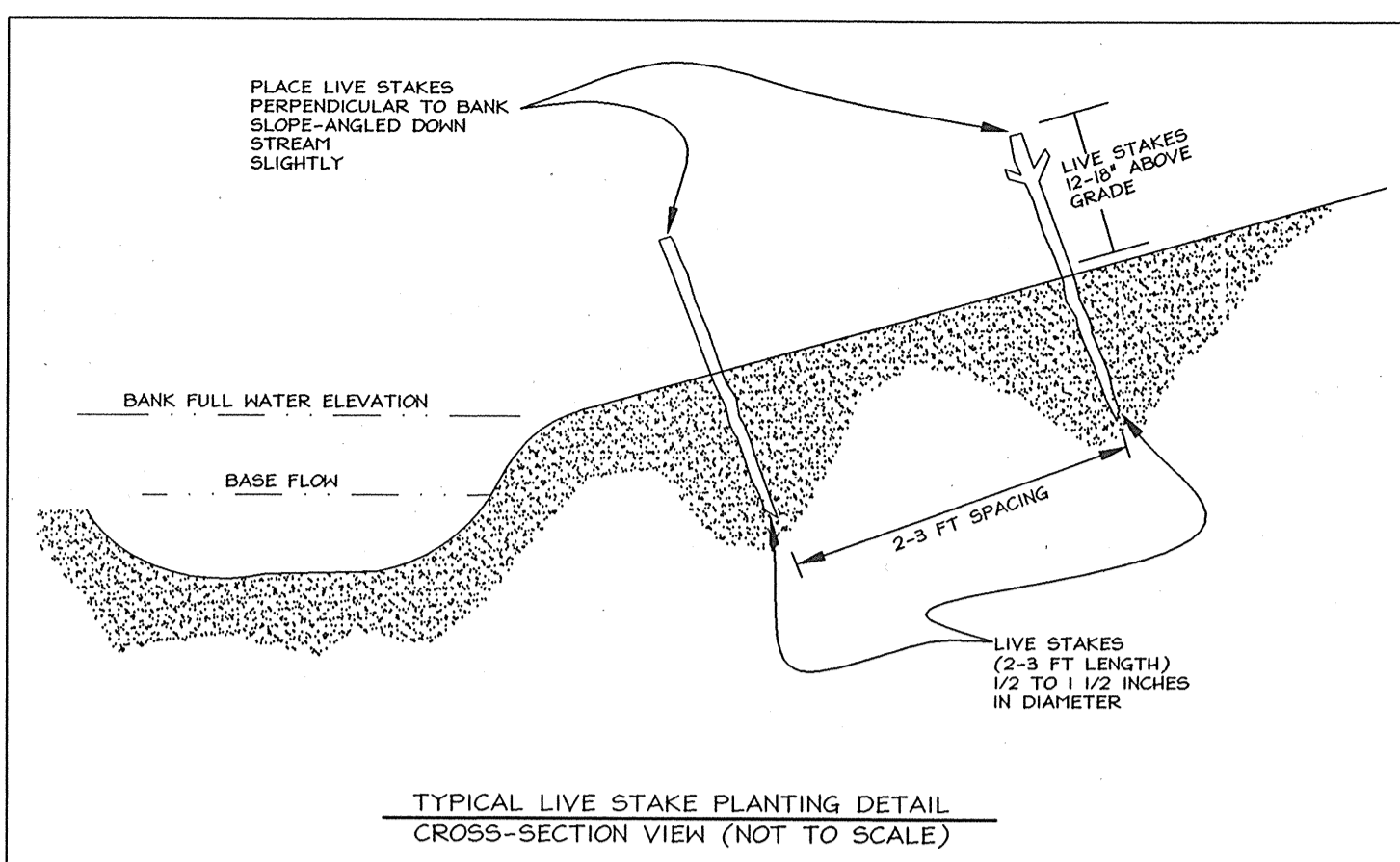




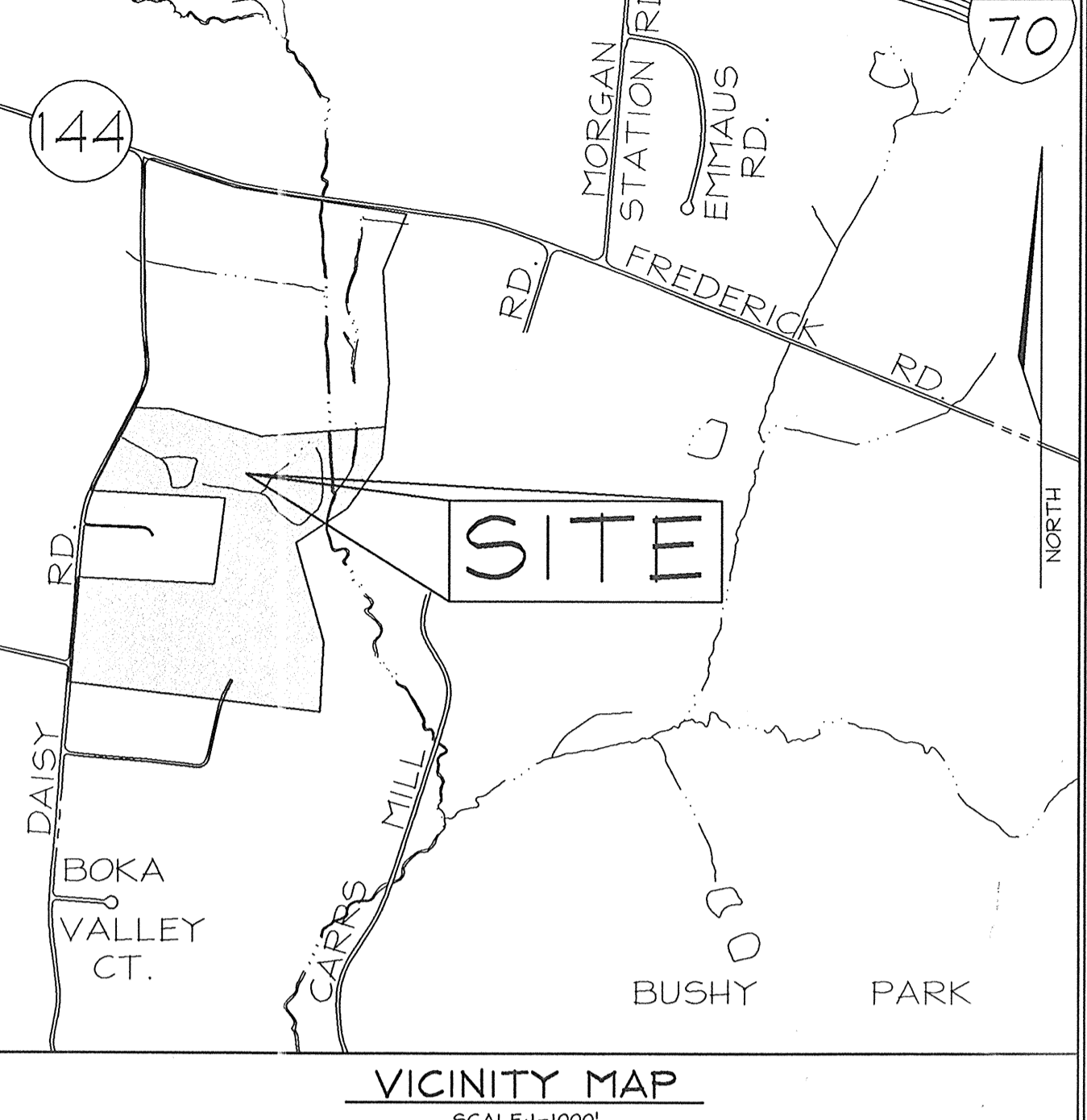
