

Independent Study Project

Land 6910, Spring 2004
Prof. Allen Stovall
Jessten Murphy

H.B. Owens Resource Center
School of Environmental Design
Caldwell Hall
University of Georgia

Introduction:

In June of 2003 I received an internship in the UGA Grounds Department Office, which proved to be an invaluable learning opportunity. It has turned into a part time job that I have worked in conjunction with my class schedule. I have been able through this position to supplement my education with hands-on projects that have given me insight into the field that I would not have otherwise received. In the office I have worked under the direction of Dexter Adams, David Hale and Chris Swann, who have all been inspirational and have respectively all taught me a great deal.

The purpose of this project has been to document and compile all of the work that I have done in the office, for my own personal benefit, and hopefully it can be of some assistance to future students with a desire to receive hands-on experience during their educational career.

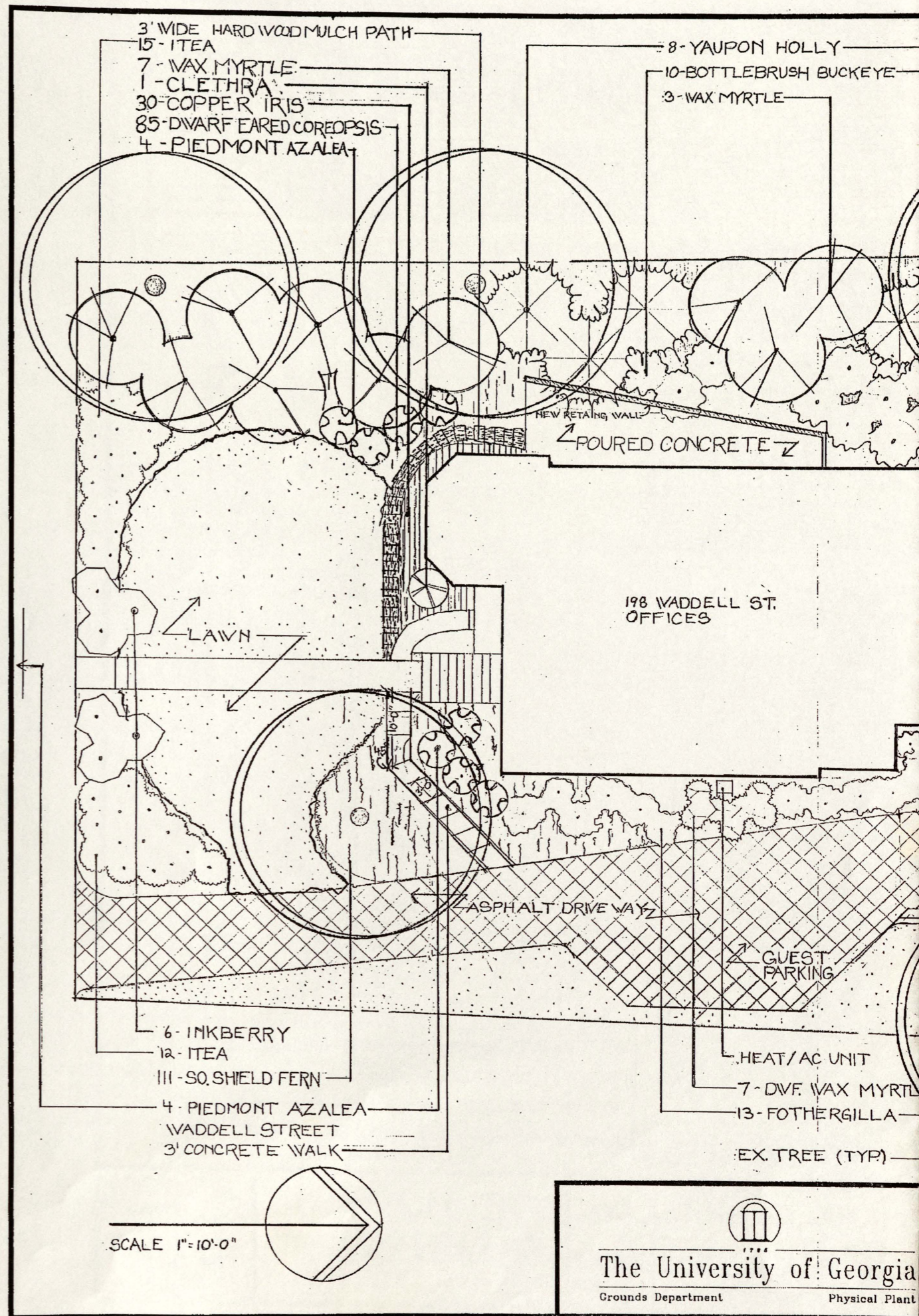
List of Projects (presented in order)

- Waddell Street Landscape
- Waddell Street Porous Parking Lot
- Muses Garden hardscape installation
- Lumpkin Street raingardens
- Grounds Department Office raingarden
- Surveys
- CCRC Remediation Plan
- East Campus Village Parking Deck
- Green Roof Planters
- Small Scale Plantings
- Miscellaneous Projects
- Food Science Contract
- Brumby/Russell Hall Site Improvements

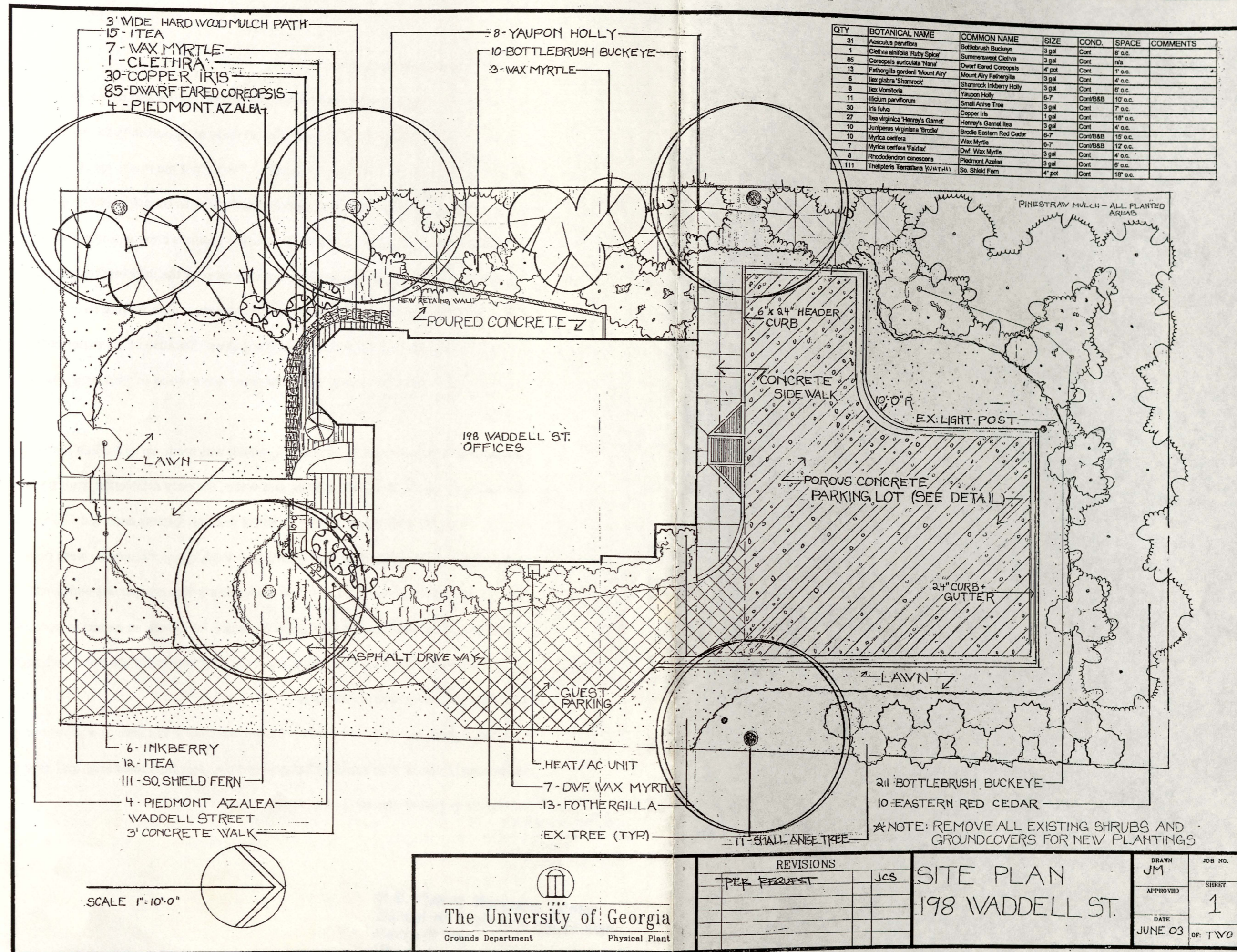
Waddell Street:

The first project that I was assigned was to design the landscape for 198 Waddell Street, which had been a residence until it was purchased by the University for additional office space. There were many lessons to be learned from this project, as it was the first planting plan and hardscape that I had ever designed that was actually going to be built. It consisted of a paved drive, a parking lot for six cars, and plants that would screen the views of adjacent low-income housing. The existing conditions on the site included flower beds, a storage shed, a large back yard, and a small deck for a picnic table, all which were to be removed.

Both the hardscape and the planting plan, though simple, proved to be great learning experiences, and I learned how much work can go into something as simple as a parking lot and a screen planting. The parking lot was to replace much of the lawn, and after trying to align it in a variety of ways, straight ahead became the most obvious solution. I made an argument against it, which was rejected, but I hope that my suggestion in some small way lead to the experiment with porous concrete (which I will get to later.) The screen plantings turned out to be very basic even though I added to them in early drawings. There was also an irrigation plan and a large retaining wall that were subsequently added to the project.



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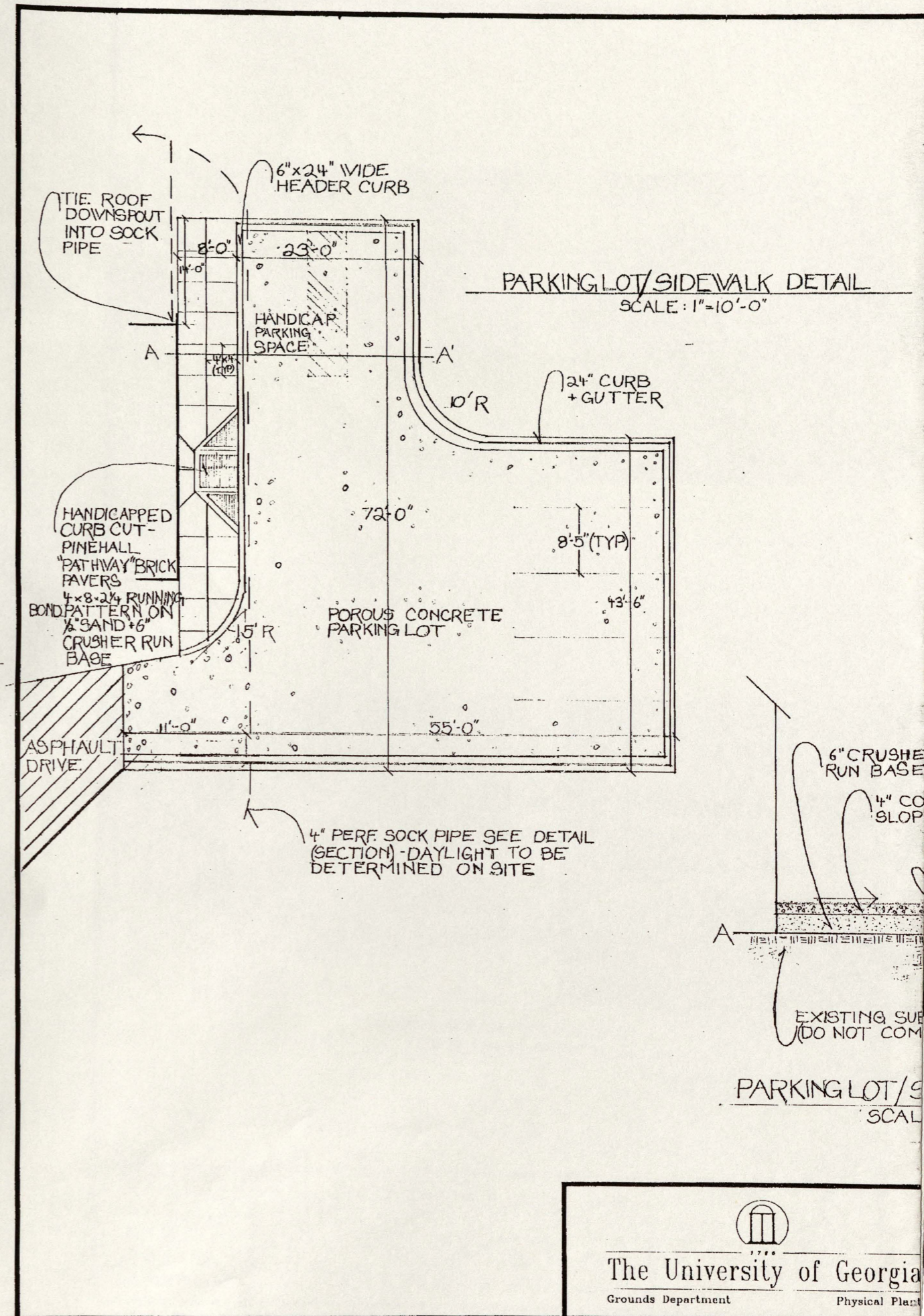


Porous Concrete Parking Lot:

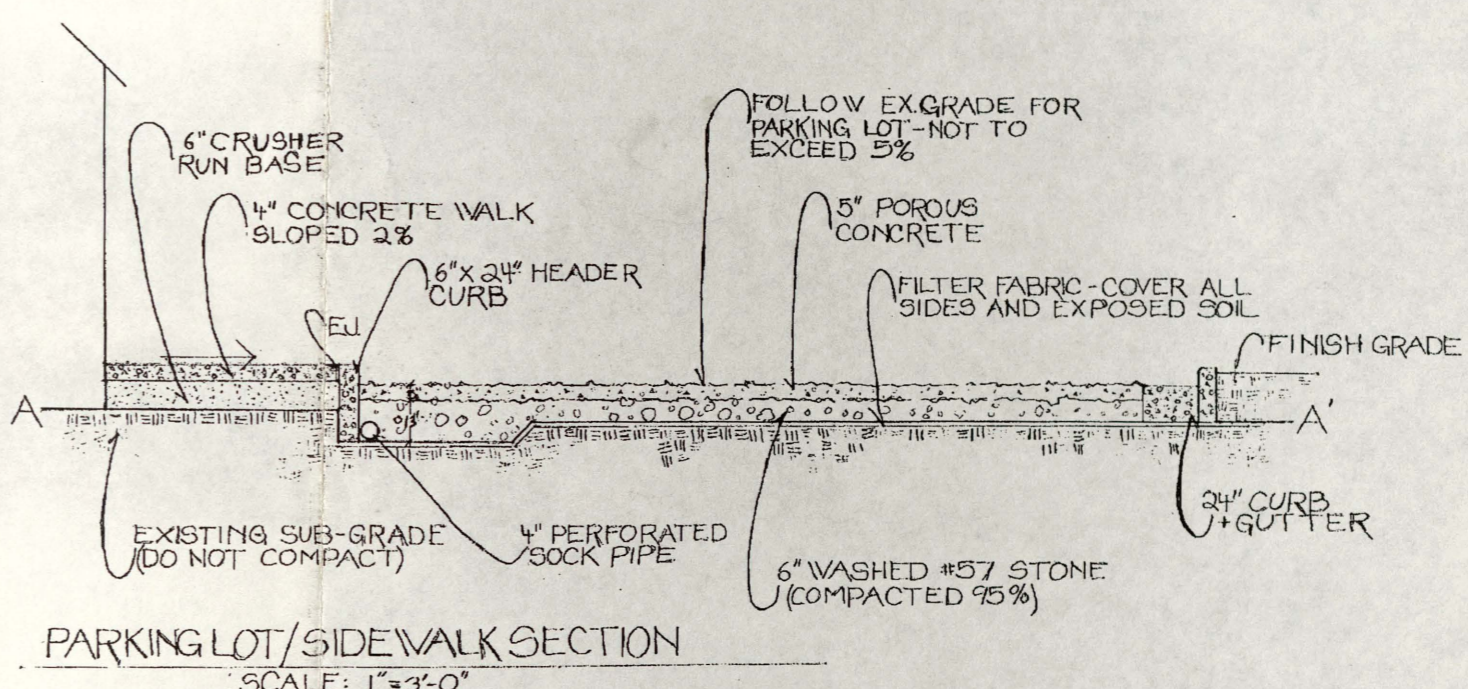
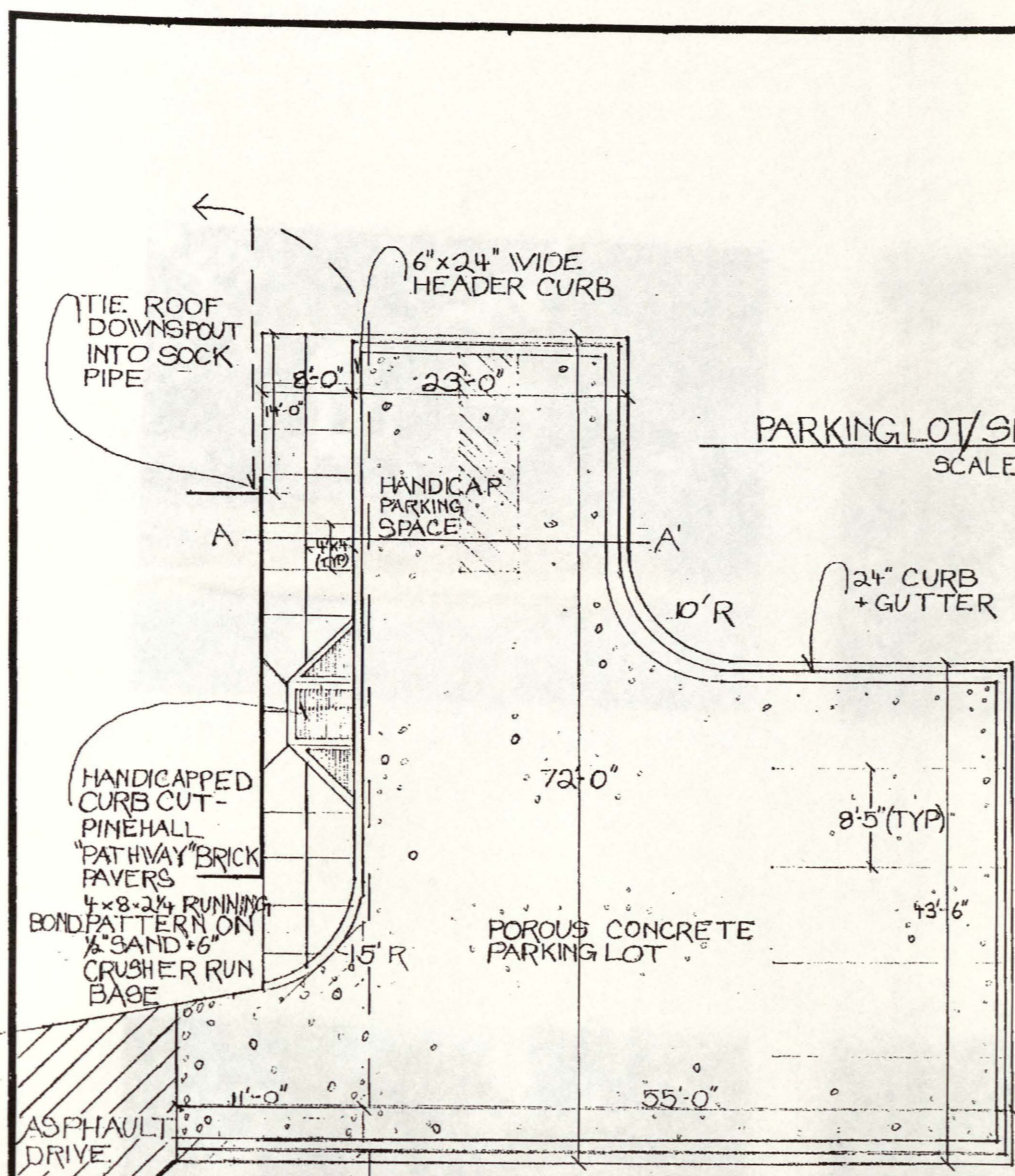
Because of the small scale of the Waddell Street parking lot and its out-of-the way location, Dexter decided that this would be an optimal opportunity to experiment with porous concrete for the first time on campus. Dexter put me in charge of research and development, which entailed figuring out exactly how to complete the project, including how to acquire, pour, finish, and present it to the grounds crew in a way that would convince them that it was worth while. Luckily most of the information came from Dan Brown a local expert in porous concrete, who was more than willing to come to Athens and give a slide show to the concrete finishing crew. Because of his experience, expertise, and insight the usually skeptical crew was excited to work with the new material.

The process began with the concrete mix, which was made up of a clean uniform aggregate (97 stone), Portland cement, and water, the only difference from traditional concrete being the absence of sand. The entire parking lot was enclosed in a traditional curb and gutter that acted as a form. Individual truckloads of concrete were poured, creating separate sections of the lot, and each section was compacted with a roller instead of smoothed with traditional finishing tools. Bruce Ferguson, an expert in porous pavements, oversaw the process and commented that it was for the most part successful, especially for a first time application.


This was a great learning opportunity because not only was I able to learn about the technology, I was able to see, first hand, how new ideas face resistance and how to attempt to overcome this type of hesitance.



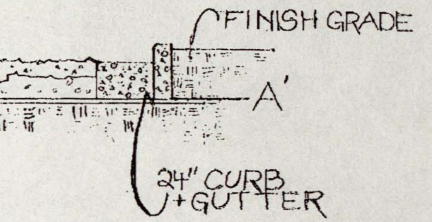
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Waddell Street

 The University of Georgia Grounds Department Physical Plant	REVISIONS _____ _____ _____	CONSTRUCTION DETAILS 198 WADDELL ST	DRAWN JM	JOB NO. _____
	APPROVED _____		SHEET 2	
			DATE AUG. 03	OF TWO

OR
ERIC - COVER ALL EXPOSED SOIL



ONE

CONSTRUCTION 3 WALL ST	DRAWN JM	JOB NO.
	APPROVED	SHEET 2
	DATE AUG, 03	OF: TVO



Waddell Street



in accordance with Islamic tradition.

Besides being a place of worship, the mosque also serves as a social gathering

The mosque is located at 2022 S. Milledge Ave., behind the BI-LO shopping center, and is open for prayer five times a day.

ed twice. He was moved midway through the fourth quarter and replaced by C.J. Leak, who guided Tennessee to a late touchdown on a

Bryant, who all but had an interception.

The touchdown cut the Georgia lead to 10-7.

Clausen appeared to have

in receiving, catching the passes for 51 yards.

Following a six-yard touchdown run by Michael Cooper to culminate a

MORE

► Game analysis, and worst of the de

THE RED & BLACK OCT 13, 2003 Pg. A-1

New porous pavement used in lot

By JENNIFER BURK
jburk@randb.com

Students walking through the new Northwest parking lot next semester shouldn't worry about getting soggy shoes on rainy days.

Few puddles will be in sight, thanks to porous pavement to be installed next month in the Baxter Street lot across from Lipscomb Hall, said University Architect Danny Sniff.

Sniff said the pavement allows water to drain through the pavement and sink through the ground "the way God originally intended."

Installing the porous pavement is part of a long-term plan to clean up Tanyard Creek, said Kevin Kirsche, an

architectural designer and part-time graduate student.

He said the use of porous pavement should minimize the effects of run-off pollution into the creek, where water from many University storm sewers flows.

While University Real Estate Foundation officials said they've yet to determine the cost of the paving project, Kirsche said porous pavement usually costs one and a half times more than regular asphalt.

He said the most important water quality issue is polluted surface run-off, and the use of porous pavement should minimize these effects.

The pavement is made out of pieces of gravel and concrete that

have holes, which allows the water to flow through — making the pavement resemble what Kirsche called a "big Rice Krispy treat."

Underneath the pavement is a layer of gravel that will prevent the ground from becoming saturated and flooding, Sniff said.

Because water flows through the pavement at a quick rate — quicker than through soil — Kirsche said there won't be water left in the pavement to freeze.

After the water seeps through the pavement, it will be directed to a "water garden" that he said will act as a filter before flowing into Tanyard Creek.

The water system also slows down

the force of water entering the creek, preventing erosion of the stream channel, Kirsche said.

Installing porous pavement in the Northwest lot is an experiment coordinated by University officials to see the effects of porous pavement on water quality.

About one-third of the lot will be regular pavement, and the run-off from that section will be directed to a separate water garden, where Kirsche said officials will monitor its quality.

Porous pavement also was installed in a six-car trial lot at the newly restored house at 198 Waddell St., the first site at the University to be paved with the material.

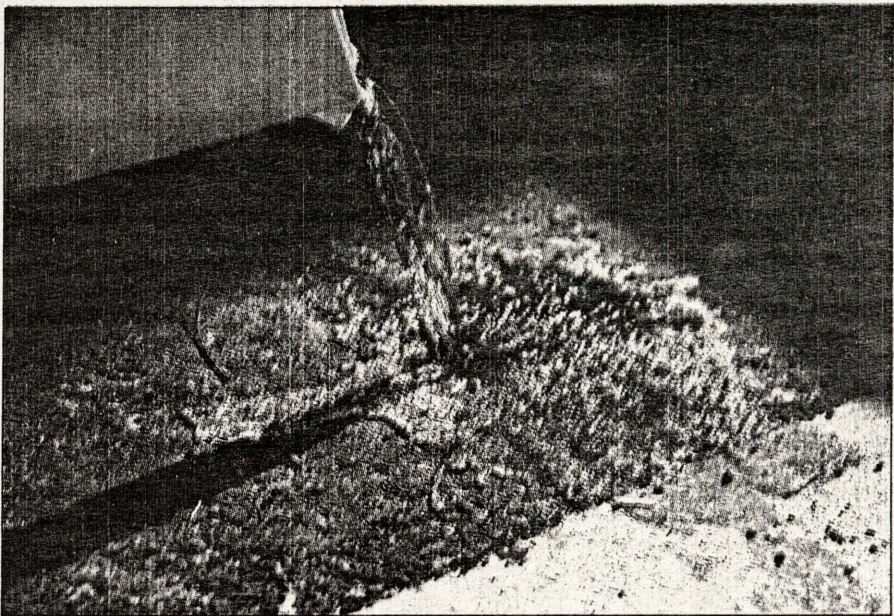
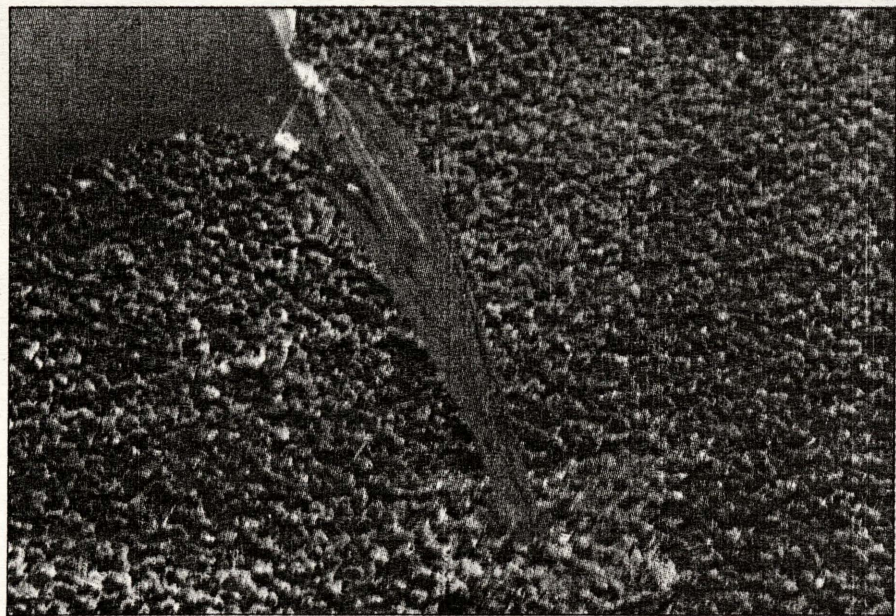


PHOTO ILLUSTRATION BY SHAUNA INTELISANO | THE RED & BLACK

▲ (Left) New porous pavement is being tested on a small lot on Waddell Street. The environmentally friendly pavement is designed to prevent an excess of run-off water. (Right) Regular pavement causes excess water run-off.

Greek organ for pr

By JUSTIN
jboron@ra

The chaplain Tau Alpha sororing a movern emphasize the of spirituality University's bers.

Chaplains of University frat sororities met the last few prayer and to Christian even said Amanda chaplain for Alpha.

"We're trying strength from she said.

Jones said chaplains to accountability chapter's spirit

In the past, various chapt in the past und cumstances, b they have ye themselves as group.

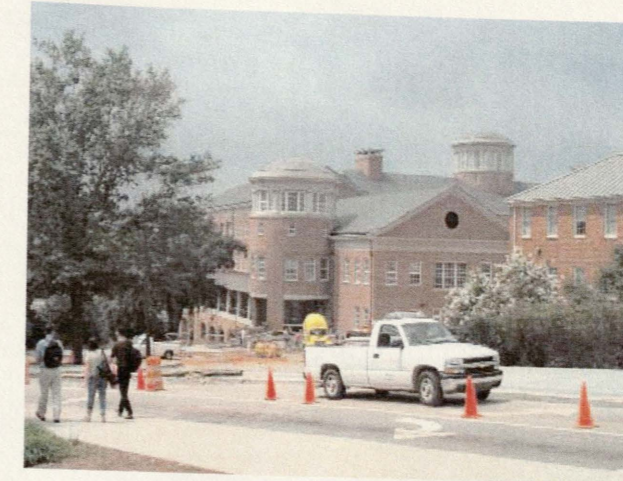
"Right now, chaplains," she that anyone v represent their attend the focused group.

► See PR

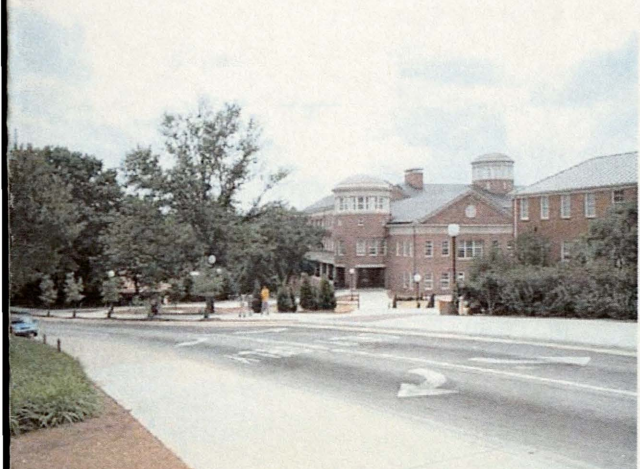
The Muse Garden: Phase 1

Aside from working in the office, I spent a large part of my internship working in the field on a large project with the Grounds Department's heavy equipment and concrete finishing crews. I worked as an assistant to Kimo Polster, the supervisor of the two shops, on the pedestrian connections and future memorial between Baldwin Street and the new Student Learning Center (SLC) building. This was an amazing experience as I was able to see exactly how drawings go from the office to the field and all that is entailed in the process. Because the work was all done in-house, the design was somewhat fluid and left many decisions up to Kimo, who has a BLA from UGA. Working on this project enabled me to see and understand much of the process of the profession that I would not have otherwise seen. Every decision made on the drafting table has real consequences and seeing them first hand was eye opening.

