

Rhode Island School of Design

FY19 FB&A Budget Committee Presentation

November 14, 2019

University of the Sciences in Philadelphia
University of Toledo
University of Vermont
University of Washington
University of West Florida
University of Wisconsin - Madison
Vanderbilt University
Virginia Commonwealth University
Wake Forest University
Washburn University
Washington State University
Washington State University - Tri-Cities Campus
Washington State University - Vancouver
Washington University in St. Louis
Wayne State University
Wellesley College
Wesleyan University
West Chester University
West Virginia Health Science Center
West Virginia University
Western Oregon University
Westfield State University
Widener University
Williams College
Worcester Polytechnic Institute
Worcester State University



Sightlines by the Numbers

Robust membership includes colleges, universities, consortiums, and state systems

Peer Institution

Arts Center College of Design
Pasadena, CA

Bentley University
Waltham, MA

Bowdoin College
Bowdoin, ME

Brown University
Providence, RI

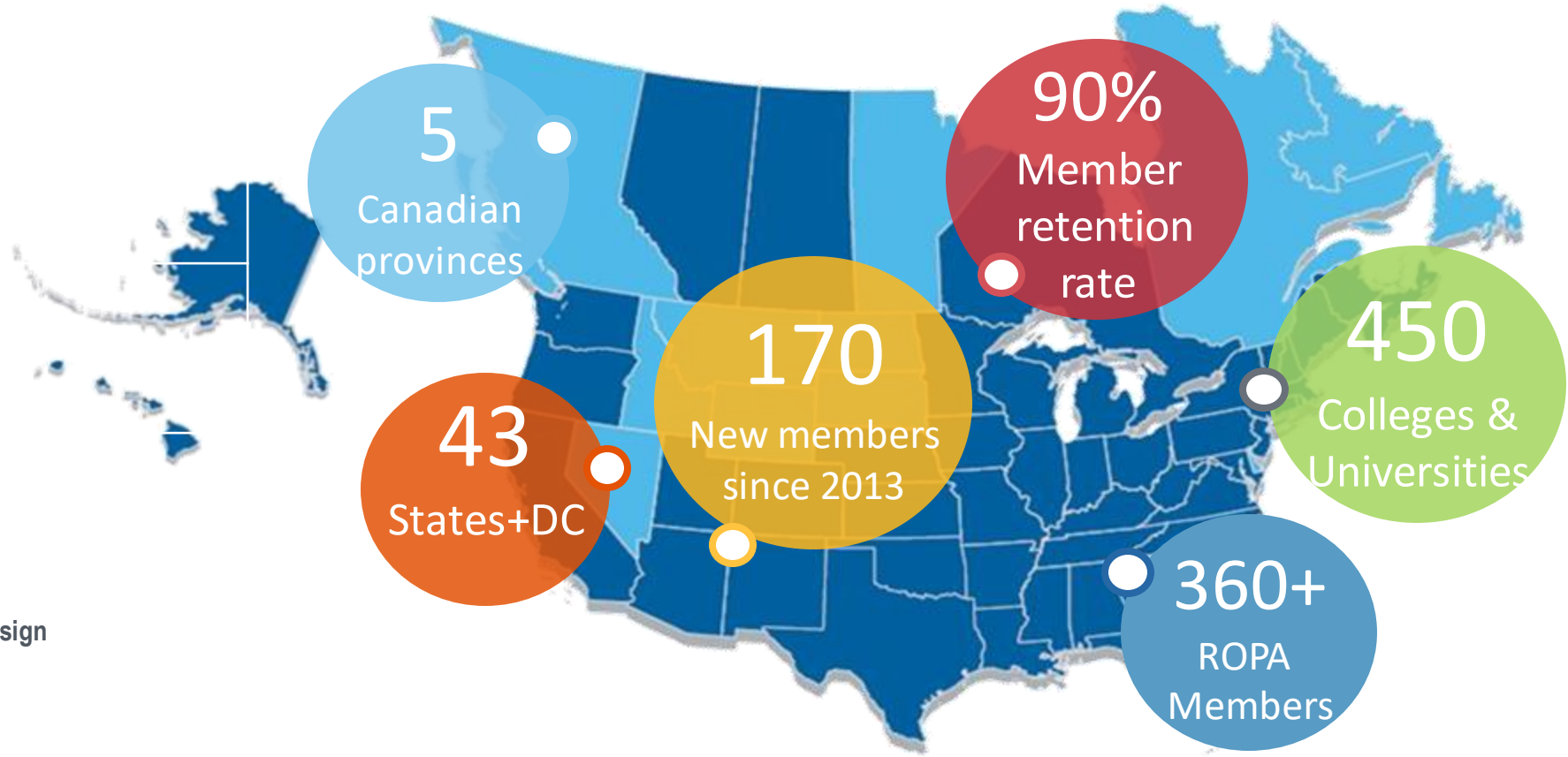
Connecticut College
New London, CT

Emerson College
Boston, MA

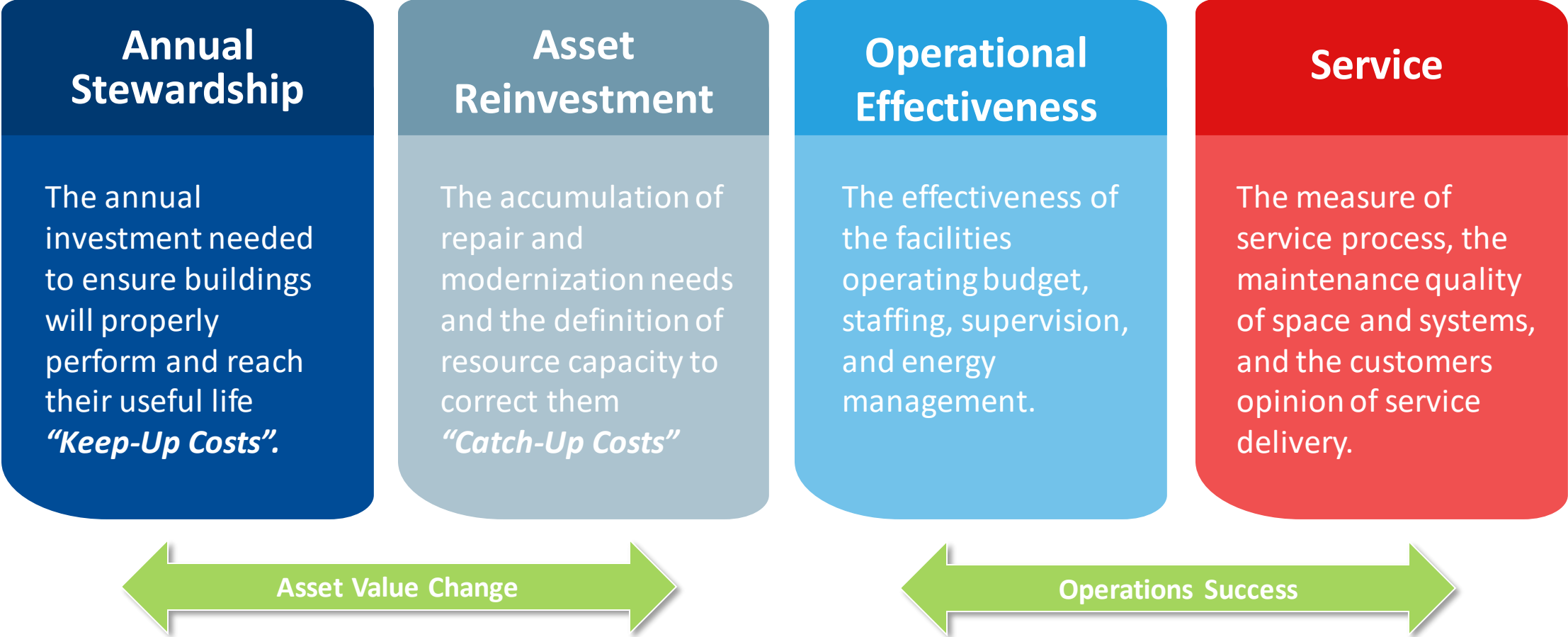
Ithaca College
Ithaca, NY

Massachusetts College of Arts and Design
Boston, MA

Mount Holyoke College
South Hadley, MA



Vocabulary for Facilities Measurement, Benchmarking & Analysis



Key Observations for Rhode Island School of Design

Space Profile

- Over 80% of total space on campus constructed within the Pre-War era.
- Renovations and new construction have offset RISD age by 55 years.

Capital Investment

- FY19 investment levels fall below the Sightlines target.
- Increasing RISD's footprint will impact annual keep-up costs.

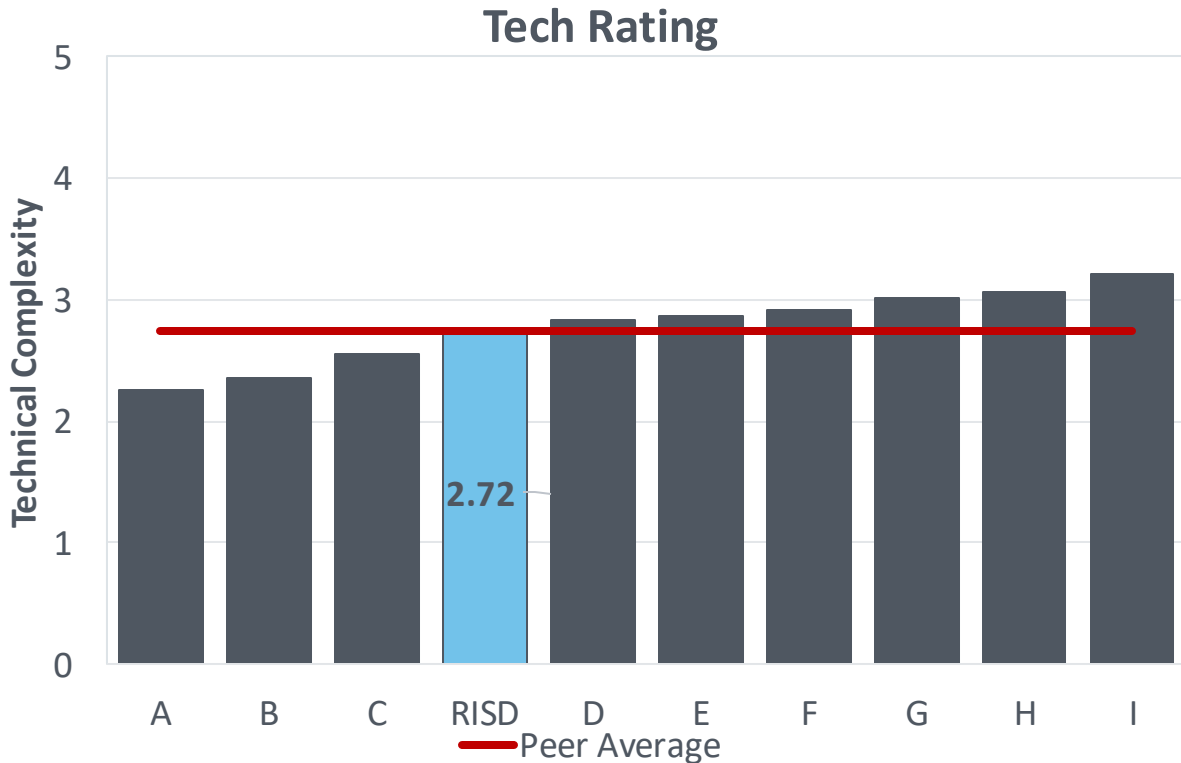
Operations

- As new space and newly renovated space comes online, maintaining a strong preventive maintenance program will extend vital building systems.



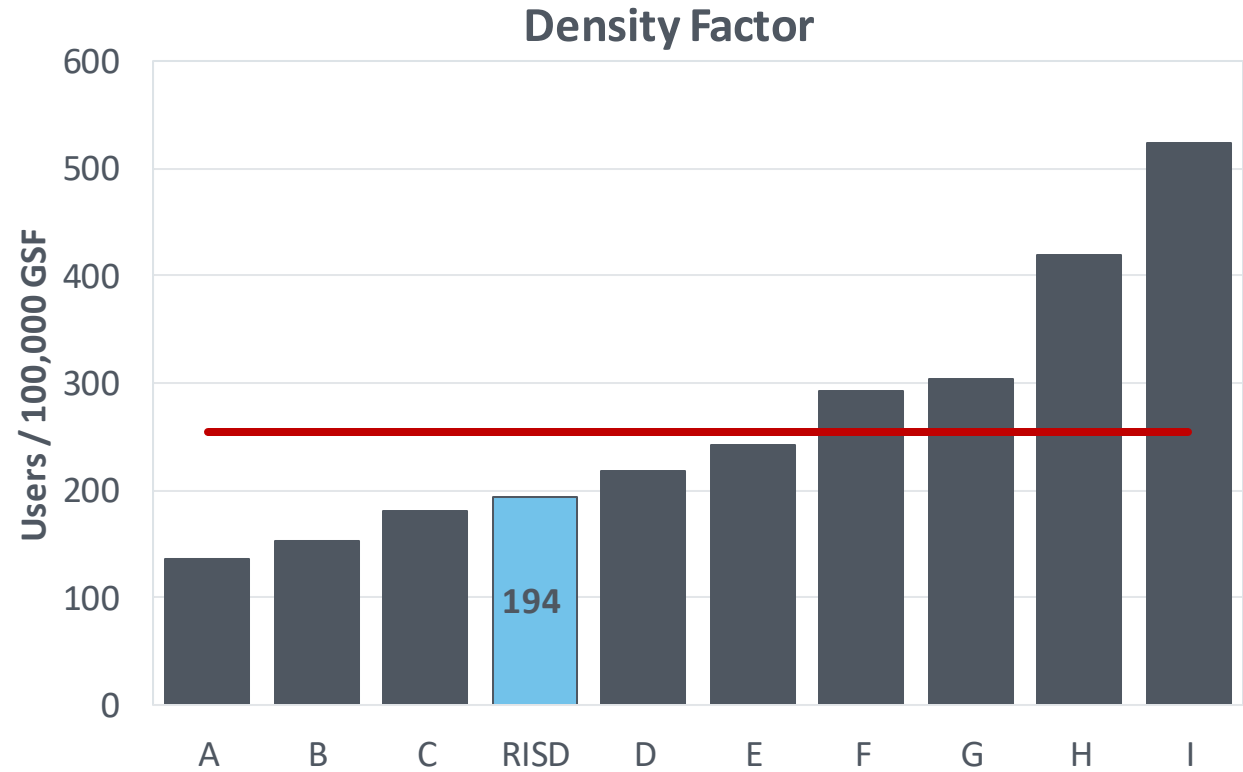
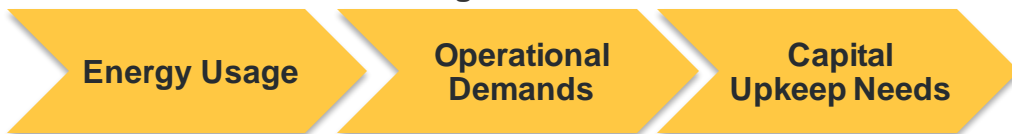
Understanding Campus Characteristics:

Building complexity like peers with fewer people moving throughout total campus



*Arranged by Tech Rating

Tech Rating Effects on Facilities:



