



MICHIGAN DEPARTMENT OF NATURAL RESOURCES  
FOREST, MINERAL AND FIRE MANAGEMENT

**TIMBER SALE PRESCRIPTION**

GENERAL					
<b>Date</b> 03/18/08			<b>Forest Management Unit</b> Atlanta Unit		
<b>Timber Sale Number (if applicable)</b>			<b>Sale Name (or prescription name)</b> Duke Hardwoods		
LOCAL CONTACT					
<b>Telephone Number</b> (989) 785-4251 x 5242			<b>FAX Number</b> (989) 785-3513		
<b>Name</b> Bob Theiner			<b>Email Address</b> theinerr@michigan.gov		
<input checked="" type="checkbox"/> <b>Map of Project Area Attached</b>					
LEGAL DESCRIPTION					
T31N R01E Section(s) 31 Description: <b>SE 1/4</b>					
Year of Entry: 2007 Compartment(s): 33 Stand Number(s): 31					
THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE					
Estimated Acres: 38 Source: <input checked="" type="checkbox"/> OI <input type="checkbox"/> GPS <input type="checkbox"/> Other _____					
Actual Acres: _____ Source: <input type="checkbox"/> OI <input type="checkbox"/> GPS <input type="checkbox"/> Other _____					
Total Acres: 38					
<b>Payment will be made on the basis of these estimated acres.</b>					
TREATMENT & OBJECTIVE					
STAND #	COVER TYPE	ACRES	BA	TREATMENT	MANAGEMENT OBJECTIVE
31	M9	38	110	Selection Cut	Northern Hardwoods
PRESCRIPTION					
1. Stand 31: Northern Hardwoods, put in boundary and Unit Lines, determine area by GPS, mark to 70 BA, tally logs and cruise pulp.					
<b>Access:</b> This compartment is accessed by Meridian Road while the stands are accessed by 2-tracks from Meridian Road (see compartment map).					
<b>DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK</b>				<b>ESTIMATED DATE</b>	
All work in the Compartment will be done by Contractor.					
<b>CONTRACT WORK CAN BEGIN:</b>					
<input checked="" type="checkbox"/> Immediately <input type="checkbox"/> Date: _____					
<b>CONTRACT WORK MUST BE COMPLETED BY:</b> Date 12/15/2008					

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

**Exclusions to mark and why:**

Contractor will put in all sale and unit boundary lines. Refer to the contract and attached appendix for detailed instructions.

**Standards for marking lines against private land:**

See Contract Specifications I-B,7.a.

### 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 type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	

**Special Instructions:**

All stands and payment units will need the area calculated using a GPS unit as described in the contract. These files must be submitted as “.cor” files on media immediately accessible to the Local Contact's equipment. The corrected map at a scale of 1:15840 will be used to indicate the plot locations as the cruise map.

### 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 & North-South

CRUISING UNITS	NUMBER OF PLOTS PER ACRE	SPACING (CHAINS)
Stand 31	1.1	3 X 3
<b>TOTAL NUMBER OF CRUISE POINTS</b>	<b>38</b>	

**Cruise Special Instructions:**

Refer to the contract and attached appendix for detailed instructions.

**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 Residual BA (Basal Area): 70 (Minimum 60 to Maximum 80) Stands: 31

Total Residual BA (Basal Area): (Minimum to Maximum ) Stands:

TREATMENT		NUMBER	SIZE
Regeneration Gaps Per Acre in Stands: All Stands		3-5 per acre	Minimum of 30 ft
Girdled Trees Per Acre		NA	NA
PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs	X and dot per 8ft log	10 inches	8 inches
Sawbolts	NA	NA	NA
Pulpwood	slash	4.6 inches	4 inches
TYPE OF WORK	WORK TO BE DONE	NOT APPLICABLE	PAINT COLOR
Trees marked to leave	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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
Sawlogs	1 : 1
Pulpwood: see cruising section	

**SPECIES TO FAVOR:**  
Contact LCA for stand specific information.

**SPECIES TO FAVOR:**  
Contact LCA

**SPECIAL MARKING INSTRUCTIONS:**  
See attached Appendix and contact LCA.

**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 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 Bob Theiner at (989) 785 -4251 ext 5242, to make arrangements for paint.
  2. Paint will be supplied from (location).
  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.

## Duke Hardwoods Contract TIMBER SALE PRESCRIPTION APPENDIX

### When establishing paint lines:

- The attached type map delineates the contract marking area.
- Avoid using dead or badly damaged trees - boundary trees must last for the duration of the timber sale (up to 3-4 years).
- Favor the use of reserved species such as cedar or oak.
- Avoid using small (fast-growing) stems and those exposed to direct sunlight.
- 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). Each boundary line tree must be stump-marked, at the base of the stump (one side) between the roots extending all the way to the ground.
- Place marks approximately six feet above the base of the tree.
- The contractor will keep track of total quarts of paint used per-sale by color.
- The contractor will use a GPS unit to determine enclosed acreage to the nearest one-tenth acre, unless an alternative method is approved prior by Unit Management.
- GPS units used must be compatible with Pathfinder Office (2.01 or later) and capable of producing a Trimble .COR file format. Supply a disk of the traverse file along with a hard copy of the corrected traverse file.
- Position Mode must be set so that GPS receiver collects data from a minimum of four satellites. This must be recorded in the position properties window after downloading.
- Positions deliver ODS (over determine system) data. 2D position will not be acceptable.
- The GPS receiver must log PDOP. This log must be recorded in the position properties window after downloading.
- PDOP mask must be less than or equal to 8.
- SNR setting must be less than or equal to 4.
- Sale boundaries are to be recorded as an area feature, not a line.
- Payment Unit lines may be recorded as a line feature bisecting the sale.

### When Registered Corners or Witness Trees are discovered:

- Any wooden posts encountered at corners must also 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 ground level with either red paint (corner surrounded by state lands) or blue paint (corner on private property boundary line). 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.
- Please report the condition of all corners, posts and bearing trees to the LCA.

### When Cruising:

- Data must be recorded so volume can be determined by stand. If a stand is split into 2 or more payment units, each unit must be recorded separately. In addition, all data must be summarized by species or species grouping by payment unit.
- All saw logs must be 100% tallied by species and diameter.
- Within all marked stands, cruise all marked pulpwood tree species that will yield one or more 100" pulpwood sticks with a minimum top diameter of four (4) inches DIB. Contact LCA to see what grouping of pulpwood is acceptable.
- Within all marked stands, residual basal area (merchantable sized trees by species) at each plot must also be recorded on the cruise sheets. Borderline residual trees do not have to be measured, but every other borderline tree should be counted.
- 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.

### When marking, prioritize selection of trees to be cut in the following order:

1. Release suitable crop trees. (Refer to The Complete Marker for crop tree specifications.)
2. When appropriate, try to increase the number of lesser occurring species such as beech in areas of high bear use. LCA can provide an explanation of this priority.
3. Remove high-risk, poor quality and trees with poor crowns.
4. Maintain target basal area.
5. Maintain all species diversity.

### Reserved Species:

- Do not mark within 100' of any raptor nest trees. Report these to the LCA as soon as possible and directions will be given at that time.
- Marking of infrequently occurring species should be avoided. Consult the LCA for clarification.