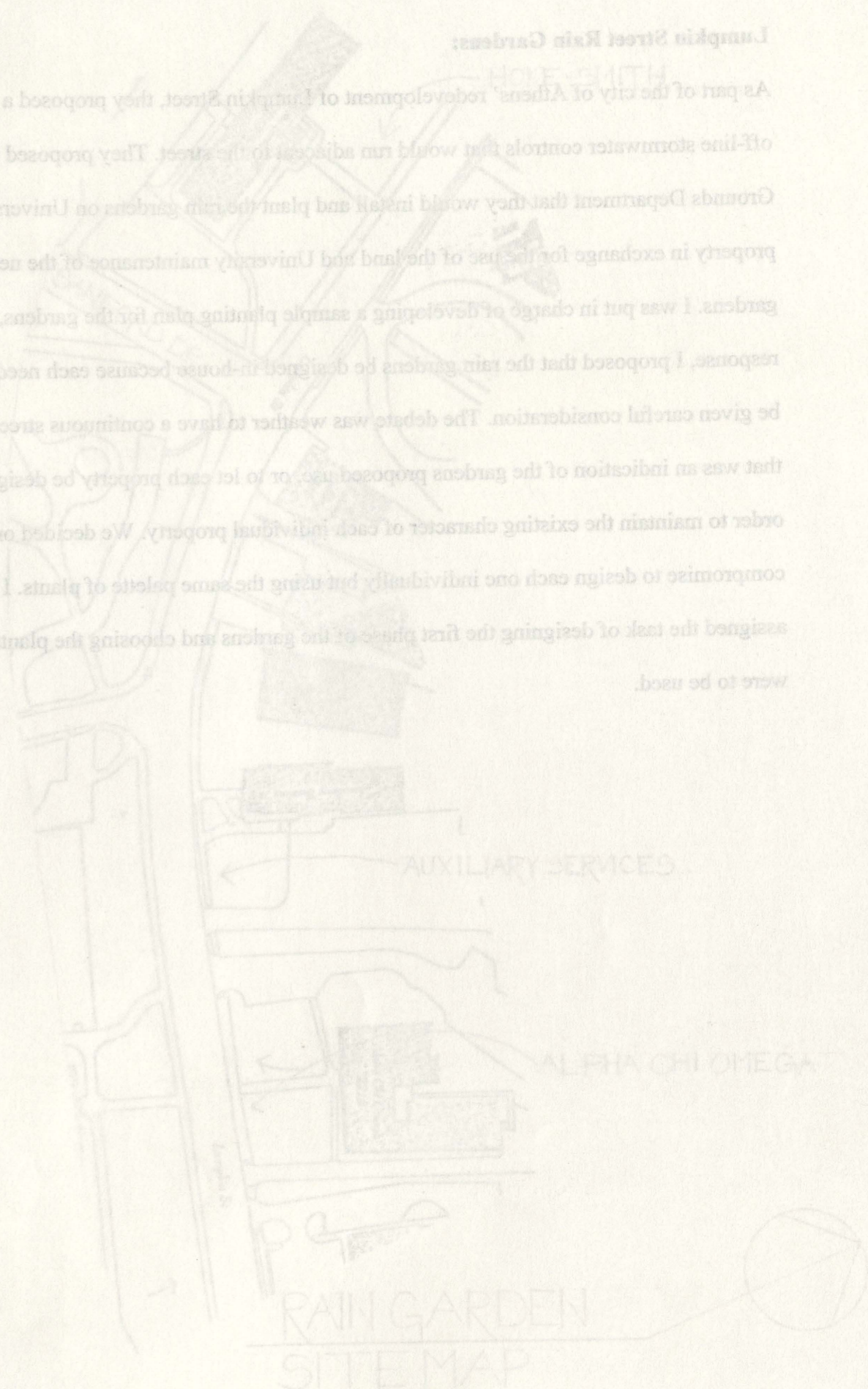
The project basically consisted of grading and demolition, lay out and pouring new sidewalks and steps. The project began by tearing out an old parking lot, laying new storm sewer pipes, and re-grading the site to meet the specifications from the plans. This was a very interesting aspect, as I was able to see the process and learned not to be squeamish about moving earth. In laying out the project I was able to see the relationship between scales, compasses, and pencils and tapes, surveying equipment, and stakes. I also realized a great respect for concrete, it is a material with infinite possibilities and potential, and skilled finishers are the key to its successful application.



Muses Garden

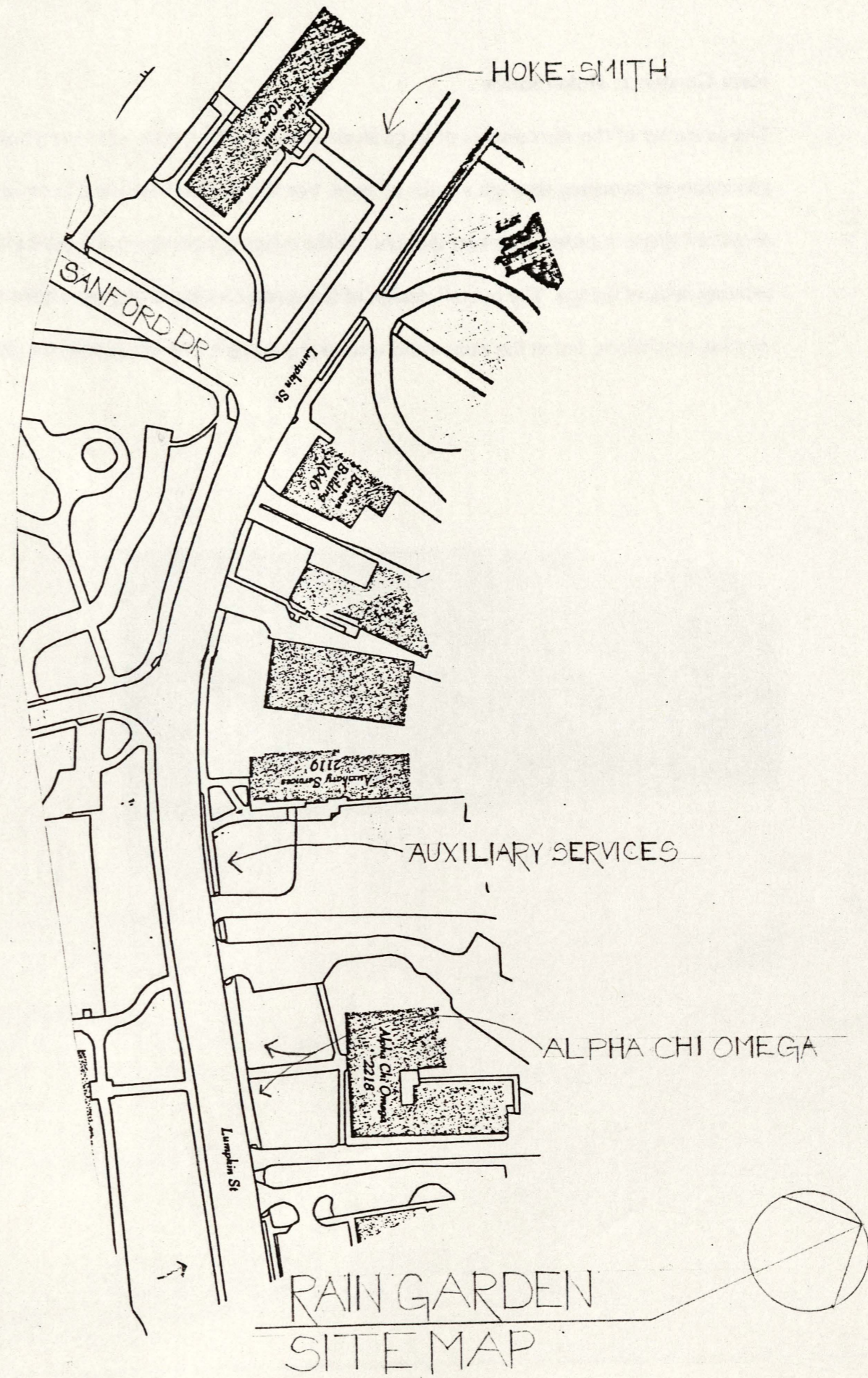


Lumpkin Street Rain Gardens:
 As part of the city of Athens' redevelopment of Lumpkin Street, they proposed a series of
 off-line stormwater controls that would run adjacent to the street. They proposed to the
 Grounds Department that they would install and plant the rain gardens on University
 property in exchange for the use of the land and University maintenance of the new
 gardens. I was put in charge of developing a sample planting plan for the gardens, and in
 response, I proposed that the rain gardens be designed in-house because each needed to
 be given careful consideration. The debate was whether to have a continuous streetscape
 that was an indication of the gardens proposed use, or to let each property be designed in
 order to maintain the existing character of each individual property. We decided on a
 compromise to design each one individually but using the same palette of plants. I was
 assigned the task of designing the first phase of the gardens and choosing the plants that
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Rain Garden 1: Hoke-Smith

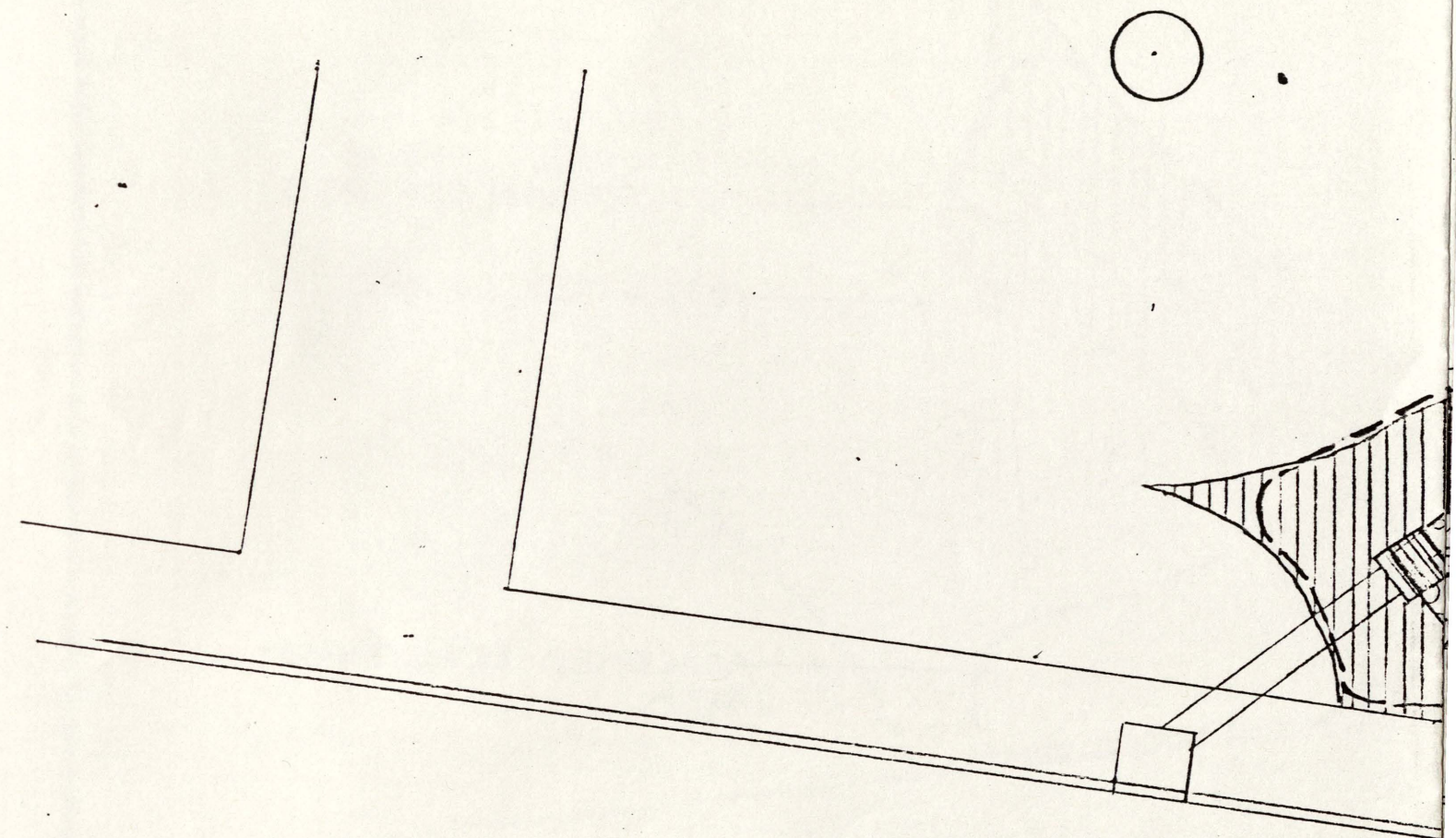
The character of the site consists of large shade trees arching over massive beds of groundcover sweeping through swaths of lawn. For this garden I first had to realign the proposed shape in order to protect the roots of the existing trees and to fit within the existing beds of liriopce. The overall design of the garden is simple and fits within the existing conditions, but at the same time accents the project with shade tolerant plants.



HOKE SMITH

PLANT LIST

QTY	BOTANICAL NAME
190	Chasmanthium latifol
600	Liriope muscari 'Big E



BIORETENTION AREA 1

SCALE: 1"=10'-0"

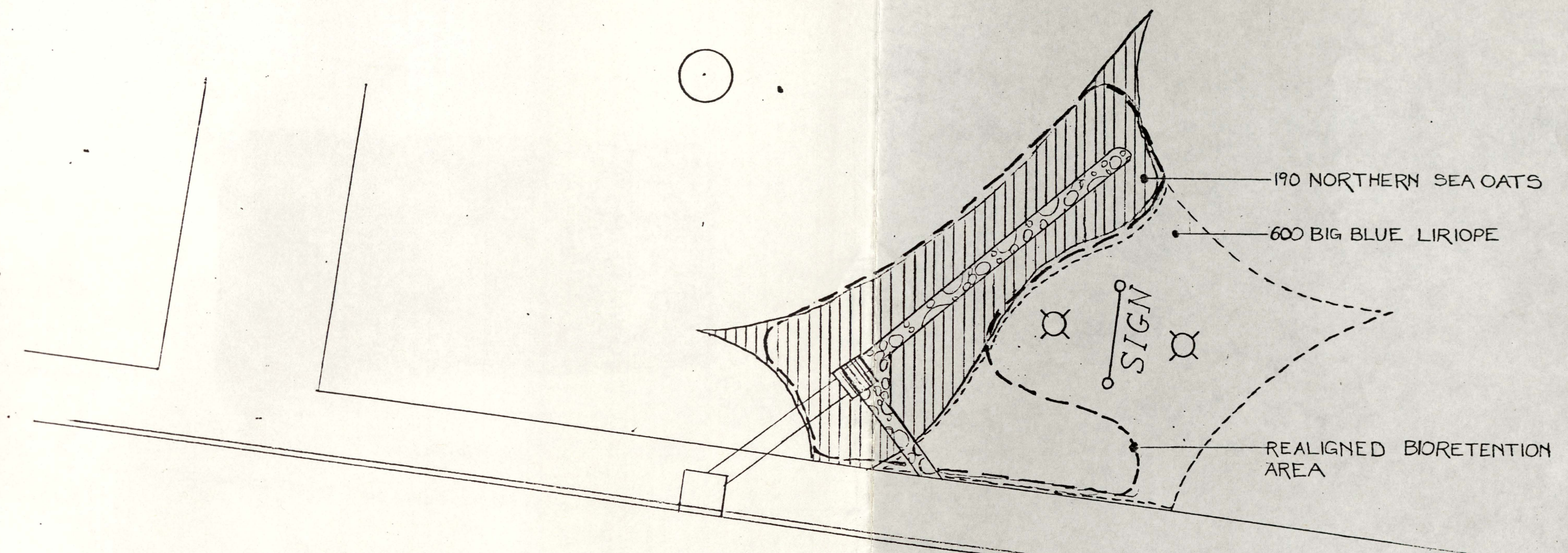
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HOKE SMITH

PLANT LIST

QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACE	COMMENTS
190	<i>Chasmanthium latifolium</i>	Northern Sea Oats	1 gal	Cont	18" o.c.	
600	<i>Liriope muscari</i> 'Big Blue'	Big Blue Liriope	2-1/4" pot	Cont	1' o.c.	

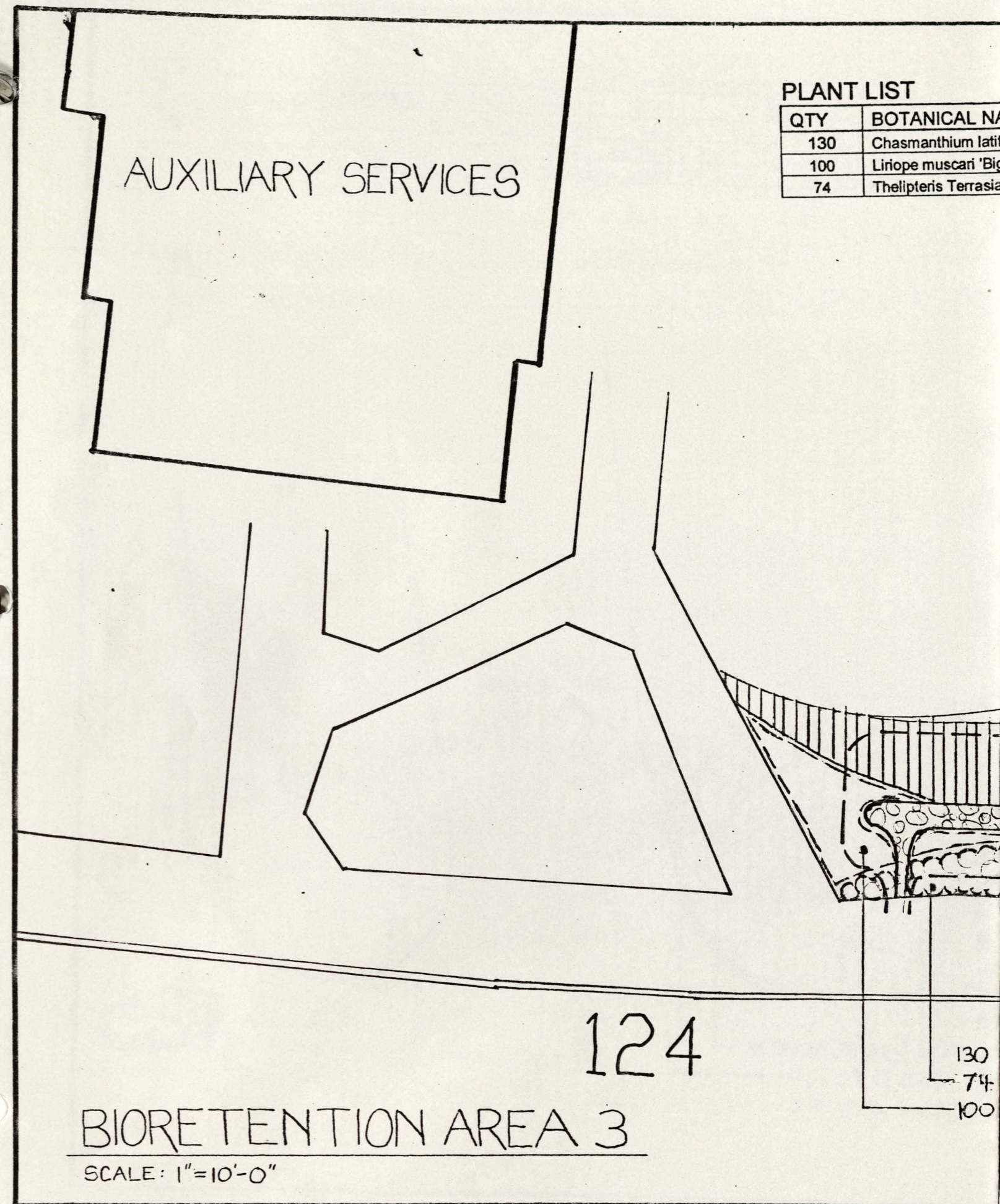


BIORETENTION AREA 1
 SCALE: 1"=10'-0"

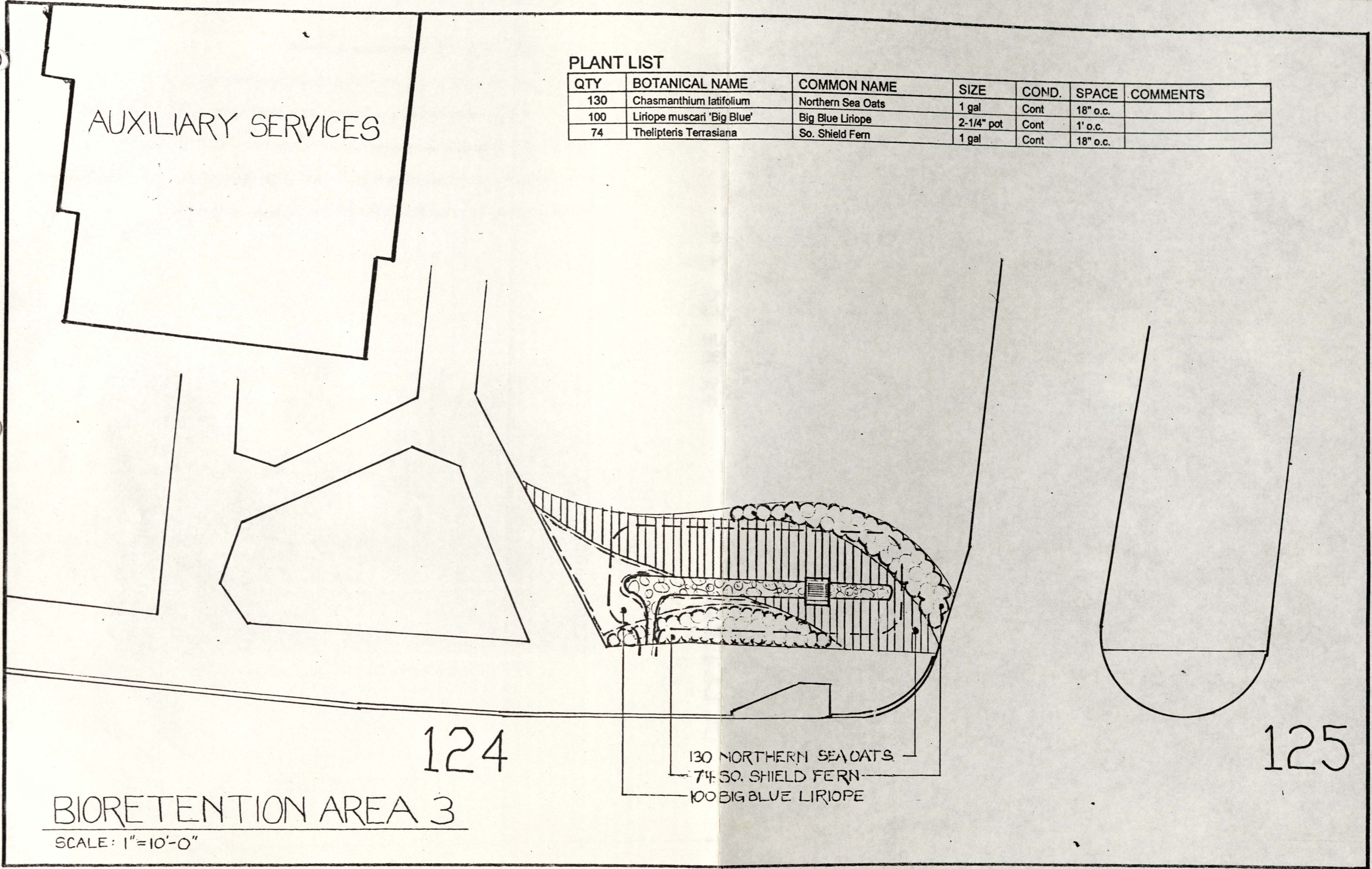
118

Rain garden 2: Auxiliary Services

The design of this property is informal and sweeping. For this garden I designed a casual sweep of plants that fit within the character of the existing pattern. I used a mix of plants from the approved list that fit in with and accented the established plantings.



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 character of the existing pattern. I used a mix of plants
 h and accented the established plantings.



PLANT LIST

QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACE	COMMENTS
130	Chasmanthium latifolium	Northern Sea Oats	1 gal	Cont	18" o.c.	
100	Liriope muscari 'Big Blue'	Big Blue Liriope	2-1/4" pot	Cont	1' o.c.	
74	Thelypteris Terrasiana	So. Shield Fern	1 gal	Cont	18" o.c.	

AUXILIARY SERVICES

124

125

BIORETENTION AREA 3

SCALE: 1"=10'-0"

130 NORTHERN SEA OATS
 74 SO. SHIELD FERN
 100 BIG BLUE LIRIOPE

Rain garden 3: Alpha Chi Omega Sorority House

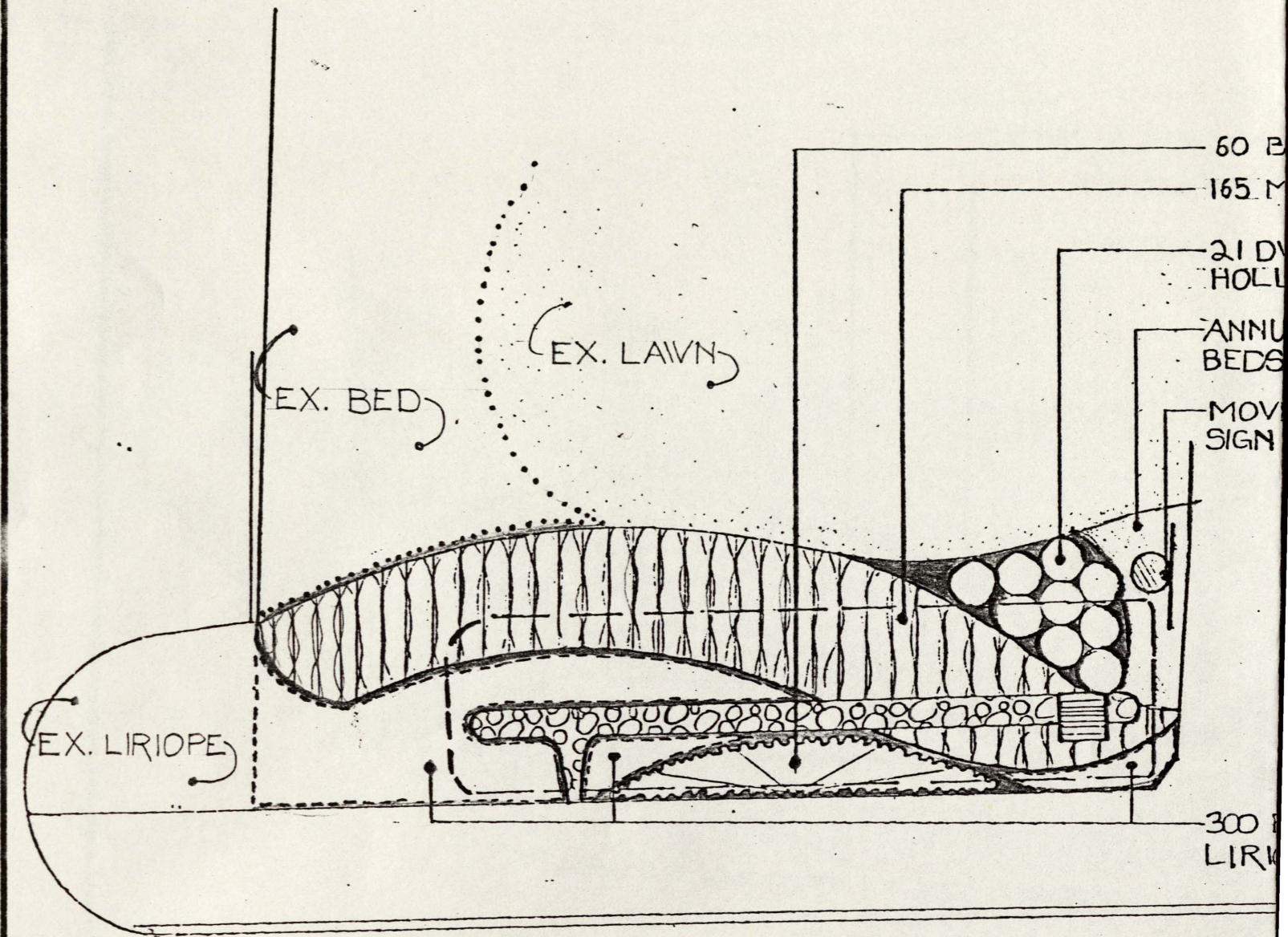
The character of this site was extremely formal and manicured: symmetrical beds met lawn in very clean edges, and the sign was set in a circular annual bed. For this planting I used more formal species, for example, Dwarf Yaupon instead of Dwarf Wax Myrtle and Pink Muhley instead of Upland Sea Oats. I continued the existing sweep of the beds to enclose the lawn and moved the sign but left planting room for annuals.



ALPHA CHI OMEGA

PLANT LIST

QTY	BOTANICAL NAME
21	Ilex vomitoria 'Nana'
360	Liriope muscari 'Big B...
180	Muhlenbergia capillari...
60	Rudbeckia fulgida 'Go...



