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Redesign of the Rose Garden Terminus Garden

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An independent study project report by The Charles C. Holman Endowed Rose and Flower Garden Intern (2015-2016)

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Abstract

The Rose Garden Axis is a strong formal element in the Morris Arboretum. My project proposes to redesign the final garden along the Rose Garden Axis, whose history included many transitions and redesigns and whose purpose essentially is to be a transition area from a formal axis to the less formal arboretum. A plant palette of glaucous colors to complement the *Hamamelis* collection would soften the visitor experience during this transition. This report includes the process: site history, site analysis, soil analysis, consultation with the Morris Arboretum's Executive Director, the Horticulture Committee Chair, the Curator, the Director of Education and Visitor Experience, and Chief Horticulturist, as well as reading former Intern Reports. Throughout this process, I have come to a richer understanding of public horticulture and of the Morris Arboretum of the University of Pennsylvania.

Disciplines

Horticulture

Comments

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Author: Maya Czulewicz
The Charles S. Holman Endowed Rose and Flower Garden Intern

Date: April 2016

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The Rose Garden Axis is a strong formal element in the Morris Arboretum. My project proposes to redesign the final garden along the Rose Garden Axis, whose history included many transitions and redesigns and whose purpose essentially is to be a transition area from a formal axis to the less formal arboretum. A plant palette of glaucous colors to complement the *Hamamelis* collection would soften the visitor experience during this transition. This report includes the process: site history, site analysis, soil analysis, consultation with the Morris Arboretum's Executive Director, the Horticulture Committee Chair, the Curator, the Director of Education and Visitor Experience, and Chief Horticulturist, as well as reading former Intern Reports. Throughout this process, I have come to a richer understanding of public horticulture and of the Morris Arboretum of the University of Pennsylvania.

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METHODS

INSPIRATION

This project began with my exposure to the site. Weekly mowing of the Rose Garden and its surroundings brought me in regular contact with this project site that, otherwise, I rarely ever worked in. The space intrigued me. I wanted to learn more about its history. I read former intern reports. I talked with Robert Gutowski, Director of Education and Visitor Experience and I looked at Archives, both hard copy and online.

FORMER INTERN PROJECTS

The 2004 Rose Garden Intern, Cynthia Durfee, wrote about the history of the garden “*along the south edge of the greenhouse complex along the drive.*”¹ The original Dwarf Conifer Bed was planted in 1965 under the Arboretum direction of Dr. John M. Fogg, Jr., when the Morris Arboretum planted according to taxon. Durfee added that in the second half of the 1970s, a cactus garden was in place “*just east of the dwarf conifer bed, below the Wisteria Walk*”²—the current project site—under the management of Gordon A. Brandes. Durfee explained the impetus for the dwarf conifer plantings, was to “*block the view [of] the Medicinal House yet preserve [and] frame views ... of the Wisteria Walk [and] the Sculpture Garden.*”³

The following year, Rose Garden Intern Lea Jozifkova redesigned the highly trafficked, high priority, steep beds that welcome visitors and tour groups just before they enter the Rose Garden. She wrote of the history:⁴ that in 1983, the Parking Lot was installed and the entrance on Northwestern Avenue was created during the time of Director, Dr. William M. Klein, Jr. Lea’s plant list was for a densely-planted year-round garden that not only heightens the esthetic of the area but also solves problems of weed-maintenance and erosion runoff. The plant list for the current project site shares these goals; both sites are appropriate pause points for tour groups.

Two years later, in 2007, Heather Hughes completed her intern project entitled, “The Wisteria Walk: A Renovation and Rejuvenation.” Hughes detailed the historical records on this space⁵. Before 1956, it was an intermediary area between the public Rose Garden and the staff’s work zone, the “Lower Nursery.” Under the direction of Dr. John M. Fogg, Jr. (Director 1954-1967), this small area became an attractive space, providing a sense of place. Hughes wrote how the allée and “*transition areas*” function to move visitors and also to “*make the gardens feel connected*”⁶—both to connect and to evoke connection—that is, to fully manifest connection. “*Located between the Rose Garden and Sculpture Garden, the Wisteria Walk serves the purpose of taking the Arboretum visitor from a very formal garden setting to a more naturalized area.*”⁷ In between the Wisteria Walk and the Sculpture Garden are two spaces: the Dwarf Conifer Bed, revitalized in 2004, and the equally transitional space of the current project site.

