TIMBER SALE PRESCRIPTION

GENERAL	
Date 08/01/2011	Forest, Mineral and Fire Management Unit Traverse City
Timber Sale Number (if applicable) **61-0??-11-01**	Sale Name (or prescription name) TC Final Harvest Measurement Block Test C

LOCAL CONTACT	
Name Scott Throop	Telephone (231) 775-9727
Email Address throops@michigan.gov	FAX ( ) -

☒ **Map of Project Area Attached**

LEGAL DESCRIPTION

T25N R10W Section(s) 35 Description

Year of Entry: 2011 Compartment(s): 58 Stand Number(s): 112

THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE

Estimated Acres: 41 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
112	Mixed Oak 9	41	75	CC w/ Reserves	Mixed oak and conifer

PRESCRIPTION

1. The BA range is 20 to 180, with an average of 75.
2. Stand has been leave tree marked down to 0 to 30 BA with an average of 5.5.
3. Current stand is Red Pine 30%, White oak 30%, Red maple 17%, Jack pine 15%, red pine 6%, white pine 2%
4. Oak, red maple, white pine in understory.
5. Cut all trees except those marked to leave.
6.
7.
8.
9.

Access Number Two Rd

DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK	ESTIMATED DATE
N/A	

CONTRACT WORK CAN BEGIN

☒ Immediately ☐ Date:

CONTRACT WORK MUST BE COMPLETED BY Date **30 days from PO issue**

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	☐	☐	☐ Blue	☐ Other:
Sale boundary	☐	☐	☐ Red	☐ Other:
Sale cutting unit	☐	☐	☐ Yellow	☐ Other:
Stand type line	☐	☐	☐	☐ Other:

Exclusions to mark and why

Standards for marking lines against private land

AREA CALCULATION

☐ **This is included in the bid** ☒ **This is not included in the bid**

UNIT	METHOD	STANDARD
Sale	☐ GPS ☐ String Chain ☐ Other	
Payment Unit	☐ GPS ☐ String Chain ☐ Other	
Stand	☐ GPS ☐ String Chain ☐Other	

Special Instructions:

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 The plots have already been established. The plot locations and numbering is shown on page 5.

CRUISING UNITS	NUMBER OF PLOTS PER ACRE	SPACING (CHAINS)
West Forty (41.0 acres): sub-sample trees	1	N/A X N/A
		N/A X N/A
		X
		X
TOTAL NUMBER OF CRUISE POINTS	40	

Cruise Special Instructions:

Temporary plots have been established. Plot center is a wooden stake sticking out at least 4" above the ground, flagged, painted, numbered and easy to see. Additional flagging has been placed overhead so the plot may be easily located. All trees, whether 'cut' or 'leave', which are 'in' using a Limiting Distance Table with a Basal Area Factor of 10 have been marked. Marking consists of a horizontal line (about 6") at dbh and a tree number anywhere on the tree, but clearly visible from plot center. Tree numbers start at 1 for each plot.

Azimuth and distance to the center of the tree at the base from the plot center have been recorded along with species. This information will be provided to you by the DNR in an Excel format. When trees are near the edge of the stand, the 'walkthrough' method (Ducey et al 2004) was used to determine 'in' trees. Trees 'in' from the 'walkthrough' method have been counted twice, have two numbers painted on the tree and are listed twice on the Excel spreadsheet.

Using the tree data in the spreadsheet, cruise each tree on the plot according to the following procedure. An example of the data and tally card is shown on page 6. The entire spreadsheet will be emailed to the winning bidder.

DBH: Measure Diameter at Breast Height (DBH) in the location marked on each tree. Round down to the nearest 10^{th}. Use a d-tape or the average of a caliper where two measurements are taken at 90°.

H_S(1'): Measure height for the sawtimber portion of the tree in feet to a 9" Diameter Outside Bark (DOB) or to the sawlog stopper (see Product Standards and Cruising Manual). Round down to the nearest 1'. Minimum DBH is 9.1". If a tree has no sawtimber portion record H_S as 0 (do not leave blank). This may occur on a tree with no 8' minimum log (9.1" tree with a fork at 6') or has no quality (9.1" tree with branches all the way to the ground). Use a Wheeler Pentaprism®, Laser Ace®, Gator Eyes® or similar device to determine the 9" location on the stem and a clinometer, Relaskop, Laser Ace® or similar device to determine H_S.

L_{DS}: Length of deduct in the sawtimber portion of the tree recorded to the nearest 1'. This is the length of defect between a 1' stump and H_S1'. This may be in one section or multiple sections, but is recorded as one number. If in multiple sections, add the sections together and record one number. The minimum length for a sawlog is 8'. There is no maximum length. See Product Standards and Cruising Manual for information on deduct

L_{DSR}: Length of deduct in the sawtimber portion of the tree that is recoverable for pulpwood recorded to the nearest 1'. The minimum length for recoverable pulpwood is 8'. There is no maximum length. For example, if there is a (H_S =)30'sawlog section in a tree with a 10' long section in the middle of it that is defective (L_{DS} = 10'), 9' of which could be a pulp log, then L_{DSR} = 9'.