*Arranged by Density Factor

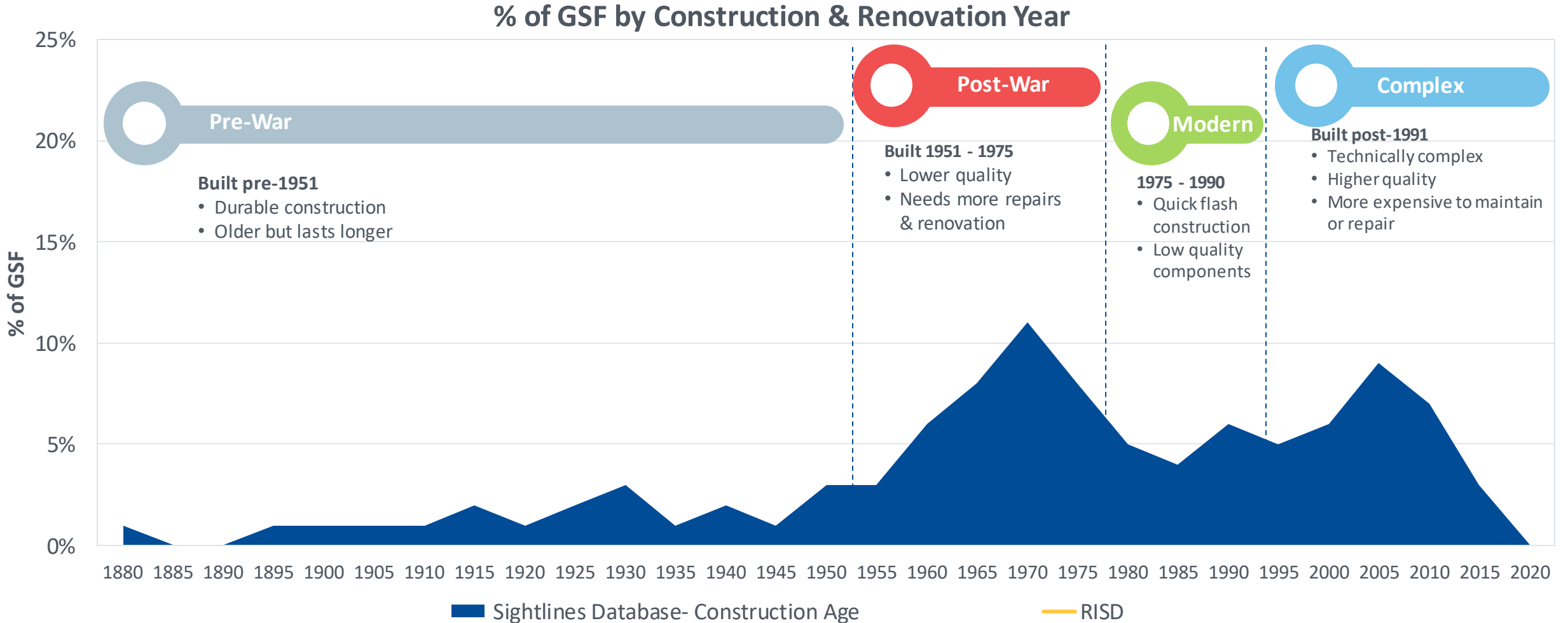
Density Factor Impacts:



*Does not include CE FTEs

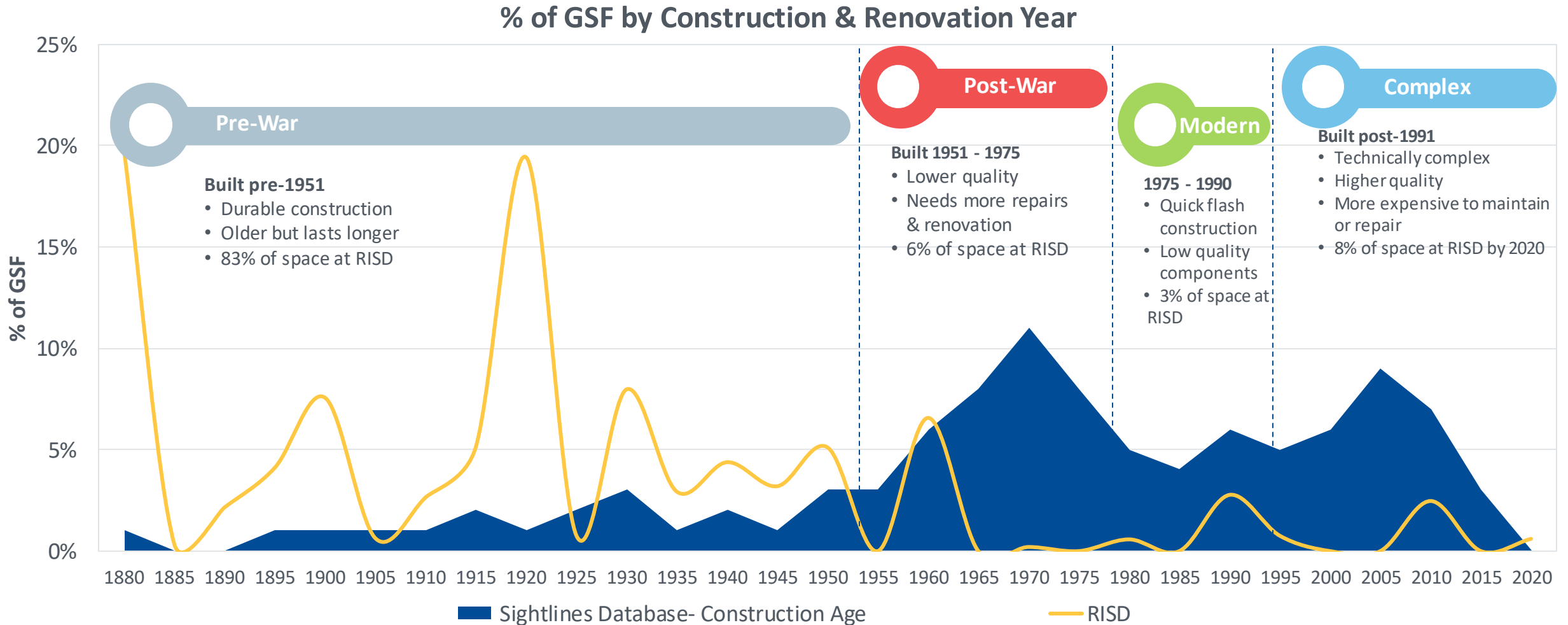
Putting Your Campus Building Age in Context

An older overall space profile creates capital and operational challenges



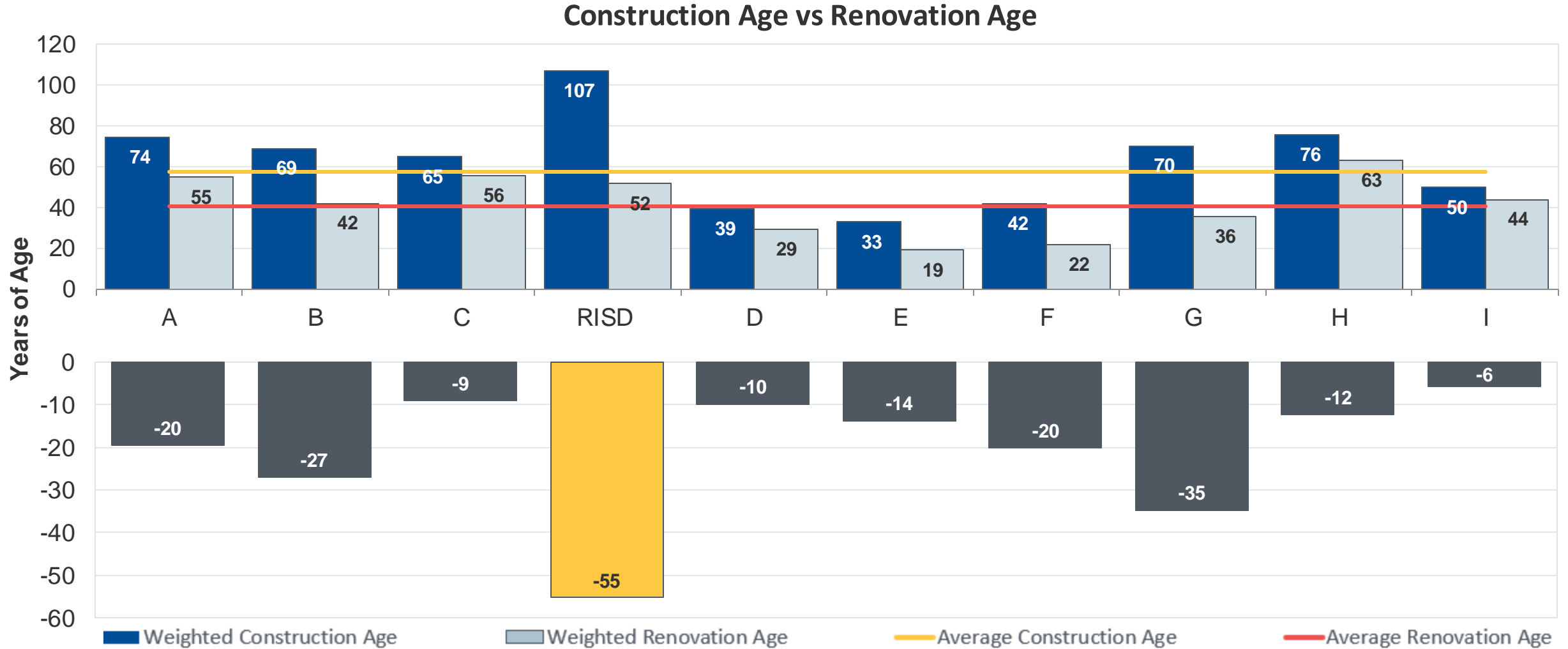
Putting Your Campus Building Age in Context

An older overall space profile creates capital and operational challenges



RISD Resetting Building Clock by 55 years

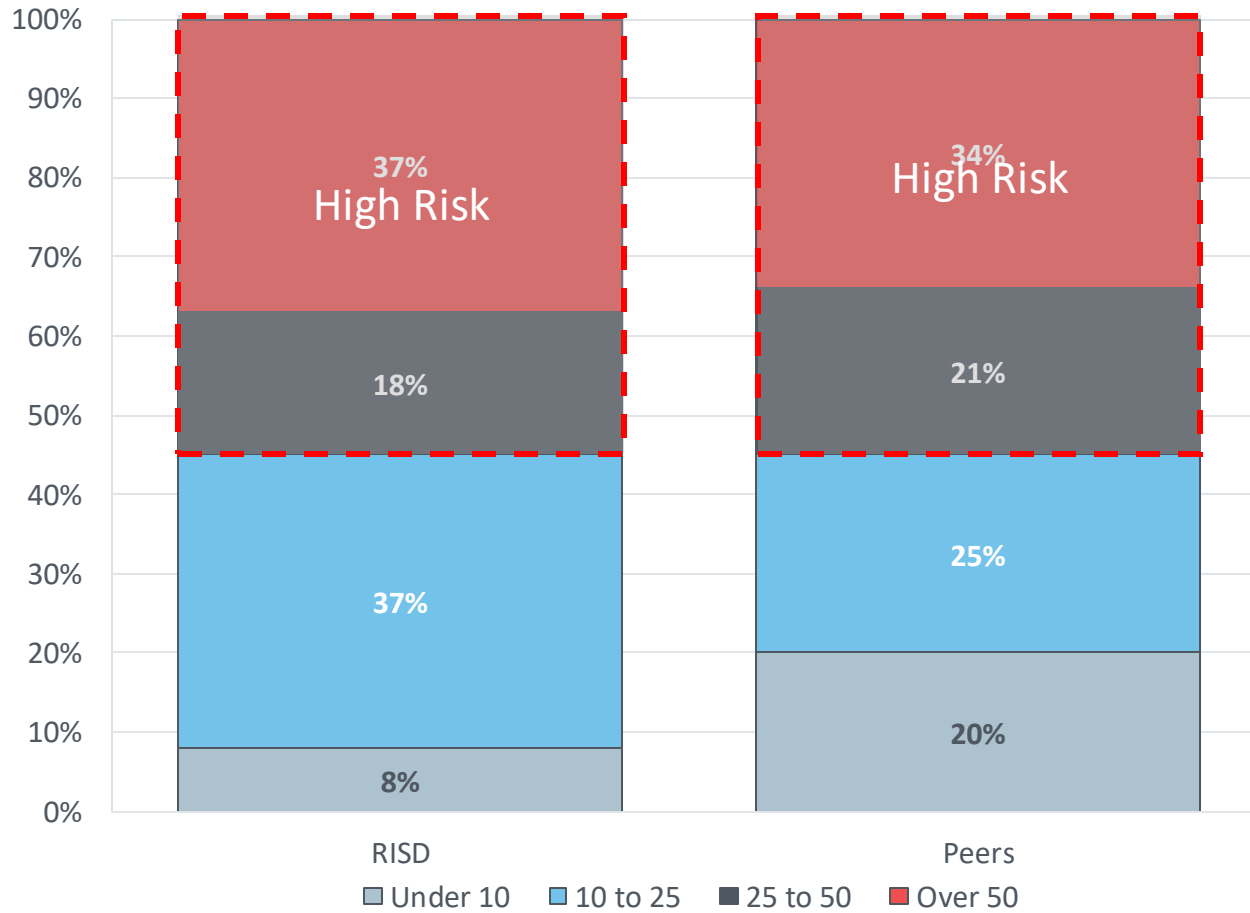
Peers resetting the clock on total construction by 16 years



An Evenly Distributed Age Profile

RISD and peers dealing with similar makeup of renovated space on campus

Campus Renovation Age by Category



Capital Risk:

Highest Risk:
Life cycles of major components past due – end of building life cycle approaching.

Higher Risk:
Life Cycles coming due in core building components.

Medium Risk:
Lower cost space renewal updates needed.

Low Risk:
“Honeymoon” period – little need for capital reinvestment.

Operational Demands:

React as Needed:
Issues in components past the end of their lifecycles will demand reactive maintenance.

Balance PM and Reactive Maintenance:
Younger components still require PM.

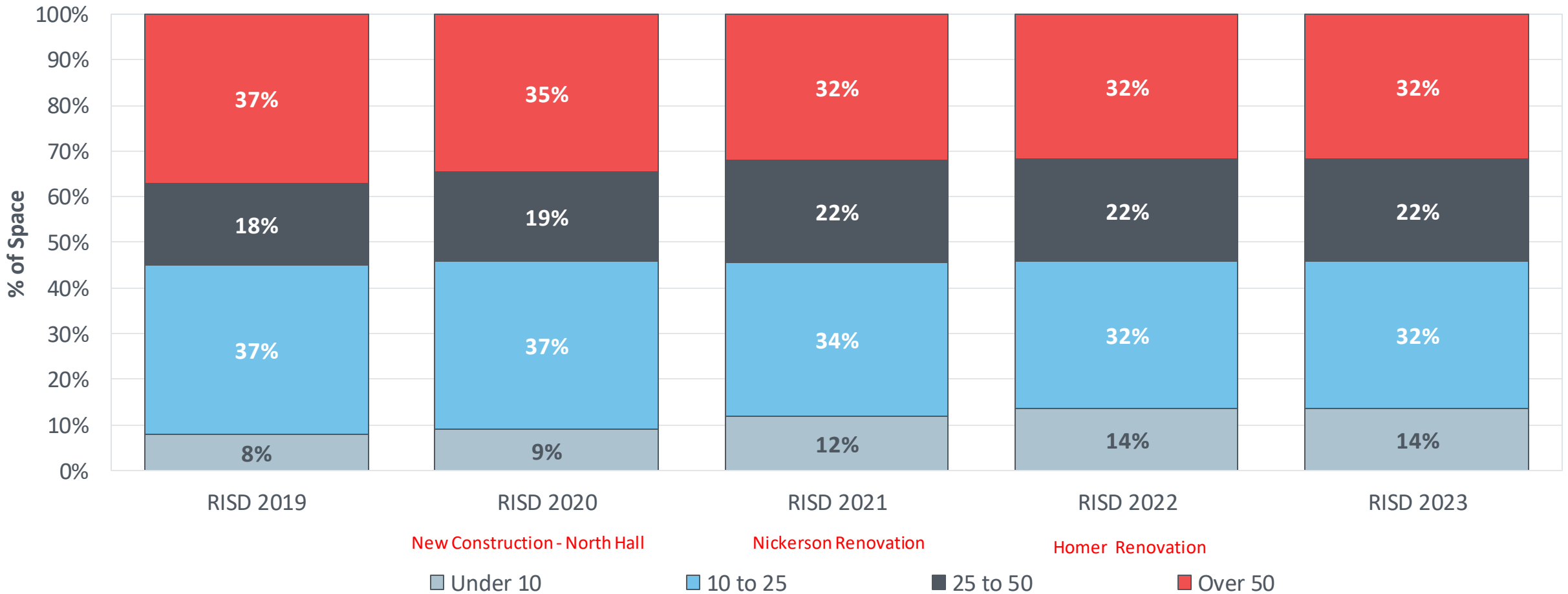
Aging components require reactive maintenance.