Hughes notes the architectural uniformity between the black iron trellis in the Wisteria Walk and the black iron structures in the Rose Garden.⁸ Hughes highlights the design feature of the trelliswork window panels which “*create framed views of different parts of the garden*”⁹ and also screen out the greenhouse buildings. This functional allée provides vignettes, acts as a visual barrier, and connects visitors from points A to B; the framed views “*help the Arboretum visitor*

experience the Wisteria Walk as a garden in and of itself..., creating a 'sense of place' ... not only as a transition corridor, but also as a place that the Arboretum visitor can truly spend some time in, rather than just [walk] through."¹⁰ The current project site functions similarly and has the same potential as the Wisteria Walk.

Hughes details a vibrant plant list that:

will not only create interest in winter months, they will also help connect the Wisteria Walk to the Dwarf Conifer Garden, which is located on the lower end of the Wisteria Walk... By implementing this new design, the Wisteria Walk will finally be able to mature into a visually stunning garden that will not only connect the Rose Garden to the Dwarf Conifer Garden and screen Arboretum visitors from the greenhouse buildings, but will hold its own as a design in the landscape and enhance the experience of all who come to enjoy the gardens...¹¹

The current project site serves the same purpose as the Wisteria Walk in these ways. Hughes articulates how the marginal space was able to contribute to the Arboretum's continuity, to be a unique, independent garden room, and to use plants and structures to block, preserve, and frame views while creating connection.¹²

In 2008, the next year, Clara Feldmanstern completed her intern project entitled "Extension of the Dwarf Conifer Collection." In her historical tour around her site, Feldmanstern refers to the 1950s collection of *Viburnums*, enriched in 1963 by the Wherry *Phlox* trial garden, and the lower stairway entrance that was flanked by *Pieris* and *Hypericum*.¹³ It was Feldmanstern whose language was helpful in understanding this garden space. "*The Dwarf Conifer Extension... terminates the Rose Garden Axis, creating a continuous path of interest from the Rose Garden to the Sculpture Garden.*"¹⁴ Here was my first introduction to "the Rose Garden Axis,"¹⁵ of which my project site is a part. "[Her garden sought to] *add more significance to this area [by] providing aesthetic value to the slope that previously looked abandoned. Moreover, this garden will provide a continuum along the path and connect this area to the sculpture garden and the conifers in the distance across the stream.*"¹⁶ I argue that the Dwarf Conifer Extension garden is not the true terminus to the Rose Garden Axis; instead the garden yet aligned with the axis is the terminus, the current project site.

An axis is a design principle, a line used to align and organize elements. When elements are arranged around an axis, the design feels ordered, stable, comfortable, and approachable. When we encounter something linear, such as an axis, we might organically follow the line in a direction. Lines prompt movement and interactions. The direction of movement depends on the end-points. A defined end-point signals a place to start or stop. The Rose Garden Axis is one formal, organizing line of direction, which begins at the Donors' Circle and terminates at the current project site, allowing visitors to transition from formality to the informal space of champion trees and babbling creeks, winding pathways, and sculptures.

PROCESS

With Chief Horticulturist, Vince Marrocco, we drew lines of movement and visibility. We determined that the space would benefit from a grounding stone and/or an object to manifest the connection to the Rose Garden Axis and to essentially be the terminus. The end of the rectilinear formality of the Rose Garden, Herb Garden, and Wisteria Walk is here in this space; this space is also the vista to the rest of the open, winding, vast Arboretum. This transition space needed attention, subtlety, elegant planting, reworking of the land, shifting of the bench, and clarification of its use.

We met with Board Member *par excellence*, Nina Schneider, who provided fabulous plant palette ideas. Silvers and whites in the beds would soften the harshness of the pointy wall and be ecologically appropriate in the full western/southern sun exposure. Removal of the overgrown *Cedrus atlantica* 'Glauca Pendula' would open up the vista, refine the focus of the Dwarf Conifer Slope's intentional plantings, and allow for an opportunity to integrate the Rose Garden Axis terminus with the Dwarf Conifer Slope and beyond. We opted for a hedge planting of low-growing *Cornus alba* 'Red Gnome.' Nina Schneider encouraged us to turn the triangular space into an ellipse, to soften the edges and balance it.

Meeting with the Horticulture Committee was helpful. I proposed my design to soften the triangular space into an ellipse. I asked for guidance and suggestions: what to place as the terminus? Alan Miller mentioned the footprint of the terminus object in the space and its proportion to the space. Alan Miller also explained the Western concept of intentionality and formality in design, whereas a more Eastern style provides elements of surprise and mystery. There must be a balance struck between the two styles in this intermediary space.

Nina Schneider seconded the motion for an urn. Tony Aiello mentioned a plinth located in a corner of the Arboretum, unused, available, but very difficult to move, and also rather wide. The Horticulture Committee was pleased to contribute to this process. I was advised to plant up the beds but to pause on the terminus.

