APPENDIX A

TECHNICAL SPECIFICATIONS FOR SERVICE WORK ITEMS

SECTION I – DESCRIPTION OF WORK:

The objectives of this project are to reduce hazardous fuels in post-Hurricane Helene National Forests in Western North Carolina on steep and rugged terrain in the Wildland Urban Interface. This work includes the development of logging plans, construction and closure of landing areas, preparation and removal of damaged timber and small roundwood material via helicopter, road maintenance and hauling of forest products. Upon completion, landing restoration will be needed.

SECTION II – WORK ITEMS

Mandatory Item 1: Logging Plan, Landing Development & Restoration for Helicopter Yarding (13 Each)
Mandatory Units 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 (Helene)

Mandatory Item 1a: Logging Plan Development

The Contractor shall develop and implement helicopter logging plans for 13 designated geographic areas over approximately 3,859 acres.

- Plans shall consider terrain constraints, existing road access, previously disturbed landings and other factors necessary in facilitating the removal of timber products.

Each area-specific plan must include:

- A map identifying helicopter drop zones that include surge areas and truck loading zones and designated helicopter landing areas for fueling/servicing/staging/etc. (See Exhibit A)
  - -Helicopter Drop Zones shall be approximately 300' x 100' and (service) landing areas shall be approximately 150 ft by 200 ft with clear, unobstructed approach and departure paths.
  - - All sites shall be located and designed to minimize flight time and maximize operational efficiency.
- Access routes to landing drop zones and service areas.
  - -Each designated area shall be accessible by road and accommodate tractor-trailer access
- Specify site preparation requirements for safe and efficient helicopter operations.

Unit Number	Unit Name	Unit Acres
1	Unaka Mountain East	562
2	Central Poplar	203
3	Low Gap	435
4	Pigeonroost Creek	597
5	Lost Cove	274
6	White Oak Top	365
7	Shephard Knob	387
8	Lyddies Creek	62
9	Spring Creek	90
10	Wolf Branch	123

1a	Unaka Mountain West	92
11	Pine Root	270
12	Brandy Gap	218
13	Ox Creek	182

Mandatory Item 1b and Optional Item 10b: Landing Development (Each)
Item 1b: Mandatory Units 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (Helene); 30 Each
Item 10b: Optional Units 1a, 11, 12, 13 (Helene)*; 10 Each

The Contractor shall prepare helicopter drop zones and service landing areas in identified and approved locations per Item 1a that meet the following performance outcomes. Refer to Exhibit A at the end of this document for examples.

- Prepare an estimated 30 landings (includes drop zones and service landings) across 10 units to efficiently perform operations (Mandatory Helene Units 1-10).
- Ensure all landings are flat, stable, free of surface and overhead hazards, and capable of safe ground crew operations.
- Remove all stumps, rocks, debris, and any material that could become airborne under rotor wash.
- Ensure uninterrupted and safe log handling from drop zone to loading.
- Coordinate with the helicopter vendor to confirm site suitability and operational support requirements.

1b: Mandatory Units		
Unit Number	Unit Name	Unit Acres
1	Unaka Mountain East	562
2	Central Poplar	203
3	Low Gap	435
4	Pigeonroost Creek	597
5	Lost Cove	274
6	White Oak Top	365
7	Shephard Knob	387
8	Lyddies Creek	62
9	Spring Creek	90
10	Wolf Branch	123
10b: Optional Units		
1a	Unaka Mountain West	92
11	Pine Root	270
12	Brandy Gap	218
13	Ox Creek	182

***Optional Item 10b: If landing development is determined to be feasible per Item 1a-Logging Plan Development and in the government's best interest, this item in whole or by unit, may be awarded.**

Mandatory Item 1c and Optional Item 10 c: Landing Closure (Each)
1c: Mandatory Units 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (Helene); 30 Each
10c: Optional Units 1a, 11, 12, 13 (Helene); 10 Each

Close all landings post- operations:

