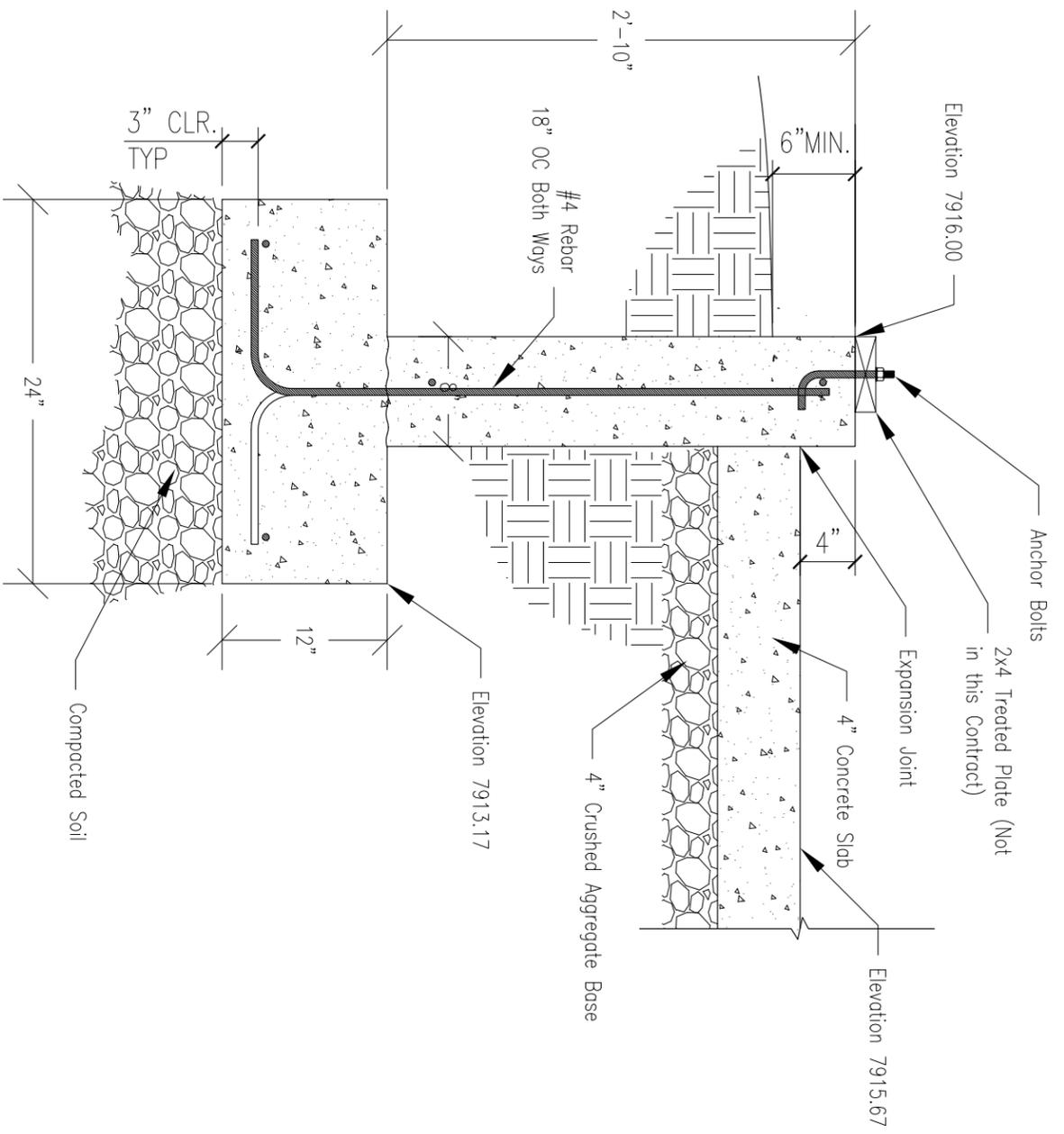


**1 GARAGE RESTROOM PLUMBING**  
SCALE: 1/4" = 1'-0"

**NOTES:**

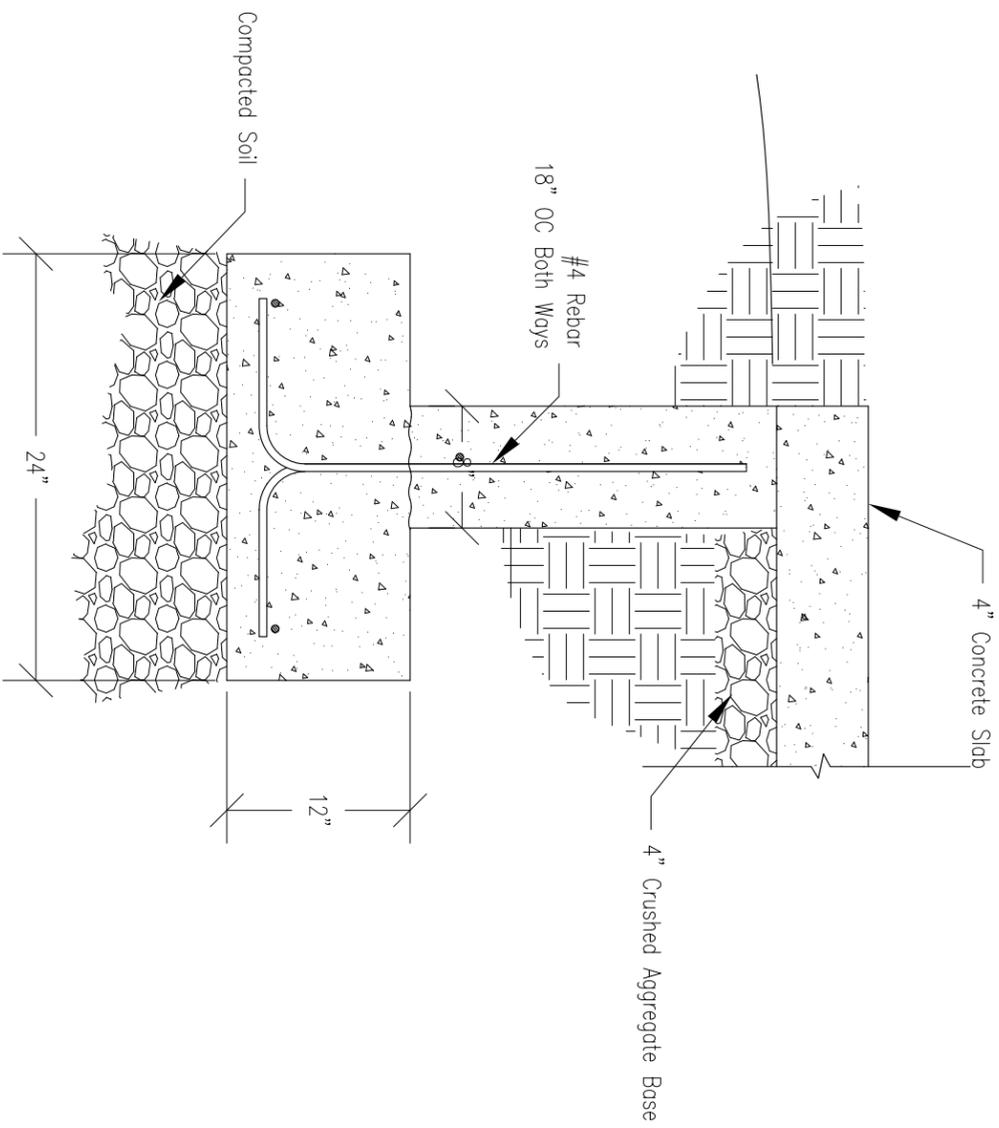
1. Install restroom DWV plumbing under concrete slab as shown. Extend vent piping to a minimum of 12" above finished floor elevation.
2. Install 1" HDPE water pipe under concrete slab and extend to 12" above floor elevation. Locate waterline in proposed wall location.
3. Extend all plumbing to 5' beyond outside edge of building.
4. Locations and elevations to be determined in the field.





**FOUNDATION DETAIL**  
NOT TO SCALE

ELEVATIONS	
LOCATION	ELEVATION
Top of Wall	7916.00
Top of Slab	7915.67
Top of Footing	7913.17



**FOUNDATION DETAIL**  
NOT TO SCALE