SITE ANALYSIS

Three beds: South, North, West

Southern Bed: 22.5' x 11' (with percolation test)

Northern Bed: 13' x 14' (closest to *Quercus macrocarpa*)

Western Bed: 13' x 28' (with *Acer palmatum* 'Katsura')

Existing trees or shrubs to keep and design around:

Hamamelis x intermedia 'Orange Beauty' (in Southern Bed)

Hamamelis x intermedia 'Georges' (in Southern Bed)

Hamamelis japonica 'Canary Yellow' (in Northern Bed)

Hydrangea arborescens 'Annabelle': to move under *Halesia diptera*.

Some *Hydrangea arborescens* ssp. *Radiata*

Existing plants to move:

Chamaecyparis obtusa ‘Golden Whorl’: to move closer to service road, near Greenhouse Basement.

Existing plants to deaccession and remove:

Layered *Hydrangea arborescens* ssp. *radiata*

Buxus sempervirens ‘Pier Cove’

Cedrus atlantica ‘Glauca Pendula’

Wind exposure: North, Westerly winds

Sun exposure: sloped beds face west, southwest.

Access points (3): steps to/from Wisteria Walk, steps to/from Sculpture Garden, turf path to/from Medicinal House.

Views: More expansive when looking westward to Sculpture Garden, *Stickworks*; more mysterious when looking eastward. This site is used as a vista, an overlook place, a pausing point. It is a mezzanine and a terrace in between Wisteria Walk and the lower level Sculpture Garden. It is an interface between public garden space and private work space. It is a two-way hallway garden.

Soil Test: returned from Penn State 1/15/16

Soil pH: 7.4 considered “optimum”; recommendation: use acid peat moss as the organic matter source, add one inch to soil.

Phosphate P₂O₅: Below Optimum/Optimum; 272 lb of P/A.

Potash/Potassium K₂O: Below Optimum; K at 1.6% saturation of the CEC. K⁺ is a positively charged cation. The soil in this site has a CEC of 19.1 (good).

Magnesium MgO: Above Optimum: 3.8 meq/100g; Mg is 19.7% saturation of the CEC.

Calcium: CaO: above optimum: Ca at 15.1; Ca is at 78.7% saturation of the CEC. High calcium level in this soil indicates the probable presence of soluble calcium.

Soil pH mid-range Optimum; no amendments recommended. Penn State did not recommend adding Calcitic Limestone, Magnesium, or Gypsum (CaSO₄) to the beds. Penn State did recommend adding Nitrogen, Phosphate, and Potassium: 1.75 lbs per 100 square feet of 10-10-10. Nitrogen in N form, Phosphate in P₂O₅ form, and potash in K₂O form. The Cation Exchange Capacity CEC is the capacity of the soil to hold positively charged cation such as K⁺, Mg⁺⁺ and Ca⁺⁺. For soils with pH greater than 7 (this site’s soil pH is 7.4), Penn State recommends using acidic peat moss as an organic matter source and incorporating all fertilizer 6-8 inches into the soil prior to planting.

When I presented my project proposal to the Arboretum Staff and the Volunteers, Plant Propagator Shelley Dillard suggested that I install plants amenable to the alkaline soil instead of amending the soil to lower the pH.

SITE HISTORY

The Morris Arboretum as a whole is considered an American, Victorian eclectic garden. “*Specimen trees, formal garden elements, open lawns, and European and Japanese influences were unified within the classic setting of an English romantic landscape.*”¹⁷ This project site is original to the 1887 Acquisition with Compton. During the Estate Era, as depicted on a 1909 map, the current project site was a flower bed framed by grass and red currant shrubs.

In 1963 to 1964, under the directorship of Dr. John M. Fogg, Jr., the Wherry *Phlox* trial garden/Scree garden was installed. University of Pennsylvania professors used these beds for educational purposes.

The Mission of Morris Arboretum is important to consider as we look to this site’s history and project its future.

The Morris Arboretum of the University of Pennsylvania is a historic public garden and educational institution. It promotes an understanding of the relationship between plants, people and place through programs that integrate science, art, and the humanities.

The Arboretum conducts four major activities: education, research, outreach, and horticultural display. As the official Arboretum of the Commonwealth of Pennsylvania, the Morris Arboretum of the University of Pennsylvania provides research and outreach services to state agencies, community institutions and to citizens of Pennsylvania and beyond.

Vision for the Future: The Morris Arboretum of the University of Pennsylvania is an important resource for extending an appreciation of the world's ecology, and an understanding of the importance of plants to people, in a biological, cultural, historical and aesthetic context.

Through this intern project, I have developed my understanding of the relationship between plants, and people, and place in context of the Rose Garden Axis, its points of connection along pathways and terminals.

How best can visitors also understand the relationship between this place and other Arboretum gardens? Manifesting this garden’s relationship along the Rose Garden Axis with an object and with elegant plantings will engage visitors’ understanding of this relationship, thereby furthering the mission of the Arboretum.

