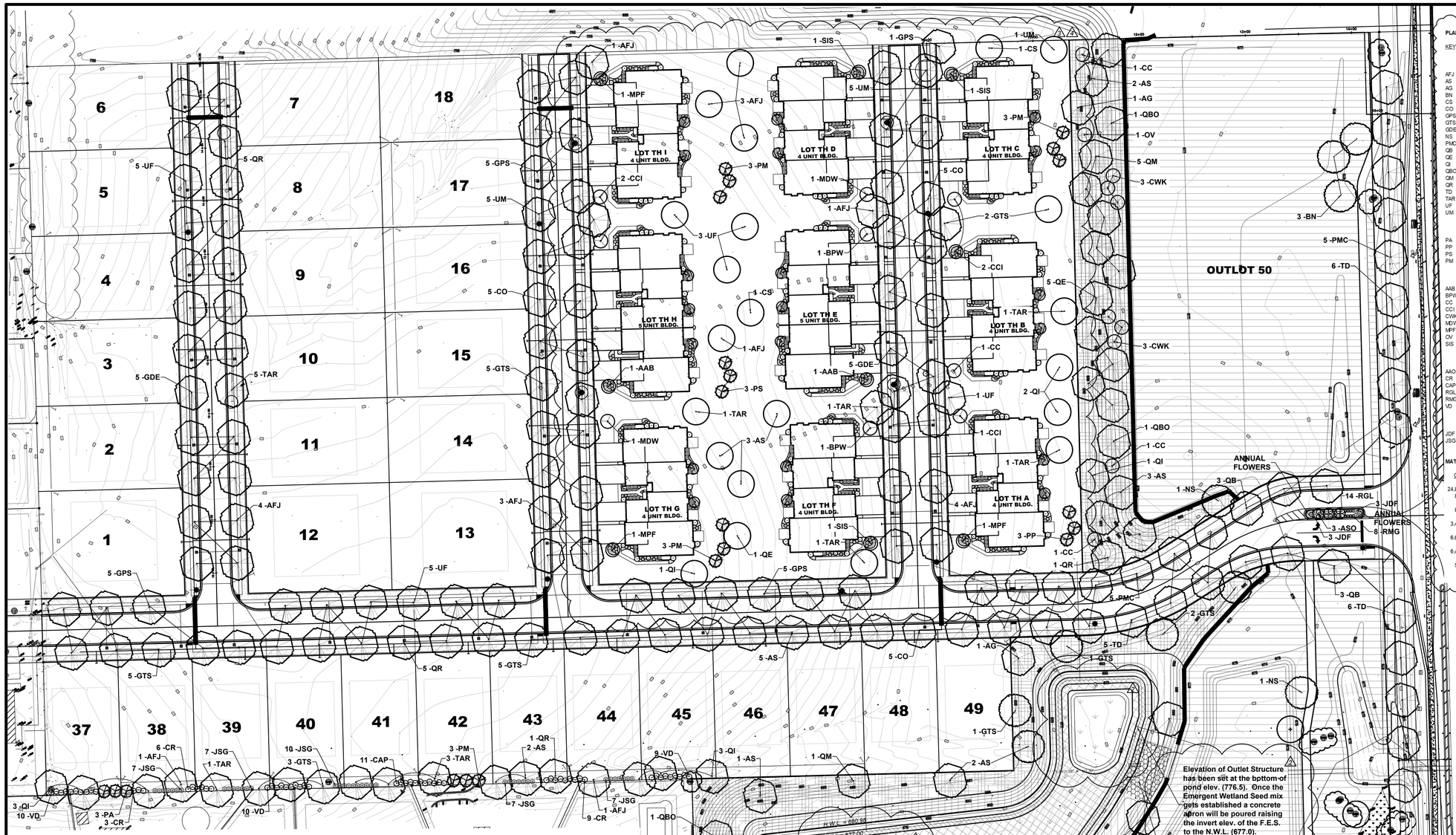

PLANT LIST

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE/ TYPE
		DECIDUOUS SHADE TREES		
AFJ	19	Acer f.'Jeffersred'	Autumn Blaze Freeman Maple	2.5" BB
AS	18	Acer saccharum	Sugar Maple	2.5" BB
AG	2	Aesculus glabra	Ohio Buckeye	2.5" BB
BN	6	Betula nigra	River Birch	12' BB
CS	2	Catalpa speciosa	Northern Catalpa	2.5" BB
CO	15	Celtis occidentalis	Hackberry	2.5" BB
GPS	11	Ginkgo b. 'Princeton Sentry'	Princeton Sentry Ginkgo	2.5" BB
GTS	24	Gleditsia t.i.'Skyline'	Skyline Honeylocust	2.5" BB
GDE	10	Gymnocladus d. 'Espresso'	Espresso Kentucky Coffeetree	2.5" BB
NS	2	Nyssa sylvatica	Black Gum	2.5" BB
PMC	15	Platanus x a. 'Morton Circle'	Exclamation London Planetree	2.5" BB
QB	14	Quercus bicolor	Swamp White Oak	2.5" BB
QE	9	Quercus ellipsoidalis	Northern Pin Oak	2.5" BB
QI	10	Quercus imbricaria	Shingle Oak	2.5" BB
QBO	3	Quercus macrocrapa	Burr Oak	2.5" BB
QM	7	Quercus muehlenbergii	Chinkapin Oak	2.5" BB
QR	12	Quercus rubra	Red Oak	2.5" BB
TD	17	Taxodium distichum	Bald Cypress	2.5" BB
TAR	14	Tilia a.'Redmond'	Redmond Linden	2.5" BB
UF	14	Ulmus 'Frontier'	Frontier Elm	2.5" BB
UM	11	Ulmus 'Morton'	Accolade Elm	2.5" BB
		EVERGREEN TREES		
PA	3	Picea abies	Norway Spruce	6' BB
PP	3	Picea pungens	Colorado Spruce	6' BB
PS	3	Pinus strobus	White Pine	6' BB
PM	12	Pseudotsuga menzesii	Douglas Fir	6' BB
		DECIDUOUS ORNAMENTAL TREES		
AAB	2	Amelanchier g. 'Autumn Brilliance'	Autumn Brilliance Serviceberry	6' BBcl.
BPW	2	Betula p. 'Whitespire'	Whitespire Grey Birch	6' BBcl.
CC	4	Carpinus caroliniana	American Hornbeam	2" BB
CCI	5	Crataegus c. inermis	Thornless Cockspur Hawthorn	6' BBcl.
CWK	6	Crataegus v. 'Winter King'	Winter King Hawthorn	6' BBcl.
MDW	2	Malus 'Donald Wyman'	Donald Wyman Crabapple	6' BBcl.
MPF	3	Malus 'Prairie Fire'	Prairie Fire Crabapple	2" BB
OV	1	Ostrya virginiana	American Hophornbeam	6' BBcl.
SIS	3	Syringa r. 'Ivory Silk'	Ivory Silk Tree Lilac	2" BB
		DECIDUOUS SHRUBS & SHRUB ROSES		
AAO	3	Amelanchier a. 'Obelisk'	Standing Ovation Serviceberry	#5
CR	18	Cornus racemosa	Grey Dogwood	3' BB
CAP	11	Cotoneaster acutifolia	Peking Cotoneaster	3' BB
RGL	14	Rhus a.'Gro-Low'	Gro-Low Sumac	#5
RMG	8	Rosa 'BAlgirl'	Easy Elegance My Girl	#3
VD	29	Viburnum dentatum	Arrowwood Viburnum	3' BB
		EVERGREEN SHRUBS		
JDF	6	Juniperus c.'Daub's Frosted'	Daub's Frosted Juniper	#5
JSG	34	Juniperus c. 'Sea Green'	Sea Green Juniper	24"/#5

MATERIAL & LABOR LIST:

QTY	ITEM	DESCRIPTION
24,835 SY	Native Seed w/ Straw Mulch	Wet-Mesic Prairie Seed Mix
871 SY	Native Seed w/ Blanket	Wet-Mesic Prairie Seed Mix w/ AEC Premier Straw Blanket (or equal)
843 SY	Native Seed w/ Blanket	Wetland Edge Seed Mix w/ AEC Premier Straw/Coconut Blanket (or equal)
3,408 SY	Native Seed w/ Blanket	Economy Prairie Seed Mix w/ AEC Premier Straw Blanket (or equal)
6,643 SY	Native Seed w/ Blanket	Emergent Wetland Seed Mix w/ AEC Premier Straw Blanket (or equal)
6,498 SY	Native Seed w/ Blanket	No-Mow Fescue Seed Mix AEC Premier Straw Blanket (or equal)
594 SY	Native Seed w/ Blanket	Swale Seed Mix w/ AEC Premier Straw/Coconut Blanket (or equal)
60 CY	Mulch	Shredded Hardwood Bark

PLANT CALCULATIONS

TYPE 1 BUFFER
LOTS 37 - 45 = 607'
Shade Trees @ 3 per 100' = 18
Evergreen or Ornamental Trees @ 1 per 100' = 6
Shrubs @ 16 per 100' = 96

ARTERIAL LANDSCAPE CORRIDOR
LOTS 31 - 36 = 501'
Shade Trees @ 4 per 100' = 20
Evergreen or Ornamental Trees @ 2 per 100' = 10

STORMWATER MANAGEMENT AREA
PERIMETER @ H.W.L. = 1329'
Shade Trees @ 1 per 100' = 13.3 or 14

INTERIOR LOT TREES (Town Homes)
TOTAL HOMES = 38
Required Trees @ 1 per units = 38

LEGEND

- NO-MOW NATIVE FESCUE SEED MIX w/ STRAW BLANKET
- EMERGENT WETLAND SEED MIX w/ STRAW BLANKET
- WETLAND EDGE SEED MIX w/ STRAW/COCNUT BLANKET
- WET-MESIC PRAIRIE SEED MIX w/ STRAW BLANKET (SLOPES 4:1 or >) STRAW MULCH (SLOPES < than 4:1)
- ECONOMY PRAIRIE SEED MIX w/ STRAW BLANKET
- SWALE SEED MIX w/ STRAW/COCNUT BLANKET
- MITIGATED TREE (12)

NORTH

0' 25' 50' 100'

SCALE: 1"=50'

GENERAL NOTES:

Plant material shall be nursery grown and be either balled and bur-lapped or container grown. Sizes and spreads on plant list represent minimum requirements.

The requirements for measurement, branching and ball size shall conform to the latest addition of ANSI Z60.1, AMERICAN STANDARD OF NURSERY STOCK by the American Nursery & Landscape Association.