BIORETENTION AREA 4-5
SCALE: 1"=10'-0"

126

Chi Omega Sorority House

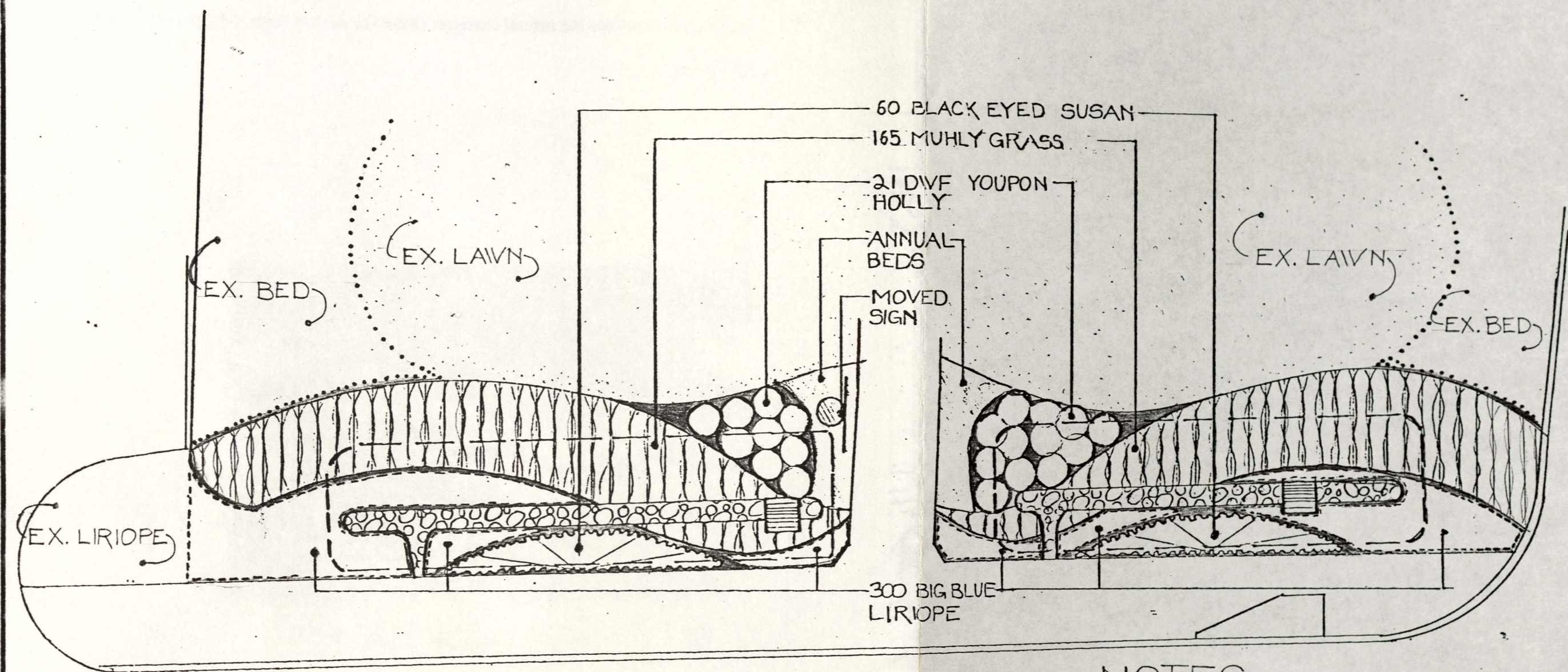
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PLANT LIST

QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACE	COMMENTS
21	<i>Ilex vomitoria</i> 'Nana'	Dwf. Yaupon Holly	3 gal.	Cont.	3' o.c.	
360	<i>Liriope muscari</i> 'Big Blue'	Big Blue Liriope	2-1/4" pot	Cont.	1' o.c.	
180	<i>Muhlenbergia capillaris</i>	Pink Muhly Grass	1 gal.	Cont.	2' o.c.	
60	<i>Rudbeckia fulgida</i> 'Goldstrum'	Black Eyed Susan	1 gal.	Cont.	2' o.c.	



126

BIORETENTION AREA 4-5

SCALE: 1"=10'-0"

NOTES

- BED LINES TO BE APPRVED BY LANDSCAPE ARCHITECT
- HANDTRENCH NEW BED LINES TO MATCH EXISTING

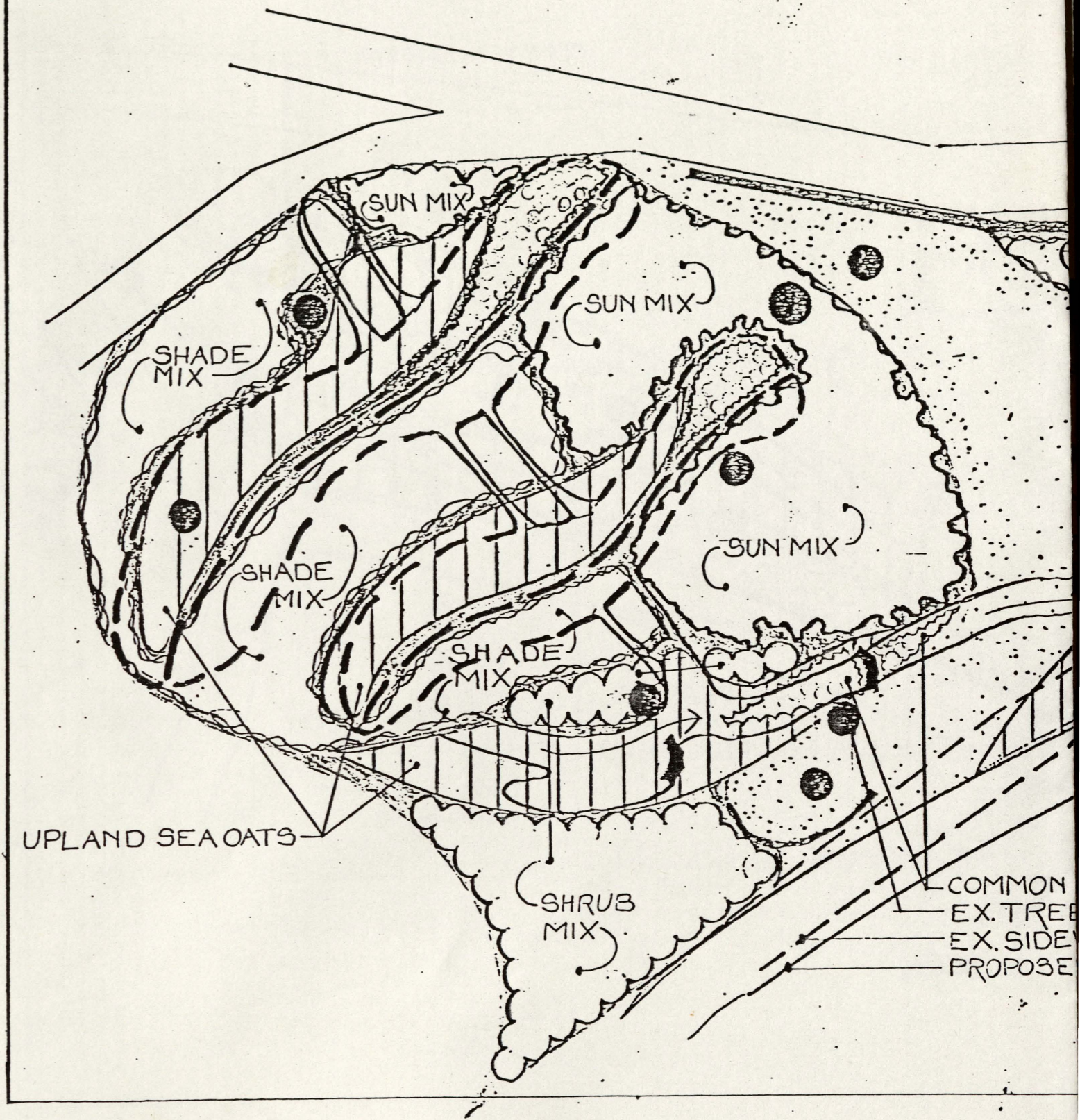
Rain garden 4-6: Lumpkin Woods

This part of the project is in a naturalized area of campus and several types of stormwater controls are going to be implemented. There will be a series of rain gardens and a bio-swale with check dams to infiltrate water before it is put back into the storm sewer. The plan is meant to retain the natural character of the site and highlight the technologies with the plantings.



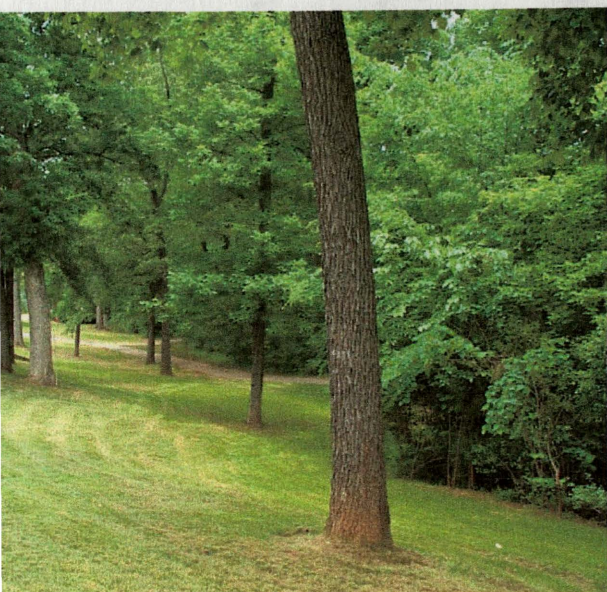
BIORETENTION AREAS-6-10

SCALE: 1" = 20'-0"



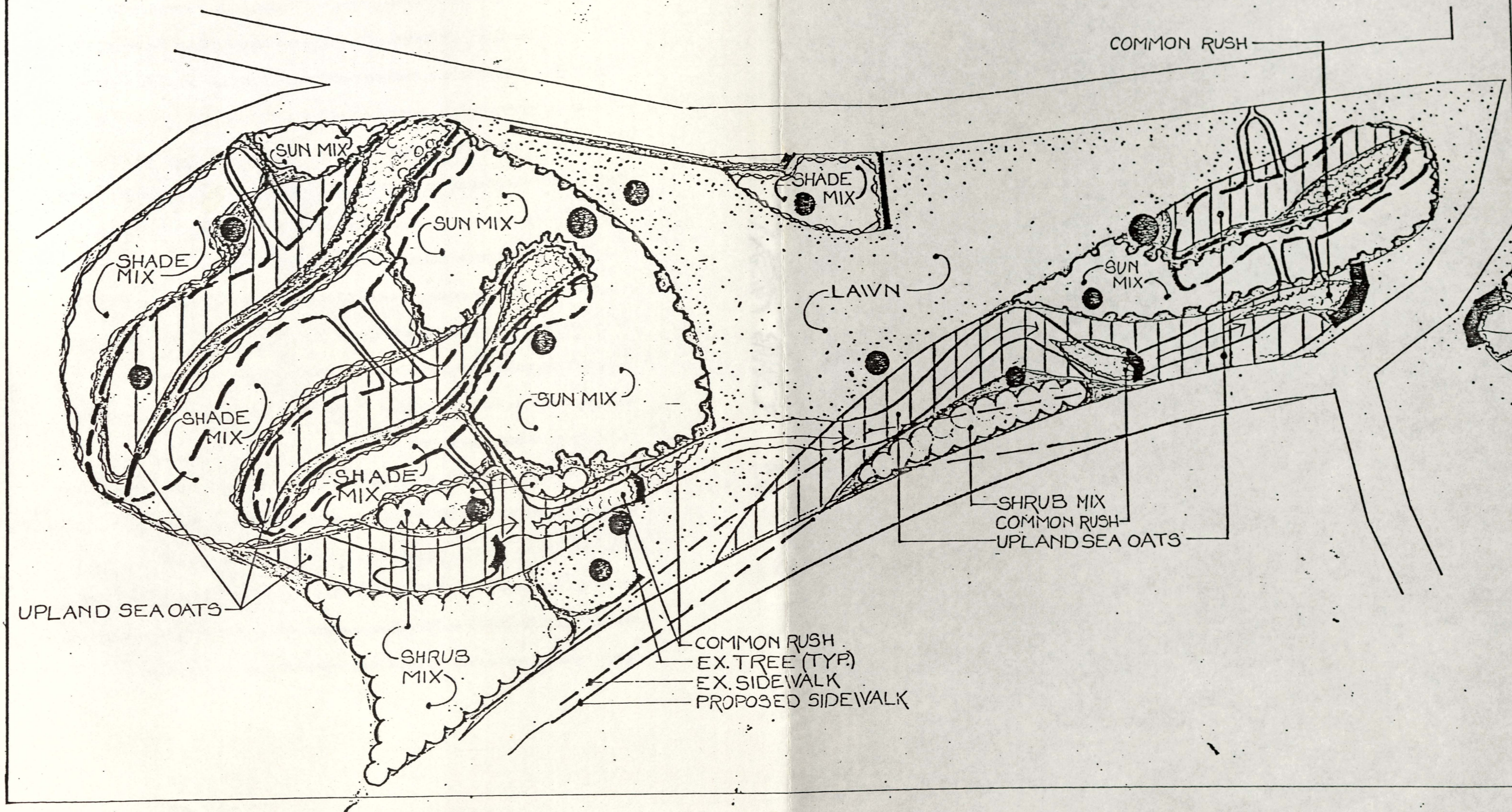
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BIORETENTION AREAS-6-10

SCALE: 1"=20'-0"



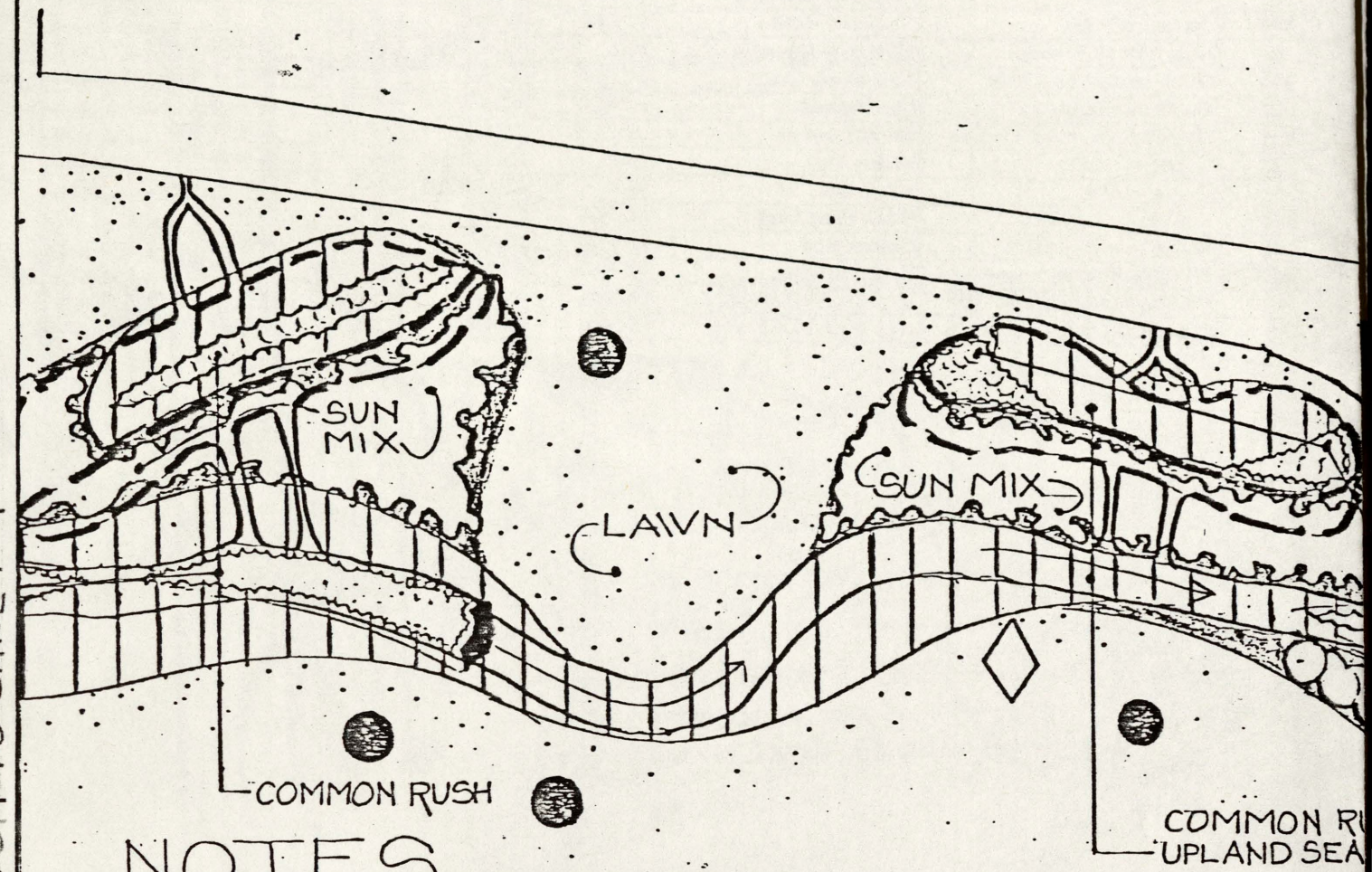
MATCH TO SHEET 2

Grounds office rain garden: design and installation

Dexter thought that since we were going to be maintaining the Lumpkin Street rain gardens, and because the grounds office was well overdue for a new landscape, our office was the optimal place for a test rain garden. For the design we followed the basic specs for the Lumpkin Street rain gardens with a couple of key exceptions. We omitted the under-drain system in order to maximize infiltration. It was also a retrofit, modifying the existing landscape in order to capture roof and parking lot run off. The final difference was that our overall shape was more naturalistic, rather than linear and formal.

We started by removing all the soil to a depth of one foot, and mixing it with compost and sand in order to amend the existing conditions. We then dug deeper "cells" that were filled with # 4 stone that would act as reservoir to store rain water. The next step was to attach over-drains to the existing storm water pipes, and cover the stones with filter fabric. We then covered the cells with the soil mix, and added river stones in order to dissipate the speed of the incoming water. The final steps were to saw cut channels through the existing sidewalks to allow water from the parking lot to flow into garden, and to cap the existing catch basin.

Because the work was done in-house and it was a new technology, the construction crew was skeptical, but we knew that they were won over when they all came to see it perform during the first rain. To date, the garden has performed exceptionally well, meeting or exceeding our expectations. All the rain water that would have previously gone directly into Trail Creek has been absorbed: it has never overflowed, and we have been able to capture litter that would have otherwise been washed directly into the creek.



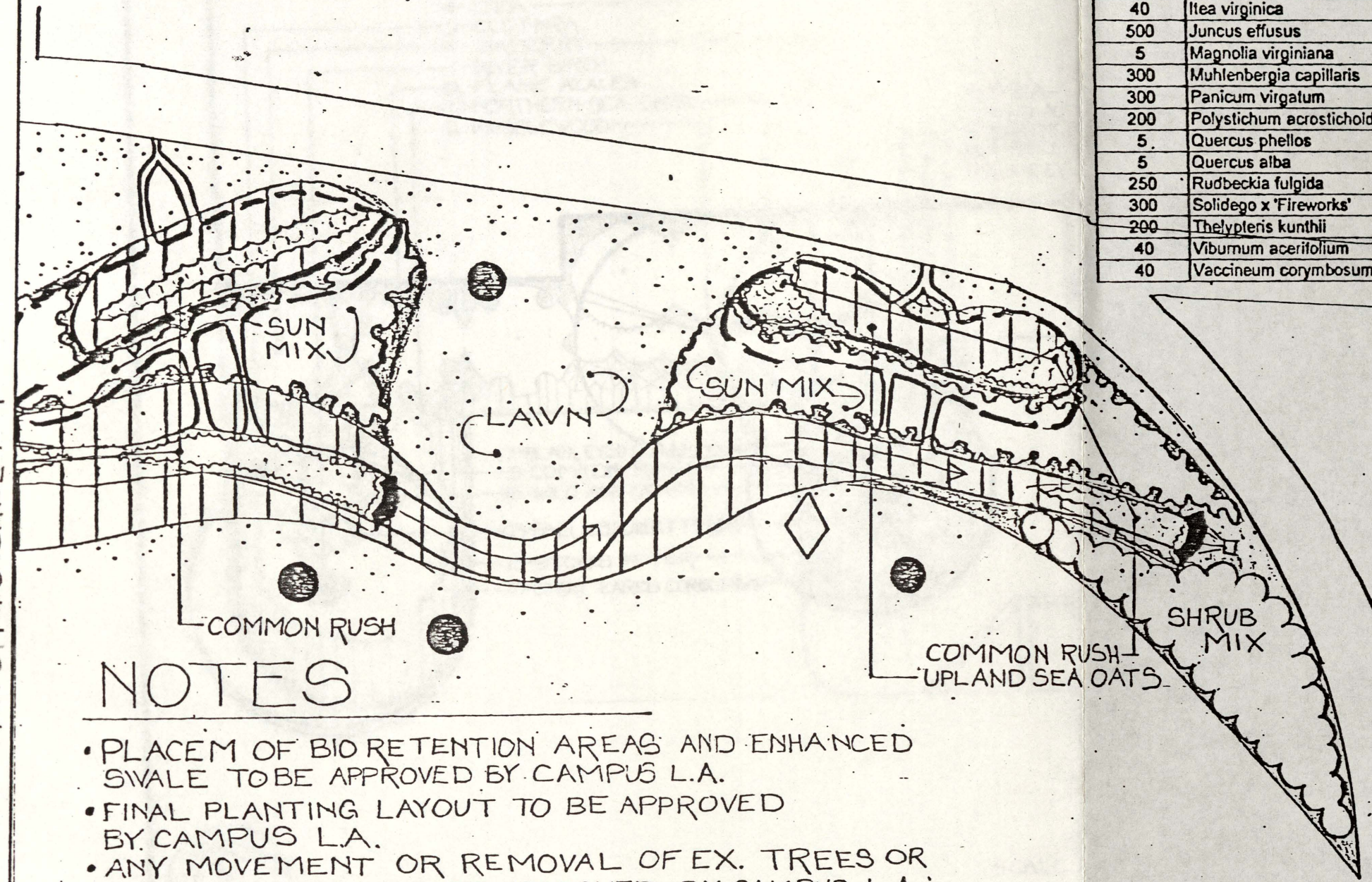
NOTES

- PLACEMENT OF BIO RETENTION AREAS AND ENHANCED SWALE TO BE APPROVED BY CAMPUS L.A.
- FINAL PLANTING LAYOUT TO BE APPROVED BY CAMPUS L.A.
- ANY MOVEMENT OR REMOVAL OF EX. TREES OR LARGE STONES TO BE APPROVED BY CAMPUS L.A.

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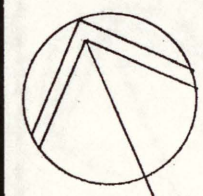
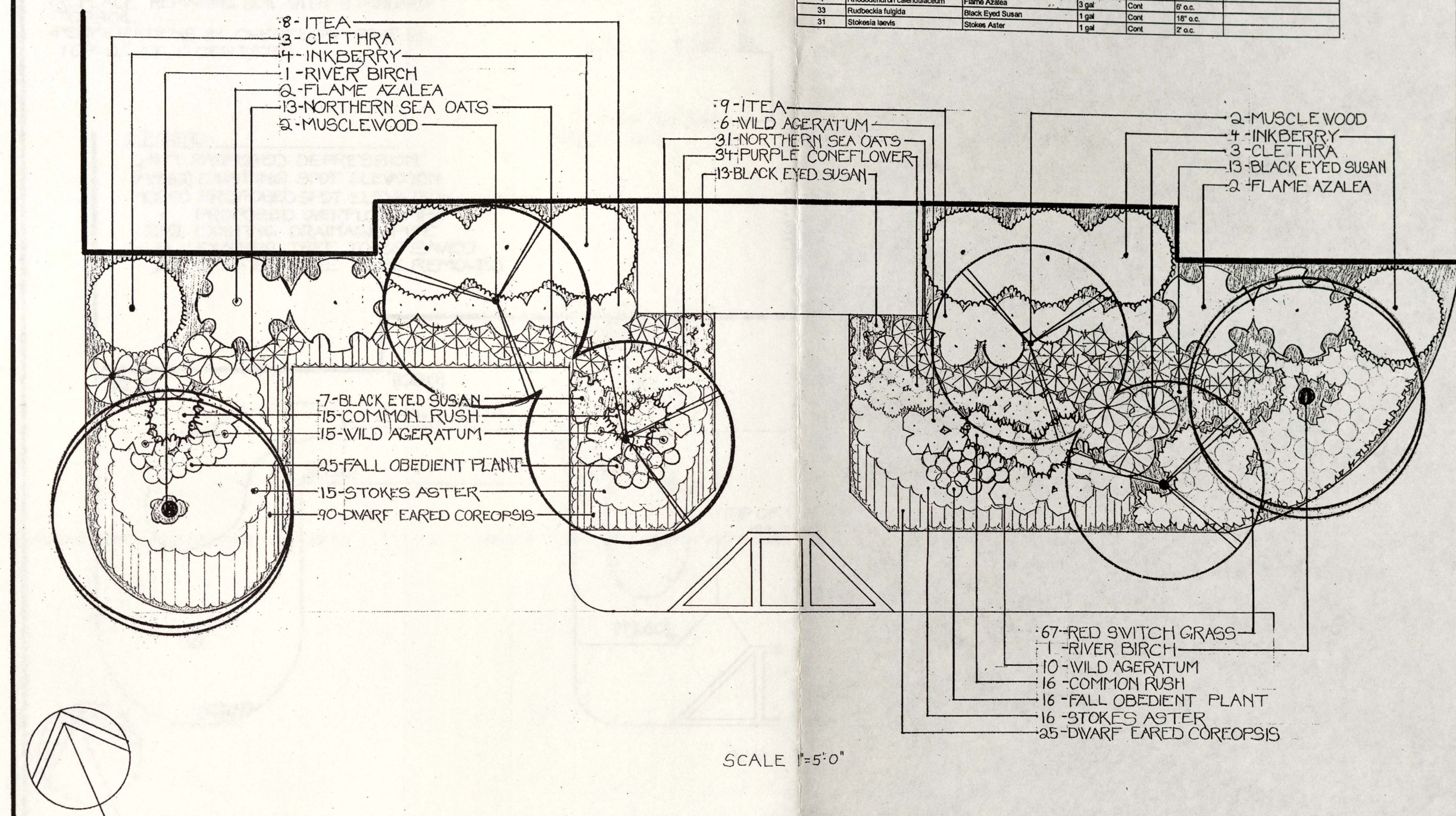
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QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACE	COMMENTS
5	<i>Acer rubrum</i>	Red Maple	6-7'	Cont./B&B	n/a	Shade Mix
40	<i>Aesculus sylvatica</i>	Bottlebrush Buckeye	3 GAL	CONT.	4' O.C.	Shrub/Shade Mix
350	<i>Andropogon virginicus</i>	Broomsedge	4" POT	CONT.	18" O.C.	Sun Mix
350	<i>Andropogon ternarius</i>	Split-Beard Broomsedge	4" POT	CONT.	18" O.C.	Sun Mix
200	<i>Aquilegia canadensis</i>	American Columbine	6-7'	Cont./B&B	n/a	Shade Mix
5	<i>Betula nigra</i>	River Birch	6-7'	Cont./B&B	n/a	Shade Mix
40	<i>Callicarpa americana</i>	Beautyberry	3 GAL	CONT.	4' O.C.	Shrub/Shade Mix
2700	<i>Chasmanthium latifolium</i>	Upland Sea Oats	4" POT	CONT.	18" O.C.	
5	<i>Cornus florida</i>	Flowering Dogwood	6-7'	Cont./B&B	n/a	Shade Mix
250	<i>Echinacea purpurea</i>	Coneflower	4" POT	CONT.	18" O.C.	Sun Mix
40	<i>Itea virginica</i>	Virginia Sweetspire	3 GAL	CONT.	4' O.C.	Shrub/Shade Mix
500	<i>Juncus effusus</i>	Common Rush	1 GAL	CONT.	18" O.C.	
5	<i>Magnolia virginiana</i>	Sweetbay Magnolia	6-7'	Cont./B&B	n/a	Shade Mix
300	<i>Muhlenbergia capillaris</i>	Pink Muhly Grass	4" POT	CONT.	18" O.C.	Sun Mix
300	<i>Panicum virgatum</i>	Switchgrass	4" POT	CONT.	18" O.C.	Sun Mix
200	<i>Polystichum acrostichoides</i>	Christmas Fern	4" POT	CONT.	18" O.C.	Shade Mix
5	<i>Quercus phellos</i>	Willow Oak	6-7'	Cont./B&B	n/a	Shade Mix
5	<i>Quercus alba</i>	White Oak	6-7'	Cont./B&B	n/a	Shade Mix
250	<i>Rudbeckia fulgida</i>	Black Eyed Susan	4" POT	CONT.	18" O.C.	Sun Mix
300	<i>Solidago x 'Fireworks'</i>	Golden Rod	4" POT	CONT.	18" O.C.	Sun Mix
200	<i>Thelypteris kunthii</i>	S. Shield Fern	4" POT	CONT.	18" O.C.	Shade Mix
40	<i>Viburnum acerifolium</i>	Maple leaf Viburnum	3 GAL	CONT.	4' O.C.	Shrub/Shade Mix
40	<i>Vaccinium corymbosum</i>	High bush Blue berry	3 GAL	CONT.	4' O.C.	Shrub/Shade Mix

NAME	SIZE	COND.	SPACE	COMMENTS
eye	6-7'	Cont./B&B	n/a	Shade Mix
	3 GAL	CONT.	4' O.C.	Shrub/Shade Mix
	4" POT	CONT.	18" O.C.	Sun Mix
msedge	4" POT	CONT.	18" O.C.	Sun Mix
bine	6-7'	Cont./B&B	n/a	Shade Mix
	6-7'	Cont./B&B	n/a	Shade Mix
	3 GAL	CONT.	4' O.C.	Shrub/Shade Mix
	4" POT	CONT.	18" O.C.	Sun Mix
ood	6-7'	Cont./B&B	n/a	Shade Mix
	4" POT	CONT.	18" O.C.	Sun Mix
ire	3 GAL	CONT.	4' O.C.	Shrub/Shade Mix
	1 GAL	CONT.	18" O.C.	Sun Mix
olia	6-7'	Cont./B&B	n/a	Shade Mix
ss	4" POT	CONT.	18" O.C.	Sun Mix
	4" POT	CONT.	18" O.C.	Sun Mix
	4" POT	CONT.	18" O.C.	Shade Mix
	6-7'	Cont./B&B	n/a	Shade Mix
	6-7'	Cont./B&B	n/a	Shade Mix
an	4" POT	CONT.	18" O.C.	Sun Mix
	4" POT	CONT.	18" O.C.	Sun Mix
	4" POT	CONT.	18" O.C.	Shade Mix
rum	3 GAL	CONT.	4' O.C.	Shrub/Shade Mix
berry	3 GAL	CONT.	4' O.C.	Shrub/Shade Mix

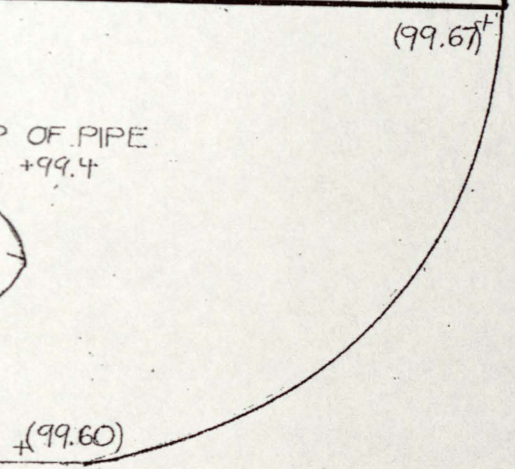
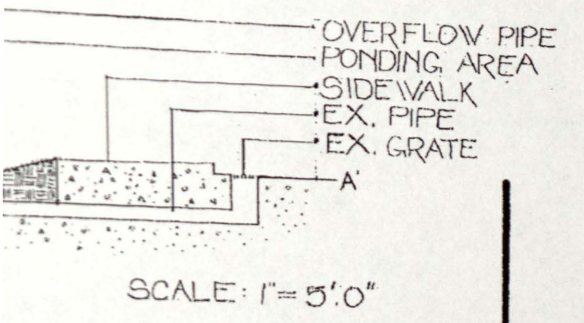
QTY	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACE	COMMENTS
2	Betula nigra	River Birch	6-7'	Cont/B&B	n/a	
4	Carpinus caroliniana	Muscledwood	6-7'	Cont/B&B	n/a	
50	Chasmanthium latifolium	Northern Sea Oats	1 gal	Cont	14" o.c.	
6	Clethra alnifolia	Clethra	3 gal	Cont	2' o.c.	
115	Coreopsis auriculata 'Nana'	Dwarf Eared Coreopsis	4" pot	Cont	5" o.c.	
34	Echinacea pallida	Purple Coneflower	1 gal	Cont	2' o.c.	
31	Eupatorium coelestinum	Wild Ageratum	1 gal	Cont	18" o.c.	
8	Ilex glabra	Inkberry	3 gal	Cont	6" o.c.	
17	Itea virginica	Itea	3 gal	Cont	3" o.c.	
31	Juncus effusus	Common Rush	1 gal	Cont	18" o.c.	
07	Panicum virgatum 'Shenadoah'	Red Switch Grass	1 gal	Cont	18" o.c.	
41	Physostegia virginiana	Fall Obedient Plant	1 gal	Cont	1' o.c.	
4	Rhododendron calendulaceum	Flame Azalea	3 gal	Cont	6" o.c.	
33	Rudbeckia fulgida	Black Eyed Susan	1 gal	Cont	18" o.c.	
31	Stokesia laevis	Stokes Aster	1 gal	Cont	2' o.c.	



