CITY OF MEDINA
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Tree Performance Standard
Example 1

Attached are worksheets and site plans showing the application of the tree performance standards using a 6-inch DBH standard as a significant tree and a 10-inch DBH standard as a significant tree. Note that using 6-inch standard results in no supplemental trees being required to be planted. However, a 10-inch standard results in two supplemental trees being required. This requirement might be satisfied either by planting two new trees or if there are remaining trees less than 10-inches DBH, these might be counted as supplemental trees.

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Example 1: Calculating Tree Performance Requirements

Tree Performance Worksheet

6-inch DBH Standard

Address: 801 NE 80th Ave | **File No.**

☒ New ☐ Revision

Instructions: *Use this worksheet to determine compliance with the tree performance standards in MMC 20.52.130 and to calculate supplemental trees. Attach additional worksheets if necessary.*

STEP 1: Inventory existing tree units — Conduct an inventory of all significant trees on the property and include significant trees in the adjoining city right-of-way (if applicable).

No.	Tree	DBH	No.	Tree	DBH
1	Apple	8	7	Elder	13
2	Apple	12	8	Hemlock	15
3	Cherry	11	9	Pine	30
4	Hemlock	23	10	Pine	24
5	Cherry	11	11	Cherry	5
6	Holly	7	12	Douglas fir	22

STEP 2: Calculate Existing Tree Units — From Table 20.52.130(C): add together the number of significant trees in each range below and multiply by the corresponding value to produce Existing Tree Units.

A.	Total number of trees at least 6 inches, but less than 10 inches DBH	2	X 0.75 =	1.5	D. TOTAL EXISTING TREE UNITS (A + B + C)
B.	Total number of trees 10 inches DBH and larger	15	X 1.00 =	15	16.5
C.	Total number of conifer trees 50 inches DBH and larger	0	X 1.25 =	0	

STEP 3: Inventory removed trees — List the significant trees that are proposed for removal. This information will be used in Step 4 and 7 (if applicable).

No.	Tree	DBH	No.	Tree	DBH
4	Hemlock	23	10	Pine	24
5	Cherry	11	11	Cherry	5
8	Hemlock	15	12	Douglas fir	22
9	Pine	30	14	Cherry	15

STEP 4: Calculate Net Existing Tree Units — To calculate Net Existing Tree Units, add together the number of significant trees in each range below that are proposed for removal and multiply by the corresponding value. Then follow H and I.

E.	Total number of trees removed at least 6 inches, but less than 10 inches DBH	0	X 0.75 =	0	H. TOTAL TREE UNITS TO BE REMOVED (E + F + G)	9
F.	Total number of trees removed 10 inches DBH and larger	9	X 1.00 =	9		
G.	Total number of conifer trees 50 inches DBH and larger	0	X 1.25 =	0	I. Net Existing Tree Units (subtract H from D)	7.5

STEP 5: Calculate Required Tree Units — To calculate Required Tree Units, perform the calculations in J through M.

Lot Area (sq. ft.)		Divide J by 1,000		Tree Density Ratio (check one)		M. REQUIRED TREE UNITS (Multiply K x L)	(round up)
J.	16,365	K.	16.3	L.	☒ 0.40 (residential) ☐ ____Table 20.52.130.B		7

STEP 6: Determine if Supplemental Trees are required — Subtract the Tree Units in M from the Tree Units in I.

- If the difference is zero or a positive number - stop. No supplemental trees are required.
- If the difference is a negative number then go to Step 7.

N. 0.5

See Page 2 for Step 7 and for additional inventory tables

Tree Performance Worksheet

STEP 7:	Calculate Supplemental Trees	• Each replacement of a 24-inch DBH and larger tree requires two supplemental trees with each supplemental tree having a Tree Unit value = 0.5. • Each replacement of a less than 24-inch DBH tree & each tree that fills a gap requires one supplemental tree with each supplemental tree having a Tree Unit value = 1.0 • The total Tree Units of the supplemental trees must equal or be greater than the absolute value of N. • Tree Units are assigned first to those supplement trees replacing removed trees and in order of largest to smallest tree.

For replacement of 24-inch DBH and larger tree					For replacement of less than 24-inch DBH/ Fill Existing Gap trees				
No.	Check if Applicable	# of Supp. Trees	Proposed # Supp. Trees	Tree Unit	No.	Check if Applicable	# of Supp. Trees	Proposed # Supp. Trees	Tree Unit
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
O.	Total				P.	Total			
							Total from O		
							Grand Totals	Q.	R.

