



TIMBER SALE PRESCRIPTION

GENERAL

Date 02/19/2009	Forest, Mineral and Fire Management Unit Cadillac FMU
Timber Sale Number (if applicable) 63-009-09-01	Sale Name (or prescription name) C23 Mix

LOCAL CONTACT

Name Cheryl Nelson	Telephone (231) 745 - 4651 Ext. 6942
Email Address nelsonca@michigan.gov	FAX (231) 745 - 8743

Map of Project Area Attached

LEGAL DESCRIPTION

T18N R11W Section(s)17, 19, 30 Description See Map
 Year of Entry: 2008 Compartment(s):23 Stand Number(s): 2, 24, 41, 43, 48, 57

THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE

Estimated Acres: 271 Source: OI GPS Other _____
Payment will be made on the basis of these estimated acres.

TREATMENT & OBJECTIVE

STAND #	COVER TYPE	ACRES	BA	TREATMENT	MANAGEMENT OBJECTIVE
2	W6	19	130	Thinning	White Pine
24	A6	5	170	Final Harvest	Aspen
41	W6	20	150	Thinning	White Pine
43	O6	23	110	Seed Tree	Oak
48	O9	84	100	Seed Tree	Oak
57	O9	120	100	Seed Tree	Oak

PRESCRIPTION

1. Stand 2: Cut all white pine 10"DBH and larger. Mark to thin white pine under 10"DBH. Create openings in areas of oak seedlings/saplings. Do not cut any red pine. Target BA to avg. 70.
2. Stand 24: Final harvest. Mark oak 8"DBH or larger to leave. Target BA to avg. 10.
3. Stand 41: Cut all white pine 10"DBH and larger. Mark to thin white pine under 10"DBH. Create openings in areas of oak seedlings/saplings. Do not cut any red pine. Target BA to avg. 50.
4. Stand 43: Cut all aspen and red maple. Remove overstory trees overtopping oak regeneration. In solid oak zones with no regeneration, thin oak leaving target BA of 30.
5. Stand 48: Remove overstory overtopping oak regeneration, leaving a target BA to avg. 20. Mark to leave a target BA to an avg. of 40 in solid oak zones and high quality oak areas. Cut all aspen and red maple.
6. Stand 57: Break stand up into two units. In both units, cut all aspen and red maple. Also, cut all white and red pine 10"DBH and larger in both units. In the lower quality oak unit, mark oak to leave a target BA avg. 20-30BA. In the higher quality oak unit, mark oak to cut leaving a target BA avg. 20-40.

Access

DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK	ESTIMATED DATE
Boundary lines (Red paint) for stands 2, 24, 41, 43, 57	Complete
Private line (Blue paint) for stand 43	Complete

CONTRACT WORK CAN BEGIN

Immediately Date:

CONTRACT WORK MUST BE COMPLETED BY Date 09/01/2009

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

Exclusions to mark and why**Standards for marking lines against private land**

- Stand 48 will have approximately 660' of private boundary to mark.
- Private boundary trees should be marked with blue paint forming a "V" at DBH, with the "V" facing into the sale area.

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 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:

- GPS units must be compatible with ArcView or Pathfinder software. A CD of the traverse shapefile (.shp) and/or corrected file (.cor) must be supplied to the DNR office. Alternatives to the CD include emailing the file(s) or providing the office with a flash drive.

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**

CRUISING UNITS	NUMBER OF PLOTS PER ACRE	SPACING (CHAINS)
All	1	3 X 3
		X
		X
		X
TOTAL NUMBER OF CRUISE POINTS	271	

Cruise Special Instructions:

- Cruise all sawlogs to a 8" top (DIB), and all pulpwood to a 4.0" top (DIB). Point sample method cruising for all products and species.

Unless otherwise specified, the tally sheets used must be those supplied by the Forest, Mineral and Fire 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): *Dependent on stand* (Minimum _____ to Maximum _____)

TREATMENT		NUMBER	SIZE
Regeneration Gaps Per Acre			
Girdled Trees Per Acre			
PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs			
Sawbolts			
Pulpwood			

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
	1 :
	1 :
	1 :
	1 :

SPECIAL MARKING INSTRUCTIONS

- 1) Stand/boundary trees shall be marked red at DBH with a "V" that is visible on 3 sides and the point of the "V" facing the sale area. Corners within the sale should be marked with 3 well defined vertical "V"'s.
- 2) Paint leave trees green at DBH with a slash on two sides (that is visible from all sides), and a stump mark.
- 3) Paint cut trees orange at DBH with a slash on two sides (that is visible from all sides), and a stump mark.

See appendix for further instructions.

Unless otherwise specified, the tally sheets used must be those provided by the Forest, Mineral and Fire Management Unit.

RESTRICTIONS

1. Forest, Mineral and Fire Management 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 Cheryl Nelson at (231) 745 - 4651, ext. 6942, to make arrangements for paint.
2. Paint will be supplied from the Baldwin 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.

C23 Mix – Contractor Appendix

When establishing Paint Lines

- Avoid using dead or badly damaged trees- boundary trees must last for the duration of the timber sale Up to 5-6 years.
- Avoid using small (fast growing) stems and those exposed to direct sunlight.
- Marking must be done in dry weather and when the trees are not wet.
- Paint the boundary line in such a way that it can be seen from the inside of the sale as well when walking along the line from either direction.
- Lines should be four and a half feet above the base of the tree.

GPS Requirements

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- PDOP mask must be less then or equal to 8.
- SNR setting must be less then or equal to 4.
- The GPS must be set to record data with a minimum of 4 satellites.
- Sale boundaries must be recorded as an area feature not a line.
- The GPS must determine area to tenths of an acre.

When Registered Corners or Witness Trees Are Discovered

- Any wooden posts encountered at corners must be painted/protected.
- 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 the ground.
- Please report corner condition to the local contact.

When Cruising

- Residual basal area must be recorded.
- Plot centers must be marked on cruise map with a scale of 1:15840 or larger (i.e., 1:7920).
- Plot center will be marked by a stake or stick firmly inserted in the ground (not snow) with ribbon attached to it at a height of not less than two feet above the ground, and labeled with the plot number. In addition, ribbon at least 12 inches long must be attached to a tree closest to plot center.