Any materials with damaged or crooked/disfigured leaders, bark abrasion, sunscald, insect damage, etc. are not acceptable and will be rejected. Trees with multiple leaders will be rejected unless called for in the plant list as multi-stem or clump (cl.).

If any mistakes, omissions, or discrepancies are found to exist with the work product, the Landscape Architect shall be promptly notified so that they have the opportunity to take any steps necessary to resolve the issue. Failure to promptly notify the Landscape Architect and the Owner of such conditions shall absolve them from any responsibility for the consequences of such failure.

Quantity lists are supplied as a convenience. However, Bidders and the Installing Contractor should verify all quantities. The drawings shall take precedence over the lists. Any discrepancies shall be reported to the Landscape Architect.

Actions taken without the knowledge and consist of the Owner and the Landscape Architect or in contradiction to the Owner and the Landscape Architect's work product or recommendations, shall become the responsibility not of the Owner and the Landscape Architect, but for the parties responsible for the taking of such action.

Civil Engineering or Architectural base information has been provided by others. The location of various site improvements on this set of drawings is only illustrative and should not be relied upon for construction purposes.

Refer to Civil Engineering documents for detailed information regarding size, location, depth and type of utilities, as well as locations of other site improvements, other than landscape improvements,

Plant symbols illustrated on this plan are a graphic representation of proposed plant material types and are intended to provide for visual clarity. However, the symbols do not necessarily represent actual plant spread at the time of installation.

All plant species specified are subject to availability. Material shortages in the landscape industry may require substitutions. All substitutions must be approved by the Village, Landscape Architect and Owner.

Contractor shall verify location of all underground utilities prior to digging. For location outside the City of Chicago call "J.U.L.I.E." (Joint Utility Location for Excavators) 1-800-892-0123.

All perennial, ornamental grass, groundcover and annual beds shall be top dressed with a minimum of three inches (3") of mushroom compost. The top dressing shall be worked into the soil to a minimum depth of nine inches (9") by the use of a cultivating mechanism. Upon completion perennials & ornamental grasses shall be mulched with an additional two inch (2") layer of shredded wood mulch; Annuals & groundcovers shall be covered with an additional two inch (2") layer of mushroom compost.

All other planting beds and tree saucers shall be mulched with a minimum of three inches (3") of shredded wood mulch.

Planting beds adjacent to building shall be mulched in their entirety to the building foundation. Plant materials shall not be installed under building overhangs and other such areas which do not receive natural rainfall.

All bed lines and tree saucers shall require a hand spaded edge between lawn and mulched areas.

Grading shall provide slopes which are smooth and continuous. Positive drainage shall be provided in all areas.

Sod shall be mineral base only.

Seed mixes shall be applied mechanically so that the seed is incorporated into the top one-half inch (1/2") of the seed bed. The seed shall then be covered with the specified blanket (installed per manufacturer's. specs) or Hydro-mulch.

All plant material shall be guaranteed for one (1) year from the date of acceptance.

REVISIONS

4	Village review comments #4	7-3-19
3	Town Home Site Plan	5-20-19
2	Village review comments #3	2-14-18
1	Village review comments #2	12-19-17

BLUFF POINTE

Orland Park, Illinois

SEAL:

STATE OF ILLINOIS
RANDY F. METZ
LANDSCAPE ARCHITECT
no. 157-001423
Expires 11/30/2019

METZ & COMPANY
LANDSCAPE ARCHITECTURE/SITE PLANNING
826 East Maple Street
Lombard, Illinois 60148
PH: 630.561.3903
Email: metz_landarch@comcast.net

TITLE

LANDSCAPE PLAN

PROJECT NO.: 17-046

DATE: 8-2-17

SCALE: 1"=50'

SHEET

L-1

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If this plan is not 24"x36" in size, then it is a reproduction that may not be to scale

BLUFF POINTE
STORMWATER MANAGEMENT AREA
DRAW DOWN ANALYSIS

TIME (hours)	ELEVATION (feet)
10.0	676.67
20.0	678.47
30.0	678.93
40.0	678.73
50.0	678.63
60.0	678.59
70.0	678.56
80.0	678.53
90.0	678.49
100.0	678.46
110.0	678.43
120.0	678.40
130.0	678.37
140.0	678.34
150.0	678.31
160.0	678.28
170.0	678.26
180.0	678.23
190.0	678.20
200.0	678.17
210.0	678.15
220.0	678.12
230.0	678.10
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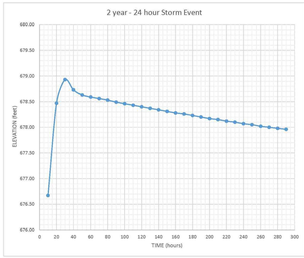
290.0	677.96



BLUFF POINTE
STORMWATER MANAGEMENT AREA
DRAW DOWN ANALYSIS

TIME (hours)	ELEVATION (feet)
0	676.50
10.0	676.82
20.0	679.07
30.0	679.91
40.0	679.01
50.0	678.75
60.0	678.65
70.0	678.60
80.0	678.57
90.0	678.53
100.0	678.50
110.0	678.47
120.0	678.44
130.0	678.41
140.0	678.38
150.0	678.35
160.0	678.32
170.0	678.29
180.0	678.26
190.0	678.23
200.0	678.20
210.0	678.18
220.0	678.15
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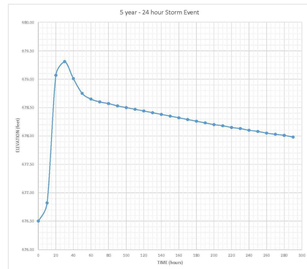

BLUFF POINTE
STORMWATER MANAGEMENT AREA
DRAW DOWN ANALYSIS

TIME (hours)	ELEVATION (feet)
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20.0	679.55
30.0	679.66
40.0	679.58
50.0	679.92
60.0	678.72
70.0	678.63
80.0	678.59
90.0	678.56
100.0	678.53
110.0	678.49
120.0	678.46
130.0	678.43
140.0	678.40
150.0	678.37
160.0	678.34
170.0	678.31
180.0	678.28
190.0	678.25
200.0	678.23
210.0	678.20
220.0	678.17
230.0	678.14
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250.0	678.09
260.0	678.07
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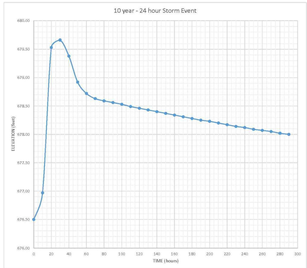
280.0	678.03
290.0	678.00



BLUFF POINTE
STORMWATER MANAGEMENT AREA
DRAW DOWN ANALYSIS

TIME (hours)	ELEVATION (feet)
0	676.50
10.0	677.72
20.0	682.06
30.0	681.58
40.0	680.78
50.0	679.87
60.0	679.19
70.0	678.83
80.0	678.68
90.0	678.61
100.0	678.58
110.0	678.55
120.0	678.51
130.0	678.48
140.0	678.45
150.0	678.42
160.0	678.39
170.0	678.36
180.0	678.33
190.0	678.30
200.0	678.27
210.0	678.24
220.0	678.22
230.0	678.19
240.0	678.16
250.0	678.14
260.0	678.11
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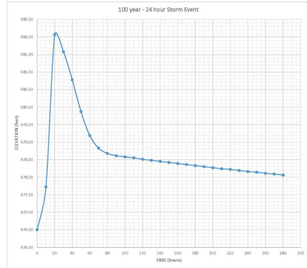
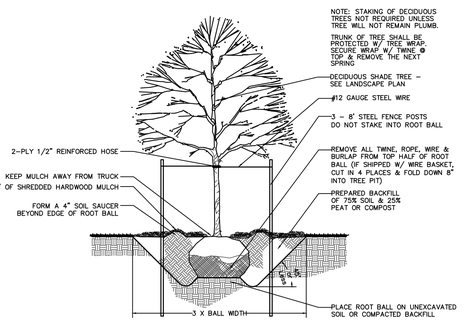
290.0	678.04





DECIDUOUS TREE

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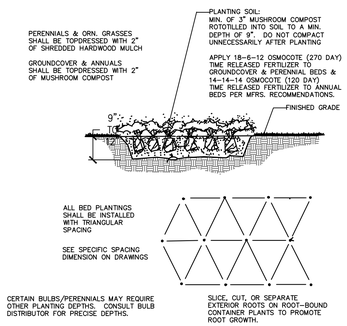
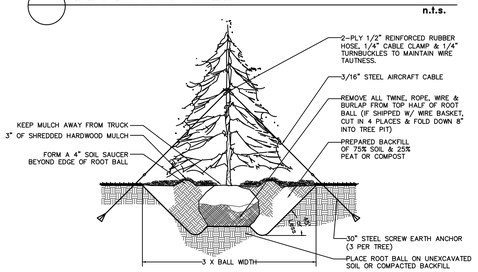


BED PLANTING DETAIL
(PERENNIALS, ORNAMENTAL GRASSES, VINES, GROUNDCOVER & ANNUALS)

n.t.s.



EVERGREEN TREE

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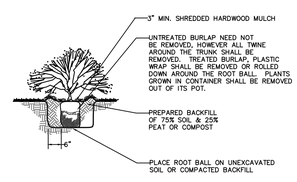
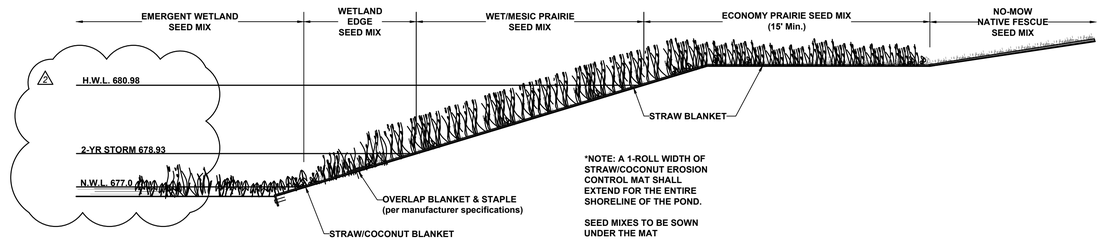


SHRUBS

n.t.s.



*NOTE: A 1-ROLL WIDTH OF STRAW/COCONUT EROSION CONTROL MAT SHALL EXTEND FOR THE ENTIRE SHORELINE OF THE POND.

SEED MIXES TO BE SOWN UNDER THE MAT

STORMWATER DETENTION AREA PLANTING DETAIL (typ.)

n.t.s.

