

Campus Development Committee Meeting

February 19, 2015

325 Burruss Hall

10:30 – 11:30 a.m.

Meeting Minutes

Members Present:

Steve Mouras
Richard Rodrigues
Brandon Hunt
Melissa Elliott
Jennifer Hundley

Samer El-Kadi
Ken Smith
Patrick Miller for Jack Davis

Others Present

Lori Sharp

Administrative:

- Steve Mouras lead meeting on behalf of Jason Soileau, Chair
And called the meeting to order at 10:31 a.m.
- A motion was unanimous to amend agenda- remove Drillfield Paths item
- Introductions
- Drillfield Paths Committee update was moved to next meeting in March

Sustainability and Energy: (presented by Steve Mouras)

Climate Action Commitment (CAC) goals by reducing, reusing and recycling. Spoke of possible opportunity for platinum LEED building in the future. Energy & Sustainability office has eighteen internships for 2015 and growing. Discussion of Sustainability programs such as Green RFP with proposals submitted by students in October, Student Internships and Green Office Certifications. Events such as, Sustainability Week with Town of Blacksburg in September, Recycle Mania in Feb.- March, Earth Day in April and Ytoss with local YMCA. Energy Management (greenhouse gases) and calculations are managed by Rueben Avagyan.

Bike Parking- MP: (presented by Steve Mouras)

Spoke of balance of aesthetics, amenities and location. Question proposed by Ken Smith of placement of bike racks other than Resident Hall due to faculty using bikes to get around campus.

Closing:

- The meeting was adjourned at 11:27a.m.
- The next Campus Development Committee Meeting is scheduled for Thursday, March 19, 2015 from 10:30 –11:30a.m in 325 Burruss Hall.

Energy & Sustainability

Virginia Tech

Steve Mouras, Dir of Transportation
Planning and Sustainability

Ruben Avagyan, Energy Manager



Agenda

- **Climate Action Commitment**
- **Sustainability Initiatives**
- **Energy Initiatives**
- **Additional Resources**



VT Climate Action Commitment (CAC)

Be a Leader in Campus Sustainability.



- Represent CAC in our Strategic Plan.
- Sets GHG emissions targets.
- Reduce energy, water, and waste.
- Pursue USGBC LEED Silver Certification or higher - new construction & major renovations.
- Create Sustainability Office.

Office of Energy and Sustainability:

What We Do

- Oversee **implementation** of CAC & SP.
 - Coordinate **outreach** programs and **communications** for campus sustainability.
 - Manage Student **Internship** Program.
 - **Coordinate** with other campus units on sustainability-related activities.
 - Membership on the Energy and Sustainability Committee (**University Governance**).
-



Programs and Events



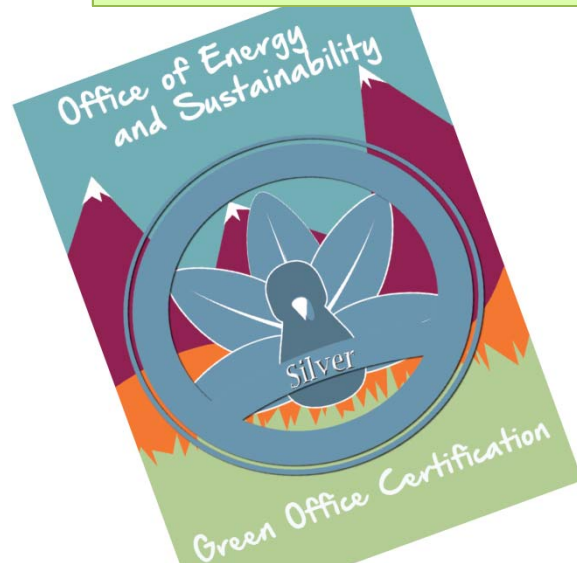
Sustainability Programs



Student Internships



Assessment



Green Office Certification



Green RFP

Sustainability Events

Sustainability Week



SUSTAINABILITY WEEK
September 13th to 21st, 2014

Blacksburg TOWN OF
a special place

VirginiaTech
Invent the Future®

Sustainable
Blacksburg

more info > SustainableBlacksburgVa.org

Celebrate • Educate • Motivate

RecycleMania



RECYCLE MANIA TOURNAMENT

Get In The Game: RECYCLE!