- The Contractor shall provide material and revegetate all disturbed areas to meet erosion control and site stabilization outcomes. Seeding shall occur between March 15 and October 15.
- Exposed soil on landings shall be seeded and fertilized within 30 days of discontinued use during the seeding season(s). Soil tilling to cover seed may be required under dry site conditions.
- Bare areas or roads with soil compaction will require harrowing, disking or ripping. Fertilization shall be applied and mixed thoroughly with the soil prior to seeding. Due to compaction, it may be necessary to till the soil to a depth of 6 inches or more.
- Landings shall be seeded when not to be used for a period exceeding 60 days during the seeding season.
- Apply the following materials per acre unless otherwise approved in writing:

Fertilizer	Pounds/Acre
17-17-17	550

Seed	Pounds/Acre
Annual Rye	15
Wheat	15
White Clover	8
Orchard Grass	30
Millet	10

Mandatory Item 2 and Optional Item 11: Fall, Delimb and Buck Trees in Preparation for Helicopter Yarding

Item 2: Mandatory Units 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (Helene); 3,098 Acres
Item 11: Optional Units 1a, 11, 12, 13 (Helene); 762 Acres

All trees 12 inches and greater that are leaning, broken off and/or root sprung are to be felled. All trees that are already on the ground will be bucked to lengths specified for helicopter lift capacity. Small Roundwood that is still standing but damaged won't be cut unless it provides a safety concern, which shall then be bucked and yarded to the deck. Bucked logs shall be clear of stumps, rocks and debris. Align stems for helicopter yarding when feasible. Trees and pieces designated for cutting and removal include:

(a) Trees and pieces of trees lying on the ground

(b) Rood sprung trees. Trees leaning but not broken will not be cut
(c) Standing trees with broken crowns

Mandatory Item 3: Helicopter Mobilization (Lump Sum)
Item 3a: Mobilization of helicopter to project area- First Operating Season
Item 3b: Mobilization of helicopter to project area- Second Operating Season

Mandatory Item 4 and Optional Item 12: Helicopter Yarding (TONS)
Mandatory Units 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (Helene); 260,232 Tons
Optional Units 1a, 11, 12, 13 (Helene); 64,008 Tons

Yard all trees felled in Item 2 /Item 11 with a helicopter to agreed upon drop zones for processing and sorting. In areas where fire has occurred and the condition has changed product merchantability the Contractor isn't required to remove that material.

Mandatory Item 5 and Optional Item 13: Landing Operations - All Products (TONS)
Mandatory Units 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (Helene); 260,232 Tons
Optional Units 1a, 11, 12, 13 (Helene); 64,008 Tons

All helicopter loads shall be delivered to designated landing drop zones, where ground crews will manage incoming material (detaching, processing, sorting, etc). Material shall be decked at locations that provide clear access for loading on trucks.

Material handling at the landing shall be continuous, shall not delay helicopter operations, and shall position logs in an orderly manner suitable for safe and efficient loader access.

Mandatory Item 6 and Optional Item 14: Hauling of timber from Contract Area
Mandatory Units 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (Helene); 260,232 Tons
Optional Units 1a, 11, 12, 13 (Helene); 64,008 Tons

Remove all included sawtimber and small roundwood from contract area. Load tickets shall be placed in approved lockbox at designated and agreed upon location(s). Haul shall be in accordance with Appendix B, C6.821 (Scaling as Presented- Load Count).

Small Roundwood may be delivered to the following disposal sites:
-Bridgewater Forest Products: located at 3991 Bridgewater Road, Morganton, North Carolina
-Suncrest: located at 118 Ferguson Road, Waynseville, North Carolina
-Valwood: located at 35 Coalville Road, Marble, North Carolina.

Mandatory Items 7 and 8: Road Maintenance
Perform road maintenance as required in Appendix C. Contractor shall provide gravel.

Items 7a and 7b-Road grading/blading -See Appendix C for T-811 specifications.

Items 8a and 8b- Gravel hauling/spreading - See Appendix C for T-813 specifications.

See table below.

