



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 131

LOCAL CONTACT	
Name Chad Fate	Telephone (989) 785 – 4251 x5245
Email Address fatec@michigan.gov	FAX (989) 785 - 3513

Map of Project Area Attached

LEGAL DESCRIPTION
T33N R5E Section(s) 28, 29 Description See attached map

Year of Entry: 2013 Compartment(s):131 Stand Number(s): 4, 5, 10, 11, 15, 19, 20

THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE

Estimated Acres: 180 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
4	M9	88	110-140	Thinning	Northern Hardwoods
5	B6	8		Clearcut	Birch, Aspen
10	A6	15		Clearcut	Aspen, Birch
11	E9	14		Clearcut	Lowland Deciduous
15	A9	28		Clearcut	Aspen
19	E9	20		Clearcut	Lowland Deciduous
20	M6	7	110-140	Thinning	Northern Hardwoods

- PRESCRIPTION**
- Stand 4: Thin to 80 BA, all ash & beech are designated to be cut. Mark to leave 1-3 beech/acre
 - Stand 5: Leave one 0.25 acre retention island.
 - Stand 10: Leave one 0.5 acre retention island.
 - Stand 11: Leave all hemlock and cedar, Leave one 0.5 acre retention island.
 - Stand 15: Leave all red & white pine, oak, cedar, hemlock. Leave one 1 acre retention island
 - Stand 19: Leave hemlock and cedar. Leave one 0.75 acre retention island.
 - Stand 20: Thin to 80 BA, do not mark any hemlock or trees adjacent to hemlocks.
 - Harvest boundary lines against private use blue paint, lines against state use red paint
 - Payment unit lines in stand 4, use red paint.
 - Determine harvest unit acreage by GPS.
 - See contract and appendix for specific instructions on marking and cruising.

Access Compartment can be accessed from County Rd 451 and Molski Hwy.

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/> Yellow	<input checked="" type="checkbox"/> Other: Red
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:

Follow standard line procedures identified in the "Terms and Conditions" document section 1.022-e of the contract. See special marking instructions regarding "old paint lines" within the treatments.

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)
Stand 4	62 total plots	3.5 X 4
Stands 5, 10, 11, 15, 19, 20	92 total plots	3 X 3
		X
		X
TOTAL NUMBER OF CRUISE POINTS	Approx. 154 total plots	

Cruise Special Instructions:

Cruise all merchantable species in each stand except trees designated to leave.
 Cruise sawtimber and pulpwood according to the cruising standards.
 Cruise residual BA for stands 4 and 20.
 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	Yellow Slash	10 inch	8 inch
Sawbolts	NA	NA	NA
Pulpwood	Yellow 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:

Stand 4 has trees marked with old orange paint. Disregard the orange paint and use yellow paint. Stands 4, 5, and 10 have old timbersale boudary lines marked in blue and red and yellow paint. Verify the corners and freshen up the old blue paint lines, use red paint to freshen up the old red lines, also use red to cover the old yellow payment unit lines.
 In stands 4 and 20 mark to cut (Yellow paint) to a residual of 80BA. Follow standard marking guidelines.
 In stand 20 do not mark any hemlock or any trees immediately adjacent to the hemlock.
 In stands 4 and 20 protect any vernal ponds if any are found.
 In stand 4 mark to leave (green paint) 1-3 dominant and/or cavity beech trees per acre.
 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 131 Contract APPENDIX 1, TIMBER SALE PRESCRIPTION

When establishing paint lines:

- The attached type maps delineate the contract sale area.
- Sale boundary lines that border private property (blue paint) will be needed on the west side of stands 4, 5, and 10; south sides of 10, 15, and 20; north sides of stands 11 and 19; and east side of 19.
- Use red paint for all external sale boundaries against State land.
- Use red paint for all internal payment unit lines. The boundary lines between stands can be painted in red. Additionally, split stand 4 into (3) equal units. No additional unit lines are needed in stands 5, 10, 11, 15, 19, and 20.
- 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.