

**Timber Sale Preparation Prescription
General**

Date: 09/10/2002

Forest Management Unit: Grayling

Timber Sale Number: Sale Name: **Compartment 175 Oak Red Pine**

Local Contact: Patrick Potter (989) 348-6371 Ext: 7441 TX FAX: (989) 348-8825

email: Potterp@michigan.gov

Map of Project Area Attached

Legal Description: T27N R4W Section(s) 5 and 8 Descriptions: Section 5 (S1/2NE, SE1/4, W1/2NW, SW1/4) Section 8 (NE1/4, N1/2SE, E1/2NW, NWNW)

Year of Entry: 2001 Compartment(s): 175. Stand Number(s): 2, 3, 8 and 36.

This timber sale preparation contract is based on the following acreage:

Estimated Acres: 397 source OI GPS Other 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 the Unit Manager. Payment will be based on actual acres rounded to the nearest whole acre.

Treatment & Objectives: Thinning

Stand nbr	Cover Type	Acres	BA / Acre	Treatment	Management Objective
2	R6	17	210	Thinning	Red pine
3	O6	68	120	Thinning	Oak
8	O6	185	140	Thinning	Oak
36	O6	127	140	Thinning	Oak

Prescription:

1. Stands # 3, 8 and 36 are a Thinning harvest. Harvest all aspen and red maple and mark rest of stand to harvest using orange paint Mark to a residual of 70 BA,
2. Stand #2 is a thinning. Mark to a residual of 140 BA using orange paint.

Access: County road 612 and Manistee River Road

DNR preparation work to be done prior to contract work:

Estimated date:

None	

Contract work can begin:

- Immediately
 Date: 10/01/02

Contract work must be completed by: Date 06/16/03

All paperwork must be submitted to the timber sale contract administrator at least 10 days prior to the contract completion date to allow for inspections.

Paint Line Work

- This is bid item
 This is not a bid item

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	Other:
Sale boundary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Red	Other:
Sale cutting unit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yellow	Other:
Stand type line	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Other:
Trees marked to leave	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Green	Other:
Trees marked to cut	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Orange	Other:

Exclusions to mark and why: None

Special Instruction: Stand 2 Mark to 140 Residual BA using orange paint.
 Stands # 3, 8 and 36 harvest all aspen, red maple. Mark residual to 70 BA using orange paint.
 Do not mark any tree to be harvested along the recreational trails.

Standards for marking lines against private land: None

Area calculation:

Unit	Method	Standard	
Sale	GPS	Appendix A	
Payment unit	GPS	Appendix A	
Stand			

Special Instruction: See guidelines outlined in attached Appendix A. Written permission must be obtained from the Unit Manager prior to bidding and must be submitted with the bid if a method other than GPS is to be used for area calculation.

Timber Cruising Specifications

- This is a bid item
 This is not a bid item
 Required Basal Area Factor: 10 20 Other:

Cruise Line Direction: North/ South

Cruising Units	Number of plots per acre	Spacing (chains)
Stands 12	One plot per acre	3 X 3.5
Stand 3	One plot per 1.2 acres	3X 4
Stand 8	One plot per 2.0 acres	4 X 5
Stand 36	One plot per 1.8 acres	4 X 4.5
Total Number of Cruise Points	229	

Cruise Special Instructions: See attachment **Appendix B**

Unless otherwise specified, the tally sheets use must be those supplied by the Management Unit.

Timber Marking Specifications

- This a bid item
 This is not a bid item
 Precise specifications to be delineated at pre-work meeting with DNR staff.

Total Residual BA (Basal Area): Stands 3, 8 and 36 (Residual BA 70 BA)
 Stand 2 (Residual BA 140)

Treatment	Number	Size
Regeneration gaps per acre	N/A	
Girdled Trees per acre	N/A	

	Marking symbol	Minimum DBH	Top DIB
Sawlogs	Appendix C & D	9 inches	8 Inches
Sawbolts	Appendix C & D	9 inches	8 Inches
Pulpwood	Appendix C & D	4.5 inches	4 inches

Tally intensities

Species / product	Ratio:
	1 :
	1 :
	1 :
	1 :