Feb 2 - Mar 29, 2014

Sponsored By:

- Office of Energy and Sustainability
- SGA
- Division of Student Affairs
- Environmental Coalition

Visit:
www.facilities.vt.edu/sustainability

VirginiaTech
Invent the Future

Res. Hall Energy Competition



TURN DOWN FOR WATT

RESIDENCE HALL ENERGY CONSERVATION COMPETITION!

OCT. 20 - NOV. 14

Light bulbs, a light switch, and a cartoon character with a crown and sunglasses.

America Recycles Day



Ytoss

Earth Week

Green Graduation Pledge & Cord



Energy at Virginia Tech



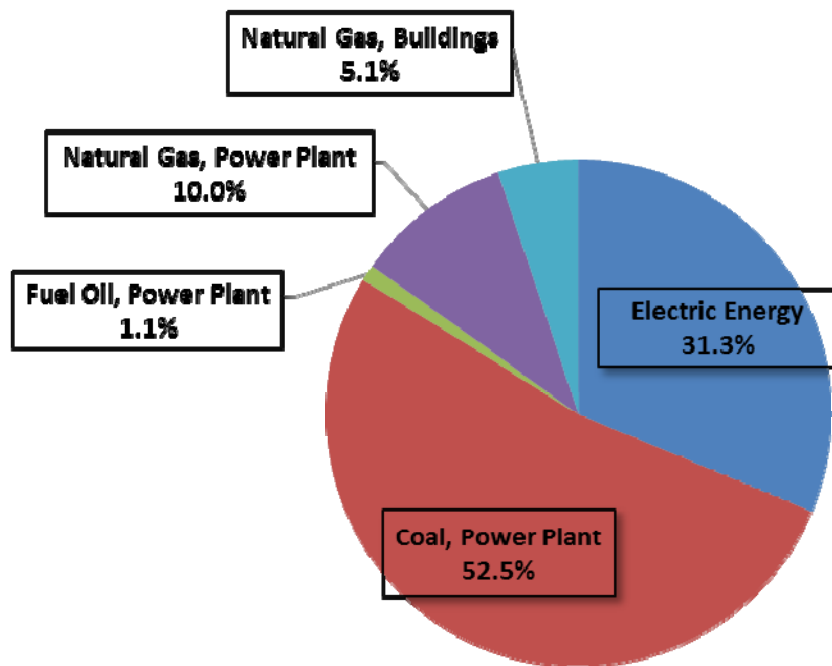
Energy Manager:

What I Do

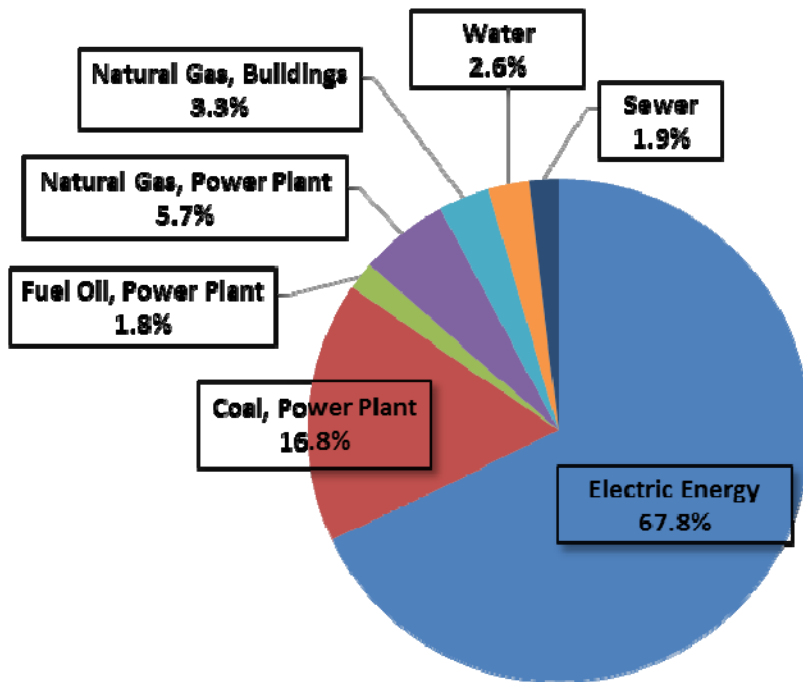
- Monitor and report energy **consumption** on campus.
 - Develop energy-reduction **goals and targets**.
 - Provide energy **data analysis** for OES.
 - Oversee implementation of **energy retrofit** projects.
 - **Verify** energy savings.
 - Coordinate **energy reduction** activities with different campus units.
-