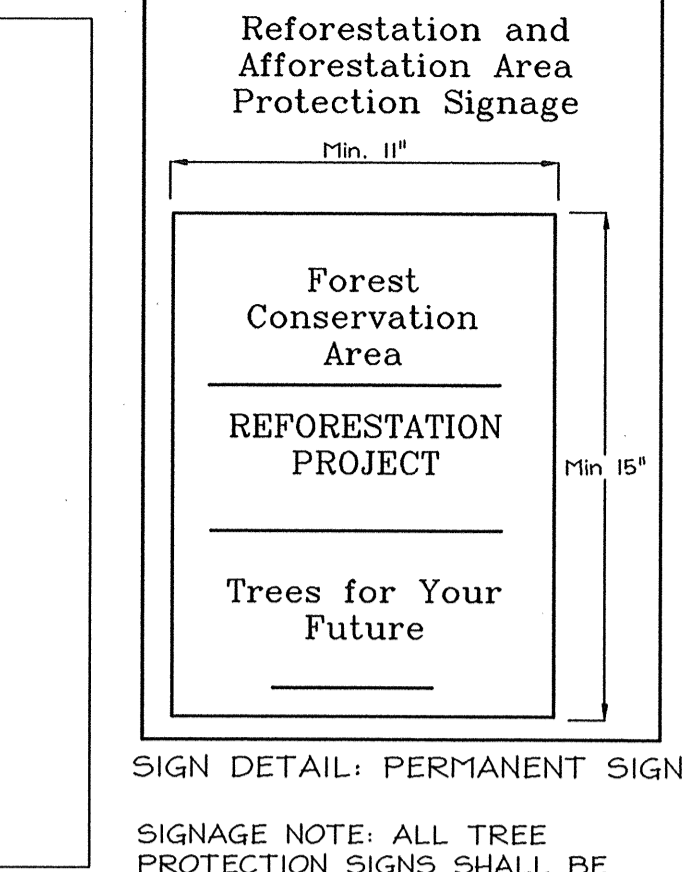
