GREAT BASIN INSTITUTE
REQUEST FOR BID (RFB) ELDO - SA - 06

VULCAN FIRE SALVAGE SKYLINE PROJECT

Contact Person:

Jerry Keir
Phone Number: 775.846.9310
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RESPONSE DUE:

July 5th, 2023 at 5pm

Email Bid response:

Subject Title: Vulcan Fire Salvage Skyline Project

jkeir@gbinstitute.org

GREAT BASIN INSTITUTE
RFB ELDO SA-06
for
VULCAN FIRE SALVAGE SKYLINE PROJECT

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I. STATEMENT OF WORK

A. BIDDER QUALIFICATIONS

1. Bidder Minimum Qualifications:

   a. Bidder, Bidder's principal, or Bidder's staff shall have been regularly engaged in the business of logging, chipping/grinding or mechanical thinning within forest environments for at least 3 years.

   b. Bidder shall possess all permits, licenses, and professional credentials necessary to perform services as specified under this RFB.

B. SCOPE

It is the intent of these specifications, terms, and conditions to describe the services GBI is seeking. GBI intends to award a contract to the Bidder(s) who best meets the requirements with preference given to proposals that accomplish all tasks at the end of calendar year 2026. The term of the contract shall begin the date the contract is executed by GBI and terminates on **December 31, 2026.**

This project lies entirely within Eldorado National Forest Lands on the Georgetown Ranger District. This project consists of 815 acres of treatments that include sale and removal of fire killed or dying trees (salvage) >10 (dbh) in specific burned timber stands, mechanical thinning of specific unburned and partially burned timber stands, cutting and removal of biomass to landings in specific units, hauling 1,000 tons of biomass or substandard timber to a biomass facility and road reconstruction and construction of specific roads. The purpose of the project is to mitigate impacts to forest health from the 2021 Mosquito Fire while removing hazard trees that are within striking distance of roads and to also thin timber stands that have not been burned. The work reduces fire and fuel hazards, improves safety along NFS roads for the public, Forest Service staff, firefighters, emergency response personnel, law enforcement, private land inholders, and others. GBI is implementing this project under a Supplemental Project Agreement pursuant to a Master Stewardship Agreement between GBI and the US Forest Service.

Methods of tree removal will include mechanized logging including feller bunchers and rubber-tired or track-mounted log skidders, cut-to-length systems that utilize in-woods tree processor and log forwarder, and conventional logging systems that employ timber fallers with chainsaws and rubber- or track-mounted log skidders. In addition, because of the steep slopes in some areas, skyline logging operations are also specified. Mandatory and optional tractor or grapple piling are included, as well as mastication within treatment units to the extent of equipment operability, utilizing an excavator type machine or similar equipped with a masticating head and or an ASV type tractor with masticating head..

Operation of ground-based equipment will be limited to areas where slopes are generally less than 35%. There are many units where slopes greater than 35% require tree removal. These steeper areas will employe skyline logging systems. Skyline equipment would operate from roads and lift/suspend logs for removal. In areas identified as suitable by the soil scientist and/or hydrologist, shovel logging or ground-based logging may be considered.

Refer to Exhibits C-G General Services Agreement for all units and specifications for operations including, but not limited to, resource protection specifications, limited operating periods, timber specifications, road maintenance specifications, and fire precautions. A project map is provided separately as the last attachment to this RFB.

Volume Estimate and Utilization Standards.

Species	Product	Estimated Quantity	Unit of Measure	Minimum Specifications				
				Merchantable Tree		Piece Required to be Removed		
				Diameter Breast Height (dbh) *(inches)*	Number of Minimum Pieces per Tree	Length *(feet)*	Diameter Inside Bark (DIB)at Small End *(inches)*	% Net of Gross
Ponderosa pine	Sawtimber	2,472	MBF	10	1	10	6.0	25%
Sugar pine	Sawtimber	796	MBF	10	1	10	6.0	25%
White fir/Red fir	Sawtimber	501	MBF	10	1	10	6.0	25%
Douglas-fir	Sawtimber	7,772	MBF	10	1	10	6.0	25%
Incense Cedar	Sawtimber	694	MBF	10	1	10	6.0	25%
Lodgepole pine	Sawtimber	Unestimated	MBF	10	1	10	6.0	25%
Combined Softwood	Biomass (Sub-standard timber not meeting Sawtimber minimum specific-ations)	1,000	Ton	N/A	N/A	N/A	N/A	N/A

II.CALENDAR OF EVENTS

EVENTS	DATE/LOCATION
RFB - Bid Tour	May 2nd, 2023
Response/Proposal Due	July 5th, 2023 by 5:00pm
Pre-work Conference	Within 10 days prior to operations starting
Anticipated Contract Date	To be determined
Contract Termination Date	December 31, 2026

For process flexibility, note that all CALENDAR dates are subject to change.

A. SITE VISIT

Bidder is strongly encouraged to perform an independent site visit to the units to be treated in order to view the project setting and understand the site conditions and other factors potentially relevant to responding to this RFB.

B. PRE-WORK CONFERENCE

Bidder agrees that if awarded a contract, Bidder and its principals will attend a pre-work conference with GBI and U.S. Forest Service prior to starting operations to discuss job requirements. The date will be determined after award of the RFB.

III. GBI PROCEDURES, TERMS, AND CONDITIONS

A. RFB ACCEPTANCE AND AWARD

1. RFB responses will be evaluated by a committee comprised of employees of the Institute, USFS, and consulting personnel.
2. The committee will recommend award to the Bidder who, in its opinion, is best qualified to perform the work described in this RFB. Award may not necessarily be made to the Bidder with the lowest bid.
3. The GBI has the right to decline to award this contract or any part of it for any reason.
4. Any specifications, terms, or conditions issued by the GBI, or those included in the Bidder's submission, in relation to this RFB, may be incorporated into any contract that may be awarded as a result of this RFB.
5. Award of contract. The right is reserved to reject any or all proposals, or to accept one part of a proposal and reject the other, unless the bidder stipulates to the contrary, and to waive technical defects, as the interest of the GBI may require. Award will be made by the GBI Executive Director upon US Forest Service completion of USFS appraisal.

B. EVALUATION CRITERIA/SELECTION COMMITTEE

All bids to be evaluated by the Selection Committee (SC). The SC will be composed of GBI staff, USFS, and other individuals who have expertise or experience in this type of procurement. The SC will select/recommend a Bidder in accordance with the evaluation criteria set forth in this RFB. The evaluation of the RFB responses shall be within the sole judgment and discretion of the SC.

C. PRICING

1. Prices quoted shall be firm for the term of any contract that may be awarded pursuant to this RFB.
2. All prices quoted shall be in United States dollars.
3. Bidders are advised that in the evaluation of cost, if applicable, it will be assumed that the unit price quoted is correct in the case of a discrepancy between the unit price and extended price.

D. PROTESTS

Protests must be in writing and received no later than seven (7) business days after the GBI issues the Notice of Intent to Award, which is sent by electronic mail to all entities who submitted a proposal. GBI will reject the protest as untimely if it is received after this specified time frame. Protests will be accepted from Bidders or potential Bidders only. If the protest is mailed and not received by the GBI, the protesting party bears the burden of proof to submit documentation (e.g., certified mail receipt) that the protest was timely sent to be otherwise received by GBI within the RFB protest period.

Bid protests must contain a detailed and complete written statement describing the reason(s) for protest. The protest must include the RFB title and number, the name of the firm protesting, and include a name, telephone number, email address and physical address of the protestor. If a firm is representing the protestor, they shall include their contact information in addition to that of the protesting firm.

Protests must be mailed or hand delivered to **Jerry Keir, GBI Forestry Program Adminstrator, 16750 Mount Rose Highway, Reno, NV 89511**. Facsimile and electronic mail protests are sent to **Jerry Keir at jkeir@gbinstitute.org** and must be followed by a mailed or hand delivered identical copy of the protest and must arrive within the seven-day time limit.

The GBI Forestry Program Adminstrator (FPA) and Chief Executive Officer (CEO), in consultation with the USFS and GBI Board of Directors, will investigate the protest and, if determined to be valid, the Institute may reject and re-bid or not re-bid the work, or recommend award to the remaining best qualified Bidder. Affected Bidders will be notified by electronic mail within 7 business days of the action taken. GBI may transmit copies of the protest and any attached

documentation to all other parties who may be affected by the outcome of the protest. The decision of GBI as to the validity of any protest is final. GBI's final decision will be transmitted to all affected parties in a timely manner.

E. INVOICING

1. Payment shall be made within 45 days following receipt of a correct invoice and upon complete satisfactory receipt of product and/or performance of services.
2. Invoices, if applicable, shall be submitted monthly during project operations.
3. GBI shall notify General Service Provider of any invoice adjustments required.
4. Invoices shall contain, at a minimum, GBI RFB number, invoice number, remit to address, and itemized services description. Invoices shall accompany a cash flow budget to actual to support fiscal outlay projections.
5. The GBI will pay General Service Provider in an amount not to exceed the negotiated amount(s) which will be referenced in the agreement signed by both parties.
6. Prior to making any payment, the GBI may require Contractor to furnish lien releases conforming to the requirements of California Civil Code section 8120, et seq., receipts or other evidence of payment from all persons performing work and supplying material to Contractor.
7. Contractor shall be required to make cash deposits for included timber and required deposits in advance of cutting and within 45 days of invoicing by GBI. These deposits shall be in cash in a form specified by GBI. Advanced deposits will be in such amounts as to maintain an unobligated balance sufficient enough to cover the value of timber to be cut. Contractor and GBI will agree on a systematic approach to provide sufficient advanced deposits.

IV. RFB RESPONSE SUBMITTAL INSTRUCTIONS AND INFORMATION

A. GBI CONTACTS

All contact during the competitive process is to be through the contact person listed on the first page of this RFB.

B. SUBMITTAL OF RFB RESPONSE

1. Late responses will not be accepted.
2. RFB responses must be received at the specified address by 5:00 p.m. on the due date specified in the Calendar of Events. Any RFB response received after that time or date cannot be considered and will be returned to the Bidder.
4. RFB responses are to be addressed/delivered as follows:

   Emailed : **jkeir@gbinstitute.org**

   Mailed: **Great Basin Institute**
   Att: Jerry Keir
   16750 Mt Rose Highway
   Reno, NV 89511
5. Bidders are to submit one (1) RFB response (Exhibit A – RFB Response Packet including all additional documentation stated in the "Required Documentation and Submittals" section of Exhibit A). Response Packet, and all additional documentation stated in the "Required Documentation and Submittals" section of Exhibit A.
6. All costs required for the preparation and submission of an RFB response shall be borne by the Bidder.
7. Bidder expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms "claim" and "knowingly" are defined in the California False Claims Act, Cal. Gov. Code, §12650 et seq.), GBI will be entitled to civil remedies set forth in the California False Claim Act.
8. The RFB response shall remain open to acceptance and is irrevocable for a period of 90 days, unless otherwise specified in the RFB documents.
9. It is understood that GBI reserves the right to reject any or all RFB responses.

C. RESPONSE FORMAT

1. Bidders shall not modify any part of Exhibits A, B, or C, or qualify their RFB responses. Bidders shall not submit to GBI a re-typed or otherwise re-created version of these documents or any other GBI-provided

document.

2. RFB responses, in whole or in part, are NOT to be marked confidential or proprietary. The GBI may refuse to consider any RFB response or part thereof so marked. RFB responses submitted in response to this RFB may be subject to public disclosure. The GBI shall not be liable in any way for disclosure of any such records.

EXHIBIT A- RFB Response Packet

RFB ELDO SA - 06: VULCAN FIRE SALVAGE SKYLINE PROJECT

To: *Great Basin Institute*

From (Name and Official Title of Bidder): _____

Preferred electronic mail (email) address: _____

RFB RESPONSE PACKET GUIDELINES

- As described in section IV- RFB response submittal instructions and information, bidders are to submit one (1) RFB response containing the following, in their entirety:
    - Exhibit A – RFB response packet, including all additional required documentation as described in Exhibit A- required documentation and submittals
- Bidders that do not comply with the requirements, and/or submit an incomplete RFB response may be subject to disqualification and their RFB response rejected in total.
- If bidders are making any clarifications and/or amendments, or taking exception to any part of this RFB, these must be submitted in the exceptions, clarifications, and amendments section of this Exhibit A – RFB response packet. GBI, at its sole discretion, may accept amendments/exceptions, or may deem them to be unacceptable, thereby rendering the RFB response disqualified.

BIDDER INFORMATION AND ACCEPTANCE

1. The undersigned declares that all RFB documents, including, without limitation, the RFB, Addenda, and Exhibits, have been read and that the terms, conditions, certifications, and requirements are agreed to.
2. The undersigned is authorized to offer, and agrees to furnish, the articles and services specified in accordance with the RFB documents of RFB ELDO SA-04.
3. The undersigned acknowledges acceptance of all addenda related to this RFB. List Addenda for this RFB on the line below:

Addendum #	Date

4. The undersigned hereby certifies to the GBI that all representations, certifications, and statements made by the Bidder, as set forth in this RFB Response Packet and attachments, are true and correct and are made under penalty of perjury pursuant to the laws of California.
5. The undersigned acknowledges that the Bidder is, and will be, in good standing in the State of California, with all the necessary licenses, permits, certifications, approvals, and authorizations necessary to perform all obligations in connection with this RFB and associated RFB documents.
6. It is the responsibility of each Bidder to be familiar with all of the specifications, terms, and conditions, and the site condition. By the submission of an RFB response, the Bidder certifies that if awarded a contract it will make no claim against the GBI based upon ignorance of conditions or misunderstanding of the specifications.
7. Patent indemnity: General or Professional Service Providers who do business with the GBI shall hold the GBI, its Directors, officers, agents, and employees harmless from liability of any nature or kind, including cost and expenses, for infringement or use of any patent, copyright or other proprietary right, secret process, patented or unpatented invention, article, or appliance furnished or used in connection with the contract or purchase order.
8. Insurance certificates are not required at the time of submission. However, by signing Exhibit A – RFB Response Packet, the Bidder agrees to meet the minimum insurance requirements stated in the RFB. This documentation must be provided to the GBI prior to execution of an agreement by the GBI, and shall include an insurance certificate which meets the minimum insurance requirements, as stated in the RFB.
9. The undersigned Bidder hereby submits this RFB response and binds itself to the GBI. The RFB, subsequent Addenda, Bidders Response Packet, and any attachments, shall be used to form the basis of a Contract, which once executed shall take precedence.

Official Name of Bidder (As appears on Bidder's corporate seal and invoice):_____
Street Address Line 1: _____
Street Address Line 2:_____
City: _____ State:____ Zip Code: _____
Web page: _____

Type of Entity / Organizational Structure (check one):

☐ Corporation
☐ Limited Liability Partnership
☐ Limited Liability Corporation
☐ Other: _____
☐ Joint Venture
☐ Partnership
☐ Non-Profit

Jurisdiction of Organization Structure: _____
Date of Organization Structure: _____
Federal Tax Identification Number: _____

Primary Contact Information:
Name / Title: _____
Telephone Number:____ _____ Fax Number: _____
E-mail Address: _____
Street Address Line 1: _____
City: _____ State: _____ Zip Code: : _____

SIGNATURE: _____

Name and Title of Signer (printed): _____

Dated this _____ day of _____20___

Proposal Bid Sheet

Cost shall be submitted on this Bid Form as is. No alterations of any kind to the Proposal Form(s) are permitted. RFB responses that do not comply may be subject to rejection in total. Volume estimates and are not to be construed as guarantees; unit acreage is predicated on GIS data. No minimum or maximum is guaranteed or implied. There are ***no*** required deposits for road maintenance and slash disposal fees. Stewardship payment will be made upon completion of units as confirmed by GPS mapping.

B. Timber Harvesting and Related Work Considered to be Appraisal Items:

Item	Description of Work
Road Mtc Associated with Project	Routine road maintenance of system and non-system roads that are used during operations, including road maintenance needed prior to, during and after haul.
Timber harvest	Skyline and tractor harvest, including temporary road construction and maintenance, cutting, skidding, loading and hauling of Included Timber.
Slash Treatment	Treatment of slash generated by harvest operations, including landing clean-up, removal of slash to disposal sites for specified units and slash associated with temporary road construction.
Erosion Control	Installation of all post-harvest erosion control devices, including water-barring of temporary roads, skid roads, landings, skyline cooridors and; back-blading where agreed.

B. 1 - Stewardship Schedule of Bid Work Items:

Prospective contractors shall submit prices for Stewardship Work in terms of Unit Costs and Total Costs in Table below. The table below states by Item, the Description of the Stewardship work to be done and the acreage, tons, hours or road work to be done and where applicable the Treatment Units where the work will occur. Prospective contractors should enter their estimated Unit Cost to perform each Stewardship Item and the Total Cost to perform the Item. For Item #5, (Road Reconstruction or Construction) the Unit Cost and Total Cost to be entered will be the same since the Treatment Unit is for the "job" of Reconstructing or Constructing the roads according to the Road Plans. For Optional Items #7 and #8, the Unit Cost to be entered is the Cost/hour of work and the Total Cost to be entered will be for 50 hours of work. Each "Mandatory" and each "Optional" Stewardship Work Item must have a Unit Cost and Total Cost figure entered. Unit Costs will be the same for each Treatment Unit within each specific Stewardship Work Item.

Steward-ship Work Item #	Description of Stewardship Work	Quanity & Unit of Measure	Treatment Units	Unit Cost $	Total Cost $
Vulcan Skyline Forest Restoration Project (Items 1-8, funded with Timber Value to Extent Possible) Items 1-5 are Mandatory, 6-8 are Optional at GBI's discretion.					
1	**Mandatory: Skyline & Biomass cut, yarding to landings** *includes piling sub-standard timber (6 to 9.9 inches dbh)	171 acres	All Skyline acres	.	

Steward-ship Work Item #	Description of Stewardship Work	Quanity & Unit of Measure	Treatment Units	Unit Cost $	Total Cost $
2	**Mandatory: Biomass cut, skid to landings** and piling (sub-standard timber, 4 to 9.9 inches dbh) in Mechanical Thin Units *all units are unburned.	147 acres	1 (25 ac) 4 (3 ac) 18 (38 ac) 18a (2 ac) 19 (23ac) 21a (6 ac) 24 (34 ac) 47 (10 ac) 47a (6 ac)		
3	**Mandatory: Biomass Removal** Load, haul and deliver 1,000 tons of biomass from prioritized areas to biomass facility or other agreed upon location. Bid item includes road maintenance as necessary. (Unless otherwise agreed, Units 9, 18 and 18a are priority units; Other units may be agreed upon.)	1,000 tons	Units 9, 18 and 18a and blance of sale, if needed		
4	**Mandatory: Machine Pile** logging slash and existing slash for post-harvest fuels treatment and/or site preparation in tractor & salvage units. (*unburned units are included & piling includes biomass in fire salvage units. Biomass is included in tractor piling treatment if not cut and skidded under Item 2.) Specifications described below	173 acres	P1 (8 ac) P2 (1 ac) 4 (3 ac) 5 (11 ac) 7 (10 ac) 7a (6 ac) 7b (5 ac) 14 (12 ac) 15 (11 ac) 16 (1 ac) 16a (1 ac) 18 (38 ac) 18a (2 ac) 19 (23 ac) 23 (13 ac) 24a (19 ac) 36 (10 ac)		
5	**Mandatory: Reconstruct and Construct roads** to specifications and design standards as specified in the Vulcan Road package.	Job	See Road Plans		

Steward-ship Work Item #	Description of Stewardship Work	Quanity & Unit of Measure	Treatment Units	Unit Cost $	Total Cost $
	(*Each pay item identified in Schedule of Items document will establish unit rates for specific work items in road package)				
6	**Optional: Mastication** as post-harvest treatment, pending fund avalablity (*Units are slightly burned or non-burned, except unit 34 - moderately burned) Specifications described below.	187 acres	1 (25 ac) 5a (6 ac) 5b (10 ac) 6 (3 ac) 17 (39 ac) 20 (3 ac) 21 (9 ac) 21a (6 ac) 22 (23 ac) 24 (34 ac) 34 (13 ac) 47 (10 ac) 47a (6)		
7	**Optional:** Hourly rate for grapple machine & operator for Machine Pile jackpot accumulations of slash pending fund availability as directed by GBI in 50 hr increments.	$/hr	A minimum of 50 hrs of work (Unit cost is hourly rate & total cost is the cost of 50 hrs of work).		
8	**Optional:** Hourly rate for tractor with brush rake and operator to Machine Pile jackpot accumulations of slash pending fund availablity as directed by GBI in 50 hr increments.	$/hr	A minimum of 50 hrs of work (Unit cost is hourly rate & total cost is the cost of 50 hrs of work)..		