TEST RAIN GARDEN
PLANTING PLAN

 The University of Georgia Grounds Department Physical Plant	REVISIONS <table border="1"> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>										1180 E. BROAD ST. CHICOPEE BLDG. 8	DRAWN JM	JOB NO.
APPROVED	SHEET 2												
DATE	OF 2												

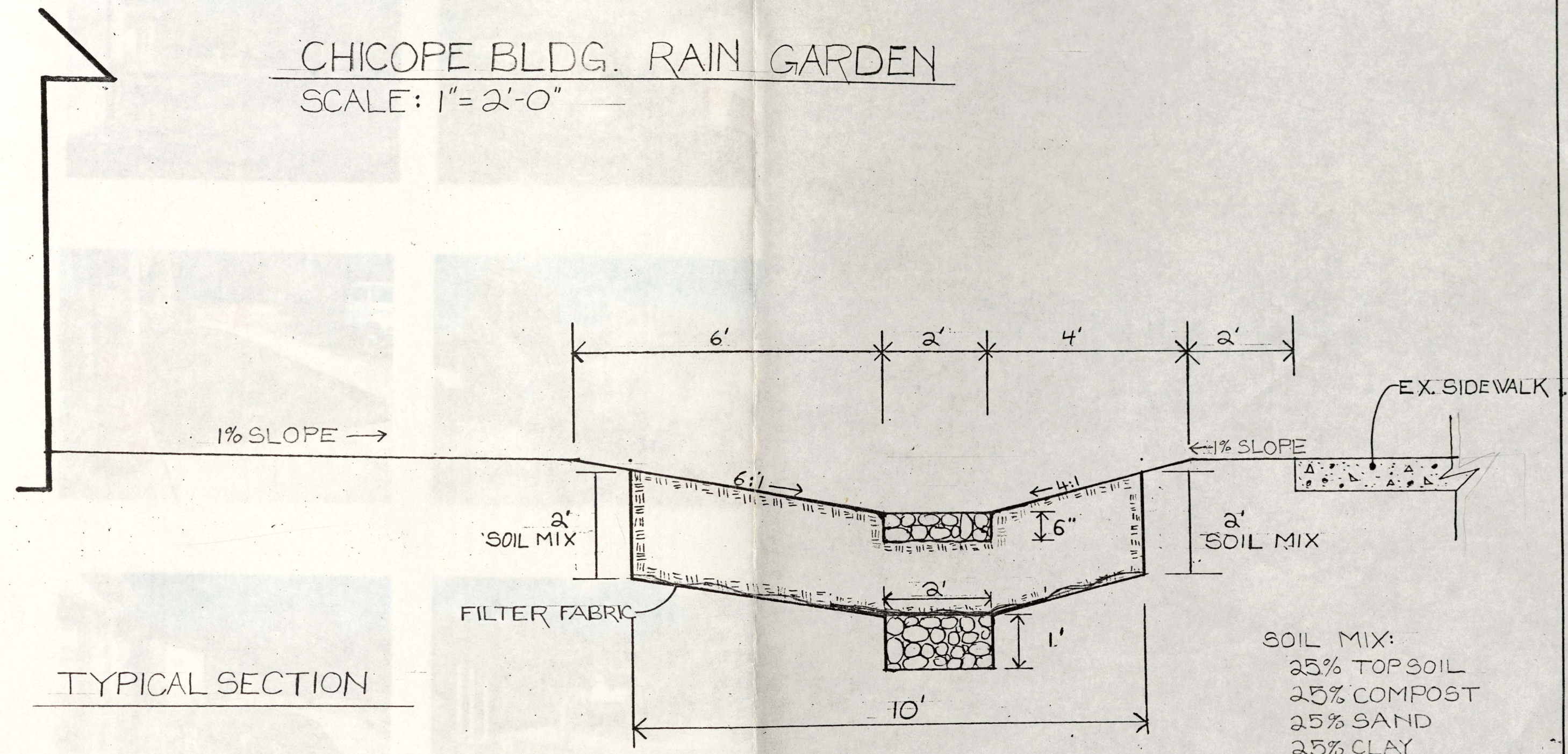
A-A'



E. BROAD St. OPEE BLDG. 8		DRAWN JM APPROVED DATE	JOB NO. SHEET 1 OF 2
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CHICOPEE BLDG. RAIN GARDEN

SCALE: 1" = 2'-0"

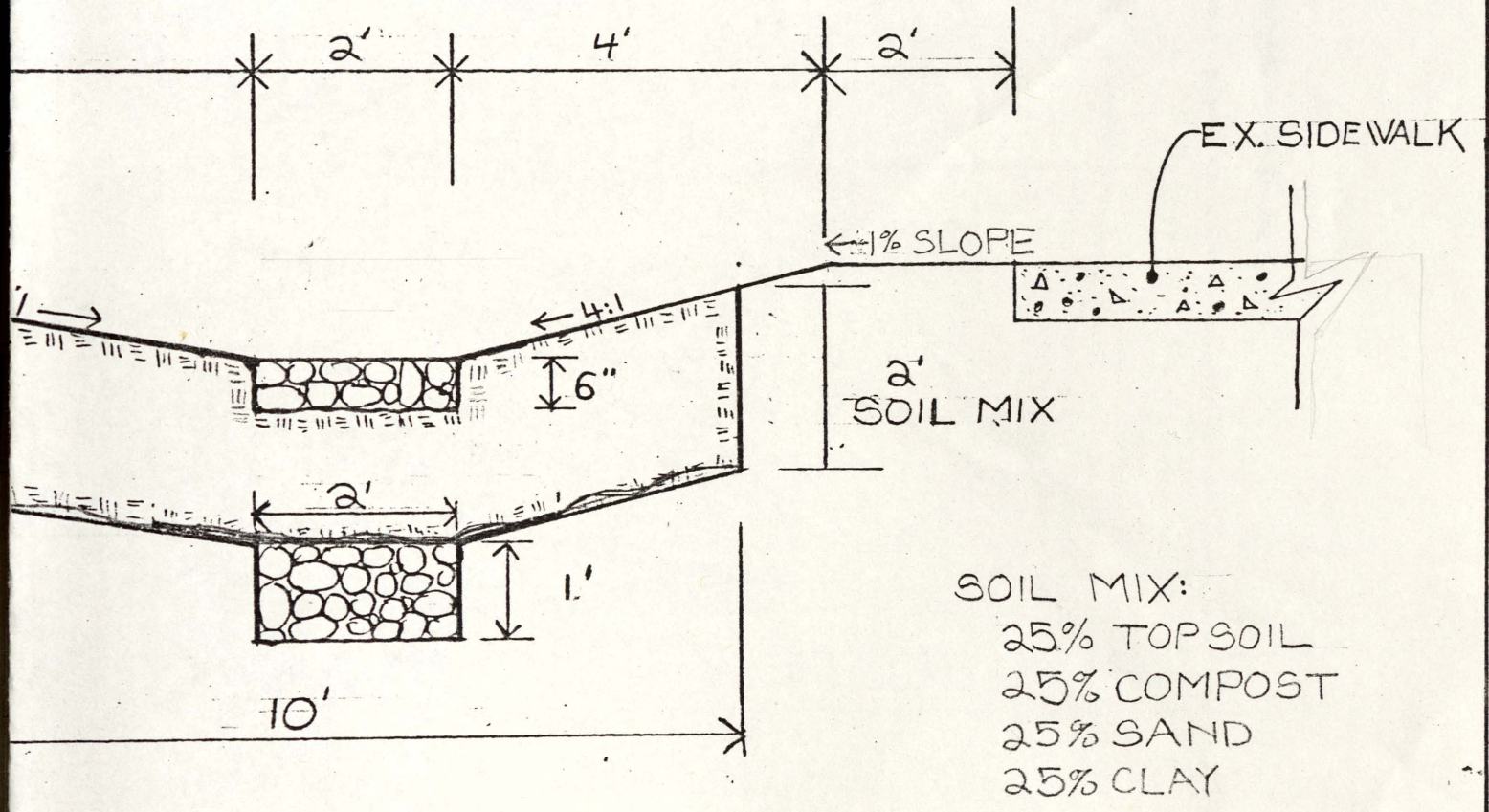


TYPICAL SECTION

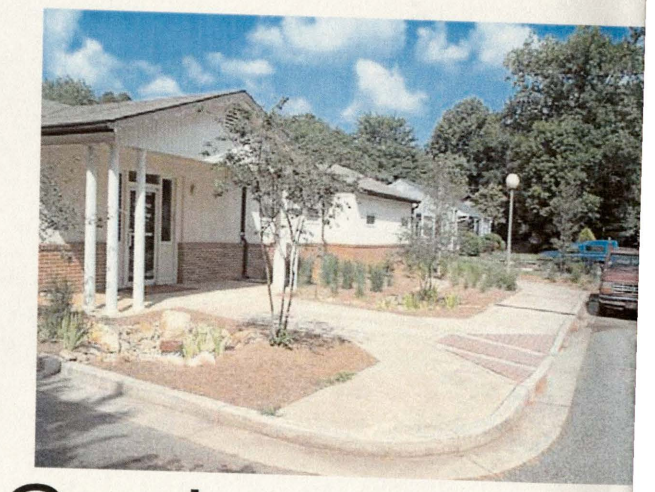
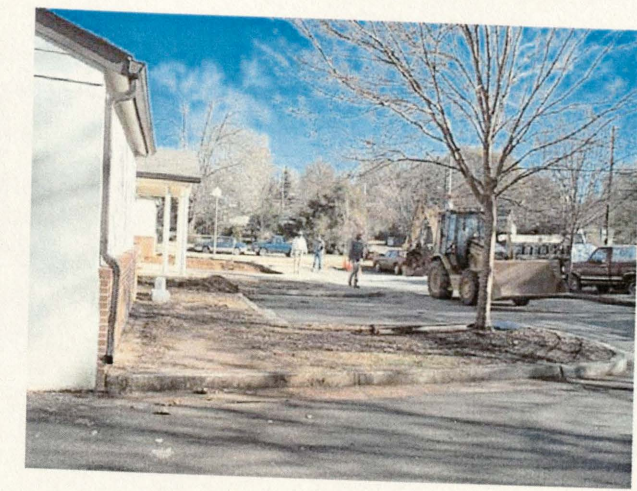
SOIL MIX:
 25% TOP SOIL
 25% COMPOST
 25% SAND
 25% CLAY

Chicopee Rain Garden

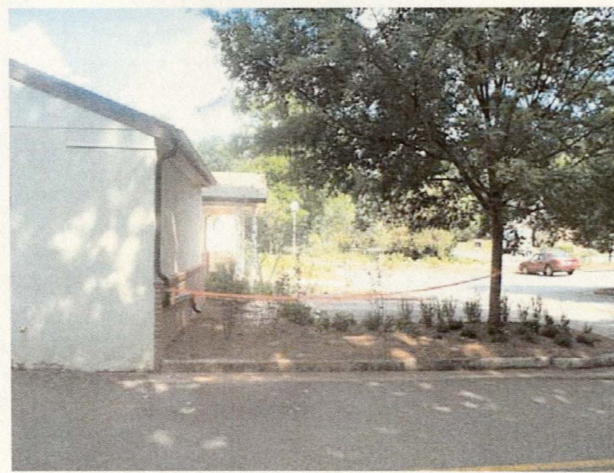
GARDEN



SOIL MIX:
 25% TOP SOIL
 25% COMPOST
 25% SAND
 25% CLAY

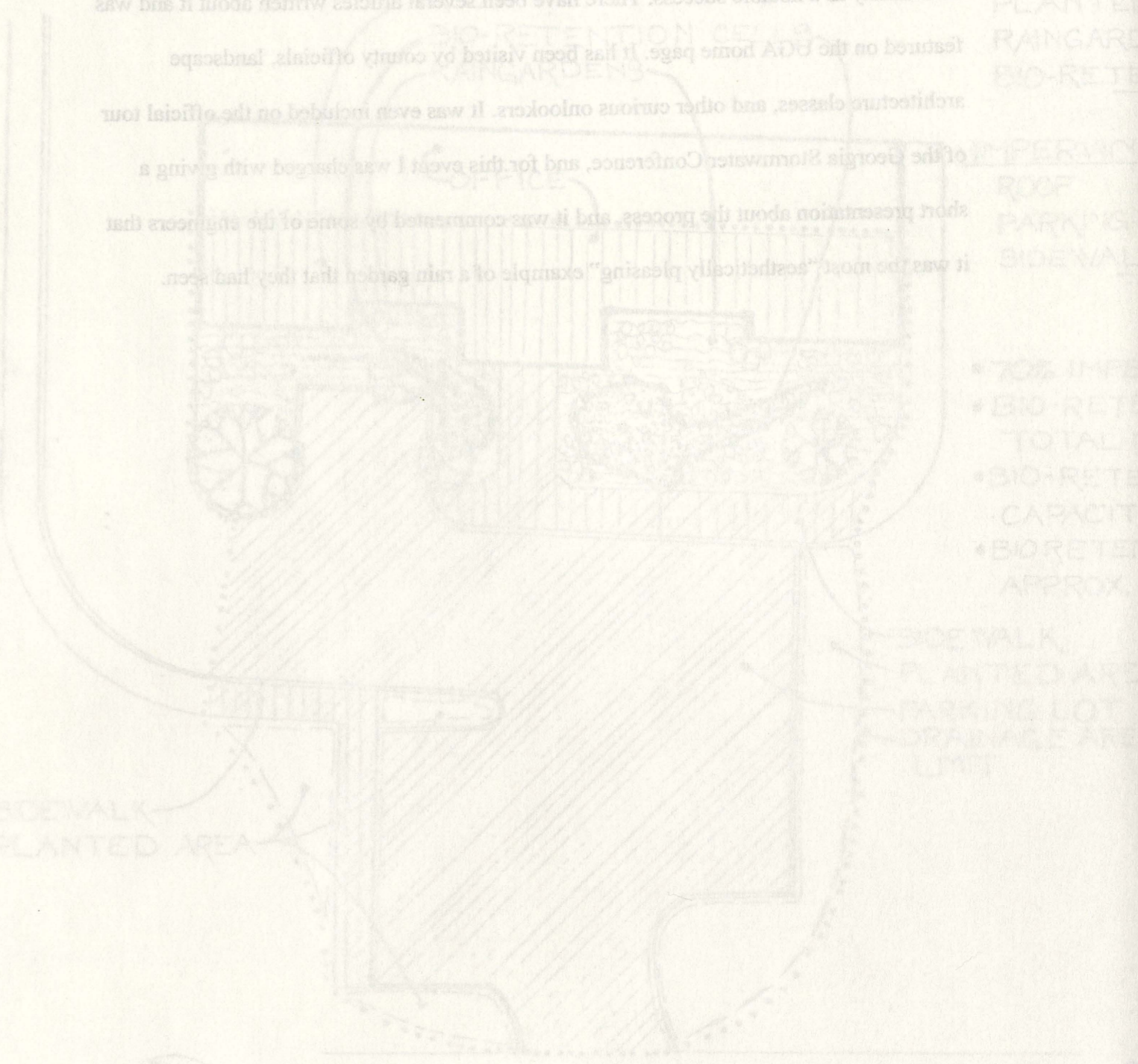


Chicopee Rain Garden



CHICOPEE RAIN GARDEN

Since the installation of the garden has been complete, it has been recognized by the community as a notable success. There have been several articles written about it and was featured on the GDA home page. It has been visited by county officials, landscape architecture classes, and other curious onlookers. It was even included on the official tour of the Georgia Stormwater Conference, and for this event I was charged with giving a short presentation about the process, and it was commented by some of the engineers that it was the most "aesthetically pleasing" example of a rain garden that they had seen.



- PERVIOUS
- PLANTED
- RAIN GARDEN
- BIO-RETEN
- IMPERVIOUS
- ROOF
- PARKING
- BIO-RETEN
- 70% IMPERVIOUS
- BIO-RETEN
- TOTAL
- BIO-RETEN
- CAPACITY
- BIO-RETEN
- APPROX



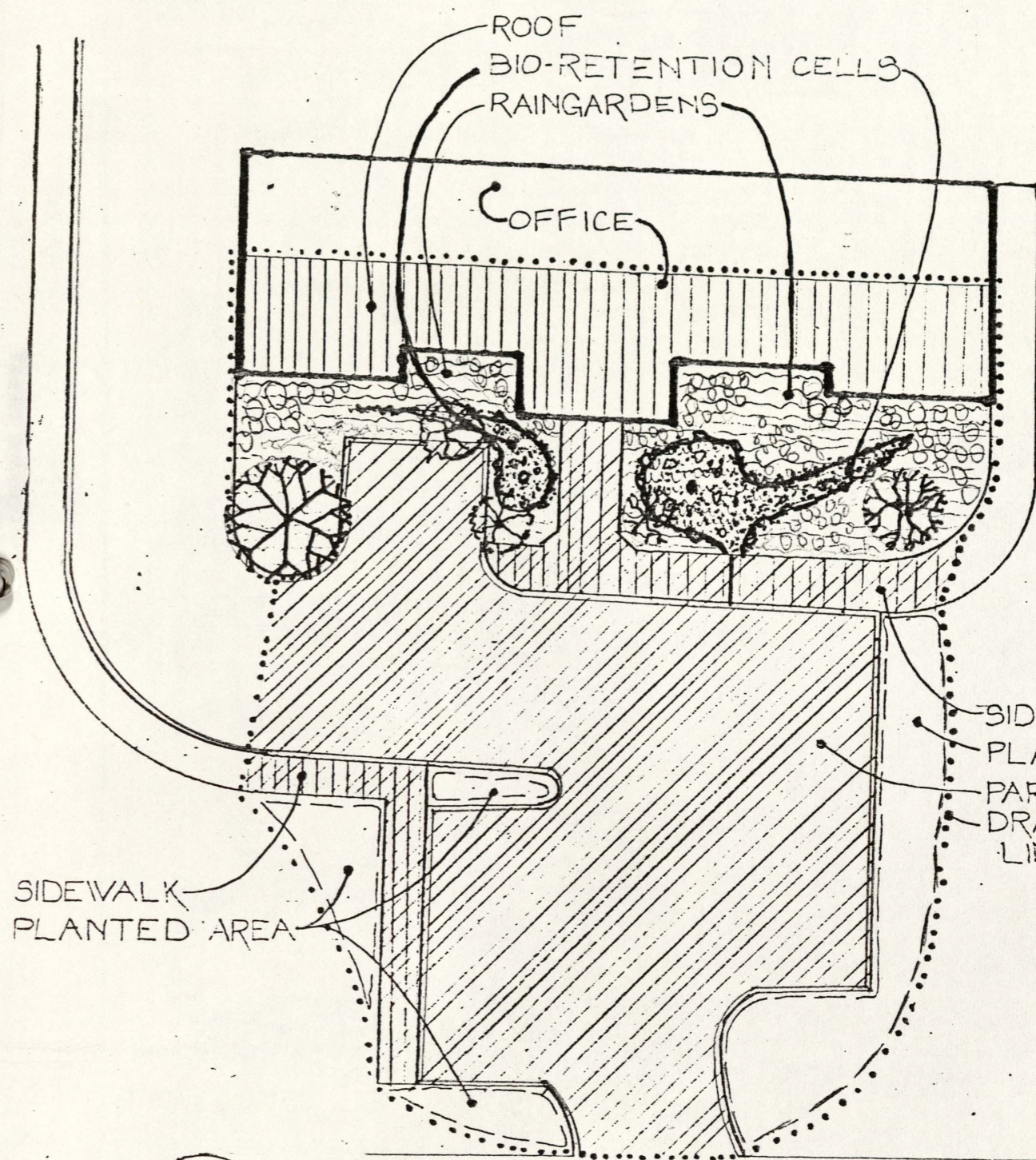
SURFACE ANALYSIS

SCALE: 1" = 20'

Grounds office rain garden: publicity

Since the installation of the garden has been complete, it has been recognized by the community as a notable success. There have been several articles written about it and was featured on the UGA home page. It has been visited by county officials, landscape architecture classes, and other curious onlookers. It was even included on the official tour of the Georgia Stormwater Conference, and for this event I was charged with giving a short presentation about the process, and it was commented by some of the engineers that it was the most "aesthetically pleasing" example of a rain garden that they had seen.

CHICOPEE RAIN GARDEN



- PVIOUS SU
- PLANTED A
- RAINGARDEN
- BIO-RETENT
- TO
- IMPERVIOUS
- ROOF
- PARKING LO
- SIDEWALKS
- TO
- 70% IMPERV
- BIO-RETENT
- TOTAL IMP
- BIO-RETENT
- CAPACITY O
- BIORETENTI
- APPROX. 1.5

- SIDEWALK
- PLANTED AREA
- PARKING LOT
- DRAINAGE AREA
- LIMIT

SIDEWALK
PLANTED AREA

EAST BROAD STREET



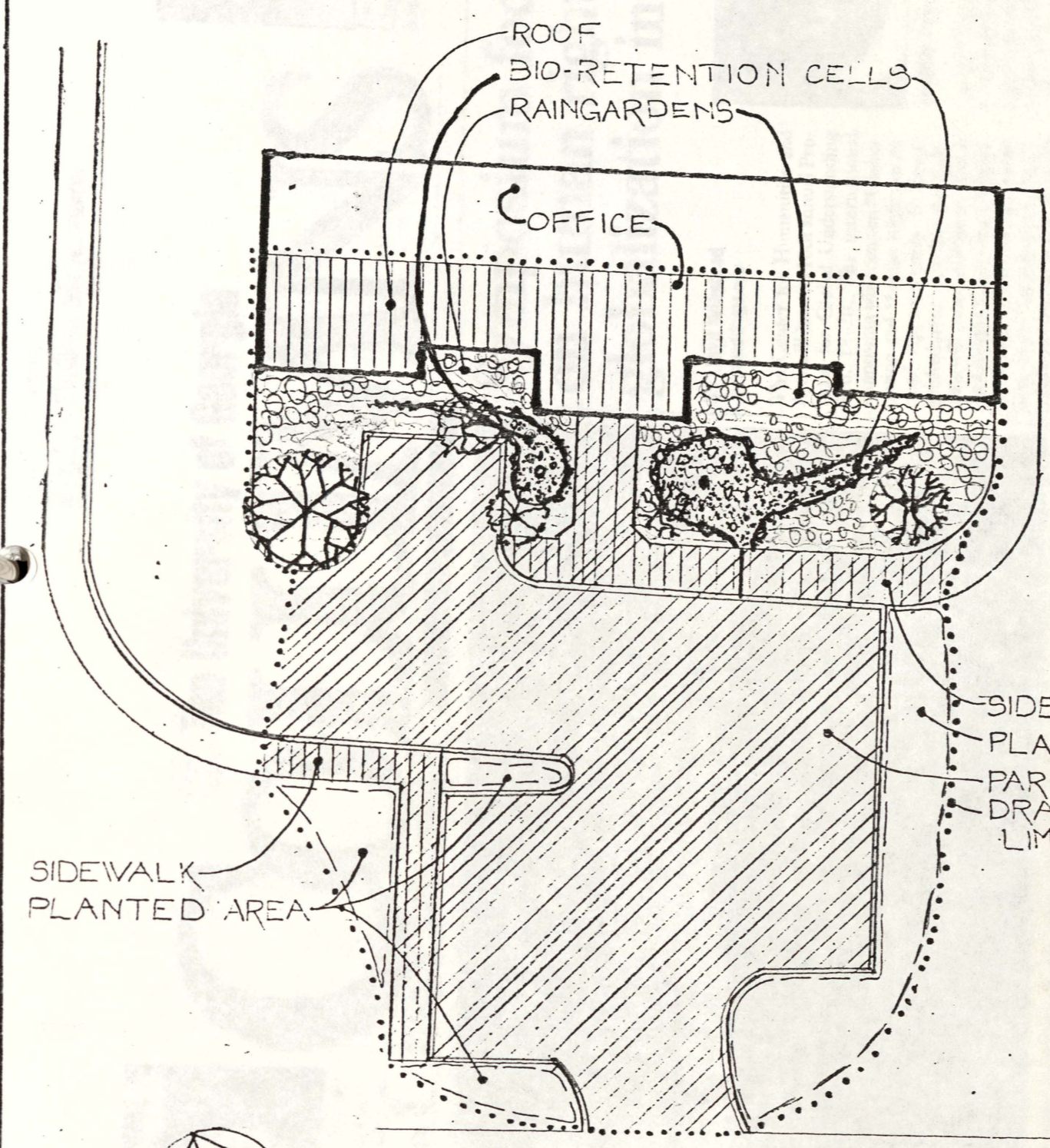
SURFACE ANALYSIS

SCALE: 1" = 20'

SOIL
25
25
25
25

e rain garden: publicity
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CHICOPEE RAIN GARDEN 1180 E. BROAD ST. BLDG #8



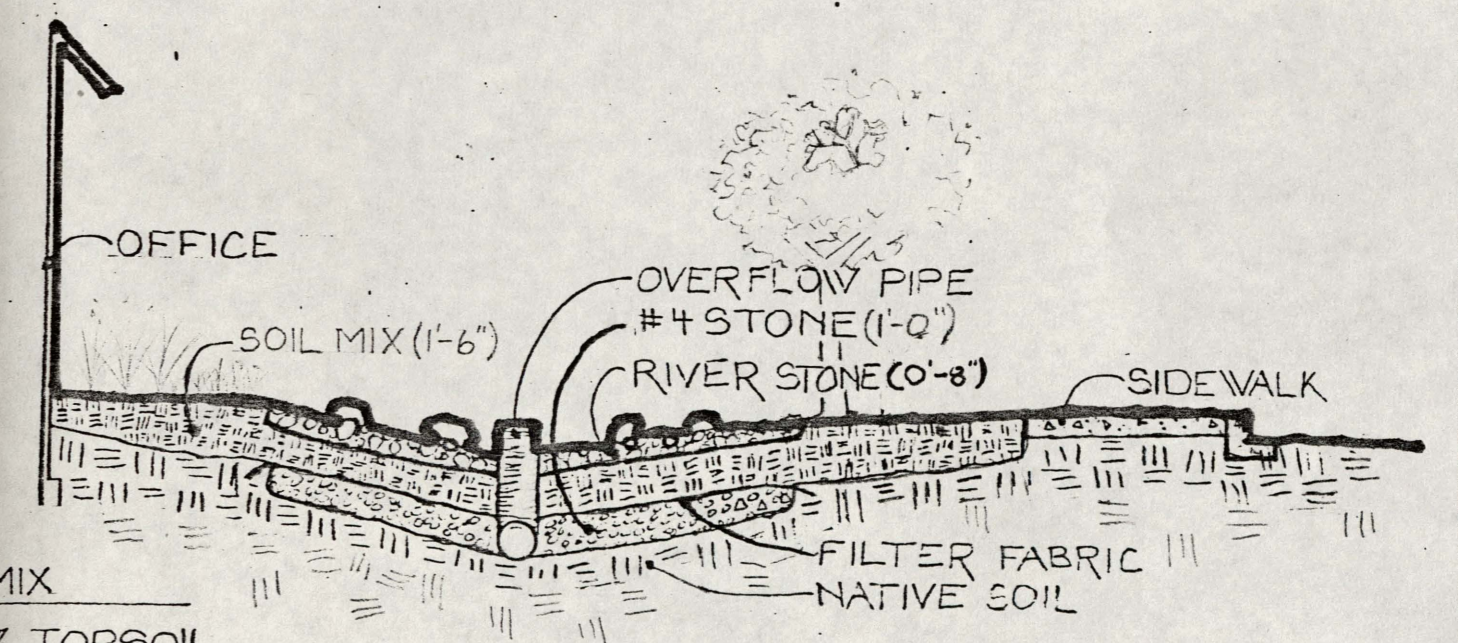
PERVIOUS SURFACE AREA
 PLANTED AREA 1010 S.F.
 RAINGARDENS 1500 S.F.
 BIO-RETENTION CELLS 350 S.F.
 TOTAL: 2860 S.F.

IMPERVIOUS SURFACE AREA
 ROOF 1585 S.F.
 PARKING LOT 4300 S.F.
 SIDEWALKS 750 S.F.
 TOTAL: 6635 S.F.

