



CITY OF MEDINA

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Tree Performance Standard Example 3

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. Using the 6-inch DBH standard, two supplemental trees are required to be planted. Using a 10-inch DBH standard, five supplemental trees are required. If trees less than the standard remain, they may be counted as supplemental trees.



Tree Performance Worksheet

6-inch DBH Standard

Address: 7635 NE 12th Street **File No. example**

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.

New
 Revision

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	Pine	6	7	Apple	18
2	Big leaf maple	13.9	8	Apple	20
3	Big leaf maple	7.2	9	Cherry	12
4	Big leaf maple	10.8	10	Vine maple	8
5	Silver maple	60	11	Big leaf maple	48
6	Pine	8	12	Spruce	28

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	4	X 0.75 =	3	D. TOTAL EXISTING TREE UNITS (A + B + C) 13
B.	Total number of trees 10 inches DBH and larger	10	X 1.00 =	10	
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
9	Ash	12	13	Spruce	18
10	Magnolia	8	14	Japanese maple	16
11	Big leaf maple	48			
12	Spruce	28			

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	1	X 0.75 =	0.75	H. TOTAL TREE UNITS TO BE REMOVED (E + F + G) 5.75
F.	Total number of trees removed 10 inches DBH and larger	5	X 1.00 =	5	
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) 7.25

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) 8
J.	19,813	K.	19.8	L.	

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.
-0.75

See Page 2 for Step 7 and for additional inventory tables

Tree Performance Worksheet

STEP 7:	Calculate Supplemental Trees	<ul style="list-style-type: none"> 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.
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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	
11	<input checked="" type="checkbox"/>	2	2	1		<input type="checkbox"/>	1			
	<input type="checkbox"/>	2				<input type="checkbox"/>	1			
	<input type="checkbox"/>	2				<input type="checkbox"/>	1			
	<input type="checkbox"/>	2				<input type="checkbox"/>	1			
	<input type="checkbox"/>	2				<input type="checkbox"/>	1			
	<input type="checkbox"/>	2				<input type="checkbox"/>	1			
	<input type="checkbox"/>	2				<input type="checkbox"/>	1			
	<input type="checkbox"/>	2				<input type="checkbox"/>	1			
	<input type="checkbox"/>	2				<input type="checkbox"/>	1			
	<input type="checkbox"/>	2				<input type="checkbox"/>	1			
	<input type="checkbox"/>	2				<input type="checkbox"/>	1			
O.		Total		1	P.		Total			
<ul style="list-style-type: none"> <i>Q is the number of supplemental trees required to be planted.</i> <i>The Tree Units in R must equal or be greater than the Tree Units in N.</i> 								Total from O	2	1
								Grand Totals	Q. 2	R. 1

STEP 1: Inventory existing tree units					
No.	Tree	DBH	No.	Tree	DBH
13	Spruce	18	21		
14	Japanese maple	16	22		
15			23		
16			24		
17			25		
18			26		
19			27		
20			28		

STEP 3: Inventory removed trees					
No.	Tree	DBH	No.	Tree	DBH

Attach additional sheets if needed.