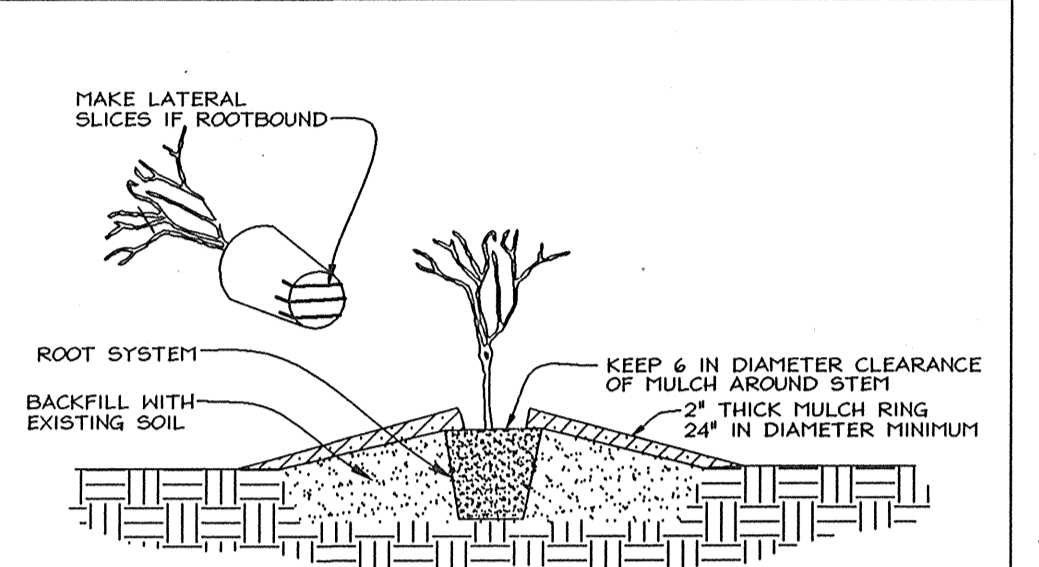
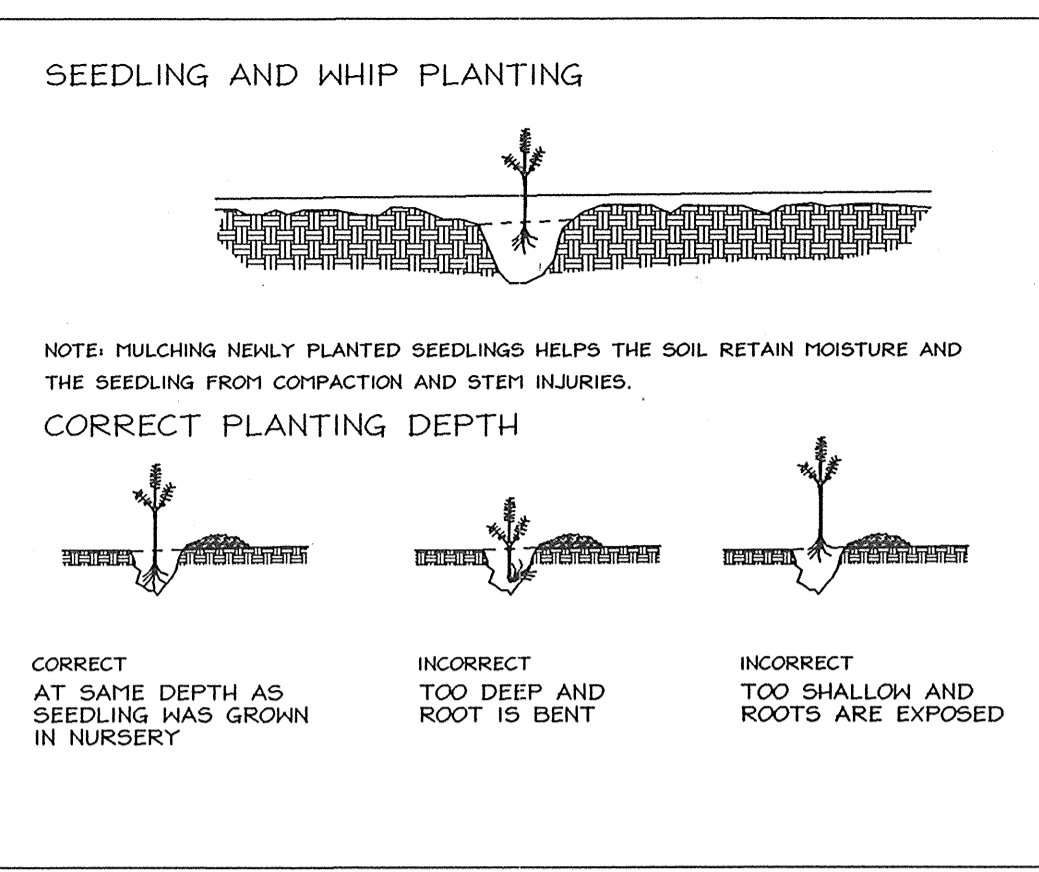