- 70% IMPERVIOUS - 30% PERVIOUS
- BIO-RETENTION CELLS = 5% OF TOTAL IMPERVIOUS SURFACE AREA
- BIO-RETENTION CELLS HAVE CAPACITY OF APPROX. 875 C.F.
- BIORETENTION CELLS CAN HOLD APPROX. 1.54" OF RAIN (2YR STORM)

PLANT LIST	
BOTANICAL NAME	COMMON NAME
• AMELANCHIER ARBOREA	• SERVICE BERRY
• BETULA NIGRA	• RIVER BIRCH
• EUPATORIUM COLESTINUM	• WILD AGERATUM
• EUPATORIUM FISTULOSUM	• JOE-PYE WEED
• ITEA VIRGINICA	• ITEA
• FOTHERGILLA GARDENII	• FOTHERGILLA
• MUHLENBERGIA CAPILLARIS	• PINK MUHLEY GRASS
• MYRICA CERIFERA	• DWF. WAX MYRTLE
• PANICUM VIRGATUM	• SWITCH GRASS
• PHYSOSTEGIA VIRGINICA	• OBEDIENT PLANT
• RUDBECKIA FULGIDA	• BLACK-EYED SUSAN
• THELIPTERIS NORMALIS	• So. SHIELD FERN

SURFACE ANALYSIS
 SCALE: 1" = 20'



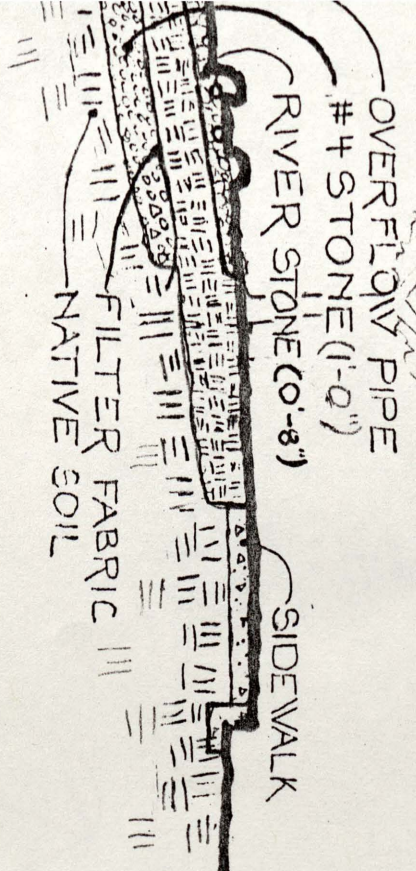
SOIL MIX
 25% TOPSOIL
 25% COMPOST
 25% SAND
 25% CLAY

SECTION
 SCALE: 1" = 5'-0"

BLDG #8

PLANT LIST

BOTANICAL NAME	COMMON NAME
AMELANCHIER	SERVICE BERRY
ARBOREA	
BETULA NIGRA	RIVER BIRCH
EUPATORIUM	WILD AGERATUM
COLESTINUM	
EUPATORIUM	JOE-PYE WEED
FISTULOSUM	
ITEA VIRGINICA	ITEA
FOTHERGILLA	FOTHERGILLA
GARDENII	
MULLENBERGIA	PINK MULLENY GRASS
CAPILLARIS	
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VIRGINICA	
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FULGIDA	
THELIPTERIS	So. SHIELD FERN
NORMALIS	

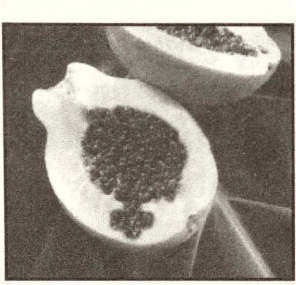


SECTION
1"=5'-0"

News Service
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Athens, GA 30602-4371

250
DONNA M GABRIEL
SENIOR ADMIN SECRETARY
SCHOOL OF ENVIRONMENTAL DESIGN
CALDWELL HALL 0046~

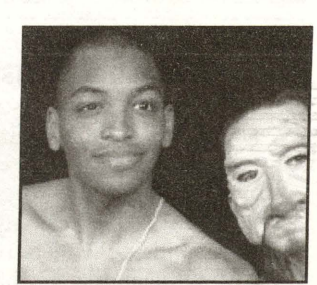
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Scientists discover that sex chromosomes of papayas, humans virtually the same

RESEARCH NEWS 3

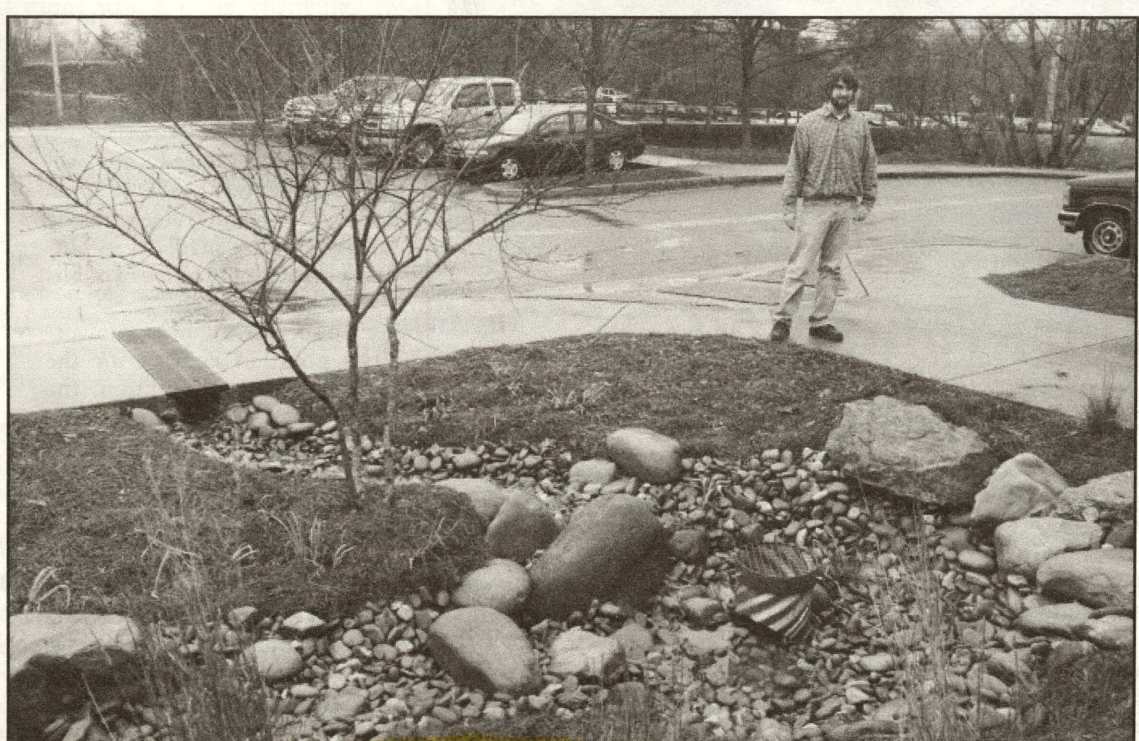
The University of Georgia COLUMNS



University Theater's Little Clay Cart opens Feb. 18 at Seney-Stovall Chapel

UGA GUIDE 4&5

Vol. 31, No. 23 www.uga.edu/columns/ February 16, 2003



Jessten Murphy is the project co-ordinator for the raingarden, installed at the grounds department office in Chicopee. Water drains off the parking lot and filters through the gravel and sand in the garden.

Symposium focuses on human rights and globalization in Africa

By Lloyd Winstead
winstead@uga.edu

The Center for Humanities and Arts will host its 10th annual Program for Global Understanding Feb. 18-20. The international symposium will focus on "Globalization and Human Rights in Africa." Approximately 20 distinguished artists, scholars and diplomats will come to Masters Hall at the Georgia Center for Continuing Education to join in discussions about the effects of globalization on human rights, religion and the process of democratization in sub-Saharan African nations.



Gertrude Mongella

Region for the World Health Organization, and president of Advocacy for Women in Africa. She has served as a member of

At 8 p.m. on Feb. 18, Gertrude Mongella will deliver the keynote address. Mongella is a member of parliament in Tanzania, goodwill ambassador for Maternal Mortality Reduction in the African

the UNESCO Council of the Future and the OAU Women's Committee for Peace and as under-secretary special envoy to the secretary general of the United Nations on women's issues and development.

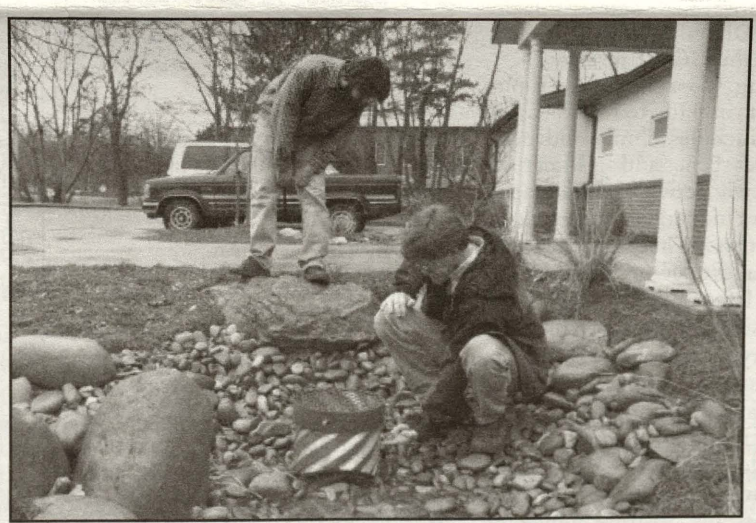
On Feb. 19, at 9 a.m., Winston Nagan, Trustee Research Fellow, professor of law and affiliate professor of anthropology at the University of Florida, will make opening remarks. Nagan has served two

That rainy-day feeling

Raingardens offer new approach to stormwater management

By Larry B. Dendy
ldendy@uga.edu

When it's dry, the rock-filled swale in front of the physical plant grounds department office looks like leftovers from a construction project. But when rain sends water from nearby roofs and a parking lot flowing into the depression, it becomes a showpiece for a popular concept in stormwater management known as a raingarden.



Dexter Adams (right), director of UGA's grounds department, shows raingarden project co-ordinator Jessten Murphy the results of a recent heavy rain.

Part reservoir, part filtration system, raingardens are a smaller version of what are also known as detention ponds. Like ponds, raingardens catch rain runoff from impervious surfaces such as asphalt and concrete, helping keep the water out of conventional drainage systems such as sewers. But raingardens—technically known as "bioretention cells"—can do more. They help cleanse water before it goes into the ground or into a drainage system. They also beautify landscapes and can improve safety by reducing flooding and standing water.

Basically, a raingarden is a large hole in the ground, several feet deep. Its size is based on the amount of water it's expected to handle; its shape is aligned with the contours of the surrounding landscape. The bottom has a "cell" composed of uniform-sized gravel and surrounded with a special porous fabric that allows water through but filters out sediment. On top of the fabric is a layer of organic material such as sandy loam. Above that, on the ground surface, are gravel and rocks of varying sizes that trap water in pockets and release it slowly. An overflow pipe buried in the hole rises about a foot above the rock surface. The garden is surrounded by grass, shrubs, trees and other amenities.

fabric, dirt, oil and other impurities are leached out and the clean water is absorbed into the ground.

"Rains of an inch or less carry the most concentrated runoff of pollutants, trash and sediments," says Adams. "For these normal rainfalls, a raingarden will really drink up the water quickly so there's rarely any standing water."

The university has a couple of other devices that just hold water, including a berm-like area at the ecology building and a retention pond at the intramural fields.

Raingardens are more expensive to install than conventional sewer drains. But Adams says they pay off in reduced water pollution, stormwater control, improved aesthetics and enhanced safety.

Expect to see several of them along Lumpkin Street as part of the extensive stormwater and drainage improvement work Athens-Clarke County is carrying out on that busy thoroughfare. UGA will maintain the Lumpkin Street raingardens, and more will be built around campus, says Dexter Adams, head of the grounds department. The garden at the grounds department office was installed as a demonstration to help UGA workers become familiar with them, says Adams.

When rain falls, runoff from parking lots, sidewalks, streets, roofs and other surfaces is channeled into the raingarden instead of going down the sewer drain or pooling along the curb. As the water seeps down through the rocks, organic material and porous

"As an educational institution, we should set an example by using best management practices," he says. "Physical plant is excited to be working with Athens-Clarke County to take advantage of these new approaches to stormwater management."

PRESIDENT'S OFFICE

Senior administration meets with university community

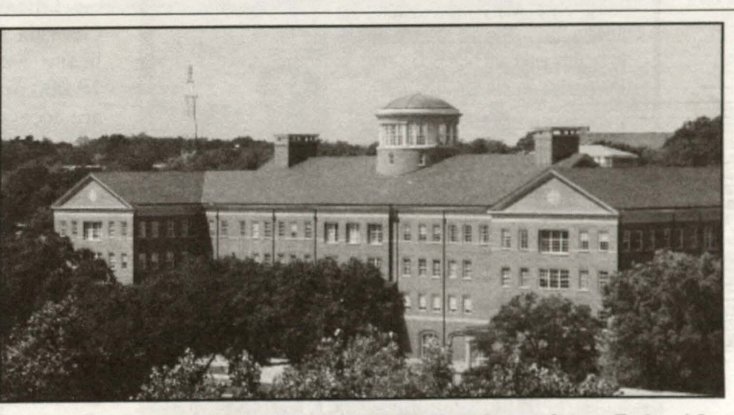
By Chuck Toney
ctoney@uga.edu

Throughout fall semester, President Michael F. Adams and Provost Arnett Mace held a series of meetings with small groups of faculty to discuss issues of concern and interest to the faculty and to offer an administrative perspective. Out of those meetings came a request by the faculty for more regular communication from the senior administration. This article in *Columns* is the first in a series that will address administrative goals and priorities.

would like to hear about administrative priorities more regularly and to have the opportunity for more input into the decision-making process," Adams says. "I agree that open lines of communication are crucial to the operation of the University of Georgia, and I hope that this series will be one step in that process."

State budget cuts

The condition of the state budget remains the top UGA issue as the Georgia General Assembly convenes. Gov. Sonny Perdue's budget proposal includes a 2 percent



Student Learning Center dedication takes place Feb. 19

The university community is invited to the dedication of the Student Learning Center on Feb. 19 at 4 p.m. The ribbon-cutting ceremony will take place in the fourth-floor rotunda.

Speakers will be Gov. Sonny Perdue, Chancellor Thomas C. Meredith, President Michael F. Adams, Provost Arnett C. Mace and Student Government Association President Latham Saddler.

A reception will be followed by tours of the SLC.

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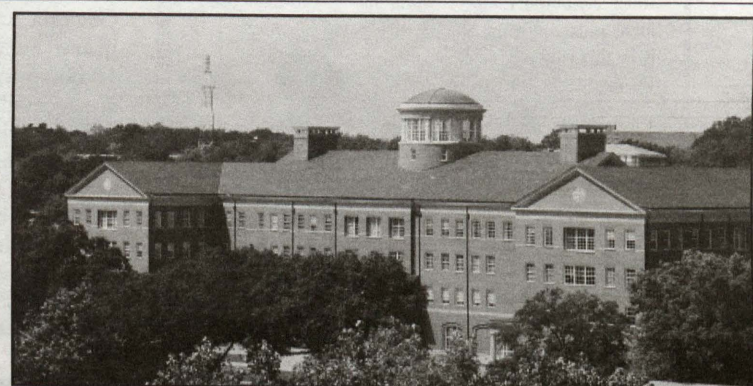
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See **REPORT** on page 8



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t you and nail you a den cross. They d at big nails right through palms of your hands and les.

The violence is just part he controversy, however. Many Jewish leaders of ay have been critical of Gibson's film because y say it makes the Jews k bad. They are afraid t Gibson will create a ve of anti-Semitism with release of his movie. In e you are not up to speed Biblical history, it was the vish leaders who had us arrested while he was iging out with Simon er and the boys in the rden of Gethsemane. They nted Jesus dead, but n't have the authority to l him. Pilate, the Roman erneror, did, so the Jewish ders sent him to Pilate. It turns out that Pilate n't find reason to execute risoner, but was too ak to stand up to the wish leaders, so he eased Jesus to them to be t to death. It is my under- nding that these are the ts Mel Gibson portrays in s movie, but they are not e central focus of the film.

The focus of the film is e pain and agony and suf- ring that Jesus endured on half of humanity. That is e message that Mel Gibson pes people will embrace. aybe that's what his critics e so worried about. Jesus's crucifixion. It's en almost two thousand ars, and folks are still lking about it!

Jesus's crucifixion. It's en almost two thousand ars, and folks are still lking about it!

Darrell Huckaby is an educator and author living in Conyers. Contact him at www.darrellhuckaby.com.

surface that a student making a run at a county commission seat Myers, Rutherford and Mary would have a good chance of getting elected, especially if he or

See **STUDENTS** on D5
ATHENS BANNER FEB 22, 2004 Pg D-1

U.S. Rep. Mark Collins, Republican, opens his campaign to the University of Georgia chapter of the College Republicans. Collins is seeking the U.S. Senate seat being vacated by Zell Miller, who is retiring.

'Raingardens' in Athens



Allen Sullivan/Staff

This 'raingarden' near the University of Georgia's physical plant offices is a small version of the raingardens that will be part of a re-configuration of Lumpkin Street. Raingardens are designed to slow the flow of stormwater, to keep pollutants out of waterways.

Stones, plants may clean water

By Lee Shearer
lee.shearer@onlineathens.com

The “raingardens” flanking the door to a little building beside the University of Georgia's Chicopee building off East Broad Street don't look like much — a few landscape plants growing from layers of smooth stones nestled against the building front.

But they're the beginning of a bigger effort that should mean cleaner water in the streams that run through downtown Athens and the University of Georgia campus, hopes Dexter Adams, head of

UGA's grounds department.

Under a joint plan between UGA and Athens-Clarke County, a series of similar raingardens will soon dot the UGA campus along South Lumpkin Street, along with hidden underground devices called “infiltration trenches.”

Clarke County sales-tax collections will pay for the system, which will stretch from Broad Street to Rutherford Avenue near Five Points.

The 1.2-mile project will be the first such large-scale installation in the state,

See **RAINGARDENS** on D2

University says she couldn't believe her eyes when she discovered the book's cost.

“I expected it to be maybe \$80,” said Hill, originally from Augusta. “But \$124, that's way too much.”

Hill's classmate, H. Kianfarid, didn't fare much better.

The 22-year-old bought a major from Atlanta for a used copy of the required for the so-called “base price” of \$101.95.

“I was so mad,” Kianfarid, studying this week at the GSU student center. “I went to three other stores and was the lowest price I found.”

See **TEXTBOOKS** on D2

Politics

WOW, the connections it makes: Unlikely pairings dominate meeting

The people who want to build a massive playground at Southeast Clarke Park say the project will bring the community together.

And the Athens-Clarke commission couldn't have made the playground folks' point better if they'd planned it.

Thursday night made for some significant pairings when it came time to vote to give the World of Wonder playground more funding.

Commissioner States McCarter made a motion to pay for earthwork for the project — no surprise in that, since the park lies in his district.

But then Carl Jordan, who doesn't always get along with McCarter and is well-known for his frugality with taxpayer money, one-upped the commissioner to his right. Sure, he said, we'll pay the \$16,500 construction, but let's pay the \$5,000 design costs, too.

An apparently surprised McCarter agreed.

Then, as if to demonstrate county-wide support for the project, the two super-district commissioners — Tom Chasteen and Cardee Kilpatrick, who together represent the entire county — moved to accept the WOW organization's donation of the \$200,000 playground.

It couldn't have worked better if they'd planned it.

Taxi! Hailing a cab could get more difficult and more expensive, Athens-Clarke Commissioner Carl Jordan predicted this week, if his colleagues approve new regulations for taxis.

The updated law is supposed to improve safety by requiring regular inspections of the cars and setting standards for the drivers.

It includes a few petty points — drivers must wear a collared shirt (or a uniform approved by the police chief) — but the important point of the law is that it continues the existing requirement that a cab company operate 24 hours a day.

“We don't run our buses 24 hours, we know better,” Jordan tried to convince other commissioners this week.

The community naturally needs more cabs during certain hours — say, between 10 p.m. and 2 a.m. in downtown — and 24-

hour service favors larger companies that can field a car during the slack times of a whole fleet during busier ones. “We should be regulating these incentives for safety purposes, that is it. Through our regulations, we are going way beyond the safety goals,” Jordan said last week. “This commission does not understand what should be left to the market,” he said. “If anybody will demonstrate to me that the price of a cab ride will be the first to support it.”

Whatcha thinkin'?: The citizen committee set up to gauge support for the Athens sales tax held their second pre-game meeting this week. The plan is set. They're ready to go ask folks what they think — about

See **IN THE LOOP** on D2

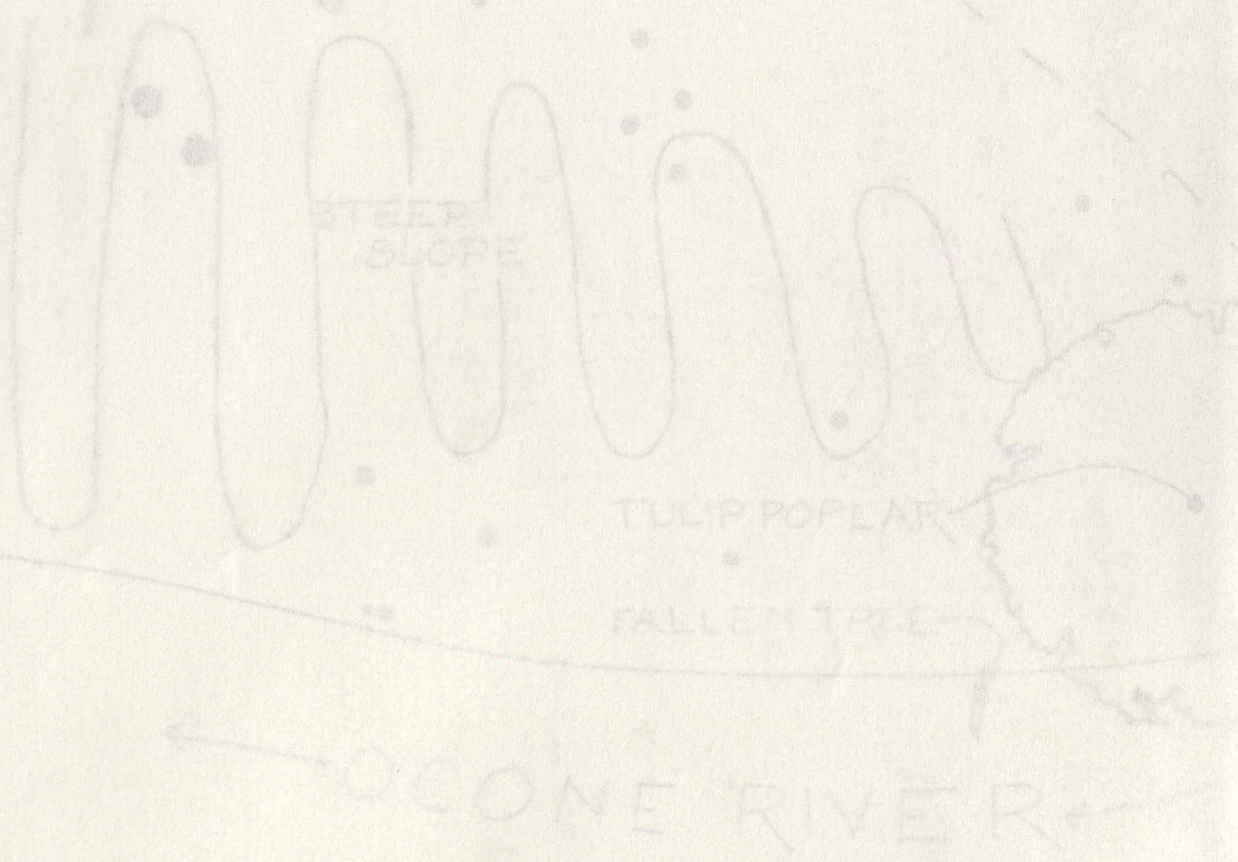
Do you have any information to submit to In The Loop? Feel free to drop a line to news@onlineathens.com.

Surveys:

“Missing Teeth.” A major project that I headed up was coined the “missing teeth survey.” This meant that I walked every square inch of campus looking for individual plants or plantings that had either died or had been killed during construction projects and were not replaced. I identified where and what the missing plants were and marked them on the survey with the appropriate type, place, and quantity. This was a very helpful document to the crew that is in charge of the yearly plantings, as it took all of the guess work out of this project, letting them know the exact quantities, types, and locations for all of the plants that they had to order. It was a helpful project for me as I gained an intimate knowledge of campus, was able to observe many types planting designs, and learned a great deal about the plants themselves.

“Storm Sewer Survey.” As the campus updates its mapping standards, an exact map of the storm sewers became a needed component. I worked with the grounds’ survey crew to begin to do a map of the storm sewers using GPS to delineate all of the systems, the size and types of the pipes used, and the inverts of each one. This required opening each manhole cover, going into the box and measuring the pipe itself and its depth. From this project I learned how to use GPS, as well as an up-close-and-personal knowledge of how traditional storm sewers work.

GCRC remediation plan:
The GCRC building is a new facility on
campus that is located off of Riverwood Road and on the Oconee River. During
attempt to have exotic invasive plants removed, the hired contractors were overzealous
and cleared all the way to the river's edge, cutting several well-established Muscogee
trees and a very old native Axial. This mistake quickly caught the attention of a
concerned community member who reported the mistake to the city. As a result, we were
required by the EPD to design and implement a remediation plan for the site. This
required erecting a fence, compiling a canopy survey, planting several replacement trees,
and providing a monitoring schedule for the site. This project gave me an inside look at
the relation between the University and the City/County and showed me the domino
effect that simple careless acts can have on a multitude of people.

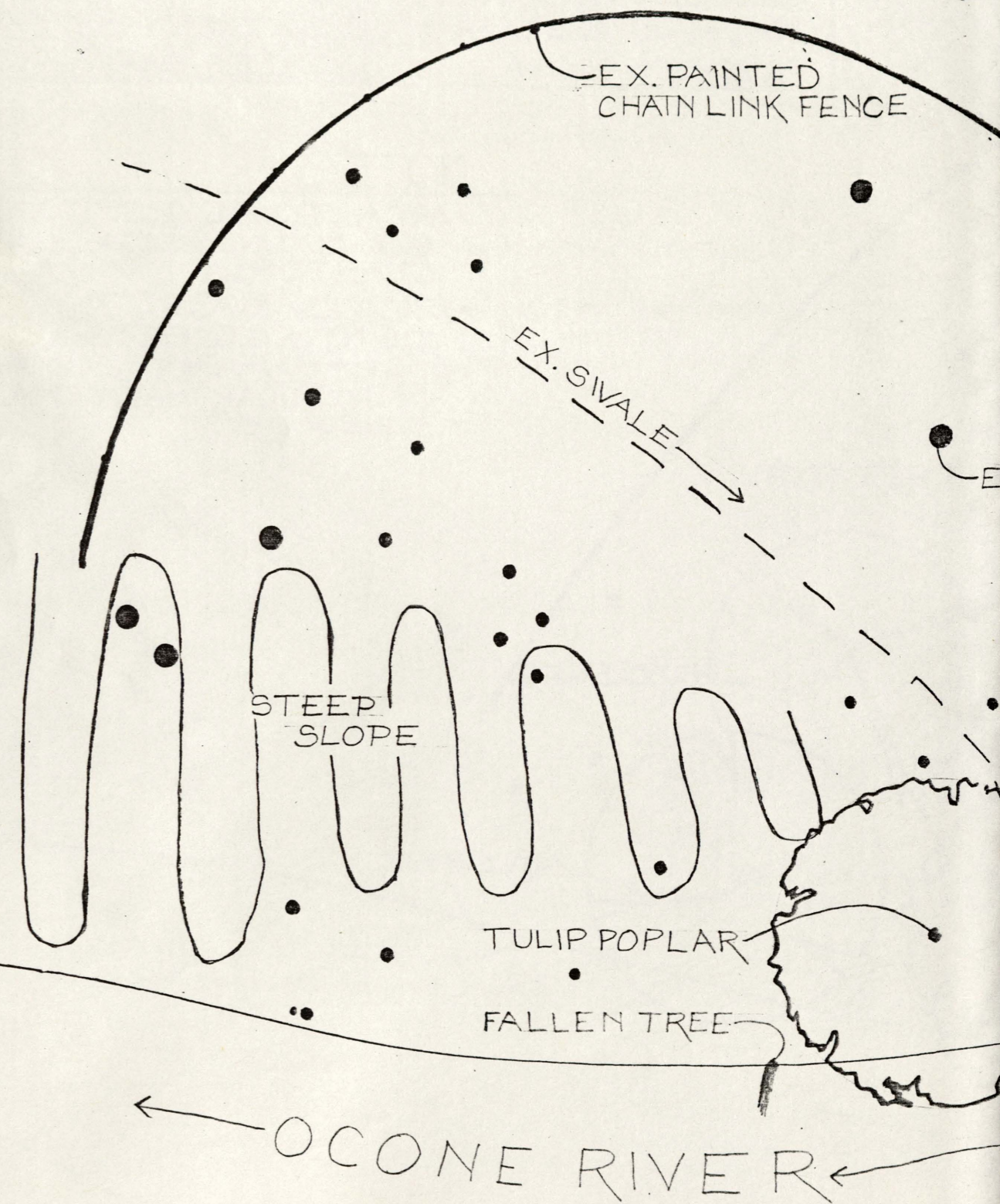


CCRC remediation Plan:

The Complex Carbohydrates Research Center (CCRC) building is a new facility on campus that is located off of Riverbend Road and on the Oconee River. During an attempt to have exotic invasive plants removed, the hired contractors were overzealous and cleared all the way to the rivers edge, cutting several well-established Musclewood trees and a very old native Azalea. This mistake quickly caught the attention of a concerned community member who reported the misdeed to the city. As a result, we were required by the EPD to design and implement a remediation plan for the site. This required erecting a fence, compiling a canopy survey, planting several replacement trees, and providing a monitoring schedule for the site. This project gave me an inside look at the relation between the University and the City/County and showed me the domino effect that simple careless acts can have on a multitude of people.