Researching the history and observing plants in each place, each garden along the Rose Garden Axis and considering appropriate plants for this place in question for my project have been helpful toward the goal of enhancing the experience for the people who come to enjoy this place with each other and with plants in and around the space.

Perhaps here, also, there can be elegant interpretive signage with our Mission Statement. Perhaps here, tour guides can pause with their student groups, enjoy the vista, and discuss the

grove of dawn redwoods, *Metasequoia glyptostroboides*, along the East Brook; the guides could discuss the history of the terrace garden: from being a marginal zone for agricultural staff, to being a living laboratory for University of Pennsylvania botany professors, to being a project site for an intern, sandwiched between several successful intern project sites. Perhaps, in the long run, a blue slate circle at this terminus could mirror the Donor's Circle at the starting point at the entrance of the Rose Garden.

RESULTS

Plant List

Buxus 'Green Velvet'
Juniperus procumbens 'Nana' / *Juniperus horizontalis* 'Wiltonii'
Nepeta x faassenii 'Junior Walker'
Ajuga reptans 'Silver Beauty' or 'Blueberry Muffin'
Artemisia schmidtiana 'Powis Castle'
Carex oshimensis EverColor® 'Everest' or *Liriope muscari* 'Variegata'

If elaboration is necessary and/or possible:

Salvia x sylvestris 'Blue Hill'
Santolina chamaecyparissus 'Nana'
Carex flacca or *C. glauca*
Symphotrichum ericoides var. *ericoides* 'Snow Flurry'
Geranium sanguineum 'Album'
Helictotrichon sempervirens 'Saphirsprudel'
Festuca glauca 'Elijah Blue'/'Bolder Blue'
Phlox subulata 'Emerald Blue'

DISCUSSION

VISITOR EXPERIENCE

Spaces of transition may be uncomfortable; a garden room that requires visitors to shift their trajectory must guide visitors through the transition experience and reduce the discomfort. Movement off of a linear axis into free space may be confusing. The dense, glaucous, and soft-textured herbaceous plantings in this site soften the harsh experience. Rounded edges to the pathways prepare visitors for entry into the winding roads and footpaths of the English Park, the Japanese Gardens, and the Arboretum collection beyond the formal gardens. This is the junction garden where a curve off of a linear path obliges visitors to take their time as they blend into transition. Certainty, safety, and clarity of intention are also important components to a visitor's experience: fortified bed edges will prevent runoff into the Dwarf Conifer Slope and the grounded rounded stone.

OPTIONS

I presented many options to the Horticulture Committee, to fellow Morris Arboretum staff members, and to volunteers. Each suggestion seemed to inspire another idea for how to manifest the terminus of the Rose Garden Axis.

One suggestion is an in-ground stone design – perhaps evoking a rose form and/or a strobilus form. A circular shape would reflect back to the Donor’s Circle atop the Rose Garden Axis and also mark the intersection of the linear Rose Garden Axis and the circuitous Arboretum path. Multiple options include: flagstone pieces, a compass inscribed on flagstone, Sett or Belgian block, or a slab of granite. An urn or an oil jar at the center of the same aligned location would be another grand feature. Acting as a sculpture, the rounded shape would fit softly and elegantly into the space. Other options include: a vase d’Anduze or a planter on a plinth, a terra cotta container, a tall sculpture, such as an obelisk, an orb, or closed limestone or terra cotta vase, a wellhead acting as a sculptural grounding point. A tall piece, rising out of the central axis point would lift the eye to the *Metasequoia* grove beyond. Either a horizontal sundial or a dial plate with a gnomon, or an armillary sphere could stand on a plinth, column, or pedestal. To reference iron obelisks and trellises of the Rose Garden, an iron trellis of the Wisteria Walk could be incorporated in this site. Rose Garden Intern Heather Hughes, during her Wister Walk redesign, brought the formal iron trellis from the Rose Garden to the formal Wisteria allée. Perhaps the ironwork theme could be repeated in this current project site.

CONCLUSION

Taking a macroscopic view of the individual garden in context with the larger contiguous spaces was essential in conceptualizing the plan of this garden’s best use and design. On a small scale, determining that turf needed to be graded and knowing that beds needed to be planted with low-maintenance plants were simple enough decisions. Understanding the connection of this garden to the Rose Garden Axis and its transition to the freer-flowing areas of the Arboretum led to the resolve to round the garden room into an ellipse, to manifest the terminus with an aligned object (urn, container, or grounded stones), to move the bench into inviting shade, and to soften the planting beds with glaucous and silver foliage plants. Softening the space will soften the visitor experience in the Rose Garden Axis Terminus Garden.

NOTES

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