FOREST STAND ANALYSIS TABLE											
KEY	TYPE OF COMMUNITY	AREA Acres	SOIL INFORMATION				EXISTING VEGETATION (Type and approx. %)	STAND CHARACTERISTICS			FOREST AREA IN SENSITIVE ENVIRONMENTS
			SOIL TYPE	TYPICAL FOREST COVER	WOODLAND SUITABILITY INDEX	HABITAT VALUE		SIZE AVG. DIAM	AGE	GENERAL CONDITIONS	
F-1	Upland Hardwoods	4.59	MID2 MIB2 GIB2	Mixed upland Hardwood	65-74 65-74 75-84	fair fair good	Black oak 60% White oak 20% Mockernut Hickory 20%	12-18 10-16 6-12	48-72 50-80 36-72	Poor Heavy understory grazing	1.2 Ac. Steep slopes 15-25%
OF-1	Open Field	41.01	Co Ha GnB2	Mixed water Tolerant Hardwoods	75-84 95+ 65-74	good good good	N/A	N/A	N/A	N/A	N/A
C-1	Crop Field	27.16	GnA GIB2 MIC2 MIC3 MIB2 CHB2	Mixed water Tolerant Hardwoods	65-74 75-84 75-84 65-74 65-74 65-74	good good good fair fair fair	N/A	N/A	N/A	N/A	N/A
C-2	Crop Field	32.21	Co CuB GnA	Mixed water Tolerant Hardwoods	75-84 75-84 65-74	good good good	N/A	N/A	N/A	N/A	N/A
L-1	Laun (Farm Stead)	2.86	GIB2	Mixed upland Hardwood	65-74	fair	N/A	N/A	N/A	N/A	N/A
L-2	Laun	1.62	MIB2	Mixed upland Hardwood	65-74	fair	N/A	N/A	N/A	N/A	N/A