C.C.R.C. STREAM BUFFER CLEARING

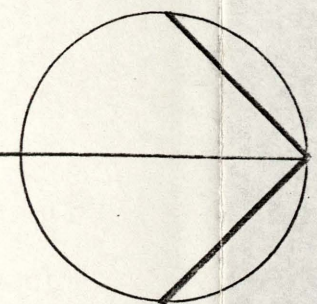
SCALE: 3/4" = 10'-0"



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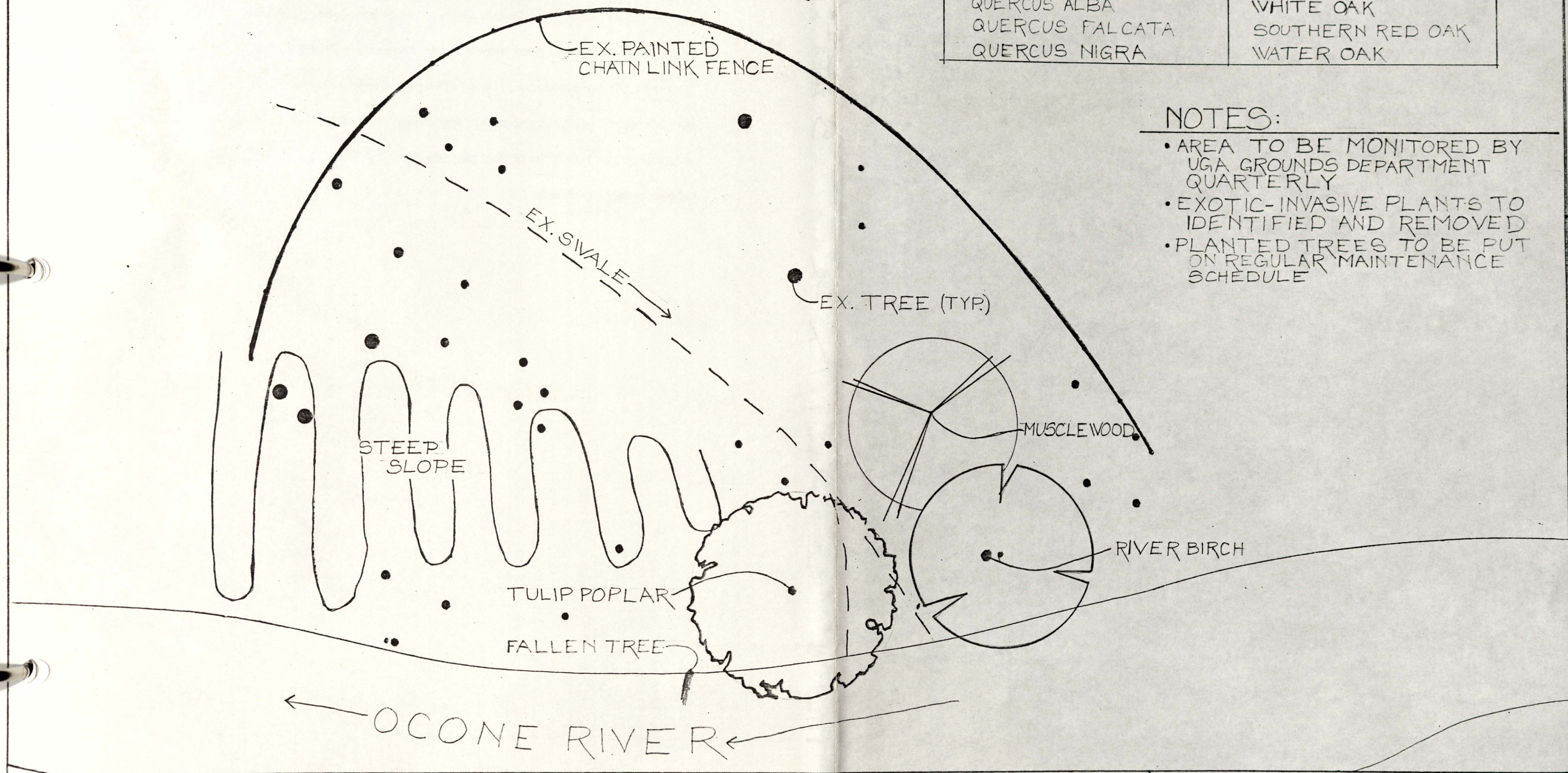
SCALE: 3/4" = 10'-0"



EX. CANOPY TREES	
BOTANICAL NAME	COMMON NAME
BETULA NIGRA	RIVER BIRCH
CARPINUS CAROLINIANA	MUSCLE WOOD
FAGUS GRANDIFOLIA	AMERICAN BEECH
LIRIODENDRON TULIPIFERA	TULIP POPLAR
PRUNUS SEROTINA	BLACK CHERRY
QUERCUS ALBA	WHITE OAK
QUERCUS FALCATA	SOUTHERN RED OAK
QUERCUS NIGRA	WATER OAK

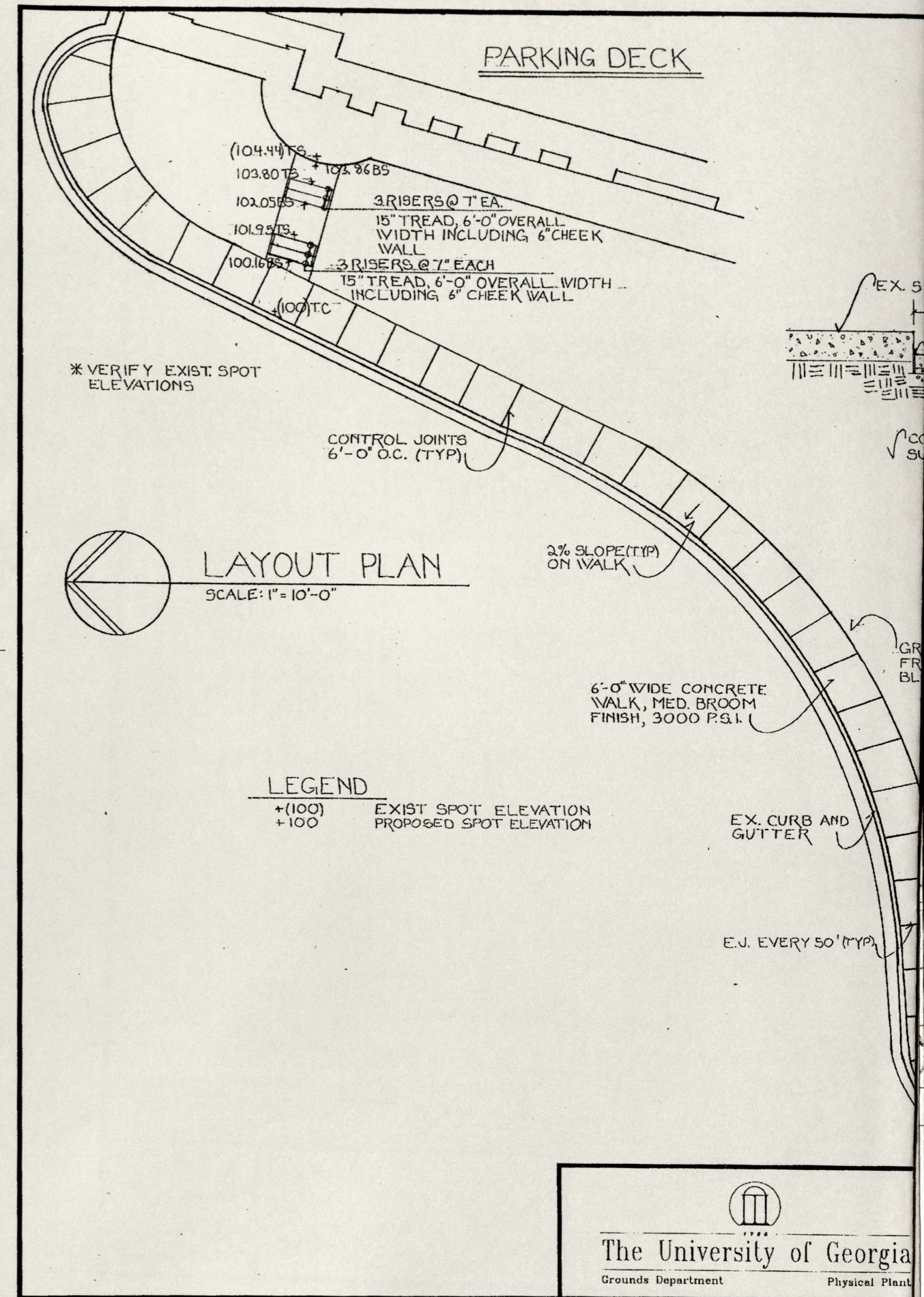
NOTES:

- AREA TO BE MONITORED BY UGA GROUNDS DEPARTMENT QUARTERLY
- EXOTIC-INVASIVE PLANTS TO IDENTIFIED AND REMOVED
- PLANTED TREES TO BE PUT ON REGULAR MAINTENANCE SCHEDULE



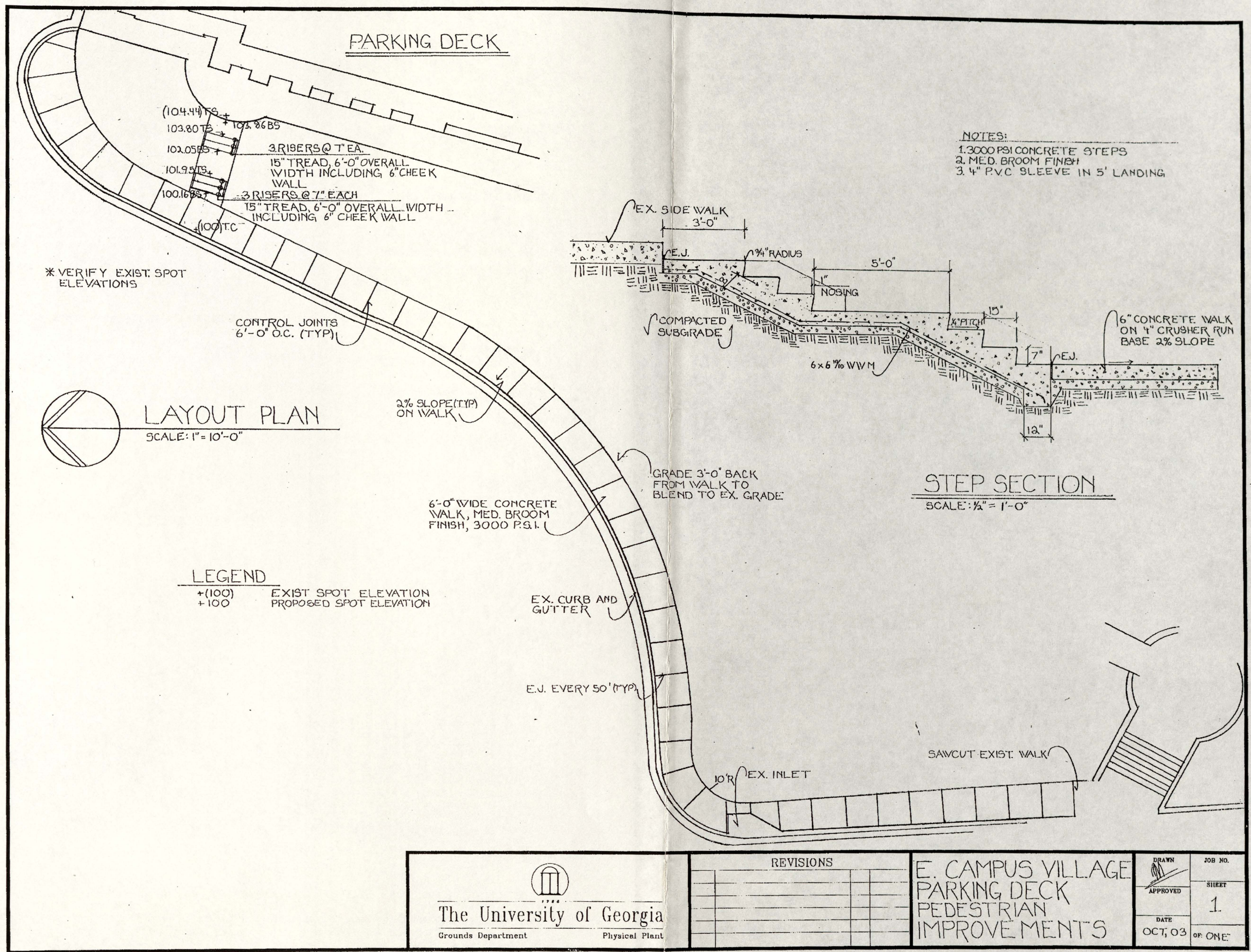
East Campus Village Parking Deck Steps:

After the completion and planting of the East Campus Village Parking Deck, it quickly became apparent that some pedestrian control measures were necessary because a network of desire lines quickly formed. The first step towards controlling circulation was to design a set of steps and sidewalk that would connect the North entrance with the Main set of steps. This was a great project for me because I was able to continue to learn the complexity of the profession. If a set of steps and sidewalk requires this much thought and attention it is amazing to realize the amount of work and skill that goes into much larger projects. This is the perfect place to start as it gives a great preview of complex problems that lay ahead.



Parking Deck Steps:

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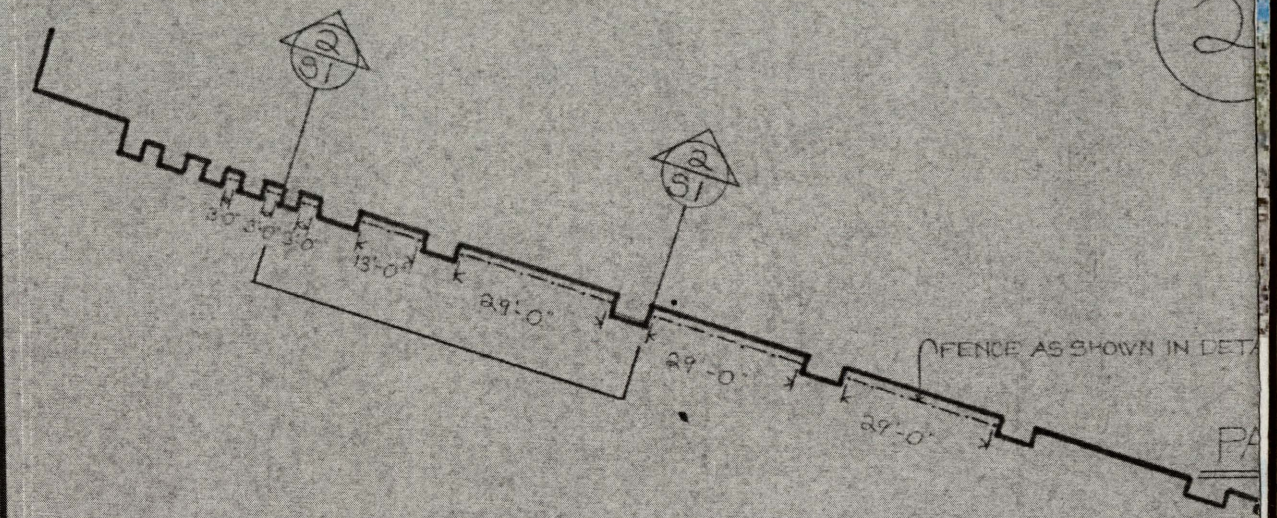


East Campus Village Parking Deck Fence

The second part of pedestrian control at the East Campus Village Parking Deck was a barrier that would control the way people entered and left the building. The fence was modeled after an existing fence on campus, and because it was a small contract (under \$5,000) and the same contractor was going to be doing the work, complex specifications were not necessary. I had to draw a plan showing exactly where the fence was to go and how it would look, and due to the fact that the architects insisted that the façade was not to be touched we had to specify that the curb be core drilled and the posts be placed with non-shrink grout. I was able to meet with the contractor during this project and help oversee the installation.

NOTES:

- FENCE TO MATCH EX. FENCE AT INTERSECTION OF BAXTER ST. AND S. CHURCH ST. BEHIND U.G.A. SIGN
- TOTAL LENGTH OF FENCE APPROX. 325 LINEAR FEET
- STEEL PIPING TO BE PRIMED AND PAINTED W/ 2 COATS BLACK PAINT.
- ALL SPOT-WELDED JOINTS TO BE GROUND EVEN W/ PIPING BEFORE PRIMING



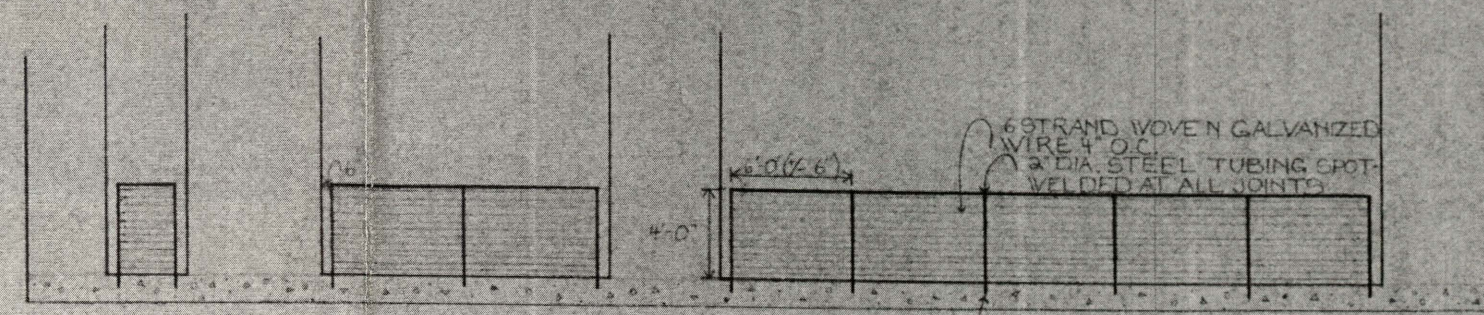
FENCE LAYOUT
SCALE: 1" = 30'-0"

arking Deck Fence

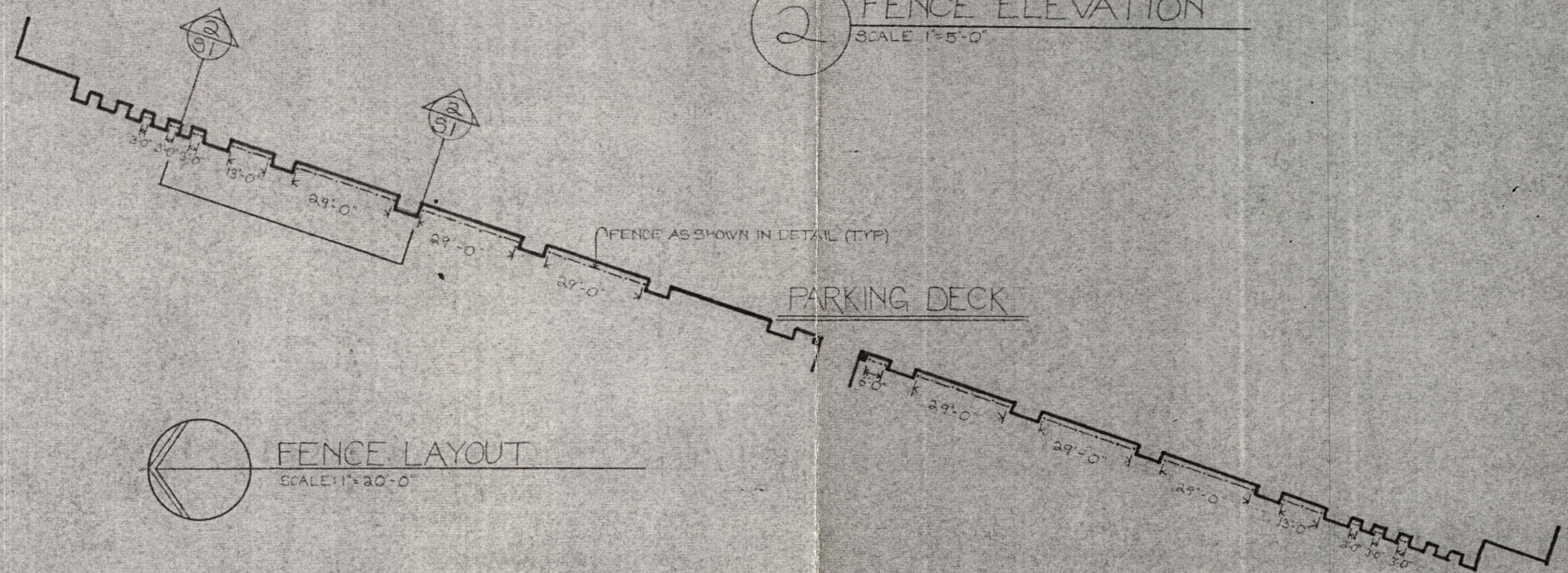
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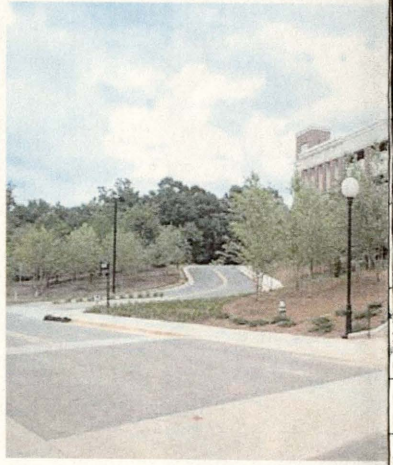
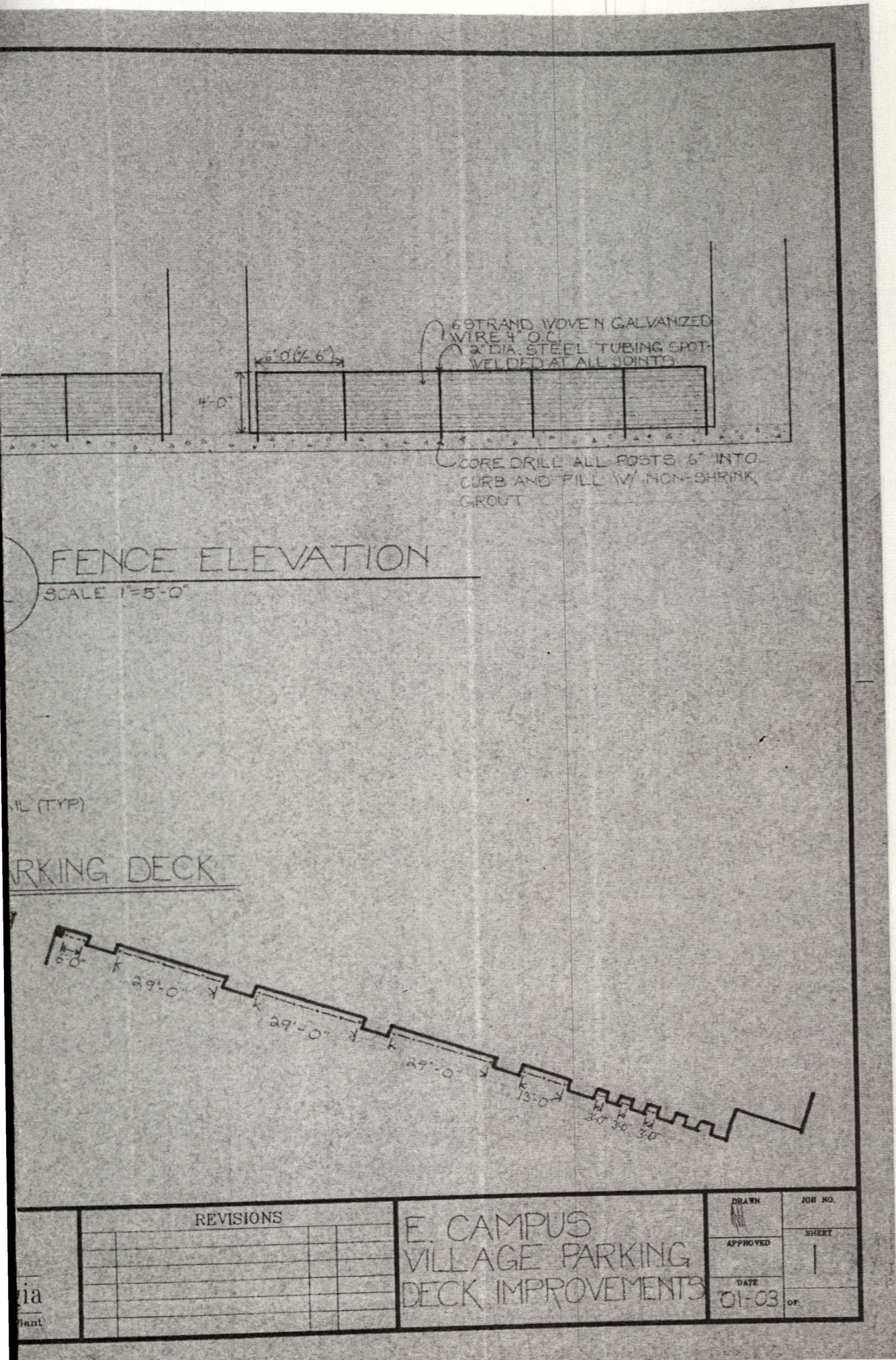


2 FENCE ELEVATION
 SCALE 1"=5'-0"

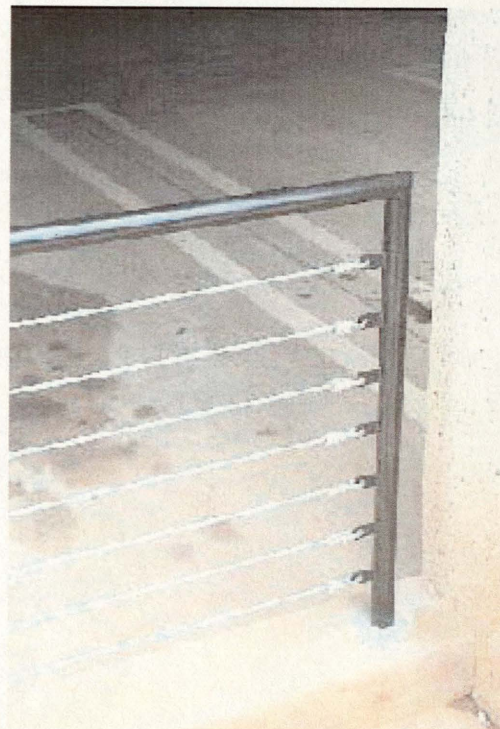
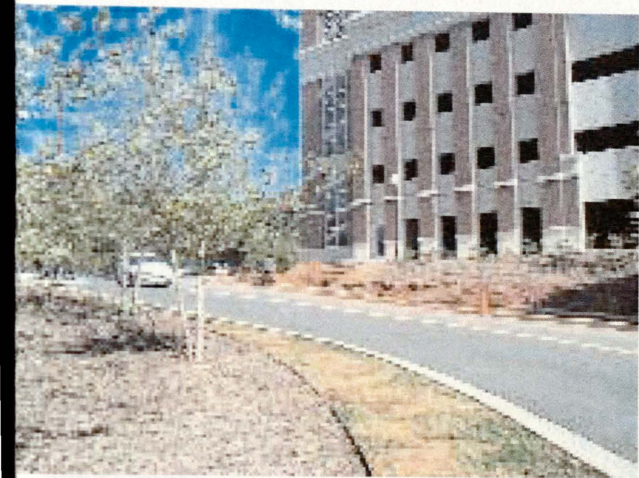
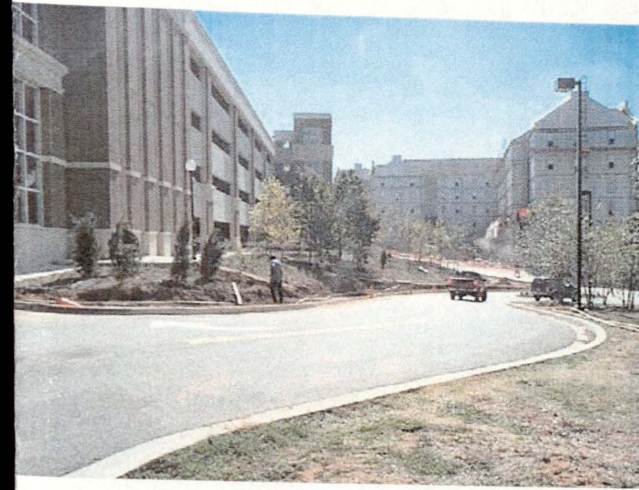


FENCE LAYOUT
 SCALE 1"=20'-0"

 The University of Georgia Grounds Department Physical Plant	REVISIONS _____ _____ _____	E. CAMPUS VILLAGE PARKING DECK IMPROVEMENTS	DRAWN [Signature] APPROVED [Signature] DATE 01-03	JOB NO. _____ SHEET 1 OF _____
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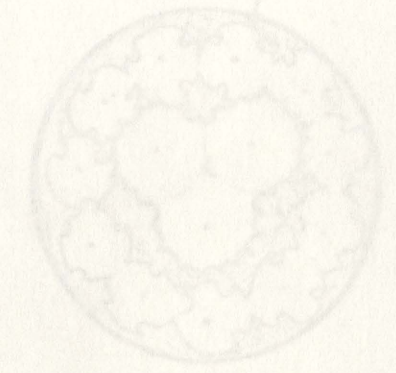
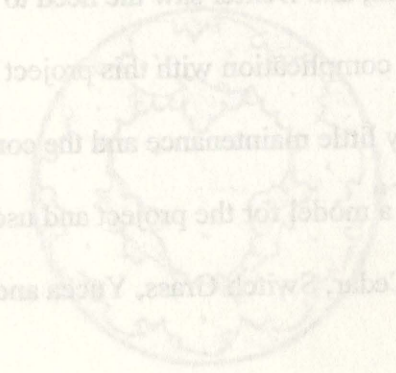
E. Campus Village Parking Deck



BOYD GRADUATE

"Green Roof" Planters:

After a test green roof system was installed on the roof of Boyd Graduate school, the area became a focal point, and Dexter saw the need to replace the existing modern style planters. The main consideration with this project is that if the planters are difficult to access, receive very little maintenance and the conditions are very harsh, I decided to use granite outcrops as a model for the project and used plants from them. The plants chosen were Eastern Red Cedar, Swiss Grass, Yucca and Yellow Jasmine.



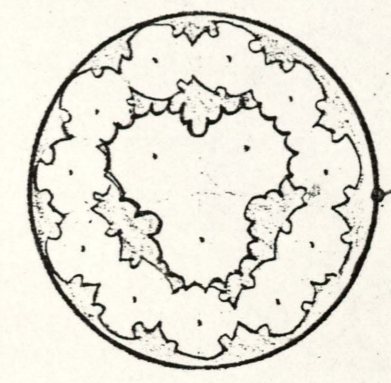
ISRODIE CEDAR (O)
SPANICUM ARGATUM
R. GELSEMIUM BEMPE

"GREENROOF" PLANTERS

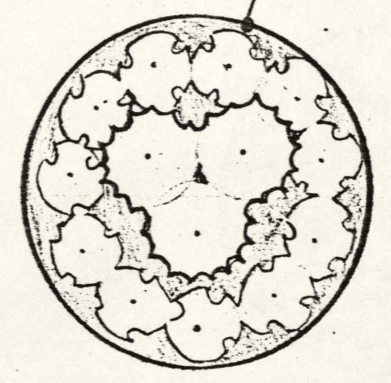
SCALE-1"=3'-0"

"Green Roof" Planters:

After a test green roof system was installed on the roof of Boyd Graduate school, the area became a focal point, and Dexter saw the need to replant the existing modern style planters. The main complication with this project is that the planters are difficult to access, receive very little maintenance and the conditions are very harsh. I decided to use granite outcrops as a model for the project and used plants from them. The plants I chose were Eastern Red Cedar, Switch Grass, Yucca and Yellow Jessamine.



