

2020

**Facilities Operations
Benchmarking and
Performing Indicators Report**

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University of Missouri System

Core Services provided by Campus Facilities Management

- Building systems operation
- Custodial services
- Facilities maintenance, including preventive maintenance, service calls, trouble calls
- Renovation and renewal program
- Fire safety systems maintenance
- Energy and resource conservation
- Event support
- Landscape services
- Recycling
- Solid waste disposal
- Surplus property
- Administrative, personnel, and business support for Facilities Services

Core Services provided by Campus Utilities and Energy Management

- Self-generation of electricity and/or thermal energy.
- Mechanical distribution of utilities (steam, chilled water/wastewater)
- Electrical distribution of electricity (12,000 Volts, 4,160 volts and above)
- Elevator, escalator, wheel chair lift, and dumbwaiter maintenance and inspection
- Metering of in-plant steam, electricity, chilled water, and domestic water, plus building meters
- Billing for all generated utilities and purchased utilities

This report also includes comparisons between University of Missouri campuses and peer institutions selected by Sightlines based on the following criteria: Student population (size) and technical complexity of plant and location. Comparing the data of these campuses aid the university with decisions for campus facilities operations.

University of Missouri - Columbia

Campus profile:

- 23,715 FTE Students
- 6,991,635 gross square feet maintained
- 1 Cogeneration Power Plant
- 2 Substations
- 137,808 feet of Steam and Condensate Pipe and Tunnels
- 1 Wind Turbine
- 153,120 feet of Domestic Water Pipe and Fire Hydrants
- 2 Chiller Plants
- 5 Wells
- 126,192 feet of Chilled Water Pipe
- 230,208 feet of Electric Lines and Equipment
- 15,470 feet of Compressed Air
- 112,464 feet of Optic Fiber

Sightlines Peer

Comparator Institutions:

- Northwestern University
- The Pennsylvania State University
- University of Illinois - Urbana/Champaign
- University of Iowa - General Funds
- University of Maryland - College Park
- University of Minnesota - Twin Cities
- University of Wisconsin - Madison

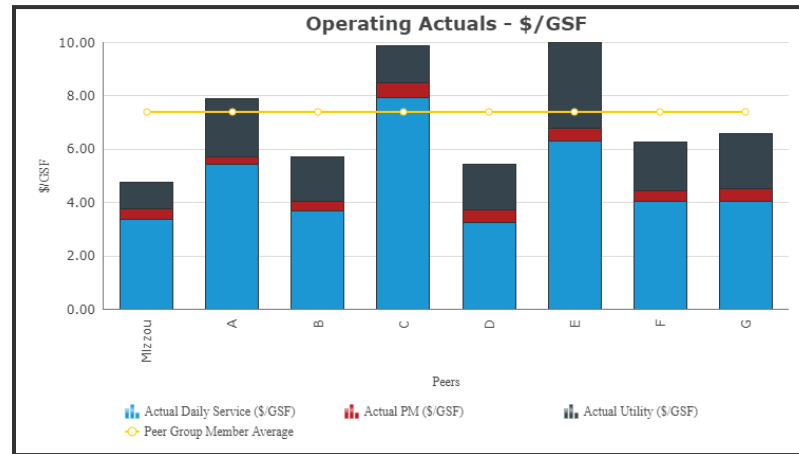
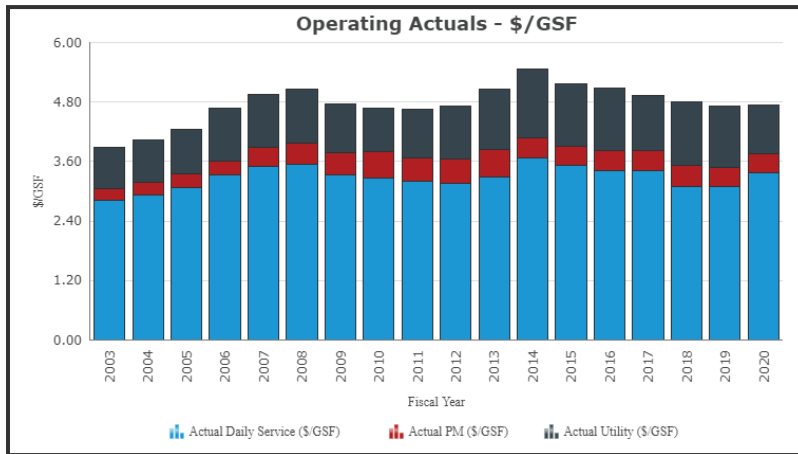
Sightlines Outsourced