**SPECIFICATIONS FOR LIVE STAKING**

- All cuttings shall be freshly cut from live woody plants of the species indicated, such as willow, alder, and shrub dogwood, during the dormant season.
- Basal end of stake should be cut on an angle with the top cut square.
- Prepare cuttings from dormant .5 in. to 2 in. diameter stock cut in 18in. to 3 feet long stakes.
- Keep cuttings moist at all times.
- Install stakes with deadblow hammer, angled downstream, on 3.0 ft. centers.
- Replace live stakes that split or become mushroomed.
- Install stakes with buds pointing upwads.



**Forest Stand Narrative**  
 F-1 This forest stand is 4.59 Ac. in size and contains steep slopes. The canopy is dominated by black oak, Quercus velutina, white oak, Quercus alba, and mockernut hickory, Carya tomentosa. The area is currently grazed and the understory is sparse.  
 L-1: This 2.86 Ac. area surrounds an existing house and various farm out buildings. The area contains laun, and ornamental tree plantings. No environmentally sensitive areas are covered by L-1.  
 L-2: This 1.62 Ac. area surrounds an existing house located on the south west corner of the property. The area contains laun and various ornamental plantings. The area contains no environmentally sensitive areas.  
 C-1: This 27.16 Ac. crop area is currently in active crop land production. There are no environmentally sensitive areas.  
 C-2: This 32.21 Ac. crop area is currently in active crop production. The area contains environmentally sensitive areas including streams and associated buffers, OF-1: This 41.01 Ac. open field area contains grazing pastures and open field. The area contains wetlands, streams and associated buffers.