Energy Management: Consumption and Utility Cost

BTU Breakout by Utility
(FY 2014)



Cost Breakout by Utility
(FY 2014)



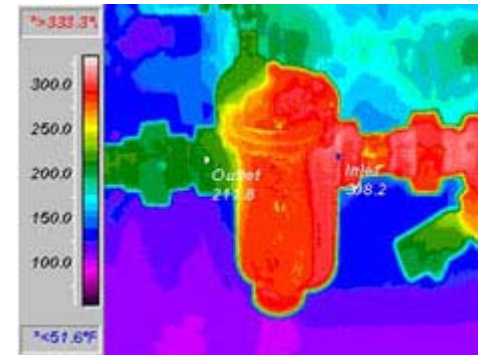
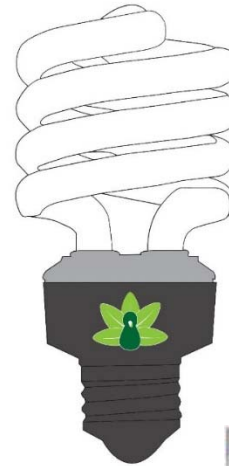
FY 14 Total Utility Cost ~ \$27,000,000

Energy Management: Completed Projects

- Energy Performance Contract with Pepco (2012-2013):
 - **\$5.3** million with **\$711k+** in annual energy cost savings.
 - 18 ECM's (energy conservation measure) in 5 buildings (Dietrick, Hahn South, McBryde, Cassel Coliseum, Steam Plant)
 - Energy projects with Siemens (2013-2014):
 - **\$316K** with **\$152k+** in annual energy cost savings
 - 6 ECM's in 2 buildings (Kelly and ICTAS II)
 - NCP Chiller Optimization with Trane (2013):
 - **\$151K** with **\$76k+** in annual energy cost savings
 - Complete overhaul of the cooling tower and chiller programming optimization
-

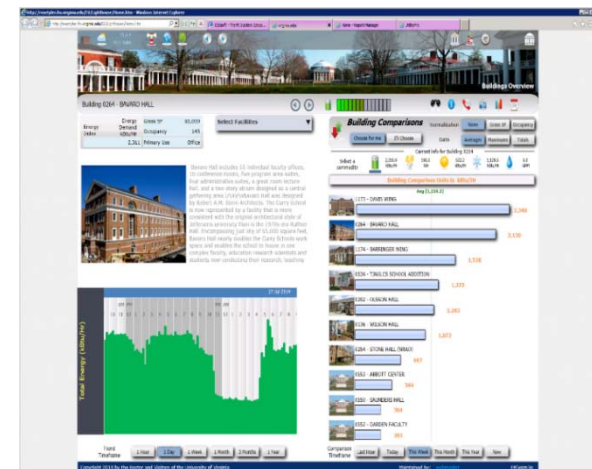
Energy Management: Ongoing Projects

- On-going Lighting Upgrades
- Automation and Controls
- Steam Utility Improvements
- Chilled Water Utility Improvements



Energy Management: Future Plans

- Strategic Energy Plan
- Steam and Chilled Water Metering
- Energy Analytics Platform
- Energy Audit Program
- Energy Retrofit Projects
- Energy Education and Training





Other Sustainability Resources

Other Sustainability Resources



Kitty Zeringue
Bike Planner
Alternative Transportation



Rial Carver
Sustainability Coordinator
Dining Services



Rob Lowe
Env. Engineer
Env. Health & Safety

Energy & Sustainability

Questions?