Species to favor: White oak
 Species to reduce: Red Maple

Special Marking Instructions **See attachment Appendix C & D**

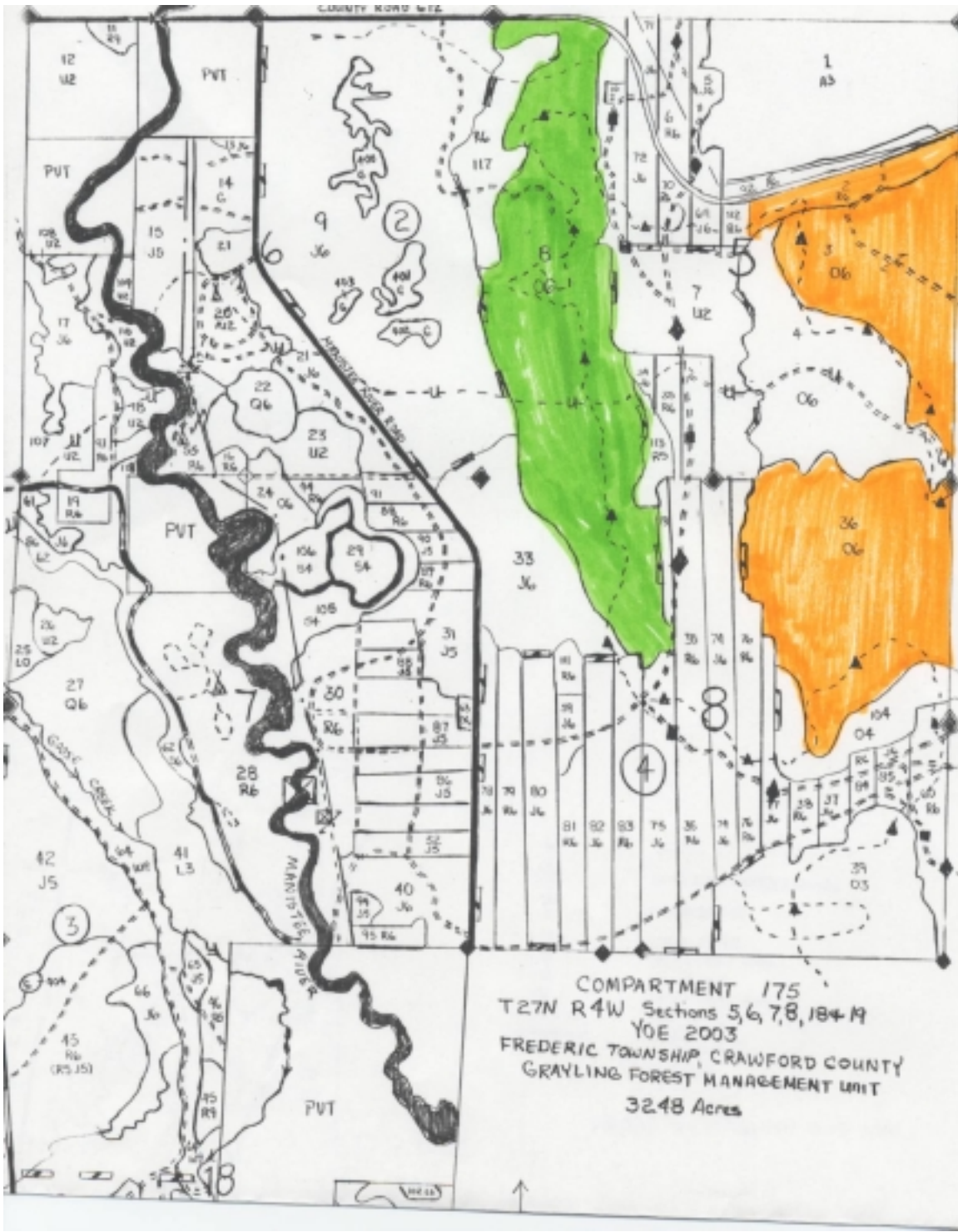
Unless otherwise specified, the tally sheets used must be those provided by the Management Unit.

Restrictions: We wish to be able to identify who did what on our sales. You may not have more than two markers in one payment unit without approval. Each marker should have an assigned area to mark (not strips).

Paint: Call (989) 348-6371 Ex: 7441 or 7442 to make arrangements for all paint pick up. Paint will be supplied from Grayling Field Office. Contractors work schedule must coincide with the DNR work schedule for paint supply. The DNR will not be available on weekends or evenings.

Deliverables:

1. A list of who marked (cruised) each payment unit (names)
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 done.
5. A hardcopy of the traverse must be supplied to the timber sale administrator prior to the administrator performing a check cruise on the stand.



Grayling Management Unit **Marking Boundaries and Area**

1. The attached type map delineates the contract marking area.
 2. Marking must be done in dry weather and when tree surfaces are not wet.
 3. 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.
 4. Paint in a unit line which will constitute the payment unit boundary, dividing the sale into payment units, as shown on the attached map.
 5. Place marks approximately six feet above the base of the tree.
 6. The contractor will keep track of total quarts of paint used per-sale by color.
-
7. 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.
 8. Position Mode must be set so that GPS receiver collects data from a minimum of four satellites, and positions deliver ODS (over determine system) data. 2D position will not be acceptable.
 9. Must log PDOP.
 10. PDOP mask less than or equal to 8.
 11. GPS units used must be compatible with Pathfinder Office 2.01 and/or capable of producing a Trimble .COR file format. In addition supply a disk of traverse file along with hard copy of the corrected traverse file.

