

# FACILITY CONDITION ASSESSMENT

**Board of Regents  
Facilities Committee  
September 8, 2010**



UNIVERSITY OF MINNESOTA

**Driven to Discover<sup>SM</sup>**

# Outstanding Organization

## University Goal

Outstanding Organization: Be responsible stewards of resources, focused on service, driven by performance, and known as the best among peers.

## University Strategy

Be responsible stewards of resources

## Key Indicator

Facilities condition

## Measure

Facilities Condition Needs Index (FCNI)



# Facilities Condition Assessment (FCA)

- ***Vision:***

The enterprise source of the most accurate and up-to-date information regarding existing buildings (component and system condition, fire safety, environmental safety, historical characteristics, past improvements, budgeted/planned capital projects, etc.) used to ensure effective operation of facilities and guide capital projects.

- ***Operationally:***

- An independent, inspection based review of building conditions
- Report prioritizes needs for facilities renewal over next ten years
- Database provides a tool for accessing and utilizing information
- Information used to measure long term facilities condition against established metrics and peers



# FCA Data Use

## Capital Improvement Planning and Oversight Process

Stage 1 <b>Potential Projects</b>	Stage 2 <b>Preliminary Review &amp; Program Analysis</b>	Stage 3 <b>Six Year Capital Improvement Plan</b>	Stage 4 <b>Approval &amp; Implementation</b>
<p><b>Primary Drivers:</b></p> <ul style="list-style-type: none"> <li>• Programmatic Needs - Compacts</li> <li>• Facility Conditions - Facility Condition Assessment (FCA)</li> </ul>	<p><b>Major Criteria:</b></p> <ul style="list-style-type: none"> <li>• Strategic Positioning</li> <li>• Academic Priorities</li> <li>• <b>Facility Conditions</b></li> <li>• Financial Constraints</li> <li>• Project Logistics</li> <li>• Space &amp; Other Issues</li> </ul>	<div style="text-align: center;"> <p>Planning &amp; Feasibility      Resource Acquisition</p> <p>Pre-design &amp; Schematic Design</p> </div>	<ul style="list-style-type: none"> <li>• Individual projects over \$500K are approved in the Annual Capital Budget and require amendments.</li> <li>• Predesign and Schematic Design complete</li> <li>• Project fully funded</li> <li>• Approved projects move into the Design and Construction process</li> </ul>
<p>Projects proposed by Chancellors, VP's Deans, Faculty, Depts. Business Units during Compact process.</p>	<p>Review, analysis &amp; recommendation by Academic, Finance &amp; Operations staff.</p>	<p>Approved &amp; recommended to Board of Regents by the President.</p>	<p>Approved &amp; recommended to Board of Regents by the President</p>



# Facility Condition Strategies

- Utilize existing space
- Demolish or decommission targeted buildings
- Implement district utility strategies
- Maximize energy conservation
- Target individual system improvements
- Renovate existing spaces
- Build new facilities



# FY '10-11 Initiatives

- FCA Program Manager
  - Hired July 2010
- Building assessments, software and reporting
  - Implement critical updates & enhancements
- Roof inspections
  - Finalizing campus-wide roof inspections
- Facility condition analytics project
  - Link building deficiency data to other enterprise data including Space & Financial



# Background: System-wide Facilities

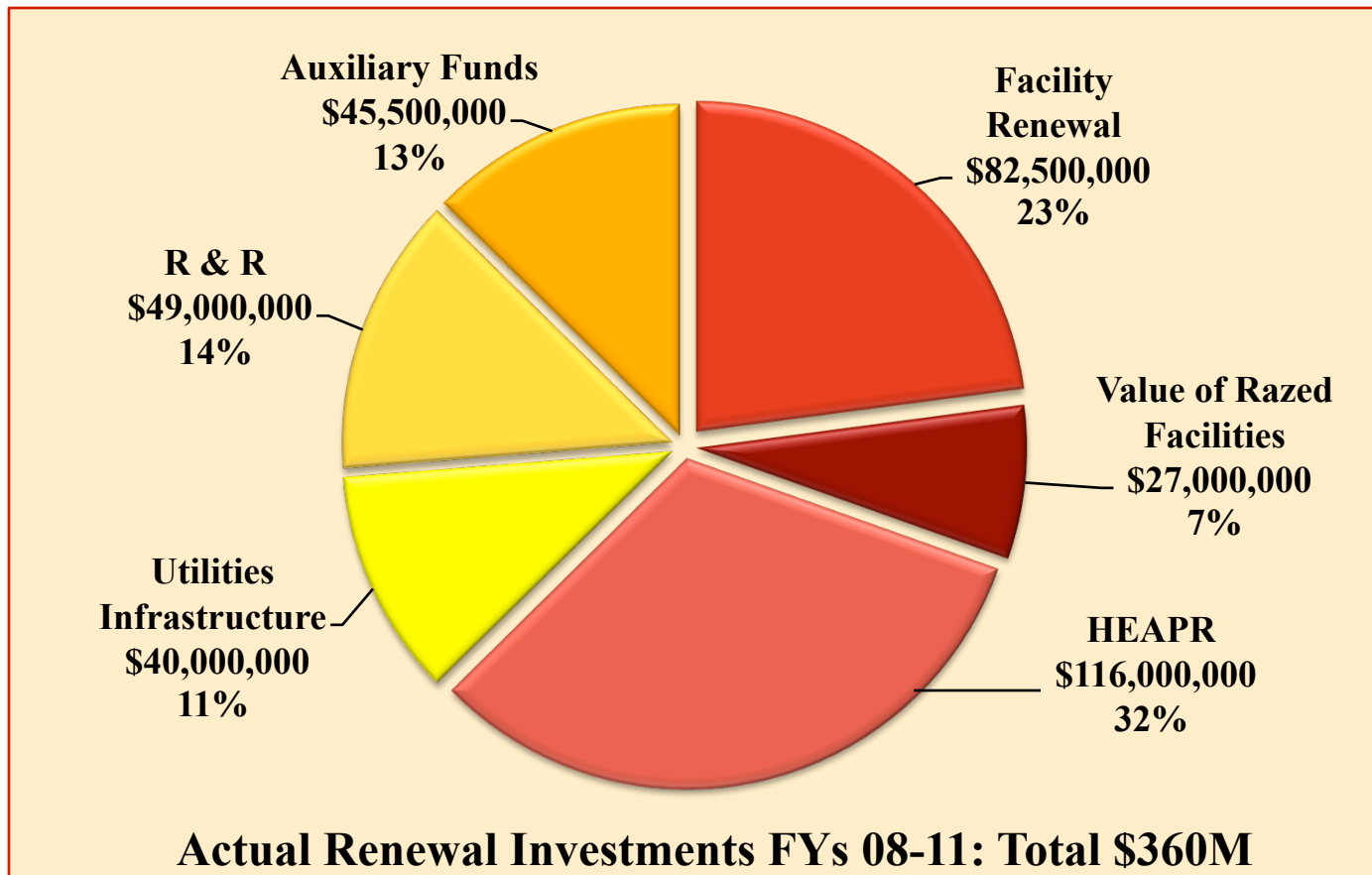
- 29 Million gross square feet
- 5 Unique campuses
- 18 Research and outreach centers or experiment stations