Bike Parking

MASTER PLAN

2014

Steve Mouras; Dir of Transportation

Office of University Planning & Parking and Transportation

Bike Parking Master Plan... So why do we need it?



GOALS OF BIKE PARKING MASTER PLAN

QUANTITY

How many bike racks are needed?

DESIGN STANDARD

Style of bike rack to be used?

Size of typical bike hub?

What aesthetic and amenities are we trying to provide?

LOCATION

Where should the bike racks be located?

Quantity

How many bike racks are needed?

1. User Groups = Office Stations, Class/Lab Stations, Residential Stations, Dining Seats.

2. % Bicycle = % of people in the user group expected to arrive by bicycle:

- a. Office Stations: 5% of peak occupancy (PO: 75%)
- b. Class/Lab Stations: 10%
- c. Residential Stations: 20%
- d. Dining Seats: 10%

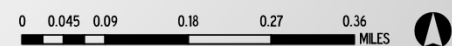
USER GROUP	#PERSONS	%BICYCLES	#BICYCLES	#SHORT TERM LOOPS
Office Stations	100	5% PO	4	2
Class/Lab Stations	100	10%	10	5
Residential Stations	100	20%	20	10
Dining Seats	100	10%	10	5
TOTAL	400		44	22

Zone Analysis

1. Divide campus into 6 Zones.
2. Divide Zones into 49 Districts.
3. Analyze each District based upon population and bike needs.