Buck Roads:

Forest System Road #	7a: Road Blading: T-811 (Miles)	8a: Gravel: T-813 (Tons)
6226	2.5	1,133

Helene Roads:

Forest System Road #	7b: Road Blading: T-811 (Miles)	8b: Gravel: T-813 (Tons)
130A	2.85	475
220	0.5	85
235	2.27	380
278	7.63	1,280
5501	3.03	510
5503	0.5	85
5504	4.09	670
5524	0.4	65
5562	0.4	65
5565	0.7	115
5567	1.67	280
5570	1.92	320
5572	1.12	190
5581	1.16	245
5582	1.00	170
Brandy Gap	0.4	65
Totals	**29.64 Miles**	**5,000 Tons**

Mandatory Item 9: Cut and Remove Timber Products Tractor Ground (144 Tons)
(Unit 14, Vineyard)

In Vineyard area, all trees greater than 8" DBH shall be cut and removed from the Contract Area. Trees to be left are banded with orange paint. Any tree that does not have orange paint shall be cut and removed.

Optional Item 15: Cut and Remove Small Roundwood- Tractor Ground (5,400 Tons)
(Optional Chunky Gal and Davenport)

In Chunky Gal and Davenport areas, all trees 8"-13" DBH that do NOT have orange paint shall be cut and removed from the Contract Area. Trees to be left are banded with orange paint.

SECTION III – INSPECTION AND ACCEPTANCE

For All Work Items:
At any point during the project, the Contractor and/or Project Manager may request (documented through email, text, or hand-written request) and 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 assure 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 Project manager shall request 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.

Government Inspection Procedures – Item 1 Development of Helicopter Logging Plan – Landing Development and Post Operations Revegetation (Units 1 – 13)
1a. Helicopter Logging Plan: The COR, or a designated GTM, shall be responsible for determining that Helicopter site specific logging plans are developed and include:

- A map identifying deck locations, helicopter drop zone, surge area, and truck loading zone.
- Access routes to landings and service areas.
- Site preparation requirements for safe and efficient helicopter operations.

1b. Landing and Deck Requirements: The COR, or a designated GTM, shall be responsible for determining those landings and deck sites that meet the requirements necessary for safe landing operations. (Mandatory Units 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, Optional Units 1a, 11, 12, 13 Helene)

1c. Landing Closure: The COR, or a designated GTM, shall be responsible for determining that landings and deck sites are closed and revegetated properly to prevent erosion and control water quality. (Mandatory Units 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, Optional Units 1a, 11, 12, 13 Helene)

Government Inspection Procedures -Items 4, 5, 6, 7, 8, (13 & 14 Optional) Yarding, Landing Operations, Hauling Products and Road Maintenance,

Road maintenance, deck processing and trucking shall be visually inspected for acceptance in accordance with Appendices A and B. The COR, or a designated GTM shall be responsible for determining that timber harvest and removal is performed in accordance with the timber removal specifications and a designated GTM with engineering experience shall be responsible for inspecting the road maintenance performed. Tickets for Gravel placed (T-813) and Loads of timber hauled shall be submitted to Forest Service at least twice a month during operations.

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

ITEM	DESCRIPTION	SCHEDULE	UNIT	Min AQL
1	Logging Plan, Landing Development & Restoration Helicopter Yarding (Helene)			
	a. Logging Plans	MANDATORY	Each	100%
	b. Landing Development	MANDATORY	Each	90%
	c. Landing Closure	MANDATORY	Each	90%
2	Fall and Buck Trees in Preparation for Helicopter Yarding (Helene)	MANDATORY	Acre	90%
3	a. Helicopter Mobilization 1st Operating Season	MANDATORY	Lump Sum	N/A
	b. Helicopter Mobilization 2nd Operating Season	MANDATORY	Lump Sum	N/A
4	Helicopter Yarding All Products (Helene)	MANDATORY	Ton	90%
5	Landing Operations of Products (Helene)	MANDATORY	Ton	90%
6	Hauling of Timber Products	MANDATORY	Ton	100%
7	Road Maintenance			
	a. Buck T-811 Blading During Haul	MANDATORY	Mile	100%
	b. Helene T-811 Blading- During Haul	MANDATORY	Mile	100%
8	a. Buck T-813 Surfacing- During Haul	MANDATORY	Ton	100%
	b. Helene T-813 Surfacing- During Haul	MANDATORY	Ton	100%
9	Cut and Remove Timber- Vineyard Tractor Ground	MANDATORY	Ton	90%
10	Landing Development & Restoration Helicopter Yarding (Helene)			
	b. Landing Development	OPTIONAL	Each	90%
	c. Post Operation Revegetation	OPTIONAL	Each	90%
11	Fall and Buck Trees in Preparation for Helicopter Yarding (Helene)	OPTIONAL	Acre	90%
12	Helicopter Yarding All Products (Helene)	OPTIONAL	Ton	90%