Comparator Institutions:

- Chapman University
- Lewis & Clark College
- Nova Southeastern University
- Saint Mary's College of California
- The Catholic University of America
- Widener University

MU - Operating Expense Summary

Operating Expense Summary	2016	2017	2018	2019	2020
Total Daily Service	\$23,333,198	\$23,728,078	\$21,394,390	\$21,579,766	\$23,549,822
Planned Maintenance	\$2,788,099	\$2,776,391	\$2,920,809	\$2,762,141	\$2,685,453
Utilities(Electric, Water, Etc.)	\$8,586,202	\$7,690,414	\$8,792,969	\$8,286,592	\$7,459,961
Total	\$34,707,499	\$34,194,883	\$33,108,168	\$32,628,499	\$33,695,236
Cost per GSF	\$5.07	\$4.93	\$4.80	\$4.71	\$4.74



Operating Actual Expense

Facilities Operating Actuals with Peer Comparators

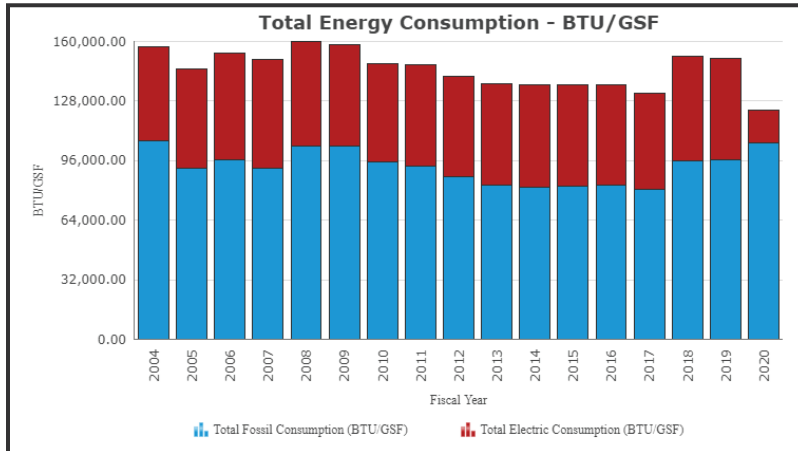
The Facilities Operating Budget Actuals Benchmark analyzes the amount spent each year to operate campus physical assets and the department that maintains them.

- **Daily Service:** Materials, labor costs, service contracts, office expense, etc. associated with the regular maintenance, cleaning and grounds keeping of the campus.
- **Planned Maintenance:** Materials, labor costs, service contracts, etc. that enhance or extend the useful life of campus buildings and components. Some examples include changing belts and filters on HVAC equipment, elevator service contracts, sprinkler and fire alarm system testing/maintenance contracts, etc.
- **Utilities:** The procurement of utility commodities, i.e. natural gas, oil, steam, electricity, water/sewer, etc. NOTE - Utilities costs do not include institutionally held people costs, plant operations or service contracts of utility systems.

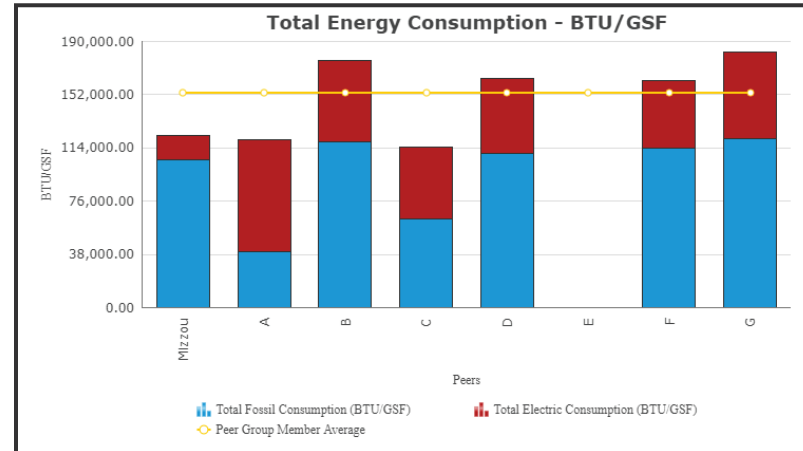
MU - Energy Consumption & Expense Summary