# Capital Need Exceeds Available Funding

(System-wide)

Required Capital to Maintain current FCNI Ratio: \$160 Million per year  
Actual Funding (average over the last 4 years): \$90 Million per year

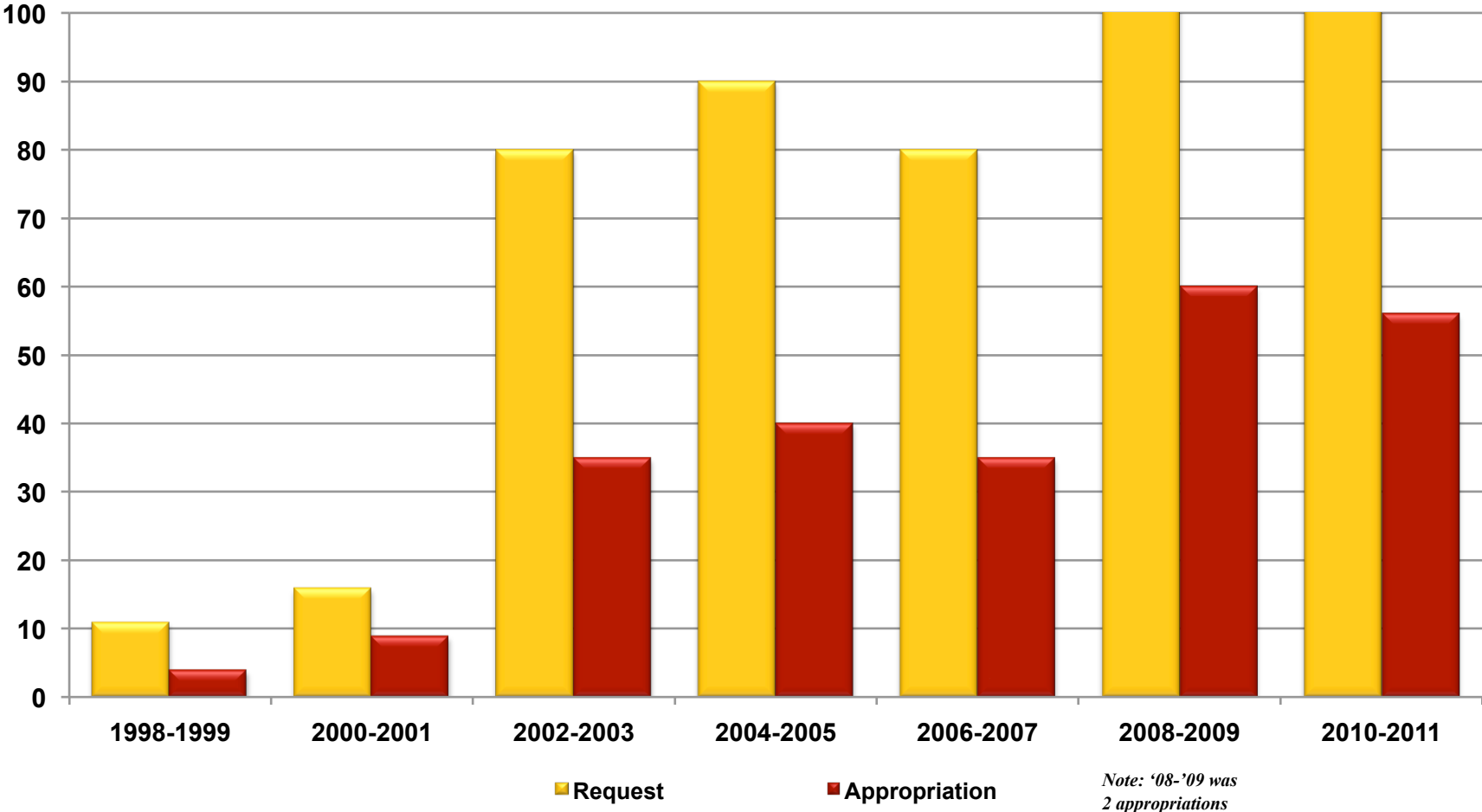




# HEAPR Appropriation History

(System-wide)

\$ Millions



# HEAPR Categories of Investments in Capital Renewal

(System-wide)

Category	Project Example
1) Energy Conservation (NEW)	UMC – Campus Energy Improvements, Moos Tower – Heat Recovery Loop (UMTC)
2) Academic Alignment	Akerman Hall, Mechanical Engineering & Amundson Hall (UMTC)
3) Building Conditions	Blegen Hall – Roof replacement (UMTC), Education – Masonry Restoration (UMM)
4) Utilities Infrastructure	UMM and UMTC – Campus electrical redundancy loops
5) Health & Safety	Dowell Hall – Fire Sprinkler (UMC), Mayo – Indoor Air Quality (UMTC)



# Facilities Condition Assessment Updated 2010

(System-wide)

Campus	Building GSF	Estimated Replacement Value	Projected 10-Year Needs	10 Year Needs/ Replacement Value = (FCNI)
Twin Cities	24,266,831	\$6,344,037,232	\$2,326,045,312	0.37
Duluth	1,875,845	\$526,329,441	\$182,192,594	0.35
Morris	921,923	\$223,166,310	\$85,297,151	0.38
Crookston	415,495	\$86,868,454	\$30,755,288	0.35
<b>Grand Totals</b>	<b>27,480,094</b>	<b>\$7,180,401,437</b>	<b>\$2,624,290,345</b>	<b>0.37</b>