Focus on PM:
Significant need for PM in young systems.

New Space & Renovations Balance RISD's Age Profile

Through renovation and new construction, RISD will have offset its's age profile in total by 53% by FY23

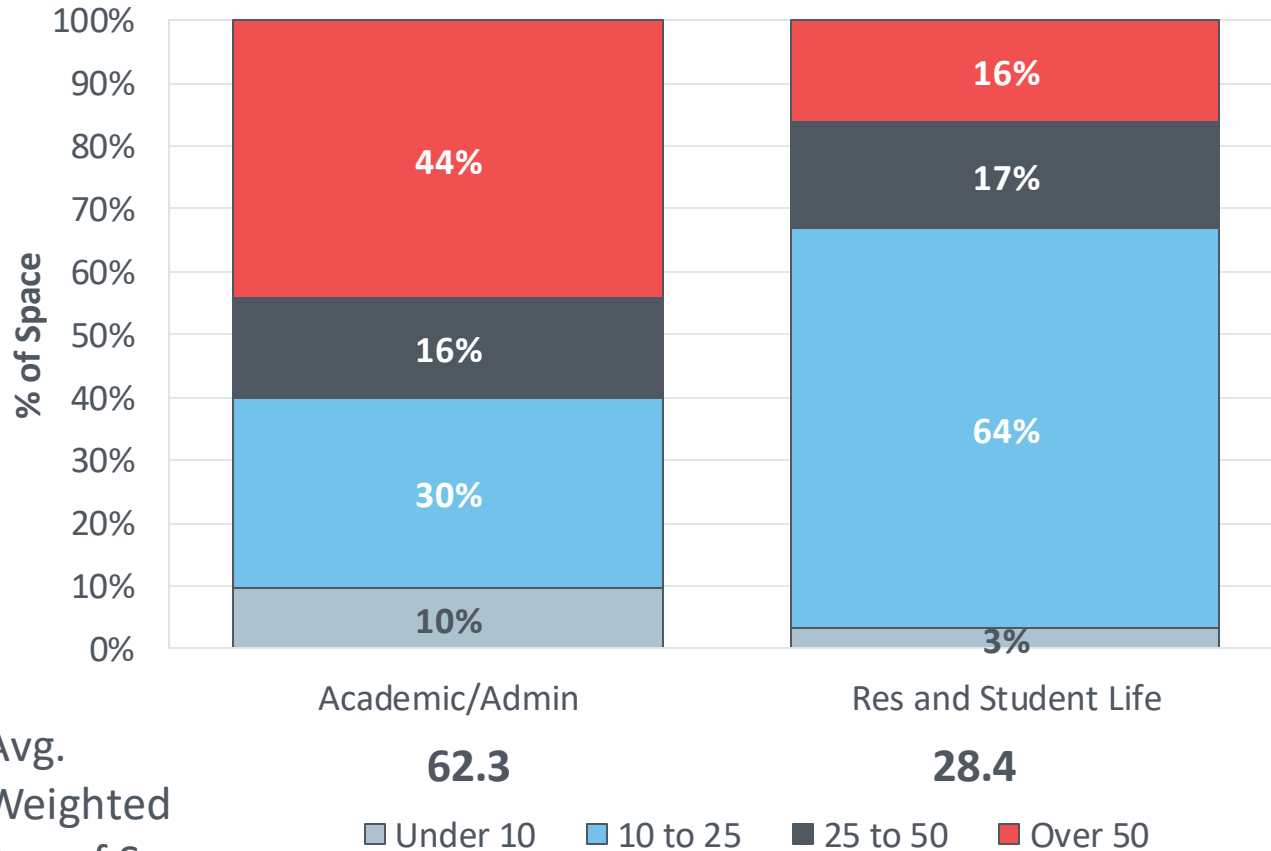
Campus Renovation Age by Category



Over 2/3 of Residence Space under 25-Year Old

Academic space profile operating with twice as much older space compared to residential

Campus Renovation Age by Category & Function



Capital Risk:

- Highest Risk:** Life cycles of major components past due – end of building life cycle approaching.
- Higher Risk:** Life Cycles coming due in core building components.
- Medium Risk:** Lower cost space renewal updates needed.
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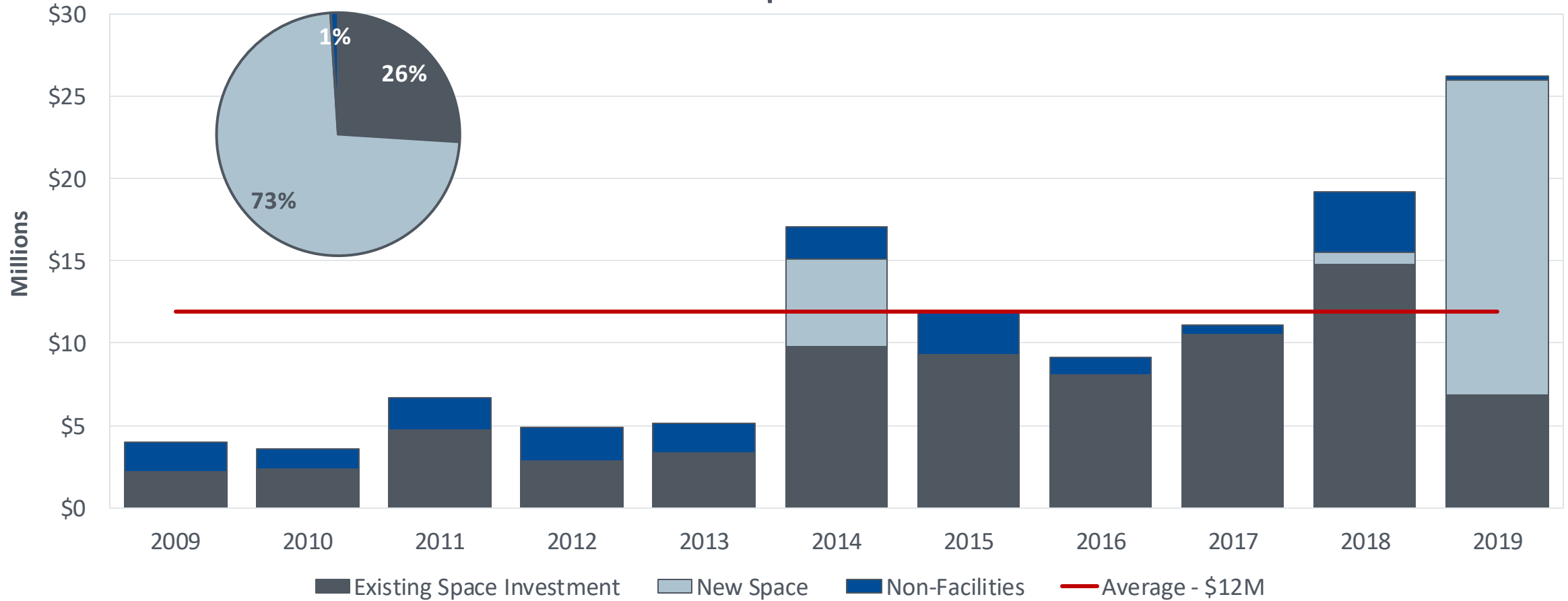
Operational Demands:

- React as Needed:** Issues in components past the end of their lifecycles will demand reactive maintenance.
- Balance PM and Reactive Maintenance:** Younger components still require PM.
- Aging components require reactive maintenance.**
- Focus on PM:** Significant need for PM in young systems.

Capital Investment Peaks with New Space Spending

Total capital investment for FY19 dominated by new residence hall construction

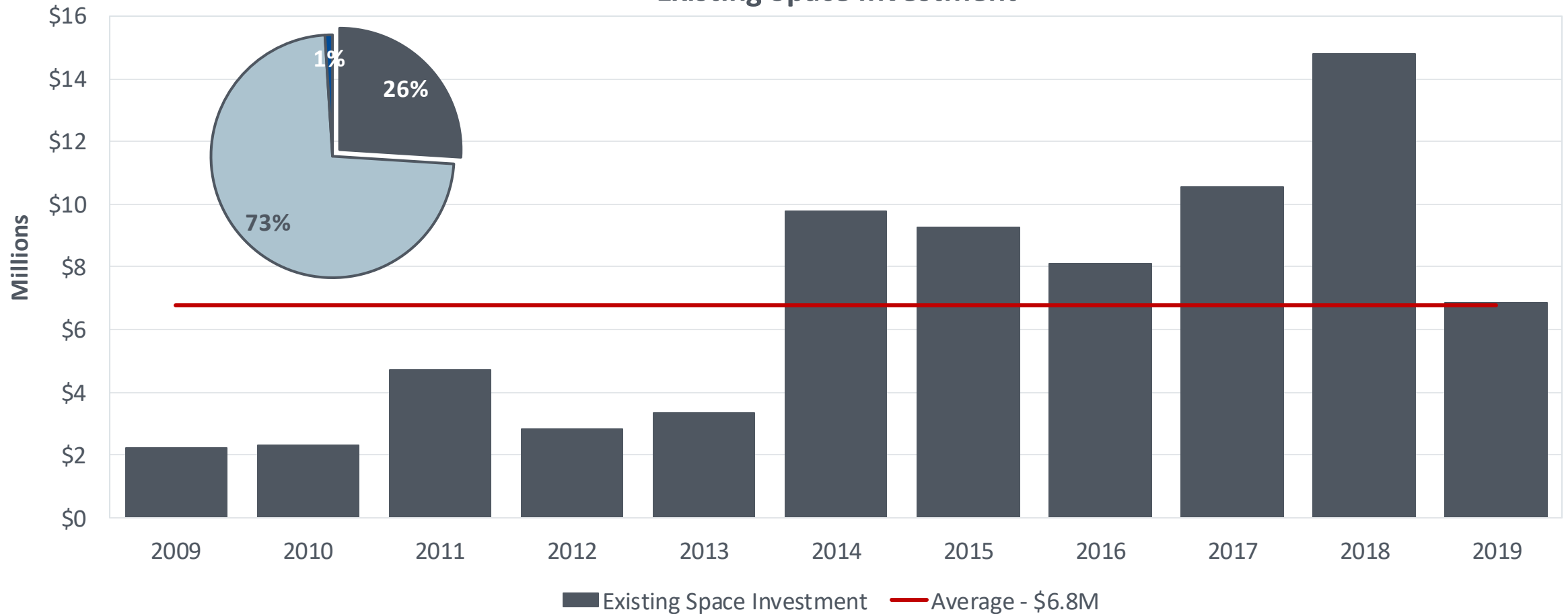
Total Capital Investment



Total Investment Towards Existing Space

RISD on average investing \$6.7M per year; FY19 in line with longitudinal average