Energy Consumption & Expense Summary	2016	2017	2018	2019	2020
MMBTU Used	981,203	949,983	1,040,999	1,026,065	1,032,104
Cost	\$8,409,932	\$8,534,857	\$8,684,034	\$7,916,077	\$6,812,300
Cost/MMBTU	\$8.57	\$8.98	\$8.34	\$7.71	\$6.60
BTU/GSF	136,704	131,937	151,597	150,613	122,867

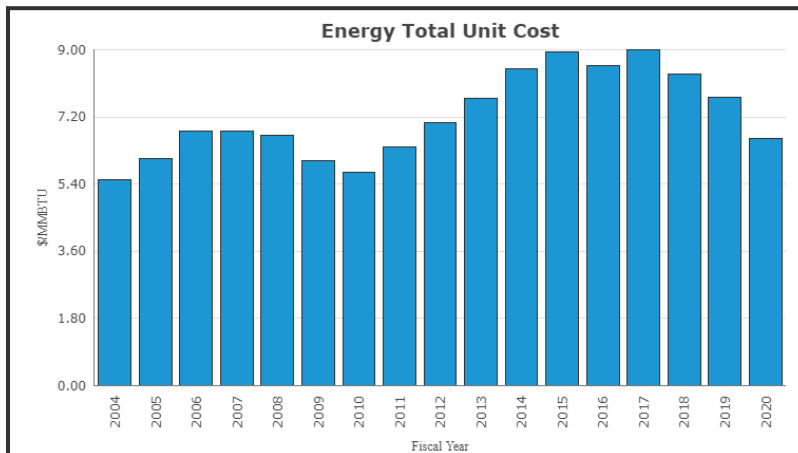
Campus Energy Consumption



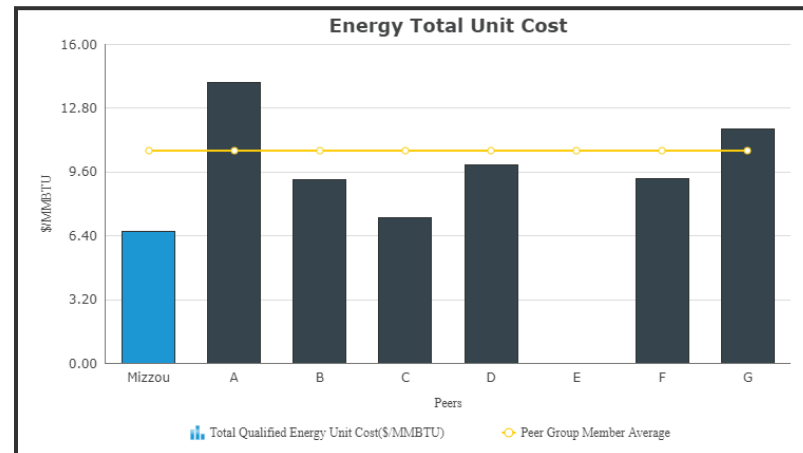
Peer Comparators Energy Consumption



Campus Energy Unit Cost



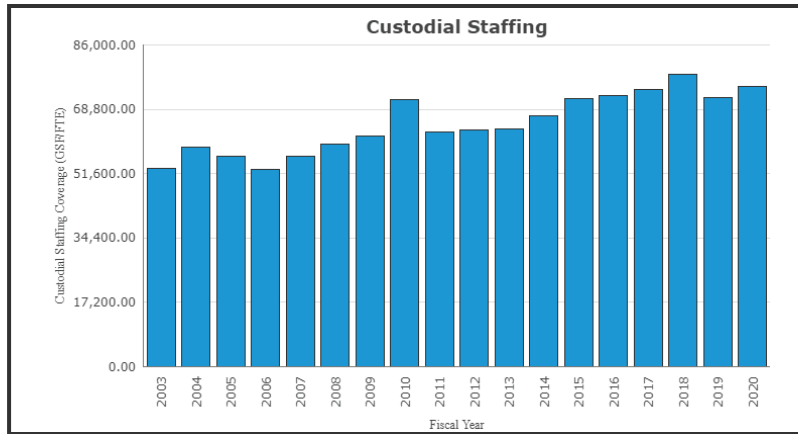
Peer Energy Unit Cost



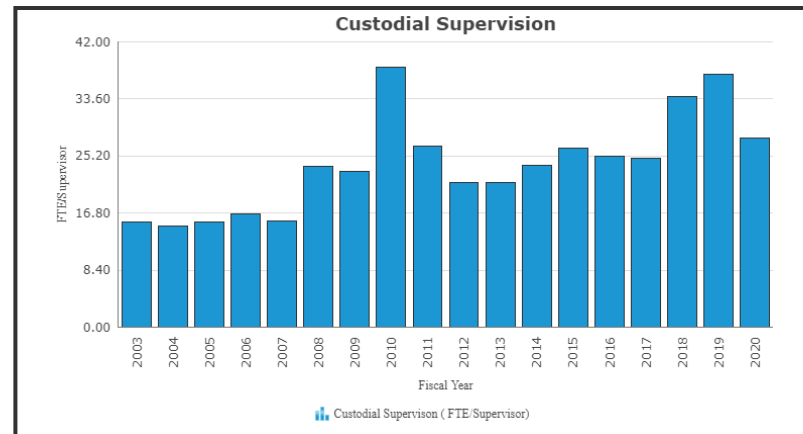
- **Energy Consumption (BTU/GSF):** The sum of fossil and electric BTU's per square foot the campus consumes each year. Energy consumption is influenced by many factors including region/climate, type of institution, technical complexity, utility systems, campus backlog, etc.
- **Energy Total Unit Cost (\$/MMBTU):** The composite cost for an MMBTU of energy; includes electricity and all fossil fuels. Region and type of utility system (centralized, independent, co-generation, etc.) greatly influence unit cost.