B-2 - Purchase of Commercial Sawlogs-This Item must be bid.

The minimum acceptable total sale value bid for advertised timber is $239,667.03.

Prospective contractors shall submit bids in terms of the minimum acceptable total sale value. The table below states minimum acceptable bid rates and estimated quantities of timber, together with the minimum acceptable Total Sale Value. The bidder should enter the offer on the following table only in terms of Total Sale Value (Bottom-right, shaded box in table below).

The Great Basin Institute shall establish bid rates by species in the contract by multiplying each species' minimum acceptable bid rate by the bid increase percentage. Such rates will be rounded to the nearest cent. The bid increase percentage is the bidder's Total Sale Value bid divided by the minimum acceptable Total Sale Value.

Species	Product	Quantity	Unit of Measure	Minimum Acceptable Bid ($/MBF)	Unit Total $
Ponderosa pine	Sawtimber	2,472	MBF	0.01	**XX**
Sugar pine	Sawtimber	796	MBF	0.01	**XX**
White fir/Red fir	Sawtimber	501	MBF	9.07	**XX**
Douglas-fir	Sawtimber	7,772	MBF	28.80	**XX**
Incense Cedar	Sawtimber	694	MBF	16.22	**XX**
Lodgepole pine	Sawtimber	Unestimated	MBF	0.01	**XX**
Total Sale Volume and Minimum Acceptable Total Sale Value	Sawtimber	12,235	MBF	**$239,667.03**	

Stewardship Work Specifications

Mastication. Unless otherwise agreed in writing, requirements for mastication are as follows:

- In identified units all brush, both live and dead, greater than 6 inches in height, down logs < 16" in diameter on large end and conifers not designated as leave trees, less than 9.9" dbh shall be machine masticated (shredded, mulched, or chipped). Pacific yews, sequoias, black oaks, dogwoods, aspen, elderberry and California nutmeg shall not be masticated unless necessary for equipment accessibility.

- All madrone and live oak and tan oak < 8" dbh are to be masticated. Species in order of preference when choosing leave trees are sugar pine, ponderosa pine, Douglas-fir, incense cedar and white fir. Giant sequoias will not be masticated.
- Conifer trees will be selected for removal to create a 20-25 foot spacing between leave trees. In specific units, Forest Service may designate in writing greater or lesser leave tree spacing. In no case will the Forest Service designate a leave tree spacing less than 16 feet. Retained hardwood trees are to be ignored in terms of determining conifer tree spacing.
- All masticated vegetation shall have a stump height generally no greater than 3 inches above ground level as measured on the uphill side or 6 inches above obstacles (i.e., large rocks, down logs not designated for mastication).
- Residual masticated vegetative debris resulting from operations shall lie flat on the ground and generally not exceed 12 inches in height. Individual pieces of vegetative debris shall generally not exceed 4 feet in length. No masticated or cut material shall accumulate against leave trees.
- Vegetation within stream course Buffer Strips shown on Contract Area Map shall not be masticated unless otherwise flagged on-the-ground by the Forest Service orGBI or agreed to in writing.
- All trees marked with orange or red paint are designated leave trees and shall not be damaged or felled.
- Characteristics of Acceptable Leave Trees.White fir, red fir and incense cedar would be prioritized for removal and healthy sequoia, ponderosa pine and rust-free sugar pine and Douglas-fir would be prioritized in this order as leave trees. Thinning shall generally be from below favoring desirable trees. Desirable trees are trees with the tallest height, fullest crown, and straightest stem and, which are free of damage due to insect, disease, physical and mechanical factors and have at least a 40% crown ratio.

Grapple Pile or Machine Pile by Tractor equipped with brush rake. Unless otherwise agreed in writing, requirements for Grapple Pile, or Machine Pile by Tractor equipped with brush rake, are as follows:

Piling Specifications. On slopes generally <35%, all brush, slash, unmerchantable logs, concentrations of logging slash and pre-existing vegetative debris greater than 4 inches in diameter and greater than 3 feet long shall be Machine Piled in a manner that will facilitate Forest Service burning. All piles will be constructed in a "teepee" or pile-shape that is a minimum of 8 feet tall unless there is insufficient material to be piled within 100 ft distance to make a pile 8 feet high. In order to get a compact machine pile, when necessary, logging slash and existing vegetative debris shall be bucked prior to piling.

All piles shall be reasonably free of soil or rocks to facilitate burning and shall be constructed of such size and at such distance from trees so that burning shall not result in unnecessary damage to residual timber. All piles will be compact with no piled material extending more than 3 feet outside of the general pile base. Material extending 3 feet or more outside the edge of a pile shall be trimmed and the trimmed material placed in burn pile.

Piles shall be located a distance of at least twice their height in feet from the outer edge of tree crowns or snags and at least 100 ft from private property. An 8-foot fire line shall be cleared around each Machine Pile to mineral soil. In areas where there is a potential for burning material to roll, fire lines shall be trenched on the downhill side of each pile to adequately prevent material from crossing fire lines. Trenches shall be constructed by hand unless otherwise agreed.

EXCEPTIONS, CLARIFICATIONS, AMENDMENTS
RFB ELDO SA - 06: VULCAN FIRE SALVAGE SKYLINE PROJECT

Bidder's Name:_____

List below requests for clarifications, exceptions, and amendments, if any, to the RFB and associated RFB documents, and submit with your RFB response. The GBI is under no obligation to accept any exceptions and such exceptions may be a basis for RFB response disqualification.

Reference to:			**Description**	
Page No.	Section		Item No.	

EXHIBIT B- Insurance Requirements

RFB ELDO SA - 06: VULCAN FIRE SALVAGE SKYLINE PROJECT

Insurance certificates are not required at the time of submission; however, by signing Exhibit A – RFB Response Packet, the Bidder agrees to meet the minimum insurance requirements stated in the RFB. This documentation must be provided to the GBI, prior to award.

The following are the minimum insurance limits, required by the GBI, to be held by the GENERAL SERVICE PROVIDER performing on this RFB.

INDEMNIFICATION AND INSURANCE

A. Indemnification

GENERAL OR PROFESSIONAL SERVICE PROVIDER expressly agrees to defend, indemnify, and hold harmless the GBI and its Directors, officers, agents, and employees from and against any and all loss, liability, expense, claims, suits, and damages, including attorneys' fees, arising out of or resulting from GENERAL OR PROFESSIONAL SERVICE PROVIDER's, its associates', employees', subcontractors', or other agents' negligent acts, errors or omissions, or willful misconduct, in the operation and/or performance under this Agreement.

B. Insurance Requirements

GENERAL OR PROFESSIONAL SERVICE PROVIDER shall take out and maintain during the life of the Project all the insurance required in this section, and if requested shall submit certificates for review and approval by the GBI. The Notice to Proceed shall not be issued, and GENERAL OR PROFESSIONAL SERVICE PROVIDER shall not commence work until such insurance has been approved by the GBI. The certificates shall be on forms approved by the GBI. Acceptance of the certificates shall not relieve GENERAL OR PROFESSIONAL SERVICE PROVIDER of any of the insurance requirements, nor decrease the liability of GENERAL OR PROFESSIONAL SERVICE PROVIDER. The GBI reserves the right to require GENERAL OR PROFESSIONAL SERVICE PROVIDER to provide insurance policies for review by the GBI.

C. Workers Compensation Insurance

GENERAL OR PROFESSIONAL SERVICE PROVIDER shall take out and maintain during the life of the Workers Compensation Insurance for all of its employees on the project. In lieu of evidence of Workers Compensation Insurance, the GBI will accept a Self-Insured Certificate from the State of California. GENERAL OR PROFESSIONAL SERVICE PROVIDER shall require any subContractor to provide it with evidence of Workers Compensation Insurance.

D. Commercial General Liability Insurance

GENERAL OR PROFESSIONAL SERVICE PROVIDER shall take out and maintain during the life of theContractAutomobile and General Liability Insurance that provides protection from claims which may arise from operations or performance under this Agreement. If GENERAL OR PROFESSIONAL SERVICE PROVIDER elects to self-insure (self-fund) any liability exposure during the contract period above $50,000, GENERAL OR PROFESSIONAL SERVICE PROVIDER is required to notify the GBI immediately. Any request to self-insure must first be approved by the GBI before the changed terms are accepted. GENERAL OR PROFESSIONAL SERVICE PROVIDER shall require any subContractor or Professional Service Provider to provide evidence of liability insurance coverages.

The amounts of insurance shall be not less than the following:

$1,000,000/Occurrence, Bodily Injury, Property Damage -- Automobile.

$1,000,000/Occurrence, Bodily Injury, Property Damage -- General Liability.

The following coverages or endorsements must be included in the policy(ies):

1. The GBI, its Directors, officers, and employees are Additional Insureds in the policy(ies) as to the work being performed under the contract.
2. The coverage is *Primary and non-contributory* to any other applicable insurance carried by the GBI.
3. The policy(ies) covers *contractual liability.*
4. The policy(ies) is written on an *occurrence* basis.
5. The policy(ies) covers the GBI's Property in Consultant's care, custody, and control.
6. The policy(ies) covers *personal injury* (libel, slander, and wrongful entry and eviction) liability.
7. The policy(ies) covers explosion, collapse, and underground hazards, fire suppression expense, property damage to forest

land due to fire, and property damage to non-owned automobiles and equipment due to fire.
8. The policy(ies) covers *products and completed operations.*
9. The policy(ies) covers the use of *owned, non-owned,* and hired automobiles.
10. The policy(ies) and/or a separate pollution liability policy(ies) shall cover pollution liability for claims related to the release or the threatened release of pollutants into the environment arising out of or resulting from Consultant's performance under this agreement.
11. The policy(ies) will not be canceled nor the above coverages/endorsements reduced without 30 days written notice to GBI at the address above.

EXHIBIT C- General Requirements
DRAFT GENERAL SERVICES AGREEMENT
RFB ELDO SA - 06: VULCAN FIRE SALVAGE SKYLINE PROJECT

1. DEFINITIONS

The following terms shall be given the meaning shown, unless context requires otherwise or a unique meaning is otherwise specified.

a. "GBI" means the Great Basin Institute, its employees acting within the scope of their authority, and its authorized representatives.

b. **"Change Order"** A Change Order is a written instrument used for modifying the contract with regards to the scope of Work, contract sum, and/or Contract Time. An approved Change Order is a Change Order signed by the GBI. An executed Change Order is a Change Order signed by both the GBI and the Contractor.

c. **"Contract"** means the agreement between the GBI and Contractor as memorialized in the Contract Document.

d. "Business Entity" means any individual, business, partnership, joint venture, corporation, sole proprietorship, or other private legal entity recognized by statute.

e. "Buyer" means the GBI's authorized contracting official.

f. "Contract Documents" comprise the entire agreement between the GBI and the Contractor and can include the GBI's contract form if used, any purchase order, RFB RFQ or Contractor response packet, and any addenda, appendices and GBI approved changes or amendments. The Contract Documents are intended to be complementary and include all items necessary for the Contractor proper execution and completion of the Work. Any part of the Work not shown or mentioned in the Contract Documents that is reasonably implied, or is necessary or usual for proper performance of the Work, shall be provided by the Contractor at its expense.

g. "Contractor" means the Business Entity with whom the GBI enters into a contractual agreement. Contractor shall be synonymous with "supplier", "vendor", "consultant" or other similar term.

h. "Day" unless otherwise specified, days are calendar days, measured from midnight to the next midnight.

i. "Goods" means off the shelf software and all types of tangible personal property, including but not limited to materials, supplies, and equipment.

j. **"Project Manager"** shall be the GBI designated individual responsible for administering and interpreting the terms and conditions of the Contract Documents, for matters relating to the Contractor performance under the Contract with the GBI, and for liaison and coordination between the GBI and Contractor.

k. "Work" means all labor, tasks, materials, supplies, and equipment required to properly fulfill the Contractor obligations as required in the Contract Documents.

l. "Work Day" Unless otherwise specified, work day includes all days of the year except Saturdays, Sundays and GBI holidays.

M. **"Stewardship Project Area (SPA)"** comprises all contracted units.

2. CONTRACTOR FINANCIAL OBLIGATION

The Contractor shall promptly make payments to all persons supplying labor and materials used in the execution of the contract.

3. MATERIAL AND WORKMANSHIP

a. All work shall be done and completed in a thorough, workmanlike manner, notwithstanding any omission from these specifications or the drawings, and it shall be the duty of the Contractor to call attention to apparent errors or omissions and request instructions before proceeding with the work. The Project Manager may, by appropriate instructions, correct errors and omissions, which instructions shall be binding upon the Contractor as though contained in the original Contract Documents.

b. All work must be satisfactory to the Project Manager. Work not in accordance with the Contract Documents, in the opinion of the Project Manager, shall be made to conform.

4. DEFECTIVE WORK

The Contractor shall replace at its own expense any part of the work that has been improperly executed, as determined by the Project Manager. If Contractor refuses or neglects to replace such defective work it may be replaced by the GBI at the expense of the Contractor, and its sureties shall be liable therefore.

5. SAFETY AND ACCIDENT PREVENTION

In performing work under the Contract on GBI premises, Contractor shall conform to any specific safety requirements contained in the Contract or as required by law or regulation. Contractor shall take any additional precautions as the GBI may reasonably require for safety and accident prevention purposes. Any violation of such rules and requirements, unless promptly corrected, shall be grounds for termination of this Contract or Contractor right to precede in accordance with the default provisions of the Contract Documents.

6. CHARACTER OF WORKFORCE

The Contractor shall employ none but skilled competent qualified personnel to perform the Work, and shall maintain discipline and order in the conduct of the Work at all times.

7. EMPLOYMENT OF APPRENTICES

a. In the performance of the contract, the Contractor and any SubContractor shall comply with the provisions concerning the employment of apprentices in Section 1777.5 of the Labor Code and any amendments thereof.

b. In the event the Contractor or any SubContractor willfully fails to comply with the aforesaid section, such Contractor or SubContractor shall be subject to the penalties for noncompliance in Labor Code, Section 1777.7.

8. CHANGES

a. Changes in the Work can only be made in writing signed by an authorized employee of the GBI. If the change causes an increase or decrease in the contract sum, or a change in the time for performance under the Contract, an adjustment may be made as determined by the Project Manager.

b. The GBI reserves the right to make changes in the design of materials, equipment, or machinery, to make alterations or additions to or deviations or subtractions from the Contract and any specifications and drawings, to increase or decrease the required quantity of any item or portion of the Work or to omit any item or portion of the Work, as may be deemed by the Project Manager to be necessary or advisable and to order such extra work as may be determined by the Project Manager to be required for the proper execution and completion of the whole Work contemplated. Any such changes will be ordered in writing by the Project Manager. The determination of the Project Manager on all questions relating to changes, including extra work, shall be conclusive and binding.

c. Prior to issuing an amendment or change to the Contract, the Project Manager may request that the Contractor submit a proposal covering the changes. Within 10 business days of receiving the request, the Contractor shall submit its proposal to the Project Manager of all costs associated with the proposed amendment or change and any request for an extension of Contract time. Contractor proposal shall include detailed estimates with cost breakdowns, including labor, material, equipment, overhead, and profit. Labor shall be broken down into hours and rate per hour. If applicable, the proposal shall include a breakdown for off-site labor (including factory labor, engineering, etc.). The Contractor proposal shall include an analysis of schedule impact when the Contractor is requesting an adjustment in contract time. The Contractor shall be responsible for any delay associated with its failure to submit its change proposal within the time specified. If the Project Manager decides not to issue an amendment or change after requesting a proposal from the Contractor, the Contractor will be notified in writing. The Contractor is not entitled to reimbursement for Change Order preparation costs if the Contractor proposal is not accepted by the Project Manager.

d. If the Contractor agrees with the terms and conditions of the approved Change Order, the Contractor shall indicate its acceptance by signing the original copy and returning it to the Project Manager within 10 Work Days after receipt or with reasonable promptness and in such sequence as to not delay the Work or activities of the GBI or of separate Contractors, whichever is sooner. If notice of any change is required to be given to a surety by the provisions of any bond, the Contractor shall provide notice and the amount of each applicable bond shall be adjusted separately. Payment in accordance with the terms and conditions set forth in the executed Change Order shall constitute full compensation for all Work included in the Change Order and the GBI will be released from any and all claims for direct, indirect, and impact expenses and additional time impact resulting from the Work. If the Contractor disagrees with the terms and conditions of the approved Change Order, the Contractor shall indicate specific areas of disagreement and return the approved Change Order to the Project Manager with a detailed written dispute. No payment will be made on the disputed work until the approved Change Order is returned to the Project Manager. However, whether or not the Contractor agrees with the terms and conditions of an approved Change Order, the Contractor shall immediately revise its sequence of operations as required to facilitate timely completion of the changed work and shall proceed with the revised work sequence.

e. The Project Manager may, after having received a written cost quotation from the Contractor, order the Contractor, in writing, to proceed with the work prior to issuance of an approved Change Order through a change directive. The change directive will authorize the Contractor to proceed with the work subject to the cost quotation submitted by the Contractor. Within five days following receipt of the change directive, the Contractor shall submit a detailed change proposal documenting the amount of compensation. The Project Manager will review the change proposal and, at its option, will either issue an approved Change Order for the work or direct the Contractor to perform the work through Force Account. Until the method of compensation is determined, and the approved Change Order is received, the Contractor shall keep full and complete time and material records of the cost of the ordered work and shall permit the Project Manager to have access to such records. An approved Change Order shall supersede any previously issued written change directive covering the same Work.

9. EFFECT OF EXTENSIONS OF TIME

The granting, or acceptance, of extensions of time to complete the Work or furnish the labor, supplies, materials or equipment, or any one of the, will not operate as a release of Contractor or the surety on Contractor faithful performance bond.