Existing Space Investment

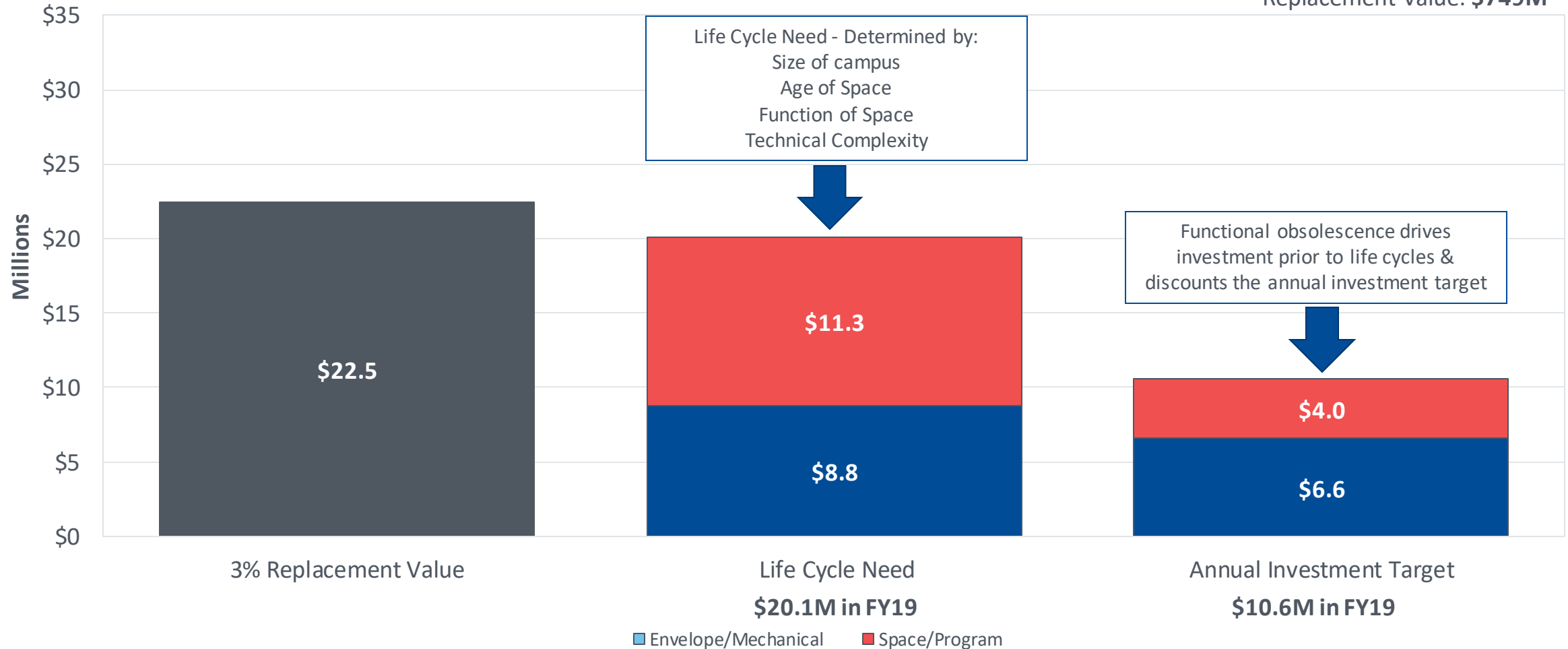


Defining an Annual Investment Target

FY19 Annual Funding Target: \$10.6M

FY19 Annual Investment Target

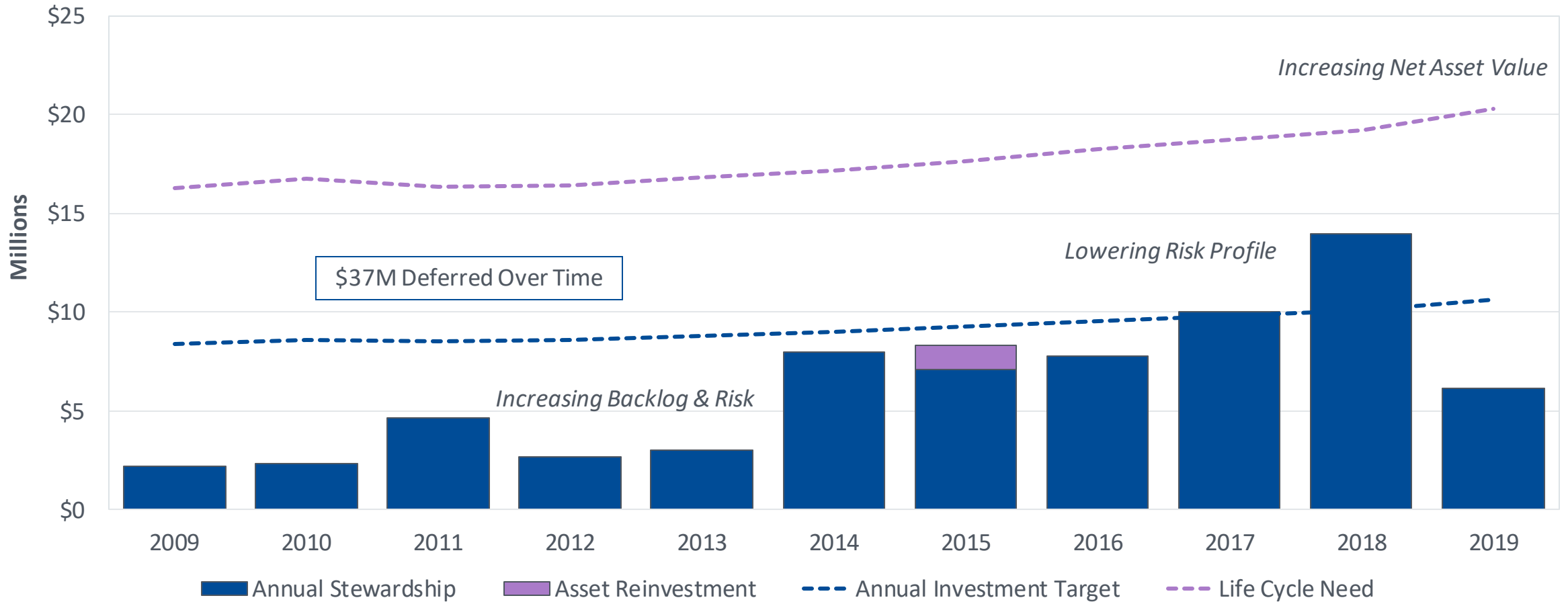
Replacement Value: \$749M



Capital Investment vs. Budgeted Funding Target

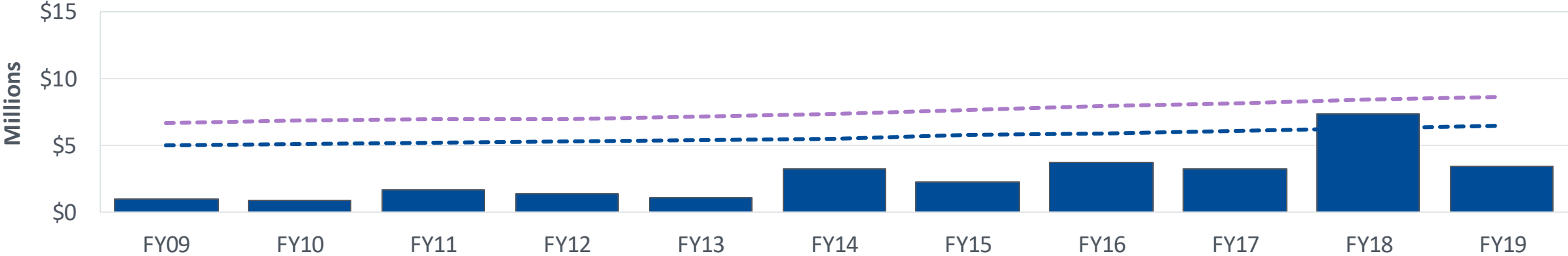
Since FY14, RISD has invested into 93% of Sightlines recommended target

Total Capital Investment into Existing Space vs. Funding Target

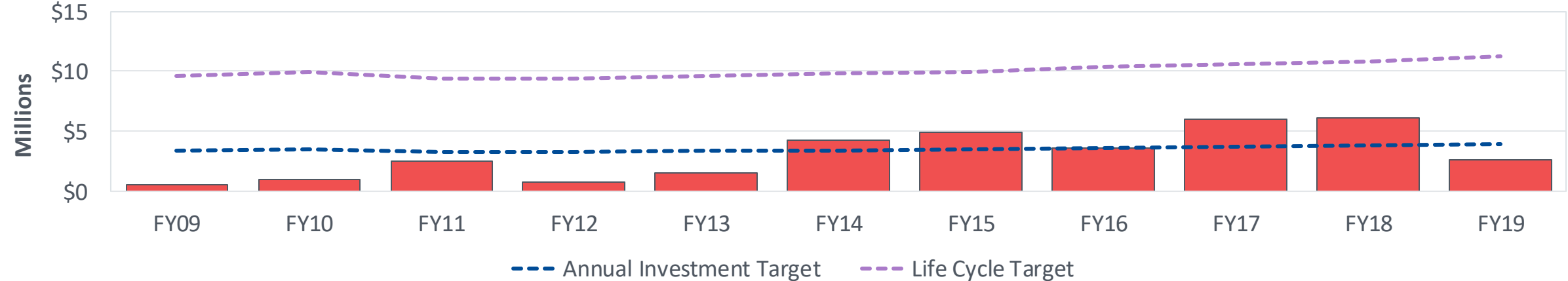


Total Capital Investment vs. Package Target

Envelope/Mechanical Spending vs. Targets



Space/Program Spending vs. Targets

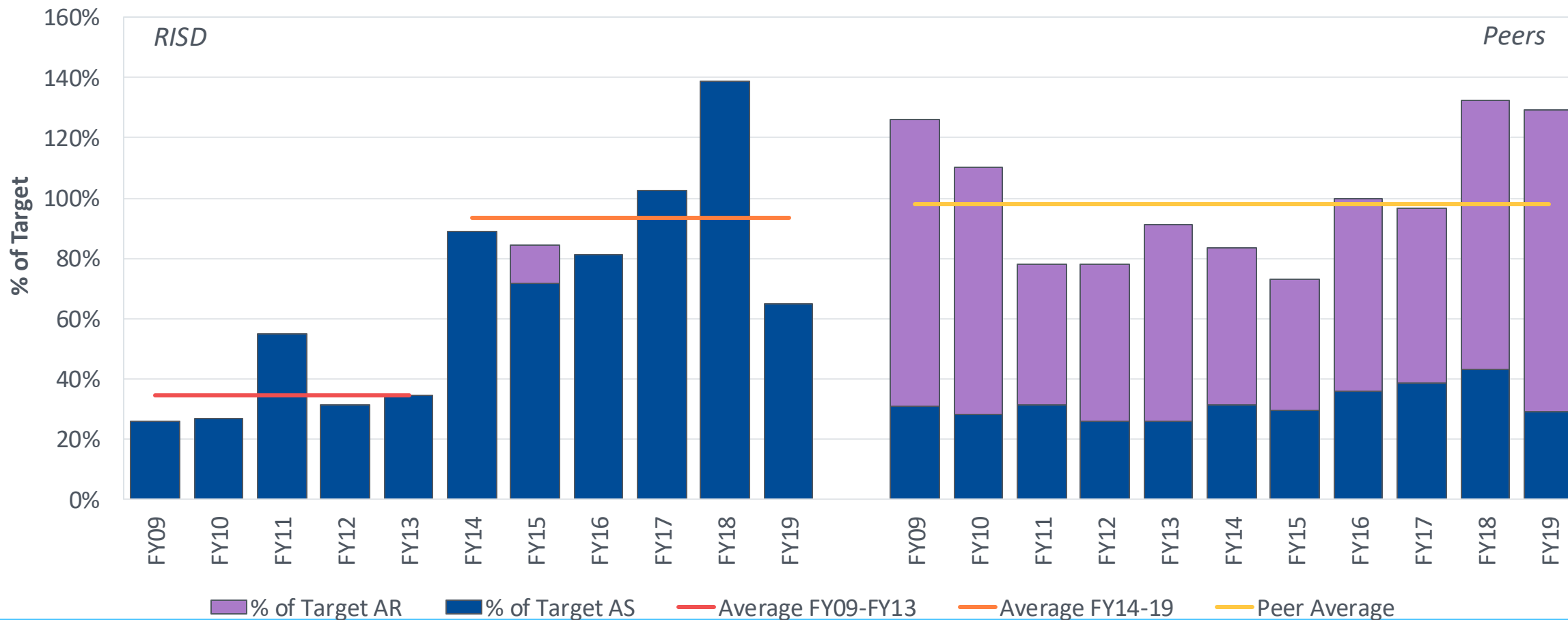


--- Annual Investment Target --- Life Cycle Target

Total Capital Investment Performance to Target

Shift in existing space investment since FY14 has aligned RISD with peer investment levels

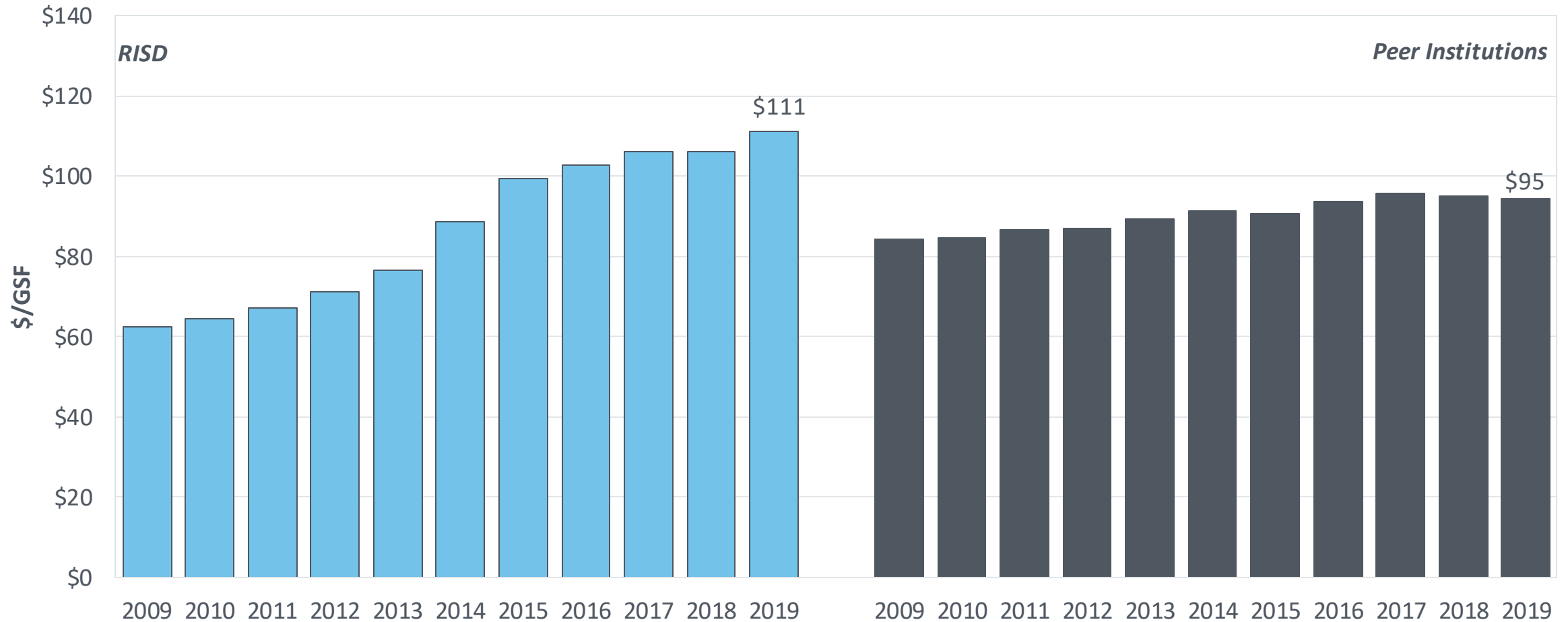
Historical Capital Investment in Existing Space



FY19 Total Asset Reinvestment Need vs. Peers

Through strategic reinvestment, RISD has been able to mitigate total DM growth since FY15