Grayling Management Unit **Timber Cruising Specifications**

1. Cruise at a rate specified in the Timber Sale Preparation Prescription.
2. Use a 10-factor prism.
3. Use the product standards to determine products and heights of products. See appendix D of product summary in the “The Compleat Marker: A Guide to Managing Northern Hardwoods on Michigan State Forests.”
4. Mark location of plots on the map, using the plot number.
5. Determine residual BA of trees by species where applicable.
6. Unless otherwise agreed to by the contract administrator and the contractor, plot center will be marked by a stake or stick firmly inserted in the ground (not snow) with a 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.
7. All cruise sheets must have compartment #, stand #, unit #, prism factor, date, individual tree species, and the cruiser's name.
8. The Grayling Management Unit Office will provide cruise sheets.
9. Estimate the volume in MBF and cords by individual tree species to be harvested using the point sampling cruising method.

Grayling Management Unit Crown Closure.

1. The attached type map delineates the contract marking area.
2. Harvest all red maple, and aspen.
3. Retain all high quality oak trees.
4. Manage for the best tree in place.
5. Mark only the trees to be left using green paint. Mark only the trees to be cut using orange paint.
6. Leave a residual BA as specified in the **Timber Sale Preparation Prescription**.
7. The Grayling Management Unit Office will provide paint.
8. Multiple stemmed trees must be either completely marked or completely left unmarked. Do not partially mark any multiple stemmed trees.
9. The contractor will keep track of total quarts of paint used per-sale by color.
10. Remove high risk and suppressed oak trees (codominants showing signs of high stress, such as heavy epicormic branching, majority of crown loss, damaged or potential damaged, or may not live another 10 years).
11. Do not discriminate regarding marking red, white, or northern pin oak species.
12. Where possible, leave a minimum of two den trees per acre. (Don't remove all poor quality trees; some may be left if suitable as den trees). All trees designated as den trees must be marked with green paint.
13. Marking must be done in dry weather and when tree surfaces are not wet.
14. Place marks approximately six feet above the base of the tree.
15. Mark the trees on two opposite sides. Each marked tree must be stump-marked, at the base of the stump (one side) between the roots extending all the way to the ground.
16. Paint must be applied on moss free areas.
17. The contractor must contact the timber sale administrator at least two days before stopping to gather paint.

Grayling Management Unit **Marking Individual Prescription**

1. Select crop trees.
2. Crop trees are defined as trees, which have the potential of making a grade one sawlog when they are mature. A grade one sawlog is any tree capable of producing 16 feet of clear lumber. A crop tree can be ANY species of tree. It is important to manage for the best tree in place at all times.
3. Locate 70 to 80 crop trees per acre spaced approximately 25 - 27 feet apart. In areas of this stand where 6" to 9" DBH trees predominate, the crop tree release will consist of creating a seven-foot opening around the crown of the tree. This means that adjoining lesser quality dominants, codominants and intermediates will have to be marked for removal. In areas where trees greater than 9" DBH predominate, the crop tree release will consist of removing the two nearest lesser quality crown competitors from the dominant, codominants and intermediate size classes.
4. After the crop tree has been chosen and properly released, additional trees may have to be removed to reduce the basal area to the desired target. First remove high-risk trees (Eutypella canker) from the stand followed by commercial subcanopy trees beneath the crop tree. (Commercial trees will be defined as any trees that contain at least one 100" sawlog or pulp sticks.) Lastly, remove any other lesser quality intermediate and codominants tree from the stand to reduce basal area to the desired goal.
5. Regeneration holes may have to be created in this stand in order to hasten its development toward a more varied structure. Establish five 30-foot regeneration holes per acre. It is important to note that the 30-foot regeneration hole refers to the size of the opening to be created among the crowns of the trees, and not stems on the ground. It is also essential that all trees greater than 1" DBH be marked within the 30-foot regeneration hole.
6. Over the rest of the unit, at least two den trees per acre will be left. Trees that have a "platform" crotch structure for raptor nest support, located beneath the foliage canopy, shall be marked with green paint.
7. The contractor will keep track of total quarts of paint used per-sale by color.
8. The attached type map delineates the contract marking area.
9. Marking must be done in dry weather and when tree surfaces are not wet.

10. Place marks approximately six feet above the base of the tree.
 11. Mark the trees on two opposite sides. Each marked tree must be stump-marked, at the base of the stump (one side) between the roots extending all the way to the ground.
 12. Paint must be applied on moss free areas.
-