\* Excludes 1.9 Million GSF for Rochester Campus, Experiment Stations and Outreach Centers



# Facilities Condition Assessment Updated 2010

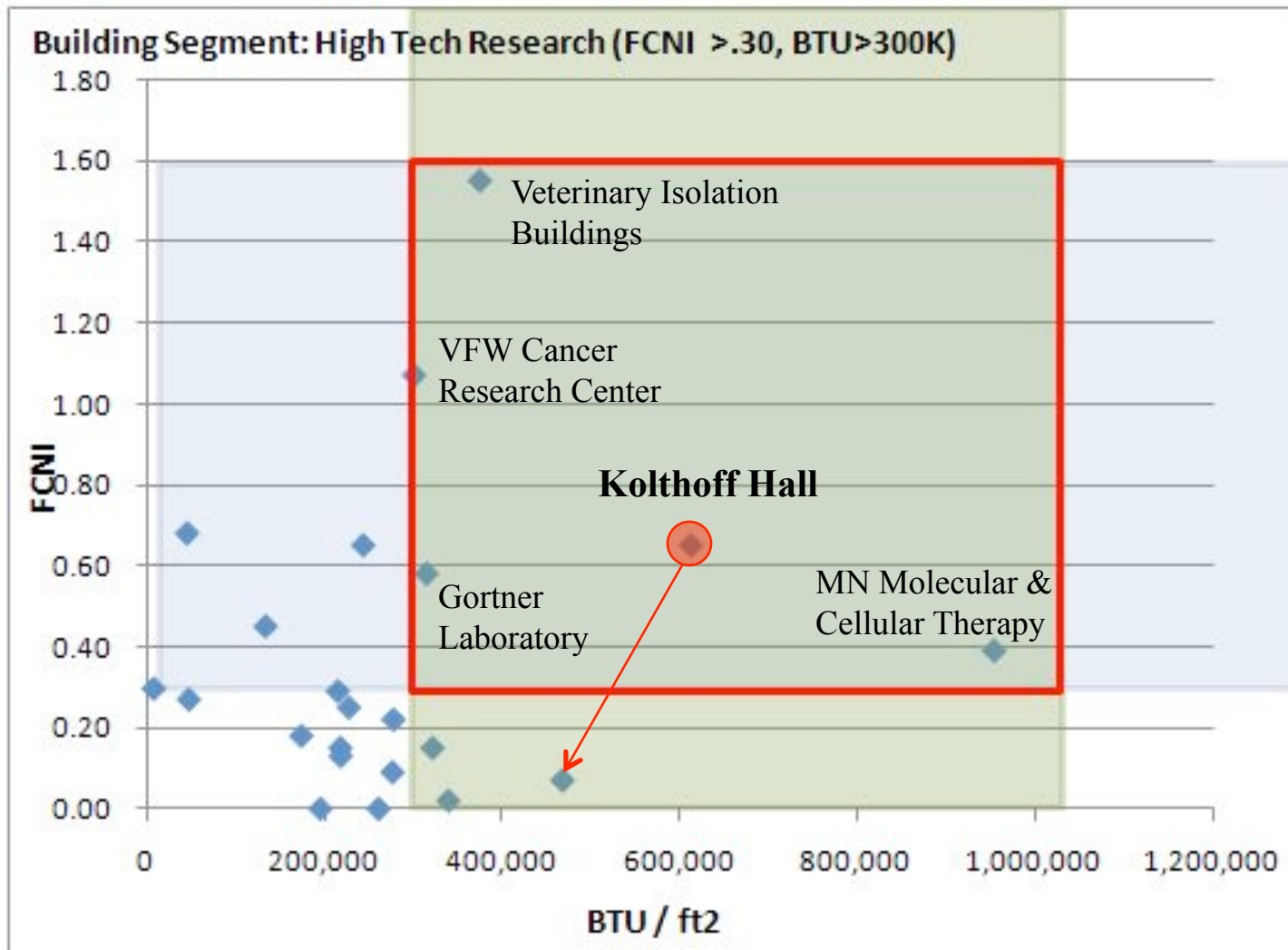
## (Twin Cities)