Campus - Custodial Staffing/Supervisor Performance Indicators

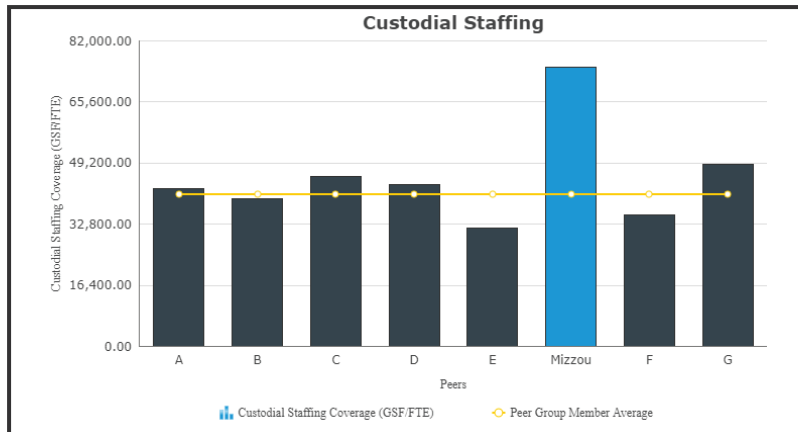
Campus Custodial Staffing



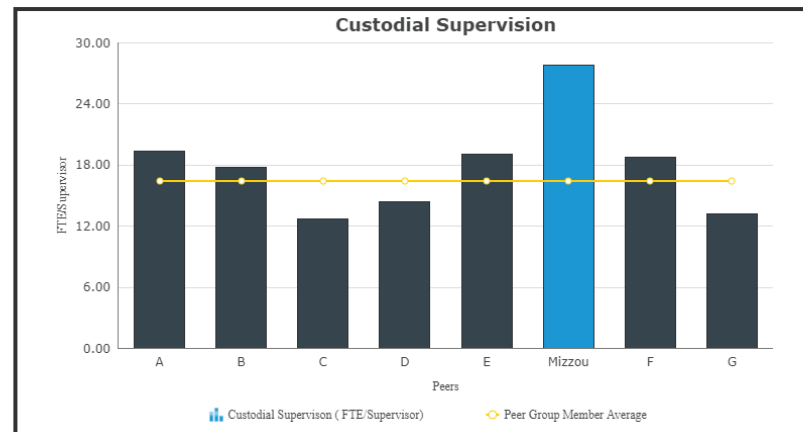
Campus Custodial Supervisor Staffing



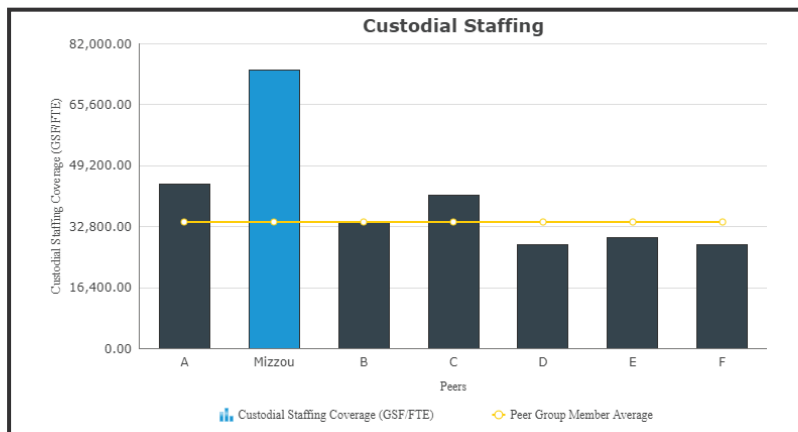
Campus Sightline Peer Comparators