Total Asset Reinvestment Need \$/GSF



FB&A Prediction Overview

Regionalized costs based on comprehensive database of building systems

6 Subsystems

Roof

Envelope

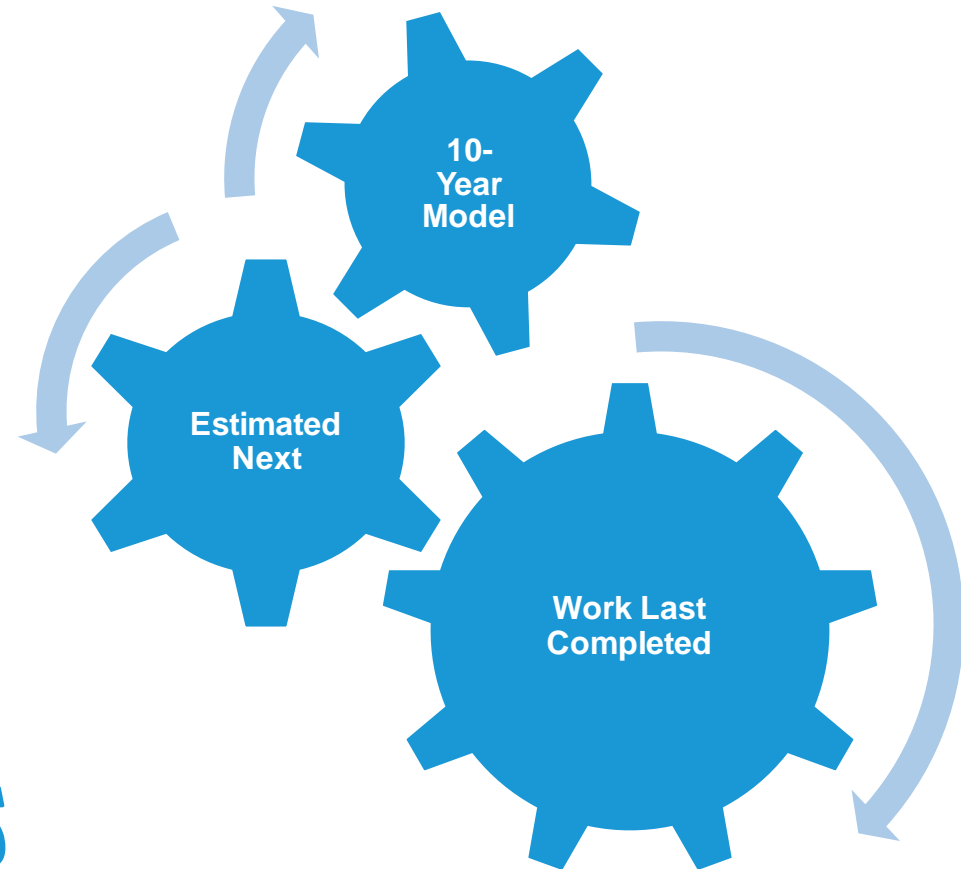
HVAC Systems

Electrical

Plumbing

Interiors

96% of Building Costs

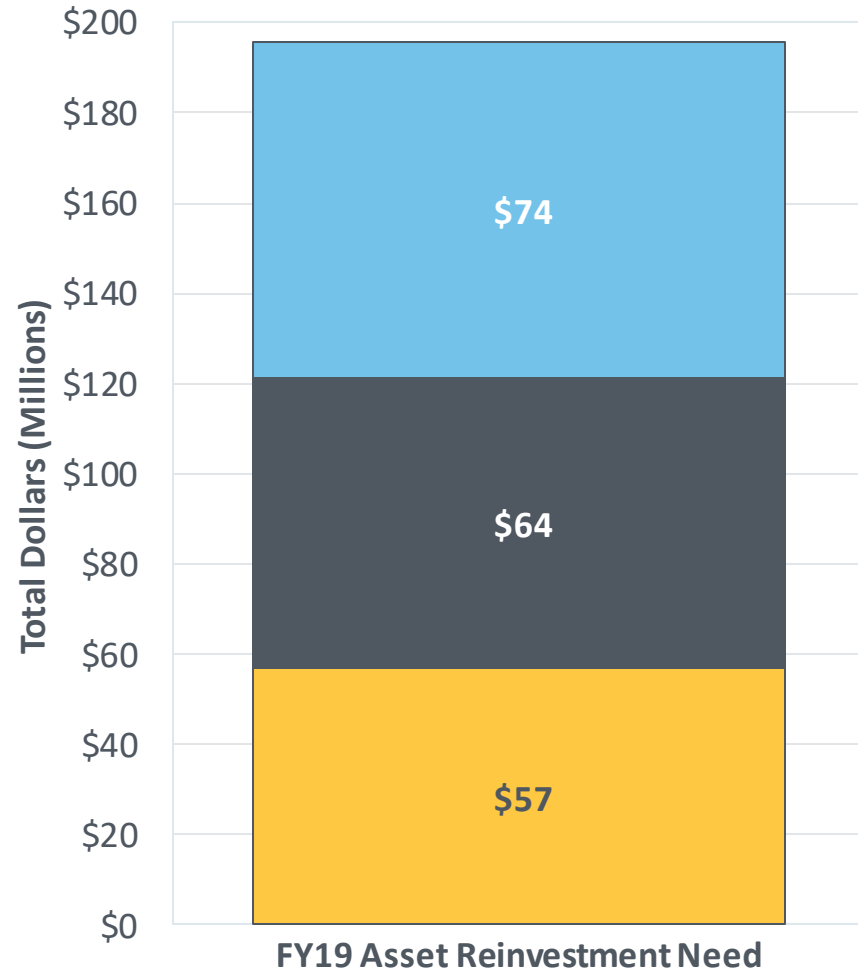


ROPA+ Prediction: Predictive Investment Model

Asset Reinvestment Need

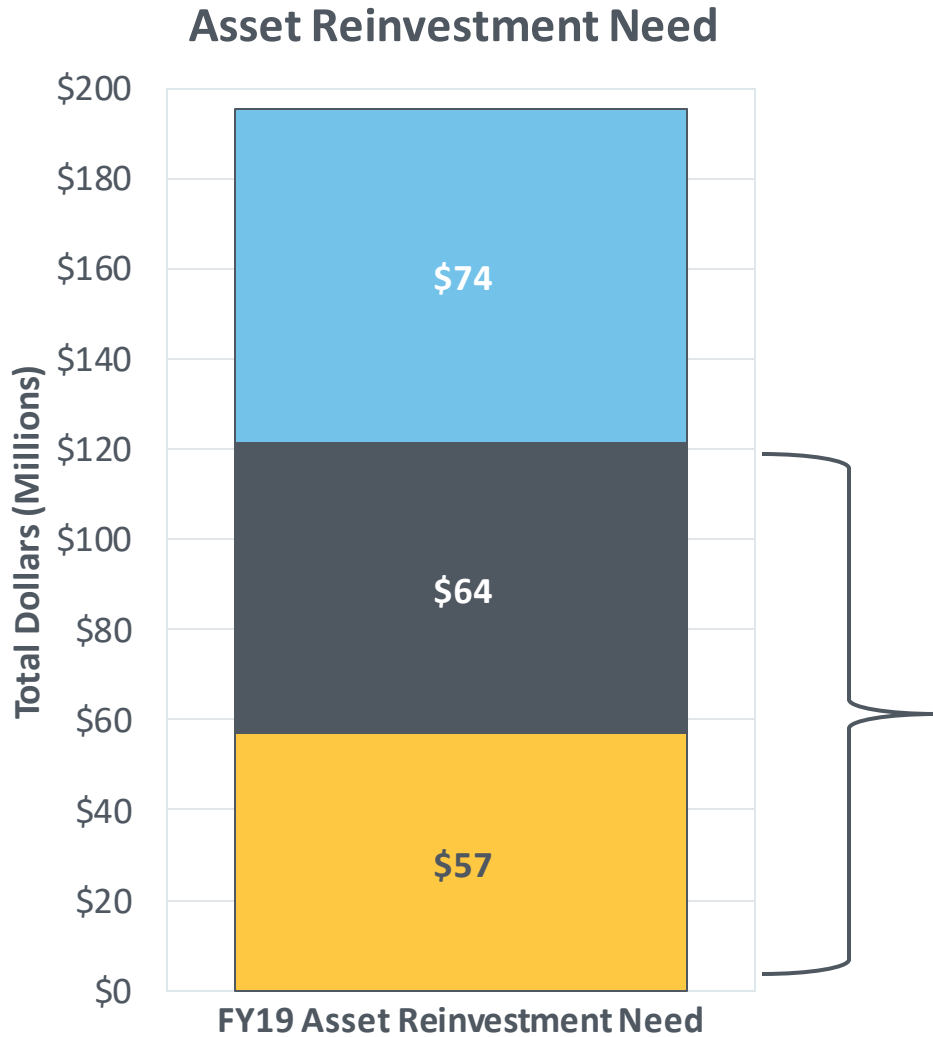


Asset Reinvestment Need

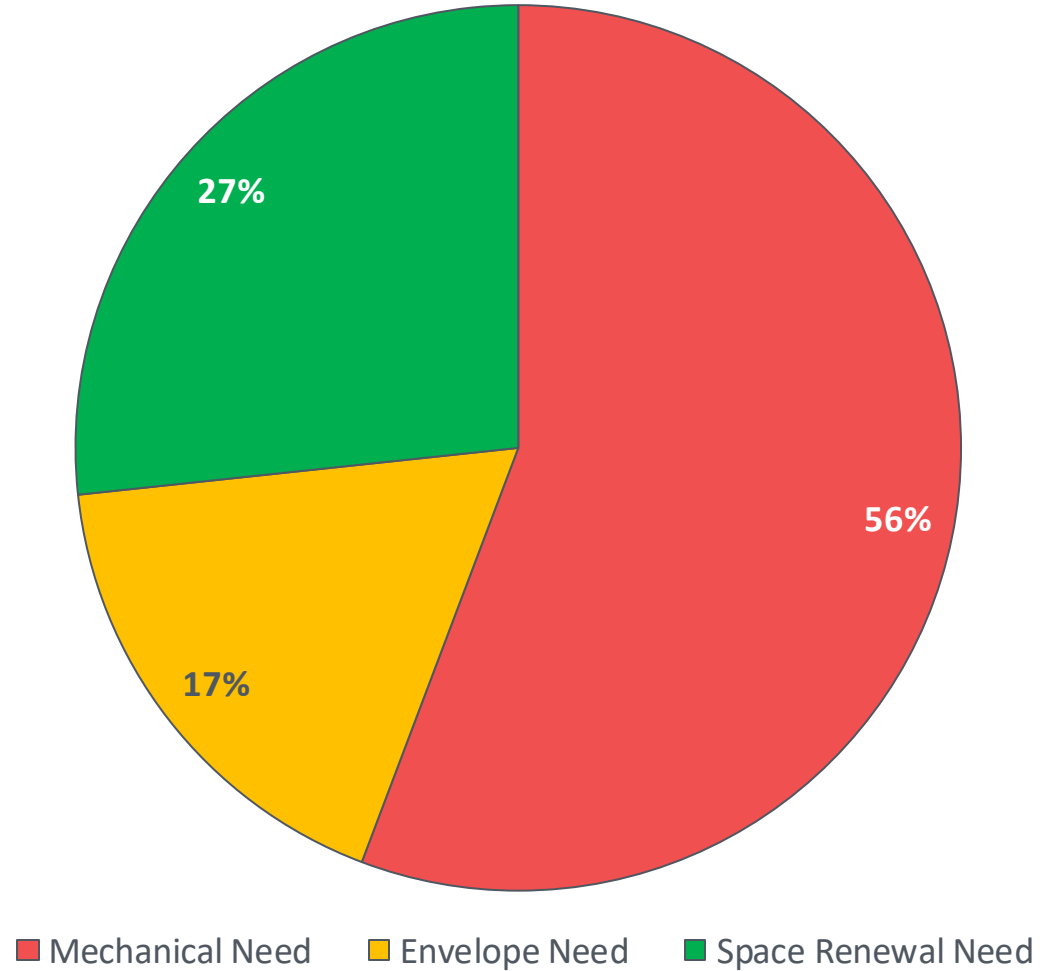


- ✓ Modernization and Infrastructure need is \$74M.
- ✓ Sightlines recommends a 10 year capital strategy to address the total need.
- ✓ Total 10 year renewal need is \$64M.
- ✓ This represents the life cycle needs coming due between 2020-2029.
- ✓ Current Need Today (Highest Risk)

Majority of Need Falls into Mechanical Systems



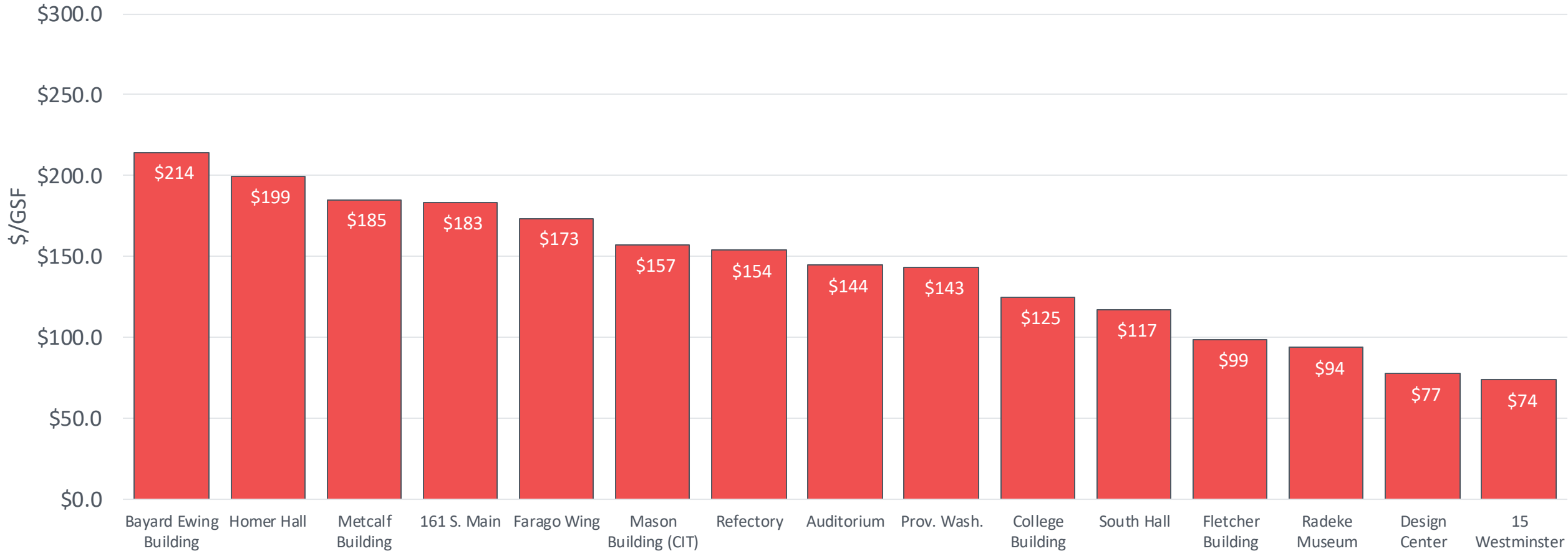
Total Need (10 Year Renewal and Current)*



Buildings with the Highest Predicted Need – Normalized \$/GSF

63% of campus need in top buildings, with equal distribution of current and renewal needs

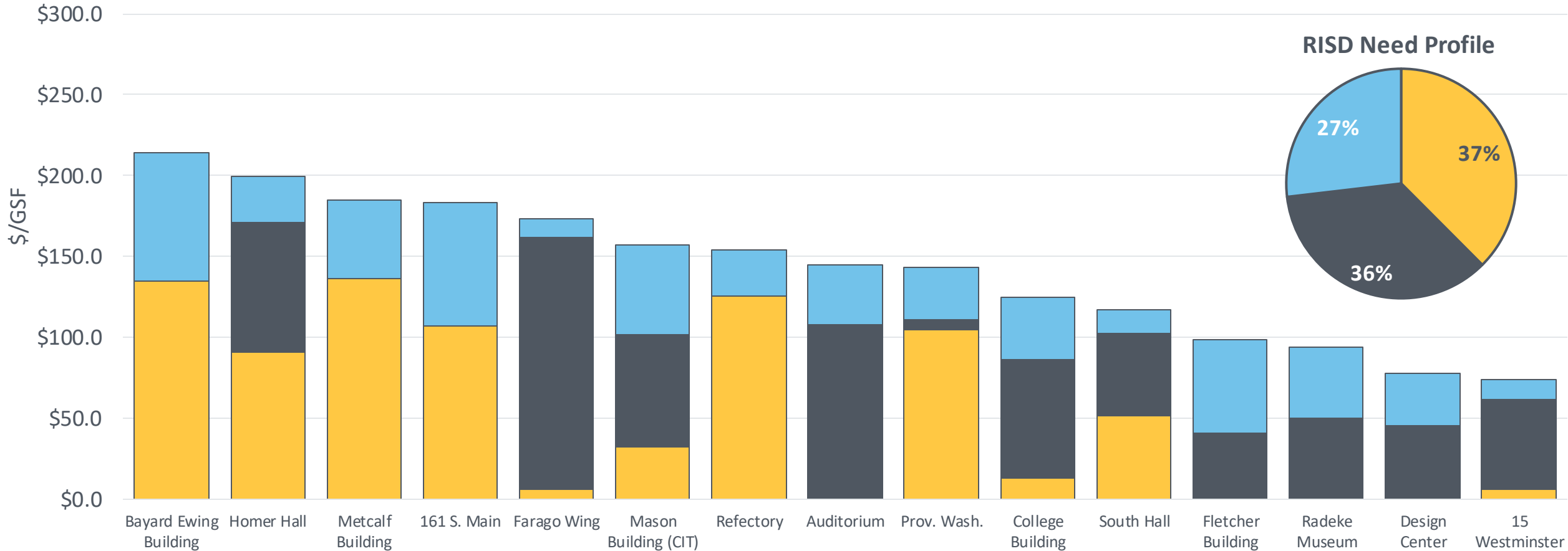
15 Highest Need Buildings (Current, Renewal and Modernization Needs) - \$/GSF