### DRAFT MODEL: Segmentation of FCA Data by Building Purpose

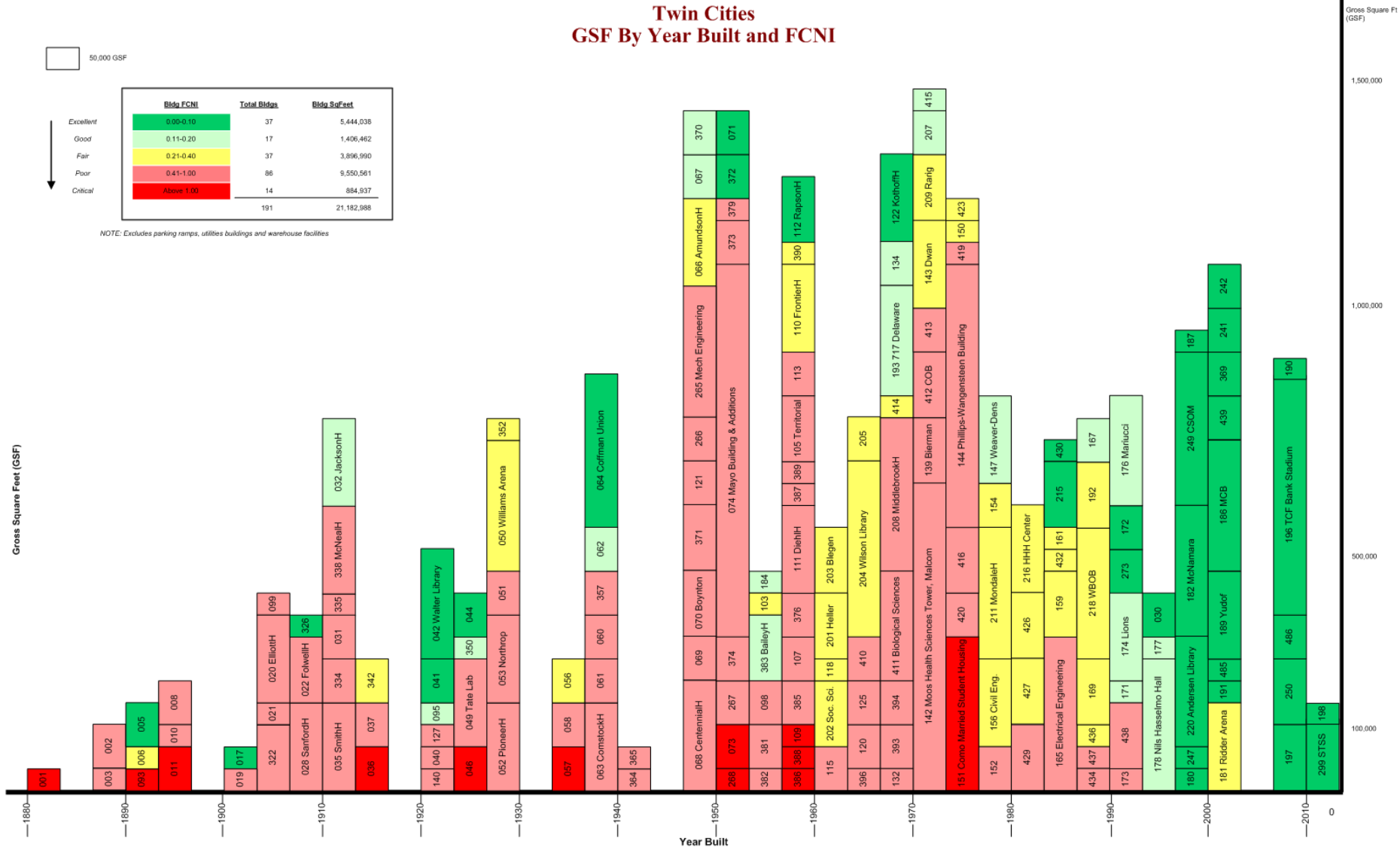
Campus	Building GSF	Estimated Replacement Value	Projected 10-Year Needs	10 Year Needs/ Replacement Value = (FCNI)
<i>High-Tech Research</i>	2,675,726	\$843,321,017	\$189,973,051	0.23
<i>Clinic</i>	1,350,715	\$438,026,108	\$269,567,586	0.62
<i>Mixed Use (Educ/Inst/Resch)</i>	7,783,430	\$2,309,610,759	\$931,025,706	0.40
<i>Office/Admin Support</i>	2,427,007	\$729,733,128	\$402,703,010	0.55
<i>Venue/Specialty</i>	3,066,417	\$839,244,467	\$178,533,136	0.21
<i>Residential Housing</i>	2,279,419	\$508,650,568	\$248,494,490	0.49
<i>Other</i>	4,684,117	\$675,451,185	\$105,748,333	0.16
<b><i>Grand Totals</i></b>	<b>24,266,831</b>	<b>6,344,037,232</b>	<b>2,326,045,312</b>	<b>0.37</b>



# Building Condition vs Energy Efficiency



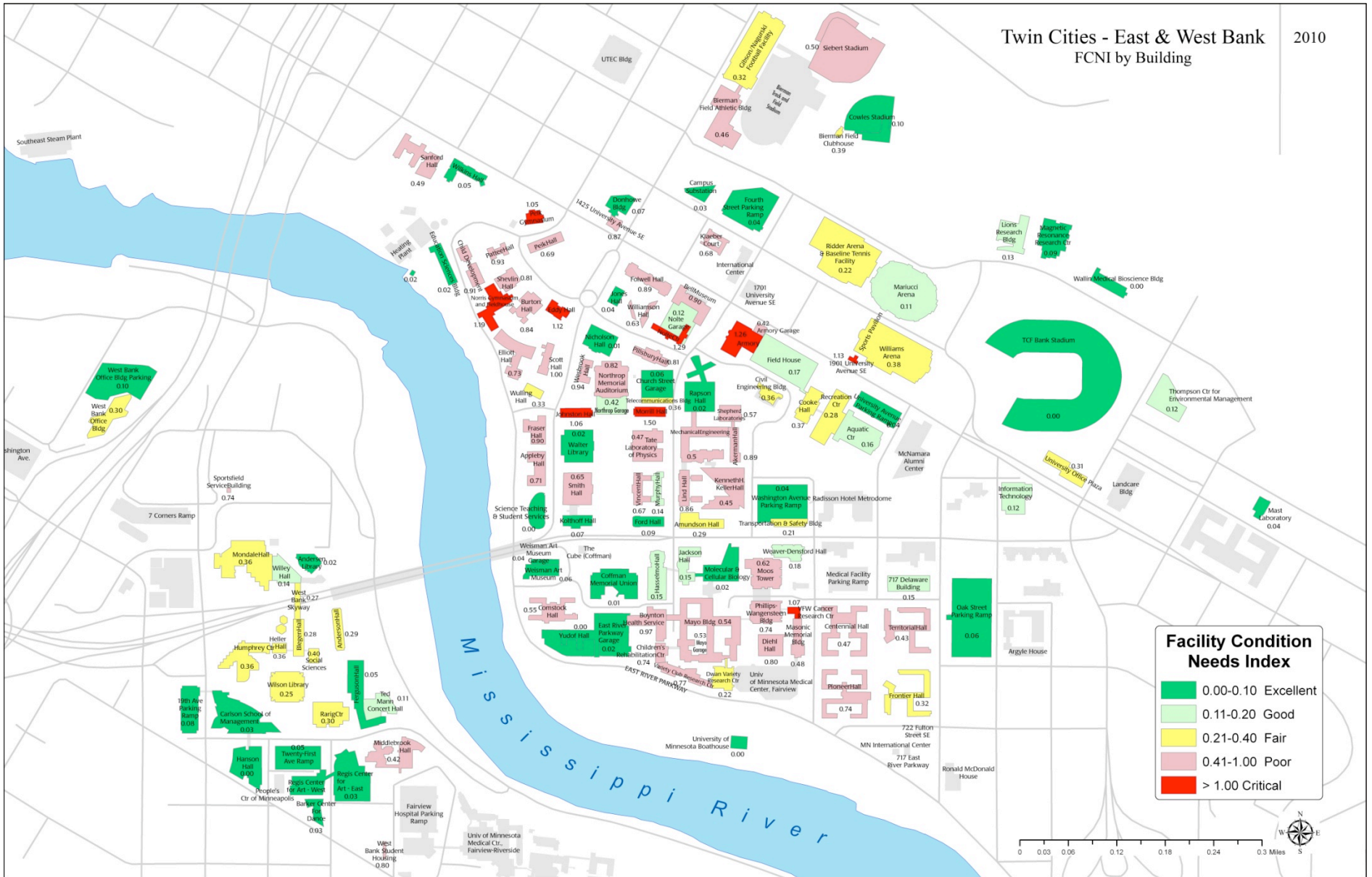
## Twin Cities GSF By Year Built and FCNI