10. DELAYS

a. The Contractor shall take reasonable precautions to foresee and prevent delays to the Work. When the Contractor foresees a delay event, and upon the occurrence of a delay event, the Contractor shall immediately notify the Project Manager of the probability or the actual occurrence of a delay, and its cause. With respect to all delays (compensable, excusable or inexcusable), the Contractor shall reschedule the Work and revise its operations, to the extent possible, to mitigate the effects of the delay. Within 15 days from the beginning of a delay the Contractor shall provide the Project Manager with a detailed written description of the delay, its cause, its impact and the Contractor mitigation plans. Failure to provide the notification required above waives the Contractor right to any additional time or compensation resulting from the delay for whatever cause. The Project Manager will investigate the facts and ascertain the extent of the delay, and the Project Manager's findings thereon shall be final and conclusive, except in the case of gross error. An extension of time must be approved

by the Project Manager to be effective, but an extension of time, whether with or without consent of the sureties, shall not release the sureties from their obligations, which shall remain in full force until the discharge of the contract. the extent of the delay, and the Project Manager's findings thereon shall be final and conclusive, except in the case of gross error. An extension of time must be approved by the Project Manager to be effective, but an extension of time, whether with or without consent of the sureties, shall not release the sureties from their obligations, which shall remain in full force until the discharge of the contract.

b. For inexcusable delays (delays caused by circumstances with in the Contractor control, the control of its subContractors or supplies of any tier, or within the scope of the Contractor contract responsibilities) the Contractor shall not be entitled to an extension of time or additional compensation for any loss, cost, damage, expense or liability resulting directly or indirectly from the inexcusable delay.

c. For excusable delays (delays to completion of the Work within the time limits set forth in the Contract Documents directly caused by events beyond the control of both the Contractor and the GBI, which delay is not concurrent with an inexcusable delay and which could not have been avoided by the Contractor through reasonable mitigation measures).

d. For compensable delays (delays to completion of the Work within the time limits set forth in the Contract Documents that could not be avoided by Contractor mitigation, caused directly and solely by the GBI or by causes within the exclusive control of the GBI, and which were not concurrent with any other type of delay) the Project Manager will grant the Contractor an extension of the time to perform under the Contract and compensation in an amount that represents the Contractor actual direct costs incurred as a direct result of the compensable delay. The Contractor may recover its direct costs only and may not recover (and waives) all other types of indirect, consequential, special and incidental damages.

e. For concurrent delays (two or more independent causes of delay directly preventing the Contractor from completing the Work within the time limits set forth in the Contract Documents where the delays occur at the same time during all or a portion of the delay period being considered, and where each of the delays would have caused delay to the Contractor even in the absence of any of the other delays, and none of the delays could have been avoided by Contractor mitigations) the following rules apply:

i. One or more of the concurrent delays are excusable or compensable, then the period of concurrent delay will be treated as an excusable delay; and

ii. All of the concurrent delays are inexcusable, then the period of concurrent delay will be inexcusable.

11. TERMINATION

a. Termination by GBI for Cause:

i. GBI may terminate the Contractor right to proceed under the Contract, in whole or in part, for cause at any time after the occurrence of any of the following events, each of which constitutes a default:

1. The Contractor becomes insolvent or files for relief under the bankruptcy laws of the United States.
2. The Contractor makes a general assignment for the benefit of its creditors or fails to pay its debts as the same become due.
3. A receiver is appointed to take charge of the Contractor property.
4. The Contractor fails to supply skilled supervisory personnel, an adequate number of properly skilled workers, proper materials, or necessary equipment to prosecute the Work in accordance with the Contract Documents.
5. The Contractor fails to make progress so as to endanger performance of the Work within the contractually required time.
6. The Contractor disregards legal requirements of agencies having jurisdiction over the Work, the Contractor, or the GBI.
7. The Contractor fails to provide the GBI with a written plan to cure a GBI identified default within five business days after the GBI's request for a plan to cure; the GBI does not accept the Contractor plan for curing its default; or the Contractor does not fully carry out an accepted plan to cure.
8. The Contractor abandons the Work. Abandonment is conclusively presumed when the GBI requests a written plan to cure a default and the Contractor does not submit the plan within five business days of the GBI's request.
9. The Contractor materially fails to meet its obligations in accordance with the Contract Documents.
10. The Contractor is in default of any other material obligation under the Contract Documents.

ii. If any of the above events occur, the GBI may, in its discretion, require that the Contractor submit a written plan to cure its default, which plan must be provided to the GBI within 5 business days of the request and must include a realistic, executable plan for curing the noted defaults.

iii. Upon any of the occurrences referred to in Article 18.a.i. above, the GBI may, at its election and by notice to the Contractor, terminate the Contract in whole or in part; accept the assignment of any or all of the subcontracts; and then complete the Work by any method the GBI may deem expedient. If requested by the GBI, the Contractor shall remove any part or all of the Contractor materials, supplies, equipment, tools, and machinery from the site of the Work within seven days of such request; and, if the Contractor fails to do so, the GBI may remove or store, and after 90 days sell, any of the same at the Contractor expense.

iv. No termination or action taken by the GBI after termination shall prejudice any other rights or remedies of the GBI provided by law or by the Contract Documents.

v. Conversion: If, after termination for other than convenience, it is determined that the Contractor was not in default or material breach, or that the default or material breach was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for convenience pursuant to Article 18.b. below.

b. Termination by GBI for Convenience

i. The GBI may, at its option, and for its convenience, terminate the Contract at any time by giving written notice to the Contractor specifying the effective date of termination. Upon such termination, the Contractor agrees to comply with the notice and further agrees to waive any claims for damages, including loss of anticipated profits, on account of the termination; and, as the sole right and remedy of the Contractor, the GBI shall pay the Contractor as set forth below

ii. Upon receipt of a notice of termination for convenience, the Contractor shall, unless the notice directs otherwise, do the following:
1. Immediately discontinue its performance of the Contract to the extent specified in the notice.
2. Place no further orders or subcontracts for materials, equipment, services, or facilities, except as may be necessary for completion of a portion of the Work that is not discontinued or that is necessary for an orderly cessation of the Work.
3. Promptly cancel, on the most favorable terms reasonably possible, all subcontracts to the extent they relate to the performance of the discontinued portion of the Work.
4. Thereafter, do only such Work as may be necessary to preserve and protect Work already in progress and to protect materials, plants, and equipment in transit to or on the site of performance.

iii. Upon such termination for convenience, the GBI will pay to the Contractor the sum of the following:
1.The amount of the contract sum allocable to the portion of the Work properly performed by the Contractor as of the effective date of termination, less sums previously paid to the Contractor.
2. Previously unpaid costs of any items delivered to the project site that were already fabricated for subsequent incorporation into the Work.
3. Any proven losses with respect to materials and equipment directly resulting from the termination.
4. Reasonable demobilization costs.

iv. The above reimbursement is the sole and exclusive remedy to which the Contractor is entitled in the event the contract is terminated for convenience; and the Contractor expressly waives any other claims, damages, demands, compensation or recovery related to this contract or project. The Contractor agrees to sign a general release incorporating this waiver.

c. Effect of Termination: Upon termination, the obligations of the Contract shall continue as to portions of the Work already performed and, subject to the Contractor obligations under Article 18.b.ii, as to bona fide obligations assumed by the Contractor prior to the date of termination.

d. Force Majeure: If the contract is suspended or terminated by the Fall River River RCD because Contractor performance is prevented or delayed by an event including an irresistible, superhuman cause, or by the act of public enemies of the State of California or of the United States (“Force Majeure”) , the Contractor will be paid for Work performed prior to the Force Majeure event at either (i) the unit prices named in the Contract; or (ii) in the event no unit prices are named, a sum equal to the percentage of the total contract amount that matches the percentage of the total contract Work performed prior to the Force Majeure event.

12. DAMAGES

All losses or damages to material or equipment to be furnished pursuant to the Contract Documents occurring prior to receipt and final acceptance of the Work shall be sustained by the Contractor. The Contractor shall sustain all losses arising from unforeseen obstructions or difficulties, either natural or artificial, encountered in the prosecution of the Work, or from any action of the elements prior to final acceptance of the work, or from an act or omission on the part of the Contractor not authorized by the Contract Documents.

13. ORDER OF PRECEDENCE

a. In the case of conflicts, errors, or discrepancies in any of the Contract Documents, the order of precedence is as follows. Within the same order of precedence, specific requirements shall take precedence over general requirements.
i. Approved Change Orders
ii. Addenda
iii. RFQ or RFB.
iv. Referenced Standard Specifications and Drawings
v. Contractor Response Packet

14. INDEMNIFICATION/RESPONSIBILITY

a. Contractor shall indemnify, keep and save harmless the GBI and each of its directors, officers, agents and employees against any and all suits, claims or actions arising out of any of the following:
i. Any injury to persons or property that may occur, or that may be alleged to have occurred, arising from the performance or implementation of this Contract; or
ii. Any allegation that materials or services developed, provided or used for this Contract infringe or violate any copyright, trademark, patent, trade secret, or any other intellectual-property or proprietary right of any third party.

b. Contractor further agrees to defend any and all such actions, suits or claims and pay all charges of attorneys and all other costs and expenses of defenses as they are incurred. If any judgment is rendered, or settlement reached, against the GBI or any of the other agencies or individuals enumerated above in any such action, Contractor shall, at its expense, satisfy and discharge the same.

c. This indemnification shall survive termination or expiration of the Contract.

15. PROHIBITION OF ASSIGNMENT

The Contractor shall not assign, transfer, or otherwise dispose of any of its rights, duties or obligations under this Contract.

16. NEWS RELEASES

The Contractor, its employees, subcontractors, and agents shall not refer to the GBI, or use any logos, images, or photographs of the GBI for any commercial purpose, including, but not limited to, advertising, promotion, or public relations, without the GBI's prior written consent. Such written consent shall not be required for the inclusion of the GBI's name on a customer list.

17. TRANSFER OF INTEREST

Contractor shall not assign, transfer or otherwise substitute its interest in the Contract or any of the contract obligations without prior written consent from the GBI.

18. SEVERABILITY

Should any part of the Contract be declared by a final decision by a court or tribunal of competent jurisdiction to be unconstitutional, invalid or beyond the authority of either party to enter into or carry out, such decision shall not affect the validity of the remainder of the Contract, which shall continue in full force and effect, provided that the remainder of the Contract can be interpreted to give effect to the intentions of the parties.

19. COVENANT AGAINST GRATUITIES

The Contractor warrants that no gratuities (in the form of entertainment, gifts, or otherwise) were offered or given by the Contractor, or any agent or representative of the Contractor, to any officer or employee of the GBI with a view toward securing the Contract or securing favorable treatment with respect to any determinations concerning the performance of the Contract. For breach or violation of this warranty, the GBI shall have the right to terminate the Contract, either in whole or in part, and any loss or damage sustained by the GBI in procuring on the open market any items which Contractor agreed to supply shall be borne and paid for by the Contractor. The rights and remedies of the GBI provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or in equity.

20. RIGHTS AND REMEDIES OF THE GBI

The rights and remedies of the GBI provided herein shall not be exclusive and are in addition to any other rights and remedies provided by law or under the Contract.

21. WAIVER OF RIGHTS

Any action or inaction by the GBI or the failure of the GBI on any occasion, to enforce any right or provision of the Contract, shall not be construed to be a waiver by the GBI of its rights and shall not prevent the GBI from enforcing such provision or right on any future occasion. Rights and remedies are cumulative and are in addition to any other rights or remedies that the GBI may have at law or in equity.

22. CONFIDENTIALITY

Contractor agrees to maintain in confidence and not disclose to any person or entity, without the GBI's prior written consent, any trade secret or confidential information, knowledge or data relating to the products, process, or operation of the GBI. Contractor further agrees to maintain in confidence and not to disclose to any person or entity, any data, information, technology, or material developed or obtained by Contractor during the term of the Contract. The covenants contained in this paragraph shall survive the termination of this Contract for whatever cause.

EXHIBIT D - Timber Removal Specifications

GENERAL SERVICES AGREEMENT

RFB ELDO SA - 06: VULCAN FIRE SALVAGE SKYLINE PROJECT

F.1 – Location and Area

Vulcan Fire Salvage Skyline Project	Approximately 815 acre Project Area	T12N, R10E, sections 3 and 4, T13N, R10E, sections 8-11, 14, 15, 19, 22, 24, 27 and 34, MDB&M

F.2 - Volume Estimate and Utilization Standards.

				Minimum Specifications				
				Merchantable Tree		Piece Required to be Removed		
Species	Product	Estimated Quantity	Unit of Measure	Diameter Breast Height (dbh) *(inches)*	Number of Minimum Pieces per Tree	Length *(feet)*	Diameter Inside Bark (DIB)at Small End *(inches)*	% Net of Gross
Ponderosa pine	Sawtimber	2,472	MBF	10	1	10	6.0	25%
Sugar pine	Sawtimber	796	MBF	10	1	10	6.0	25%
White fir/Red fir	Sawtimber	501	MBF	10	1	10	6.0	25%
Douglas-fir	Sawtimber	7,772	MBF	10	1	10	6.0	25%
Incense cedar	Sawtimber	694	MBF	10	1	10	6.0	25%
Lodgepole pine	Sawtimber	Unestimated	MBF	10	1	10	6.0	25%
Combined Softwood	Biomass (Sub-standard timber not meeting Sawtimber minimum specific-ations)	1,000	Ton	N/A	N/A	N/A	N/A	N/A

F.3 - Stump Height.

Species	Product	Maximum Stump Height (inches)	Minimum Stump Height (inches)
All	Sawtimber	1/3 stump diameter, or 6 inches, whichever is greatest to maximum height of 12 inches	N/A
All	Biomass (Substandard Timber)	6 inches	N/A

F.4 - Estimated Quantities and Rates Per Unit of Measure.

Cutting Unit Number	Approx. Acres	Species	Product	Quantity	Unit of Measure	Rate of Payment $/UOM	Required Deposit per unit of measure
All	815	Ponderosa pine	Sawtimber	2,472	MBF		$0.00
		Sugar pine	Sawtimber	796	MBF		$0.00
		White fir/Red fir	Sawtimber	501	MBF		$0.00
		Douglas-fir	Sawtimber	7,772	MBF		$0.00
		Incense Cedar	Sawtimber	694	MBF		$0.00
		Lodgepole pine	Sawtimber	Unestimated	MBF		$0.00
All	Unest.	Combined Softwood	Biomass (Sub-standard timber not meeting Sawtimber minimum specific-ations)	1,000.	ton	$0.00	$0.00

F.5 - Timber Designations. Timber designated for cutting shall be confined to the Contract Area. No undesignated timber shall be cut without prior notification to and approval of the Forest Service. Prescriptions/timber designations are included later in this subsection.

Designation	Number of Units	Acres
Clearcutting Units	0	0
Stewardship Road Clearing (Estimated 0.65 miles or 2 acres)	4 road segments	Acres included below
Overstory Removal Units	0	0
Understory Removal Units	0	0
Individual Trees (Designated by Damage Class)	26	289
Individual Trees (marked)	32	526
Incompletely Marked Timber	0	0

F.6 - Cutting Unit Boundary Designation. The boundaries of cutting units are designated as shown in the following table. The trees used for boundary designation are not to be cut.

Marked boundary trees shall not be cut.

Cutting Unit	Paint Color	Designation
All Units	Orange	3 orange paint stripes facing into the unit on boundary trees and an orange mark below stump height.

F.7 - Utilization and Removal of Included Timber. "Utilization Standards" for trees and minimum pieces. To meet minimum tree specifications, trees must equal or exceed tree diameters and contain at least one minimum piece. Except for timber required or authorized to be left, CONTRACTOR shall fell and buck such trees and shall remove from Project Area all pieces that:

(a) meet minimum piece standards or
(b) Do not meet such standards but would have qualified as part of minimum pieces if bucking lengths were varied to include such material.

F.7.1.1 Standard Timber. Live and dead trees and portions thereof that meet Utilization Standards and are designated for cutting.

F.7.1.2 Substandard Timber. Live and dead trees that:
(a) Do not meet Utilization Standards and
(b) Are located in Clearcutting Units or construction clearings or are otherwise designated for cutting.

F.7.2 Damaged Timber.

F.7.2.a Damaged by CONTRACTOR. Undesignated live trees meeting Utilization Standards (a) within 200

feet slope distance from centerline of roads constructed hereunder which are damaged by CONTRACTOR construction to the extent that considerable deterioration or mortality is imminent and are designated by Forest Service for felling before the nearest road segment is substantially completed; or (b) which are damaged by CONTRACTOR in logging and are subsequently marked before CONTRACTOR has completed skidding or yarding operations in the immediate area. By agreement, such trees may be left without charge if their removal would cause undue damage or be grossly uneconomic.

F.7.2.b Negligent or Willful Damage. Undesignated timber meeting Utilization Standards and unnecessarily damaged or negligently or willfully cut by CONTRACTOR, if included by Forest Service.

F.7.2.c Minor Damage by Natural Causes. Undesignated trees within the Project Area and meeting Utilization Standards, that become insect infested, wind thrown, suffer serious damage, or die, as designated by agreement.

F.7.3 Unintentionally Cut Timber. Trees within or immediately adjacent to the Project Area or to road construction or other authorized clearing outside Contract Area, not designated for cutting but that are cut through mistake by CONTRACTOR, when included by Forest Service.

F.7.4 Other Material. Species or products not listed in the contract, upon written approval of Forest Service.

F.7.4-a Timber Subject to Agreement. In addition, there is within the Project Area an unestimated quantity of:

Species	Product
Combined Softwoods	Non Sawlog (Sub-standard) Material (including biomass in excess of 1,000 tons) at no cost
Hardwood species	Firewood (in log truck loads) @ $5.00/cord in 20 cord minimums

that shall be included timber upon written agreement.

F.8 - Tree Designation/Prescriptions.

F.8-a Other Authorized Clearings. Timber within authorized clearings for Temporary Roads, landings, or other construction clearings is designated for cutting. Quantities of such timber are not included, but may be included by agreement.

F.8-b Understory Removal Units. All trees within "Understory Removal Units" are designated for cutting when they meet Utilization Standards and are smaller than the diameter limits shown on Contract Area Map.

F.8-c Individual Trees. All trees to be cut, are "Marked" when individually designated by Forest Service with Green or Blue tracer paint marks above and below stump height. Contract Area Map indicates areas plainly identified on the ground where leave trees are Marked to be left uncut. Where stump marks have been burned off, GBI or the Forest Service will re-mark trees prior to harvest.

F.8-d Minor Changes. Within Project Area, minor adjustments may be made in boundaries of cutting units or in the timber individually Marked for cutting when acceptable to CONTRACTOR and Forest Service.

F.8-e Designation By Damage Class. All trees within "Fire Salvage Units" identified on Contract Map are designated for cutting when they meet Utilization Standards and meet the following criteria:

1. All fire-killed and dying conifer trees with no green foliage,
2. Individual fire damaged conifer trees with some green foliage will be assessed to determine whether or not the individual tree will be Included Timber by assessment using the "Marking Guidelines for Fire-Injured Trees in California, Report #RO-11-1 (Smith and Cluck, 2011. The following criterion from the Smith and Cluck document will be used:
    a. Crown injury assessment for all species; (post-bud break for yellow pine)
    b. Presence or absence of red turpentine beetle pitch tubes on yellow pine and sugar pine;
    c. Upon completion of individual tree assessment, **a Probability of Mortality (Pm) of 60% will be applied to determine which individual trees will be designated for harvest.**
    d. Additional trees to be cut, if any, will be marked by GBI or the Forest Service with blue paint.

F.9 Mining Claims. Valid claims are excluded from Stewardship Project Area, except those on which timber cutting is authorized in writing by the claimant and except mining claims on which cutting is authorized by the Act of July 23, 1955 (30 USC 614). Claims that limit CONTRACTOR rights to operate under this contract and that Forest Service has been able to identify are shown on Stewardship Project Area Map.

CONTRACTOR is not obligated to operate contrary to existing claim limitations. Forest Service shall designate boundaries of claims on the ground to the extent necessary to identify Included Timber.

F.10 - Control of Operations. Under this agreement, "CONTRACTOR operations" shall include activities of or use of equipment of the CONTRACTOR, the Contractor employees, agents, CONTRACTOR sub-contractors, or their employees or agents, acting in the course of their employment in operations hereunder on National Forest lands or within Forest Service protection boundary (unless acting under the immediate supervision of Forest Service).

