APPENDIX A

TECHNICAL SPECIFICATIONS FOR SERVICE WORK ITEMS

SECTION I – DESCRIPTION OF WORK:

The objectives of this project are to increase forest health and vigor, diminish tree competition and mortality, and reduce hazardous fuels to reduce the threat of catastrophic wildfire by accomplishing the following:

1. Thin mixed conifer stands.
2. Remove included sawtimber and non-saw from the Contract Area.
3. Abate and remove hazardous standing fuels along haul roads.
4. Masticate brush, saplings, and downed woody material.
5. Reconstruct roads to chip van or log truck standards.

SECTION II – WORK ITEMS

Mandatory Item 1: Cutting and Hauling Included Products

All requirements of Appendix B apply. Appendix C Road Maintenance requirements are commensurate with use.

Work Item 1a: Thinning unit products removal: on 1,458 acres remove, from National Forest lands, included products which meet the minimum specifications identified in A.2 (Appendix B). See Table below for units and acres. Sawtimber will be removed from all acres per the criteria of C2.355# – DESIGNATION BY PRESCRIPTION. Biomass will be removed from 451 acres, per the criteria of C2.352# – DESIGNATION BY SPECIES AND DIAMETER. Includes the removal of YUMD, sawtimber topwood volume, and cull tree topwood volume. All biomass material in units described in C2.352# shall be removed regardless of landing location. Snags will be removed from 566 acres, per the criteria of C2.353# – DESIGNATION BY DAMAGE CLASS.

Item 1a							
Unit	**Acres**	**Unit**	**Acres**	**Unit**	**Acres**	**Unit**	**Acres**
800	17	820	5	908	15	928	28
801	20	821	5	910	76	929	10
802	58	822	11	911	6	930	10
803	6	823	23	912	7	932	14
804	32	824	45	913	3	934	10
805	10	825	3	914	25	936	37
806	30	826	9	915	10	937	32
807	20	827	24	916	39	940	11
808	12	828	26	917	5	942	8
809	6	829	5	918	48	944	17
810	18	830	17	920	12	945	9
812	6	832	6	922	26	946	75
814	50	834	39	923	14	948	42
816	12	838	26	924	52	949	20
817	12	902	57	925	9	950	5
818	33	904	24	926	24	951	32
819	22	906	24	927	11	952	3

Work Item 1b: Hazardous standing fuels removal: Along haul roads shown on Contract Area Map remove from National Forest lands, included cull logs which meet the minimum specifications identified in A.2 (Appendix B). Remove snags per the criteria of C2.353# – DESIGNATION BY DAMAGE CLASS. See Table B below for units and road length. Felling shall be done prior to, or concurrently with, road reconstruction activities. Hand felling may occur in the LOP area shown on the Contract Area Map during the LOP season when it can be completed in 1 day. Skidding and landing operations must be done outside the LOP season, unless LOP is lifted. Contractor will coordinate with the Forest Service to ensure a Forest Service archeological monitor is present for falling of trees in archeological sites.

Table B

Item 1b			
Unit	**Road**	**Miles**	**Approx Acres***
H1	4N28Y & 4N52Y	1.0	15
H2	4N53Y	0.1	3
H3	4N12	0.6	9
H4	4N12H	0.3	5
H5	4N12	0.9	15
H8	4N12	0.4	4
H12	5N46YA	0.4	5
H18	18EV463	0.1	1

** Acres calculated using the 82-foot average cut tree height to create an 82-foot average cut distance off the road.*

Mandatory Item 2: Mastication:

Masticate 836 acres of units shown in Table C below and on the Contract Area Map. Units F01 through F82, and FB01 through FB38, shall not be masticated until after Mandatory Item 1 has been completed in the respective unit. Inoperable areas 1 acre or greater shall be removed from payment.

Table C

Item 2					
Unit	**Acres**	**Unit**	**Acres**	**Unit**	**Acres**
F01	93	F23	23	F44	10
F02	34	F24	22	F38	22
F06	18	F25	45	F50	5
F10	16	F26	13	F82	11
F11	56	F27	24	FB01	22
F12	1	F28	25	FB18	24
F13	5	F29	5	FB24	6
F14	37	F30	16	FB32	2
F15	10	F32	2	FB34	1
F16	39	F34	35	FB36	23
F17	12	F36	10	FB38	11
F18	33	F37	4	FB4	4
F19	22	F38	6	FB5	2
F20	5	F40	10	FB6	35
F21	5	F42	2	FB7	4
F22	26	--	--	--	--

Units are designed with geo-fence whose location on the ground corresponds to the boundary location shown on a mobile mapping device using a Global Positioning System (GPS) Receiver using the digital vector file/shapefile named **Bumblebee_MasticationUnits_Official_20250310** and dated **3/10/2025**. Units along System roads will use the edge of the road as the official unit boundary. The digital vector file/shapefile will be provided to the Contractor by the Forest Service. A digital list of the coordinates can be provided upon request.