13	Landing Operations (Helene)	OPTIONAL	Ton	90%
14	Hauling of Timber Products	MANDATORY	Ton	100%
15	Cut and Haul Small Roundwood (Buck)	OPTIONAL	Tons	90%

Unsatisfactory Performance

1. If the work quality falls below the minimum AQL or performance standard detailed in the pertinent specification, the COR will immediately notify the Contractor, in writing, and order him to improve the quality of work performed.
2. If after rework has been performed and reinspected, and work quality still falls below minimum AQL percent or performance standard detailed in the pertinent specification, payment will either be made at a reduced rate, as determined in SECTION V below or reworked again.
3. Repeated failure to produce work quality at or above the minimum acceptable standard will be considered reason for 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.

SECTION V – PAYMENT METHODS

Method of Measurement for Acreages

Acreages were determined by using Global Positioning Systems (GPS) or digitized using GIS mapping. Some unit boundaries are flagged; the majority of boundaries are virtual.

Discernable Boundaries are boundary locations that are readily identifiable features on the ground in locations shown on the Contract Area Map. A Geo-Fence is a location on the ground corresponding to the boundary location shown on a mobile mapping device using a Global Positioning System (GPS) Receiver using a digital vector file/shapefile. The digital vector file/shapefile will be provided as an attachment to the Contractor by the Forest Service at award. A digital list of the coordinates can be provided upon request.

Contractor is responsible for obtaining a GPS receiver(s) that can determine the location of the geo-fence boundary within the contract tolerance. Allowable contract tolerance is 30 feet.
Forest Service inspection of treatment boundaries shall be conducted to determine treatments are within the allowable contract tolerance using the digital vector file/shapefile referenced above using a GPS Receiver with a minimum, tested accuracy in a Light- Medium canopy of 20 feet.
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. Forest Service determination of boundary location will be final.

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.

The acreage for each work item will be rounded to the nearest acre 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 provision

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 variance of ten percent or less exists on units of 1 to 5 acres, five percent or less exists on units of more than five but less than 20 acres, or if three percent or less exists on units of 20 acres or larger, the Contractor shall pay for the actual costs of the remeasurement. Under this condition, payment will be made on the acreage stated on the project maps. If the remeasurement indicates the actual acreage varies by more than the above factors from that stated on the project maps, the payment will be made on the remeasured acreage, and the Forest Service will pay for the cost of the remeasurement.

Acceptance and Payment

Acceptance and Payment –Item 1a:

1. Full payment will be issued after review and acceptance of proposed logging plans.

Acceptance and Payment – Mandatory Items 1b, 1c, 2, 9:

1. If informal visual inspection indicates acceptable work quality, the Contractor will be paid 100 percent of their bid rate. Partial payments may be agreed to at the CO's discretion.

Acceptance and Payment –Item 3:

1. Payment shall be made upon mobilization of all necessary equipment to start operations in a contract area.

Acceptance and Payment –Item 4 and 12:

1. Full payment will be issued once the contractor's invoices are validated using Contractor provided reports of tons yarded by helicopter. Failure to provide daily yarding reports may result in those volumes not being eligible for invoicing unless the contractor provides other acceptable evidence of the yarded material to the CO.

Acceptance and Payment –Items 5 and 13:

1. Acceptance and payment for this work item will be based on quantities recorded and maintained under items 4 and 12 for this project. The contractor is responsible for performing the work in accordance with

contract specifications; however, the Government's records will serve as the authoritative source for determining payable quantities.

2. The Government will reconcile yarded and hauled quantities by auditing pre- and post-activity records, including daily weight reports, haul tickets, and any other project documentation. Any discrepancies between contractor and Government records will be resolved through this audit process. Payment will be made only for volumes verified and accepted through this reconciliation.