H_4(1'): Measure height of the tree in feet to a 4" Diameter Outside Bark (DOB). Round down to the nearest 1'. This can be, but is not necessarily the merchantable height. Record height to a 4" DOB regardless of the location of the pulpwood stopper (denoted as H_P). Use a Wheeler Pentaprism®, Laser Ace®, Gator Eyes® or similar device to determine the 4" location on the stem and use a clinometer, Relaskop, Laser Ace® or similar device to determine H_4. If there is a pulpwood stopper (See Product Standards and Cruising Manual), also record the height to the location of the pulpwood stopper, H_P(1')to the nearest 1'; use a clinometer, Relaskop, Laser Ace® or similar device to determine H_4.

L_{D4}: Length of deduct in the pulpwood portion of the tree recorded to the nearest 1'. This is the length of defect between the H_S and H_4(or H_P, if $H_4 \neq H_P$). This may be in one section or multiple sections, but is recorded as one number. If in multiple sections, add the sections together and record one number. The minimum length for pulpwood is 8'. There is no maximum length. See Product Standards and Cruising Manual for information on deduct.

Every 4th tree on each plot has been painted with a different colored number, e.g. tree #4, tree #8, etc. These are the sub-sample trees. The sub-sample trees will require 3 additional measurements: DFH, H1' and H_C1'.

DFH is the diameter at form-class height (17.3') measured to the nearest 0.1" using a Wheeler Pentaprism®, Laser Ace®, Gator Eyes® or similar device. The location, i.e. 17.3', would be determined using a clinometer, Relaskop, Laser Ace® or similar device. If the $H_4$1' height is less than 17.3', then record zero.

H1' is the total height of a tree measured to the nearest 1' using a clinometer, Relaskop, Laser Ace® or similar device.

H_C1' is the height at the base of the (merchantable) crown (where the base of the first merchantable branch occurs) to the nearest 1' using a clinometer, Relaskop, Laser Ace® or similar device. If there is no merchantable branch, then record zero. A fork is considered a merchantable branch. The main stem would be considered the stem with the most value.

In addition to the tree measurements, you must track your time conducting this test. If you are using a portable data recorder, this could be used for time tracking. Time starts when you leave your truck to begin measurement and ends when you return to your truck. If you take breaks or lunch in the woods, then stop your time at the beginning of each break and start when you resume work. This is an important attribute of our test so it is important that you remember to start and stop your time appropriately.

Tally sheets will be provided by the DNR. Output from an electronic data recorder is acceptable.

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): ____ (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	☐	☐	☐ Green ☐ Other
Trees marked to cut	☐	☐	☐ Orange ☐ Other

TALLY INTENSITIES

SPECIES / PRODUCT	RATIO
	1 :
	1 : 1 :
	1 :

SPECIAL MARKING INSTRUCTIONS

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

RESTRICTIONS

1. Forest Management Division must to be able to identify who did what on the timber sale.
2. This work is to be performed by one person.

PAINT

1. None needed.

DELIVERABLES

1. The name of the person that did the cruising.
2. Tally from each plot in the Excel spreadsheet provided by the DNR.


14 13 12 11
15 10
30 29 28 16 9
31 32 27 31 17 7
36 35 26 33 18 8 6
37 40 25 10 19 1 2 5
38 39 24 11 3 4
23 12

Plot #	Tree #	Species	Azimuth	Dist.	DBH	H_S1'	L_{DS}	L_{DSR}	H_P1'	H_41'	L_{D4}	DFH	H1'	H_C1'
1	1	red maple	7	21								-	-	-
1	2	red maple	8	19.9								-	-	-
1	3	red maple	9	18.9								-	-	-
1	4	red maple	10	20.9										
1	5	white oak	114	32.3								-	-	-
1	6	red maple	164	13.3								-	-	-
1	7	white oak	168	26.6								-	-	-
1	a	white oak	209	24.3								-	-	-
1	b	white oak	211	22								-	-	-
1	8	white oak	251	16.1										
1	9	white oak	310	25.1								-	-	-
1	10	white oak	318	24.3								-	-	-
2	1	jack pine	26	16.5								-	-	-
2	2	jack pine	51	13.6								-	-	-
2	3	jack pine	77	18								-	-	-
2	4	jack pine	145	28.1										
2	5	red pine	211	35								-	-	-
2	6	red pine	212	34								-	-	-
2	7	white oak	276	24.4								-	-	-
2	a	white oak	294	32.1								-	-	-
2	b	white oak	297	30.3								-	-	-
2	c	red pine	311	22.2								-	-	-
3	1	white oak	156	41.7								-	-	-
3	2	jack pine	197	20.4								-	-	-