3 YUCCA FILAMENTOSA
11 GELSEMIUM SEMPERVIRENS

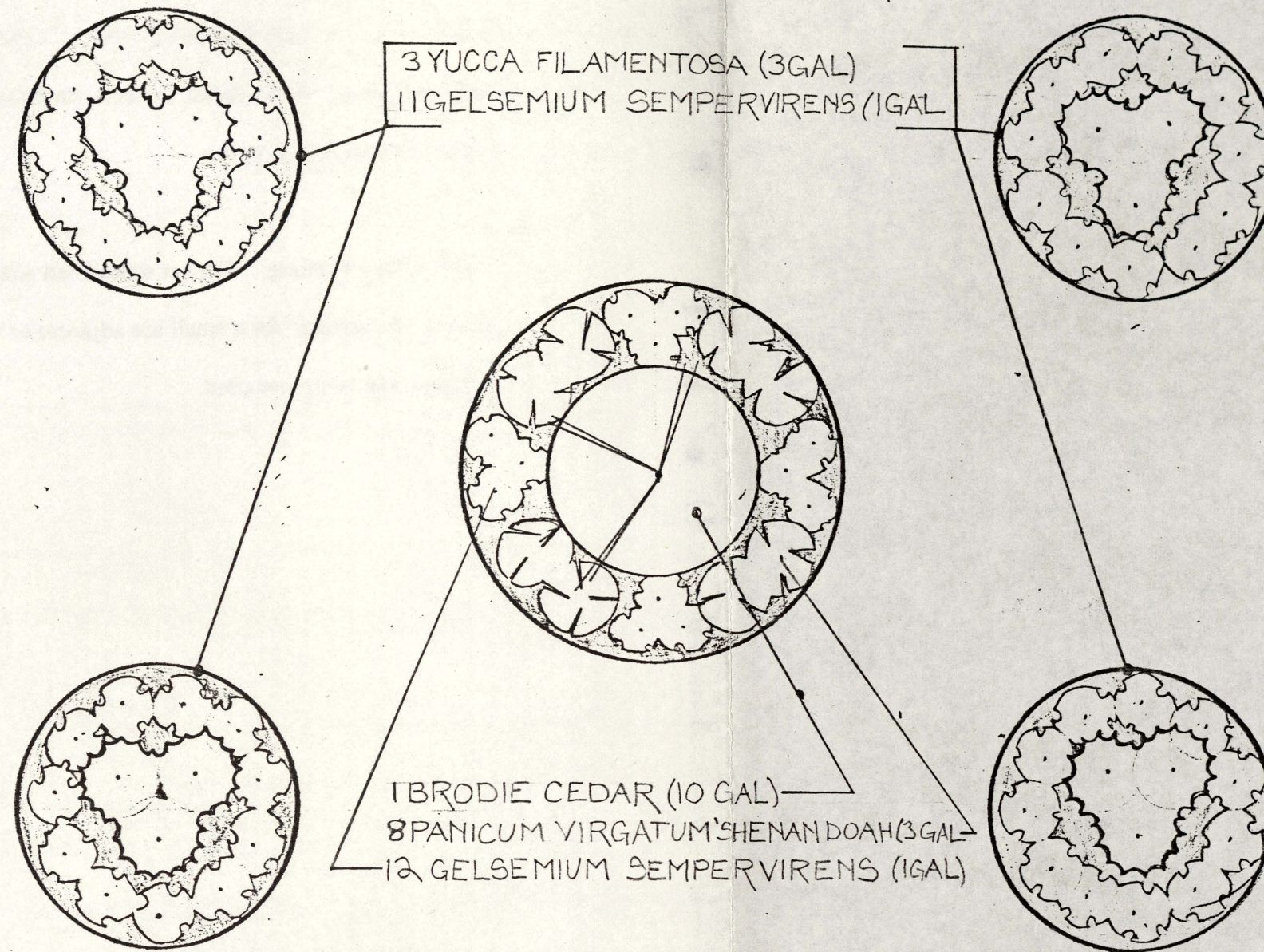


1 BRODIE CEDAR (10 G)
8 PANICUM VIRGATUM'S
12 GELSEMIUM SEMPERVIRENS

"GREENROOF" PLANTERS

SCALE - 1" = 3'-0"

BOYD GRADUATE CENTER



"GREENROOF" PLANTERS

SCALE - 1" = 3'-0"

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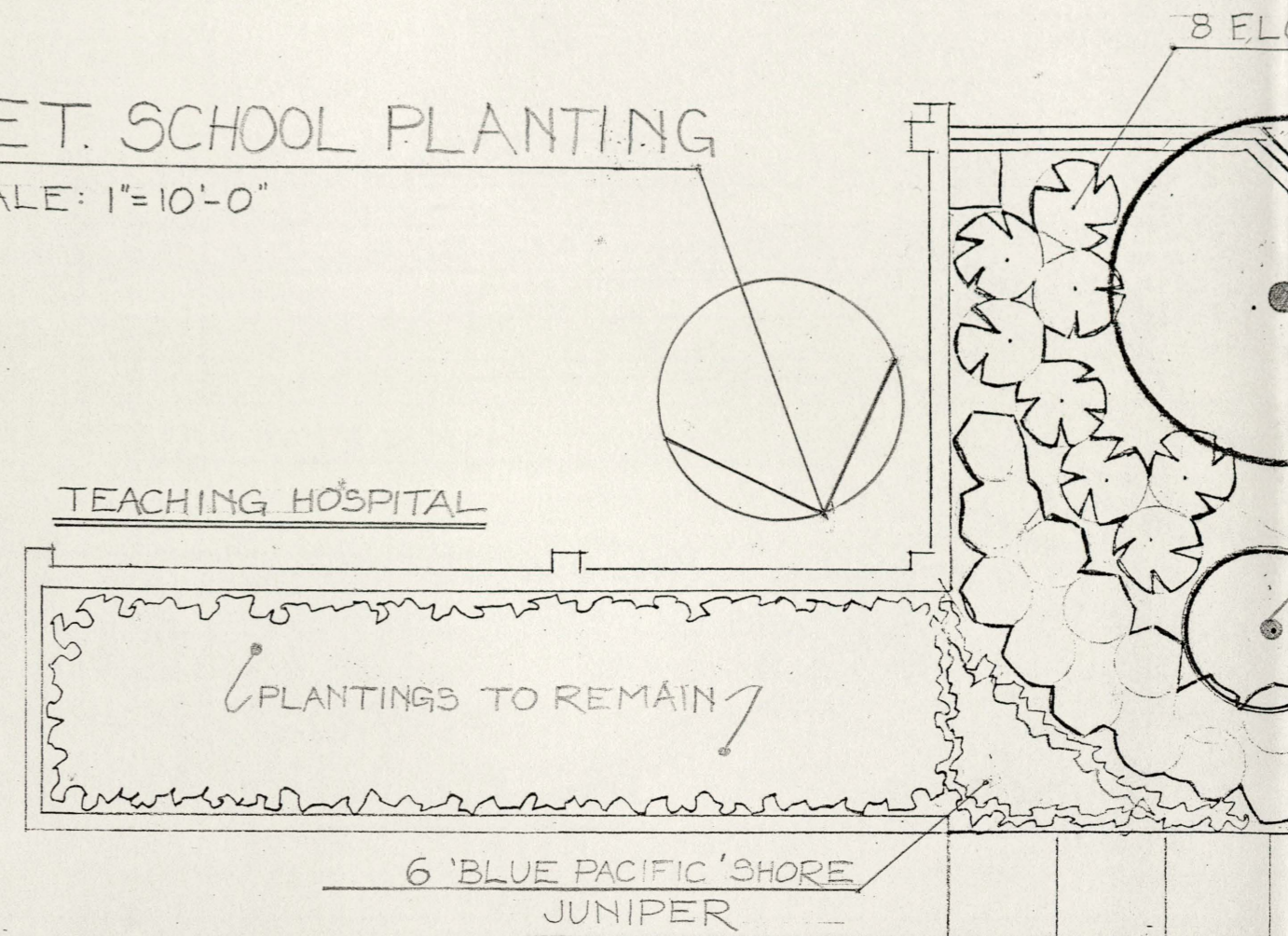
Small Scale Plantings:

"Dumpster Area Screening:" The dumpster area that is used for storage and staging and is adjacent to the Chicopee Complex is surrounded with an unsightly fence that faces a residential area. Sam Wittamore, who is in charge of the area, requested that we do a screen planting for the fence. I used a combination of Wax Myrtle, Cedar, Cherry Laurel, and 'Little Gem' Magnolia.

"Vet School Planting:" The vet school had some end of the year money and requested that we do a design for a small area adjacent to the "dog exercise area" that was damaged while it was being installed.

VET. SCHOOL PLANTING

SCALE: 1"=10'-0"



QUANT.	BOTANICAL NAME	COM.
27	EVONYMUS ALATUS 'RUDY HAAG'	VINGE
80	HEMEROCALLIS 'STELLA D'ORO'	STEL
2	ILEX ATTENUATA 'FOSTERS #2'	FOST
8	ILLICIAM FLORDANUM	FLOR
6	JUNIPERUS CONFERTA 'BLUE PACIFIC'	BLUE

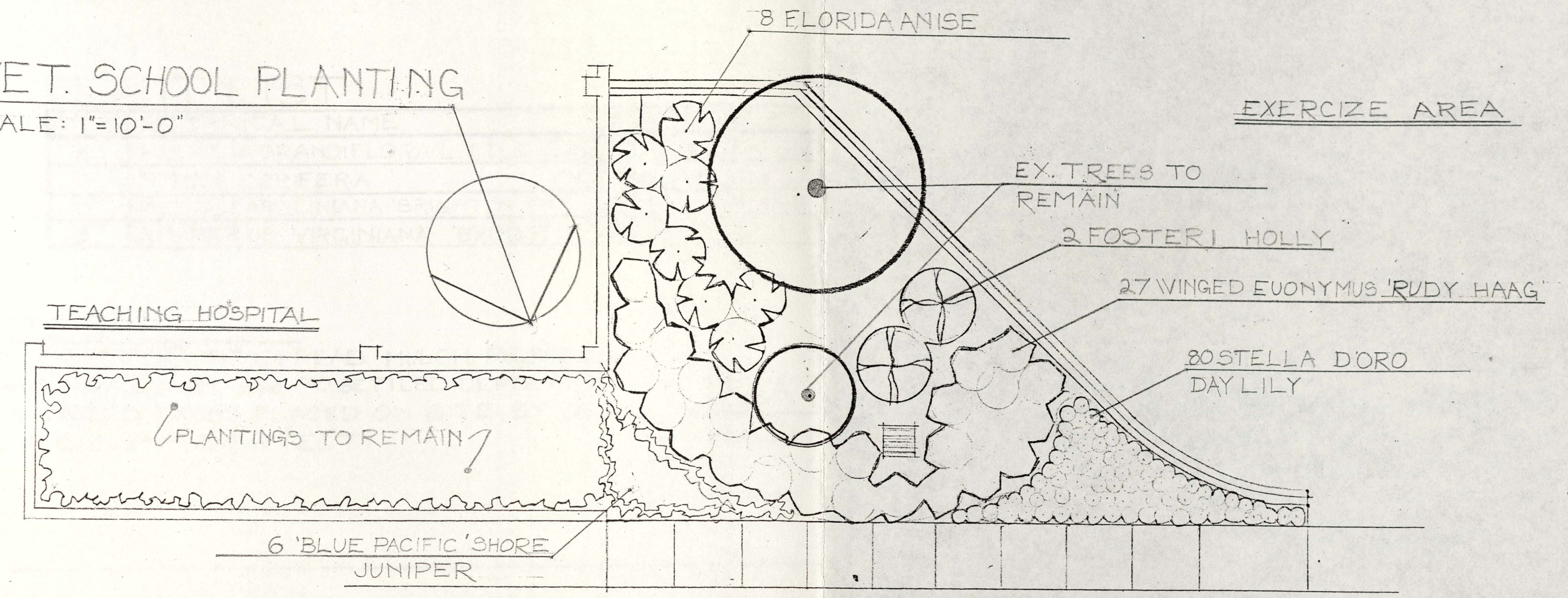
CARLTON STRE

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 e adjacent to the "dog exercise area" that was damaged

VET. SCHOOL PLANTING

SCALE: 1"=10'-0"



QUANT.	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACE
27	EUONYMUS ALATUS 'RUDY HAAG'	WINGED EUONYMUS	3 GAL.	CONT.	4' O.C.
80	HEMEROCALLIS 'STELLA D'ORO'	STELLA D'ORO DAYLILY	1 GAL.	CONT.	18" O.C.
2	ILEX ATTENUATA 'FOSTERS #2'	FOSTERI HOLLY	10 GAL.	CONT.	8' O.C.
8	ILLICIUM FLORDANUM	FLORIDA ANISE	3 GAL.	CONT.	4' O.C.
6	JUNIPERUS CONFERTA 'BLUE PACIFIC'	BLUE PACIFIC JUNIPER	3 GAL.	CONT.	4' O.C.

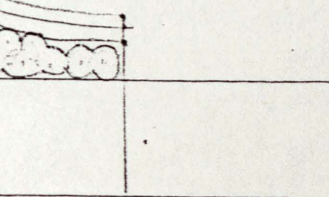
CARLTON STREET

EXERCISE AREA

HOLLY

EUONYMUS 'RUDY HAAG'

TELLA D'ORO
LILY



SPACE
4' O.C.
18" O.C.
8' O.C.
4' O.C.
4' O.C.

PLANT LIST

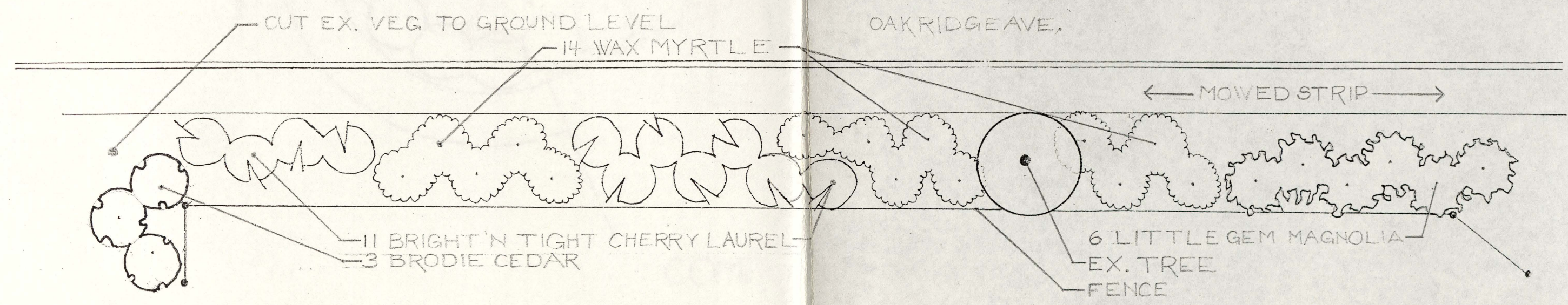
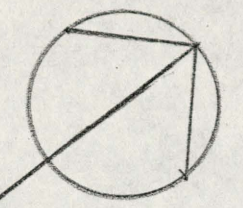
QTY.	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACE
6	MAGNOLIA GRANDIFLORA 'LITTLE GEM'	LITTLE GEM MAGNOLIA	15 GAL.	CONT.	10' O.C.
14	MYRICA CERIFERA	WAX MYRTLE	15 GAL.	CONT.	10' O.C.
11	PRUNUS CAROLINIANA 'BRIGHT 'N TIGHT'	BRIGHT 'N TIGHT CHERRY LAUREL	15 GAL.	CONT.	10' O.C.
3	JUNIPERUS VIRGINIANA 'BRODIE'	BRODIE CEDAR	15 GAL.	CONT.	10' O.C.

NOTES:

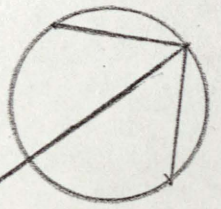
- CONTRACTOR TO SPREAD MULCH, PROVIDED AND HAULED BY UGA TO SETTLED DEPTH OF 3"
- ALL TREES TO BE PLACED ON SITE BY UGA LANDSCAPE ARCHITECT

UGA DUMPSTER AREA

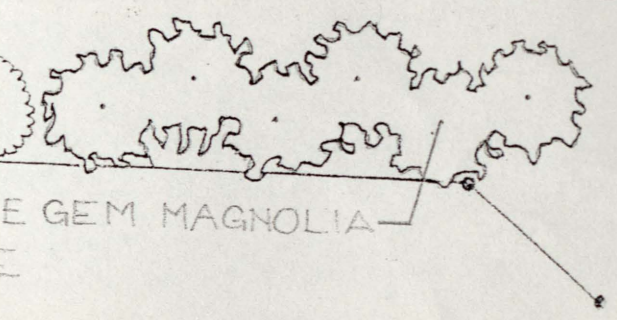
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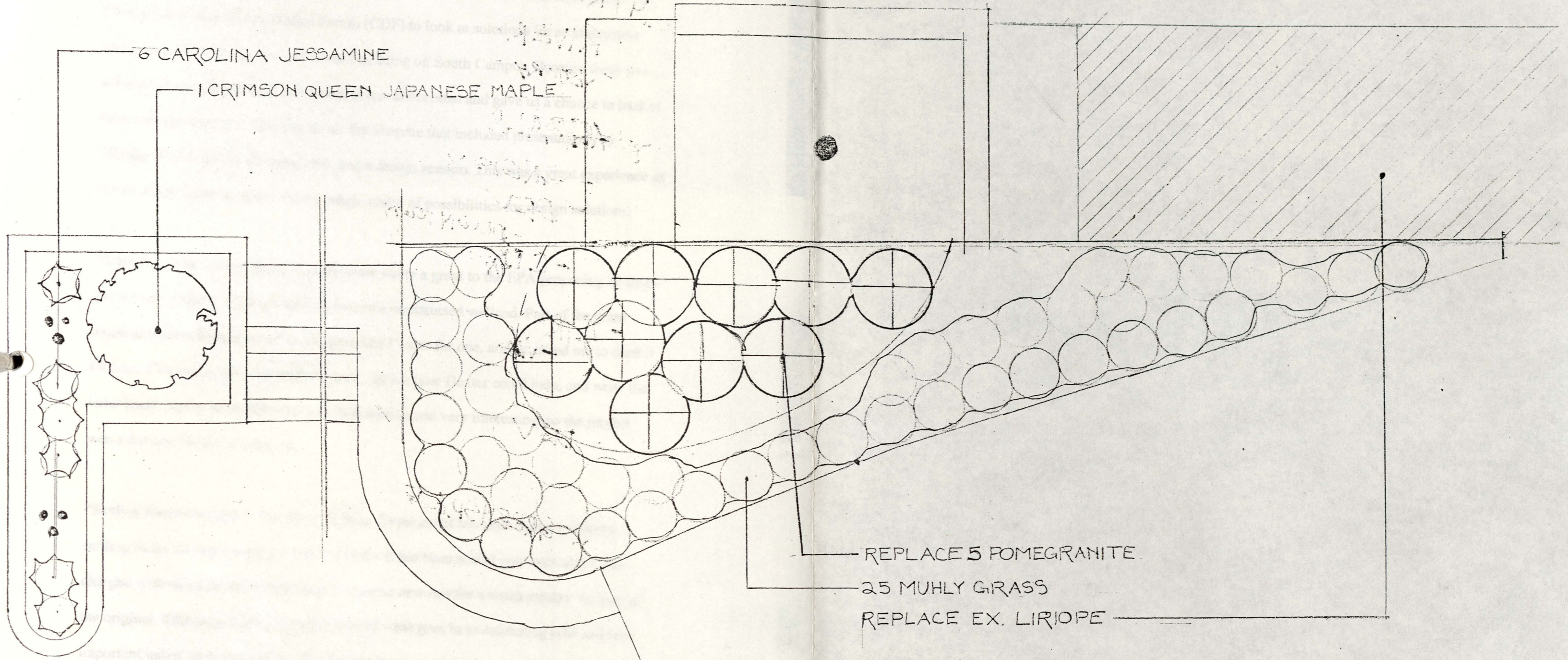
SPACE
10' O.C.
10' O.C.
10' O.C.
10' O.C.



MOWED STRIP →



THE GEM MAGNOLIA



6 CAROLINA JESSAMINE

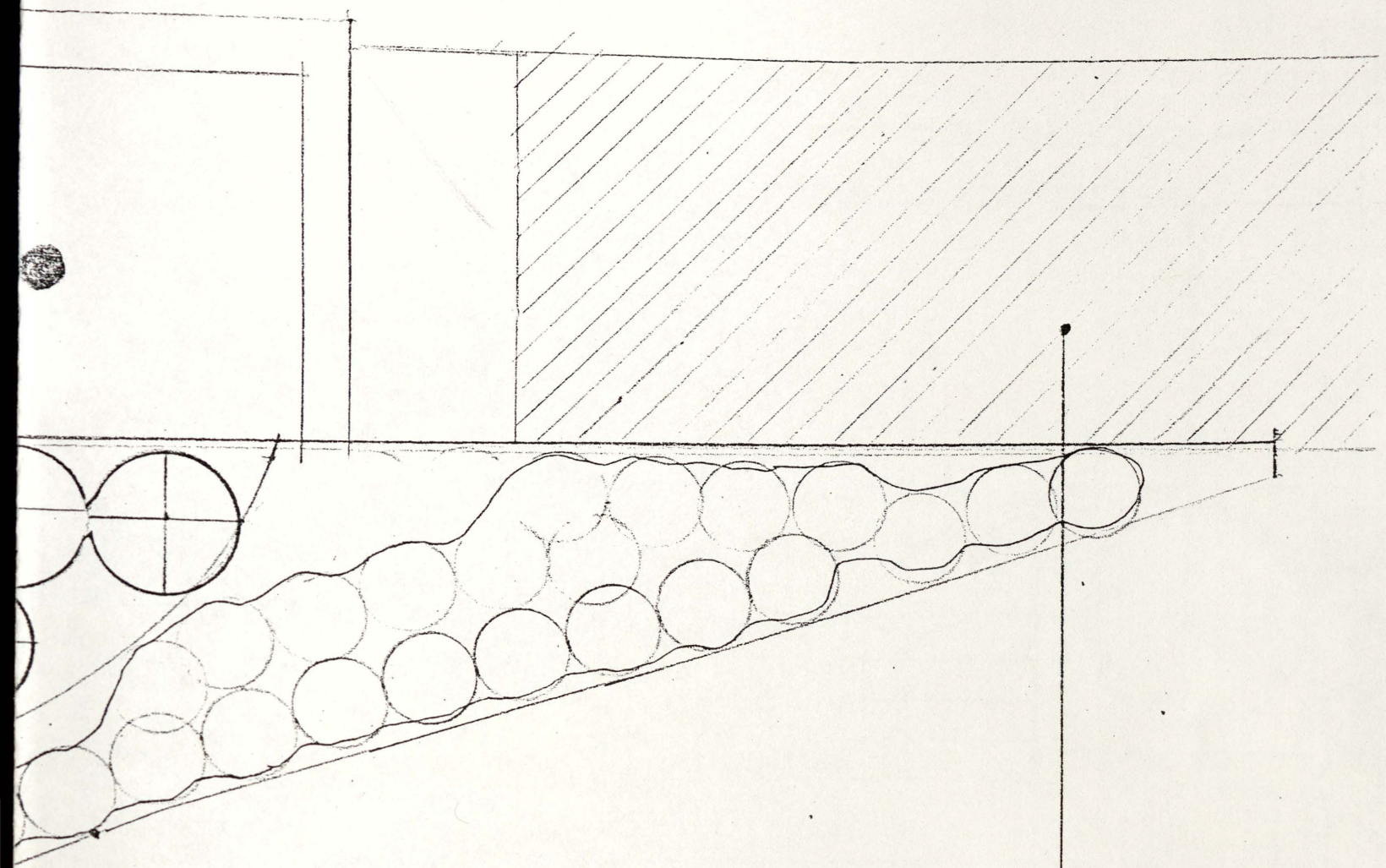
1 CRIMSON QUEEN JAPANESE MAPLE

REPLACE 5 POMEGRANITE

25 MUHLY GRASS

REPLACE EX. LIRIOPE

COMPUTATIONAL CHEMISTRY RE-PLANTING



REPLACE 5 POMEGRANITE

25 MUHLY GRASS

REPLACE EX. LIRIOPE

INTERNATIONAL CHEMISTRY RE-PLANTING

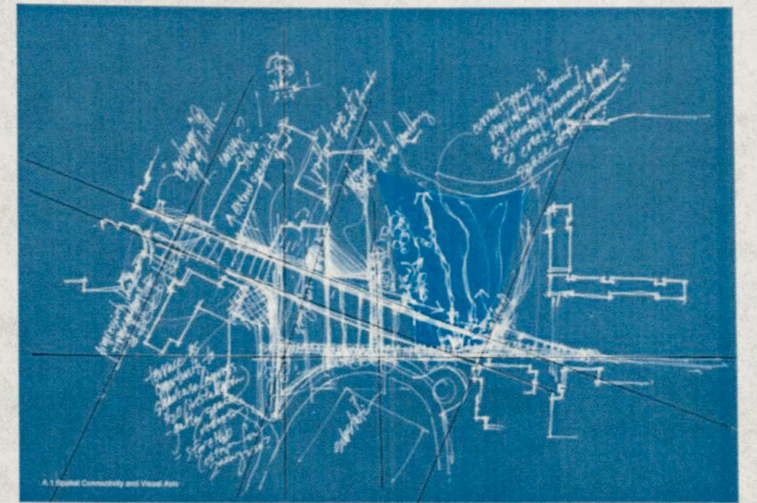
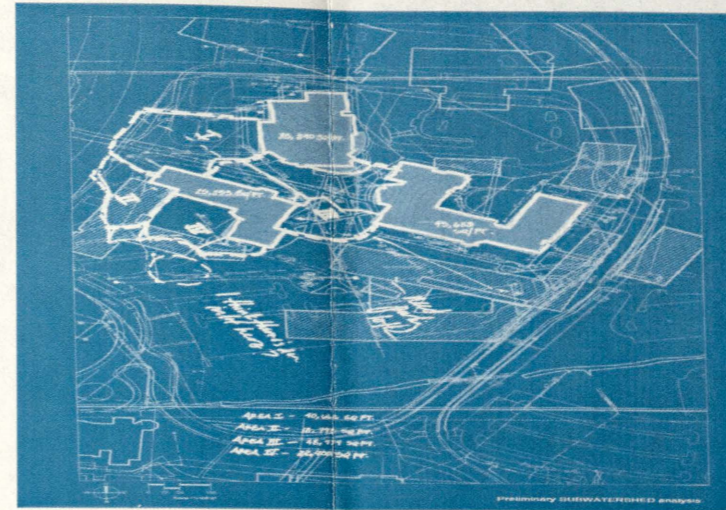
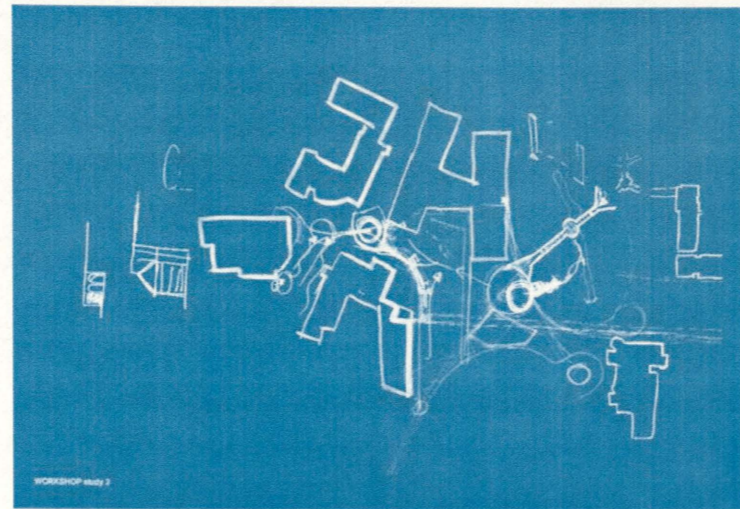
Miscellaneous Projects:

"Jim Patchett Charette" The University Architects held a charette with Jim Patchett the principal of Conservation Design Forum (CDF) to look at solutions for an innovative stormwater plan for the new Art School building on South Campus. Because there was not enough money for implementation, it was conceptual and gave us a chance to look at far-reaching-solutions. This was an all day charette that included presentations by Patchett and Danny Sniff, a site visit, and a design session. This was a great experience as Patchett was inspiring and it gave a whole realm of possibilities for design solutions.

"Grant Proposal Letter:" Mary-Carol Hunter wrote a grant to the EPA proposing an interdisciplinary project to design and implement a constructed wetland. Part of the grant required letters of recommendation, she asked Dexter for one, and he asked me to draft it for him. This required me to read the grant, decide how Dexter could help, and write the letter itself. The grant application was well written and very interesting, so the project was a fun one for me to work on.

"Settling Basin Estimate:" The Dairy Science Department has been trying to build a settling basin for manure for a couple of years. It has been scaled way back and I was charged with using previous estimates to create a new one for a much smaller version of the original. This project gave me a glimpse of what goes in to estimating jobs and how important initial estimates can be. The project has been given the go ahead and it is now out to bid.

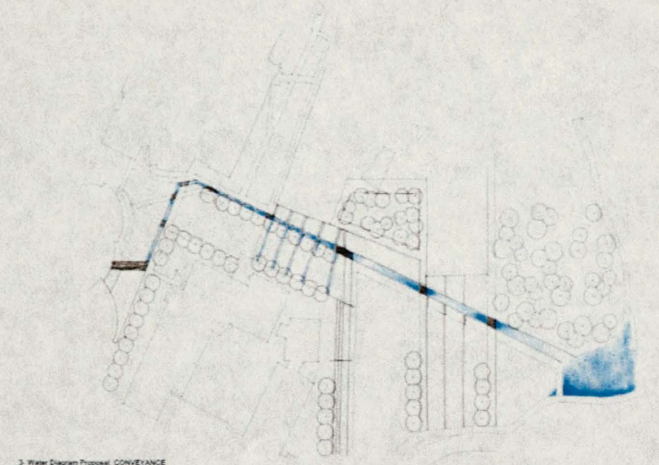
Results from Jim Patchett Cha



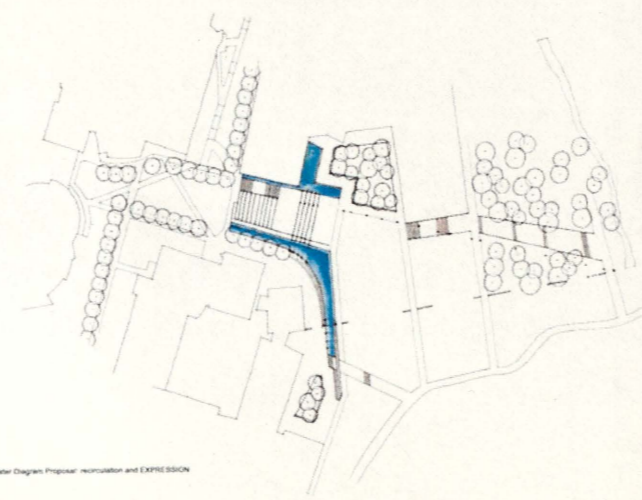
green space or BLUE SPACE...?