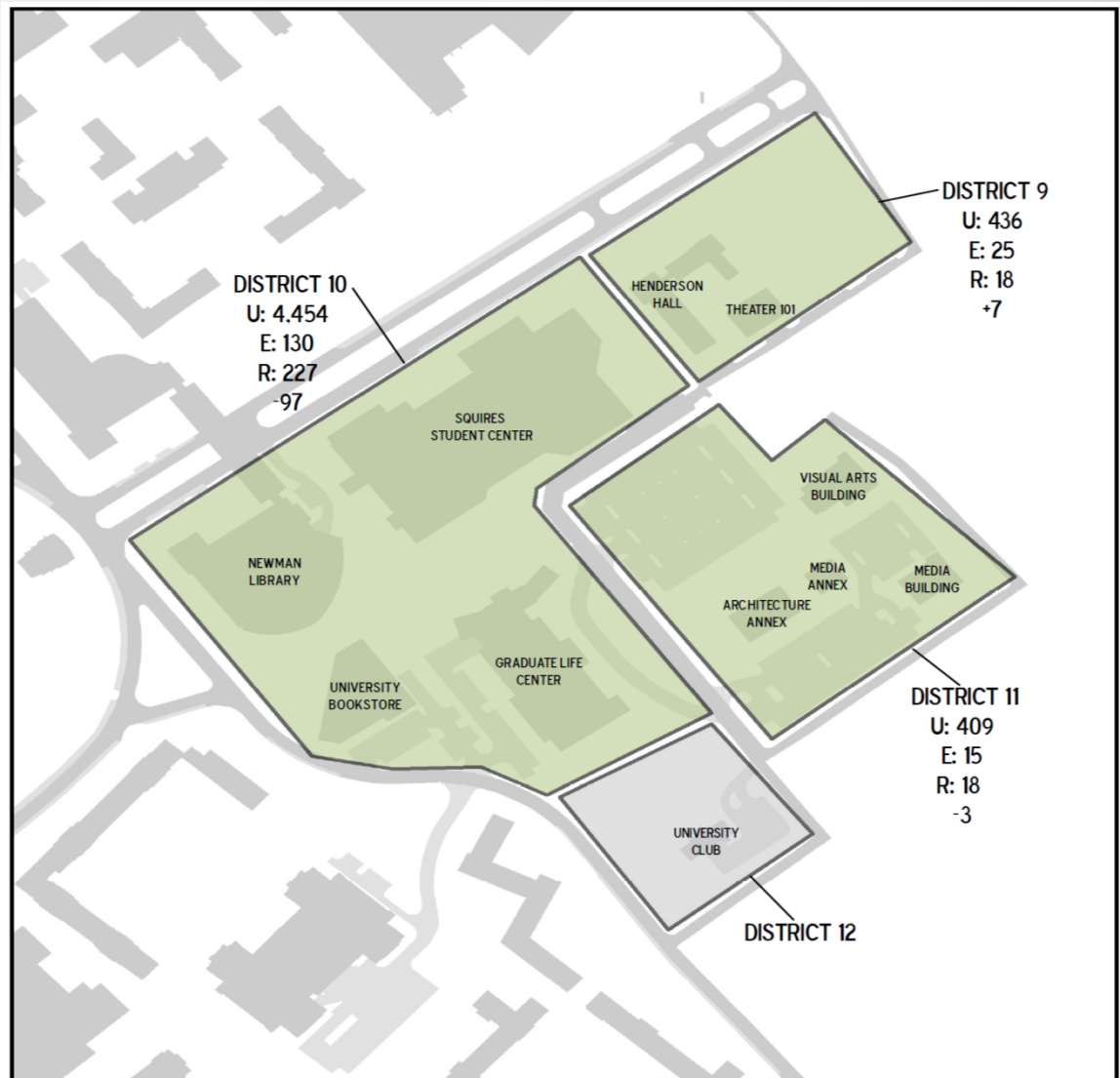
BICYCLE PARKING DISTRICTS



UNIVERSITY BICYCLE PARKING PLAN, 2013
DATA SOURCE: VIRGINIA TECH GIS DATABASE
CREATED BY: KATHRYN ZERINGUE, 7.1.13

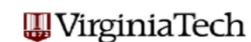
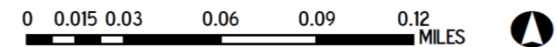
District Analysis

1. Divide Zones into 49 Districts.
2. Analyze each District based upon population and bike needs.
3. Identify shortfalls between each building need and existing bike loops.
4. Identify total district excess or shortfall.



DOWNTOWN CAMPUS DISTRICTS BICYCLE PARKING

U: POTENTIAL USERS (5,299)
E: EXISTING LOOPS (170)
R: REQUIRED LOOPS (263)
+/- #: LOOP EXCESS/SHORTAGE (-93)



UNIVERSITY BICYCLE PARKING PLAN, 2013
DATA SOURCE: VIRGINIA TECH GIS DATABASE
CREATED BY: KATHRYN ZERINGUE, 7.1.13

Design Standards

Bike Rack: Used guidelines from Assoc of Pedestrian & Bicycle Professionals (APBP):

- a. Supports bikes from 2 locations
- b. Allows use of U-lock to frame & wheels
- c. Anchored to ground
- d. Allows both front and back-in parking

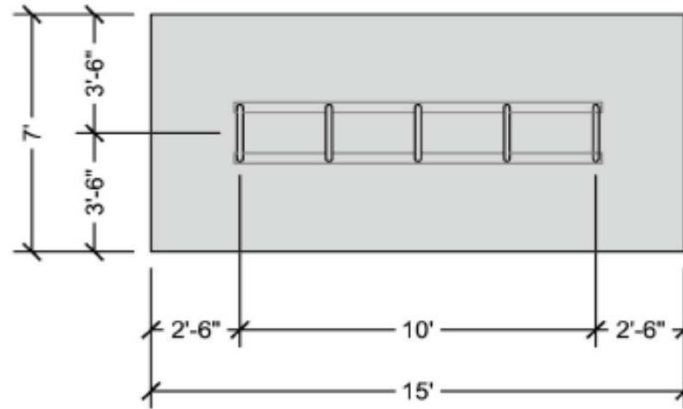
Voted on two models:

winner



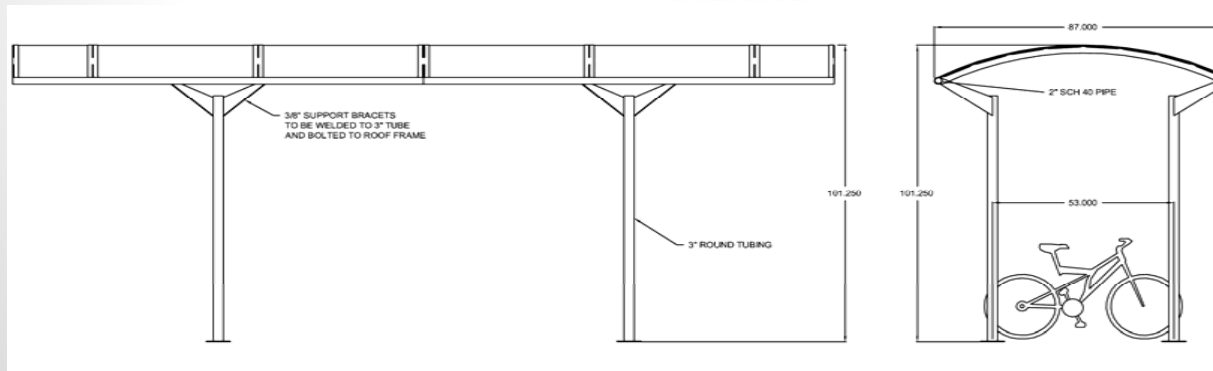
Design Standards

Standard Bike Rack:



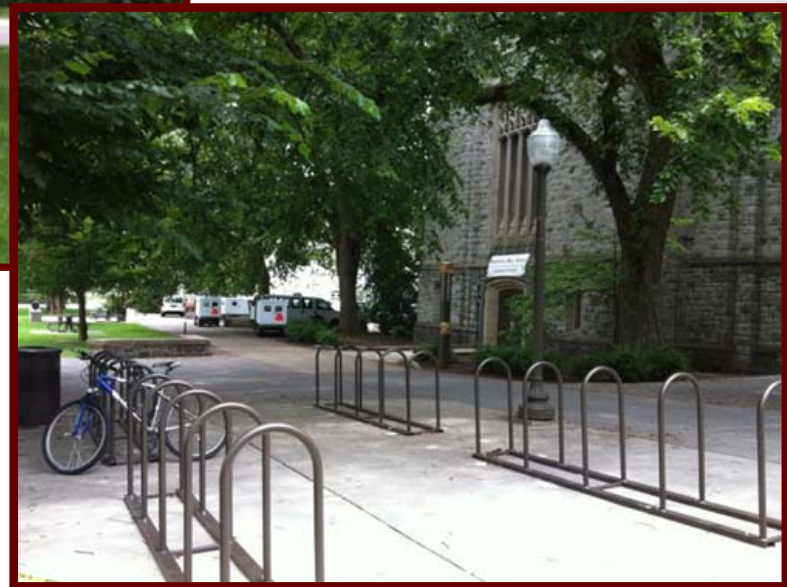
Standard Bike Shelter:

STANDARD 5-LOOP RACK
AREA: 105 SF
21 SF/ LOOP





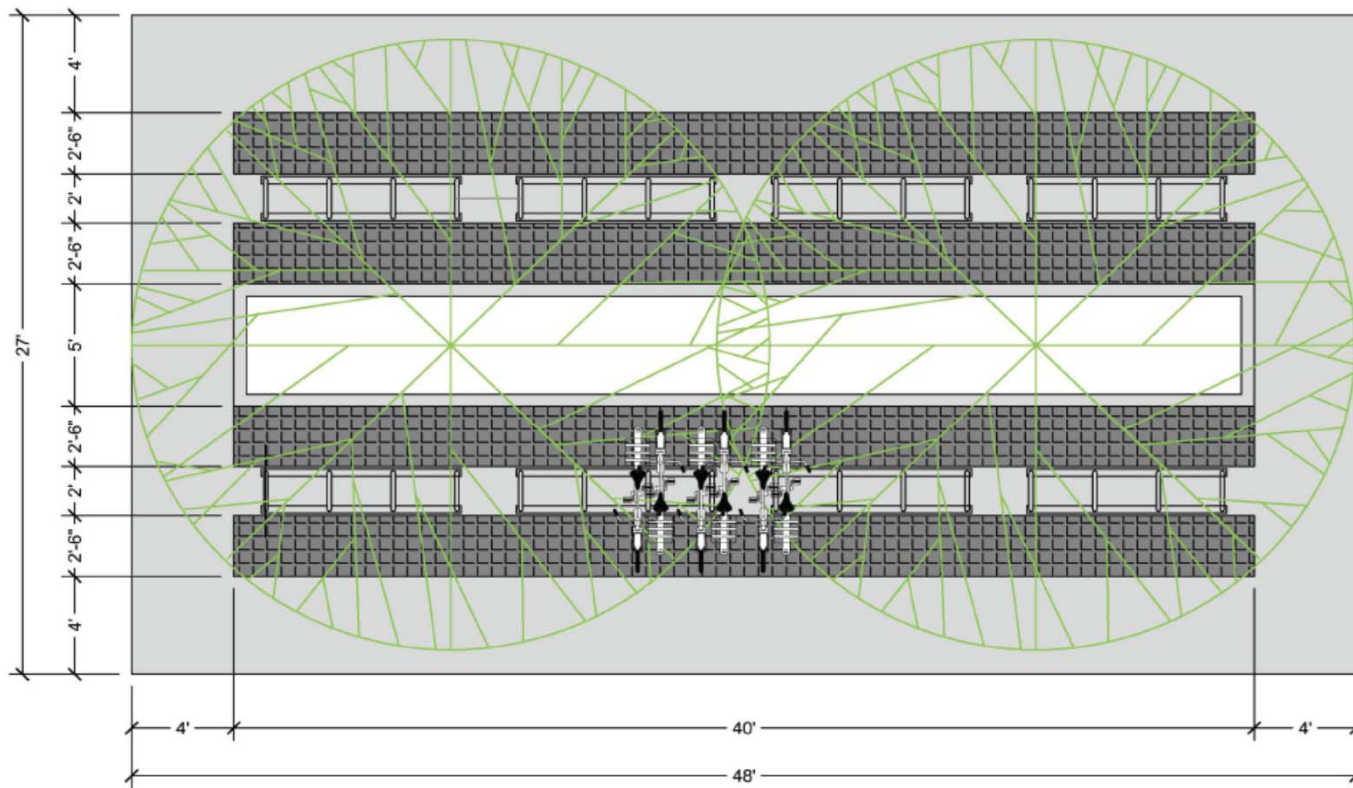
Bike Shelter



Bike Rack

Design Standards

Bike Hub (30 or more loops):



4-LOOP (32 TOTAL): OPTION 'C'
AREA: 1296 SF
40.5 SF/LOOP



Bike Hubs



BIKE PARKING MASTER PLAN

Implementation:

a. Identify top sites, based on shortfalls, for bike hubs:

- **District 10:** (Multi-Use) Squires Student Center, Newman Library, Graduate Life Center, University Bookstore (*short 97 loops*)
- **District 20:** (Academic) Derring Hall, Hahn Hall North Wing, Hahn Hall South Wing, Pamplin Hall, Robeson Hall (*short 104 loops*)
- **District 26:** (Residential) Payne Hall, New Res Hall, O'Shaughnessy Hall, Lee Hall, Pritchard Hall, Peddrew-Yates Hall (*short 128 loops*)

b. Identify location for additional bike racks based on both demand and master plan sites.

c. Identify location and design of bike hub for the master plan sites.

Proposed first BIKE HUB



Revisions
10-14-13
REVISION3
REVISION4



VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY

OFFICE OF UNIVERSITY PLANNING
 48 STERRETT FACILITIES COMPLEX
 BLACKSBURG, VIRGINIA 24061-0160
 (540) 231-3812

Bike Pod Concept
 Pamplin-Robeson

Drawn by:	mng
Des by:	mng
Chk by:	
Date:	10-10-13
Scale:	1"=16'
Dwg Name:	

Sheet
1
 of 1

Completed first BIKE HUB



Questions & Comments?

Thank You!