Contractor operations shall be conducted in a workmanlike and orderly manner. The timing of any required Forest Service or GBI designation of work on the ground and the performance of other Forest Service or GBI work shall not be such as to cause unnecessary delay to CONTRACTOR.

F.11 - Felling, Bucking, Limbing and Skidding Specifications. Unless otherwise agreed in writing, CONTRACTOR felling, bucking, and limbing operations shall be conducted as below. Unless otherwise agreed in writing, the method of skidding Included Timber shall be as shown on the Contract Area Map, by areas, with symbols defined as follows:

Treatment Method	Felling, Bucking and Limbing Specifications
Limbing	Outside of construction clearings, Clearcutting Units and regeneration units, unless otherwise provided, CONTRACTOR shall, prior to skidding/yarding operations, cut exposed limbs from products which are to be skidded/yarded. Such limbing of stems shall be done to a top diameter of approximately 6 inches, at which point the top shall be cut from the remainder of the stem.
No Lop	N/A
Whole Tree Yarding	Notwithstanding the requirements above, within units or subdivisions designated "Whole" on sale Area Map, trees smaller than 24 inches DBH shall be skidded/yarded to agreed landing locations

"Whole"	prior to limbing, bucking, and lopping. Trees larger than or equal to 24 inches DBH shall be bucked into two or more pieces with the butt portion being no longer than 41 feet prior to skidding/yarding. The butt log shall be limbed prior to skidding/yarding.
Directional Felling	Within areas designated DF on Project Area Map, Included Timber shall be directionally felled away from boundary trees, gates, campground improvements, survey monuments, controlled areas, stream courses, meadows, roads, trails, and other ownership with the use of specialized equipment. Such directional felling shall not be required when in the faller's judgment it is unsafe to do so, and shall be left standing.
Treatment of Stumps	N/A
Maximum Log Length	N/A

F.12 Skidding and Yarding.

Map Symbol	Requirements
TRAC	Skid road pattern shall be agreed in advance of felling and main skid roads shall be flagged on the ground in advance of felling. CONTRACTOR shall stage-log by felling and skidding Included Timber in two or more separate operations when necessary to prevent undue damage to the resources or residual stand. Needed tractor trails shall be constructed in advance of skidding. Products shall be end-lined as needed to protect resources or residual timber from unnecessary damage. The number of chokers shall be limited as necessary to avoid unnecessary damage to resources or residual timber. By agreement, tractors may be used to separate products to prevent stain.
SUSP	Products shall be skidded with leading end clear of ground.
SPACE	Skid roads will average 120 feet from center to center, except where converging.
ENDL	End lining shall not be required for distances in excess of 100 feet uphill, and 200 feet downhill.
MAX	N/A
MH	CONTRACTOR shall cut Included Timber and move it to designated skid trails using equipment with a boom having an operating radius of at least 20 feet for bunching trees, capable of severing, lowering and placing trees up to 24 inches diameter at stump height on the ground prior to skidding. Such equipment must be capable of operating on slopes up to 35%. Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources from unnecessary damage. Trees which exceed capability of specified equipment may be felled, bucked and skidded in a manner consistent with the requirements of F.11 –Felling, Bucking, Limbing and Skidding and the above "TRAC", "SUSP", "SPACE","ENDL", and "MAX" requirements.
CTL	N/A
PB	N/A
HCTL	N/A

Cable and Skyline Yarding. Unless otherwise agreed in writing, requirements for cable and skyline yarding equipment are shown on **Sale Area Map**, by areas, with the following symbols:

Map Symbol	Requirements
CS	Cable yarding specified. .
CR	Be capable of yarding from roadway with additional landing excavation to accommodate the yarder held to a minimum consistent with safe yarding operations.
CW	Meet all of above requirements using a boom type yarder.
SY	All yarding except lateral yarding, shall be accomplished by a skyline system, which supports products clear of the ground across Buffer Strips and in other areas yard with one product end suspended
SL	Meet all of above requirements, have lateral yarding capability to hold skyline carriage stationary until products are yarded to skyline corridor.
SR	Meet all of above requirements and be capable of yarding from roadway with additional landing excavation to accommodate the yarder held to a minimum consistent with safe yarding operations.
SW	Meet all of above requirements using a boom type yarder.

For SL, SR, and SW areas, locations of all skyline corridors shall be determined and designated on the ground. Such agreement shall be prior to felling unless ground and timber conditions otherwise justify. Width of said skyline corridors shall be kept to a practicable minimum consistent with the related silvicultural prescription.

For all yarding methods, if rigging must be slung on undesignated live trees, these trees shall be protected from damage by special steel plates, nylon tail-hold slings or similar effective protective devices.

Skyline Yarding. In areas designated with the following labels on the Sale Area Map, the following requirements are included, unless otherwise agreed in writing:

"Tractor Yarding" – all Included Timber shall be tractor skidded from yarder landing to loading areas shown on Sale Area Map or other agreed locations.

"Skyline Yarding" – all Included Timber shall be skyline yarded from tractor skidded area to a skyline yarding landing. Location of tractor and skyline landings shall be agreed upon prior to skidding and yarding operations.

F.13 Project Operations Schedule Unless otherwise agreed in writing, Contractor operations shall be performed in accordance with the following schedule.

Subdivisions/Unit/Area	Requirement	Purpose
Contract Area	Harvest in fire salvage units must commence in 2023 and be completed by December 31, 2024.	Require completion of fire salvage harvest to avoid timber deterioration.
All roads shown on Contract Map	Use of roads on this project need to be scheduled in such manner as to avoid conflict with existing road reconstruction occurring under Mosquito Fire Suppression Road Repair Contract.	Roads: • 13N51, • 13N66 and • 13N66A are scheduled for reconstruction on an existing road reconstruction contract.
Limited Operating Period in specified units listed herein.	No operations permitted in all or portions of skyline units 92, 95, 96, and 98 until July 1, 2023.	Botanical surveys need to be conducted in identified harvest units with known occurrences of Poa sierrae the spring prior to project implementation. In the event any new populations of Poa sierrae are discovered during project activities or during spring 2023 botanical surveys, the area will be flagged and avoided until a Forest Service Botanist is consulted.
Limited Operating Period for Entire Contract Area	Unless otherwise agreed, there will be no harvest operations permitted prior to 0600 am on any operating day within approximately 500 ft horizontal distance from occupied residence. Log loading, hauling, road watering, road construction and road maintenance are permitted.	Intended to reduce conflicts with occupied residences that are adjacent to some of the planned harvest units.
Limited Operating Period Entire Contract Area	Ground disturbance within areas flagged with orange "Noxious Weed" flagging and or areas shown on the Contract Map as CA-3 will be minimized to the extent practicable. If ground disturbance must occur to remove fire-killed or dying trees, operations within flagged area will be conducted last for any associated harvest unit. Unless otherwise agreed equipment will be washed before moving to other harvest units upon completion of work in noxious weed area.	Intended to minimize spread of noxious weeds to uninfected units or areas.
Limited Operating Periods for Terrestrial Wildlife	No operations permitted in units, or portions or units as shown on Project Map.	To prevent disturbance to spotted owls and goshawks.

Subdivisions/Unit/Area	Requirement	Purpose
Limited Operating Period for Aquatic Wildlife	No operations permitted in units or portions of units as shown on ProjectMap after 1st fall frontal system depositing a minimum of ¼ inch of rain between Oct 15th and April 15th. During LOP, activities may resume after a 72 hour drying period.	To protect CA red-legged frogs.
Entire Contract Area	No operations permitted within areas flagged with pink and black checkered flagging and/or designated as CA-1 sites on Contract Map.	Intended to avoid impacts to protected cultural sites.
Entire Contract Area	No operations permitted within areas flagged with white and chartreuse sold colored flagging and/or designated as CA-2 sites on Contract Map	Intended to avoid impacts to protected botanical species.

F.14 Erosion Control, Meadow Protection Obliteration of Temporary Roads, Skid Trails and Landings.

CONTRACTOR's operations shall be conducted reasonably to minimize soil erosion. Equipment shall not be operated when ground conditions are such that excessive damage will result. CONTRACTOR shall adjust the kinds and intensity of erosion control work done to ground and weather conditions and the need for controlling runoff. Erosion control work shall be kept current immediately preceeding expected seasonal periods of precipitation or runoff.

Erosion prevention and control work, including stream course protection, shall be completed within 15 calendar days after skidding operations related to each landing are substantially completed or after GBI designation on the ground of work where such designation is required hereunder. After September 15 and as long thereafter as operations continue the work shall be done as promptly as practicable. Damage resulting from CONTRACTOR's operations due to failure to perform required work shall be repaired by CONTRACTOR.

Notwithstanding other provisions in this contract and unless otherwise agreed in writing, any hay, straw or mulch used in this contract shall be State of California certified weed free. Unless otherwise agreed in writing, temporary roads, skid trails and landings associated with the cutting unit(s) listed in the following table shall be obliterated using the method described.

Reasonable care shall be taken to avoid damage to the cover, soil and water in meadows shown on Contract Map. Vehicular or skidding equipment shall not be used on meadows, except where roads, landings and tractor roads are approved. Unless otherwise agreed, trees felled into meadows shall be removed by endlining. Resulting logging slash shall be removed where necessary to protect cover, soil and water.

After landings have served CONTRACTOR's purpose, CONTRACTOR shall ditch and slope them to permit water to drain or spread. Unless agreed otherwise, cut and fill banks around landings shall be sloped to remove overhangs and otherwise minimize erosion.

CONTRACTOR shall construct cross ditches and water-spreading ditches on tractor roads and skid trails where staked or otherwise marked on the ground by GBI. By agreement, CONTRACTOR may use other comparable erosion control measures, such as back-blading skid trails, in lieu or cross ditching.

Temporary Road, Skid Trail, Landings and Landing Obliteration Method:

- Block facility with native material based on GBI direction.
- NSR identified roads planned for reconstruction or construction will be winterized upon completion of seasonal use, but left open for administrative access by installation of driveable waterbars.

F. 15 Slash Disposal/Treatment. CONTRACTOR shall treat slash as defined in specifications below within designated areas. Work required of CONTRACTOR shall be in accordance with the slash plan, slash specifications, and the Contract Map. Vegetative debris larger than 1 inch in diameter outside bark and greater than 3 feet long resulting from CONTRACTOR's Operations, other than Construction Slash, is Logging Slash. Treatment of Construction Slash is specified in Road Plans. Measures to be taken by CONTRACTOR for treatment of Logging Slash are set forth below unless otherwise agreed in writing.

GBI and CONTRACTOR shall jointly develop a schedule for completion of slash treatment on the various portions of the Contract Area prior to CONTRACTOR's Operations. CONTRACTOR's timing of product removal and preparatory work shall not unnecessarily delay slash disposal.Removing may be substituted for treatment of any other specified method. By agreement in writing, certain slash may be left for fuelwood. When the specified treatment is by a combination of methods, Logging Slash not treated by one of the methods shall be treated by the other(s).

Specified slash treatment methods shall be shown on Sale Area Map or listed in the following tables by the following symbols:

Slash Treatment Methods

Symbol	Method	Definition
Deck	"Decking" large material	Logging Slash 10 inches or larger in large end d.o.b.(diameter outside bark) and 10 feet or more in length shall be Decked for disposal GBI by piling pieces parallel to each other.
Mach	"Machine Piling"	Concentrations of Logging Slash, excluding scattered individual pieces, shall be Machine Piled by tractor equipped with brush rake for disposal.
Pile	"Piling" small material	Logging Slash smaller than 10 inches in large end d.o.b. and smaller than 10 feet in length shall be hand piled for disposal.
Remove	Removing	Logging Slash shall be moved or hauled to locations shown on Contract Map and designated on the ground where it shall be piled for disposal.
View	Visible Slash Treatment	Designated on Contract Map, with boundaries posted on the ground, are areas with distance limitations for visible slash treatment. Within such areas and the area of visible Logging Slash, Logging Slash shall be treated by CONTRACTOR. Primary treatment shall be by Removing, Burying, Chipping, Piling, Machine Piling, or a combination of these means unless a method is specified or prohibited on Contract Map. Logging Slash not readily treated by the selected or specified method shall be removed to designated areas or treated as agreed.

MACH AND HAND PILING SPECIFICATIONS. All piles shall be reasonably compact and free of soil to facilitate burning and shall be constructed of such size and at such distance from trees so that burning shall not result in unnecessary damage to residual timber. Machine Piling will not cause undue damage to residual timber or occur where slopes exceed 35%. Piles shall be located a distance of at least twice their height in feet from the outer edge of tree crowns or snags. Piles shall be no less than 8 feet in height.. Material extending three feet or more outside the edge of a pile shall be trimmed and trimmed material placed in pile. An eight-foot fire break shall be cleared to mineral soil around each Machine Pile. For hand piles, a 3 foot-wide fire line shall be constructed around each pile. In areas where there is a potential for burning material to roll, fire lines, including those for Machine Piles, shall be trenched on the downhill side of each pile to adequately prevent material from crossing fire lines. Trenches shall be constructed by hand unless otherwise agreed.

UNIT AND SUBDIVISION SLASH TREATMENT SPECIFICATIONS

Slash Treatment Required	Location
All	See Contract Map

LANDINGS AND DISPOSAL SITES. Unutilized logs accumulated at landings and disposal sites shall be Decked by CONTRACTOR for disposal by Forest Service. The maximum height of decks is shown in the following table. Other slash accumulated at landings and disposal sites shall be kept separate from unutilized logs and treated by the method shown in the following table.

SLASH TREATMENT			
	Subdivision or Unit No.	Specified Method	Maximum Height of Decks
Landings	All landings, except landings in units listed below.	DECK, MACH	N/A
Disposal Sites	Applies to REMOVE landing slash from Units 91, 91D, 94 on road 14N35NSR3.	REMOVE slash from landings and haul to Disposal Site shown on Contract Map where slash will be Machine Piled for burning. Slash will be removed via dump or box trucks. Cull logs and other slash may be placed in single pile.	N/A

TREATMENT ALONG PERMANENT ROADS Pile a maximum N/A acres as designated by GBI or Forest Service.

TREATMENT ALONG TEMPORARY ROADS. Lop and scatter construction/reconstruction generated slash to 18-inch height. Stumps will be placed at toe of fill where 4 foot or higher fills are present or placed in landings for inclusion in Landing slash treatment specifications.

ADDITIONAL SLASH TREATMENT REQUIREMENTS. N/A

ASSISTANCE IN SLASH BURNING. N/A

F. 16 Accountability and Identification.

F.16.1 Accountability. When Scaling is performed away from Contract Area, products shall be accounted for in accordance with Forest Service written instructions or an Accountability Agreement between Forest Service, GBI and CONTRACTOR and as follows: (a) CONTRACTOR shall plainly mark or otherwise identify products prior to hauling in accordance with F.16.2. (b) Forest Service or GBI shall issue removal receipts to CONTRACTOR. (c) CONTRACTOR shall assign a competent individual at the landing to complete removal receipts and attach to each load of products removed from Project Area. (d) Removal receipts shall be returned to Forest Service or GBI at periodic intervals. (e) When products are in transit, the truck driver shall possess or display removal receipt and show it upon request as evidence of authority to move products. (f) The scaler's portion of removal receipt shall be surrendered at point of Scaling, the unloading point, or as requested by Forest Service or GBI; and (g) CONTRACTOR shall notify Forest Service and GBI of lost or off-loaded logs and their location within 12 hours of such loss. CONTRACTOR shall not place products in storage for deferred

Scaling until an accountability system has been agreed to in writing for a stated period.

F.16.2 Route of Haul. As part of the annual Operating Schedule, CONTRACTOR shall furnish a map showing the route of haul over which unscaled products will be transported from the Project Area to the approved Scaling location. Such route of haul shall be the shortest, most economical haul route available between the points. Upon advance written agreement, other routes may be approved. All unscaled products removed from Sale Area shall be transported over the designated routes of haul. CONTRACTOR shall notify Forest Service or GBI when a load of products, after leaving Project Area, will be delayed for more than 12 hours in reaching Scaling location.

CONTRACTOR shall require truck drivers to stop, if requested by Forest Service or GBI, for the following reasons:
(a) For accountability checks when products are in transit from Project Area to the designated Scaling location or (b) For a remote check Scale when products are in transit after being truck Scaled at the designated Scaling location. CONTRACTOR and Forest Service and GBI shall agree to locations for accountability checks and remote check Scales in advance of haul. Such locations shall be established only in areas where it is safe to stop trucks. Forest Service or GBI shall notify CONTRACTOR of the methods to be used to alert truck drivers of an impending stop.

F.16.3 Product Identification. For contracts west of the 100th meridian, before removal from Project Area, unless Contracting Officer determines that circumstances warrant a written waiver or adjustment, CONTRACTOR shall:(a) Hammer brand all products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter(b) Paint with a spot of highway-yellow paint all domestic processing products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter. Each paint spot must be not less than three (3) square inches in size. Contracting Officer shall assign brands and, if Project Area is within a State that maintains a log brand register, brands shall be registered with the State. CONTRACTOR shall use assigned brand exclusively on logs from this contract until Contracting Officer releases brand. CONTRACTOR will furnish and apply highway-yellow paint of a lasting quality (oil-base or equivalent). All hammer brands and/or highway-yellow paint must remain on logs until they are domestically processed. CONTRACTOR shall replace identifying marks if they are lost, removed, or become unreadable. CONTRACTOR may remanufacture products into different log lengths. Except for logs remanufactured as part of the mill in-feed process immediately before processing, remanufactured products must be rebranded with the assigned contract brand and repainted with highway-yellow paint, unless otherwise agreed to in writing by Contracting Officer. For such remanufactured products, Contracting Officer may approve use of a brand to be used exclusively as a catch brand, in lieu of the assigned contract brand.

F.17 Roads Maintenance Requirements. CONTRACTOR shall maintain roads in accordance with the Road Maintenance Specifications described in Section G..

F.17.1 Road Water Supply Use. National Forest water supply locations, access, method of filling trucks, period of water availability and procedures designed to maintain water quality at each location shall be agreed in advance of use. Such use shall at no time reduce water supplies to the level that further use may be detrimental to aquatic resources or other established use. Waterholes and other improvements relating to said water supplies shall be put into condition, prior to expected seasonal periods of precipitation or runoff, to avoid resource damage. Damage to resources at such locations caused by CONTRACTOR Operations, other than fire suppression activities, shall be repaired by CONTRACTOR in a timely and agreed manner to the extent

practicable to restore and prevent further resource damage. Unless otherwise agreed, CONTRACTOR use of roads and other water supply requirements shall conform to the following table.