- *Q is the number of supplemental trees required to be planted.*
- *The Tree Units in R must equal or be greater than the Tree Units in N.*

STEP 1: Inventory existing tree units

No.	Tree	DBH	No.	Tree	DBH
13	Hemlock	20	21		
14	Cherry	15	22		
15	Apple	16	23		
16	Apple	5	24		
17	Cedar	18	25		
18	Cedar	23	26		
19	Douglas fir	24	27		
20			28		

STEP 3: Inventory removed trees

No.	Tree	DBH	No.	Tree	DBH
15	Apple	16			
16	Apple	5			
17	Cedar	18			

Attach additional sheets if needed.

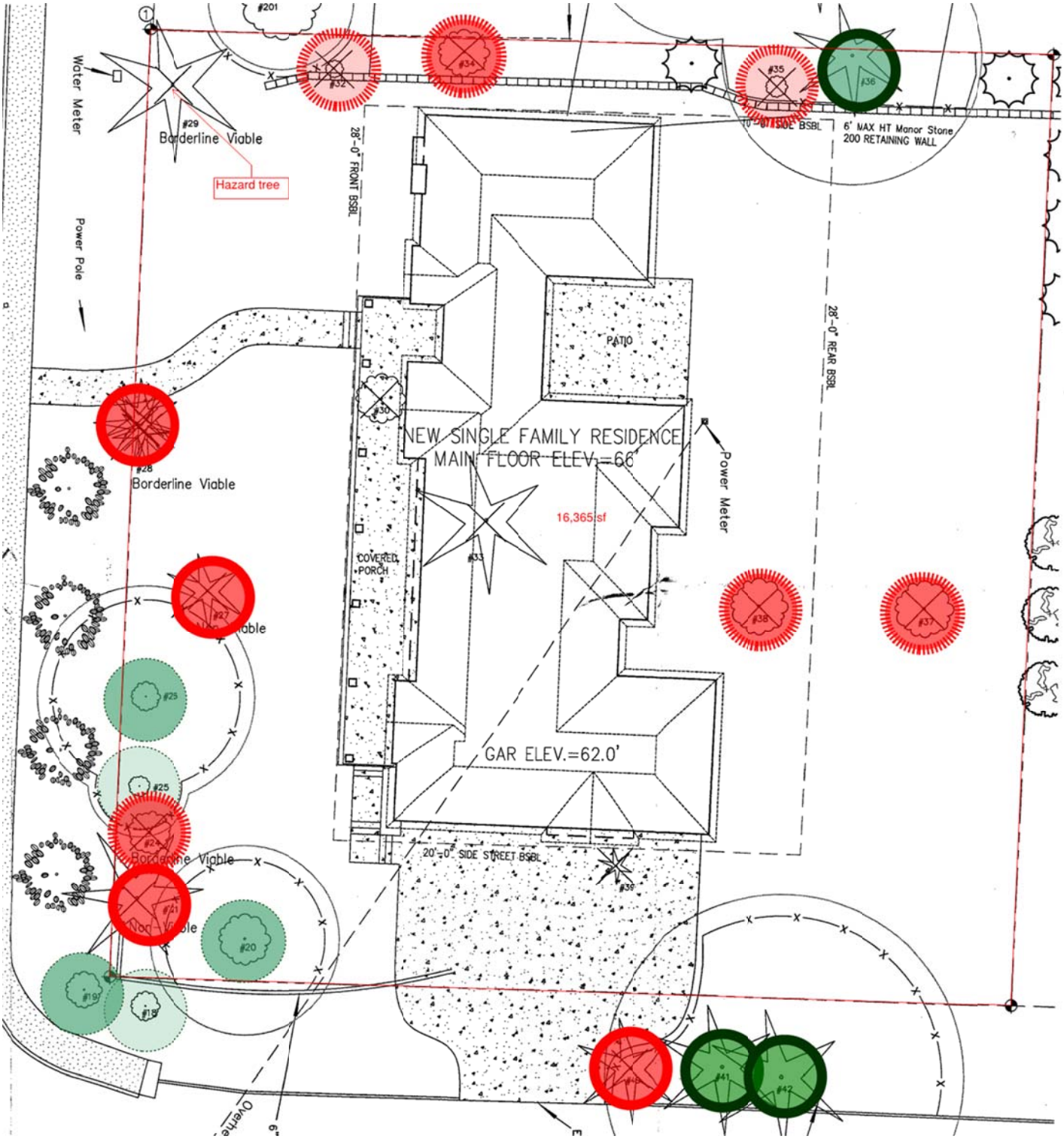

Figure 1 – site plan showing trees to be removed in red and retained in green; dashed edge indicates deciduous, solid edge indicates coniferous, darker shading indicates greater than 10-inches DBH and lighter shading indicates less than 10-inches DBH.