**Easement 2: PLANTING AREA: 1.12 Ac.**

Qty	Botanical Name	Common Name	Size	Credit/Plant	Total Credit
1	Acer rubrum	Red Maple	2" cal.+	435.6	435.6
30	Acer rubrum	Red Maple	1" cal.	217.8	6534
17	Acer rubrum	Red Maple	2-3' ht.	125.0	2125
10	Amalanchier canadensis	Serviceberry	1" cal.	217.8	2178
1	Amalanchier canadensis	Serviceberry	2-3' ht.	125.0	125
18	Chionanthus virginicus	White Fringetree	1" cal.	217.8	3920.4
19	Cornus florida	Flowering Dogwood	1" cal.	217.8	4138.2
15	Cercis canadensis	Redbud	1" cal.	217.8	3267
2	Fagus grandifolia	American Beech	1" cal.	217.8	435.6
11	Juniperus virginiana	Eastern Redcedar	2-3' ht.	125.0	1375
3	Liriodendron tulipifera	Tulip Poplar	2" cal.+	435.6	1306.8
15	Liriodendron tulipifera	Tulip Poplar	2-3' ht.	125.0	1875
7	Magnolia virginiana	Sweetbay Magnolia	1" cal.	217.8	1524.6
17	Nyssa sylvatica	Black Gum	1" cal.	217.8	3702.6
1	Nyssa sylvatica	Black Gum	2-3' ht.	125.0	125
2	Nyssa sylvatica	Black Gum	2" cal.+	435.6	871.2
2	Platanus occidentalis	Sycamore	2" cal.+	435.6	871.2
8	Platanus occidentalis	Sycamore	1" cal.	217.8	1742.4
23	Quercus alba	White Oak	2-3' ht.	125.0	2875
20	Quercus bicolor	Swamp White Oak	1" cal.	217.8	4356
10	Quercus coccinea	Scarlet Oak	1" cal.	217.8	2178
10	Quercus palustris	Pin Oak	1" cal.	217.8	2178
13	Viburnum dentatum	Arrowwood	2-3' ht.	62	806
<b>255 Total Plantings</b>				<b>48,945.6 s.f. = 1.12 Ac.</b>	

**Planting Area Description**  
 The three proposed planting area totaling 1.89 Ac. are proposed entirely within stream and wetland buffer areas. The current land use is pasture land, making it an ideal area to plant and provide a forested stream buffer.

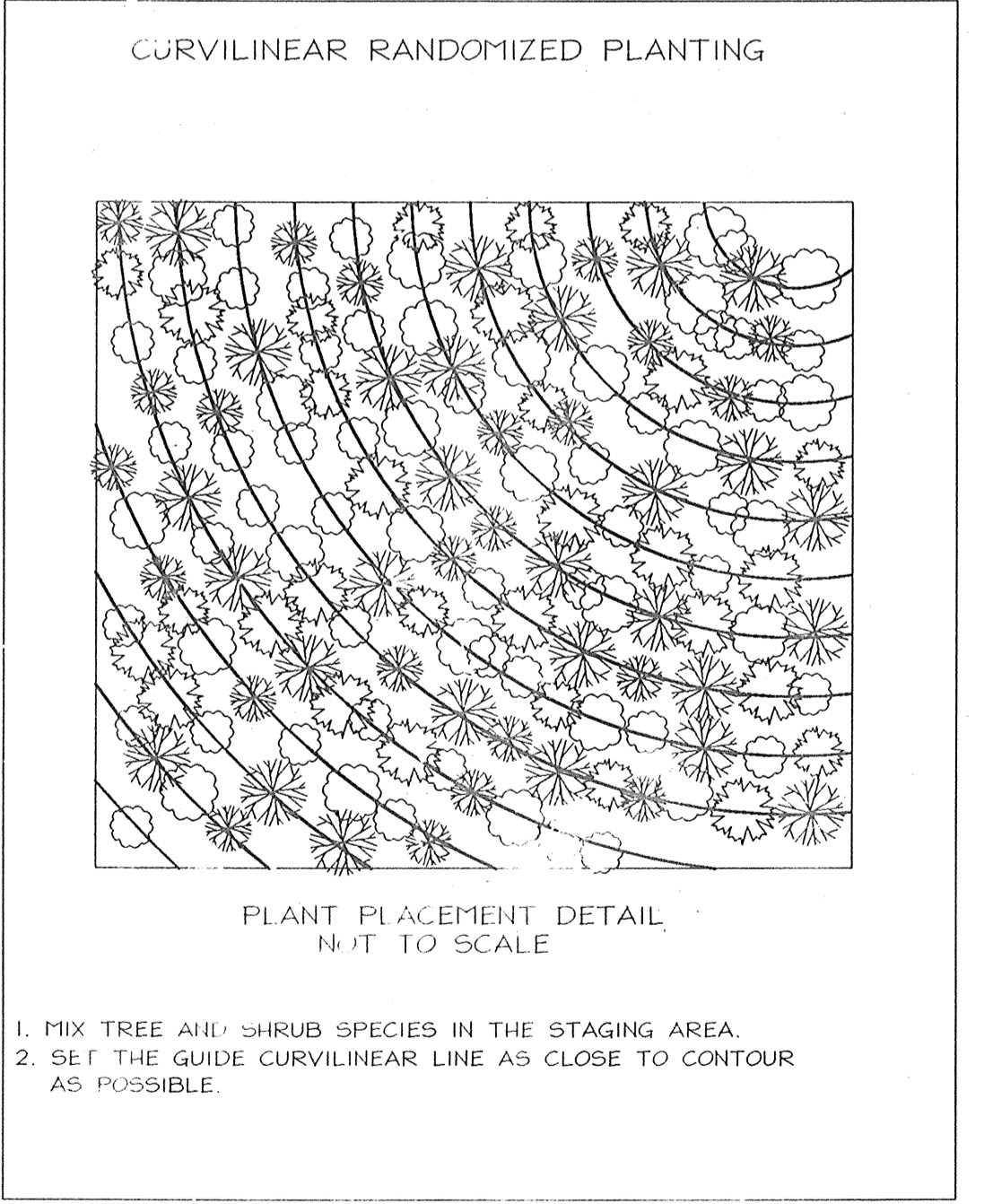
Planting will utilize a variety of sizes and species as shown in the proposed planting schedule. The larger stock will be placed farther upland. All container grown stock will utilize tree shelters. The entire area will be stabilized with the described seed mix cover crop. The planting as specified will more than satisfy the required acreage.

