



TIMBER SALE PRESCRIPTION

GENERAL

Date 5/22/2013	Forest Resources Division Management Unit Atlanta
Timber Sale Number (if applicable) NA	Sale Name (or prescription name) Compartment 124

LOCAL CONTACT

Name Chad Fate	Telephone (989) 785 – 4251 x5245
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Map of Project Area Attached

LEGAL DESCRIPTION

T33N R2E Section(s) 25, 26 Description See attached map

Year of Entry: 2013 Compartment(s):124 Stand Number(s): 9, 18, 24, 36, 44, 45, 46

THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE

Estimated Acres: 256 Source: OI GPS Other IFMAP Treatments

Payment will be made on the basis of these estimated acres.

TREATMENT & OBJECTIVE

STAND #	COVER TYPE	ACRES	BA	TREATMENT	MANAGEMENT OBJECTIVE
9	J6	75		Clearcut	Jack Pine
18	O9	52	110-140	Thinning	Oak
24	A9	14		Clearcut	Aspen, Oak
36	J6	23		Clearcut	Jack Pine
44	J6	56		Clearcut	Jack Pine
45	M9	22	110-140	Selection	Mixed Deciduous
46	J6	14		clearcut	Jack Pine

PRESCRIPTION

- Stand 9: Mark to leave 1-3 dominant oaks per acre. Leave one 2.5 acre retention island.
- Stand 18: Thin to 80 BA
- Stand 24: Mark to leave 1-3 dominant oaks per acre. Leave one 0.5 acre retention island.
- Stand 36: Mark to leave scattered white oaks when present. Leave one 0.75 acre retention island
- Stand 44: Leave one 1.75 acre retention island.
- Stand 45: Thin to 80BA focus on removing poor quality stems and mature trees that are declining
- Stand 46: Mark to leave 1-3 oaks and white pine per acre. Leave one 0.5 acre retention island.
- Harvest boundary lines to be painted in red and payment unit lines in yellow, see map.
- Determine harvest unit acreage by GPS.
- See contract and appendix for specific instructions on marking and cruising.

Access These stands can be accessed from Tomahawk Lake Highway.

DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK	ESTIMATED DATE
NA	
NA	
NA	

CONTRACT WORK CAN BEGIN

Immediately Date:

CONTRACT WORK MUST BE COMPLETED BY Date: 12/15/2013

PAINT LINE WORK

This is included in the bid This is not included in the bid

Paint line work to be performed: (See attached map for locations)

TYPE OF LINE	WORK TO BE DONE	NOT APPLICABLE	PAINT COLOR	
Private boundary	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blue	<input type="checkbox"/> Other:
Sale boundary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Red	<input type="checkbox"/> Other:
Sale cutting unit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yellow	<input type="checkbox"/> Other:
Stand type line	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Other:

Exclusions to mark and why:

Retention areas for clearcuts as written in the prescription. Use red paint for all exclusion lines.

Standards for marking lines against private land:

NA

AREA CALCULATION

This is included in the bid This is not included in the bid

UNIT	METHOD	STANDARD
Sale	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	
Payment Unit	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	
Stand	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	

Special Instructions:

All stand and payment units will need the area calculated using a GPS unit as described in the contract. These files need to be submitted electronically as .shp files to the LCA. A corrected hardcopy map at a scale of 1:15840 indicating plot locations also needs to be submitted to the LCA. Plot Locations must also be submitted electronically as a .shp or a .way file.

TIMBER CRUISING SPECIFICATIONS

This is included in the bid This is not included in the bid

Required Basal Area Factor: 10 20 Other:

Cruise Line Directions: east/west or north/south

CRUISING UNITS	NUMBER OF PLOTS PER ACRE	SPACING (CHAINS)
Stands 9, 18, and 44	152 total plots	3 X 4
Stands 24, 36, 45, 46	73 total plots	3 X 3
		X
		X
TOTAL NUMBER OF CRUISE POINTS	Approx. 225 total plots	

Cruise Special Instructions:

Cruise all merchantable species in each stand except marked leave trees.
 Cruise sawtimber and pulpwood according to the cruising standards.
 Cruise residual BA for stands 18 and 45.
 Refer to the contract and the attached appendix for detailed cruising instructions.

Unless otherwise specified, the tally sheets used must be those supplied by the Forest Resources Division Management Unit.

TIMBER MARKING SPECIFICATIONS

This is included in the bid This is not included in the bid

Precise specifications to be delineated at pre-work meeting with DNR staff

Total Merchantable Residual BA (Basal Area): 80 (Minimum 70 to Maximum 90)

TREATMENT		NUMBER	SIZE
Regeneration Gaps Per Acre:		NA	NA
Girdled Trees Per Acre:		NA	Na
PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs	Orange Slash	10 inch	8 inch
Sawbolts	NA	NA	NA
Pulpwood	Orange Slash	4.6 inch	4 inch

TYPE OF WORK	WORK TO BE DONE	NOT APPLICABLE	PAINT COLOR
Trees marked to leave	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Green <input type="checkbox"/> Other
Trees marked to cut	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Orange <input type="checkbox"/> Other

TALLY INTENSITIES	
SPECIES / PRODUCT	RATIO
NA	1 :
	1 :
	1 :
	1 :

SPECIAL MARKING INSTRUCTIONS:

In stands 9 and 24 mark to leave 1-3 healthy dominant oak trees per acre where present (green paint).
 In stand 46 mark to leave 1-3 healthy dominant oaks and white pines per acre where present (green paint).
 In stand 36 mark to leave a few scattered white oaks where present (shoot for 1-3 per acre but may be lower than that in many areas).
 In stand 18 mark to cut (orange paint) to a residual of 80BA. Follow standard marking guidelines.
 In stand 45 mark to cut (orange paint) to a residual of 80BA. Focus on removing poor quality stems and removing larger mature trees that are declining.
 Refer to the contract and the attached appendix and maps for detailed instructions.