SPECIFICATIONS PURSUANT TO - Requirements of Road and Water Supply Use

Load Limitations	CONTRACTOR shall notify Forest Service and GBI in writing of the planned size and load distribution for equipment which exceeds the State of California Vehicle Code legal size and weight, and the National Forest System roads to be used. Such notice may be part of plan of operation. Within l5 days after receipt of the written notice Forest Service shall notify CONTRACTOR in writing of any regulations or restrictions that may be needed to protect National Forest Transportation Facilities. A written permit shall be required for moving any vehicle which is in excess of the established legal size and weight which is not listed in the above plan, except as may be authorized in prior written agreements.
Existing Non-National Forest System Roads	Roads not shown on Project Area Map may be used as Temporary Roads if there is before use is started.
Snow Removal	If CONTRACTOR removes snow from roads, such work shall be done with Forest Service approval and in a manner that will protect roads and adjacent resources. Snow berms shall be removed or placed to avoid accumulation of melt water on the road and prevent water concentration on erosive slopes or soils. Snow must not be removed to the road surface. A minimum 4 inch snow depth must be left to protect the roadway. If the road surface is damaged, CONTRACTOR shall replace lost surface material and repair structures damaged in blading operations prior to hauling, unless climatic conditions prevent necessary work from being accomplished or as otherwise agreed in writing. Single lane roads shall be plowed full width including turnouts. In event double lane roads are not plowed to full width, warning signs shall be required and plowing shall be no less than single lane (12 feet) with inter-visible turnouts.
Water Supply Deposits	N/A
Water Supply Source	It is expected because of limited water sources within reasonable distance of Contract Area that CONTRACTOR will need to make formal arrangements with the Georgetown Public Utility District (GPUD) to purchase necessary water from GPUD hydrants. CONTRACTOR will need to comply with all requirements imposed by GPUD. Non-GPUD water sources will require Forest Service or GBI approval prior to use.
Surface Replacement Deposits	N/A

F.18 Use of Roads. Contractor use of existing roads identified on Sale Area Map by the following codes is prohibited or subject to restrictive limitations, unless agreed to otherwise:

Code	Use Limitations
X	Hauling prohibited
R	Hauling restricted
U	Unsuitable for hauling prior to completion of agreed reconstruction
P	Use prohibited
A	Public use restriction
W	Regulation waiver

Roads coded A will be signed by the Forest Service to inform the public of use restrictions. Contractor use of roads coded R, A, or W shall be in accordance with the following restrictions:

Restricted Road List.

Road Number	Road Name	Termini From	Termini To	Map Legend	Description of Restrictions[1]
13N51NSR1	No name	13N51	13N51NSR2	N/A	See footnote
13N51NSR2	No name	13N51NSR1	Property Line	N/A	See footnote
14N35NSR1	No name	ELD 64	Property Line	N/A	See footnote
14N35NSR3	No name	ELD 64	Property Line	N/A	See footnote
14N35NSR4	No name	ELD 64	Property Line	N/A	See footnote
14N35B	No name	ELD 64	Property Line	N/A	See footnote
14N35C	No name	ELD 64	Property Line	N/A	See footnote
14N35D	No name	14N35C	Property Line	N/A	See footnote

F.19 - Scaling Services. Scaling instructions and specifications will follow guidelines laid out in FSH 2409.11a, National Forest Log Scaling Handbook, as amended and supplemented.

Species	Product	Unit of Measure	Site and Geographic Location	Method	Standard Estimated Cost / Unit $
All	Sawtimber and Sub-standard Sawtimber	MBF/ton	As approved and agreed to by GBI & Forest Service	100 % scaled	0.00

[1] A Temporary Road Use permit from private landowner to the Forest Service applies to all Restricted Roads. CONTRACTOR and subcontractors must comply with stipulations in Temporary Road Use Permit in terms of construction, reconstruction and use.

F.19.1 - Third Party Scaling Services. Notwithstanding the requirement for GBI or the Forest Service or parties under contract to GBI or the Forest Service to provide Scaling services, Scaling designated shall be conducted by a third-party Scaling organization approved by GBI and the Forest Service. Scaling shall be done in accordance with Method and CONTRACTOR shall bear costs for Scaling service.

In the event third party Scaling service is suspended for causes such as strikes, termination of third party's approval to Scale National Forest logs by Forest Service, or CONTRACTOR'S failure to pay third party Scaling costs, hauling operations shall be suspended until agreed alternate Scaling services are provided or service by third party is resumed.

When an approved alternate Scaling location does not have an approved third-party scaling organization as a commonly used Scaling services provider, GBI or parties under contract to Forest Service shall attempt to provide Scaling services at the approved alternate location. In such an event, the cost of scaling for services shall be borne by CONTRACTOR.

If GBI, Forest Service and CONTRACTOR agree in writing that another party under contract to Forest Service will perform Scaling, the contract will be modified to include amount of scaling charges and Timber Sale Account will be charged for such Scaling.

F.20 - Advance Deposits. CONTRACTOR agrees to make advanced payments or credits in advance of cutting. These deposits may be in the form of cash, acceptable payment bond, earned stewardship credit or any combination thereof. GBI billings for advance cash deposits shall be in such amounts that the Statement of Account will maintain an unobligated balance equal to the applicable charges for timber that GBI estimates will be cut in not less than 30 days and not more than 60 days. The Forest Service and GBI and CONTRACTOR will agree on a systematic approach to provide sufficient advanced deposits.

If the credit balance in the Statement of Account (IRSA) is less than the amount due for timber, GBI or the Forest Service will suspend all or any part of CONTRACTOR operations until payment or acceptable payment guarantee is received.

F.21 - Payments Not Received.

(a) Payments are due and payable on the date of issue indicated on the bill for collection. When a payment for timber cut and other charges is not received at the location designated by GBI by the date allowed in the bill for collection for receipt of payment, the Forest Service or GBI will suspend all or any part of CONTRACTOR Operations until payment or acceptable payment guarantee is received.

(b) Pursuant to the Debt Collection Improvement Act of 1996, as amended, if a payment is not received by GBI within 15 days after the date of issue indicated on the bill for collection:

(i) Simple interest shall be assessed at the higher of the Current Value of Funds Rate or the Prompt Payment Rate as established by the Secretary of the Treasury, interest will begin to accrue as of the date of issue indicated on the initial bill for collection.

(ii) Debtors will be assessed administrative charges, in addition to the delinquent amount due. Administrative charges are those additional costs incurred by GBI in processing, handling, and collecting delinquent debts.

(iii) A penalty charge of six (6) percent per annum will be assessed on any portion of a debt delinquent more than 90 days. This penalty charge is in addition to the interest and administrative charge under paragraphs (c) (i) and (c) (ii). The penalty charges shall accrue from the date of issue indicated on the bill for collection and shall be assessed on all outstanding amounts, including interest and administrative costs assessed

under paragraph's (c)(i) and (c)(ii).

(iv) Payments will be credited on the date received by GBI or Collection Officer designated on the bill for collection.

F.22 RATES OF PAYMENT

F.22.1 Current Contract Rates. Included Timber that is Released for Cutting shall be paid for at Current Contract Rates determined under this Section. "Current Contract Rates" shall be Flat Rates. Flat Rates shall be those listed in F.4. In the event contract time is adjusted, Current Contract Rates shall be continued in the same manner as immediately prior to the adjustment period.

F.22.2 Other Payment Rates.

F.22.2a Material and Quantities Not in F-2 or F.7-4-a. Incidental amounts of products or portions of trees of species that do not meet Utilization Standards may be removed without charge. Such material from Clearcutting Units and construction clearings may be purposely removed in more than incidental amounts without charge subject to agreement on deposits for road maintenance and use. Such material from other than Clearcutting Units and construction clearings may be purposely removed in more than incidental amounts without charge upon written approval of GBI or the Forest Service and subject to agreement on deposits if needed for road maintenance and use. Other species or products not listed may, upon written approval of Contracting Officer, be cut and removed without charge other than Required Deposits established by agreement. Timber for which the quantity is not included in the estimate, shall be paid for at Current Contract Rates and Required Deposits.

F.22.2b Timber Cut Through Mistake. Undesignated timber meeting Utilization Standards, cut by CONTRACTOR through mistake and included by the Forest Service, shall be removed and paid for at Current Contract Rates and Required Deposits, unless such material is not listed. In such event, GBI, in accord with standard Forest Service methods, shall establish rates to be paid.

F.22.3 Designated Timber Cut But Not Removed. Standard timber shall be removed prior to acceptance of a Subdivision for completion of logging. There shall be no charge when (a) leaving the incidental material is justified under existing conditions, or (b) Cut timber is left by option or requirement.

F.22.4 Undesignated Timber Damaged Without Negligence. Undesignated timber meeting Utilization Standards, damaged without negligence by CONTRACTOR and designated by GBI, shall be cut, removed, and paid for at Current Contract Rates and Required Deposits.

F.22.5 Undesignated Timber Unnecessarily Damaged or Negligently or Willfully Cut. Undesignated timber meeting Utilization Standards and unnecessarily damaged or negligently or willfully cut by CONTRACTOR, if included by GBI shall be cut, removed, and paid for at Current Contract Rates and Required Deposits that are in addition to liquidated damages. If such timber is of a species or size not listed in F.2 or is of a quality different from designated timber, Contracting Officer shall establish payment rates in accord with standard GBI methods.

F.22.6 Liquidated Damages. Unnecessary damage to or negligent or willful cutting of undesignated timber, on portions of Project Area cut over under this contract is likely to cause substantial silvicultural or other damage to the National Forest. It will be difficult, if not impossible, to determine the amount of such damage. Therefore, CONTRACTOR shall pay as fixed, agreed, and liquidated damages an amount equivalent to the amount payable at Current Contract Rates. If designated by the GBI, CONTRACTOR shall remove such damaged

timber.

F.23 Payments.

F.23.1 Amount Payable for Timber. Current Contract Rates and Required Deposits in effect when a Payment Unit is Released for cutting shall be applied to the timber quantities to determine the amount CONTRACTOR shall pay. Payment shall be in the form of Stewardship Credits or cash.

F.23.2 Stewardship Account.
"Stewardship Account" is an account of all CONTRACTOR deposits, credits, Payment Guarantees, and the charges for:
a. Timber, or other Products at rates specified in contract
b. Slash disposal and road maintenance at Required Deposit rates,
c. Contract Scaling Deposits, and
d. Other Charges provided in this contract.

Cash deposits and Stewardship Credits earned shall be recorded currently in such account. Charges for timber cut shall be made when GBI prepares and furnishes to CONTRACTOR periodic statements of volume and value of such timber cut and scaled. Charges against Stewardship Credits shall be limited to timber value in excess of Required Deposits. Required Deposits and Other Charges shall be paid in cash.

CONTRACTOR shall make cash deposits to meet Contractor obligations within 15 days of billing by the GBI. Deposits shall be made to GBI, USDA, by mail or delivery to the address shown on the bill for collection.

F.23.3 - Deposits When Payment Guaranteed. To the extent payment guarantee is provided under Clause entitled, "PRODUCT PAYMENT GUARANTEE" requirements for advance cash deposits shall be waived for the value of Product on Project Area that is cut, but not removed, and for the value of Products removed from Project Area, up to limit of remaining stewardship credits to be earned and exchanged for value of included product except for Required Deposits and Associated Charges. Associated charges shall be waived for not more than one monthly billing period.

F.24 - Title Passage. All right, title, and interest in and to any included Timber shall remain in Forest Service until it has been cut, removed from Contract area or other authorized cutting area, and paid for, at which time title shall vest in GBI. Timber cut under the terms of clause Product Payment Guarantee, shall be considered to be paid for. Title to any include Timber that has been cut and paid for, but not removed from Contract Area or other authorized cutting area by GBI on or prior to contract termination, shall remain in Forest Service.

F.25 - Liability for Loss. If Included Timber is destroyed or damaged by an unexpected event that significantly changes the nature of Included Timber, such as fire, wind, flood, insects, disease, or similar cause, the party holding title shall bear the timber value loss resulting from such destruction or damage; except that such losses after removal of timber from the Stewardship Project Area, but before scaling, shall be borne by CONTRACTOR at current Rates and Required Deposits. Deterioration or loss of value of salvage timber is not an unexpected event.

In the event Included Timber to which GBI holds title is destroyed, CONTRACTOR will not be obligated to remove and pay for such timber. In the event Included Timber to which GBI holds title is damaged, GBI and the Forest Service shall make an appraisal to determine for each species the difference between the appraised unit

value of Included Timber immediately prior to the value loss and the appraised unit value of timber after the loss. Current Rates in effect at the time of the value loss shall be adjusted by differences to become the redetermined rates. There shall be no obligation for the GBI or Forest Service to supply, or for CONTRACTOR to accept and pay for, other timber in lieu of that destroyed or damaged. This Sub-section shall not be construed to relieve either party of liability for negligence.

Limited Liability for Operations Fires, Maximum Amount of CONTRACTOR Obligation per Operation's Fire.

Cooperator's Obligation per Operations Fire,
Maximum Amount: $ 35,000.00

EXHIBIT E - Specifications for Operations
GENERAL SERVICES AGREEMENT
RFB ELDO SA - 06: VULCAN FIRE SALVAGE SKYLINE PROJECT

The following Guidelines for Operations apply to activities under this to the project. These guidelines are intended to clarify the expectations of the parties related to these specific areas of operations.

G.1 Contract Area Map: This is the boundary of the Stewardship Project Area as designated on the ground by the Forest Service and GBI to meet the anticipated needs of the parties. A detailed map will be provided to CONTRACTOR prior to the start of opperations. The map will have the following items identified:

a) Identified patented claims.
b) Boundaries of all harvest and stewardship treatment units.
c) Diameter limits for overstory and understory removal units.
d) Areas where leave trees are marked to be left uncut.
e) Specified roads.
f) Sources of base course, surface rock, and rock riprap listed in the Schedule of Items;
g) Roads where log hauling or use is prohibited or restricted.
h) Roads and trails to be kept open.
i) Improvements to be protected.
j) Locations of known wildlife or plant habitat and cave resources to be protected.
k) Locations of areas known to be infested with specific invasive species of concern.
l) Maximum stump heights when more than one height is listed by areas.
m) Skidding or yarding methods.
n) Streamcourses to be protected.
o) Locations of meadows requiring protection.
p) Locations of wetlands requiring protection.
q) Locations of temporary roads to be kept open.
r) Payment units, if required

The following Guidelines for Operations apply to activities under this SPA, when relevant to the project. These guidelines are intended to clarify the expectations of the parties related to these specific areas of operations.

G.2 Roads: CONTRACTOR is authorized to use existing National Forest system roads and specified roads approved by GBI. CONTRACTOR and GBI will determine that such use will not cause damage to the roads or National Forest resources. CONTRACTOR is authorized to construct, reconstruct and maintain roads, bridges, and other transportation facilities, as needed for harvesting included timber and completing stewardship projects on National Forest and other lands where Forest Service has such authority and with GBI approval.

The government may undertake or award other contracts for additional work at or near the site of the work under this contract. The CONTRACTOR shall fully cooperate with the other Contractors and with government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by the Forest Timber Sale Contracting Officer. The CONTRACTOR shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Government employees.

G.2.1 - Plan of Operations for Roads: Annually, prior to start of operations, CONTRACTOR will prepare a supplement to the Technical Proposal that shall include a schedule of proposed maintenance and construction progress and a description of planned measures to be taken to provide erosion control for work in progress, including special measures to be taken on any segments of construction not substantially completed prior to periods of seasonal precipitation or runoff. CONTRACTOR shall submit a revised schedule when they propose a significant deviation from the progress schedule. Prior to beginning construction on any portion of specified roads identified as sensitive on plans, the parties shall agree on the proposed method of construction and maintenance.

G.2.2 - Specified Road Reconstruction: See attached "Work List", "Schedule of Items", "Summary of quantities", Drawings" and specifications.

G.2.3 - Road Maintenance: CONTRACTOR shall maintain roads, commensurate with CONTRACTOR use, in accordance with road maintenance requirements and the "Road Maintenance Specifications". Performance of road maintenance work by CONTRACTOR may be required prior to, during, or after each period of use.

Road Maintenance Requirements Summary

	Termini			Applicable Prehaul Road Maintenance Specifications									
Road	**From**	**To**	**Miles**	**806**	**809**	**810**	**811**	**831**	**834**	**835**	**837**	**851**	**853**
All native or aggregate surface roads that are used by contrctor				P	P	P	P	P	P	P	P	. P	P
All FS chip seal/paved surface roads used by Contractor				P		P						P	P

P = CONTRACTOR Performance, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road	Termini		Miles	Applicable During Haul Road Maintenance Specifications											
	From	To		806	808	809	810	811	812	815	831	834	837	854	891
All native or aggregate surface roads that are used by contrctor				P	P		P	P	P		P	P	P	P	P
All FS chip seal/paved surface roads used by Contractor				P	P		P			P				P	

P = CONTRACTOR Performance, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road	Termini			Applicable Post Haul Road Maintenance Specifications												
	From	To	Miles	806	808	809	810	811	812	815	831	834	837	835	854	891
All native or aggregate surface roads that are used by Contractor				P	P	P	P	P	P		P	P	P	P	P	P
All FS chip seal/paved surface roads used by Contractor				P	P		P			P					P	

P = CONTRACTOR Performance, D = Deposit to Forest Service D3 = Deposit to Third Party

Applicable Road Maintenance T-Specifications (See Eldorado National Forest Standard Timber Sale Road Maintenance Specifications for Roads (July 2012) for definitions and requirements.

**Dust abatement material will be limited to water only

No.	Specification Title
T-800	Definitions
T-806	Weed and Disease Prevention
T-808	Work Area Management
T-809	Waterbars
T-810	Slide and Slump Repair
T-811	Blading

T-812	Dust Abatement
T-815	Paved Surface Cleaning
T-816	Maintenance of Unpaved Shoulders
T-831	Ditch Maintenance and Construction
T-832	Remove and End Haul Materials
T-834	Drainage Structure Maintenance
T-835	Roadway Drainage Maintenance
T-837	Drainage Dip Maintenance
T-838	Maintenance For Limited Use
T-842	Cutting Roadway Vegetation
T-851	Logging Out
T-853	Removal of Structures and Obstructions
T-854	Hazard Removal and Cleanup
T-862	Maintenance of Traffic Gates and Barriers
T-882	Equipment Moving
T-891	Water Supply and Watering

Stewardship Road Plans

Road Number	Road Name	Type of Work	Design Class	Miles
12N07	Tipton Hill	Reconstruction	SL 14	0.79
12N70T	Brass Rock	Reconstruction	SL 14	0.35
13N51 NSR1	No name	Reconstruction	SL 14	0.36
13N66ANSR	NSR Road	Construction	SL 14	0.22
14N35C	Cassile Mine Rd	Reconstruction	SL 14	0.34
14N35J NSR	NSR Road	Construction	SL 14	0.24
14N35 NSR1	NSR Road thru Pvt Land	Construction	SL 14	0.05
14N35 NSR2	Power-line Road	Reconstruction	SL 14	0.54
14N35	NSR Road thru Pvt Land	Reconstruction	SL 14	0.22

Road Number	Road Name	Type of Work	Design Class	Miles
14N35 NSR4	NSR Road thru Pvt Land	Reconstruction and Construction	SL 14	0.14

G.2.3.1- Road Maintenance and Surface Replacement Deposits Schedule: Other provisions herin notwithstanding, when GBI requests payment in lieu of CONTRACTOR's performance of road maintenance, CONTRACTOR whall make Required Deposits for Deferred Road Maintenance and Deferred Surface Replacement. Such deposits are based on the estimated volume and distance hauled and CONTRACTOR's commensurate use of each road listed in the Road Maintenance Plan, above.

CONTRACTOR and GBI may agree in writing on adjustment of such rates. If CONTRACTOR uses roads under jurisdiction of Forest Service other than those listed in the Road Maintenance Plan, GBI shall establish rates commentsurate with CONTRACTOR's use of such roads.

The Required Deposits for Deferred Road Maintenance for this contract is: **$0.00/MBF or ton**.

The Required Deposits for Surface Replacement for this contract is: **$0.00/MBF or ton.**

G.2.4 - Temporary Roads: "Temporary Roads" are roads other than "Specified Roads" that are constructed by CONTRACTOR for the purpose of harvesting included timber or completing stewardship projects. The location and clearing widths of all temporary roads including previously-tilled temporarily used roads or facilities shall be agreed to in writing with the GBI before construction is started. The proposed activities could necessitate the use of previously tilled temporary roads, unclassified non-system roads or roadbeds, or new temporary roads to provide short-term access to landings or roads to the treatment units. After completion of project, temporary roads would be closed and decommissioned to prevent unauthorized use including motorized travel, and dispersed camping. Temporary roads would also be stabilized through sub-soiling to reduce compaction, and/or installation of waterbars or other drainage methods applied to disperse water flows or as agreed to in writing with the GBI. In addition, where needed to maintain hydrology, berms would be pulled in and topography would be reestablished for water flow. Where needed, ground cover would be reestablished with mulch, slash, or wood chips from the surrounding area, or certified weed-free straw or as agreed to in writing with the GBI.