Trees, saplings, brush, and downed woody material to be treated are located within and not past the boundary as shown on the mobile mapping device using the digital vector file/shapefile listed above. Contractor is responsible for obtaining a GPS receiver(s)that is capable of determining the location of the true Geo-Fence within the contract tolerance. Allowable contract tolerance is **30** feet.

Forest Service inspection of treated areas to determine if mastication/cutting is within allowable contract tolerance, shall use the digital vector file/shapefile named and dated above using a GPS Receiver with a minimum, tested accuracy in a **Light-Medium** canopy of **13** feet. Forest Service d determination of boundary location will be final. National Technology Development Program GPS Receiver accuracy reports by GPS manufacturer and model are available at: https://www.fs.usda.gov/database/gps/mtdcrept/accuracy/index.htm.

As an operational convenience and subject to written agreement by the Forest Service, Contractor may mark Geo-Fence boundaries on the ground with Contractor's non-tracer paint. Boundary trees shall not be identified with paint applied below stump height. Contractor shall bear all costs associated with painting used to visually identify boundaries. Forest Service will not approve or accept the boundaries identified on the ground by the Contractor in advance of mastication.

In case of a major disruption in GPS service, or lack of GPS coverage on the Contract Area beyond the control of the Contractor, as determined by the Contracting Officer, extension of time may be granted by Contracting Officer when requested in writing by Contractor in accordance with 52.212-4 (f) Excusable Delays. To resolve major disruption of GPS service, or lack of GPS coverage on the Contract Area, the Forest Service may elect to Mark Geo-Fence boundaries on the ground, in which case the Forest Service's determination of boundary location will be final.

Units F01 through F82:

- Masticate to a 20 x 20 foot spacing:
  - Live shrubs greater than 12 inches in height, except for the following:
    - California hazelnut and Elderberry.
    - In open areas or areas with little overstory, retain 25% of shrubs greater than 12-inches outside of the driplines of the residual trees to create isolated clumps. Isolated clumps should be comprised of the healthiest vegetation, average 5-10 shrubs per clump, and be separated by at least 25 feet.
- Masticate to 15 x 15 foot spacing from leave trees:
  - Live coniferous trees up to 10-inch DBH, except for: California nutmeg, Pacific yew, and healthy sugar pine without evidence of white pine blister rust or bark beetle attack.
    - Species preference for retention trees: sugar pine, Douglas fir, Jeffrey pine, ponderosa pine, red fir, white fir, and incense cedar.
    - Retained trees should be dominant and co-dominant trees, with a single leader, straight bole, full crowns, dark green foliage, and no signs of insects, disease, or physical damage.
  - Live hardwoods up to 10-inch DBH, except for: California hazelnut and dogwood greater than 4 inches DBH.
  - Retain obligate riparian shrubs and trees (e.g., willows, alder, aspen) in Riparian Conservation Areas.
- Masticate all conifers up to 10 inches DBH within 25 feet of oaks greater than 10 inches DBH.
- Masticate all existing piles and slash.
- Mastication shall occur on slopes up to 45%.
- Debris created through mastication shall not exceed 2 feet in length AND:

    - On slopes < 35% debris shall be mulched into the soil to a depth of 6 inches.
    - On slopes > 35%, unit F27, OR in areas with thin soils or rocks, debris depth shall not exceed 6 inches.
- Masticate snags up to 20 inches DBH and greater than 10 feet tall, leaving the 4 largest snags per acre.
- Masticate all existing logs up to where the log is 20 inches in diameter, leaving the 4 largest on each acre untouched. Retained logs shall be at least 20 inches diameter at the mid-point and at least 20 feet long. All other logs will be decked for burning. Unless otherwise agreed, piles will be consistent with specifications in C6.7# of Appendix B.

In units FB01 through FB38:

- Masticate:
  - In areas with conifer and hardwood overstory, 75% of shrubs greater than 12 inches in height.
    - Retained shrubs should be comprised of the healthiest vegetation, average 5-10 shrubs per clump, and be separated by at least 25 feet.
  - In open areas or areas with little overstory, retain 25% of shrubs greater than 12-inches outside of the driplines of the residual trees to create isolated clumps.
    - Retained clumps should be comprised of the healthiest vegetation, average 5-10 shrubs per clump, and be separated by at least 25 feet.
  - 75% of conifers and hardwoods ≤ 10" DBH except as described below:
    - Retain all healthy sugar pine without evidence of white pine blister rust or bark beetle attack.
    - Retain all dogwood ≥ 4" DBH.
    - In areas where large trees are sparse, thin trees up to 10" DBH to a spacing of 20 feet.
    - Species preference for retention trees: sugar pine, Douglas fir, Jeffrey pine, ponderosa pine, lodgepole pine, red fir, white fir, incense cedar.
  - Retain obligate riparian shrubs and trees (e.g. willows, alder, aspen) in RCAs.
- Masticate all conifers up to 10 inches DBH within 25 feet of oaks greater than 10 inches DBH.
- Masticate all existing piles and slash.
- Mastication shall occur on slopes up to 45%.
- Debris created through mastication shall not exceed 2 feet in length AND:
    - On slopes < 35% debris shall be mulched into the soil to a depth of 6 inches.
    - On slopes > 35% OR in areas with thin soils OR where ground conditions prevent mulching, debris depth shall not exceed 6 inches or shall be piled for burning.
- Masticate all snags up to 20 inches DBH and greater than 10 feet tall, leaving the 2 largest well-distributed snags per acre. All other snags greater than 20 inches DBH shall be piled for burning.
- Masticate all existing down logs up to where the log is 20 inches in diameter, leaving the 2 largest on each acre untouched. All other down logs shall be piled for burning, leaving the 2 largest per acre at least 20 feet long.

Within 150 feet of the powerline (notwithstanding the above requirements):

- Outside of open areas with little overstory, masticate <u>all</u> shrubs greater than 12 inches in height and <u>all</u> trees ≤ 10" DBH.
- Masticate <u>all</u> snags up to 20 inches DBH and greater than 10 feet tall. All other snags greater than 20 inches DBH shall be piled for burning.
- Masticate <u>all</u> logs up to where it is 20 inches in diameter, unless logs are needed as road barriers.
- All remaining logs shall be piled for burning, unless logs are needed as road barriers.
- *Road Barriers:*
  - In sections along the road where preexisting barriers do not exist to discourage breach, vegetation will be utilized to create a barrier.
    - Preference for barrier material would be:
      - Large logs.
      - Conifers or hardwoods between 6-9-inch DBH spaced 6-feet apart at the bole.
      - Manzanita with stems of 4-6-inch DBH spaced 6-feet apart.

Bumblebee - Mandatory Items 3 through 15 and Associated Sub-Items: Road Reconstruction of Haul Routes

See Appendix D for Bumblebee Road Reconstruction requirements.

Marble Mountain - Mandatory Items 16 through 35 and Associated Sub-Items: Road Reconstruction of Haul Routes

See Appendix D for Marble Mountain Road Reconstruction requirements

Marble Mountain - Optional Item 36: Timber/Product Removal

After the completion of sale preparation activities, and agreement by both parties to the appraised timber rate derived by the FS using the R5 TEA appraisal system following the Forest Service Handbook direction; Draft Appendix B – Marble Mountain Area and Appendix A – Specifications for Optional Items 36a, 36b, and 37 will be modified to reflect net acres as well as shown on final approved Contract Area Map 3. If an agreement of the appraised timber rate cannot be made within 14 business days from the date the appraised timber rate is shared, Marble Mountain Cutting Units, optional service work, and road maintenance will not be executed and a bi-lateral modification will not occur.

Work Item 36a: Cut and Remove Included Timber: Remove, from National Forest lands, included products which meet the minimum specifications identified in A.2 (Draft Appendix B). See Table below for units and acres. Sawtimber will be removed from all acres per the criteria of C2.355# – DESIGNATION BY PRESCRIPTION.

Modified C2.355# – DESIGNATION BY PRESCRIPTION shall be used for cutting included sawtimber. All requirements of the modified Appendix B – Marble Mountain Area will apply.

Appendix C Road Maintenance – Marble Mountain Area requirements are commensurate with use.

Item 36a – Acres subject to change post unit delineation							
Unit	Acres	Unit	Acres	Unit	Acres	Unit	Acres
200	43	225	15	257	44	339	10
201	33	226	6	259	18	340	3
203	36	227	89	261	4	341	68
205	18	229	45	301	7	343	18
206	20	230	11	303	15	345	8
207	32	231	34	305	16	347	12
208	2	235	32	309	4	349	9
209	12	236	11	311	55	351	17
211	26	237	12	313	57	353	21
212	22	239	63	315	57	355	14
213	32	241	47	319	6	357	44
214	33	242	7	323	15	358	8
215	12	243	9	325	43	359	30
216	4	245	34	327	14	361	17
217	21	247	16	329	13	363	45

218	11	248	12	331	17	365	12
219	7	249	16	333	49	367	12
221	5	251	12	335	20		
223	22	253	25	337	22		
224	7	255	25	338	7		

Work Item 36b: Cut Skid Deck Biomass (Grn Bio / Cull Logs):
Cut, skid, and deck trees meeting minimum specifications identified as Timber Subject to Agreement in Draft Appendix B (Marble Mountain). Non-saw cut trees and all material meeting the YUMD specification of C6.7# shall be brought to Agreed to landings. All biomass material in units described shall be brought to a landing regardless of landing location.

Non-saw material will be cut, skid, and decked using the following criteria:

Trees that meet Utilization Standards are designated for cutting, as shown on the Tree Designation Table and Contract Area Map, except trees Marked with **PINK or RED** color paint or described to be left uncut.

Tree Designation Table

Subdivision(s) or Cutting Unit(s)	Designated Species 1/	More than Diameter (inches)	Less than Diameter (inches) 2/	Spacing (feet) 3/
All Units	IC, WF, PP, JP, DF, & unhealthy SP	4	13	15
Designated Openings in Units: **TBD**	IC, WF, PP JP, DF, & unhealthy SP	4	13	20
Within 25 feet of oaks >12 and pines >24 inches DBH in all Units	IC, WF, PP, JP, DF, & unhealthy SP	4	13	25

1/ Species listed by cut preference in natural stands.
2/ Add 1 inch for IC.
3/ Average spacing from residual trees.

Additional trees to be cut, if any, are Marked with **BLUE** color paint.

All **Hardwoods** shall be left as leave trees, unless Marked with **BLUE** color paint. Other trees that shall be left uncut are Marked with **PINK or RED** color paint.

Diameters are measured outside bark at **6** inches above ground on the uphill side of the tree. Diameters shall be measured using a “diameter equivalents of circumference” tape measure, caliper, electronic laser method or equivalent method by agreement.

Within Subdivision(s) or cutting unit(s) **All Units** as shown on Contract Area Map, trees and other products that meet Utilization Standards and the following criteria are designated for cutting and removal:

(a) All dead conifers with no visible green needles greater than 12 inches DBH within 1 tree length of a haul road or fence shown on the Contract Area Map.

(b) All dead conifers with no visible green needles 10 inches DBH to maximum DBH limit specified in table below:

Units	Maximum DBH (inches)
TBD	16
TBD	18
TBD	20
TBD	22
TBD	24
TBD	26
TBD	28
TBD	30

(d) Additional trees to be cut, if any, are Marked with **BLUE** color paint.

(e) Other trees that shall be left uncut are Marked with **PINK or RED** color paint.

Optional Items 37 : Mastication (Marble Mountain)

Masticate 730 acres of units shown in table below and on the Contract Area Map. "N" and "P" units shown in table below shall not be masticated until after Optional Item 36 has been completed in the respective unit. Inoperable areas 1 acre or greater shall be removed from payment.

Unit	Acres	Unit	Acres	Unit	Acres
F2	20	N1	16	P31	14
F3	13	N3	6	P37	20
F4	5	N5	43	P39	14
F5	12	N7	18	P43	12
F6	8	N9	4	P45	3
F8	13	N11	60	P53	11
F9	14	N13	22	P57	12
F10	13	N15	6	P59	4
F11	52	N17	37	P67	12
F12	27	N19	23	P77	3
F13	16	P3	25	P79	6
F14	12	P7	34	P81	4
F15	6	P8	16	P83	41
F16	3	P11	12	P87	11
F17	7	P29	11	P89	3

Units are designed with geo-fence whose location on the ground corresponds to the boundary location shown on a mobile mapping device using a Global Positioning System (GPS) Receiver using the digital vector file/shapefile named **MarbleMtn_MasticationUnits_Official_20260227** and dated **2/27/2026**. Units along System roads will use the edge of the road as the official unit boundary. The digital vector file/shapefile will be provided to the Contractor by the Forest Service. A digital list of the coordinates can be provided upon request.

Trees, saplings, brush, and downed woody material to be treated are located within and not past the boundary as

shown on the mobile mapping device using the digital vector file/shapefile listed above. Contractor is responsible for obtaining a GPS receiver(s)that is capable of determining the location of the true Geo-Fence within the contract tolerance. Allowable contract tolerance is **30** feet.

Forest Service inspection of treated areas to determine if mastication/cutting is within allowable contract tolerance, shall use the digital vector file/shapefile named and dated above using a GPS Receiver with a minimum, tested accuracy in a **Light-Medium** canopy of **13** feet. Forest Service d determination of boundary location will be final. National Technology Development Program GPS Receiver accuracy reports by GPS manufacturer and model are available at: https://www.fs.usda.gov/database/gps/mtdcrept/accuracy/index.htm.

As an operational convenience and subject to written agreement by the Forest Service, Contractor may mark Geo-Fence boundaries on the ground with Contractor's non-tracer paint. Boundary trees shall not be identified with paint applied below stump height. Contractor shall bear all costs associated with painting used to visually identify boundaries. Forest Service will not approve or accept the boundaries identified on the ground by the Contractor in advance of mastication.

In case of a major disruption in GPS service, or lack of GPS coverage on the Contract Area beyond the control of the Contractor, as determined by the Contracting Officer, extension of time may be granted by Contracting Officer when requested in writing by Contractor in accordance with 52.212-4 (f) Excusable Delays. To resolve major disruption of GPS service, or lack of GPS coverage on the Contract Area, the Forest Service may elect to Mark Geo-Fence boundaries on the ground, in which case the Forest Service's determination of boundary location will be final.

Mastication Units:

- Masticate to a 20 x 20 foot spacing:
  - Live shrubs greater than 12 inches in height, except for the following:
    - California hazelnut and Elderberry.
    - In open areas or areas with little overstory, retain 25% of shrubs greater than 12-inches outside of the driplines of the residual trees to create isolated clumps. Isolated clumps should be comprised of the healthiest vegetation, average 5-10 shrubs per clump, and be separated by at least 25 feet.
- Masticate to 15 x 15 foot spacing from leave trees:
  - Live coniferous trees up to 10-inch DBH, except for: California nutmeg, Pacific yew, and healthy sugar pine without evidence of white pine blister rust or bark beetle attack.
    - Species preference for retention trees: sugar pine, Douglas fir, Jeffrey pine, ponderosa pine, red fir, white fir, and incense cedar.
    - Retained trees should be dominant and co-dominant trees, with a single leader, straight bole, full crowns, dark green foliage, and no signs of insects, disease, or physical damage.
  - Live hardwoods up to 10-inch DBH, except for: California hazelnut and dogwood greater than 4 inches DBH.
  - Retain obligate riparian shrubs and trees (e.g., willows, alder, aspen) in Riparian Conservation Areas.
- Masticate all conifers up to 10 inches DBH within 25 feet of oaks greater than 10 inches DBH.
- Masticate all existing piles and slash.
- Mastication shall occur on slopes up to 45%.
- Debris created through mastication shall not exceed 2 feet in length AND:
  - On slopes < 35% debris shall be mulched into the soil to a depth of 6 inches.
  - On slopes > 35% OR in areas with thin soils or rocks, debris depth shall not exceed 6 inches.
- Masticate snags up to 20 inches DBH and greater than 10 feet tall, leaving the 4 largest snags per acre.
- Masticate all existing logs up to where the log is 20 inches in diameter, leaving the 4 largest on each acre untouched. Retained logs shall be at least 20 inches diameter at the mid-point and at least 20 feet long. All other logs will be decked for burning. Unless otherwise agreed, piles will be consistent with specifications in C6.7# of Appendix B.

SECTION III – CONTROL OF WORK

The Contractor agrees to conduct its operations under this contract and other related business activities in compliance with Federal, State, and local statutes, standards, orders, permits and other regulations.

The Contractor shall meet all State and local environmental quality laws applicable to National Forest system lands.

Work may be done any time during the term of the contract, except under the following conditions:

(1) When conditions are such that operations shall be restricted or ceased due to increased fire risk during the Fire Precautionary Period April 1st to December 1st.

(2) When seasonal operating restrictions for active raptor nests are in effect. All areas of restriction are shown on CAM and listed in the solicitation under Protection Measures Needed for Plants Animals, Cultural Resources, and Cave Resources. Restrictions would apply.

(3) If new nests are discovered,

(4) When soil moisture conditions create excessive risk of damage to the soil,

(5) When snow depth creates a situation where requirements cannot be met and/or work cannot be inspected, as determined by the COR.

(6) The government reserves the right to prioritize the order in which Units are treated.

(7) If any cultural or archeological sites are discovered during operations of this contract, work will be suspended in the immediate vicinity of the site until a reconnaissance survey is completed by the Forest Service Archeologist. Areas excluded from treatment shall be deleted from the contract.

SECTION IV – INSPECTION AND ACCEPTANCE

For All Work Items:
At any point during the project, the Contractor ~~and/or COR~~ may request (documented through email or hand-written request) an in the field consultation with the Forest Service to inspect work progress, review contract specifications, or clarify issues. The Forest Service shall respond to Contractor's request within 5 working days, excluding weekends and federal holidays.

GOVERNMENT QUALITY ASSURANCE SURVEILLANCE PLAN:

Government Inspection Procedures - The COR, or a designated inspector (GTM), will make periodic inspections while work is in progress, usually daily at first, as needed to ensure work is proceeding satisfactorily. The Contractor shall notify the COR when units are started, when problems are encountered and when contract work needs government oversight.

1. Each unit will be inspected as a separate unit. Unit will not be averaged with other units for acceptance or payment.

2. When units are completed and ready for government inspection, Contractor~~'s designated COR~~ requests unit inspection in writing, prior to moving out of the general area.

3. The COR, or designated inspector, will determine compliance with contract specifications through informal visual inspections. In the event visual inspection indicates work to be in non-compliance with specifications, prompt corrective action and/or rework shall be required.

4. In the event visual inspection indicates work and/or rework to be in non-compliance with contract specifications, a series of verification plots shall be installed by the Government to determine compliance with specifications and percent of satisfactory work for treatment of each unit not meeting specification as observed with visual inspection.

   - Inspection criteria for Mandatory Item 1a and 36a follows specifications found in Appendix B, **C6.36# - Acceptance of Work.** Piling of non-saw requirements will be visual inspections using specifications found on the CAM and in Appendix B, **C6.7# - Slash Requirements.**

   - Government verification plots will consist of a series of fixed area plots and/or variable radius plots along a grid to record if specifications were met as described in **Section II – Work Items: Mandatory Work Item 2: Mastication (Bumblebee), and Optional Work Item 37 : Mastication (Marble Mountain).**

   - Plots and grid will be distributed so that a representative sample is obtained.

   - The COR or designated inspector will mark the center of each plot on the ground using flagging, stakes, or pin flags. Additional flagging will be hung near the plot center so that it may be seen from a distance. The inspector will include the plot number, their initials and date on the flagging.

   - Plots will be numbered to correlate with the inspection form and transects on a unit map.

   - Determination of acceptability of the work performed will be based on Government verification inspections and will be considered conclusive.

   - A random starting point will be selected for the first plot location and plots will be spaced to achieve at least one plot per 10 acres, cutting unit will have a minimum of 3 plots. Plots will be distributed on a systematic grid with the spacing measured in horizontal distance and cardinal directions as designated on a map. Plots may be located using GPS coordinates.

   - Units shall be inspected once completed or what can be completed in a 30-day period by the contractor, whichever comes first.

   - Contractor will be allowed 5 working days to correct unsatisfactory work, unless otherwise agreed in writing.

   - Record plot acceptable or not acceptable on form R5-2400-181.

Unsatisfactory Performance

1. If the work quality falls below the minimum Acceptable Quality Level (AQL), the COR will immediately notify the Contractor, in writing, and order them to improve the quality of subsequent work. If the quality of subsequent work is not raised above the minimum AQL within the specified time frame of the written notice, a Cure Notice will be issued.

2. When the work quality falls below the AQL percent as a result of excess trees, the Government will do the

following:

Order rework to be performed and withhold payment until excess trees are cut and the results of a post-rework Government inspection show work quality meets the minimum AQL. No rework shall be performed until authorized by the COR.

3. When the work quality falls below the AQL percent as a result of deficient trees, the Government will do the following:

   Withhold payment.

4. Repeated failure to produce work quality at or above the AQL percent will be considered reason for no payment and/or contract Termination for Cause.

Reinspection Upon Contractor Request

1. If Government inspection results are unacceptable to the Contractor, a reinspection may be requested, in writing, within 5 business days after receipt of notice of said inspection results. The same inspection procedure will be used; however, the inspection pattern will be shifted so that new inspection plots will not overlap previously inspected plots.

2. If reinspection results – rounded up to the nearest whole percent – indicate a variance of more than 5 percent from the first inspection, the results of the second inspection will be used to calculate work quality and payment, and the Government will bear the cost of reinspection.

3. If reinspection results – rounded up to the nearest whole percent – are within 5 percent of the first inspection, plots from the initial inspection and the reinspection will be combined and used to calculate work quality and payment, and the Contractor shall bear the cost of reinspection.

Government Inspection Procedures – Items 1 - 37

Table 1 – Minimum Acceptable Quality Levels (AQL) of Work

ITEM	DESCRIPTION	SCHEDULE	UNIT	Min AQL
1a	Cut and Haul Included Products	MANDATORY	ACRE	*See Appendix B, C6.36#*
1b	Cutting and Hauling Hazardous Standing Fuels	MANDATORY	ACRE	*100%*
2	Mastication (Bumblebee)	MANDATORY	ACRE	90%
3-35	Road Reconstruction of Haul Routes	MANDATORY	LUMP SUM, MILE, CUBIC YARD, EACH, TON, LINEAR FOOT, SQUARE YARD	100%
36a	Cut and Remove Included Timber (Marble Mountain)	OPTONAL	ACRE	*See Appendix B, C6.36#*
36b	Cut Skid and Deck Biomass (Grn Bio / Cull Logs)	OPTONAL	ACRE	*90%*
37	Mastication (Marble Mountain)	OPTONAL	ACRE	90%

SECTION V – PAYMENT METHODS

Method of Measurement for Acreages

Acreages were determined by using Global Positioning Systems (GPS). The acreage for each work item will be rounded to the nearest acre and the mileage will be rounded to the nearest 1/10th of a mile and is final unless:

a. The contract is modified or,
b. The Government makes a determination to remeasure or,
c. The Contractor exercises his/her option under the following Remeasurement provisions:

Remeasurement

1. The Contractor may request, in writing, remeasurement of any units under this contract if he/she feels that acreage stated on the project maps is incorrect. The remeasurement must be within the existing perimeter of the respective unit. No variance of the unit perimeters as laid out on the ground for this contract will be allowed. All requests for remeasurement must be made prior to payment for each completed unit. Remeasurement will be performed by the Government.
2. If remeasurement indicates that a difference of less than ten percent exists, the Contractor shall pay for the actual costs of the remeasurement. Under this condition, payment will be made on the acreage or mileage stated on the project maps. If the remeasurement indicates the actual acreage or mileage varies by more than ten percent from that stated on the project maps, the payment will be made on the remeasured acreage or milage and the Forest Service will pay for the cost of the remeasurement.

Acceptance and Payment

1. Percentages as calculated herein shall be rounded to the nearest whole percent.
2. No allowance for variation or portion of a variation will be added which will create a percentage greater than 100 percent.

Acceptance and Payment: Mandatory Item 2

1. If informal visual inspection indicates acceptable work quality, the Contractor will be paid 100 percent of their bid rate.
2. In the event that formal inspections are used, the rate of payment to the Contractor will be calculated as follows: a) work quality of 90% or higher, Contractor will be paid 100 percent of their bid rate; b) work quality less than 90%, the work is unacceptable and will either require rework or no payment will be made.

Acceptance and Payment: Mandatory Items 3-35

Full payment will be made when visual and/or measurement inspection meets 100% AQL.

Acceptance and Payment: Optional Items 36 and 37

1. If informal visual inspection indicates acceptable work quality, the Contractor will be paid 100 percent of their bid rate.
2. In the event that formal inspections are used, the rate of payment to the Contractor will be calculated as follows: a) work quality of 90% or higher, Contractor will be paid 100 percent of their bid rate; b) work quality less than 90%, the work is unacceptable and will either require rework or no payment will be made.

*** Stewardship Credits will be earned first, whenever practical. Forest Service Funds will be used if the availability of Stewardship Credits is exhausted or if appropriated dollars are obligated to a specific item.**

SECTION VI – DEFINITIONS

ACCEPTABLE QUALITY LEVEL (AQL): Acceptance of work will be based on compliance with all specifications corresponding to the appropriate task(s); refer to the Performance Requirements Summary in Section E.4 of the contract. A minimum AQL is required for all service work – hand or mechanical. The minimum AQL will receive a satisfactory performance rating.

BIOMASS TREES: Any live conifer 3.0 inches to 9.9 inches DBH, and any dead conifer greater than 8.0 inches DBH.

BOLE SPACING: The slope distance in feet from the edge of one leave tree bole to another leave tree bole, measured from the outside bark of each tree at stump height.

CIRCULAR PLOT: A sample plot within a thinning unit that is used to determine the number of desirable trees and other contract specifications.

COARSE WOODY DEBRIS: Woody material left on the ground to meet wildlife habitat requirements.

CROWN RATIO: The ratio of live crown length (tip of leader to base of the crown) to total tree length/height.

CROWN SPACING: The horizontal distance in feet between the dripline of a live crown to another live crown.

CULL LOGS: Log segments produced from dead trees meeting size specifications as defined in Appendix B, Division A.2.

CUT TREES: Trees that do not possess the characteristics of desirable leave trees and are required to be cut. As described by the contract or otherwise marked to be cut.

CUTTING UNIT: See Treatment Unit definition.

DAMAGED TREES: Trees damaged beyond recovery. A tree that is larger than 3 feet in height, and has the top knocked out, is leaning more than 10 degrees, has less than one half of its original limbs, or has more than 25% of bark removed from the circumference of the bole.

DBH: Diameter at breast height, measured at a point of 4.5 feet above the ground level on the uphill side of the tree.

DEBRIS: The woody or vegetative material resulting from mastication. Material size is usually less than 2 inches, but occasionally it is up 2 feet in length.

Debris size:

- 75% less than 6 inches in length
- 20% greater than 6 inches in length
- 5% 6 inches through 2 feet in length
- With accumulations not exceeding 12 inches in more than 15% of unit acres

DECKING: Stockpiling of trees in a designated area parallel to one another as tight and compact as possible.

DYING TREES: Trees with the crown foliage changing from green to red or yellow. Any tree that has pitch tubes indicating Western Pine Beetle infestation.

DESIGNATION BY SPECIES AND DIAMETER (DXSD): A cutting prescription in which species and diameter are used to determine which trees will be left and which will be cut.

DIB: Diameter inside bark.

DSH: Diameter at stump height, measured 6 inches up on the uphill side of the tree or stump.

GTM: Government Technical Monitor

HANG-UP TREE: Any cut tree suspended above ground level.

HEALTHY: tree with greater than 30% live crown ratio, no insect activity, no mistletoe, and no signs of disease.

HEALTHY REGENERATION: Young, healthy, dwarf mistletoe free conifers, less than 4 inches in diameter, free of defect or characteristics listed in Section II, 2.2.2.

LEAVE TREE: Trees that possess desirable characteristics and that serve to create the basis for designated spacing requirements or are otherwise designated to be left.

MASTICATION - The mechanical process of shredding/mulching live and dead fuels including small trees, shrubs, standing dead trees, and down woody debris with a rotary style drum equipped with carbide knives or teeth.

NON-SAW TREE: For all conifer species, minimum diameter of 3.0 inches DBH to minimum diameter by species identified in Appendix B, Division A.

PERFORMANCE REQUIREMENTS SUMMARY (PRS): Identifies the key service outputs of the contract that will be evaluated by the Government to assure contract performance standards are met by the Contractor.

PILING: Material moved to an agreed upon location shall be piled for future treatment by Forest Service.

PROGRESSION OF WORK: Work conducted in a progressive, workmanlike and orderly manner by the Contractor.

RESERVE CLUMPS: Groups of trees within a treatment area that are protected from cutting, may also include Individual Reserve trees.

SAWTIMBER TREE: Included timber meeting sawlog size specifications as defined in Appendix B, Division A.2.

SLASH: Woody material existing or created that has accumulated on the forest floor. Woody material includes logs, pieces of logs, tops, and branches.

SURPLUS PRODUCTS: timber products that local industries and/or markets either cannot process prior to deterioration, are limited in capacity to receive products from hazardous fuels reduction projects timely, and/or where local markets do not exist.

UNIT: See Treatment Unit.

TEMPORARY ROADS: Non-permanent roads that are constructed by Contractor for the purpose of treatment unit access.

TOPWOOD: Volume not meeting minimum specifications identified in the A.2 table of Appendix B.

TREATMENT UNIT: An individual area on the ground in which activities will be performed and which may appear as a separate pay item in the Schedule of Items.

TPA: Trees per acre.

UNSATISFACTORY WORK: If work quality falls below the AQL, the COR will issue a work order or notice of noncompliance to the Contractor in writing. Untreated or unsatisfactory treated areas shall be reworked to obtain satisfactory work quality.

WHOLE TREE YARDING: Whole tree logging includes cutting tree and removing the entire tree, including tops and branches, to the landing.

WILDLIFE TREE: Standing tree marked to be reserved as a wildlife tree. Used by birds and small mammals for shelter, nesting, perching, etc.