Unless otherwise specified, the tally sheets used must be those provided by the Forest Resources Division Management Unit.

RESTRICTIONS

1. Forest Resources Division must to be able to identify who did what on the timber sale.
2. The contractor may not have more than two markers in one payment unit without prior approval.
3. Each marker should have an assigned area to mark (not strips).

PAINT

1. Call Chad Fate at (989) 785 - 4251 x5245, to make arrangements for paint.
2. Paint will be supplied from Atlanta Field Office.
3. Contractor's work schedule must coincide with the DNR work schedule for paint supply.
4. The DNR will not be available on weekends or evenings.

DELIVERABLES

1. A list of names that marked or cruised each payment unit.
2. A summary of paint used (in quarts).
3. Tally summaries for each payment unit (one summary, regardless of the number of markers) and all of the original tally sheets.
4. GPS files for any GPS work.

Compartment 124 Contract APPENDIX 1, TIMBER SALE PRESCRIPTION

When establishing paint lines:

- The attached type maps delineate the contract sale area.
- There are no lines that border private property.
- Use red paint for all external sale boundaries.
- Use yellow paint for all internal payment unit lines. The boundary lines between stands can be painted in yellow. Additionally, split stand 9 into (3) equal units and split stand 18 and 44 each into (2) equal units. No unit lines are needed in stands 24, 36, 45, and 46.
- Avoid using dead or badly damaged trees and avoid using small (fast-growing) stems.
- Marking must be done in dry weather and when tree surfaces are not wet.
- Paint the boundary line in such a way that it can be seen both from the inside of the sale area and when walking along the line from either direction (two sides) and place marks approximately six feet above the base of the tree.
- Electronic shapefiles (.shp) of the treatment boundaries are available by request.
- The contractor will keep track of total quarts of paint used per-sale by color.
- The contractor will use a GPS unit to determine acreage to the nearest one-tenth acre.
- GPS setup used must be able to output ESRI shapefiles (SHP.) Supply a copy of the area files, including the .SHP, .SHX, .DBF, and .PRJ files, along with a hard copy of the corrected area file.
- For TDS/Trimble NOMADs and Recons, HDOP must be 4 or less. Positions must be determined using at least 4 satellites.
- Sale boundaries are to be recorded as an area feature, not a line.

When Registered Corners or Witness Trees are discovered:

- Bearing and/or witness trees discovered during the course of sale preparation must be protected. This can be accomplished by painting a ring completely around the tree at 4-6 feet above ground level with either red paint. In addition, tying ribbon on these trees helps alert loggers to their presence. Do not mark any trees for harvest if cutting them is likely to result in damage to corner monuments and/or bearing trees.

When Cruising:

- Contractor must follow the cruising guidelines in the Michigan DNR's "Product Standards and Cruising Manual"
- Data must be recorded so volume can be determined by stand.
- Cruise all marked units using the Cumulative Cruise Method.
- Cruise all trees designated to cut by species that will yield one or more 100" sticks with a minimum top diameter of four (4) inches DIB for pulpwood and eight (8) inches DIB for sawlogs.
- Limiting distance for borderline trees should be measured for all trees designated to be cut.
- Within all marked stands, residual basal area (merchantable sized trees) at each plot must also be recorded on the cruise sheets.
- Plot centers must be marked according to contract specifications and correspond to a legible 1:15840 scale cruise map. Cruise specifications may be altered as necessary by the LCA.
- Plot locations must be submitted in a .shp or .way file format
- Cruise data must be submitted in a TSale compatible electronic format (microsoft excel, or a .crl file created by a program such as TSale or T-Cruise, or other electronic format approved by the LCA)
- If data is collected on paper then entered electronically, a copy of the original cruise sheets must also be submitted.

When marking: Prioritize selection of trees to be cut in the following order:

1. Marking must comply with The Compleat Marker, The Complete Marker Addendum, and Within Stand Retention Guidelines (IC4110.)
2. Of the residual trees in the marked stands retain the following when possible:
 - Under-represented species.
 - Mast trees - at least 3 trees/acre when available.
 - Leave all super-canopy trees or "Legacy Trees" – remnants of the historical stands.
 - Live cavity trees and snags.
3. Mark all stems including non-merchantable stems within the regeneration gaps.
4. Release 50 potential crop trees per acre.
 - Manage for best tree in place.
 - For trees less than 8" DBH, release all sides of the crown. For trees greater than 8" DBH remove the two most significant crown competitors. (Refer to The Compleat Marker for crop tree specifications.)
 - Be certain that marked trees can be felled using modern logging equipment.
5. Remove high risk and cull trees.
6. Thin from below until stocking is reached unless otherwise stated.
7. All marking must be done in dry weather and on dry bark surfaces.
8. Stump marks are required, winter marking is allowed providing snow depths are low enough to achieve proper stump marks. Check with the LCA if winter work is possible.

Reserved Species: Do not mark within 100' of any raptor nest trees. Report these to the LCA as soon as possible and further directions will be given at that time.