WET-TO-MESIC PRAIRIE SEED MIX
Cardno-JFNew

BOTANICAL/ (COMMON) NAME	PLS OZ./Ac
PERMANENT MATRIX:	
Andropogon gerardii (Big Bluestem)	24.00
Calamagrostis canadensis (Bluejoint Grass)	1.00
Carex spp (Prairie Sedge Mix)	4.00
Carex lurida (Bottlebrush Sedge)	2.00
Elymus virginicus (Virginia Wild Rye)	24.00
Panicum virgatum (Swtich Grass)	2.00
Scirpus pendulus (Red Bulrush)	0.25
Sorghastrum nutans (Indian Grass)	6.00
Spartna pectinata (Prairie Cord Grass)	3.00
TOTAL	**66.25**
TEMPORARY COVER:	
Avena sativa (Seed Oats)	360.00
Lolium multiflorum (Annual Rye)	100.00
TOTAL	**460.00**
FORBS:	
Aster novae-angliae (New England Aster)	0.25
Baptisia lactea (White Wild Indigo)	0.75
Chamaecrista fasciculata (Partridge Pea)	12.00
Coreopsis lanceolata (Sand Coreopsis)	3.50
Coreopsis tripteris (Tall Coreopsis)	3.00
Desmodium illinoense (Illinois Tick Trefoil)	0.50
Echinacea purpurea (Purple Coneflower)	3.50
Eryngium yuccifolium (Rattlesnake Master)	2.00
Helenium autumnale (Sneezeweed)	2.50
Heliathus grosseserratus (Sawtooth Sunflower)	0.50
Liatris spicata (Marsh Blazing Star)	1.00
Monarda fistulosa (Wild Bergamot)	1.00
Parthenium integrifolium (Wild Quinine)	1.00
Physostegia virginiana (Obedient Plant)	0.25
Pycnanthemum virginianum (Common Mountain Mint)	1.00
Ratibida pinnata (Yellow Coneflower)	5.00
Rudbeckia hirta (Black-Eyed Susan)	5.50
Rudbeckia laciniata (Wild Golden Glow)	1.00
Rudbeckia subtomentosa (Sweet Black-Eyed Susan)	0.50
Silphium integrifolium (Rosin Weed)	1.00
Silphium laciniatum (Compass Plant)	2.00
Silphium perfoliatum (Cup Plant)	3.00
Silphium terebinthinaceum (Prairie Dock)	6.00
Solidago juncea (Early Goldenrod)	0.25
Solidago rigida (Stiff Goldenrod)	1.00
Solidago rugosa (Rough Goldenrod)	0.25
Tradescantia ohiensis (Common Spiderwort)	1.25
Vernonia spp. (Ironweed Mix)	3.00
Veronicastrum virginicum (Culver's Root)	0.25
Ziziz aurea (Golden Alexanders)	0.50
TOTAL	**63.25**

EMERGENT WETLAND SEED MIX
Cardno-JFNew - Apply at 33.9 PLS pounds per acre

BOTANICAL/ (COMMON) NAME	PLS OZ./Ac
PERMANENT MATRIX:	
Carex comosa (Bristly Sedge)	2.50
Carex lacustris (Common Lake Sedge)	0.25
Carex lurida (Bottlebrush Sedge)	4.00
Carex vulpinoidea (Brown Fox Sedge)	6.00
Eleocharis ovata (Blunt Spike Rush)	1.00
Leersia oryzoides (Rice Cut Grass)	3.00
Juncus effusus (Common Rush)	1.00
Scirpus acutus (Hard-stemmed Bulrush)	2.50
Scirpus pungens (Chairmaker's Rush))	4.00
Scirpus validus (Great Bulrush)	6.00
TOTAL	**30.25**
TEMPORARY COVER:	
Avena sativa (Seed Oats)	360.00
Lolium multiflorum (Annual Rye)	100.00
TOTAL	**460.00**
FORBS:	
Acorus calamus (Sweet Flag)	0.50
Alisma spp. (Water Plantain Mix)	2.00
Asclepias incarnata (Swamp Milkweed)	1.50
Cephalanthus occidentalis (Buttonbush	0.50
Decodon verticillatus (Swamp Loosestrife)	0.50
Eupatorium maculatum (Spotted Joe-Pye Weed)	0.50
Hibiscus spp. (Rose Mallow Mix)	3.00
Iris virginica (Blue Flag)	6.00
Lobelia siphilitica (Great Blue Lobelia)	1.50
Lobelia cardinalis (Cardinial Flower)	0.25
Lycopus americanus (Common Water Horehound)	0.25
Mimulus ringens (Monkey Flower)	1.00
Peltandra virginica (Arrow Arum)	16.00
Penthorum sedoides (Ditch Stonecrop)	0.50
Polyonum spp. (Smartweed Mix)	0.50
Pondtederia cordata (Piclerel Weed)	10.00
Sagittaria latifolia (Common Arrowhead)	2.00
Sparganium americanum (American Bur Reed)	1.00
Sparganium eurycarpum (Common Bur Reed)	4.00
Verbena hastata (Blue Vervain)	1.00
TOTAL	**52.50**

ECONOMY PRAIRIE SEED MIX
Cardno-JFNew - Apply at 37.2 PLS pounds per acre

BOTANICAL/ (COMMON) NAME	PLS OZ./Ac
PERMANENT MATRIX:	
Andropogon gerardii (Big Bluestem)	16.00
Bouteloua curtipendula (Side Oats Grama)	18.00
Carex spp. (Prairie Carex Mix)	1.00
Elymus canadensis (Canada Wild Rye)	16.00
Panicum virgatum (Prairie Switch Grass)	2.50
Schizachyrium scoparium (Little Bluestem)	24.00
Sorghastrum nutans (Indian Grass)	18.00
TOTAL	**95.50**
TEMPORARY COVER:	
Avena sativa (Seed Oats)	360.00
Lolium multiflorum (Annual Rye)	100.00
TOTAL	**460.00**
FORBS:	
Asclepias syriaca (Common Milk)	0.50
Asclepias tuberosa (Butterfly Weed)	1.00
Aster laevis (Smooth Blue Aster)	0.25
Aster novae-angliae (New England Aster)	0.75
Chamaecrista fasciculata (Partridge Pea)	12.00
Coreopsis lanceolata (Sand Coreopsis)	5.00
Echinacea purpurea (Purple Coneflower)	7.50
Heliopsis helianthoides (False Sunflower)	0.25
Lupinus perennis (Wild Lupine)	0.50
Monarda fistulosa (Wild Bergamot)	0.25
Pycnanthemum virginianum (Common Mountain Mint)	0.50
Ratibida pinnata (Yellow Coneflower)	3.50
Rudbeckia hirta (Black-Eyed Susan	8.00
TOTAL	**40.00**

NO MOW FESCUE SEED MIX
Prairie Nursery Westfield, WI

COMMON NAME	PERCENT	GERMINATION
SR5100 Chewings Fescue	23.52%	85%
Sheep Fescue	23.52%	85%
Dawson Red Fescue	11.76%	85%
SR100 Hard Fescue	11.76%	85%
Scaidis Hard Fescue	11.76%	85%
Creeping Red Fescue	11.70%	85%
Annual Ryegrass	3.88%	90%

Seed Rate 5 lbs per 100 sq. ft. or 220 lbs per acre

WETLAND EDGE SEED MIX
Cardno-JFNew Apply @ 32.83 PLS pounds per arce

BOTANICAL/ (COMMON) NAME	PLS OZ./Ac
PERMANENT MATRIX:	
Carex comosa (Bristly Sedge)	1.00
Carex cristatella (Crested Oval Sedge)	2.00
Carex frankii (Bristly Cattail Sedge)	6.00
Carex vulpinoidea (Brown Fox Sedge)	3.00
Eleocharis palustris (Great Spike Rush)	0.50
Elymus virginicus (Virginia Wild Rye)	12.00
Glyceria striata (Fowl Manna Grass)	1.00
Leersia oryzoides (Rice Cut Grass)	1.50
Scirpus atrovirens (Dark Green Bulrush)	1.00
Scirpus cyperinus (Wool Grass)	0.75
Scirpus pungens (Chairmaker's Rush))	1.00
Scirpus validus (Great Bulrush)	2.50
TOTAL	**32.25**
TEMPORARY COVER:	
Avena sativa (Seed Oats)	360.00
Lolium multiflorum (Annual Rye)	100.00
TOTAL	**460.00**
FORBS:	
Acorus calamus (Sweet Flag)	0.50
Alisma spp. (Water Plantain Mix)	2.00
Asclepias incarnata (Swamp Milkweed)	1.00
Aster puniceus (Bristly Aster)	1.00
Bidens spp. (Bidens Mix)	2.00
Eupatorium perfoliatum (Common Boneset)	1.00
Helenium autumnale (Sneezeweed)	2.00
Iris virginica (Blue Flag)	2.50
Lobelia siphilitica (Great Blue Lobelia)	1.00
Lycopus americanus (Common Water Horehound)	0.25
Mimulus ringens (Monkey Flower)	1.50
Penthorum sedoides (Ditch Stonecrop)	0.50
Polyonum spp. (Smartweed Mix)	0.50
Rudbeckia laciniata (Wild Golden Glow)	0.75
Sagittaria latifolia (Common Arrowhead)	2.00
Senna hebecarpa (Wild Senna)	2.00
Sparganium eurycarpum)Common Bur Reed)	4.00
Thalictrum dasycarpum (Purple Meadow Rue)	0.50
Verbena hastata (Blue Vervain)	1.50
Vernonia spp. (Ironweed Mix)	2.00
TOTAL	**28.50**

SWALE SEED MIX
Cardno-JFNew - Apply at 32.2 PLS pounds per acre

BOTANICAL/ (COMMON) NAME	PLS OZ./Ac
PERMANENT MATRIX:	
Andropogon gerardii (Big Bluestem)	12.00
Carex comosa (Bristly Sedge)	2.00
Carex cristatella (Crested Oval Sedge)	1.00
Carex lurida (Bottlebrush Sedge)	2.50
Carex spp (Prairie Sedge Mix)	2.00
Carex vulpinoidea (Brown Fox Sedge)	4.00
Elymus virginicus (Virginia Wild Rye)	8.00
Glyceria striata (Fowl Manna Grass)	1.00
Panicum virgatum (Swtich Grass)	2.00
Scirpus cyperinus (Wool Grass)	2.00
Scirpus atrovirens (Dark Green Bulrush)	0.50
Spartna pectinata (Prairie Cord Grass)	3.00
TOTAL	**40.00**
TEMPORARY COVER:	
Avena sativa (Seed Oats)	360.00
Lolium multiflorum (Annual Rye)	100.00
TOTAL	**460.00**
FORBS:	
Alisma spp. (Water Plantain Mix)	1.00
Asclepias incamata (Swamp Milkweed)	2.00
Aster novae-angliae (New England Aster)	0.50
Coreopsis tripteris (Tall Coreopsis)	1.00
Eupatorium maculatum (Spotted Joe-Pye Weed)	0.25
Iris virginica (Blue Flag)	4.00
Liatris spicata (Marsh Blazing Star)	1.00
Lobelia cardinalis (Cardinal Flower)	0.25
Lobelia siphilitica (Great Blue Lobelia)	0.50
Lycopus americanus (Common Water Horehound)	0.25
Sagittaria latifolia (Common Arrowhead)	0.75
Silphium terebinthinaceum (Prairie Dock)	1.00
Verbena hastata (Blue Vervain)	1.50
Ziziz aurea (Golden Alexanders)	0.75
TOTAL	**14.75**

"No-Mow" Maintenance Program

Mowing

"No-Mow" lawns may require occasional mowing during the first two (2) years of establishment to control weeds, especially with lawns that are seeded in spring. Most annual weeds can be controlled by mowing at a heightof four inches (4") in the first growing season. If biennial weeds such as sweet clover, Queen Anne's Lace, burdock, etc. are a problem in the second year, they should be mowed at four inches (4") just as they begin to flower, usually around mid June. This carefully timed mowing will kill most biennials. A few may survive the mowing, and should be mowed at four inches (4") a second time when they re-bloom later in the season.

Once the "No-Mow" lawn is established there are four (4) basic mowing options "

- No mowing at all
- One late spring mowing, usually in early June when the seed heads appear
- Fall mowing with a mulching mower, es pecially in wooded areas to chop up fallen leaves
- Regular mowing, usually monthly, to maintain a more "cropped" appearance

No Mowing: This will result in a turf whose leaves grow to about six inches (6") in height that will drape over one another to create a low -growing meadow effect. Seedheads about two feet (2') tall will appear in early to mid June, creating a nice meadow effect. The seedheads will typically fall to the ground by late summer, and the lawn will revert to its normal height of about five to six inches.

Late Spring Mowing: Mowing the "No-Mow' lawn once a year in June when the seedheads appear at a height of four (4) to five (5) inches to remove the seedheads and the turf will re -grow to its normal height.

Fall Mowing: This as a good option for seedlings under or in open woodlands. The fescue grasses usually will not form seadhead s when growing in shade, so June mowing is not required to maintain a normal height. However, leaves from deciduous trees must either be raked up and removed, or chopped up with a mulching mower in order to prevent smothering of the turf over winter.

Regular Mowing: For a traditional manicured lawn look, regular mowing can be done every three (3) to four (4) weeks, or when the grass reaches a height of six inches (6"). Most fine fescues do not tolerate close mowing, and should be mowed no lower than 3.5 inches. Never remove more than one third of the total leaf material, or the turf will be damaged. Always cut grass with a sharp mower blade to minimize tearing of the leaves which will cause additional stress to the grass plant.

De-Thatching

Fine fescues tend to develop a thatch layer near the soil surface over time. Thatch is composed of dead grass that does not decompose. It can smother the growth of new grass shoots, reducing the density of the lawn and creating dead spots. The thatch layer also tends to retain moisture at the ground level, which can encourage the growth of fungal diseases. Thatch development is encouraged by high levels of soil Nitrogen, and is more common in rich soils and lawns that are regularly fertilized. If thatch builds up to a point where dead grass is visible and grass begins to thin out, the lawn should be de-thatched.

De-thatching can be accomplished using a mechanical de-thatcher or power rack, or by hand using a de-thatching rake. Set mechanical de -thatchers to a depth where they lift the tha tch without digging up the soil. If the thatch is particularly thick, the de -thatcher will need to be set deeper, and some soil disturbance will likely occur. The thatch should be racked out of the lawn and removed. If open soil is visible following de-thatching, the affected areas should then be over-seeded with "No-Mow" lawn mix.

Timing of de-thatching is very important. Cool season fescue lawns should be de-thatched in mid-spring after the grass has greened up and begun active growth. De-thatching in early spring before the lawn begins to grow tends to encourage weeds.

REVISIONS

4	Village review comments #4	7-3-19
3	Town Home Site Plan	5-20-19
2	Village review comments #3	2-14-18
1	Village review comments #2	12-19-17

BLUFF POINTE
Orland Park, Illinois

SEAL:

STATE OF ILLINOIS
RANDY F. METZ
LANDSCAPE ARCHITECT
no. 157-000422

METZ & COMPANY
LANDSCAPE ARCHITECTURE/SITE PLANNING
826 East Maple Street
Lombard, Illinois 60148
PH: 630.561.3903
Email: metz_landarch@comcast.net

TITLE
LANDSCAPE PLAN

PROJECT NO.: 17-046
DATE: 8–2–17
SCALE: 1"=50'

SHEET
L-2

If this plan is not 24" x 36" in size, then it is a reproduction that may not be to scale

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Bluff Pointe, 171st Street & Wolf Road, Orland Park

MONITORING AND MANAGEMENT PLAN AGREEMENT FOR NATURALIZED LANDSCAPE AREAS ("PLAN")

SECTION 1.0 GENERAL

1.1 Contact Information

McNaughton Development will be responsible for the timely execution of all near term maintenance activities and the Village of Orland Park will be responsible for the timely execution of all long-term maintenance activities within the naturalized landscape, unless otherwise noted, as set forth in this Plan for the naturalized landscape areas located at the Bluff Pointe subdivision at 171st Street & Wolf Road ("Subject Property"). The following party should be contacted regarding management activities and is the party responsible for compliance with this Plan:

Names, addresses, contacts, and telephone numbers of the property owner(s):

McNaughton Development 115220 Jackson Street, Burr Ridge Illinois 60527
630-325-3400
_____
_____
_____
_____

Names, addresses, contacts, and telephone numbers of the party or parties legally responsible for operations and

McNaughton Development 115220 Jackson Street, Burr Ridge Illinois 60527
630-325-3400

1.3 Letter of Credit

The approved letter of credit amount for the naturalized landscape portion of this project is $_____, as approved by the Development Services Department on _____/_____/_____.

1.3 Location Information

Improvements and maintenance per the final landscape plans by Metz & Associates dated February ____ 2018.

1.4 Prohibited Activities

This section outlines various activities restricted or prohibited within areas of naturalized landscaping except as needed to achieve and maintain a naturalized landscape consistent with the approved plan as directed by a natural landscape maintenance specialist:

- dumping of yard waste or debris
- replacement of approved vegetation with non-approved materials
- construction or placement of structures
- application of pesticides, fertilizer, or herbicides
- mowing other than for meeting specific management goals
- commercial, industrial, agricultural, residential developments, buildings, or structures, including but not limited to signs, billboards, other advertising material, or other structures
- removal or destruction of trees or plants, mowing, draining, plowing, mining, removal of topsoil, sand, rock, gravel, minerals or other material
- operation of snowmobiles, dune buggies, motorcycles, all-terrain vehicles or any other types of motorized vehicles.
-

1.5 Estimated Expenses

Owner shall submit documentation of the estimated routine and non-routine expenses as well as the source(s) of funding for continued inspection, operation and maintenance.

1.6 Homeowners Association/Business Owners Association

If a homeowners association or business owners association ("Association") is the party responsible for compliance with this Plan, the Association shall include language in its governing documents authorizing the collection of fees for the naturalized landscape maintenance and outline the process for corrective action(s) to be taken, if necessary.

1.7 Obligations to Run with the Subject Property

This Plan shall be binding upon and inure to the benefit of the parties hereto, successor owners of record of the Subject Property, assignees, lessees and upon any successor municipal authorities of said Village and successor municipalities.

1.8 Authority to Sign

Each Party, and the person signing on behalf of each Party, represents that the person signing this Plan has the authority to execute this document and thereby bind the Party hereto on whose behalf the person is signing.

1.9 Severability

If any provision of this Plan is held invalid by a court of competent jurisdiction or in the event such a court shall determine that the Village does not have the power to perform any such provision, such provision shall be deemed to be excised herefrom and the invalidity thereof shall not affect any of the other provisions contained herein, and such judgment or decree shall relieve Village from performance under such invalid provision of this Plan.

1.10 Amendments to Covenants and Restrictions

Any amendment to covenants or restrictions pertaining to the Subject Property must be submitted to the Village for approval if the amendment(s) alters the site beyond the original condition.

1.11 Amendments to Management Actions

Potential issues and management requirements are likely to change over time. Owner may have additional responsibilities which may include, but are not limited to, access restriction enforcement (e.g. fly dumping, fishing, recreational vehicles) and wildlife management (e.g., including control of carp, muskrats, and geese). Owner and Village will evaluate the need for other management actions when performing other maintenance visits and inspections.

SECTION 2.0 NEAR-TERM MONITORING AND REPORTING

2.1 Responsible Parties

McNaughton Development, Inc. ("Owner") will be responsible for funding and implementing a near-term monitoring and management plan (typically three years in length) and for the long-term monitoring and managements set forth in Section 4.0 for establishing a naturalized landscape area(s) associated with the proposed stormwater management area within the Bluff Pointe residential subdivision. If the performance standards are not achieved after the initial three-year monitoring and management period, then additional monitoring and management activities shall continue until the minimum performance standards are met. The Owner may elect to contract management and maintenance services to a third party to ensure proper implementation in accordance with the following standards.

2.2 Monitoring Methodology

Owner will monitor areas of naturalized landscaping following methodologies as outlined herein. Owner will perform meander survey monitoring on an annual basis for a minimum of three years after planting is substantially complete, or until the naturalized landscape area(s) in question is/are accepted by the Village. Annual vegetation monitoring will occur in August, September, or early October. Meander survey methodology will involve taking five to 10 representative site photographs and performing a review of at least 20 percent of each vegetative community to identify the following:

a. the limits of all vegetation areas by general community type and dominant species within each planting zone (e.g., wetland and prairie zones),
b. all plant species (native and non-native) in each planting zone,
c. the approximate percent ground cover by native species within each planting zone,
d. the percent ground cover by non-native or invasive species in each planting zone,
e. erosion and sedimentation problems,
f. water level or drainage problems,
g. areas of bare soil larger than one square-meter, and
h. observations on specific management strategies necessary to achieve acceptance requirements.

2.3 Reporting Requirements

Upon completion of landscape installation, the Owner will notify the Village that the natural landscape area installation has been installed as per the approved landscape plan. Owner will provide nursery packing lists indicating the species and quantities of materials installed with this notice.

In addition, the Owner will submit an annual monitoring report to the Village of Orland Park by February 28th of the following year evaluating the progress of the naturalized landscape toward design goals. The report will contain a location map, a summary of annual monitoring observations, a description of management performed during the year, a tabular summary of annual progress relative to acceptance standards, and a list of proposed management activities during the upcoming year.

2.4 Performance Standards

Satisfactory landscape development associated with naturalized vegetation in the stormwater facility will be based on the following items. If these standards are met at the end of the initial near-term monitoring and management period, as determined by the Village, the Village will approve the naturalized landscape areas and return the letter of credit. If these standards are not met at the end of the initial near-term monitoring and management period, the time period will be extended until the performance standards are met and the letter of credit will be held until the performance standards are met.

First Year:

- First Year: Within three months of seed installation (or three months after the start of the growing season following dormant seeding), at least 90 percent of the seeded area, as measured by aerial cover, will be vegetated or otherwise stabilized against erosion. The cover crop may be included in this measurement.

Second Year:

- Second Year: By the end of the second growing season, the planted areas shall have a minimum of 50 percent ground cover by species in the approved plant list and/or native species with native coefficient of conservation (C-) values of 2 or greater (per Swink and Wilhelm 1994 or more current version).

Third Year:

- Third Year: By the end of the third growing season, the planted areas (e.g. wetland, prairie) shall have a minimum of 75 percent ground cover and emergent areas shall have minimum of 35 percent ground cover (by species in the approved plant list and/or native species with native coefficient of conservation (C-) values of 2 or greater. The cumulative plant list, across all vegetative communities shall have a minimum native floristic quality index (FQI) of 20 and a (C-) value of 3.5 or greater.

Second and Third Year Additional Performance Standards:

- Naturalized landscapes shall not have more than one square-meter devoid of vegetation, as measured by aerial coverage.
- Seeded/planted areas (Excluding emergent zone) shall have no rills or gullies greater than four inches wide by four inches deep.
- Areas seeded to turfgrass or low-maintenance turf shall have 95 percent ground cover.
- Installed woody materials within the naturalized landscape area shall be alive, in healthy condition, and representative of the species.
- No more than 25 percent of any specific plant community shall be individually or collectively dominated by non-native or weedy species.
- None of the three-most dominant species may be non-native or weedy, including but not limited to the following:

Woody Plants

Acer negundo	Box elder
Alnus glutinosa	Black Alder
Elaeagnus umbellata	Autumn olive
Euonymus alatus	Burning bush
Lonicera spp.	Honeysuckle
Rhamnus spp.	Buckthorn
Robinia pseudoacacia	Black locust
Rosa multiflora	Multiflora rose
Ulmus pumila	Siberian elm

Broadleaf Plants

Alliaria petiolata	Garlic mustard
Ambrosia spp.	Ragweed
Arctium spp.	Burdock
Carduus nutans	Musk thistle
Centaurea maculosa	Spotted knapweed
Cirsium arvense	Canada thistle
Conium maculatum	Spotted hemlock
Coronilla varia	Crown vetch
Daucus carota	Wild carrot
Dipsacus spp.	Teasel
Euphorbia escula	Leafy spurge
Hesperis matronalis	Dame's rocket
Lotus corniculatus	Bird's-foot trefoil
Lythrum salicaria	Purple loosestrife
Medicago spp.	Alfalfa/medick
Melilotus spp.	Sweetclover
Pastinaca sativa	Wild parsnip
Polygonum cuspidatum	Japanese knotweed
Solidago altissima	Tall goldenrod
Solidago sempervirens	Seaside goldenrod
Trifolium spp.	Clover
Typha spp.	Cattails

Grass-like Plants

Agropyron repens	Quackgrass
Bromus tectorum	Cheatgrass
Bromus japonicus	Japanese brome
Bromus inermis	Smooth brome
Phalaris arundinacea	Reed canarygrass
Phragmites australis	Common reed
Poa pratensis	Kentucky bluegrass

- Common Reed (*Phragmites australis*) is an aggressive invasive species that is especially problematic in the Orland Park region and is extremely difficult to control once established. Therefore, particular attention should be made for the early detection and eradication of Common Reed across the entire project property.
- Cattails (*Typha* spp.) do not count towards the 25 percent weed criterion provided they represent no more than 20 percent cover.

SECTION 3.0 NEAR-TERM MANAGEMENT FOR NATURALIZED LANDSCAPES

Near-term management for naturalized landscapes associated with the Bluff Pointe subdivision will involve monitoring and management to promote germination and establishment of desired plants and to prevent the establishment of invasive species. The least costly and most effective action for controlling invasive species is their early identification and eradication. The following is the near-term management plan that Owner shall follow for naturalized landscape areas associated with the Bluff Pointe subdivision:

3.1 Near-Term Management Tasks

For a minimum of three years after installation, Owner will manage naturalized landscapes on a regular basis to ensure successful establishment. The following management tasks provide a reasonable approach to most conditions likely to be encountered during the establishment of naturalized habitat. However, site characteristics can significantly influence how management and maintenance techniques are implemented. Therefore, vegetation management actions may differ from the tasks and frequencies indicated below based on specific recommendations from a qualified native landscape restoration specialist.

3.1.1 Undesirable Plant Control

The Owner acknowledges that it is best to perform corrective actions for vegetation management early in the revegetation effort. Owner will manage aggressive and/or non-native species such that their presence and density does not threaten the attainment of performance standards.

Depending on the type of plant being targeted, control of undesirable plant species may involve removing all above-ground and below-ground stems, roots, and flower masses prior to development of seeds. Weeding practices will avoid damaging the native plantings and be timed to prevent development of weed seeds. Therefore, the ability to differentiate between weeds and native seedlings is important and must be conducted by personnel with experience in the establishment of native vegetation.

Owner shall use various means of weed control, as appropriate, and may include mechanical control, chemical control, and/or biological control.

Mechanical Control: Mechanical control of nuisance plant species typically includes cutting, mowing and/or the digging up individual plants by hand. In many cases, cutting or mowing a plant before its seeds mature will minimize further spread. Cutting or mowing close to the ground surface with a weed-

eater or hand-scythe can be an effective means of control for species such as sweet clover, various thistles, and ragweed. For general mowing of swaths of vegetation, mowers will be set to a height of 12+ inches above the ground surface or to a height that treats weedy species yet minimizes impacts on desirable plants.

For species such as common reed, purple loosestrife, Canada thistle, and reed canarygrass, mowing actually encourages the spread of underground stems. Hand digging these species and woody undesirables such as multiflora rose can result in control if there are fewer than 100 plants throughout the entire site. Where more than 100 individuals of such plants are present, chemical control will be the primary method of control. (Note: Pulling and digging out weeds generally is discouraged because the soil disturbance can uproot desirable plants and encourage the growth of more weeds.)

Chemical Control: When employed in conjunction with prescribed burning and mechanical control, the judicious use of herbicides can be an important component of management programs for controlling weeds. Some weeds such as purple loosestrife, buckthorn (*Rhamnus* spp.) and honeysuckle (*Lonicera* spp.), reed canarygrass, common reed, sandbar willow, and cattails are controlled more effectively by chemical treatment than by most mechanical control measures.

For aggressive weeds, an appropriate herbicide will be applied. Because of the potential for damage to native plant communities, the use of preventative herbicides will be limited to problem areas and problem species for which manual control is ineffective. Aquatic herbicides will not be used to treat algal blooms.

Glyphosate herbicide (trade names Rodeo or Roundup) is often recommended for use in naturalized landscape areas. Other herbicides such as Transline, Plateau, and Garlon are also used. The application of herbicides will be performed only by persons licensed or certified in the State of Illinois for pesticide/herbicide application. Herbicide use will be in strict compliance with all application rates, procedures, warning labels and applicable codes, standards and best management practices.

Generally, wick application will be preferred over spray application, which is less selective. Wicking applies herbicide only to individual plants, typically using hand application or pipe dispersal methods. The handwicking or "glove of death" method for specifically targeting weedy plants while protecting higher quality plants in sensitive habitats. Pipe dispersal methods are also appropriate for targeting weedy plants while avoiding desirable plants growing alongside them by using a canvas-covered, perforated, chemical filled PVC pipe. Trained personnel walk the area, swinging pipe (commonly 8-feet long) from side to side above the native plants but deliberately striking invasive species. The pipe strikes and bends the weeds, smearing them with the chemical and destroying them within a few days. If used, spray applications will not occur on gusty days because non-target species could be affected.

Biological Control: An alternative to chemical treatment, use of biological controls for purple loosestrife will be considered provided site conditions are appropriate to support and maintain the insect population. Through this method, host-specific insects (one a root infesting weevil; others are leaf-eating chrysomelid beetles) are released to feed on the roots or leaves of purple loosestrife. If purple loosestrife becomes abundant, biological control can prove a cost-effective means of management.

2.1.1 Wildlife Management

Nuisance species such as ducks, geese or muskrats often forage on young emergent wetland plants. Herbivory fencing may be installed to protect the wetland plants during establishment. Herbivory fencing typically consists

of chicken wire, netting or string to deter waterfowl or other species from areas where native plugs have been installed. The fencing can be removed once the vegetation is well established. Additional control of nuisance species must be performed if monitoring indicates such species are responsible for poor plant establishment and performance. The method of control will be determined by a native landscape restoration specialist.

It is generally accepted that the long-term use of even the most benign pesticides has effects on wildlife that are still only barely researched. Therefore, Owner will not use pesticides broadly or routinely in any naturalized landscape other than for mosquito abatement (should that be necessary). Owner will use pesticides only for specific and localized problem areas as determined by a native landscape restoration specialist with experience in installation and development of native plant communities, should such areas occur. Standard application procedures and precautions for chemical application in wetland areas will be followed.

2.1.1 Fertilizer Application

For ecological reasons, a conservative approach to the application of fertilizers will be taken. Turf management chemicals will not be used within areas of naturalized plantings unless specifically prescribed by and per the direction of a native landscape restoration specialist. If used, special care will be taken to not apply fertilizers when inclement weather is forecast.

3.2 Schedule Of Near-Term Management Activities

Appendix 1, titled "Near-Term Management & Management Tasks for Naturalized Landscapes", and the following text provide the schedule of management and management tasks for installation and establishment of naturalized landscape areas. The actual schedule and tasks performed in any given year may differ from those indicated based on specific recommendations from a natural landscape restoration specialist.

3.2.1 Inspection Schedule – Near Term Activities

Inspections will be made as detailed in **Appendix 1**, which **must** be attached to this document prior to document approval.

3.2.2 First-Year Management Actions

To prevent weed seed development, Owner will mow to a height of 6 inches when vegetation reaches a height of 12 inches. (Note: Weekly mowing at turf lawn height will NOT be performed, as mowing too often can set-back native planting development.) Owner must use a rotary or flail-type mower to finely chop the cut material. If clippings shade the ground or smother the remaining plants, Owner will bag the clippings for off-site disposal or otherwise dispersed. The Owner must time the last mow so that vegetation can grow to a height of eight to 10 inches before winter.

Owner will avoid weedy practices that damage the native plantings and will time the practices to prevent development of weed seeds. For aggressive weeds, herbicide will be selectively applied (e.g., wick application, not spraying). Turf management chemicals will not be used on native plantings except as directed by a Village-approved landscape restoration specialist.

Dobris and litter (e.g., paper, plastic, metal, concrete, grass clippings, brush, etc.) will be removed every other month between 1 March to 31 October to prevent floating materials from clogging the outlet. Dubris will be disposed of at an appropriate off-site trash receptacle.
Other potential responsibilities may include, but are not limited to, access restriction enforcement, insect pest control, erosion repairs, and wildlife management (e.g., control of carp, muskrats, geese, etc. as needed). The Owner will determine the need for other management actions on a quarterly basis when performing general maintenance visits for dam embankments and control structures.

3.2.3 Second-Year Management Actions

During the second growing season, Owner will mow the seeded area as close to the ground as possible in early spring and the cuttings raked or bagged. If annual weeds remain a problem, Owner will perform an additional mow during mid- to late June, with the mow height set to 12 inches.

Weed management will emphasize control of biennial and perennial weeds. Biennial weeds targeted for control include sweetclovers (*Melilotus* spp), Queen Anne's lace (*Daucus carota*), and teasel (*Dipsacus* spp.). Proper weed control may require multiple treatments, and Owner will perform the treatments at times that will provide maximum treatment effectiveness.

Other management practices will include debris and litter removal, access restriction enforcement, and erosion control and repairs (as needed). Additional management tasks may include insect pest control, reseeding/replanting in targeted areas, wildlife management as determined on a quarterly basis. If there is sufficient fuel, a prescribed burn may be attempted at the end of the second growing season, provided Owner obtains proper permits from the Illinois Environmental Protection Agency and provides notice to the Village and local authorities.

3.2.4 Third-Year Management Actions

Typical management in the third growing season will involve the use of prescribed fire in combination with mechanical and chemical methods for controlling aggressive biennial and perennial weeds.

Owner will obtain a permit from the Illinois Environmental Protection Agency, Cook/Will County and Village prior to conducting a prescribed burn. Burns must be performed by a qualified contractor. All other required permits need to be in place before the Village will issue a permit. The burn will occur between mid-October and April as weather and site conditions permit. Prior to conducting a prescribed burn, Owner must provide notice to the Village and local authorities. If prescribed burning is not practical, Owner will substitute mowing in late fall or very early spring. The burn-replacement mow will be done at a height of two inches, with cut material bagged for off-site disposal.

As in the first two years, Owner will continue management of aggressive weeds. Other management practices will include debris and litter removal, access restriction enforcement, and erosion control and repairs (as needed). Additional management tasks may include insect pest control, reseeding/replanting in targeted areas, wildlife management and the Owner will determine the need for other management actions, on a quarterly basis, when performing general maintenance visits for dam embankments and control structures.

SECTION 4.0 LONG-TERM MANAGEMENT FOR NATURALIZED LANDSCAPES

Traditional turfgrass maintenance practices are not appropriate for naturalized landscapes. Owner must provide proper management which shall be performed by parties experienced in native landscape maintenance.

4.1 Long-Term Management Tasks

Long-term maintenance of naturalized landscapes involves significantly less effort and cost than for landscapes vegetated with traditional turfgrass. Routine maintenance activities for naturalized landscapes include debris management, structural inspections, vegetation maintenance, and pest species management. Non-routine maintenance and management actions are performed as site-specific conditions warrant and include sediment/pollutant removal, structure replacement, and replanting. **Appendix 2, titled Long-Term Management & Management Tasks for Naturalized Landscapes,** presents the schedule for typical activities associated with long-term management of naturalized landscapes.

4.1.1 Debris and Litter Management

Owner shall remove debris and litter (e.g., paper, plastic, metal, concrete, grass clippings, brush, etc.) every other month between 1 March to 31 October and dispose of it at an appropriate off-site trash receptacle.

4.1.2 Structural Management

Owner will inspect water control structures quarterly and within 24 hours of each major rainstorm (> 1 inch rainfall). Inspections will include an evaluation on the stability of the outlet, embankments, and inlets. Observations will be made on the presence and extent of erosion, lack of vegetation, or other problems such as soil cracking, the outlet/inlet structures degradation, sink holes, or wet areas on the slopes. An engineer will perform or participate in these inspections.

Capture of sediment and pollutants eventually results in a decrease in pool volume and/or water quality in a stormwater facility and sediments need to be removed. Because each facility is different, there are no set timeframes for sediment/pollutant removal. The need for sediment removal is expected when the pool volume is reduced by 15 to 20 percent of the design volume.

4.1.3 Vegetation Management

Long-term management actions emphasize regular prescribed burning, accompanied by periodic herbicide treatment, mowing, or a combination of these practices. Accurate plant identification is essential. The type of vegetation management will be based on recommendations from a native landscape restoration specialist.

Prescribed Burning: If possible, established naturalized landscapes should be burned every two to three years or as directed by a landscape restoration specialist/ecologist. Large areas can be divided into management sections and burned on a rotational basis, with only a portion burned each year and the entire area burned over a three-year period. The timing of the burn should be determined based on weather conditions and management goals as recommended by the landscape restoration specialist/ecologist.

A permit must be obtained from the Illinois Environmental Protection Agency prior to conducting a prescribed burn. The burn should occur between mid-October and April as weather and site conditions permit. Burning should only be conducted by a qualified burn contractor experienced in grassland fire control and only upon receipt of a permit from the Illinois Environmental Protection Agency. Prior to conducting a prescribed burn, Owner must provide notice to the Village and local authorities. If prescribed burning is not practical, Owner will mow in late fall or very early spring to substitute for burning. The burn-replacement mow will be done at a height of two inches, with cut material bagged for off-site disposal.

Weed Management: Aggressive plants can overtake naturalized landscapes in the absence of management interventions. The "worst offenders" typically include purple loosestrife (*Lythrum salicaria*), cattails (*Typha* spp.), bush honeysuckles (*Lonicera* spp.), buckthorn (*Rhamnus* spp.), multiflora rose (*Rosa multiflora*), black locust (*Robinia pseudoacacia*), teasel (*Dipsacus* spp.), garlic mustard (*Alliaria petiolata*), wild parsnip (*Pastinaca sativa*), thistles (*Cirsium* and *Carduus* spp.), common reed (*Phragmites australis*), and reed canarygrass (*Phalaris arundinacea*).

Owner will perform mechanical, chemical, or biological control of these and other aggressive weeds as directed by the native landscape restoration specialist.

Mechanical Control — Mechanical control of nuisance plant species typically includes mowing and/or the digging up individual plants by hand.

The timing and height of the mow depends on the species being controlled but typically is between 12 to 18 inches high. Owner will use a rotary or flail mower to chop the cut material into fine pieces that will not smother native plants

Hand pulling or digging of these species and woody undesirables can provide control if there are fewer than 100 plants.

Chemical Control — Owner will limit use of preventative herbicides to selected problem areas with a dominance of plant species that do not respond well to prescribed burning and/or mechanical control measures.

Herbicide application must be performed by a licensed professional applicator in strict compliance with all warning labels and applicable codes, standards and best management practices.

Herbicides will be applied selectively (e.g., wick application rather than spraying).

Biological Control — Special attention will also be given to purple loosestrife control, should it occur on the site. Where the plant is abundant, biological control can prove a cost-effective means of management. Through this method, host-specific insects are released to feed on the roots or leaves of purple loosestrife.

Supplemental Planting/Revegetation: Remedial actions may be needed as site conditions warrant. Such actions may include spot reseeding. Installation of supplemental plugs and/or seed using species in the approved mix (or if approved by the Village, with modifications) must be performed if any of the following circumstances exist: 1) more than half of the area of emergent plantings does not establish or

persist; 2) the slope has any area greater than 0.25 square-meter in size devoid of vegetation; 3) the shoreline has any area more than five feet in length devoid of vegetation; or 4) any area (regardless of size) is actively eroding.

Except for the cover crop, Owner will use seed from native species with an emphasis on establishment of the grass matrix, which will support prescribed burn management. A native landscape management specialist must determine the type and quantity of seeds based on site-specific conditions. Owner will use a cover crop when seeding bare areas, with seed oats comprising the primary cover crop species. If used, annual ryegrass will be applied at a rate not to exceed 5 lbs/ac.

4.1.4 Pesticide and Fungicide Use

Pesticides will not be used broadly or routinely. Instead, Owner will use pesticides at specific and localized problem areas. Owner will exercise particular care in the areas near or directly tributary to surface waters. Owner will follow standard application procedures and precautions. Insecticides and fungicides are generally unnecessary. If public perception or the identification of a specific mosquito problem warrants the use of insect controls, Owner will consider biological measures. This could include stocking a wet basin with fish that feed on mosquito larvae and/or the use of BTI (*Bacillus thuringiensis israelensis*) to selectively kill mosquito larvae. Habitat structures also could be installed to encourage the nesting and feeding of purple martins, bats, or other insectivorous wildlife.

4.1.5 Fertilizer Use

For ecological reasons, turf management chemicals will not be used on naturalized plantings except as directed by a native landscape restoration specialist.

4.1.6 Other Management Actions

When properly installed and established, naturalized landscapes typically require less management and maintenance than conventional landscapes. However, naturalized landscapes are not maintenance free. Therefore, a budget for long-term management activities should be established to protect the investment that has been made in the naturalized areas.

4.2 Schedule of Long-Term Management Activities

Appendix 2, titled "Long-Term Management & Management Tasks for Naturalized Landscapes", provides the schedule of management and maintenance tasks for installation and establishment of naturalized landscape areas. The actual schedule and tasks performed in any given year may differ from those indicated based on specific recommendations from a natural landscape restoration specialist.

4.2.1 Inspection Schedule – Long-Term Activities

Inspections will be made as detailed in **Appendix 2,** which **must** be attached to this document prior to document approval.

5.0 APPROVAL

VILLAGE OF ORLAND PARK	PETITIONER/OWNER
Approved By:_____	Submitted By:_____
Printed Name:_____	Printed Name:_____
Title:_____	Property Address:_____
Date:_____	Contact Phone:_____
	Contact Email:_____
	Date:_____

Appendix 1

Near-term Monitoring & Management Tasks for Naturalized Landscapes.

Activity	2x /month	Monthly	Every other month	Quarterly	Semi-annual	Annual	As needed	After major storms *	Year 1	Year 2	Year 3	J	F	M	A	M	J	J	A	S	O	N	D
												Calendar											
Debris/Litter Management																							
Remove trash (e.g., paper, plastic, brush, grass clippings, etc.) from inlet/outlet structures, basin slopes, and bottom and dispose in appropriate off-site location.				X				X		X	X				X		X		X				
Stormwater Structure Management																							
Perform inspection of control structure/spillway and clean-out/repair and dispose of debris in an appropriate off-site location.	X (until stable)					X		X		X	X					X						X	
Inspect basin/pond slopes and embankments.				X				X		X	X			X				X			X		
Perform corrective maintenance any time the pond takes longer than design time to return to +6 inches of NWL.								X						X	X	X	X	X	X	X	X	X	X
SESC Management																							
Maintain SESC devices in functional condition at all times and correct deficiencies immediately.									X					X	X	X	X	X	X	X	X	X	X
Conduct inspection within 24 hours of 1" storm event.								X		X					X	X	X	X	X	X	X		
Repair damage to slopes/embankment, including undercut or eroded areas if 1.0 sq. m. in size or 5 lin. ft, or 4 in x 4 in wide or greater.									X					X	X	X	X	X	X	X	X	X	X
Repair and revegetate eroded areas.									X							X	X	X				X	X
Vegetation Management																							
General Weed Management																							
Control invasive/non-invasive weeds as appropriate to each species. This may require different treatment times for different plant species. Treatment mechanisms may include mowing, hand cutting, prescribed burning, herbicide application, or a combination of methods. Species include but are not limited to the following:																							
Buckthorn									X					X	X	X							X
Bush honeysuckle									X					X	X	X							X
Cattails									X									X	X				
Common reed									X										X	X	X	X	X
Purple loosestrife									X									X	X	X	X	X	
Reed canarygrass									X						X	X	X					X	X
Sweet Clover															X	X				X	X		
General Weed Management CONT.																							
Thistles									X										X		X		
Teasel															X	X					X	X	X
Prescribed burning																							
Have a qualified burn contractor conduct prescribed burning as fuel and weather conditions allow. If conditions prevent burning, conduct a high mow the following growing season.											X			X	X	X					X	X	X
Mowing																							
Conduct variable-height mowing to prevent weed seed production.			X						X	X								X	X	X	X		
Conduct variable-height mowing to prevent weed seed production.									X		X									X			
Conduct single-season mow in place of prescribed burning.									X					X				X		or			X
Clearing/Removal																							
Remove wetland plants killed by sediment build up to prepare bed for replanting. Dispose of material at an appropriate off-site location.									X						X	X						X	X
Replanting																							
Replace/supplement wetland and upland vegetation to meet performance standards.									X									X	X				
Other Management Actions																							
Manage wildlife and control mosquitos.									X						X	X	X	X	X	X	X	X	X
Vegetation Monitoring																							
Installation and Establishment																							

Appendix 2.

Long-term Monitoring & Management Tasks for Naturalized Landscapes.

Activity	Monthly	Every other month	Quarterly	Semi-annual	Annual	As needed	After major storms *	Every 2 to 3 years	Every 5 to 10 years	J	F	M	A	M	J	J	A	S	O	N	D
								Frequency										Calendar			
Debris/Litter Management																					
Remove trash (e.g., paper, plastic, brush, grass clippings, etc.) from inlet/outlet structures, basin slopes, and bottom and dispose in appropriate off-site location.		X					X					X		X		X		X			
Structural Management																					
Perform structural inspection of control structure/spillway and clean-out/repair and dispose of debris in an appropriate off-site location.			X									X						X			
Inspect basin/pond slopes and embankments.			X									X			X		X			X	
Repair damage to slopes/embankment, including undercut or eroded areas if 1 m2 in size or 5 lin. ft, or 4 in x 4 in wide or greater.						X				X	X	X				or				X	X
Perform corrective maintenance any time a basin takes longer than design time to return to +6 inches of NWL.						X				X	X	X	X	X	X	X	X	X	X	X	X
Remove sediment and return basin to original grades when plants are choked with sediment, pool volume has become significantly reduced (>20 percent), or basin becomes eutrophic.						X				X	X	X								X	X
Vegetation Management																					
General Weed Management																					
Control invasive/non-invasive weeds as appropriate to each species. This may require different treatment times for different plant species. Treatment mechanisms may include mowing, hand cutting, prescribed burning, herbicide application, or a combination of methods. Species include but are not limited to the following:																			X	X	X
Buckthorn						X				X	X	X									X
Bush honeysuckle						X				X	X	X									X
Cattails						X								X	X						
Common reed						X											X				
Purple loosestrife						X								X	X	X	X	X			
General Weed Management CONT.																					
Reed Canarygrass																					
Sweet Clover																					
Teasel						X					X	X	X						X	X	
Thistles						X									X				X		
Prescribed burning																					
Have a qualified burn contractor conduct prescribed burning as fuel and weather conditions allow. If conditions prevent burning, conduct a high mow the following growing season.							X			X	X	X							X	X	X
Mowing																					
Conduct a high mow (12 inches) to prevent weed seed production.						X									X						
Conduct single-season mow in place of prescribed burning.						X						X				or				X	
Clearing/Removal																					
Remove wetland plants killed by sediment build up to prepare bed for replanting. Dispose of material at an appropriate off-site location.						X					X	X							X	X	
Replanting																					
Install supplemental plugs and/or seed when: a) more than half of the emergent plantings do not persist, b) the slope has any area greater than 1.0 sq. m. devoid of vegetation, c) the shoreline has any area more than 5 ft long devoid of vegetation, or d) any area is actively eroding.						X						X	X						X	X	
Other Management Actions																					

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REVISIONS

4	Village review comments #4	7-3-19
3	Town Home Site Plan	5-20-19
2	Village review comments #3	2-14-18
1	Village review comments #2	12-19-17

BLUFF POINTE

Orland Park, Illinois

SEAL:

STATE OF ILLINOIS
RANDY F. METZ
LANDSCAPE ARCHITECT
no. 157-000422
Expires 11/30/2019

METZ & COMPANY
LANDSCAPE ARCHITECTURE/SITE PLANNING
826 East Maple Street
Lombard, Illinois 60148
PH: 630.561.3903
Email: metz_landarch@comcast.net

TITLE

NATIVE LANDSCAPE MANAGEMENT PLAN

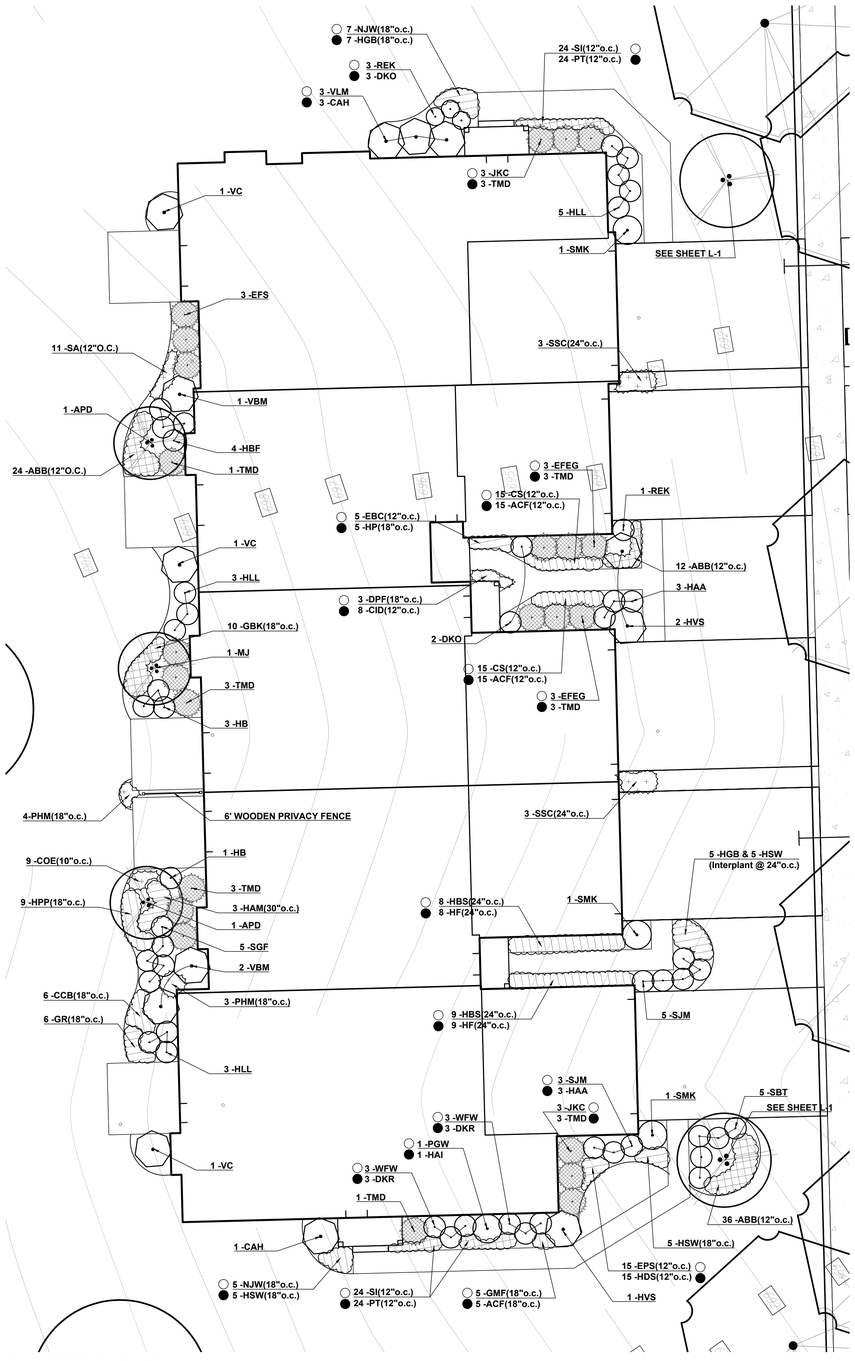
PROJECT NO.: 17-046

DATE: 8-2-17

SCALE: 1"=50'