**Plant Selection and Density Spacing Requirements.**  
**Planting Material Size and Density Planting:**  
 Planting size and density shall be varied with a combination of planting stock. Planting quantity and spacing are based on square footage credit, which varies by material size. A total of 48,960 sq. ft. of planting credit must be fulfilled for each acre planted. This credit can be fulfilled with any combination of material size in accordance with the following chart.

Material Size	Spacing	TPA	Sq. Ft. Credit per Plant	Comments
2" caliper trees	20' x 20'	100	435.6	B & B
1" caliper trees	15' x 15'	200	217.8	B & B
seedlings or whips	11' x 11'	350	125	Container 1-3 gal w/tree shelters
seedlings or shrubs	8' x 8'	700	62	Bare root

**FOREST CONSERVATION EASEMENT TABLE**

EASEMENT	TYPE	AREA (ACRES)
2	Reforestation	1.12
3	Reforestation	0.45
4	Reforestation	0.32
<b>TOTAL</b>		<b>1.89</b>



**Easement 3: PLANTING AREA: 0.45 Ac.**

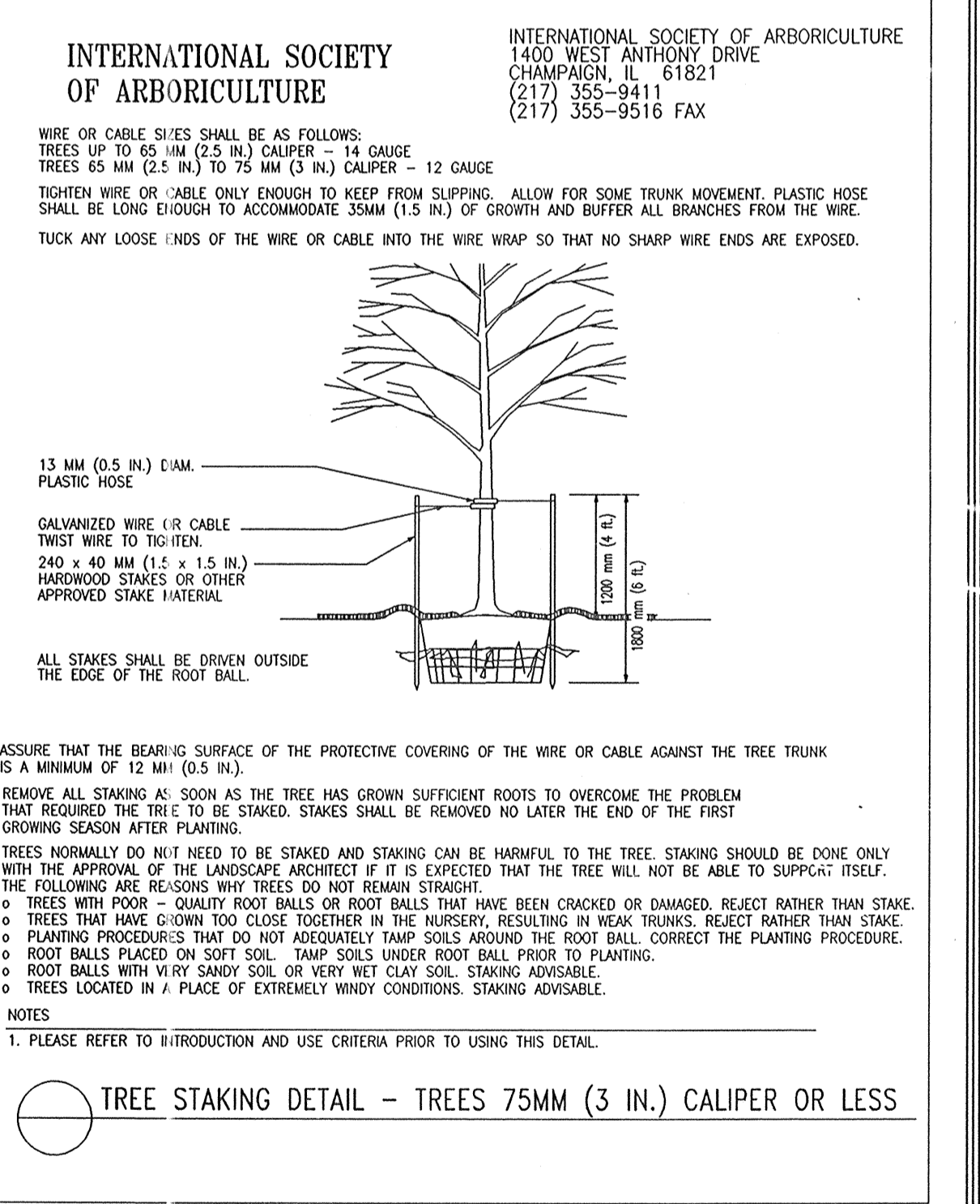
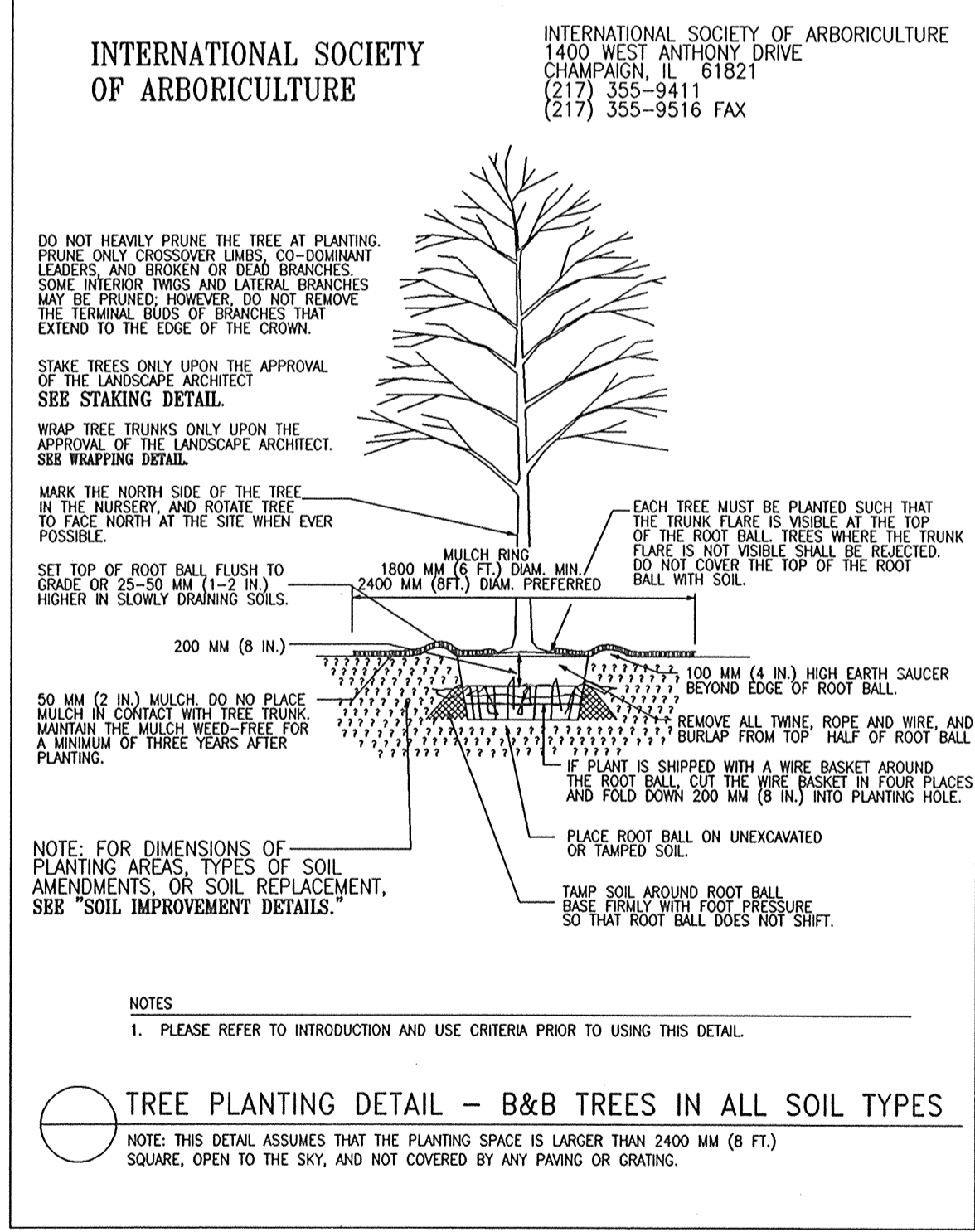
Qty	Botanical Name	Common Name	Size	Credit/Plant	Total Credit
11	Acer rubrum	Red Maple	1" cal.	217.8	2395.8
5	Amalanchier canadensis	Serviceberry	1" cal.	217.8	1089
5	Carpinus caroliniana	Hornbeam	1" cal.	217.8	1089
5	Cercis canadensis	Redbud	1" cal.	217.8	1089
10	Nyssa sylvatica	Black Gum	1" cal.	217.8	2178
12	Liriodendron tulipifera	Tulip Poplar	2" cal.+	435.6	5227.2
5	Magnolia virginiana	Sweetbay Magnolia	1" cal.	217.8	1089
5	Quercus bicolor	Swamp White Oak	1" cal.	217.8	1089
10	Quercus coccinea	Scarlet Oak	1" cal.	217.8	2178
10	Quercus palustris	Pin Oak	1" cal.	217.8	2178
<b>78 Total Plantings</b>				<b>19,602.0 s.f. = 0.45 Ac.</b>	