# Twin Cities - East & West Bank

## FCNI by Building

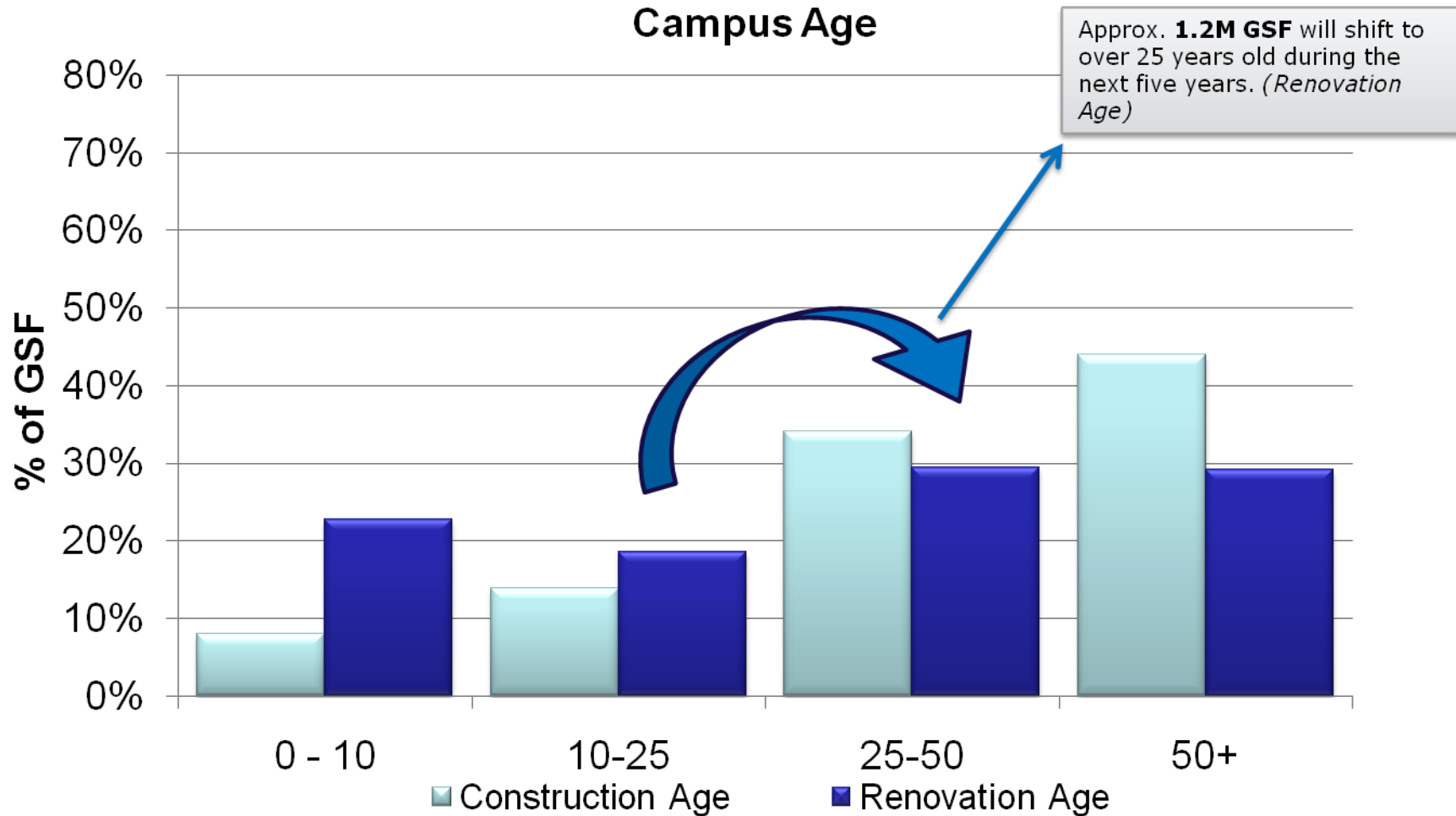
2010



# University of MN Facility Portfolio By Age

(Twin Cities)

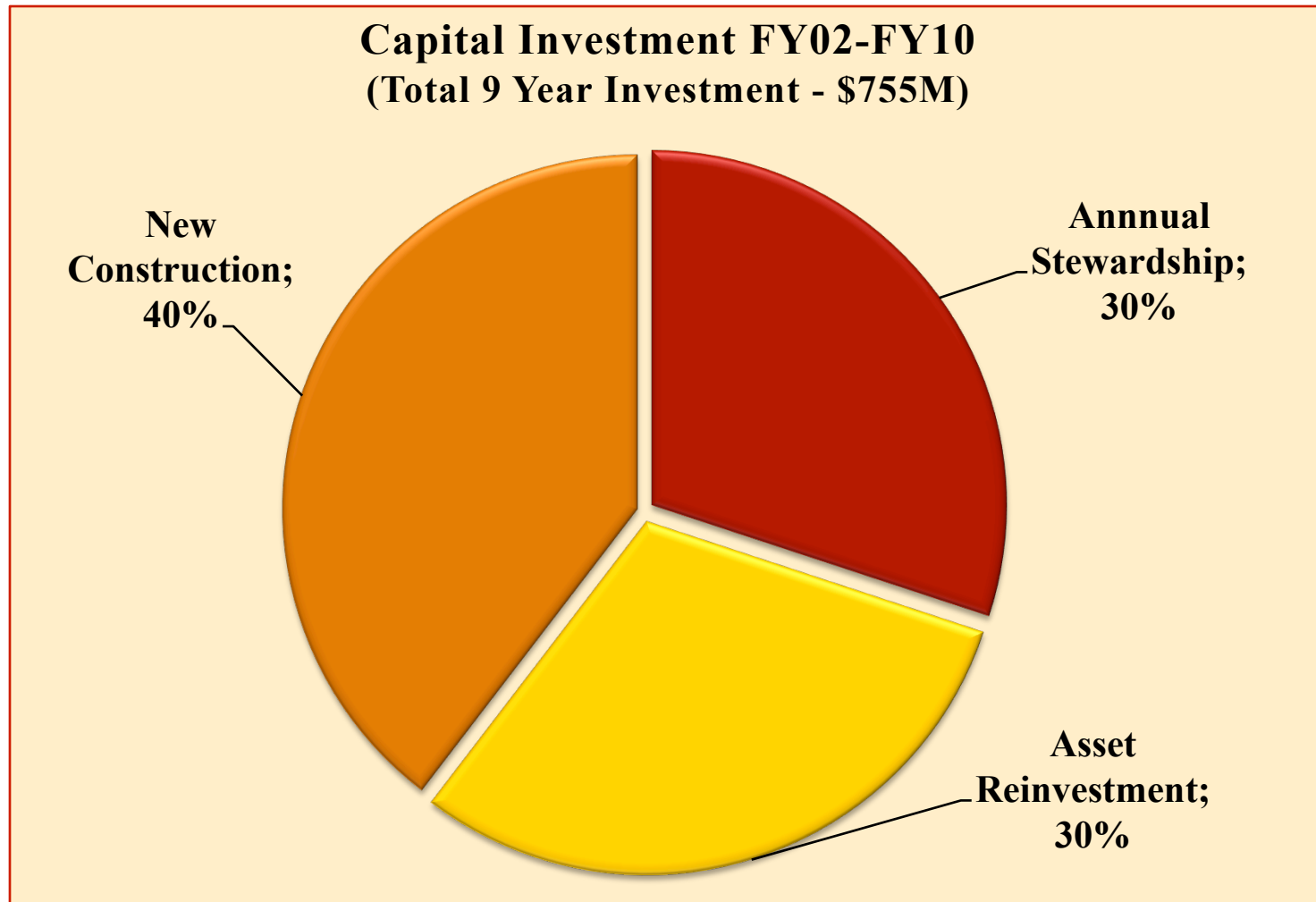
## Campus Age





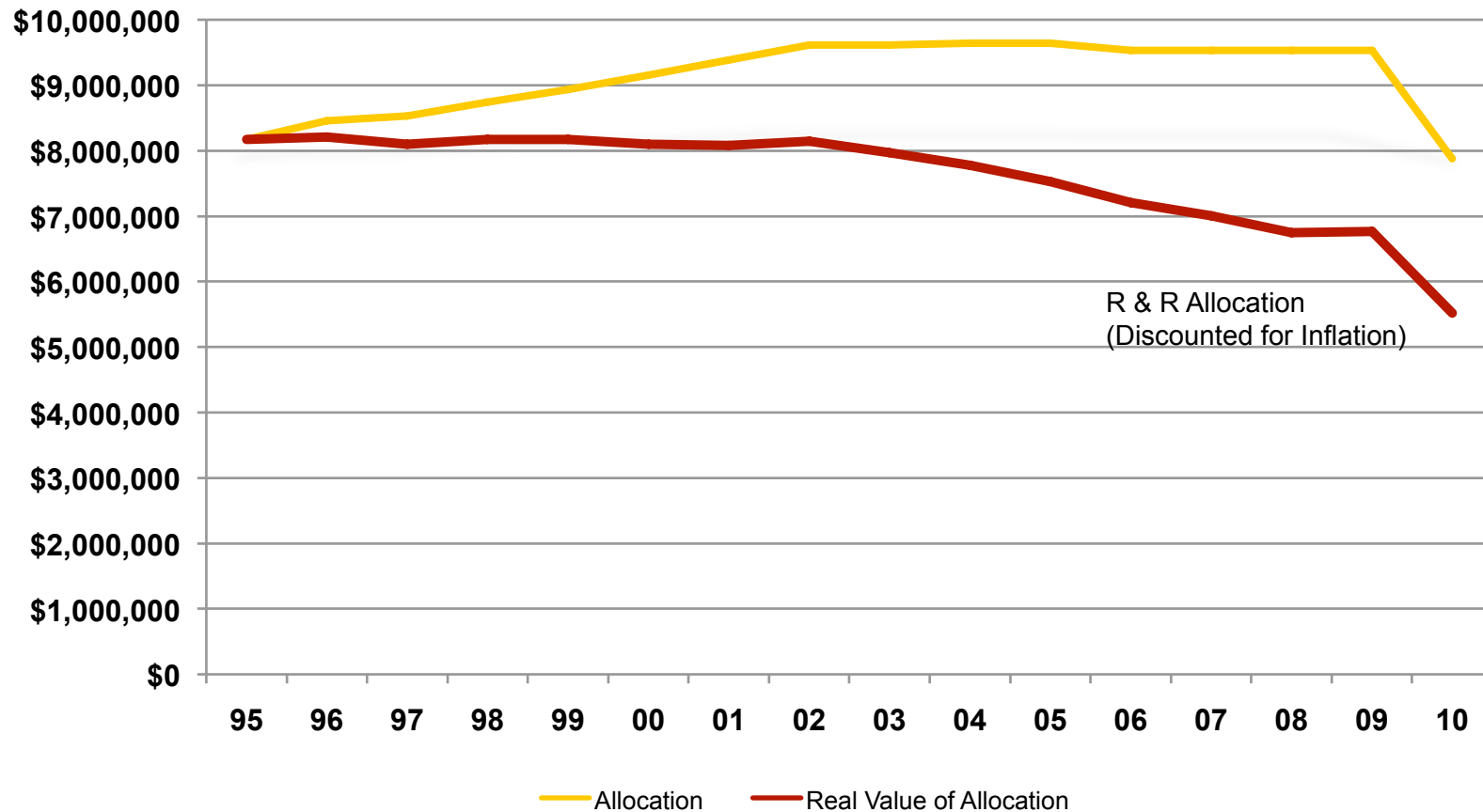
# Investment in Existing Space vs. New Space

(Twin Cities – State support space only)



# Capital Need Exceeds Available Funding (Twin Cities)

"REAL" DOLLARS OF REPAIR AND REPLACEMENT ALLOCATIONS

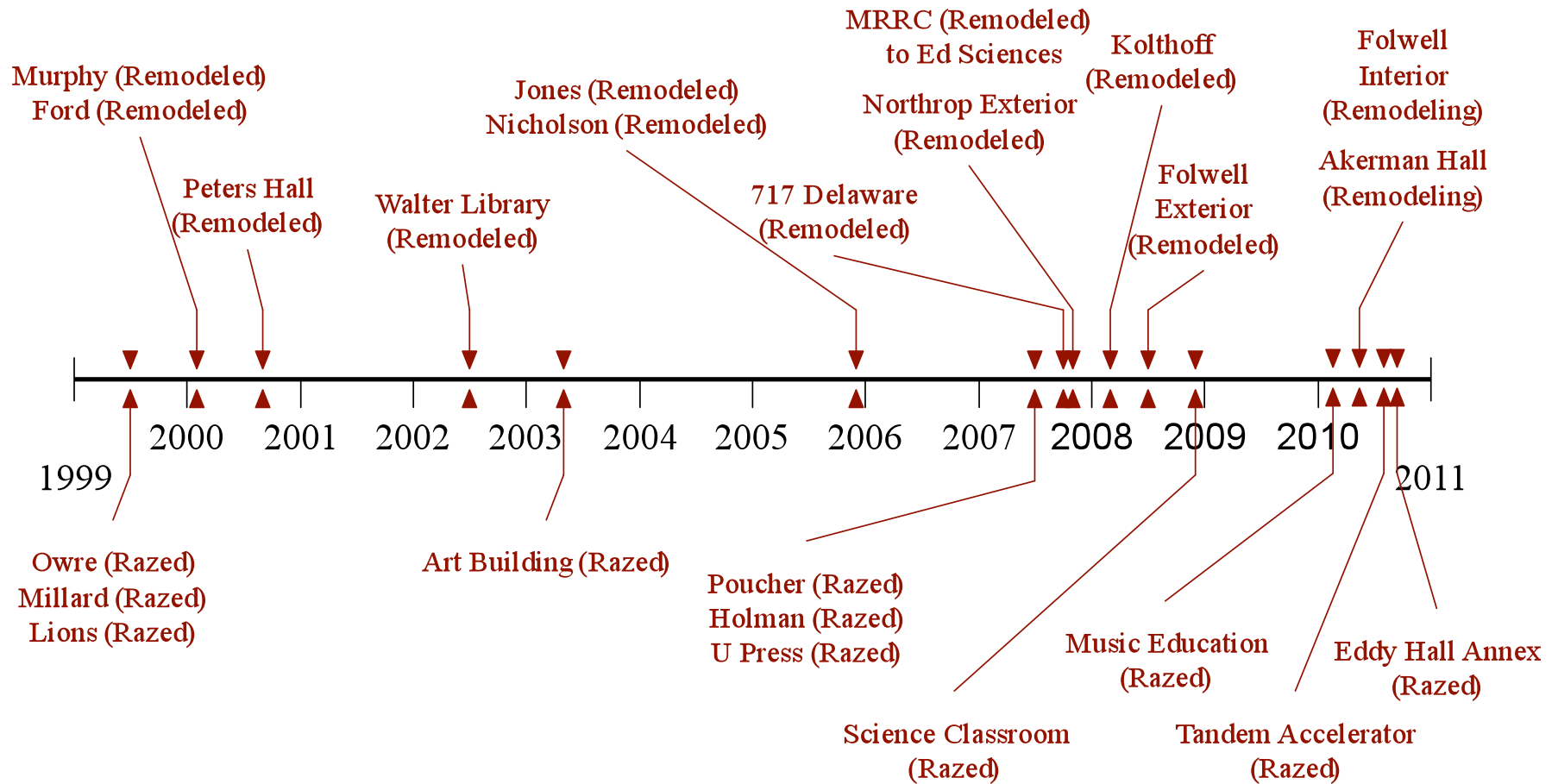


## How have we maintained the current FCNI ratio in spite of a funding gap?

- Adding new buildings
  - Increases the average condition
- Extending the useful life of buildings through good maintenance
  - Pushes the projected needs further into the future
- Tearing down targeted buildings
  - Reduces the total project need