G.2.5.1 - Temporary Road Design Criteria:

- Temporary road design and location will follow the following principles: Temporary roads will follow previously-used road beds where available and appropriately located.
- Use rolling dips and an out-sloped road template.
- Limit the amount of temporary road construction by maximizing the skidding distance.
- During activities maintain road drainage and road surface conditions to control runoff.
- Minimize the length and width of the roads. Avoid unstable areas where there is potential for mass soil erosion.
- Temporary road stream crossings will incorporate a method (culvert) of passing water under the running surface to minimize sediment transport if the road is used while water is flowing. Culverts and stream crossings will not create barriers to aquatic species.
- Crossings will be designed to provide measures to pass flows, and may include extra protection measures,

such as gravel, culverts or drainage controls when needed. Culverts and stream crossings will not create barriers to aquatic species. Typically, the flow volume through these crossings is low and there is a low risk of significant precipitation during the operating period. Wet weather clauses are included to limit operations in inclement weather, when soils deform or compact, and road rutting and deformation become significant. Temporary crossings will be removed the same season they are installed, and removal will occur no later than October 15th of the season of installation.

• Temporary roads crossing through ephemeral drainages will be designed to pass flow using drainage dips, waterbars or culverts when needed. Removal of temporary roads on ephemeral drainages will include reestablishing drainage passage, mulching, and pulling outside berms to restore overland flows.

G.3 Temporarily-Used Routes and Landings: Routes and landings temporarily created and used during timber removal will be obliterated and blocked after use. Obliteration measures will be monitored and supplemented with additional obliteration actions as necessary to prevent future use. Entrances to temporarily-used routes and landings should be blocked.

G.4 Fire Precautions and Control.

Plans. Prior to initiating's operations during Fire Precautionary Period, CONTRACTOR shall file with GBI and the Forest Service a Fire Prevention and Control Plan providing for the prevention and control of fires on the Contract Area and other areas of Operations. Such plan shall include a detailed list of personnel and equipment at disposal for implementing the plan. This requirement may be met by preparing a single plan for more than one Contract.

Fire Precautions. Specific fire precautionary measures listed in this section shall be applicable during Operations in "Fire Precautionary Period" described. The dates of Fire Precautionary Period may be changed by GBI or the Forest Service, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for fire fighting at all times during operations in Fire Precautionary Period.

Substitute Precautions. GBI and the Forest Service may authorize substitute measures or equipment, or waive specific requirements by written notice, if substitute measures or equipment will afford equal protection or some of the required measures and equipment are unnecessary.

Emergency Precautions. GBI and the Forest Service may require the necessary shutting down of equipment on portions of Operations, as specified by the emergency fire precautions schedule. Under such conditions, CONTRACTOR after cease of active operations, shall release for hire by Forest Service, if needed, shutdown equipment for fire standby on the Stewardship Project Area or other areas of Operations and personnel for fire standby or fire patrol, when such personnel and equipment are not needed by for other fire fighting or protection from fire. Equipment shall be paid for at fire fighting equipment rates common in the area or at prior agreed rates and, if requested, shall be operated only by personnel approved by the CONTRACTOR. Personnel so hired shall be subject to direction and control by Forest Service and shall be paid by Forest Service at fire fighting rates common in the area or at prior agreed rates.

Fire Precautionary Period and Fire Plan. Specific fire precautionary measures are set forth below. The following requirements shall apply during the period **April 1 to December 1** and during other such periods as specified by GBI and the Forest Service. Specific fire precautionary measures listed in this Section shall be applicable during Operations in "Fire Precautionary Period" described. The dates of Fire Precautionary Period

may be changed by agreement, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for fire fighting at all times during operations in Fire Precautionary Period. Listing of specific fire precautionary measures is not intended to relieve CONTRACTOR in any way from compliance with State fire laws covering fire prevention and suppression equipment applicable to CONTRACTOR's Operations.

G.5 Protection of Land Survey Monuments. GBI or the Forest Service shall appropriately designate on the ground all known survey monuments, section corners, and other corner accessories. GBI or the Forest Service shall post identifying signs on two sides of each known bearing tree. GBI or the Forest Service shall arrange protective or perpetuative action that does not cause unnecessary delay to CONTRACTOR in authorized clearings, such as Clearcutting Units and road construction, and in other instances where damage to monuments, section corners, and other corner accessories is unavoidable.CONTRACTOR shall protect all known survey monuments, witness corners, reference monuments, and bearing trees against avoidable destruction, obliteration, or damage during CONTRACTOR Operations. If any known monuments, corners, or accessories are destroyed, obliterated, or damaged by CONTRACTOR Operations, CONTRACTOR shall hire the appropriate surveyor or a registered land surveyor to reestablish or restore at the same location the monuments, corners, or accessories. Such surveyors shall use procedures in accordance with the Bureau of Land Management "Manual of Instructions for the Survey of the Public Lands of the United States" for General Land Office surveys and in accordance with State law for others. CONTRACTOR shall record such survey in appropriate county records.

G.6 Protection Measures Needed for Plants, Animals, Cultural Resources, Cave and Recreation Resources: Locations of known areas needing special measures for the protection of plants, animals, cultural resources, and/or cave resources are shown on Project Area Map and/or identified on the ground.

- Known archeological sites are shown on a separate map that will be provided to the CONTRACTOR (confidential and not to be duplicated). Areas are identified on the ground with flagging. Operations may require crossing certain sites which can be done only upon written approval of the GBI, or if indicated on map provided to the CONTRACTOR.

In addition to any special protection measures noted, CONTRACTOR has a general duty to protect all known and identified resources from damage or removal during CONTRACTOr Operations. Discovery of additional areas, resources, or members of species needing special protection shall be promptly reported to GBI or the Forest Service, and operations shall be delayed or interrupted at that location if it is determined there is risk of damage to such areas, resources, or species from continued operations. Wheeled or track-laying equipment shall not be operated in areas identified as needing prtotection measures, except on roads, landings, tractor roads, or skid trails approved. Unless agreed otherwise, trees will not be felled into such areas. CONTRACTOR may be required to backblade skid trails and other ground disturbed by CONTRACTOR Operations within such areas. CONTRACTOR shall immediately notify GBI or the Forest Service if disturbance occurs to any area identified as needing special protection measures and shall immediately halt operations in the vicinity of the disturbance until GBI or the Forest Service authorizes CONTRACTOR to proceed. CONTRACTOR shall bear costs of resource evaluation and restoration to identified sites. Such payment shall not relieve CONTRACTOR from civil or criminal liability otherwise provided by law.

G.7 Protection of Residual Trees: CONTRACTOR'S operations shall not unnecessarily damage young growth or other live trees to be reserved.

G.8 Safety: CONTRACTOR'S operations shall facilitate GBI's and the Forest Service's safe and practical inspection of CONTRACTOR'S operations and conduct of other official duties on the Stewardship Project Area. CONTRACTOR'S has/have all responsibility for compliance with safety requirements for CONTRACTOR'S employees.

When operations are in progress adjacent or on Forest Service controlled roads and trails open to public travel, CONTRACTOR shall furnish, install, and maintain all temporary traffic controls that provide the user with adequate warming of hazardous or potentially hazardous conditions associated with operations occurring in the area. The parties shall agree to a specific traffic control plan prior to commencement of work. Devices shall be appropriate to current conditions and shall be covered or removed when not needed.

During periods of unanticipated or unplanned or unusually high general recreation activity within Stewardship Project Area or vicinity, GBI or the Forest Service may restrict road construction, timber cutting, yarding, and other harvesting operations to days other than Saturdays, Sundays, and holidays.

LOGGING AND MAINTENANCE OPERATIONS SIGNING STANDARDS

All signs must be manufactured & installed as specified in the FHWA "**Manual on Uniform Traffic Control Devices**" (MUTCD) & FS publication "**Standards for Forest Service Signs & Posters**"(EM 7100-15).

SIGN STANDARDS

SHAPE & COLOR: Generally, signs for logging and maintenance operations are either diamond-shaped or rectangular. All signs are ***reflective orange background with black legend and border*** unless shown otherwise. Handpainted, homemade signs are not legal. Fluorescent paint is not reflectorized.

SUBSTRATE: Sign substrate material may be High Density Overlay (HDO) Plywood, Aluminum, Fiberglass Reinforced Plastic, Corrugated Plastic or Roll-up Fabrics.

SIGN SIZE: Sign size is a factor of speed and MUTCD & FS standards. Where conditions of speed, volume, or special hazard require greater visibility or emphasis, larger signs should be used. Minimum sizes for the most common signs can be found in Figure 4. Refer to the EM-7100-15 for additional sign sizes.

LEGEND: All lettering shall be Series "C" alphabet, conforming to Standard Alphabets for Highway Signs. Letter size is also a function of speed - use letter size and word messages as specified in MUTCD and EM-7100-15.

SIGN PLACEMENT

Signs are to be installed in locations as agreed to in the traffic control plan. All signs are to be removed, covered, or folded when operations are not in progress or the sign message is not applicable. Signs should generally be located on the right-hand side of the roadway. When special emphasis is needed, signs may be placed on both the left and right sides of the road. Sign message shall be clearly visible to road users, mounted on posts or portable sign stands.

LATERAL CLEARANCE

From the edge of the road - 2 foot minimum, where slope limits to less than 6 feet. 6-12 foot preferred.

HEIGHT

Minimum of 7 feet, measured from the bottom of the sign to the near edge of the travelway. The height to the bottom of a supplemental sign mounted below the primary sign will be 6 feet.

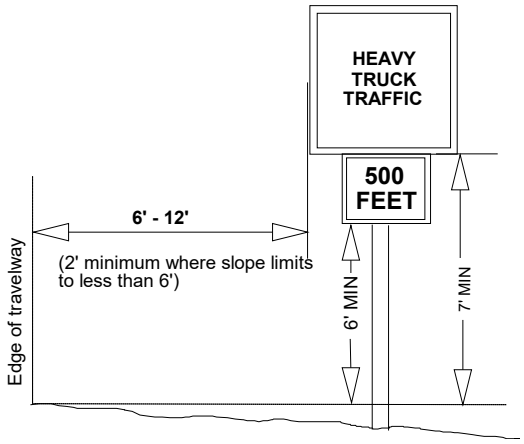

Figure 1: Sign Placement Dimensions

PLACEMENT DISTANCE

Signs must be located 100-500 feet prior to the activity, (both ends if a through road) and maintained at that distance. This distance is based on speed. Refer to Figure 2 , Table II-1, MUTCD, a portion of which is reproduced here, to determine correct placement distance.

Posted or 85 percentile speed MPH	Deceleration to listed advisory speed MPH				
	10	**20**	**30**	**40**	**50**
20	NA				
25	100				
30	150	100			
35	200	175			
40	275	250	175		
45	350	300	250		
50	425	400	325	225	
55	500	475	400	300	
60	575	550	500	400	300
65	650	625	575	500	375

Figure 2: A Portion of MUTCD TABLE II-1

SIGN SUPPORTS

POSTS: Signs are to be mounted on separate posts. Supplemental signs such as Speed Advisory plates are to be mounted on the same post as the primary sign. ***Do not mount signs on trees or other signs.*** Posts may be wood, metal, carsonite or similar material. Where sign supports cannot be sufficiently offset from the road edge, supports will meet breakaway standards. Single wood posts with less than 24 square inches do not require breakaway design.

TEMPORARY/PORTABLE SUPPORTS: Portable supports may be used for short-term, short-duration, and mobile conditions. MUTCD defines this time period as one work shift, 12 hours or less. All portable supports must meet MUTCD standards, including breakaway. These must be a minimum of 1 foot above the road surface or more if visibility requires it.

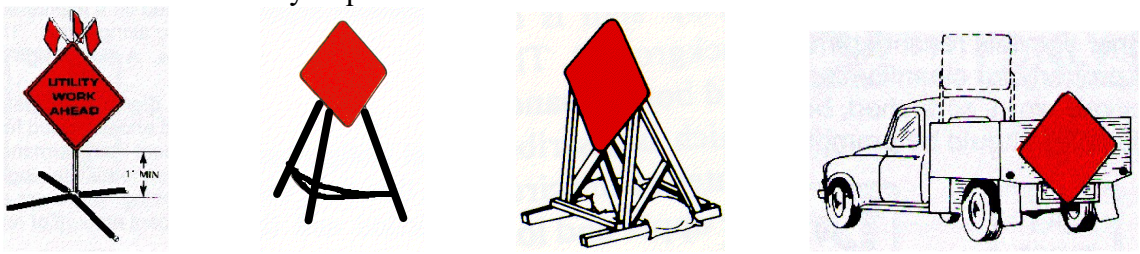

Figure 3: Examples of Temporary/Portable Supports

SIGNS

The following signs meet the intent of the Safety standard. ***This is not a complete listing of signs that may be needed.***

FG20-1-48*

FG20-2-48

FG20-3-42*

FG20-3a-42

FW22-3-30

FW20-1-30*

W21-3-30*

FW21-4a-30

FW11-7-24

W22-1-36*

FW8-6-24

FW11-9a-24

W7-3a-24*

W13-1-18**

W20-7aP-24*

* Specify Distance

** Specify Speed

BM-L-O

BM-R-O

Barricade Markers (See MUTCD for length and stripe size)

G.9 Safety (Timber Hauling): CONTRACTOR shall secure all products transported by truck with at least two chain or cable wrappers over the load, such wrappers being securely fastened to effectively contain every bolt or log in at least two places.

G.10 Accident and Injury Notification: CONTRACTOR shall notify GBI of any lost time personal injury accident or any accident or vandalism resulting in personal property damage over $400 in value that occurs as a result of or is associated with CONTRACTOR'S Operations.

CONTRACTOR shall notify GBI within 8 hours of any personal injury accident. For vandalism and personal property accidents, CONTRACTOR shall notify GBI at the same time notification is given to the state and local law enforcement authorities.

CONTRACTOr shall take all reasonable measures after an accident or vandalism event to preserve the scene of the incident and provide information to facilitate a GBI investigation.

G.11 Sanitation and Servicing: CONTRACTOR shall take all reasonable precautions to prevent pollution of air, soil, and water by CONTRACTOR'S operations. Precautions shall include if facilities for employees are established on the Stewardship Project Area, they shall be operated in a sanitary manner. The parties shall agree to the cleanup and restoration of a polluted site. CONTRACTOR shall maintain all equipment operating on Stewardship Project Area in good repair and free of abnormal leakage of lubricants, fuel, coolants, and hydraulic fluid. CONTRACTOR shall not service tractors, trucks, or other equipment on National Forest lands where servicing is likely to result in pollution to soil or water. CONTRACTOR shall furnish oil-absorbing mats for use under all stationary equipment or equipment being serviced to prevent leaking or spilled petroleum-based products from contaminating soil and water resources. CONTRACTOR shall remove from National Forest lands all contaminated soil, vegetation, debris, vehicle oil filters (drained of free-flowing oil), batteries, oily rags, and waste oil resulting from use, servicing, repair, or abandonment of equipment.

G.12 Prevention of Oil Spills: If CONTRACTOR maintain(s) storage facilities for oil or oil products on the Stewardship Project Area, CONTRACTOR shall take appropriate preventive measures to ensure that any spill of such oil or oil products does not enter any stream or other waters of the United States or any of the individual States. If the total oil or oil products storage exceeds 1,320 gallons in containers of 55 gallons or greater,

CONTRACTOR shall prepare a Spill Prevention Control and Countermeasures Plan. Such plan shall meet applicable EPA requirements (40 CFR 112), including certification by a registered professional engineer. CONTRACTOR shall notify the GBI and appropriate agencies of all reportable (40 CFR 110) spills of oil or oil products on or in the vicinity of the Stewardship Project Area that are caused by CONTRACTOR'S employees, agents, Sub-Contractor's or their employees or agents, directly or indirectly, as a result of CONTRACTOR. CONTRACTOR will take whatever initial action may be safely accomplished to contain all spills.

G.13 Hazardous Substances: CONTRACTOR shall notify the National Response Center, GBI and Forest Service principal contact of all releases of reportable quantities of hazardous substances on or in the vicinity of the Stewardship Project Area that are caused by CONTRACTOR's employees, agents, Sub-Contractors, or their employees or agents, directly or indirectly, as a result of CONTRACTOR'S operations, in accordance with 40 CFR 302.

G.14 Washing Equipment: In order to prevent the spread of noxious weeds into the Stewardship Project Area, CONTRATOR shall be required to clean all off-road logging and construction equipment **prior** to entry on to the Stewardship Project Area. This cleaning shall remove all soil, plant parts, seeds, vegetative matter, or other debris that could contain or hold seeds. Only logging and construction equipment so cleaned and inspected by GBI or the Forest Service will be allowed to operate within the Stewardship Project Area. All subsequent move-ins of equipment to the Stewardship Project Area shall be treated in the same manner as the initial move in. "Off-road equipment" includes all logging and construction machinery, except for log trucks, chip vans, service vehicles, water trucks, pickup trucks, cars, and similar vehicles. To the extent practicable, Operations within or adjacent to areas of known noxious weed infestations will be conducted lastly in each unit relative to areas within a treatment unit that is free of noxious weeds

CONTRACTOR shall employ whatever cleaning methods are necessary to ensure that off-road equipment is free of noxious weeds. Equipment shall be considered free of soil, seed, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required.

As agreed upon, CONTRACTOR shall inspect equipment at cleaning location, and provide documentation of inspection to GBI and the Forest Service.

New infestations of noxious weeds, of concern to Forest Service and identified by either CONTRACTOR, GBI or Forest Service on the Stewardship Project Area or on the haul route, shall be promptly reported to the other parties. CONTRACTOR, GBI and Forest Service shall agree on treatment methods to reduce or stop the spread of noxious weeds when new infestations are found. A current list of noxious weeds of concern to Forest Service is available at each Forest Service office.

G.15 Conduct of Logging: Unless otherwise specifically provided herein, CONTRACTOR shall fell trees designated for cutting and shall remove the portions that meet Utilization Standards, prior to acceptance of work for completion of logging and stewardship projects. Forest Service or GBI may make exceptions for occasional trees inadvertently not cut or trees or pieces not removed for good reason, including possible damage to forest resources or gross economic impracticability at the time of removal of other timber.

G.16 Felling and Bucking: Felling shall be done to minimize breakage of included timber and damage to residual timber. Unless agreed otherwise, felling shall be done by saws or shears. Bucking shall be done to permit removal of all minimum pieces. CONTRACTOR may buck out cull material when necessary to produce

pieces meeting utilization standards. Such bucked out material shall contain a minimum amount of sound wood, not in excess of the net scale in percentage of gross scale, or based on the merchantability factor. If necessary to assess extent of defect, CONTRACTOR shall make sample saw cuts or wedges.

G.17 Felling in Clearings: Insofar as ground conditions, tree lean, and shape of clearings permit, trees shall be felled so that their tops do not extend outside clearcutting units, construction clearings, and areas of regeneration cutting.