**Easement 4: PLANTING AREA: 0.32 Ac.**

Qty	Botanical Name	Common Name	Size	Credit/Plant	Total Credit
10	Acer rubrum	Red Maple	1" cal.	217.8	2178
4	Amalanchier canadensis	Serviceberry	1" cal.	217.8	871.2
4	Betula nigra	River Birch	1" cal.	217.8	871.2
4	Carpinus caroliniana	Hornbeam	1" cal.	217.8	871.2
4	Cercis canadensis	Redbud	1" cal.	217.8	871.2
<b>64 Total Plantings</b>				<b>13,939.2 s.f. = 0.32 Ac.</b>	

**Native Seed Mix**

Percentage	Botanical Name	Common Name
25%	Agrostis alba	Redtop
25%	Carex vulpinoides	Fox Sedge
25%	Alopecurus pratensis	Meadow Fox Tail
20%	Andropogon scoparius	Little Bluestem
5%	Chrysanthemum leucan themum	Ox Eye Daisy

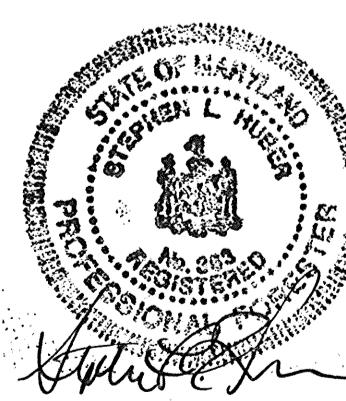


**Reforestation Area Monitoring Notes**

- Monthly visits during the first growing season are to assess the success of the plantings and to determine if supplemental watering, pest control, invasive plant management, mowing or other actions are necessary. Early spring visits will document winter kill and autumn visits will document summer kill.
- The minimum survival rate shall be 75% of the total number of trees planted per acre at the end of the two year maintenance period. Wild tree seedlings from natural regeneration on the planting site may be counted up to 50% toward the total survival number if they are healthy native species at least 12 inches tall.
- Survival will be determined by a stratified random sample of the plantings. The species composition of the sample population should be proportionate to the amount of each species in the entire planting to be sampled.
- Effective monitoring will assess plant survivability during the first growing season and make recommendations for reinforcement planting if required at that time.

**Forest Tree Protection and Management Notes**

- Any significant changes made to the Forest Conservation Plan shall be made with the prior approval if the Howard County Dept. Of Planning and Zoning.
- Forest protection and management to be in accordance with a forest management plan. The plan shall be prepared by a MD. licensed forester to facilitate the landowners management objectives, such as wildlife enhancement, water quality, aesthetics, forest products, etc.
- Future forest harvests may be conducted under a Howard County approved forest harvest plan, prepared by a MD. licensed forester.



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 E-mail: FSHAssociates@gs.com

**OWNER**  
 Talley Family LLP  
 1525 Daisy Road  
 Woodbine, MD 21797  
 410-442-2300

**OFFSITE FOREST MITIGATION PLAN**  
 for NOLAN PROPERTY  
 LOTS 1-7 on Talley Property  
 Parcel 1, RE-03-02 DSI, P.N. 15815,  
 F-03-28-S, P.N. 16071, TM B, TM PARCEL 481  
 TAX MAP 8 GRID 13 PARCEL 481  
 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN BY: RAB  
 DRAWN BY: RAB  
 CHECKED BY: SLH  
 SCALE: As Shown  
 DATE: Nov. 03, 2004  
 W.O. No.: 3082  
 SHEET No.: 2 OF 2

**EXPLORATION RESEARCH, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 LANDSCAPE ARCHITECTS  
 6918 FORREST STREET  
 BELTSVILLE CITY, MARYLAND 21043  
 TEL: (410) 760-1100 FAX: (410) 760-7880  
 EMAIL: EXPLORATION@R2S.COM

APPROVED: **HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING**

*Chad DeWitt* 11/19/04  
 CHIEF, DEVELOPMENT ENGINEER, DIVISION MGR DATE

*Cinda Hamilton* 11/23/04  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE