LANDSCAPE ARCHITECT

WHAT MY MOM THINKS I DO

WHAT HORTICULTURISTS THINK I DO

WHAT CLIENTS THINK I DO

WHAT CONTRACTORS THINK I DO

WHAT I THINK I DO

WHAT I ACTUALLY DO
What I Actually Do
What am I talking about?

- Brief overview of designed plant communities
- Our process to embrace the concept of designed plant communities
- Project review: The Center for Nursing and Health Sciences
- Project review: MSD neighborhood rain garden
- Native plants!
TRADITIONAL PLANTING DESIGN

- Low maintenance (short-term)
- High initial investment
- Low diversity
- Annual mulching

- HIGH MAINTENANCE (LONG-TERM)
- LOW WILDLIFE DIVERSITY
- PLANTS AS MULCH
- MAINTAINED

DESIGNED PLANT COMMUNITIES

- Multi-layered
- Low maintenance (long-term)
- Managed
- Higher wildlife diversity
- Weeds blend in
- High initial investment

- Multi-layered
- Highest wildlife diversity
- Unlimited diversity
- Seeded

NATURE / SEEDING

- Low initial investment
- Weeds at home
- Annual fire or mowing
- Plants as mulch

- LOW WILDLIFE DIVERSITY
- WEEDS STAND OUT
- High initial investment
- MAINTAINED
- Low diversity
- Annual mulching
DESIGNED PLANT COMMUNITIES

The strategy of designed plant communities is to increase diversity and seasonality while decreasing maintenance. It achieves this by mimicking the layering and distribution of plant material observed in nature. A base layer of low-growing groundcover plants acts as weed suppression and “green mulch” while setting the field for dynamic species. These dynamic accents are stand-out stars with overlapping bloom periods to ensure consistent seasonal interest. Finally, the structural plant material utilizes verticality to control viewsheds and call attention to the dynamic layer of plant material.

The matrix approach to planting design will create a layered and tactile experience for garden visitors to enjoy in all seasons.

S STRUCTURAL
Includes trees, shrubs, and tall perennials. These plants form framework of the planting design as dominant vertical elements.

D DYNAMIC
Perennials or low-growing shrubs that stand out individually during their bloom period and otherwise act as companion plants. Typically with attractive foliage color or texture.

F FIELD
Mixture of low grasses and sedges that act as a groundcover beneath taller species. They reduce maintenance by becoming a “green mulch”

E EPHEMERAL
Short-lived spring ephemerals which provide interest at the onset of spring and then enter dormancy as warm-season species emerge.
Traditional Planting Design

<table>
<thead>
<tr>
<th>SPACING &quot;D&quot;</th>
<th>ROW &quot;A&quot;</th>
<th>PLANTS PER SQ. FT</th>
</tr>
</thead>
<tbody>
<tr>
<td>24&quot; O.C.</td>
<td>20.8&quot;</td>
<td>0.29</td>
</tr>
<tr>
<td>18&quot; O.C.</td>
<td>15.6&quot;</td>
<td>0.50</td>
</tr>
<tr>
<td>12&quot; O.C.</td>
<td>10.4&quot;</td>
<td>1.15</td>
</tr>
<tr>
<td>10&quot; O.C.</td>
<td>8.7&quot;</td>
<td>1.66</td>
</tr>
<tr>
<td>8&quot; O.C.</td>
<td>6.9&quot;</td>
<td>2.60</td>
</tr>
<tr>
<td>6&quot; O.C.</td>
<td>5.2&quot;</td>
<td>4.00</td>
</tr>
</tbody>
</table>

NOTES:
- PLANT QUANTITIES WERE DETERMINED BY MULTIPLYING AREA (SQ. FT.) BY NUMBER OF PLANTS PER SQ. FT. FOR REQUIRED SPACING
- QUANTITY OF PLANTS AND SPACING AS NOTED IN PLANTING SCHEDULE

FINISHED GRADE

SEE PLAN FOR SPACING

SET PLANT ENTIRELY IN PLANTING SOIL MIX. TOP OF ROOT MASS SHALL BE AT FINISH GRADE

2" LEAF MULCH, PLACED AFTER PLANTING

POTTED PERENNIAL / ORNAMENTAL GRASS PLANT

GC AND PERENNIAL SOIL

COMPACTED SUBGRADE

[ 5 ] PERENNIAL PLANTING

1/2" = 1'-0"
<table>
<thead>
<tr>
<th>QTY</th>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>SIZE</th>
<th>SPACING</th>
<th>DETAIL</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>TREES</strong></td>
<td></td>
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<tr>
<td></td>
<td>CC 2 Cercis canadensis</td>
<td>Eastern Redbud</td>
<td>2&quot;</td>
<td>Cal. As Shown</td>
<td>FULL, DENSE, MATCHED SPECIMEN</td>
<td></td>
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<tr>
<td></td>
<td>BN 1 Betula nigra  'Cully'</td>
<td>Heritage River Birch (multi)</td>
<td>2.5&quot;</td>
<td>Cal. As Shown</td>
<td>FULL, DENSE, MATCHED SPECIMEN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TD 4 Taxodium distichum  'Shawnee Brave'</td>
<td>Bald Cypress</td>
<td>2.5&quot;</td>
<td>Cal. As Shown</td>
<td>FULL, DENSE, MATCHED SPECIMEN</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>SHRUBS</strong></td>
<td></td>
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<tr>
<td></td>
<td>CS 5 Cornus Sericea  'Farrow'</td>
<td>Arctic Fire Red Twig Dogwood #5</td>
<td>36&quot;</td>
<td>O.C.</td>
<td>FULL, DENSE, MATCHED SPECIMEN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RA 65 Rhus aromatica  'Gro-low'</td>
<td>Grow Low Fragrant Sumac</td>
<td>48&quot;</td>
<td>O.C.</td>
<td>FULL, DENSE, MATCHED SPECIMEN</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>GRASSES/SEDGES</strong> (5 recommended)</td>
<td></td>
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<tr>
<td></td>
<td>CM 54 Carex muskingumensis</td>
<td>Palm Sedge</td>
<td>SP4</td>
<td>18&quot;</td>
<td>FULL, DENSE, MATCHED SPECIMEN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CV 65 Carex vulpinodea</td>
<td>Fox Sedge</td>
<td>SP4</td>
<td>18&quot;</td>
<td>FULL, DENSE, MATCHED SPECIMEN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JE 280 Juncus effusus</td>
<td>Common Rush</td>
<td>SP4</td>
<td>18&quot;</td>
<td>FULL, DENSE, MATCHED SPECIMEN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PV 13 Panicum virgatum  'Shenandoah'</td>
<td>Switchgrass</td>
<td>#3</td>
<td>30&quot;</td>
<td>FULL, DENSE, MATCHED SPECIMEN</td>
<td></td>
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<tr>
<td></td>
<td><strong>FORBES</strong> (8 recommended)</td>
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<tr>
<td></td>
<td>AI 20 Amsonia illustris</td>
<td>Shining Bluestar</td>
<td>SP4</td>
<td>30&quot;</td>
<td>FULL, DENSE, MATCHED SPECIMEN</td>
<td></td>
</tr>
</tbody>
</table>

**Diagram:**
- The diagram shows the layout of various plants, including trees, shrubs, grasses, and forbes, arranged in a specific pattern.

**Real Image:**
- The image shows a real-world example of the planting schedule, with various plants such as Rhus, Carex, Juncus, Pycanthemum, and Iris, arranged according to the planting schedule.
Monarda

Bouteloua ‘Blonde Ambition’
Symphyotrichum novae-angliae

'Stake'

Symphyotrichum novae-angliae

'Purple Dome'
Seeded Prairie Restoration
Case Study:
River Des Peres Greenway

- Installed 2014
- Design by Arcturis
- Traditional planting design in bioretention areas
Case Study: Healing Garden

- Goal to increase diversity of native plant species
- Each plant drawn to-scale at maturity
- Naturalistic design concept
- Designed and installed in 2017
Lessons Learned:

- Documentation strategy limited to small projects
- Complicated installation
- A naturalistic design might be installed in a “naturalistic” manner
Back to the Drawing Board

- Scalable
- Simple
- Layered
- Compatible with standard planting conventions
Graphic Symbols

- Establish layers within plantings
- Species that evolved to compete in a community (tall/leggy)
- Species that are not ideal for massing arrangements
- Short-lived

Hatch Regions

- Clumping forming / spreading
- Highly social species
- Mixes or blends to increase diversity
• Center for Nursing and Health Sciences “AH” under construction (2018-2019)

• Building A & B to be removed (2019-2020)
• Create new campus entry from Oakland Avenue

• Leadership in Energy and Environmental Design (LEED) silver rating
PLANTING PLAN

MIX 1 - ENTRY
MIX 2 - ACCENT
MIX 3 - BIORETENTION BASIN
MIX 4 - BIORETENTION SHORT

A
Acer Rubrum 'Bowhall'

B
Juniperus virginiana 'Grey Owl'

C
Rudbeckia fulgida 'Early Bird Gold'

STLCCFP
CENTER FOR NURSING
& HEALTH SCIENCES
COMMUNITY BASED PLANTING DESIGN

The strategy of community based planting design is to increase diversity and seasonality while decreasing maintenance. It achieves this by mimicking the layering and distribution of plant material observed in nature. A base layer of low-growing groundcover plants acts as weed suppression and “green mulch” while setting the field for dynamic species. These dynamic accents are stand-out stars with overlapping bloom periods to ensure consistent seasonal interest. Finally, the structural plant material utilizes verticality to control viewsheds and call attention to the dynamic layer of plant material.

The matrix approach to planting design will create a layered and tactile experience for garden visitors to enjoy in all seasons.

**STRUCTURAL**
Includes trees, shrubs, and tall perennials. These plants form framework of the planting design as dominant vertical elements.

**DYNAMIC**
Perennials or low-growing shrubs that stand out individually during their bloom period and otherwise act as companion plants. Typically with attractive foliage color or texture.

**FIELD**
Mixture of low grasses and sedges that act as a groundcover beneath taller species. They reduce maintenance by becoming a “green mulch”

**EPHEMERAL**
Short-lived spring ephemerals which provide interest at the onset of spring and then enter dormancy as warm-season species emerge.
1. Veri cons any
2. Veri sew as-b before
3. All with ordi
4. Coord water impr
5. All with repla
6. All with and
7. All with other
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10. Repa draw seed
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12. All plan
13. Prov of al shru
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15. Keep
16. Plan for a arch to b
17. The spac quan
18. Ther appr shal subm unle own
19. Plan sign line trian
20. Refer...
Carex praegracilis

Rudbeckia fulgida ‘Early Bird Gold’

Juniperus virginiana ‘Grey Owl’
Asclepias tuberosa
Silphium terebinthinaceum
Amsonia ciliata var. filifolia
Coreopsis lanceolata

PLANTING MIXES TO BE INSTALLED ACCORDING TO THE PROPORTIONS INDICATED, USING TRIANGULAR SPACING. INSTALL IN CLUSTERS OF 3 TO 9 PLANTS, RANDOMLY DISTRIBUTED.
1. Verify all dimensions and site conditions prior to starting construction and immediately notify the landscape architect of any discrepancies.

2. Verify the location of all utilities including sanitary and storm sewer and roof drains prior to beginning construction. Obtain as-built plan of utilities and review with landscape architect before beginning planting.

3. All work performed shall be in compliance with the contract documents and with all applicable codes, standards and ordinances.

4. Coordinate locations of new plantings with utilities, waterproofing, site lighting, irrigation, and other proposed improvements. Do not plant trees under overhead power.

5. All plants shall be guaranteed for one full year from the substantial completion of the landscape contract at full replacement value including labor to replace plant materials.

6. All plant material shall be of specimen quality and of the size and type specified in the plant schedule.
Modular Planting - Dan Pearson
Tokachi Millennium Forest, Japan

Aster divaricatus
Cimicifuga racemosa var. confifolia
Euphorbia griffithii “Fireglow”
Rodgersia podophylla
Sanguisorba tenuifolia ‘Alba’
Peonia: P. obovata 60%, P. milkowskisii 40%
# Structural Species

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Cultivar</th>
<th>Common Name</th>
<th>Seasonal Color and Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silphium terebinthinaceum</td>
<td>Prairie Dock</td>
<td></td>
<td></td>
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<tr>
<td>Amsonia illustris</td>
<td>Shining Blue Star</td>
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<td></td>
</tr>
</tbody>
</table>

# Dynamic/Design Species

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Cultivar</th>
<th>Common Name</th>
<th>Seasonal Color and Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquilegia canadensis</td>
<td>Columbine</td>
<td></td>
<td></td>
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<tr>
<td>Zizia aurea</td>
<td>Golden Alexander</td>
<td></td>
<td></td>
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<tr>
<td>Iris virginica var. shrevei</td>
<td>Southern blueflag</td>
<td></td>
<td></td>
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<tr>
<td>Echinacea pallida</td>
<td>Glade Coneflower</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asclepias tuberosa</td>
<td>Butterfly Milkweed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pycnanthemum tenufolium</td>
<td>Slender Mountain Mint</td>
<td></td>
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<tr>
<td>Filipendula rubra</td>
<td>Queen of the Prairie</td>
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<tr>
<td>Solidago speciosa</td>
<td>Showy Goldenrod</td>
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<tr>
<td>Symphyotrichum novae-angliae</td>
<td>Purple Dome</td>
<td>Purple Dome New England Aster</td>
<td></td>
</tr>
<tr>
<td>Symphyotrichum oblongifolium</td>
<td>October Skies</td>
<td>Aromatic aster</td>
<td></td>
</tr>
<tr>
<td>Vernonia lettermanii</td>
<td>Iron Butterfly</td>
<td>Iron Butterfly ironweed</td>
<td></td>
</tr>
</tbody>
</table>

# Field/Filler Species

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Cultivar</th>
<th>Common Name</th>
<th>Seasonal Color and Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antennaria neglecta</td>
<td>Prairie Pussyles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carex praegracilis</td>
<td>Tollway Sedge</td>
<td></td>
<td></td>
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<tr>
<td>Carex radiata</td>
<td>Eastern Star Sedge</td>
<td></td>
<td></td>
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<tr>
<td>Conoclinium coelestinum</td>
<td>Blue Mistflower</td>
<td></td>
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<tr>
<td>Fragaria virginiana</td>
<td>Wild Strawberry</td>
<td></td>
<td></td>
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<tr>
<td>Packera aurea</td>
<td>Roundleaf Ragwort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packera obovata</td>
<td>Golden Groundsel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Module A1
12" spacing
48 plants

Module A2
12" spacing
48 plants

Module A3
12" spacing
48 plants

Module M1
12" spacing
36 plants

Module S1
12" spacing
48 plants

Module M2
12" spacing
36 plants

1 PLANTING MODULE LAYOUT
1" = 10'

Module layout and plant spacing diagram.
THANK YOU