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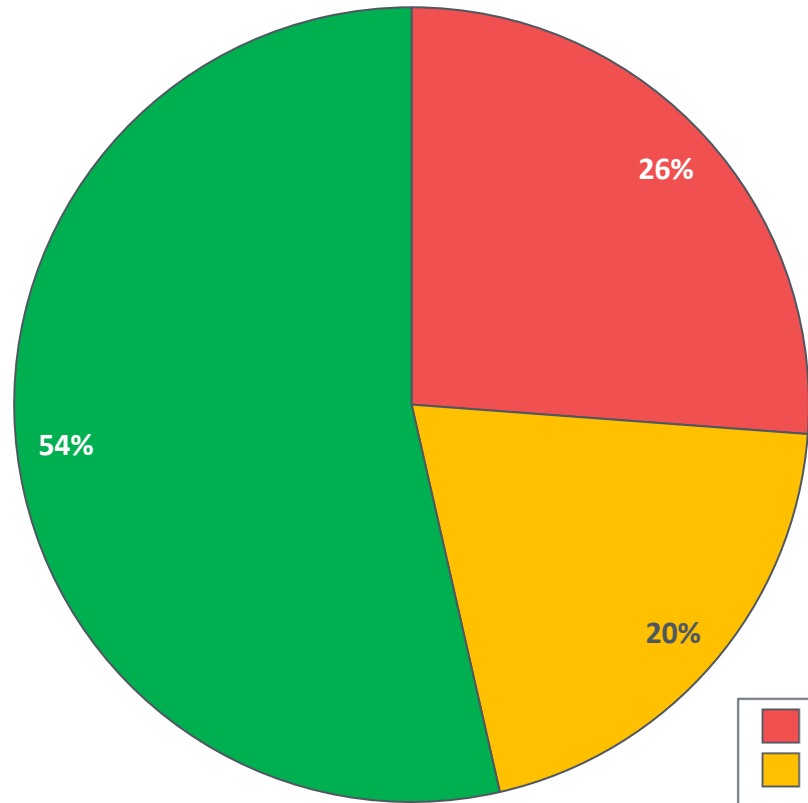
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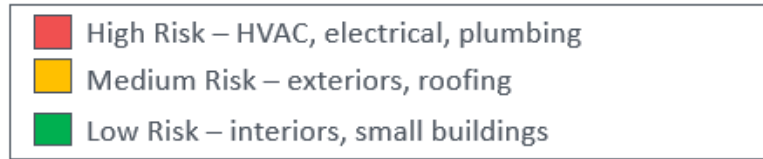
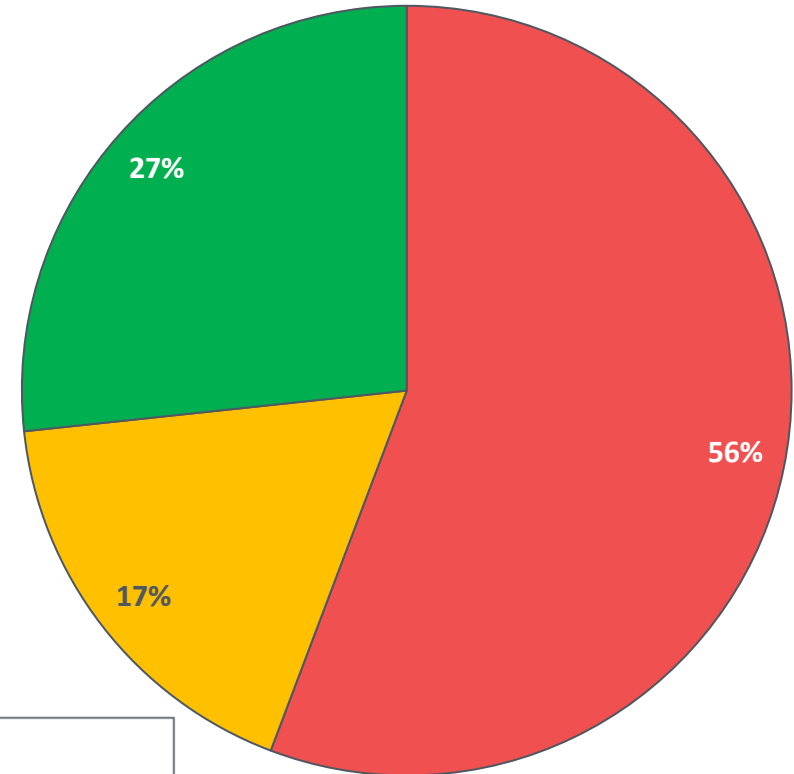
Historic Investment in Existing Space vs. Predicted Needs

Capital resources will need to strategically target MEP needs going forward

Historic Investment by Risk Category
10-Year Avg.



Predicted Current and Renewal Need by Risk Category
FY19-FY28

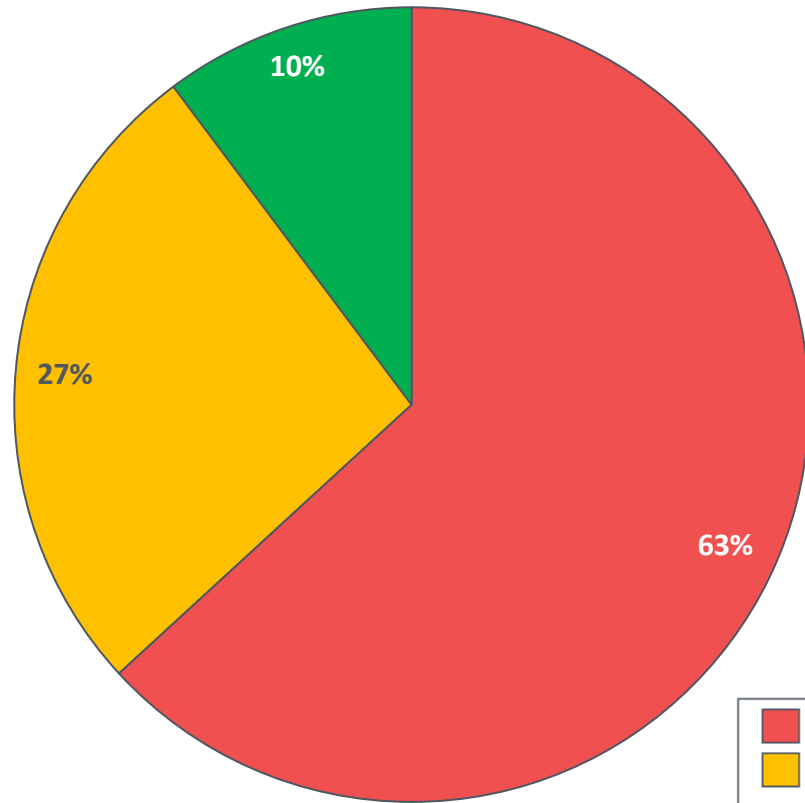


Residential Needs Mitigated through Renovation

Academic space estimated to have significant MEP demands across campus in comparison to Residential Life

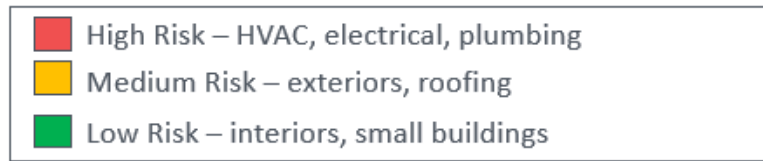
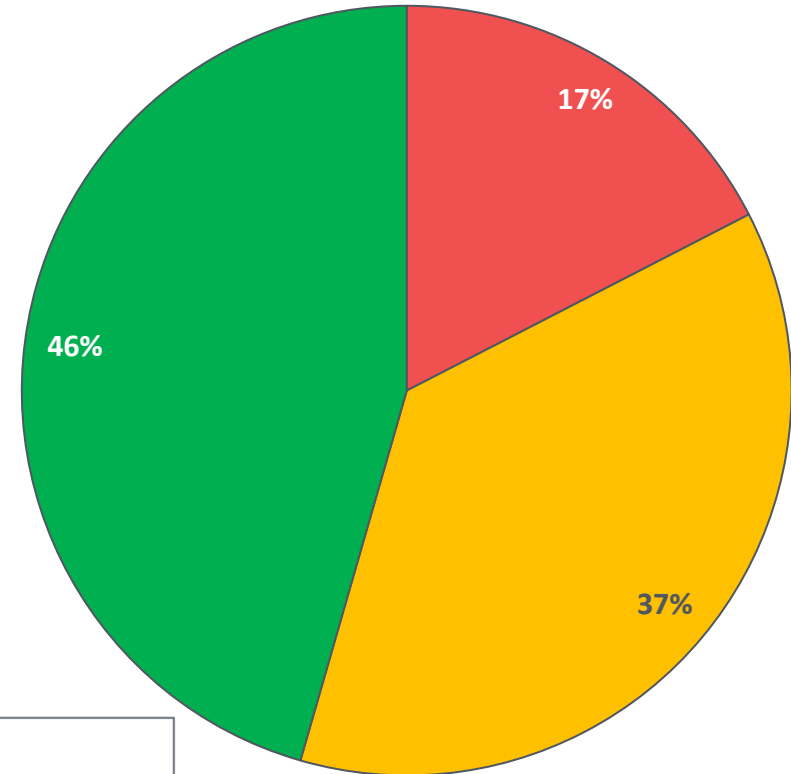
Current and Renewal Needs by Risk Category

Academic Space



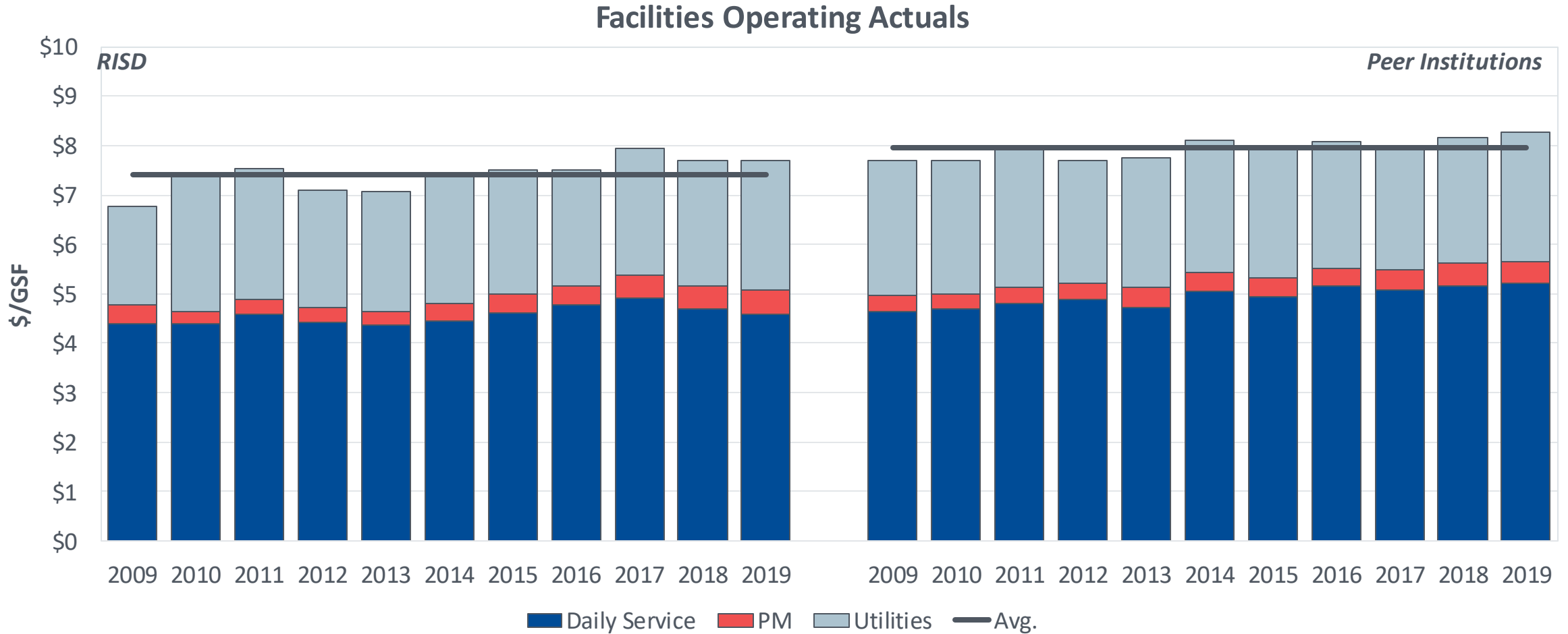
Current and Renewal Needs by Risk Category

Residential and Student Life



Historical Facilities Operating Actual Expenditures vs. Peers

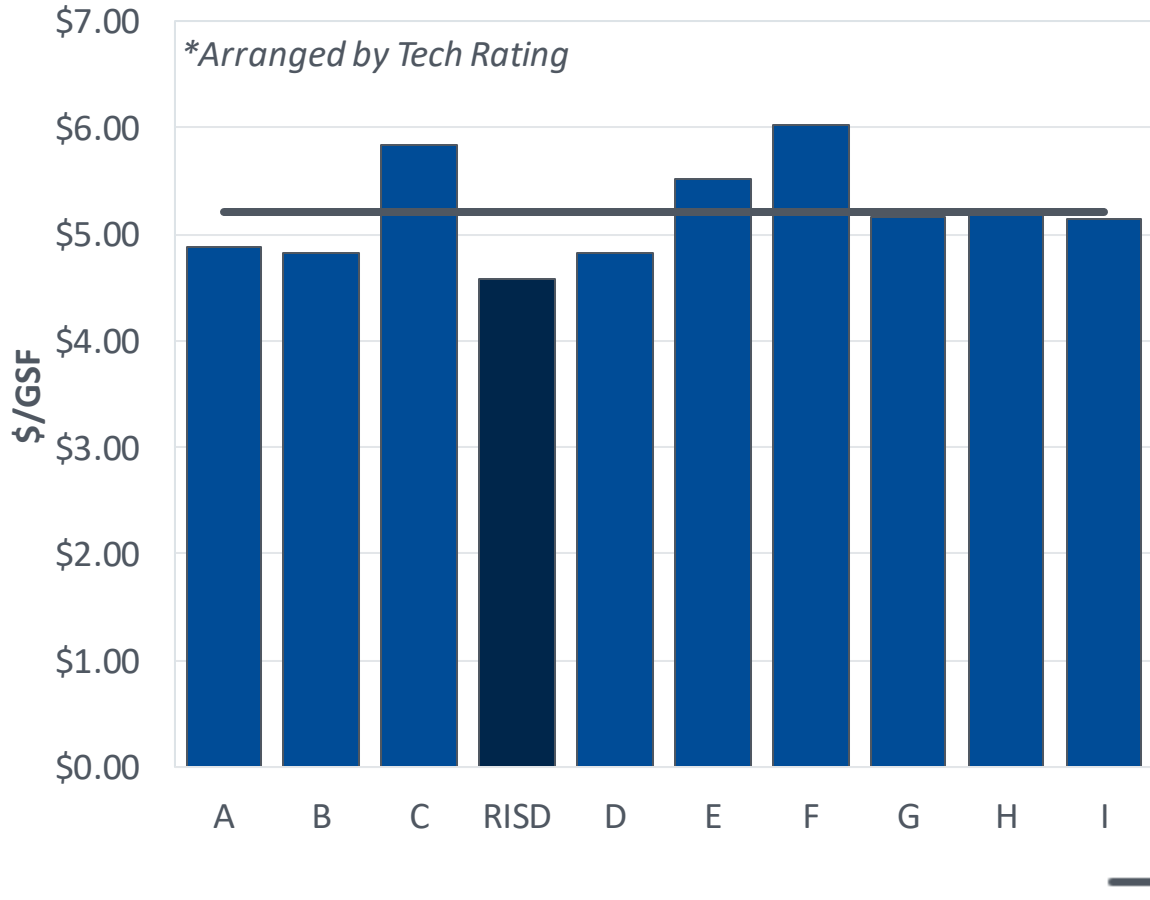
Peers operating with 8% more daily resources compared to RISD in FY19