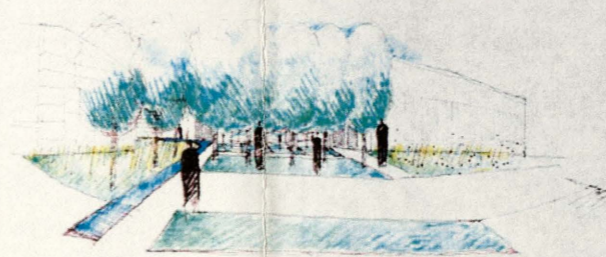
15" Diameter OPPORTUNITY to revalue water



3 Water Design Process CONVERGENCE



2 Water Design Process INFORMATION and EXPRESSION



Five Arts Center Study 2-Plan Review



Five Arts Center Study 3

Results from Jim Patchett Charette

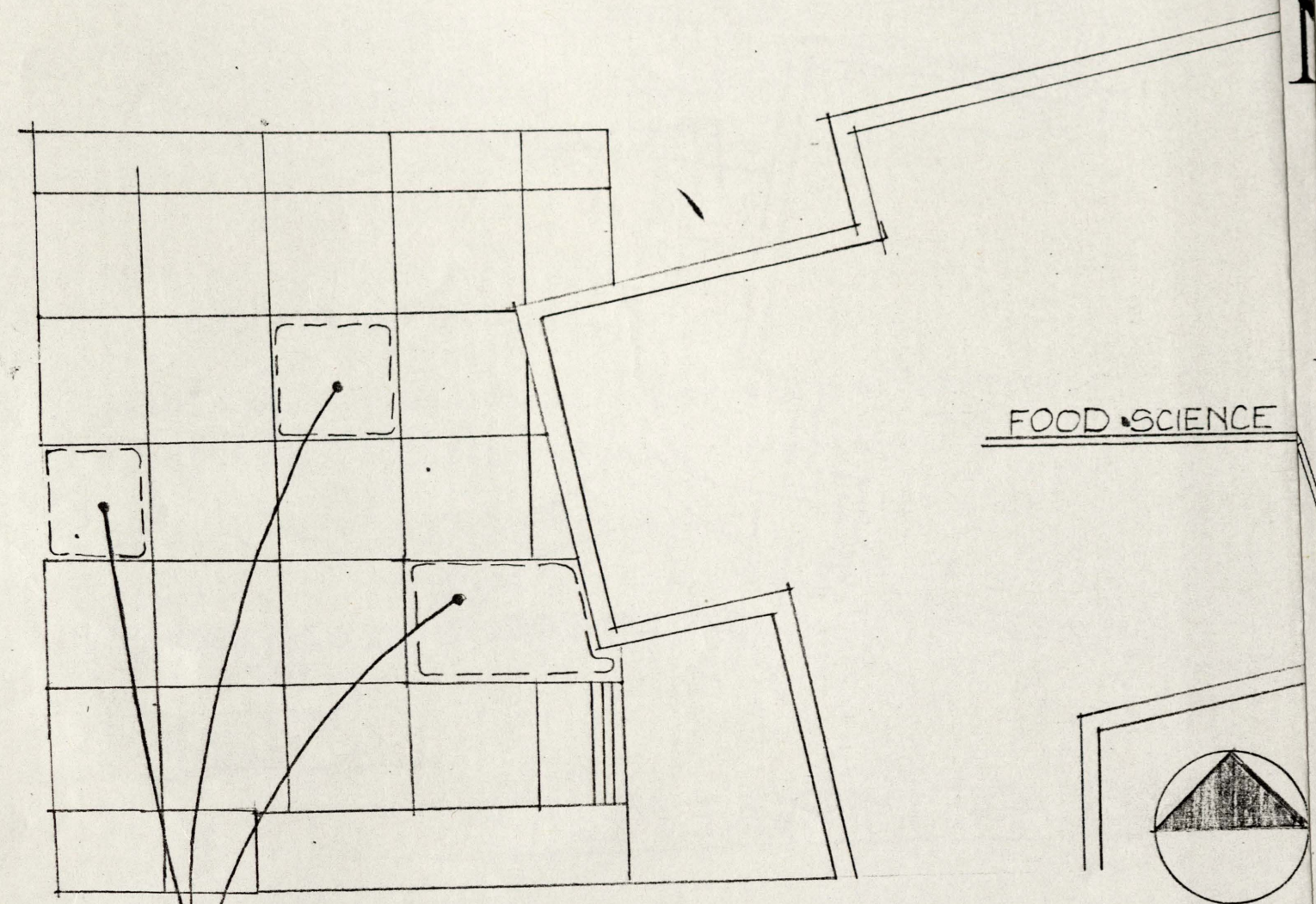
Food Science Contract:

The Food Science building was well overdue for a new landscape and I was able to play a role in all aspects of this project. I first put together a small contract for some hardscape work, including a new sidewalk and saw cuts of several large panels in the entry plaza. I also played a role in putting together the contract documents, including doing small refinements on the final planting plan, assembling the planting detail sheet, and creating the cover sheet. I also put together the bid packages and delivered them to the bid office. I next went with Chris to the bid opening and met with the contractor for the pre-construction meeting.

This has been a great project for me to work on because I have seen all aspects of a competitive bid contract from beginning to end. This has fortunately coincided with my professional practice class, so I have seen the real world application of the process at the same time that I have learned the principles of it in my class. Seeing it for myself was a great opportunity because I have really *learned* the process in a way that I will never forget.

NOTES

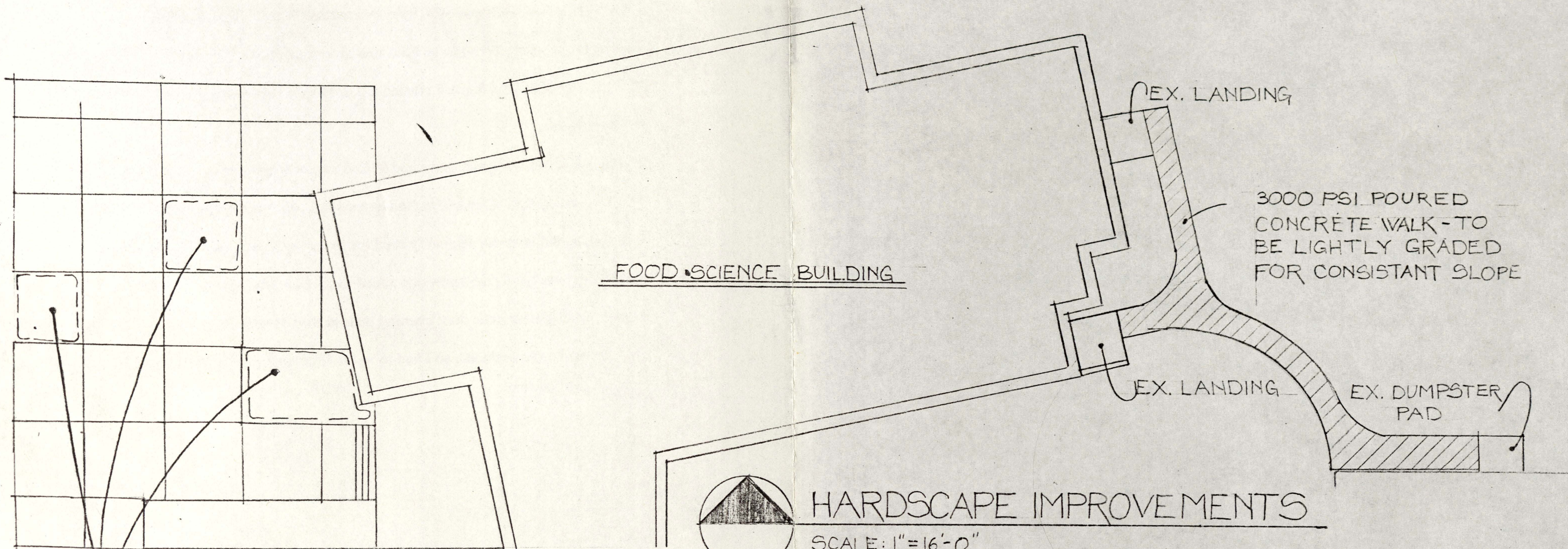
- SIDEWALK TO HAVE EXPANSION JOINTS, ALONG EDGES OF EX. CONCRETE AND AT 40' O.C. OR LESS AT CONTROL JOINTS
- 1/2" DEEP HAND TOOLED CONTROL JOINTS AT 4' O.C. AND AT ALL RADIUS TANGENT POINTS



SAWCUT PANELS AT EX. CONTROL JOINTS, REMOVE CONCRETE AND SOIL TO DEPTH OF 2', AND REPLACE TOPSOIL TO FINISH GRADE OF PLAZA

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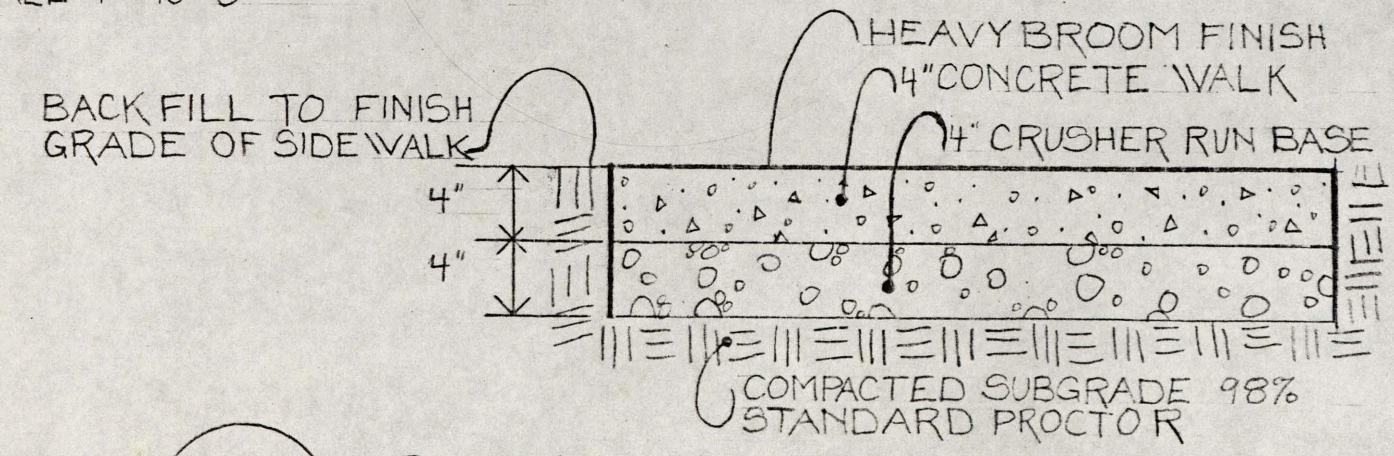


FOOD SCIENCE BUILDING

HARDSCAPE IMPROVEMENTS

SCALE: 1"=16'-0"

SAWCUT PANELS AT EX. CONTROL JOINTS, REMOVE CONCRETE AND SOIL TO DEPTH OF 2', AND REPLACE TOPSOIL TO FINISH GRADE OF PLAZA



SIDEWALK DETAIL

SCALE: 1"=1'-0"

Brumby/Russell Hall Site Improvements:

This was the first project that I have done almost completely on my own, and it consisted of a loft lumberrecycling pad, a recycling dumpster pad, and a new entry for Brumby hall. The loft recycling pad is a place for students to leave the wood from their lofts at the end of the semester. It had to be built into an embankment and required a slab, retaining wall, side walls, and a fence. I created a base map, a plan and details for all components of the project.

For the recycling dumpster pad I had to find a central and accessible location for a new recycling dumpster. I chose to extend an existing concrete slab in the parking lot adjacent to Finley Street that was originally used for motorcycle parking. I specified that some of the curb be removed, and a new one added to the extended slab.

Finally, the old automatic door opening pads at the Brumby Hall entrance were peeling back and had to be replaced, so I had to write the specifications for this component of the project.

BRUMBY/RUSSE SITE IMPROVEM

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BRUMBY/RUSSELL HALL SITE IMPROVEMENTS

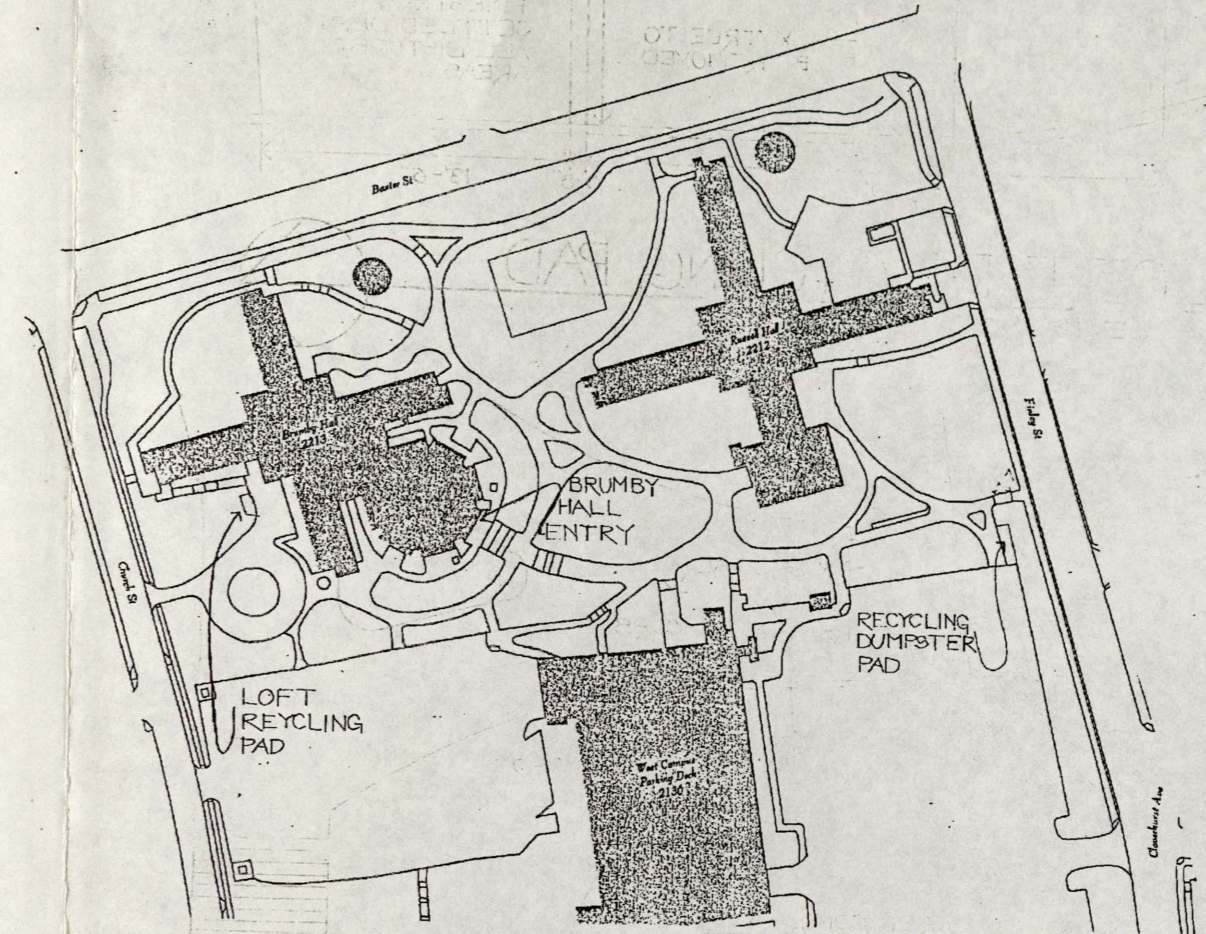
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VICINITY MAP



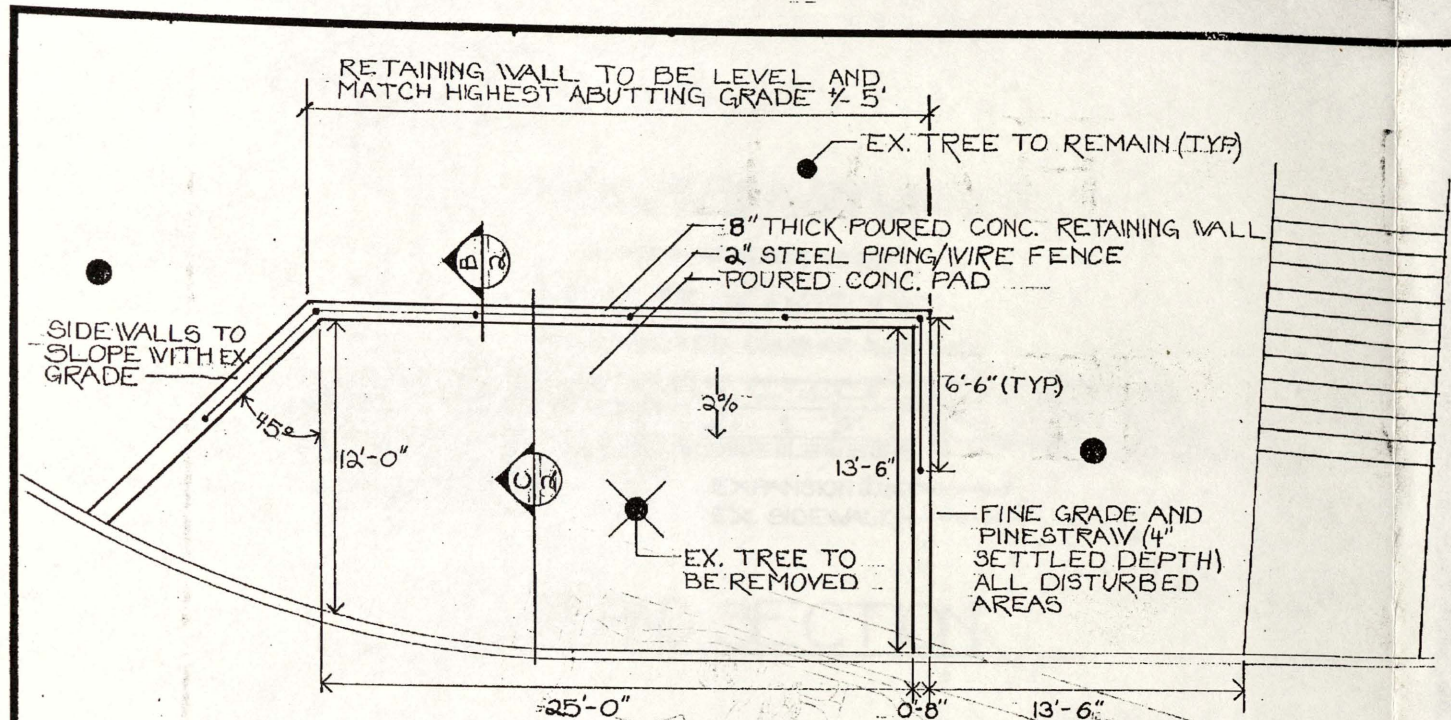
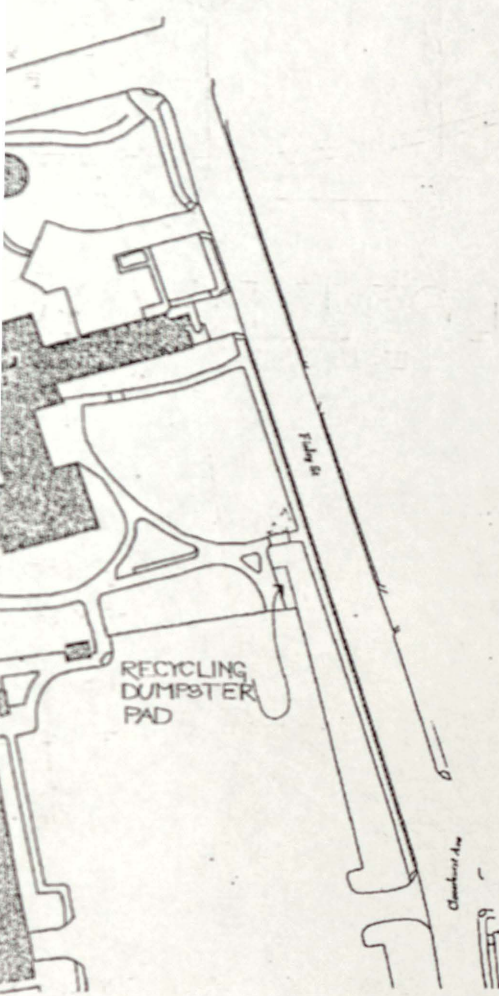
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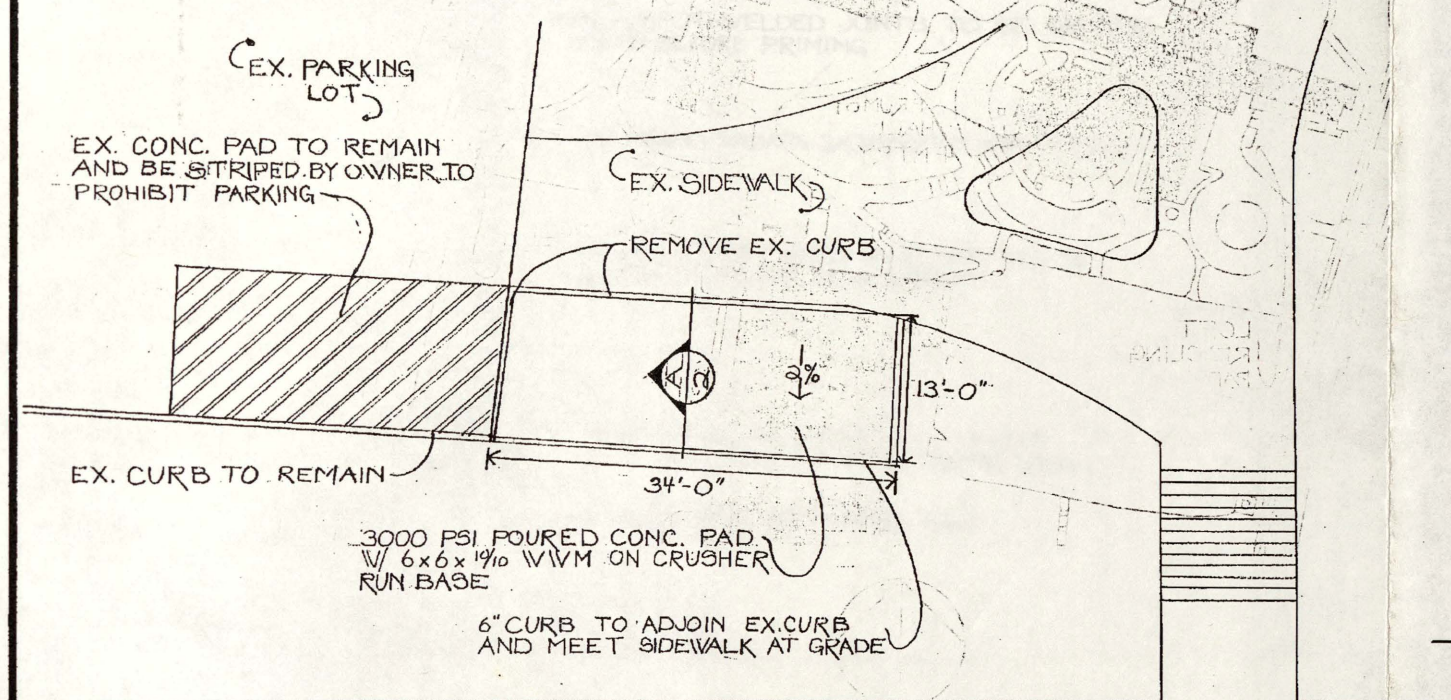
NO.	DATE	DESCRIPTION

BRUMBY/RUSSELL
HALL SITE
IMPROVEMENTS

DRAWN JM	JOB NO.
APPROVED	SHEET
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OF	



LOFT RECYCLING PAD
SCALE: 1"=5'-0"



RECYCLING DUMPSTER PAD
SCALE: 1"=10'-0"

NOTES:
 • PAD TO MEET ADJOINING CONCRETE AT GRADE W/ CONTINUOUS EXPANSION JOINT
 • CURB FACING FINLEY ST. TO HAVE 4" NOTCHES @ 8' O.C. BEGINNING IN NORTH-EAST CORNER

REMOVE EX. ENTRY LANDING INCLUDING AUTOMATIC DOOR OPENING PADS AND REPLACE W/ 4" 3000 PSI POURED CONC. W/ HEAVY BROOM FINISH ON 4" CRUSHER RUN BASE

BRUMBY HALL

NOTES:
 • LEAVE THRESHOLD AND ADJOINING WALK INTACT - SAWCUT FOR CLEAN JOINTS
 • FINISH ONE DOORWAY BEFORE BEGINNING OTHER IN ORDER TO ENSURE CONTINUOUS ACCESS TO BUILDING
 • ENSURE THAT ALL ELECTRICAL CONNECTIONS ARE SHUT OFF, DISCONNECTED, AND DISPOSED OF PROPERLY

BRUMBY HALL ENTRY
SCALE: 1"=10'-0"

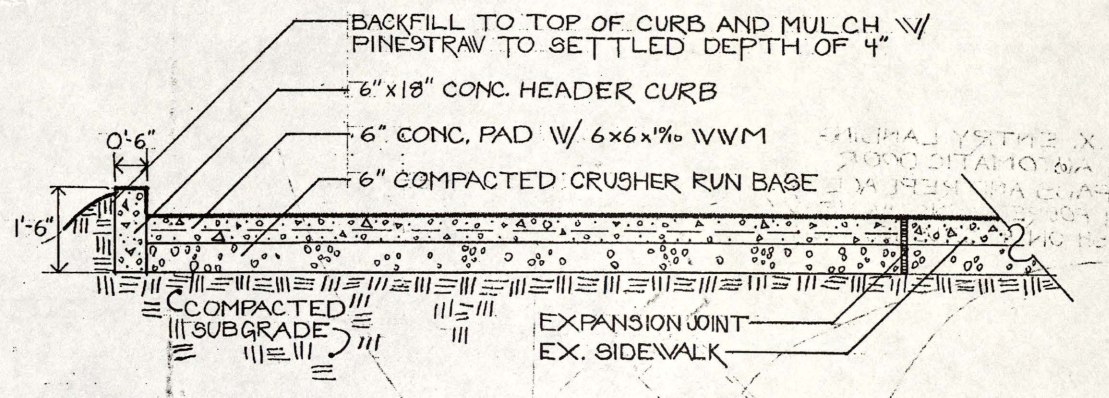
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IMPROVEMENTS	COVER	

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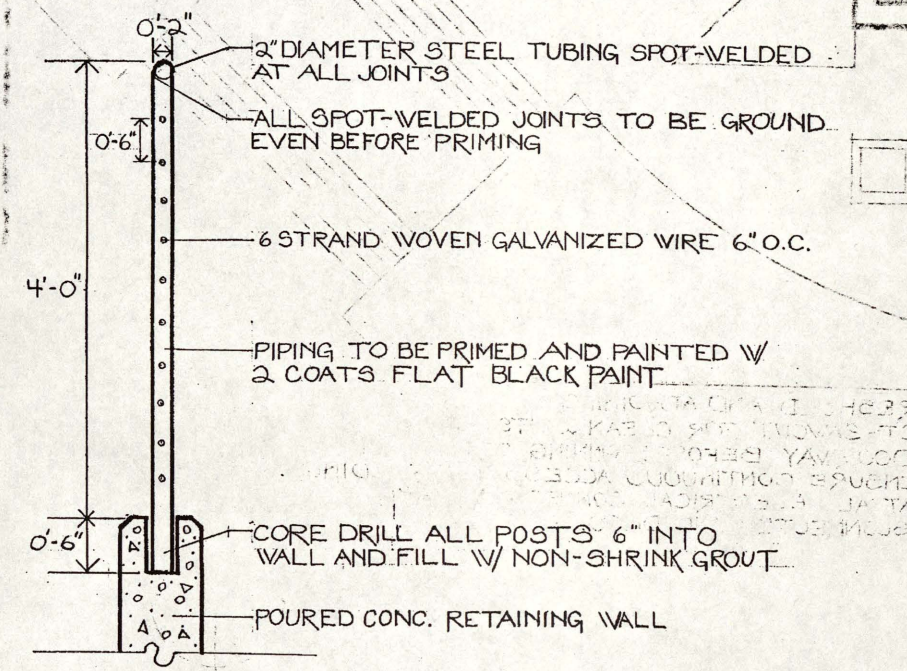
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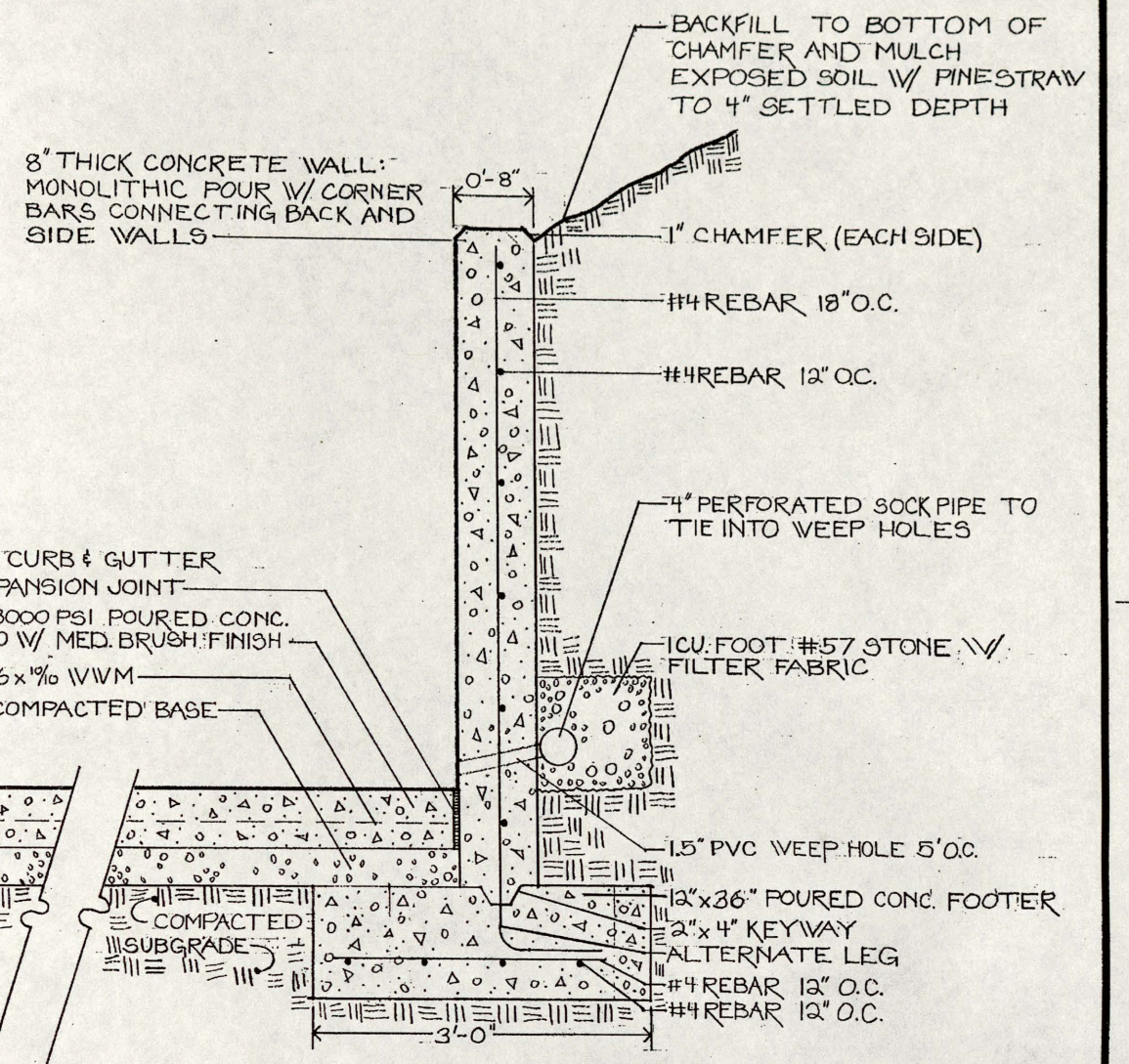
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(A) DUMPSTER PAD SECTION
SCALE: 1" = 4'-0"



(B) FENCE DETAIL
SCALE: 1" = 1'-0"



(C) WALL/PAD SECTION
SCALE: 1" = 1'-0"

- NOTES:
- FENCE TO MATCH EX. FENCE AT INTERSECTION OF BAXTER ST. AND S. CHURCH ST. BEHIND UGA SIGN
 - TOTAL LENGTH OF FENCE APPROX 39 LINEAR FEET
 - POSTS TO BE PLACED 6'-6" O.C. (± 6")

BRUMBY/RUSSELL SITE IMPROVEMENTS	DRAWN JM	JOB NO.
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