G.18 Stump Heights: Stumps shall not exceed, on the side adjacent to the highest ground, the maximum heights set forth in F-3 except that occasional stumps of greater heights are acceptable when CONTRACTOR determine(s) that they are necessary for safe and efficient conduct of logging. Unless otherwise agreed, CONTRACTOR shall re-cut high stumps so they will not exceed heights specified in F-3 and shall dispose of severed portions in the same manner as other logging debris. The stump heights were selected with the objective of maximum reasonable utilization of the timber, unless the Map shows special areas where stump heights are lower for aesthetic, land treatment, or silvicultural reasons.

G.19 Bucking Lengths: Trees shall be bucked in various lengths to obtain the greatest utilization of material meeting utilization standards.

G.20 Limbing: CONTRACTOR shall cut exposed limbs from products prior to skidding, as necessary to minimize damage to the residual stand during skidding. CONTRACTOR may leave uncut those limbs that cannot be cut with reasonable safety.

G.21 Skidding and Yarding: Methods of skidding or yarding specified for particular areas, if any, are indicated on the Map. Outside clearcutting units and construction clearings, insofar as ground conditions permit, products shall not be skidded against reserve trees or groups of reproduction and tractors shall be equipped with a winch to facilitate skidding.

G.22 Rigging: Insofar as practicable, needed rigging shall be slung on stumps or trees designated for cutting.

G.23 Landings and Skid Trails: Location of all landings, tractor roads, and skid trails shall be agreed upon prior to their construction. The cleared or excavated size of landings shall not exceed that needed for efficient skidding and loading operations.

G.24 Arches and Dozer Blades: Skidding tractors equipped with pull-type arches or dozer blades wider than tractor width or C-frame width, whichever is greater, shall not be used in residual timber outside clearcutting units and other authorized clearings, except on constructed tractor roads or landings, unless there is written agreement that residual timber will not be damaged materially by such use.

G.25 Protection of Streamcourses*:* CONTRACTOR operations shall be conducted to prevent debris from entering streamcourses, except by agreement. In event CONTRACTOR cause (s) debris to enter streamcourses in amounts that may adversely affect the natural flow of the stream, water quality, or fishery resource, CONTRACTOR shall remove such debris as soon as practicable, but not to exceed 2 days, and in an agreed manner that will cause the least disturbance to streamcourses. Included timber and Substandard timber within streamcourse buffers will be cut and removed unless otherwise agreed. Unless otherwise agreed, no ground based equipment will be allowed within the streamcourse buffers except that Included Timber and Substandard

Timber will be removed when products can be removed with full suspenion or end-lined out of buffer zone. Any resulting furrows produced by end-lining will be reshaped and covered with slash by CONTRACTOR.

a) Culverts or bridges shall be required on Temporary Roads at all points where it is necessary to cross Streamcourses. Such facilities shall be of sufficient size and design and installed in a manner to provide unobstructed flow of water and to minimize damage to streamcourses. Trees or products shall not be otherwise hauled or yarded across streamcourses unless fully suspended.
b) Wheeled or track-laying equipment shall not be operated in streamcourses, except at crossings agreed to by CONTRACTOR and GBI and/or the Forest Service or as essential to construction or removal of culverts and bridges.
c) Flow in streamcourses may be temporarily diverted only if such diversion is necessary for planned construction and GBI and/or the Forest Service gives written authorization. Such flow shall be restored to the natural course as soon as practicable and, in any event, prior to a major storm runoff period or runoff season.

G.26 Erosion Prevention and Control: CONTRACTOR'S operations shall be conducted reasonably to minimize soil erosion. Equipment shall not be operated when ground conditions are such that excessive damage will result. CONTRACTOR shall adjust the kinds and intensity of erosion control work done, to ground conditions and weather conditions and the need for controlling runoff. Erosion control work shall be kept current immediately preceding expected seasonal periods of precipitation or runoff. Prior to periods of accelerated water runoff, especially during the spring runoff and periods of heavy rainfall, commensurate with its use, CONTRACTOR shall inspect and open culverts and drainage structures, construct special cross ditches for road runoff, and take other reasonable measures needed to prevent soil erosion and siltation of streams. Unless otherwise agreed in writing, **after September 15 of each operating season**, erosion control work must be kept current. CONTRACTOR shall complete erosion prevention and control work, including streamcourse protection, within 15 calendar days after completion of skidding and/or yarding operations for each landing. Designation of on the ground work shall be done as promptly as feasible unless it is agreed that the location of such work can be established without marking on the ground. During periods of accelerated water runoff, especially during the spring runoff and periods of heavy rainfall, commensurate with its use, CONTRACTOR shall inspect and open culverts and drainage structures, construct special cross ditches for road runoff, and take other reasonable measures needed to prevent soil erosion and siltation of streams. When operations are active, erosion control work will be kept current and will be completed as soon as practicable. Additioanlly, FS may require special erosion prevention measures which may include, but not limited to; use of certified weed free straw, wood chips, slash, mulch, etc. on areas of bare soil with high erosion hazard potential. No tightly woven fiber mesh or plastic monofilament netting shall be used for soil stabilization.

G.27 Protection of Improvements: So far as practicable, CONTRACTOR shall protect specified roads and other improvements (such as roads, trails, telephone lines, ditches, and fences):

a) Existing in the operating area,
b) Determined to have a continuing need or use, and
c) Designated on the Map.

CONTRACTOR shall keep roads and trails needed for fire protection or other purposes and designated on the Map reasonably free of equipment and products, slash, and debris resulting from CONTRACTOR operations. CONTRACTOR shall make timely restoration of any such improvements damaged by CONTRACTOR'S operations and, when necessary because of such operations, shall move such improvements. Improvements

shall be returned to their original locations following CONTRACTOR Operations.

G.28 Meadow Protection: Reasonable care shall be taken to avoid damage to the cover, soil, and water in meadows shown on the Map. Vehicular or skidding equipment shall not be used on meadows, except where roads, landings, and tractor roads are approved. Unless otherwise agreed, trees felled into meadows shall be removed by endlining. Resulting logging slash shall be removed where necessary to protect cover, soil, and water.

G.29 Wetlands Protection: Wetlands requiring protection under Executive Order 11990 are shown on the Map. Vehicular or skidding equipment shall not be used in such wetlands, except where roads, landings, and tractor roads are approved.

G.30 Temporary Roads to Remain Open: All bridges and culverts shall remain in place and ditches shall not be eliminated on Temporary Roads, shown as "Remained Open on the Map. All drainage structures shall be left in functional condition.

G.31 Landings: After landings have served CONTRACTOR'S purpose, CONTRACTOR shall ditch and slope them to permit water to drain or spread. Unless agreed to otherwise, cut and fill banks around landings shall be sloped to remove overhangs and otherwise minimize erosion.

G.32 Skid Trails and Fire Lines: Unless otherwise agreed in writing, skid trail patterns shall be agreed to in advance of felling and main skid trails shall be flagged on the ground in advance of felling. Needed main skid trails will be constructed in advance of skidding. Main skid trails will be spaced on average of 120 feet apart, except when converging. Additional skid trails may be agreed upon when soil conditions permit. Harvest operations will be confined to designated main skid trails until soil conditions are dry. Dry soil for main skid trails is defined as soil that when sampled from a specified depth of 8 inches and placed in the hand and squeezed, the hand shows no significant moisture stains. Existing skid trails will be used whenever possible except when they do not meet other resource protection measures.

CONTRACTOR shall construct cross ditches and water-spreading ditches on tractor roads and skid trails, where needed to prevent erosion. By agreement, CONTRACTOR may use other comparable erosion control measures, such as backblading skid trails, in lieu of cross ditching.

G.33 Current Operating Areas: Where logging, road construction, or other stewardship project work is in progress but not completed, unless agreed to otherwise, CONTRACTOR shall, before operations cease annually, remove all temporary log culverts and construct temporary cross drains, drainage ditches, dips, berms, culverts, or other facilities needed to control erosion. Such protection shall be provided, for all disturbed, unprotected ground that is not to be disturbed further prior to end of operations each year, including roads and associated fills, tractor roads, skid trails, and fire lines. When weather permits operations, CONTRACTOR shall keep such work on any additional disturbed areas as up to date as practicable.

G.34 Erosion Control Structure Maintenance: During the period of this contract, CONTRACTOR shall provide maintenance of soil erosion control structures constructed by CONTRACTOR until they become stabilized, but not for more than one year after their construction.

G.35 Slash Disposal: CONTRACTOR timing of product removal and preparatory work shall not unnecessarily delay slash disposal. Specific slash disposal measures to be employed by CONTRACTOr are stated in F-15.

G.36 Scaling: Scaling includes:

a) Various volume determination methods, such as log rule, sampling, measuring, linear measuring, counting, weighing, or another method or combination of methods;
b) Various sites, such as truck Scaling stations, rollways, weighing stations, woods landings, water Scaling stations, or other sites.
c) Various geographic locations.

G.36 Scaling Services: Scaling services shall be performed by Forest Service personnel or parties under contract to Forest Service, except that weighing services may be performed by personnel or parties approved by the Forest Service. Scaling shall be provided in accordance with the instructions and specifications in Appendix F. Scalers shall be currently certified to perform accurate Scaling services. The scaling services provided shall be selected exclusively by the Forest Service. Scaling services may be continuous, intermittent, or extended.

a) Continuous scaling services is scaling at one site five (5) 8-hour shifts a week, exclusive of Sundays and Federal holidays.
b) Intermittent scaling services are non-continuous scaling services.
c) Extended scaling services are scaling services exceeding continuous scaling services and may include Sundays and designated Federal holidays.

G.38 Scaling Location: The Forest Service shall provide scaling services at the scaling site(s) shown in F-19. The Scaling site(s) shown in F-19 normally will be a non-exclusive site where more than one National Forest may be served. CONTRACTOr may request, in writing, an alternate scaling site, such as at a private mill yard, private truck ramp, or a privately operated log transfer facility. The Forest Service may approve an alternate scaling site, when the Forest Service determines that scaling conditions at an alternate site are acceptable. Such conditions shall include at a minimum:

a) Scaler safety and comfort,
b) Product accountability and security,
c) Facilities and practices conducive to accurate and independent Scaling, and
d) The ability to provide for remote check Scaling.

Upon approval of an alternate scaling site, the Forest Service, GBI and the CONTRACTOR shall enter into a written memorandum of agreement governing Scaling at that alternate location. CONTRACTOR agree(s) that Forest Service personnel or persons under contract with the Forest Service shall perform scaling services at an alternative scaling site. In no instance shall CONTRACTOR perform scaling services.

G.39 Scaling Adjustments: The Forest Service shall check the accuracy of the scaling performed on National Forest logs. Scaling will be satisfactory if performed within the accuracy standards in governing instructions identified in Appendix F. In the event the Forest Service check scale(s) shows a variance in net scale in excess of the allowable variance, an adjustment to volume reported scaled may be made by the Forest Service. Such adjustment will be based on the difference between Forest Service check Scale(s) and original Scale for volume Scaled within the adjustment period. The volume to which this difference will be applied will be:

a) One-half of the volume Scaled between the last satisfactory check Scale and the first unsatisfactory check Scale or, if a period of 120 days or more occurs without Scaling National Forest timber for stumpage, the adjustment will be applied to 100 percent of the volume Scaled after this period and
b) 100 percent of the volume Scaled between unsatisfactory check Scales and
c) One-half of the volume Scaled between the last unsatisfactory check Scale and the next satisfactory check Scale, or if no satisfactory check Scale is completed and a period of 120 days or more occurs without Scaling of National Forest timber for stumpage, the adjustment will be applied to 100 percent of the volume Scaled since the last unsatisfactory check Scale.

Adjustments may increase or decrease the original Scaled volume. Adjustments will be applied to Integrated Resource Account to correct charges for Included Timber, plus deposits, Scaled during the adjustment period.

G.40 Weighing Services: Weighing services for stumpage payment purposes may be provided by either public or privately owned and operated weighing facilities. A "Weighing Services Agreement," approved by the Forest Supervisor, must be executed at each weighing facility providing weighing services.

Scales used to weigh National Forest products for payment purposes must be a currently certified scale in accordance with State law and be capable of weighing the entire load of logs in a single operation. The weighing of less than the entire load or weighing two loads at once is prohibited. Unless otherwise agreed, the minimum sized weighing facility shall be a 60-ton capacity scale with a 10 foot by 70 foot platform or larger. The weighmaster must work in a position where it is possible to verify that the truck wheels are on or off the scales.Weighing facilities shall meet the following minimum requirements:

a) Be an electronic design,
b) Use electronic load cells or have a fully enclosed and sealed weigh-beam,
c) Have digital weight meters sealed with a seal approved by the State,
d) Have a zero interlocking device on the printer,
e) Have an automatic zero-setting mechanism,
f) Have an automatic motion-detecting device,
g) Be shielded against radio or electromagnetic interference, and
h) Have a date and time stamp and gross and tare weights that print electronically with each weighing. The Forest Service may waive electronic printing for public or third party weighing facilities. Contractor shall bear all charges or fees for weighing services.

G.41 Presentation for Scaling: CONTRACTOR shall present products so that they may be Scaled in an economical and safe manner.

G.42 Accountability: When Scaling is performed away from Stewardship Project Area, products shall be accounted for in accordance with Forest Service and GBI written instructions, as follows:

a) CONTRACTOR shall plainly mark or otherwise identify products prior to hauling;
b) Forest Service and/or GBI shall issue removal receipts to CONTRACTOR;
c) CONTRACTOr shall assign a competent individual at the landing to complete removal receipts and attach them to each load of products removed from Stewardship Project Area;
d) Removal receipts shall be returned to GBI or the Forest Service at periodic intervals;
e) When products are in transit, the truck driver shall possess or display removal receipt and show it upon request as evidence of authority to move products;

f) The scaler's portion of removal receipt shall be surrendered at point of Scaling, the unloading point, or as requested by Forest Service or GBI; and
g) CONTRACTOR shall notify Forest Service and GBI of lost or off-loaded logs and their location within 12 hours of such loss. Contractor shall not place products in storage for deferred Scaling until an accountability system has been agreed to in writing for a stated period.

G.42 Route of Haul: As part of the annual Operating Schedule, CONTRACTOR shall furnish a map showing the route of haul over which unscaled products will be transported from the Stewardship Project Area to the approved Scaling location. Such route of haul shall be the shortest, most economical haul route available between the points.

Upon advance written agreement, other routes may be approved. All unscaled products removed from Stewardship Project Area shall be transported over the designated routes of haul. CONTRACTOR shall notify GBI or the Forest Service when a load of products, after leaving Stewardship Project Area, will be delayed for more than 12 hours in reaching Scaling location. CONTRACTOR shall require truck drivers to stop, if requested by Forest Service or GBI, for the following reasons:

a) For accountability checks when products are in transit from Stewardship Project Area to the designated Scaling location or
b) For a remote check Scale when products are in transit after being truck Scaled at the designated Scaling location.

CONTRACTOr and GBI and the Forest Service shall agree to locations for accountability checks and remote check Scales in advance of haul. Such locations shall be established only in areas where it is safe to stop trucks. The Forest Service and/or GBI shall notify CONTRACTOR of the methods to be used to alert truck drivers of an impending stop.

G.43 Product Identification: Before removal from the Stewardship Project Area, unless the Forest Service determines that circumstances warrant a written waiver or adjustment, CONTRACTOR shall:

a) Hammer brand all products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter.
b) West of the 100th meridian, paint with a spot of highway-yellow paint all domestic processing products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter. Each paint spot must be not less than three (3) square inches in size.

The Forest Service shall assign brands and, if the Stewardship Project Area is within a State that maintains a log brand register, brands shall be registered with the State. CONTRACTOR shall use assigned brand exclusively on logs until Forest Service releases brand. CONTRACTOR will furnish and apply highway-yellow paint of a lasting quality (oil-base or equivalent).

All hammer brands and/or highway-yellow paint must remain on logs until they are domestically processed. CONTRACTOR shall replace identifying marks if they are lost, removed, or become unreadable. CONTRACTOR may remanufacture products into different log lengths. Except for logs remanufactured as part of the mill infeed process immediately before processing, remanufactured products must be rebranded with the assigned SPA brand and repainted with highway-yellow paint, unless otherwise agreed to in writing by the Forest Service. For such remanufactured products, Forest Service may approve use of a brand to be used exclusively as a catch brand, in lieu of the assigned sale brand.

G.44 Scaling Lost Products: The volume of lost products shall be determined by the best methods currently available, using data from the records for the period in which the loss occurred or the most applicable period if loss should occur substantially after cutting. In the absence of specific information indicating size or species of lost products, species distribution and volume for entire truckloads shall be assumed to be the same as the average volume Scaled per truck during the report period, and for individual products it shall be assumed that the volume and species were the average volume of the highest priced species Scaled during the report period.

G. 45 Scaling Lost Sample Loads: If Scaling is being done by sampling loads of logs, CONTRACTOR shall present such sample loads for Scaling by Forest Service. If loads of logs selected to be sample Scaled are placed in the decks before they are Scaled, they will be considered as lost sample loads. It will be difficult, if not impossible, to determine the volume and species contained in such loads for payment purposes. Therefore, lost sample loads will be deemed to have a Scale volume and species composition equal to that of the highest value load Scaled during the sampling period, as established by Forest Service. If no sample loads were Scaled during the period, the Scale data for the high valued load will be taken from the most current preceding sampling period with Scale. Sample loads lost as a result of Forest Service actions shall be treated as non-Scaled loads.

G.46 Scale Reports: GBI shall provide CONTRACTOR a copy of Forest Service scaler's record, if requested in writing.

G.47 Fire Precautions and Control:

a) **Plans.** Prior to initiating CONTRACTOR'S operations during Fire Precautionary Period, CONTRACTOR shall file with Forest Service and GBI a Fire Prevention and Control Plan providing for the prevention and control of fires on the Stewardship Project Area and other areas of CONTRACTOR'S Operations. Such plan shall include a detailed list of personnel and equipment at the CONTRACTOR'S disposal for implementing the plan.

b) **Fire Precautions.** Specific fire precautionary measures listed in this Appendix shall be applicable during CONTRACTOR'S pperations in "Fire Precautionary Period" described. The dates of Fire Precautionary Period may be changed by agreement, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for fire fighting at all times during CONTRACTOR'S operations in Fire Precautionary Period.

c) **Substitute Precautions.** The Forest Service may authorize substitute measures or equipment, or waive specific requirements by written notice, if substitute measures or equipment will afford equal protection or some of the required measures and equipment are unnecessary.

d) **Emergency Precautions.** The Forest Service may require the necessary shutting down of equipment on portions of CONTRACTOR'S operations, as specified by the emergency fire precautions schedule. Under such conditions, after CONTRACTOR'S cease(s) active operations, CONTRACTOR shall release for hire by Forest Service, if needed, CONTRACTOR'S shutdown equipment for fire standby on the Stewardship Project Area or other areas of CONTRACTOR'S operations and personnel for fire standby or fire patrol, when such personnel and equipment are not needed by CONTRACTOR for other fire fighting or protection from fire. Equipment shall be paid for at fire fighting equipment rates common in the area or at prior agreed rates and, if CONTRACTOR request(s), shall be operated only by personnel approved by the CONTRACTOR. Personnel so hired shall be subject to direction and control by Forest Service and shall be paid by Forest Service at fire fighting rates common in the area or at prior agreed rates.

e) **Fire Precautionary Period and Fire Plan.** Specific fire precautionary measures are set forth below. The following requirements shall apply during the period **April 1 to December 1** and during other such periods as specified by Forest Service. Specific fire precautionary measures listed in this Appendix shall be applicable during a CONTRACTOR'S operations in "Fire Precautionary Period" described. The dates of Fire Precautionary Period may be changed by agreement, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for fire fighting at all times during CONTRACTOR'S operations in Fire Precautionary Period. Listing of specific fire precautionary measures is not intended to relieve CONTRACTOR in any way from compliance with State fire laws covering fire prevention and suppression equipment applicable to Contractor Operations.