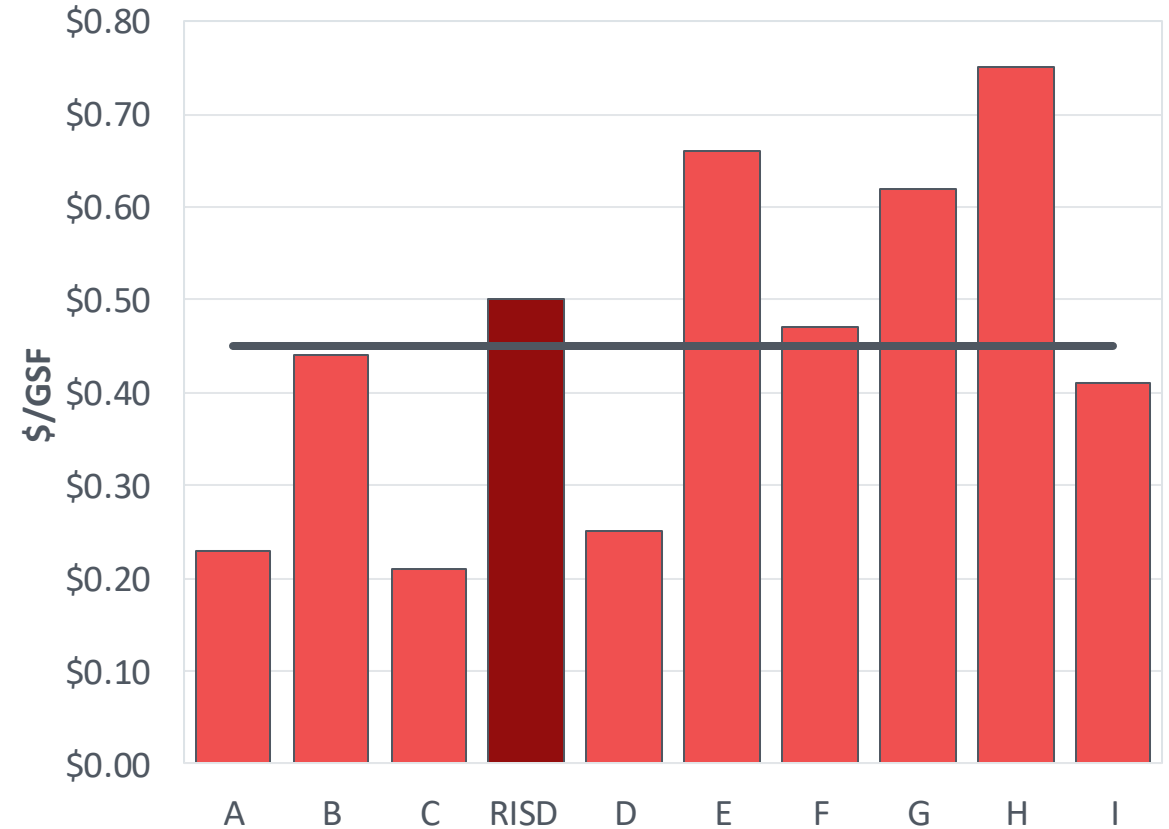
Breaking Out Daily Service & PM

RISD allocating 10% more towards preventative maintenance than peers

Daily Service vs Peers



Planned Maintenance vs Peers



Staffing Overview

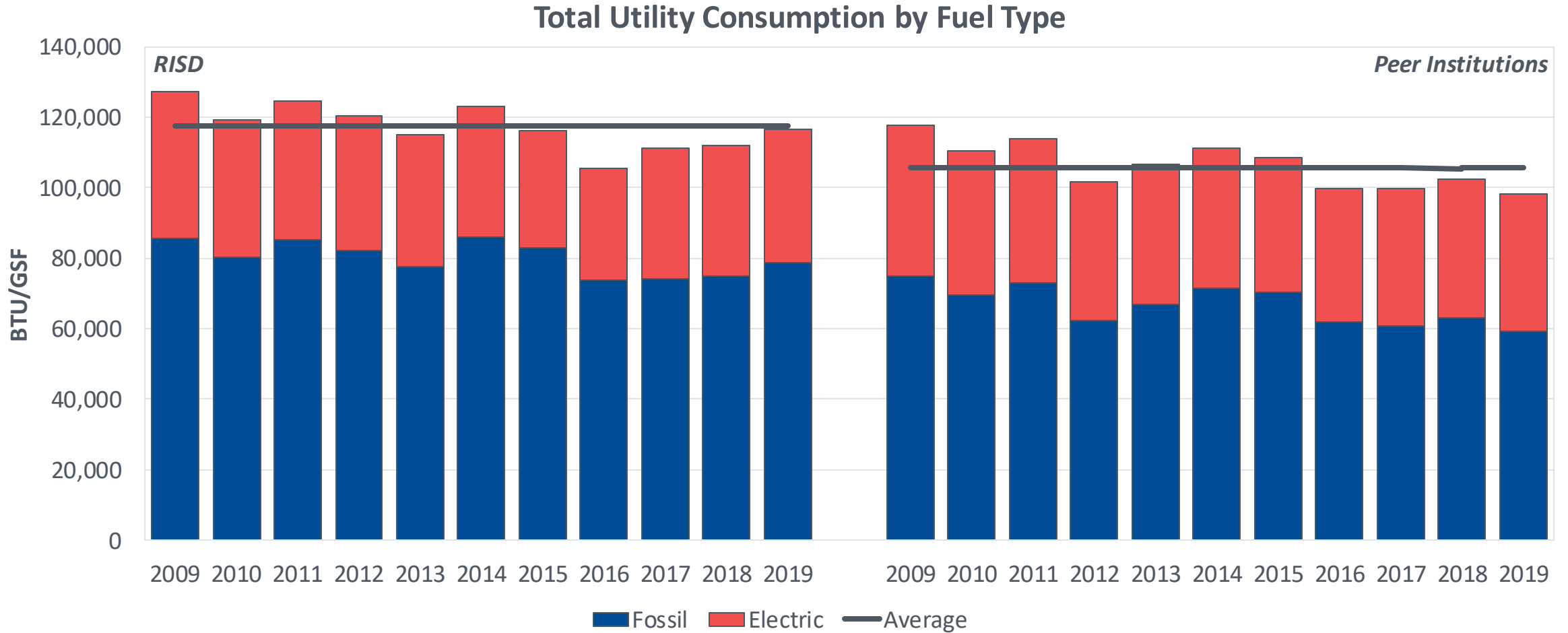
Maintenance Metrics	RISD	Peers	Database	<u>Bottom Line</u>
Staffing (GSF/FTE)	74,364	86,539	87,499	Covering less space, with closer supervision, and less materials
Materials (\$/GSF)	\$ 0.10/GSF	\$0.21/GSF	\$0.25 /GSF	
Supervision (FTE/Supervisor)	9.27/Supervisor	10.54/Supervisor	12.48/Supervisor	

Custodial Metrics	RISD	Peers	Database	<u>Bottom Line</u>
Staffing (GSF/FTE)	27,757	37,277	34,895	Covering similar space, with less supervision, and less materials
Materials (\$/GSF)	\$0.10/GSF	\$0.13/GSF	\$0.12 /GSF	
Supervision (FTE/Supervisor)	31.85/Supervisor	24.26/Supervisor	19.47/Supervisor	

Grounds Metrics	RISD	Peers	Database	<u>Bottom Line</u>
Staffing (Acres/FTE)	7.44	27.31	21.84	Covering less space, with similar supervision, and similar materials
Materials (\$/Acre)	\$327.62/Acre	\$832.50/Acre	\$754.34/Acre	
Supervision (FTE/Supervisor)	5.88 /Supervisor	10.78 /Supervisor	13.05/Supervisor	

Longitudinal Energy Consumption vs. Peers

RISD's total energy consumption increased by 4%, realigning itself with historical average



Sightlines Recommendation

Total Space Profile dominated by Pre-War Construction;

- Over 80% of construction occurred before 1950. Through strategic gut renovation of campus buildings, age has been offset significantly, aligning itself closer with peers.
- Despite significant gut renovations, renovated campus age profile remains older than peers. Age profile driven by Academic space which an average composite age of 62 years old.

Historical capital investment unable to keep pace with growing campus backlog;

- Capital investment profile a tale of two-cities. From FY09-13 capital investment was funded on average of 35%. Since FY14 RISD has achieved 93% of its total advised yearly target.
- Since increased funding in FY14 Space Program target has been achieved at a significant higher proportion than the Envelope/Mechanical target.
- Continuing to allocate investment into high ROI project work such as systems and envelope should be prioritized. Our prediction analysis estimates 56% of total campus needs consolidated within HVAC, Electrical and Plumbing over the next 10-years.

Continue to allocate PM to New Construction and Renovated Spaces;

- While our Daily Service costs have stayed consistent, our allocation towards PM activity has increased. Continued PM in high traffic spaces and new construction with help alleviated future reactive demands and preserve new construction for the future.



Questions & Discussion

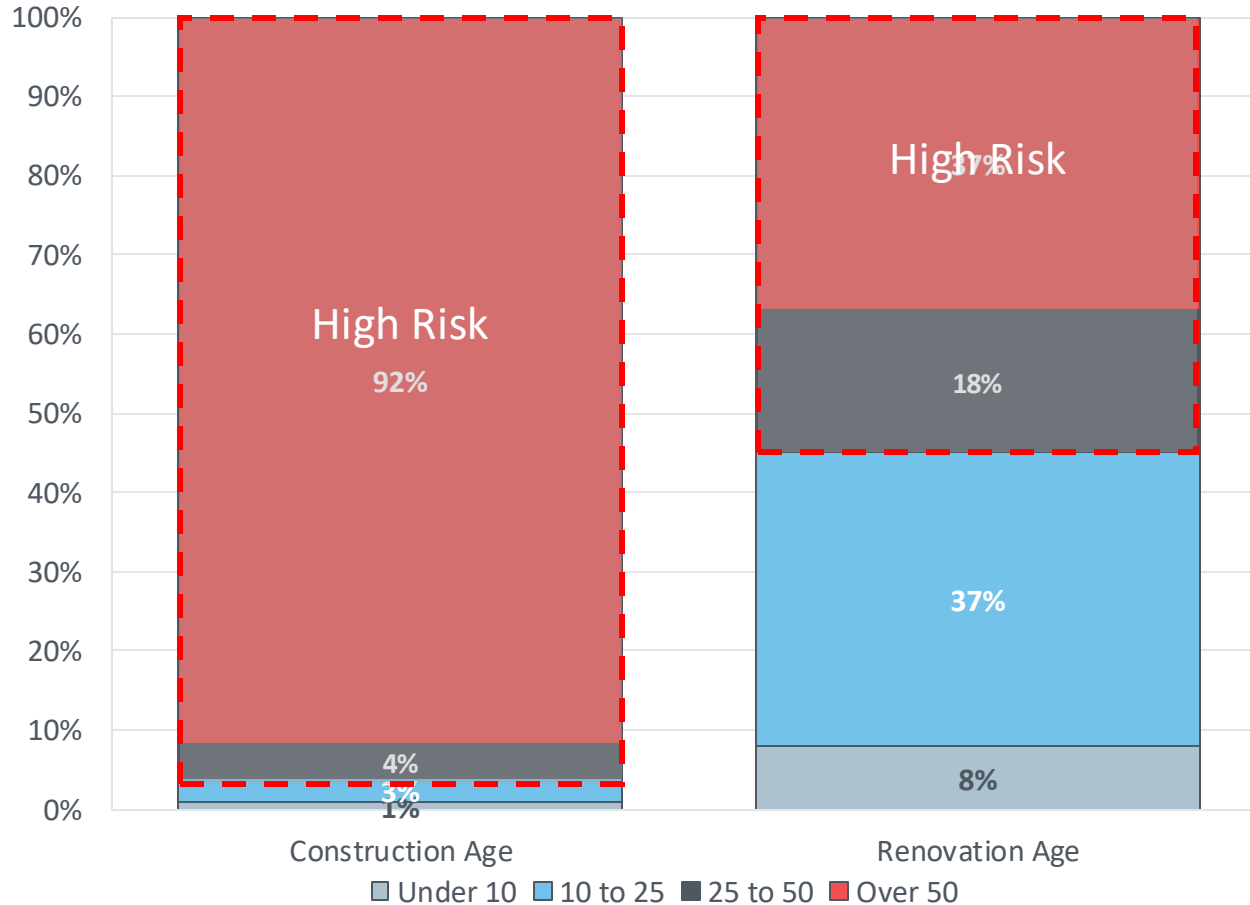


Appendix

The Benefit of Renovations

Renovations redistribute campus age and reduce overall risk

Campus Age by Category



Capital Risk:

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Life cycles of major components past due – end of building life cycle approaching.
- Higher Risk:**
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“Honeymoon” period – little need for capital reinvestment.

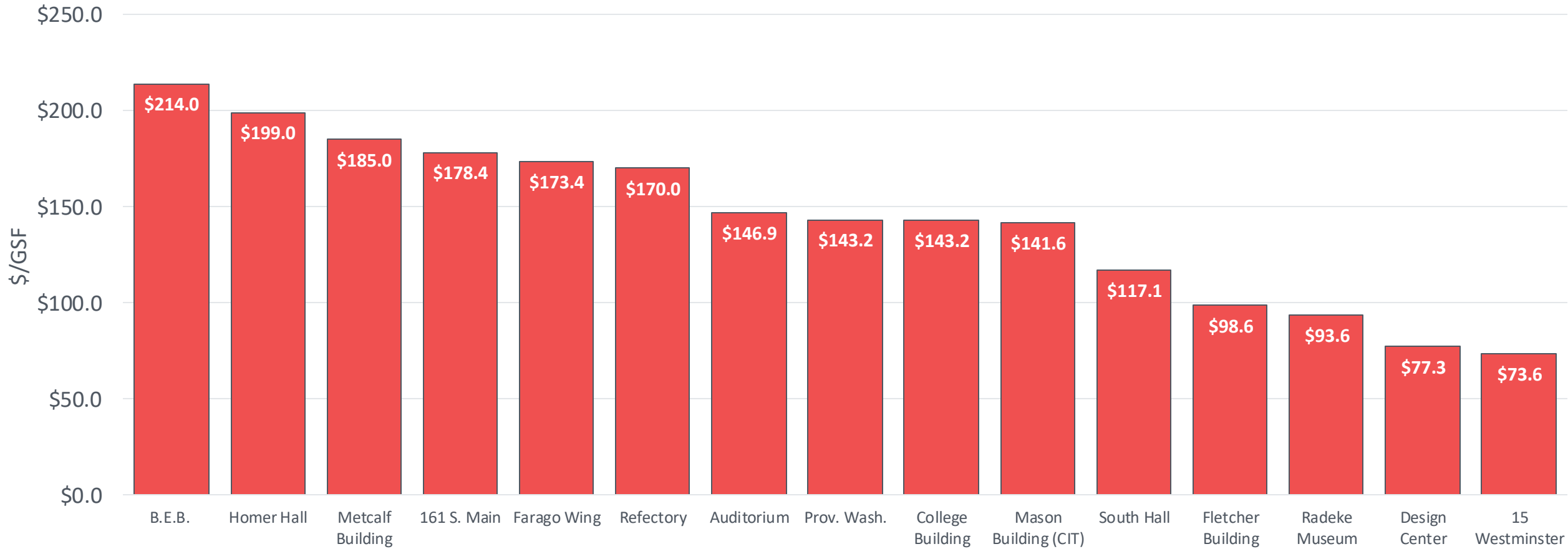
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Issues in components past the end of their lifecycles will demand reactive maintenance.
- Balance PM and Reactive Maintenance:**
Younger components still require PM.
- Aging components require reactive maintenance.**
- Focus on PM:**
Significant need for PM in young systems.