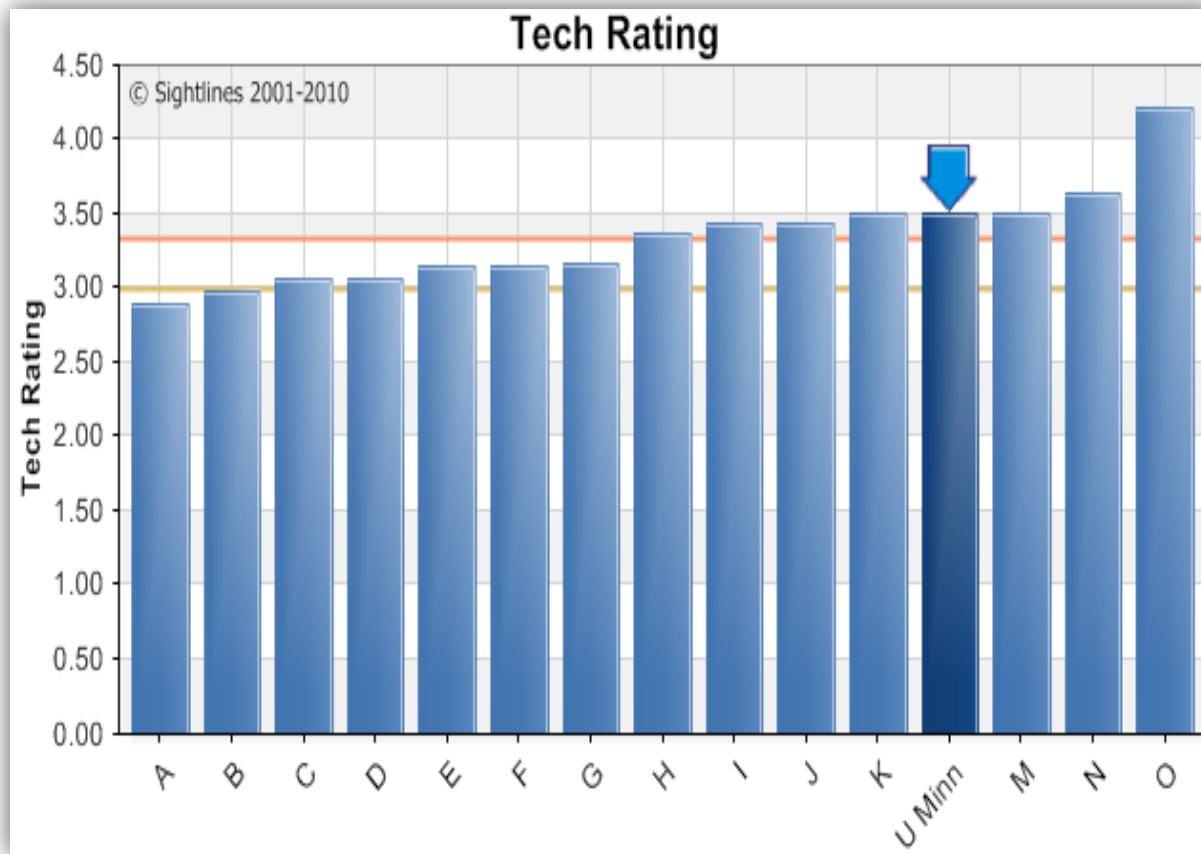


# Projects Addressing Facility Needs (Twin Cities)



# University of MN Technical Rating (Twin Cities)

## Tech Rating: Comparison to Peer Group

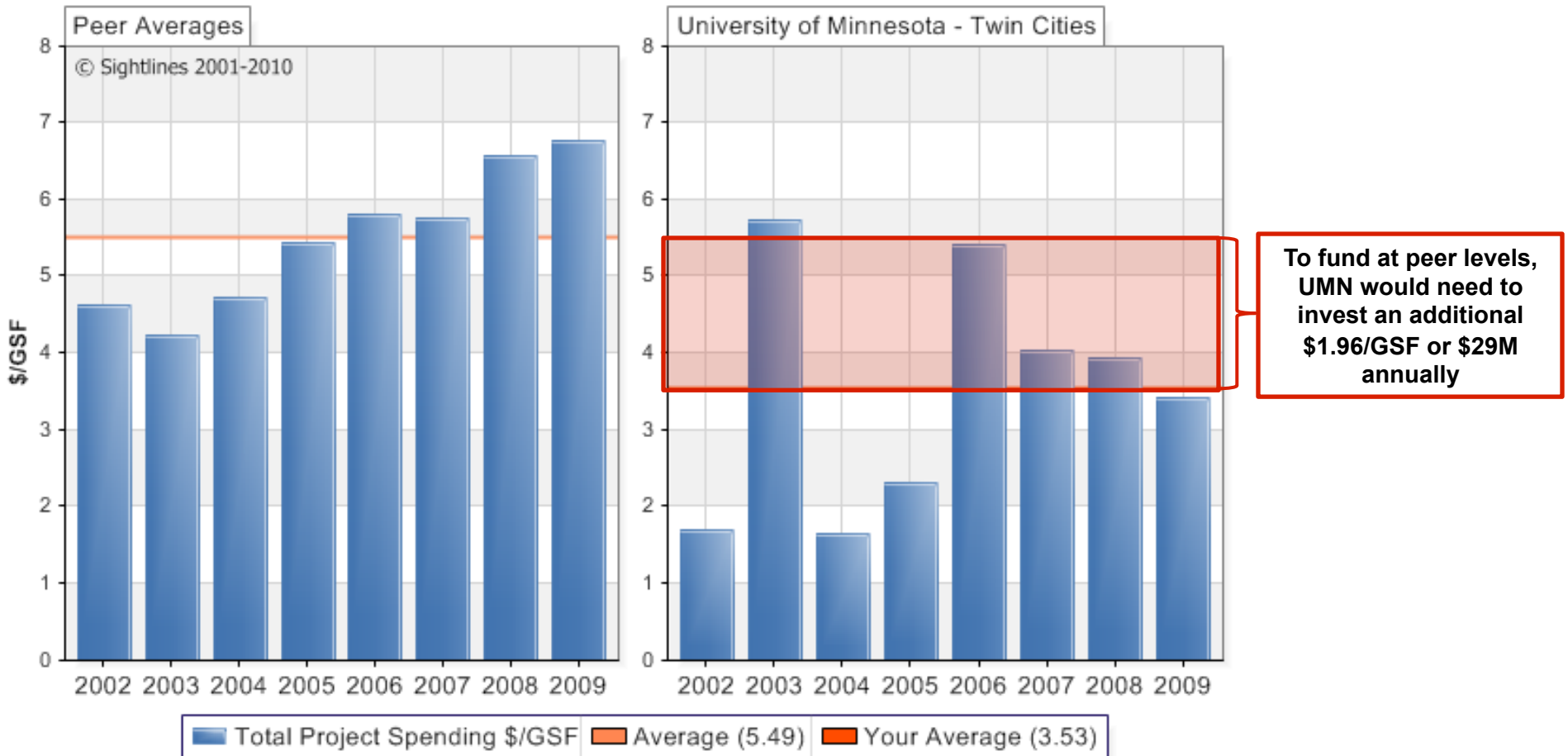


Institution	Location
Cornell University	Ithaca, NY
Georgetown University	Washington, DC
Georgia Institute of Technology	Atlanta, GA
Massachusetts Institute of Technology	Cambridge, MA
New York University	New York, NY
Northwestern University	Evanston, IL
Princeton University	Princeton, NJ
Purdue University	West Lafayette, IN
The Johns Hopkins University	Baltimore, MD
<b>The Ohio State University</b>	Columbus, OH
<b>The Pennsylvania State University</b>	State College, PA
<b>University of Illinois – Urbana Champaign</b>	Chicago, IL
<b>University of Michigan – Ann Arbor</b>	Ann Arbor, MI
University of Missouri - Columbia	Columbia, MO



# Total Project Spending vs. Peers (Twin Cities)

Total Project Spending \$/GSF



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# Questions?