Existing code requirements: The current code requires 126 inches of mitigation for the removal of five significant, non-hazardous trees. This is approximately 42 three inch caliper trees.

Proposed code requirements: The proposed code requirement would not require any additional trees to be replanted due to the required 7 tree units for the site being met by the 7.5 tree units remaining.

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Tree Performance Worksheet

10-inch DBH Standard

Address: 801 NE 80th Ave | **File No.**

☒ New ☐ Revision

Instructions: *Use this worksheet to determine compliance with the tree performance standards in MMC 20.52.130 and to calculate supplemental trees. Attach additional worksheets if necessary.*

STEP 1: Inventory existing tree units — Conduct an inventory of all significant trees on the property and include significant trees in the adjoining city right-of-way (if applicable).

No.	Tree	DBH	No.	Tree	DBH
19	Apple	12	28	Pine	30
20	Cherry	11	29	Pine	24
21	Hemlock	23	33	Douglas fir	22
24	Cherry	11	36	Hemlock	20
26	Elder	13	37	Cherry	15
27	Hemlock	15	38	Apple	16

STEP 2: Calculate Existing Tree Units — From Table 20.52.130(C): add together the number of significant trees in each range below and multiply by the corresponding value to produce Existing Tree Units.

A.	Total number of trees at least 6 inches, but less than 10 inches DBH	n/a	X 0.75 =	0	D. TOTAL EXISTING TREE UNITS (A + B + C)
B.	Total number of trees 10 inches DBH and larger	15	X 1.00 =	15	15
C.	Total number of conifer trees 50 inches DBH and larger	0	X 1.25 =	0	

STEP 3: Inventory removed trees — List the significant trees that are proposed for removal. This information will be used in Step 4 and 7 (if applicable).

No.	Tree	DBH	No.	Tree	DBH
21	Hemlock	23	29	Pine	24
24	Cherry	11	33	Douglas fir	22
27	Hemlock	15	37	Cherry	15
28	Pine	30	38	Apple	16

STEP 4: Calculate Net Existing Tree Units — To calculate Net Existing Tree Units, add together the number of significant trees in each range below that are proposed for removal and multiply by the corresponding value. Then follow H and I.

E.	Total number of trees removed at least 6 inches, but less than 10 inches DBH	n/a	X 0.75 =	0	H. TOTAL TREE UNITS TO BE REMOVED (E + F + G)	9
F.	Total number of trees removed 10 inches DBH and larger	9	X 1.00 =	9		
G.	Total number of conifer trees 50 inches DBH and larger	0	X 1.25 =	0	I. Net Existing Tree Units (subtract H from D)	6

STEP 5: Calculate Required Tree Units — To calculate Required Tree Units, perform the calculations in J through M.

Lot Area (sq. ft.)		Divide J by 1,000		Tree Density Ratio (check one)		M. REQUIRED TREE UNITS (Multiply K x L)	(round up) 7
J.	16,365	K.	16.3	L.	☒ 0.40 (residential) ☐ ____Table 20.52.130.B		

STEP 6: Determine if Supplemental Trees are required — Subtract the Tree Units in M from the Tree Units in I.

- If the difference is zero or a positive number - stop. No supplemental trees are required.
- If the difference is a negative number then go to Step 7.

N. -1

See Page 2 for Step 7 and for additional inventory tables

Tree Performance Worksheet

STEP 7:	Calculate Supplemental Trees	• Each replacement of a 24-inch DBH and larger tree requires two supplemental trees with each supplemental tree having a Tree Unit value = 0.5. • Each replacement of a less than 24-inch DBH tree & each tree that fills a gap requires one supplemental tree with each supplemental tree having a Tree Unit value = 1.0 • The total Tree Units of the supplemental trees must equal or be greater than the absolute value of N. • Tree Units are assigned first to those supplement trees replacing removed trees and in order of largest to smallest tree.

For replacement of 24-inch DBH and larger tree					For replacement of less than 24-inch DBH/ Fill Existing Gap trees				
No.	Check if Applicable	# of Supp. Trees	Proposed # Supp. Trees	Tree Unit	No.	Check if Applicable	# of Supp. Trees	Proposed # Supp. Trees	Tree Unit
28	☒	2	2	1		☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
	☐	2				☐	1		
O.		Total	2	1	P.		Total		

- *Q is the number of supplemental trees required to be planted.*
- *The Tree Units in R must equal or be greater than the Tree Units in N.*

Total from O	2	1
Grand Totals	Q. 2	R. 1

STEP 1: Inventory existing tree units

No.	Tree	DBH	No.	Tree	DBH
40	Cedar	18			
41	Cedar	23			
42	Douglas fir	24			

STEP 3: Inventory removed trees

No.	Tree	DBH	No.	Tree	DBH
40	Cedar	18			

Attach additional sheets if needed.

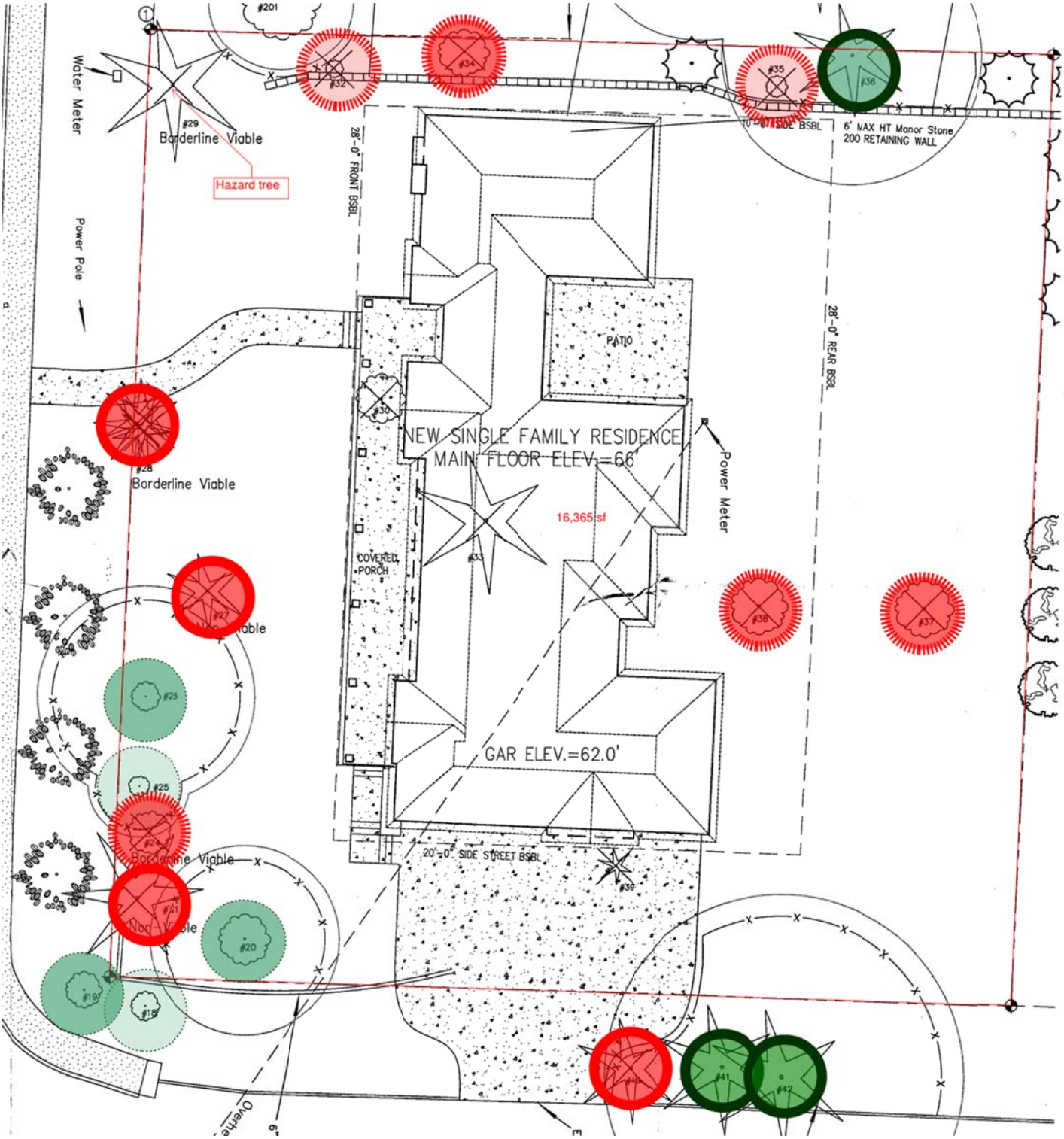

Figure 1 – site plan showing trees to be removed in red and retained in green; dashed edge indicates deciduous, solid edge indicates coniferous, darker shading indicates greater than 10-inches DBH and lighter shading indicates less than 10-inches DBH.

Existing code requirements: The current code requires 126 inches of mitigation for the removal of five significant, non-hazardous trees. This is approximately 42 three inch caliper trees.

Proposed code requirements: The proposed code requirement (10 inch DBH significant tree threshold) would require 2 additional trees to be planted. The retention of two trees less than 10 inches DBH would qualify for the 2 required supplemental plantings but the plans also identify the planting of 6 trees which would meet the supplemental tree requirements of MMC 20.52.130.