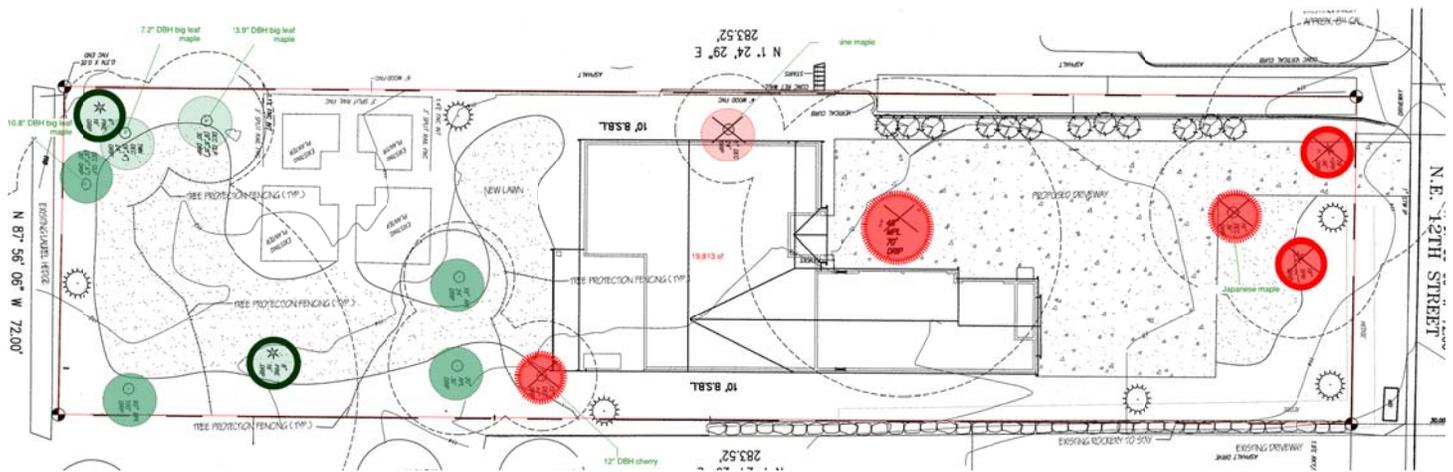


Figure 1 – site plan showing trees to be removed in red and retained in green; dashed edge indicates deciduous, solid edge indicates coniferous, darker shading indicates greater than 10-inches DBH and lighter shading indicates less than 10-inches DBH.

Existing code requirements: 54 inches of mitigation, 18 replacement trees, were required to mitigate for the removal of the 28" Spruce (tree #12) and the 18" Spruce (tree #13). The removal of the 12" ash, 8" magnolia, 48" big leaf maple and 16" Japanese maple did not require mitigation due to their being non-significant species.

Proposed code requirements: The site requires 8 tree units. The development reduced the tree units to 0.75 below the required 8 tree units for the lot. The largest tree removed was larger than 24" DBH and therefore two replacement trees, worth 0.5 tree credits each, are required for replanting.



Tree Performance Worksheet

10-inch DBH Standard

Address: 7635 NE 12th Street	File No. example	<input checked="" type="checkbox"/> New
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.		<input type="checkbox"/> Revision

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	Pine	6	7	Apple	18
2	Big leaf maple	13.9	8	Apple	20
3	Big leaf maple	7.2	9	Cherry	12
4	Big leaf maple	10.8	10	Vine maple	8
5	Silver maple	60	11	Big leaf maple	48
6	Pine	8	12	Spruce	28

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) 10
B.	Total number of trees 10 inches DBH and larger	10	X 1.00 =	10	
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
9	Ash	12	14	Japanese maple	16
11	Big leaf maple	48			
12	Spruce	28			
13	Spruce	18			

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) 5
F.	Total number of trees removed 10 inches DBH and larger	5	X 1.00 =	5	
G.	Total number of conifer trees 50 inches DBH and larger	0	X 1.25 =	0	

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) 8
J.	19,813	K.	19.8	L.	<input checked="" type="checkbox"/> 0.40 (residential) <input type="checkbox"/> ____ 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.	-3
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See Page 2 for Step 7 and for additional inventory tables

Tree Performance Worksheet

STEP 7:	Calculate Supplemental Trees	<ul style="list-style-type: none"> 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.
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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
11	<input checked="" type="checkbox"/>	2	2	1		<input checked="" type="checkbox"/>	1	1	1
12	<input checked="" type="checkbox"/>	2	2	1		<input type="checkbox"/>	1		
	<input type="checkbox"/>	2				<input type="checkbox"/>	1		
	<input type="checkbox"/>	2				<input type="checkbox"/>	1		
	<input type="checkbox"/>	2				<input type="checkbox"/>	1		
	<input type="checkbox"/>	2				<input type="checkbox"/>	1		
	<input type="checkbox"/>	2				<input type="checkbox"/>	1		
	<input type="checkbox"/>	2				<input type="checkbox"/>	1		
	<input type="checkbox"/>	2				<input type="checkbox"/>	1		
	<input type="checkbox"/>	2				<input type="checkbox"/>	1		
	<input type="checkbox"/>	2				<input type="checkbox"/>	1		
O.		Total	4	2	P.		Total	1	1
							Total from O	4	2
							Grand Totals	Q. 5	R. 3