EXHIBIT F - Fire Plan
GENERAL SERVICES AGREEMENT
RFB ELDO SA - 06: VULCAN FIRE SALVAGE SKYLINE PROJECT

FIRE PLAN FOR SERVICE AGREEMENTS

1. **SCOPE:**

The provisions set forth below outline the responsibility for fire prevention and suppression activities and establish a suppression plan for fires within the Contract Area. The Project Area is delineated by map in the Contract area. The provisions set forth below also specify conditions under which Contractor activities will be curtailed or shut down.

2. **RESPONSIBILITIES:**

A. Contractor

(1) Shall abide by the requirements of this Fire Plan.

(2) Shall take all steps necessary to prevent his/her employees, sub-CONTRACTORs and their employees from setting fires not required in completion of the agreement, shall be responsible for preventing the escape of fires set directly or indirectly as a result of Contractor operations, and shall extinguish all such fires which may escape.

(3) Shall permit and assist in periodic testing and inspection of required fire equipment. Contractor shall certify compliance with specific fire precautionary measures in the fire plan, before beginning operations during Fire Precautionary Period and shall update such certification when operations change.

(4) Shall designate in the Fire Plan and furnish on SPA Area, during operating hours, a qualified fire supervisor authorized to act on behalf of the Contractor in fire prevention and suppression matters.

B. GBI and Forest Service

The Forest Service and GBI may conduct one or more inspections for compliance with the Fire Plan. The number, timing, and scope of such inspections will be at the discretion of agency employees responsible for administration.

3. **DEFINITIONS:**

The following definitions shall apply:

Active Landing: A location the Contractor may be skidding logs into, or performing other operations such as de-limbing, log manufacturing, and chipping logs. Except for EV and E days, loading logs or stockpiling chips only, on a cleared landing, does not constitute an Active Landing.

Hot Saw: A harvesting system that employs a high-speed (>1100 rpm) rotating felling head, i.e., full rotation lateral tilt head.

Mechanical Operations: The process of felling, skidding, chipping, shredding, masticating, piling, log processing and/or yarding which requires the use of motorized power which includes, chainsaws, chippers, motorized carriages, masticators, stroke delimbers, skidders , dozers etc.

4. TOOLS AND EQUIPMENT:

The Contractor shall comply with the following requirements during the fire precautionary period, as defined by GBI:

The Fire Precautionary Period is set by the State of California which is **May 1 through December 1** of any year.

- This Contract requires, Fire Box and associated Fire Tools, according to CPRC Section 4428.

A. **Fire Tools and Equipment**:

Contractor shall meet minimum requirements of Section 4428 of the California Public Resources Code (C.P.R.C.). Fire tools kept at each operating landing shall be sufficient to equip all employees in the felling, yarding, loading, chipping, and material processing operations associated with each landing. Fire equipment shall include two tractor headlights for each tractor dozer used in UMRWA's Operations. Tractor headlights shall be attachable to each tractor and served by an adequate power source. All required fire tools shall be maintained in suitable and serviceable condition for firefighting purposes.

Trucks, tractors, skidders, pickups and other similar mobile equipment shall be equipped with and carry at all times a size 0 or larger shovel with an overall length of not less than 46 inches and a 2-1/2 pound axe or larger with an overall length of not less than 28 inches.

Where cable yarding is used, Contractor shall provide a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump within 25 feet of each tail and corner block.

C. **Fire Extinguishers**:

Contractor shall equip each internal combustion yarder, fuel truck, and loader with a fire extinguisher for oil and grease fires (4-A:60-B:C).

Skidders and tractors shall be equipped with a minimum 5-BC fire extinguisher.

All Fire Extinguishers shall be mounted, readily accessible, properly maintained and fully charged.

Contractor shall equip each mechanized harvesting machine with hydraulic systems, powered by an internal combustion engine (chipper, feller/buncher, harvester, forwarder, hot saws, stroke delimber, etc), except tractors and skidders, with at least two 4-A:60-B:C fire extinguishers or equivalent.

D. **Spark Arresters and Mufflers:**

Contractor shall equip each operating tractor and any other internal combustion engine with a spark arrester, except for motor vehicles equipped with a maintained muffler as defined in C.P.R.C. Section 4442 or tractors with exhaust-operated turbochargers. Spark Arresters shall be a model tested and approved under Forest Service Standard 5100-1a as shown in the. National Wildlife Coordinating Group Spark Arrester Guide, Volumes 1 and 2, and shall be maintained in good operating condition. Every motor vehicle subject to registration shall at all times be equipped with

an adequate exhaust system meeting the requirements of the California Vehicle Code.

E. **Power Saws:**

Each power saw shall be equipped with a spark arrester approved according to C.P.R.C. Section 4442 or 4443 and shall be maintained in effective working order. An Underwriters Laboratories (UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating power saw. In addition, a size 0 or larger shovel with an overall length of not less than 38 inches shall be kept with each gas can but not more than 300 feet from each power saw when used off cleared landing areas.

F. **Tank Truck or Trailer:**

Contractor shall provide a **water tank truck or trailer** on or in proximity to SPA Area during Contractor's Operations hereunder during Fire Precautionary Period. When Project Activity Level B or higher is in effect, a tank truck or trailer shall be on or immediately adjacent to each active landing, unless otherwise excepted when Hot Saws or Masticators are being used. See Section 6 for specific Contractor requirements.

The tank shall contain at least 300 gallons of water available for fire suppression. Ample power and hitch shall be readily available for promptly and safely moving tank over roads serving SPA Area. Tank truck or trailer shall be equipped with the following:

(1) Pump, which at sea level, can deliver 23 gallons per minute at 175 pounds per square inch measured at the pump outlet. Pumps shall be tested on SPA Area using a 5/16 inch orifice in the Forester One Inch In-Line Gauge test kit. Pump shall meet or exceed the pressure value in the following table for nearest temperature and elevation:

Temp	Sea Level		1,000 Feet		2,000 Feet		3,000 Feet		4,000 Feet		5,000 Feet		6,000 Feet		7,000 Feet		8,000 Feet		9,000 Feet		10,000 Feet	
	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM
55	179	23	174	23	169	23	165	22	161	22	157	22	153	22	150	21	146	21	142	21	139	21
70	175	23	171	23	166	22	162	22	158	22	154	22	150	21	147	21	143	21	139	21	136	20
85	171	23	168	23	163	22	159	22	155	22	151	21	147	21	144	21	140	21	136	20	133	20
100	168	23	164	23	159	22	155	22	152	22	148	21	144	21	141	21	137	20	133	20	131	20

The pump outlet shall be equipped with 1-1/2 inch National Standard Fire Hose thread. A bypass or pressure relief valve shall be provided for other than centrifugal pumps.

(2) 300 feet of 3/4-inch inside diameter rubber-covered high-pressure hose mounted on live reel attached to pump with no segments longer than approximately 50 feet, when measured to the extreme ends of the couplings. Hose shall have reusable compression wedge type 1-inch brass

or lightweight couplings (aluminum or plastic). One end of hose shall be equipped with a coupling female section and the other end with a coupling male section. The hose shall, with the nozzle closed, be capable of withstanding 200 PSI pump pressure without leaking, distortions, slipping of couplings, or other failures.

(3) A shut-off combination nozzle that meets the following minimum performance standards when measured at 100 P.S.I. at the nozzle:

	G.P.M.	Horizontal Range
Straight Stream	10	38 feet
Fog Spray	6 - 20	N/A

(4) Sufficient fuel to run the pump at least 2 hours and necessary service accessories to facilitate efficient operation of the pump.

When Contractor is using hot saws or masticators, an additional 250 feet of lightweight hose, approved by GBI, shall be immediately available for use and be capable of connecting to the 300 feet of hose and appurtenances in (2) and (3) above.

This equipment and accessories shall be deliverable to a fire in the area of operations and is subject to the requirements for each specific activity level identified in Section 6.

G. **Compressed Air Foam System:** A Compressed Air Foam System (CAFS) is a fire suppression system where compressed air is added to water and a foaming agent. By agreement, the Contractor may substitute a CAFS or functional equivalent in lieu of the tank truck, trailer or fire extinguishers, provided it meets or exceeds the following specifications and requirements:

1. Variable foam expansion ratio – 10:1 to 20:1.
2. Units shall be kept fully charged with air; water and foam concentrate as recommended by the manufacturer and have the appropriate tools to service the system.
3. The unit shall contain enough energy to empty tank and clear hose prior to exhausting propellant.
4. The unit shall be capable of being completely recharged within 10 minutes.
5. When used on cable yarding landings, the unit shall be outfitted for immediate attachment to carriage and transported without damage to the unit.

Fire extinguishers required for Hot Saws, Masticators and similar equipment identified in Section 4 B. above may be substituted with a 3 gallon CAFS.

Tank truck, trailer or equivalent may be substituted with a 30 Gallon CAFS with at least 550 feet of one inch hose and an adjustable nozzle with enough water, air and foam concentrate for at least one recharge.

This equipment and accessories shall also be deliverable to a fire in the area of operations and subject to the requirements for each specific activity level identified in Section 6.

5. GENERAL

A. **State Law**: In addition to the requirements in this Fire Plan, the Contractor shall comply with all applicable laws of the State of California. In particular, see California Public Resource Codes.

B. **Permits Required**: The Contractor must secure a special written permit from the District Ranger or designated representative before burning, welding or cutting metal or starting any warming fires. If contract requires Blasting and Storing of Explosives and Detonators, an Explosives Permit may be required pursuant to the California Health and Safety Code, Section 12101.

C. **Blasting**: Contractor shall use electric caps only unless otherwise agreed in writing. When blasting is necessary in slash areas, a Fire Patrolperson equipped with a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump shall remain in the immediate area for an hour after blasting has been completed.

D. **Smoking**: Smoking shall not be permitted during fire season, except in a barren area or in an area cleared to mineral soil at least three feet in diameter. In areas closed to smoking, the CO may approve special areas to be used for smoking. The Contractor shall sign designated smoking areas. Contractor shall post signs regarding smoking and fire rules in conspicuous places for all employees to see. Contractor's supervisory personnel shall require compliance with these rules. Under no circumstances shall smoking be permitted during fire season while employees are operating light or heavy equipment, or walking or working in grass and woodlands.

E. **Storage and Parking Areas**. Equipment service areas, parking areas, and gas and oil storage areas shall be cleared of all flammable material for a radius of at least 10 feet unless otherwise specified by local administrative unit. Small mobile or stationary internal combustion engine sites shall be cleared of flammable material for a slope distance of at least 10 feet from such engine. GBI shall approve such sites in writing.

F. **Reporting Fires**: As soon as feasible but no later than 15 minutes after initial discovery, Contractor shall notify GBI and the Forest Service of any fires on Contract Area or along roads used by Contractor. Contractor's employees shall report all fires as soon as possible to any of the following Forest Service facilities and/or personnel listed below, but not necessarily in the order shown:

Contact	Name	Office Address	Office telephone
Dispatch Center	Camino Dispatch	Camino	530-642-5170
Nearest FS Station	Georgetown R.D	7600 Wentworth Springs Road, Georgetown, CA 95634	530-333-4312 (office)
Inspector	TBD		
FSR	Don Errington	Pacific RD, 7887 Highway 50, Pollock Pines, CA 95726	530-647-5450 (office) 530-363-6120 (cell)
GBI Representative	Tyler Schroyer	Placerville RD, Camino Office	925-482-5795

When reporting a fire, provide the following information:

- Your Name
- Call back telephone number
- Project Name
- Location: Legal description (Township, Range, Section); and Descriptive location (Reference point)
- Fire Information: Including Acres, Rate of Spread and Wind Conditions.

G. **Communications**: Contractor shall furnish a serviceable telephone, radio-telephone or radio system connecting each operating side with Contractor's headquarters. When such headquarters is at a location which makes communication to it clearly impractical, GBI or the Forest Service may accept a reasonable alternative location. The communication system shall provide prompt and reliable communications between Contractor's headquarters (or agreed to alternative) and GBI via telephone.

H. **Fire Patrol person**: Contractor shall furnish a qualified fire patrolperson each operating day when Project Activity Level C or higher is in effect. When on duty, sole responsibility of patrolperson shall be to patrol the operation for prevention and detection of fires, take suppression action where necessary and notify the Forest Service and GBI as required. This Fire patrol is required on foot, unless otherwise agreed. By agreement, one patrolperson may provide patrol on this and adjacent projects. No patrolperson shall be required on Specified Road construction jobs except during clearing operations unless otherwise specified.

The Contractor shall, prior to commencing work, furnish the following information relating to key personnel:

Title	**Name**	**Telephone Number**
Fire Supervisor		
Fire Patrolperson		

I. **Clearing of Fuels:** Contractor shall clear away, and keep clear, fuels and logging debris as follows:

Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:	10 feet slope radius
Tail or corner haulback blocks:	All running blocks shall be located in the center of an area cleared to mineral soil at least 15 feet in diameter.
Lines near, between or above blocks:	Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material.

6. EMERGENCY PRECAUTIONS

Contractor's Operations shall conform to the limitations or requirements in the Project Activity Level (PAL) table below. Project Activity Levels applicable to this project shall be the predicted activity levels for the Fire Danger Rating Area(s), or fire weather station(s) stated in the SPA Area Map Legend.

Fire Danger Rating Area/Fire Weather Station f	P.A.L. Zone Forest – wide Average of FS Weather stations

The Forest Service, in its sole discretion, may change the predicted activity level if the current fire suppression situation, weather and vegetation conditions warrant an adjustment. If practicable, Forest Service will determine the following day's activity level by 6:00 PM. Contractor shall obtain the predicted Project Activity Level from the appropriate Ranger District Office before starting work each day. Forest Service may change the Project Activity Level Table to other values upon revision of the National Fire Danger Rating System. When Contractor is notified, the revised Project Activity Levels will supersede the levels in the Project Activity Level Table below.

Phone Number or Website to obtain Predicted Activity 530-295-5699

LEVELS:

PROJECT ACTIVITY LEVEL

Level	***Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.***
A	Minimum requirements noted above in Sections 4 and 5.
B	1. Tank truck, trailer, or approved CAFS substitute shall be on or adjacent to the Active Landing.
C	1. When Hot Saws or Masticators are operating, a tank truck, trailer, or approved CAFS substitute shall be within ¼ mile of these operations. Effective communications shall exist between the operator and the Active Landing. 2. Immediately after Mechanical Operations cease, Fire patrol is required for two hours.
D	1. Immediately after Hot Saw or Masticator operations cease, Fire patrol is required for three hours. 2. No Dead Tree felling after 1:00 PM, except recently dead. 3 No burning, blasting, welding or cutting of metal after 1:00 PM, except by special permit.

Level	***Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.***
Ev	1. The following activities may operate all day: a) Loading and hauling logs decked at approved landings. b) Loading and hauling chips stockpiled at approved landings. c) Servicing equipment at approved sites. d) Dust abatement, road maintenance (Chainsaw use prohibited)**,** culvert installation within cleared area, chip sealing, paving, earth moving or rock aggregate stock pile loading and installation (does not include pit or quarry development). e) Chainsaw and log processing operations associated with loading logs or other forest products at approved landings. 2. Hot Saws or Masticators may operate until 1:00 PM; provided that: a) A tractor or other equipment with a blade capable of constructing fireline is on or adjacent to the active landing or within ¼ mile of the operating equipment. This piece of equipment shall have effective communication with the Hot Saw or Masticator. b) Any additional restrictions specified by the Forest. 3. All other conventional Mechanical Operations are permitted until 1:00 PM. 4. Some operations may be permitted after 1:00 PM, on a case-by-case basis, under the terms of a PAL Ev Variance Agreement. Activities for which a Variance may be issued are: • Rubber Tire Skidding • Chipping on Landings • Helicopter Yarding • Fire Salvage When approved by a Line Officer, a Variance Agreement can be implemented when the criteria specified in the agreement are met and mitigation measures are in place. This approval is good for ten (10) days unless cancelled sooner or extended by the Contracting Officer for an additional ten (10) days. Variance approval can be withdrawn at the sole discretion of GBI. Variance approval is contingent on the 7-day fire weather forecast, fuel conditions, site characteristics, current fire situation, state of Contractor's equipment for prevention and suppression readiness, type of operation and social and Contractor community considerations etc. (See attached Project Activity Level Variance Agreement).
E	The following activities may operate all day: 1. Loading and hauling logs decked at approved landings. 2. Loading and hauling chips stockpiled at approved landings. 3. Servicing Equipment at approved sites. 4. Dust abatement, road maintenance (chainsaw use prohibited) or loading stock piles and rock aggregate installation (does not include pit or quarry development). 5. Chainsaw operation associated with loading at approved landings. All other activities are prohibited.

Project Activity Level Climatology						
Eldorado National Forest: Average of all Weather Stations						
Years Analyzed:	2004 -	2010				
Working Operating Season - May 1-Oct 30 (predicted PAL used) excludes Sundays and Holidays						
PAL:	**A**	**B**	**C**	**D**	**EV**	**E**
Month	**Average Days per Month at Each PAL Value**					
May	9	3	4	0	0	0
June	4	8	8	4	0	0
July	0	1	16	5	0	0
August	0	0	6	14	2	0
September	0	1	6	10	2	1
October	4	3	8	3	1	0
Total Days per Season	**17**	**16**	**48**	**36**	**5**	**1**

Region 5 Project Activity Level (PAL) Ev Variance Application/Agreement

Project Name: _____
Agreement Number: _____
Agreement Name: _____
Request #__, for period: _____
Units/Subdivisions Affected: _____

Location of operation:	
Slope	
Aspect	
Elevation	
Fuels on site	
Fuels in surrounding area	
7 Day PAL Outlook	
Short range predictions (Red Flags)	

Fuel Moistures	
Response time of suppression resources	
Potential for ignition	
RAWS location	
Current Fire Situation:	
Draw down information	
National Readiness Level	
Agreement considerations:	
Normal Operating Season	
Frequency of recent Contractor fires in area	
Type of operation	
Contractor's past/current performance & equipment readiness	
Other site specific mitigation or precaution (i.e. Contractor's proposals)	
Social & Community Considerations:	
Proximity of high value resources	
Sensitivity of location	

Proposed Actions:

Description of Mitigation Measures:

Remarks:

I have considered the above request and determined the specified mitigation measures or actions must be implemented to continue operations in Project Activity Level Ev. Unless extended, the approval remains in effect for ten (10) calendar days unless cancelled sooner or extended by the Forest Service for an additional ten (10) days. At the sole discretion of the Forest Service, this variance can be modified and/or cancelled at no cost to the government.

Approved By

Fire Management Officer Concurrence Date

Line Officer Approval | Date

Agreed to by:

Contractor Project Manager | Date

GBI Representative | Date

EXHIBIT G - Project Maps

Attached Seperately

EXHIBIT H - Engineering Estimate Blank Form

SCHEDULE OF ITEMS

Vulcan Forest Health Project

ROAD NUMBER: 12N07

SEGMENT: 0.00 - 0.79

CONSTRUCTION:

RECONSTRUCTION: X

PROJECT LENGTH (Miles): 0.79

PAY ITEM	DESCRIPTION	UNIT	QUANTITIES	UNIT $	TOTAL $
20425A	Drainage Excavation, Type Waterbar	Each	2	$	$
20425B	Drainage Excavation, Type I Rolling Dip	Each	5	$	$
30315	Roadway Reconditioning, Placement Method 2	Mile	0.79	$	$
				TOTAL $	

*Denotes contract quantity