SHEET

L-3



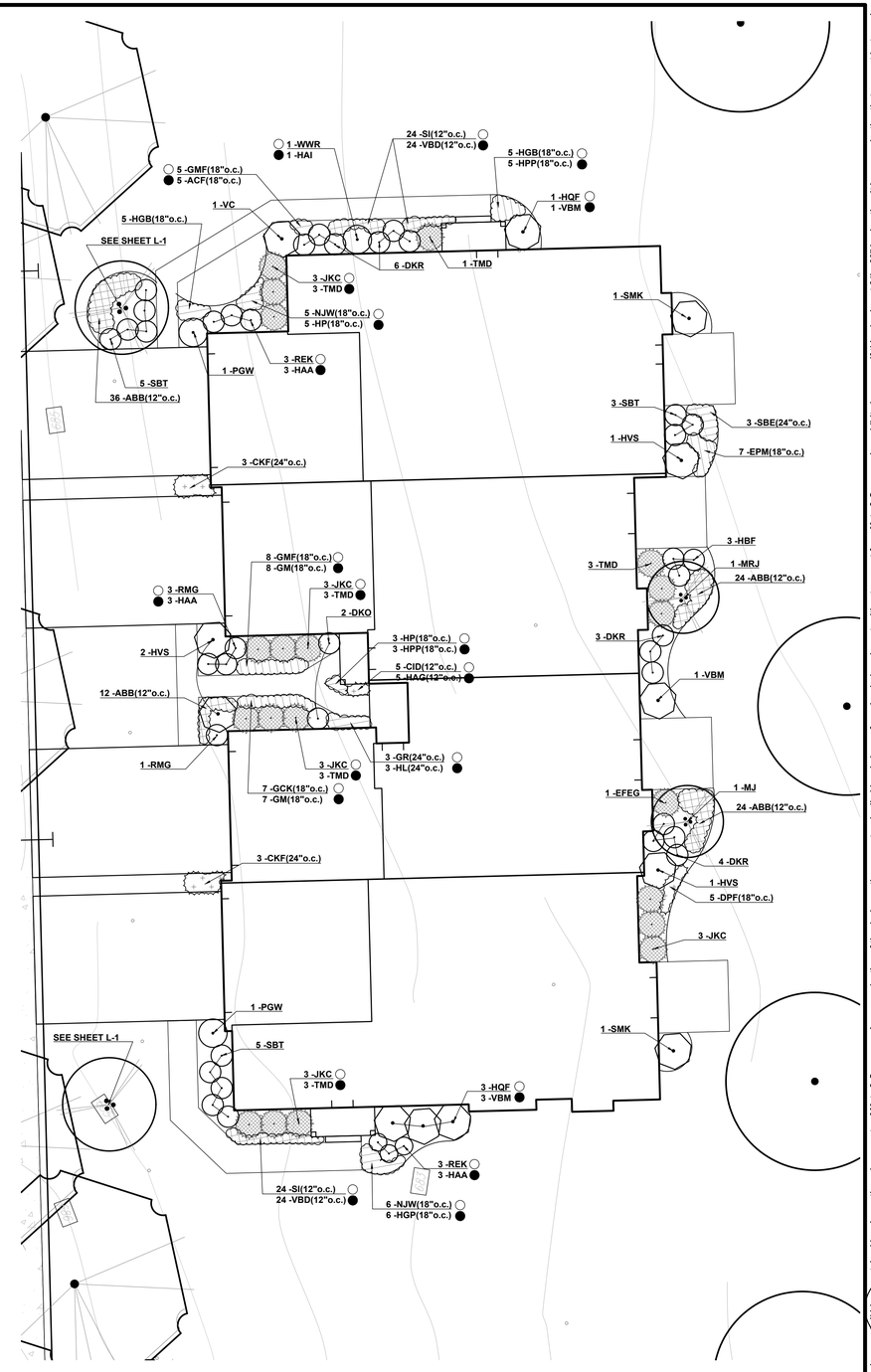
5-UNIT BUILDING

PLANT LIST

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE/ TYPE
		DECIDUOUS ORNAMENTAL TREES		
APD	4	Amelanchier g. 'Princess Diana'	Princess Diana Serviceberry	6' BBcl.
MJ	7	Magnolia x 'Jane'	Jane Magnolia	6' BBcl.
MRJ	5	Malus 'Red Jewel'	Red Jewel Crabapple	2.5" BB
		DECIDUOUS SHRUBS & SHRUB ROSES		
CAH	8	Corylus americana	American Hazelnut	3' BB
DKO	20	Diervilla r. 'G2X88544'	Orange Kodiak Diervilla	18"/#3
DKR	65	Diervilla r. 'G2X885411'	Red Kodiak Diervilla	18"/#3
HAA	27	Hydrangea a. 'Annabella'	Annabelle Hydrangea	24"/#5
HAI	3	Hydrangea a. 'Abetwo'	Incrediball Hydrangea	24"/#5
HB	8	Hydrangea p. 'ILVOBO'	Bobo Hydrangea	18"/#3
HLL	22	Hydrangea p. 'Jane'	Little Lime Hydrangea	24"/#5
HQF	11	Hydrangea p. 'Quick Fire'	Quick Fire Hydrangea	30"/#5
HVS	26	Hydrangea p. 'Renhy'	Vanilla Strawberry Hydrangea	30"/#5
HBF	23	Hypericum k. 'SMHKBF'	Blue Festival St. Johnswort	18"/#3
PGW	12	Physocarpus o. 'Jefam'	Amber Jubilee Ninebark	30"/#5
REK	17	Rosa 'BAfmir'	Easy Elegance Kashmir Rose	18"/#3
RMG	14	Rosa x 'BAlgirl'	Easy Elegance My Girl	18"/#3
SBT	75	Spiraea betulifolia 'Tor'	Birchleaf Spirea	24"/#5
SGF	10	Spiraea b. 'Goldflame"	Goldflame Spirea	18"/#3
SJM	16	Spiraea j. 'Minspi'	Painted Lady Double Play Spirea	18"/#3
SMK	16	Syringa p. 'Miss Kim'	Miss Kim Lilac	24" BB
VC	11	Viburnum 'Cayuga'	Koreanspice Viburnum	24" BB
VBM	20	Viburnum d. 'Christom'	Blue Muffin Arrowwood Viburnum	30"/#5
WFW	12	Weigela f. 'Fine Wine'	Fine Wine Weigela	18"/#3
WWR	2	Weigela f. 'Alexandra'	Wine & Roses Weigela	24"/#5
		EVERGREEN SHRUBS		
JKC	51	Juniperus c. 'Kalley's'	Kalleys Compact Juniper	24"/#5
TMD	78	Taxis m. 'Densiformis'	Dense Yew	24"/#5
		BROADLEAF EVERGREENS		
EFEG	11	Euonymus f 'Emerald Gaiety'	Emerald Gaiety Euonymus	#5
EFS	6	Euonymus f 'Sarcoxie'	Sarcoxie Euonymus	#5
		ORNAMENTAL GRASS		
CKF	30	Calamgrostis a. 'Karl Foerster'	Feather Reed Grass	#1
COE	18	Carex o. "Evergold'	Evergold Sedge	#1
CID	15	Carex m. 'Ice Dance'	Ice Dance Sedge	#1
DPF	31	Deschampsia c. 'Pixie Fountain'	Pixie Fountain Tufted Hair Grass	#1
HAG	10	Hakonechloa m. 'All Gold'	Japanese Forest Grass	#1
PHM	14	Panicum v.'Heavy Metal'	Heavy Metal Switch Grass	#1
SSC	12	Schizachyrium s. 'Carousel'	Carousel Little Bluestem	#1
SA	22	Sesleria autumnalis	Autumn Moor Grass	#1
		PERENNIALS		
ACF	45	Astilbe x.a. 'Beauty of Ernst'	Color Flash Astilbe	#1
CS	30	Campanula c. 'Pearl Deep Blue'	Carpathian Blue Harebell	#1
CCB	12	Coreopsis 'Crème Brulee'	Crème Brulee Coreopsis	#1
EBC	10	Echinacea 'Cleopratra'	Butterfly Cleopatra Coneflower	#1
EPS	30	Echinacea p. 'Prairie Splendor'	Prairie Splendor Coneflower	#1
EPM	35	Echinacea x. 'CBG Cone 2'	Pixie Meadowbrite Coneflower	#1
GCK	14	Geranium x. c. 'Karmina'	Karmina Geranium	#1
GR	12	Geranium 'Gerwat'	Rozanne Geranium	#1
GM	37	Geranium maculatum	Wild Geranium	#1
GMF	44	Geranium s. 'Max Frie'	Max Frie Geranium	#1
HGB	59	Hemerocallis 'Going Bananas'	Going Bananas Daylily	#1
HSW	20	Hemerocallis 'Summer Wine'	Summer Wine Daylily	#1
HGP	12	Heuchera 'Georgia Peach'	Georgia Peach Alumroot	#1
HPP	39	Heuchera 'Purple Petticoats'	Purple Petticoats Coralbells	#1
HAM	6	Hosta 'August Moon'	August Moon Hosta	#1
HBS	16	Hosta 'Brother Stefan'	Brother Stefan Hosta	#1
HF	18	Hosta 'Francee'	Francee Hosta	#1
HL	9	Hosta 'Liberty'	Liberty Hosta	#1
HP	24	Hosta 'Patriot'	Patriot Hosta	#1
NJW	38	Nepeta f. 'Novanepjun'	Junior Walker Catmint	#1
SBE	15	Stachys b.'Big Ears'	Big Ears Lamb's Ear	#1
		GROUNDCOVERS & VINES		
ABB	22	Ajuga r. 'Bronze Beauty'	Carpet Bugleweed (528 plants)	from 24 flat
GCB	2	Geranium x c. 'Karmina'	Karmina Geranium(20 plants)	from 10 flat
SI	7	Sedum 'Immergrunchen'	Little Evergreen Sedum(168 plants)	from 24 flat
PT	2	Pachysandra t. 'Green Carpet'	Japanese Sprurge(48 plants)	from 24 flat
VDB	5	Vinca Darts Blue	Periwinkle(120 plants)	from 24 flat

LEGEND

SOUTH EXPOSURE ○
NORTH EXPOSURE ●



4-UNIT BUILDING

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BLUFF POINTE

Orland Park, Illinois

SEAL:

STATE OF ILLINOIS
RANDY F. METZ
LANDSCAPE ARCHITECT
NO. 157-000122
MY LICENSE EXPIRES NOV. 30, 2017

METZ & COMPANY
LANDSCAPE ARCHITECTURE/SITE PLANNING
826 East Maple Street
Lombard, Illinois 60148
PH: 630.561.3903
Email: metz_landarch@comcast.net

TITLE
PROTO-TYPICAL FOUNDATION LANDSCAPE PLAN

PROJECT NO.: 17-046

DATE: 8-2-17

SCALE: 1"=10'

SHEET
L-4

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