- 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	Spruce	18	21		
14	Japanese maple	16	22		
15			23		
16			24		
17			25		
18			26		
19			27		
20			28		

STEP 3: Inventory removed trees					
No.	Tree	DBH	No.	Tree	DBH

Attach additional sheets if needed.

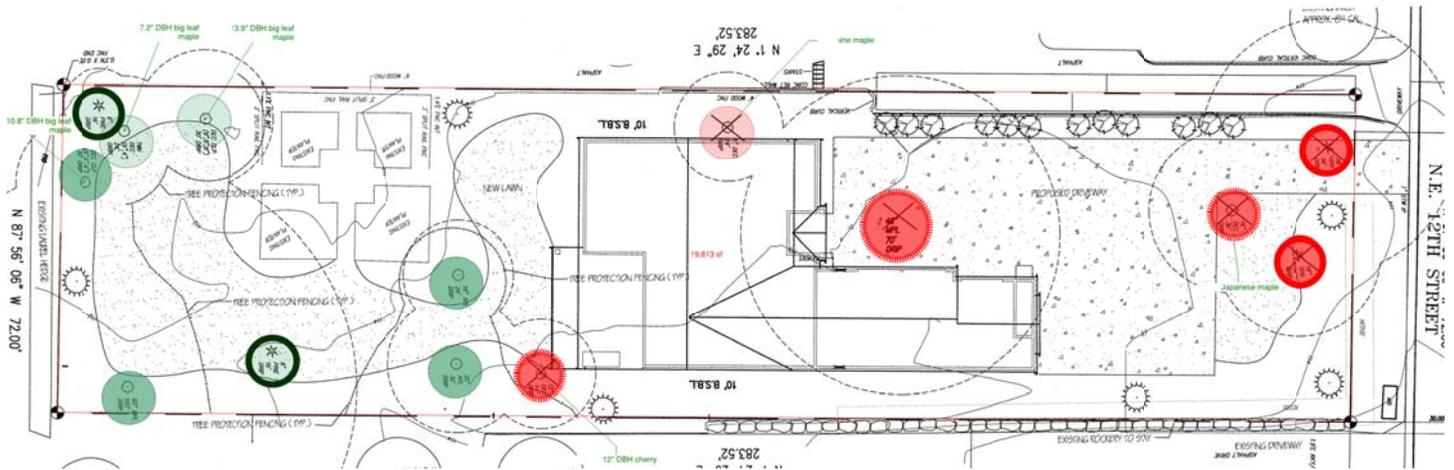


Figure 1 – site plan showing trees to be removed in red and retained in green; dashed edge indicates deciduous, solid edge indicates coniferous, darker shading indicates greater than 10-inches DBH and lighter shading indicates less than 10-inches DBH.

Existing code requirements: 54 inches of mitigation, 18 replacement trees, were required to mitigate for the removal of the 28" Spruce (tree #12) and the 18" Spruce (tree #13). The removal of the 12" ash, 8" magnolia, 48" big leaf maple and 16" Japanese maple did not require mitigation due to their being non-significant species.

Proposed code requirements: The site requires 8 tree units. The development reduced the tree units to 3 below the required 8 tree units for the lot. Two trees greater than 24" DBH were removed which require that the initial four supplemental trees obtain 0.5 tree credits each. Fourteen additional trees are proposed to be planted on the site to total 16 supplemental tree units for the site.