Acceptance and Payment –Items 6, 14 and 15:

1. Full payment will be issued once the contractor's invoices are validated using the returned scalers' portion of the load count tickets from the final delivery point. Lost load receipts will not be accepted as billable volume unless the contractor provides other verifiable evidence of the haul. Acceptable alternatives may include a completed and identifiable weight receipt from the final delivery point or other documentation approved by the Project COR.

Acceptance and Payment –Item 7:

1. Full payment will be made when visual and/or measurement inspection indicates specifications have been met.

Acceptance and Payment –Item 8:

1. Payment for gravel hauling will be based on verified load tickets submitted by the contractor. Each load ticket must be fully completed, legible, and include the date, truck identification, material type, and quantity delivered. Only tickets originating from the approved loading and delivery locations will be accepted for payment.
2. Lost, incomplete, or illegible load tickets will not be counted toward payable volume unless the contractor provides other verifiable documentation for the specific load. Acceptable alternatives may include scale-house records, weigh slips, or other forms of documentation approved by the Project COR that clearly identify the load in question.

* **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). A minimum AQL is required for all service work – hand or mechanical. The minimum AQL will receive a satisfactory performance rating.

BIOMASS TREES: Any conifer material 2 feet in height to 4.9 inches DBH.

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

BROWNS TRANSECT: A line intercept method for measuring the amount of fuel on the ground.

BRUSH: Vegetation consisting of shrub species with single or multi-stems originating at or near ground level not normally reaching more than 15 feet in 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.

CLEARCUT: A cutting prescription in which all trees within a boundary are designated to be cut.

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.

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 2 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 approximately 50% 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.

DECKING: Stockpiling of trees in a designated area.

DEAD/DYING TREES: Trees with the crown foliage changing from green to red, yellow, or needleless. Any tree that has pitch tubes indicating Mountain 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.

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

HEALTHY REGENERATION: Young, healthy, dwarf mistletoe free conifers, less than 4.9 inches in diameter, free of defect or characteristics.

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.

LOPPING AND/OR SCATTERING: Cutting limbs from trunks of cut trees, bucking, and moving and rearranging of slash concentrations to reduce the fuel bed height as specified.

OVERSTORY REMOVAL: A cutting prescription where all trees greater than a specified size are cut. Trees less than the specified size are protected.

PAYMENT UNIT: See Treatment Unit.

PILING: Gathering and stacking of downed wood and activity slash by hand or mechanical methods into piles constructed and located as indicated by technical specification and project maps.

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.

SMALL ROUNDWOOD TREE: For all conifer species, minimum diameter of 5 inches DBH to minimum diameter by species identified in Appendix B, Division A.

UNIT: See Treatment Unit.

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

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.

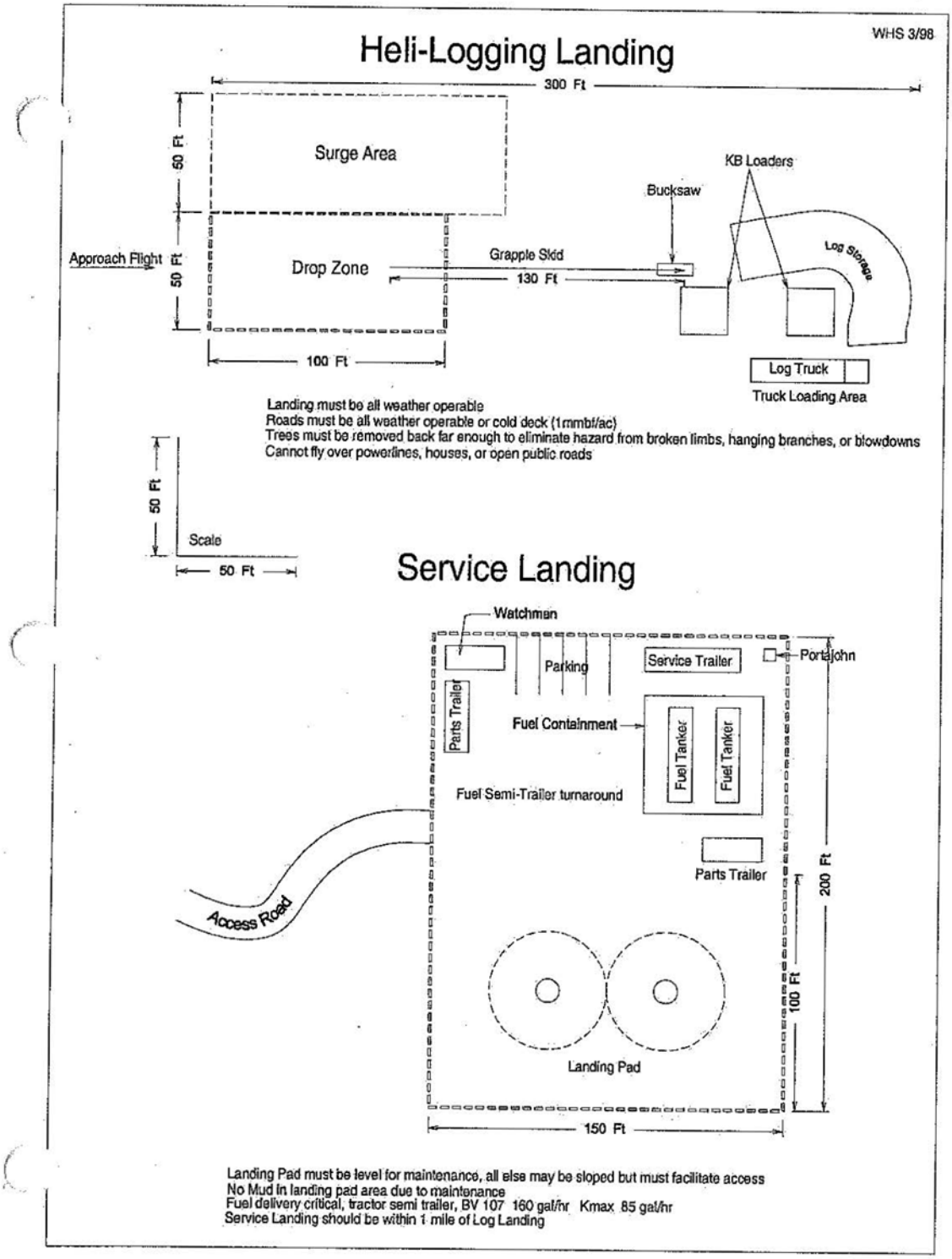
UNSATISFACTORY WORK: If work quality falls below the AQL, the COR will issue a work order or notice of noncompliance to the Contractor in writing. Untreated or unsatisfactory treated areas shall be reworked to obtain satisfactory work quality.

VIRTUAL BOUNDARY: A unit boundary that is shown on the map but is not demarcated on the ground. The contractor must use mapping applications in order to locate these boundaries in the unit.

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.

Exhibit A:


WHS 3/98
Heli-Logging Landing
300 Ft
50 Ft
Surge Area
KB Loaders
Bucksaw
Approach Flight
50 Ft
Drop Zone
Grapple Skid
130 Ft
Log Storage
100 Ft
Log Truck
Truck Loading Area
Landing must be all weather operable
Roads must be all weather operable or cold deck (1 mmbf/ac)
Trees must be removed back far enough to eliminate hazard from broken limbs, hanging branches, or blowdowns
Cannot fly over powerlines, houses, or open public roads
50 Ft
Scale
50 Ft
Service Landing
Watchman
Parking
Service Trailer
Portajohn
Parts Trailer
Fuel Containment
Fuel Tanker
Fuel Tanker
Fuel Semi-Trailer turnaround
Parts Trailer
Access Road
200 Ft
100 Ft
Landing Pad
150 Ft
Landing Pad must be level for maintenance, all else may be sloped but must facilitate access
No Mud in landing pad area due to maintenance
Fuel delivery critical, tractor semi trailer, BV 107 160 gal/hr Kmax 85 gal/hr
Service Landing should be within 1 mile of Log Landing