Buildings with the Highest Need

These buildings account for 63% of total campus need

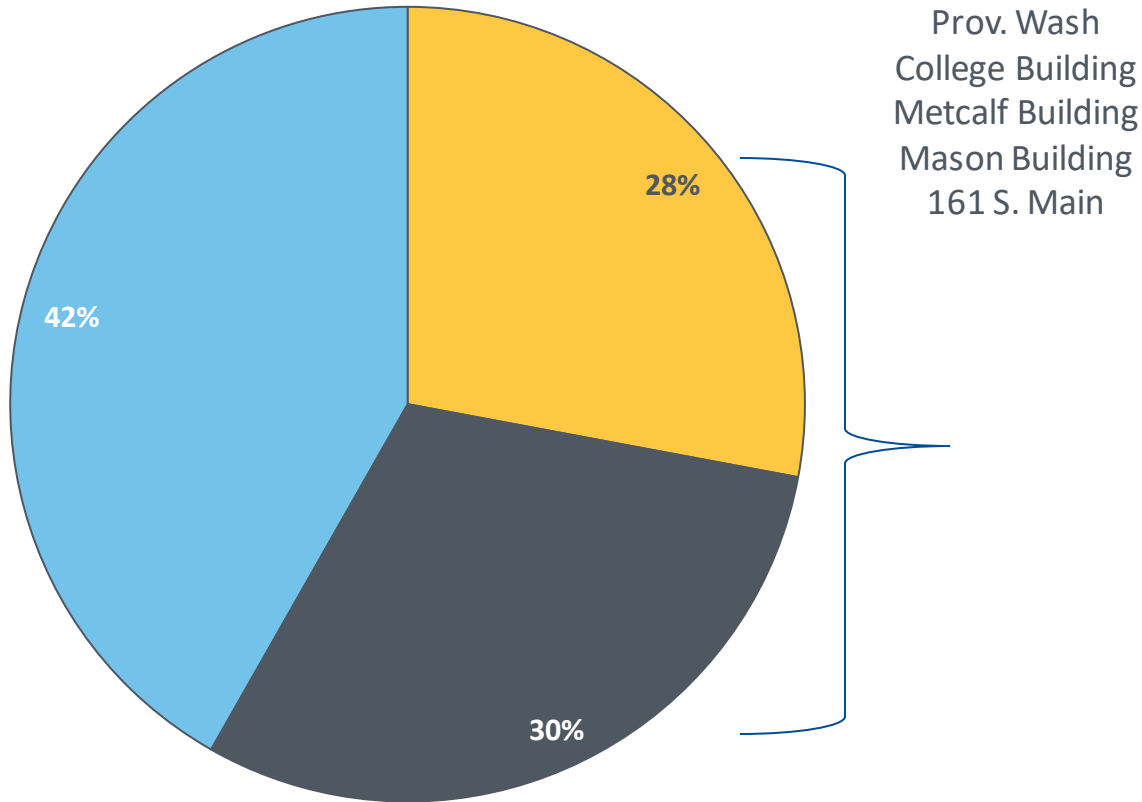
15 Highest Need Buildings (Current, Renewal and Modernization Needs) - \$/GSF



Focused Planning with Address Res Life Renewal Needs

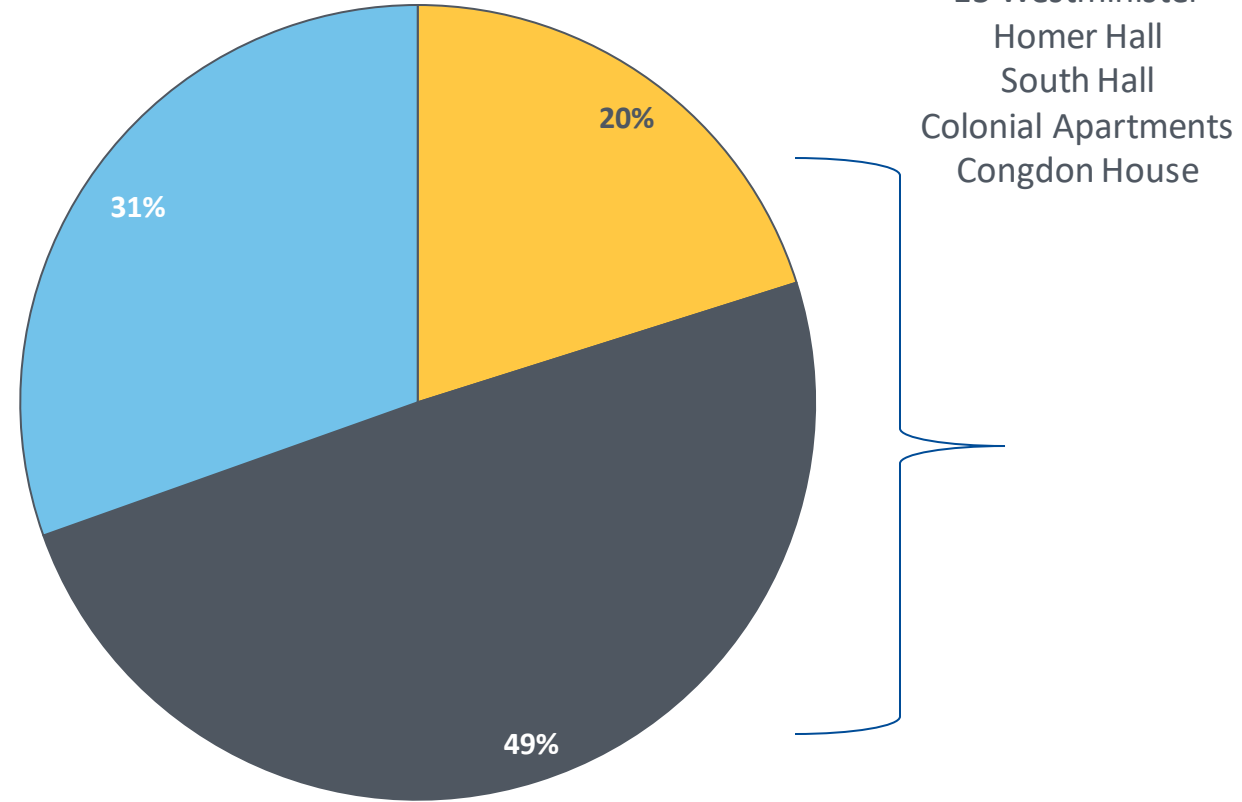
Current, Renewal and Modernization Needs

Academic Space



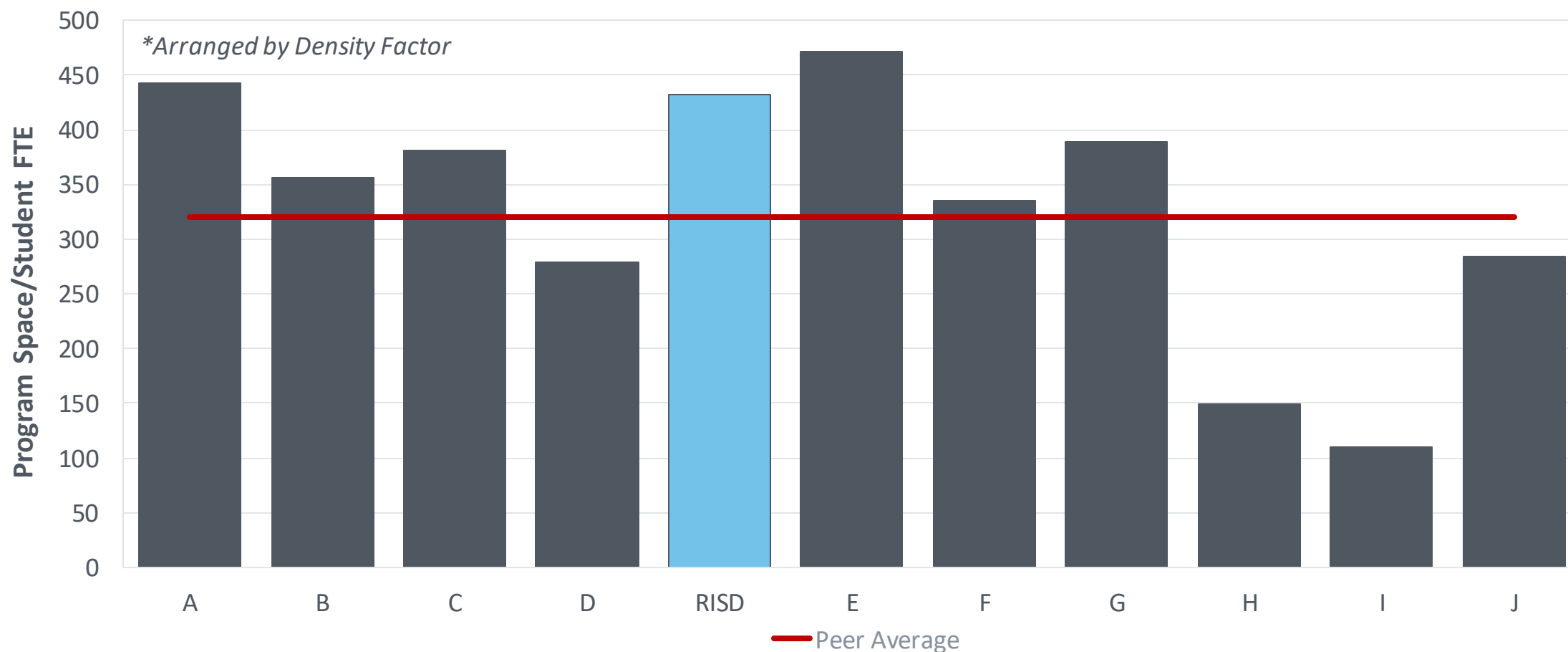
Current, Renewal and Modernization Needs

Res Life Space



Academic Space/Student

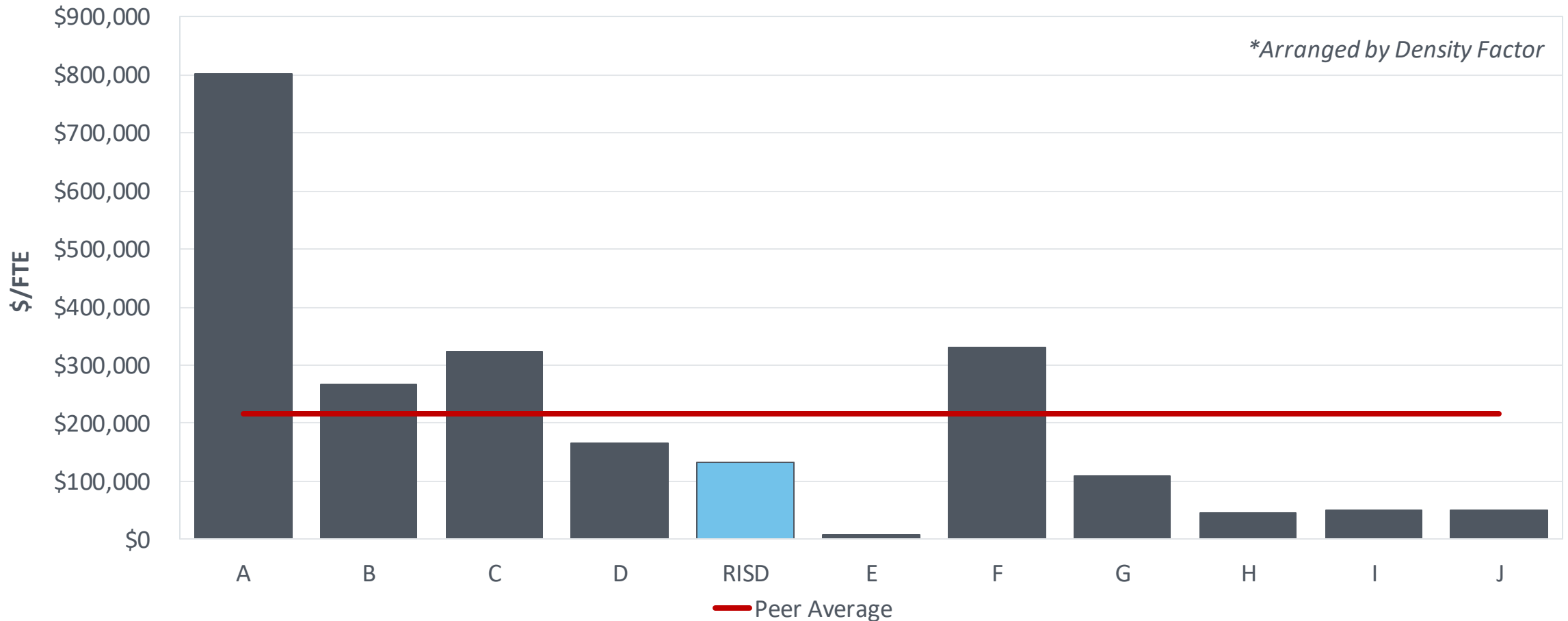
RISD is offer student with more programmatic space compared to peers



Endowment/Student

RISD is operating with a lower Endowment compared to peers on a student per FTE

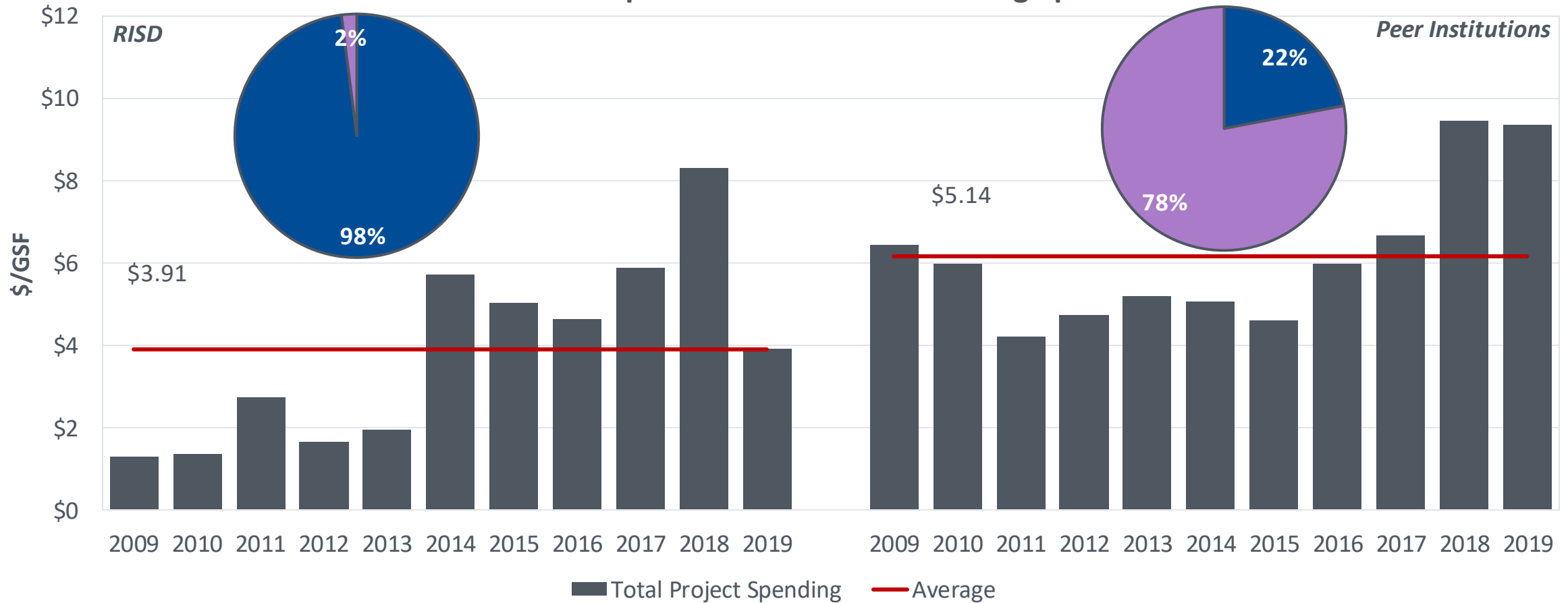
Endowment per Student



Total Project Spending vs. Peers

A larger portion of peer expenditures come from One-Time funding (Gifts, Grants, Bonds, Fundraising)

Total Capital Investment into Existing Space



Defining an Annual Investment Target

FY19 Annual Funding Target: \$10.6M