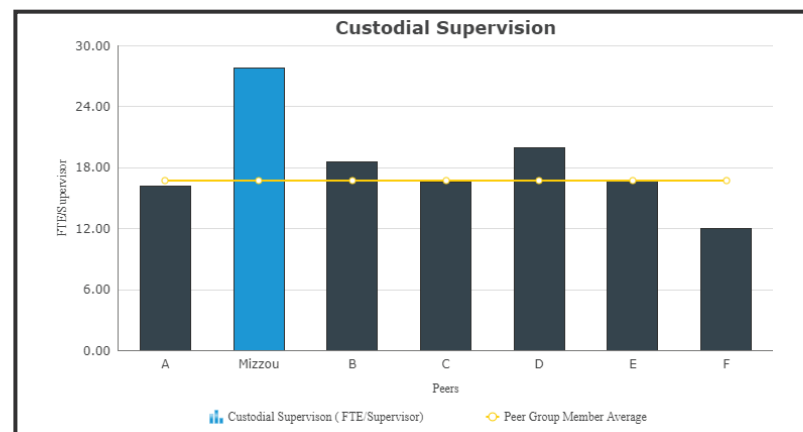
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

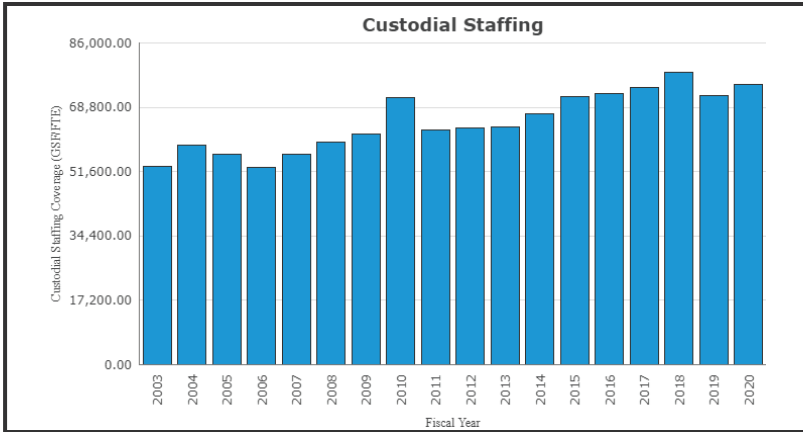


Facility Operations Outsourced Peer Comparators

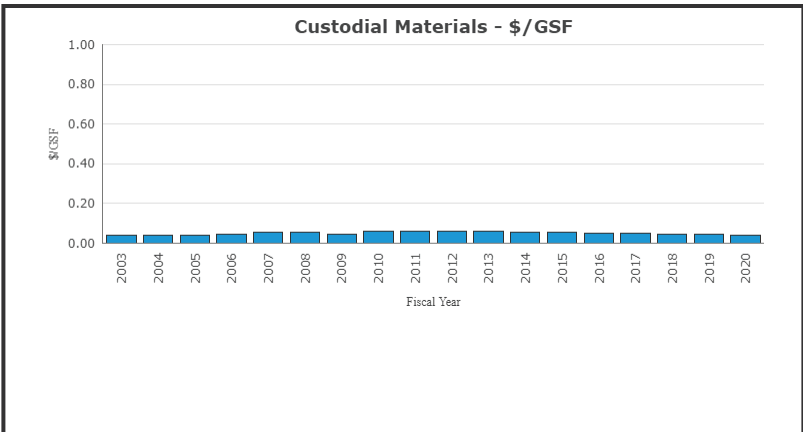


Campus - Custodial Materials Performance Indicators

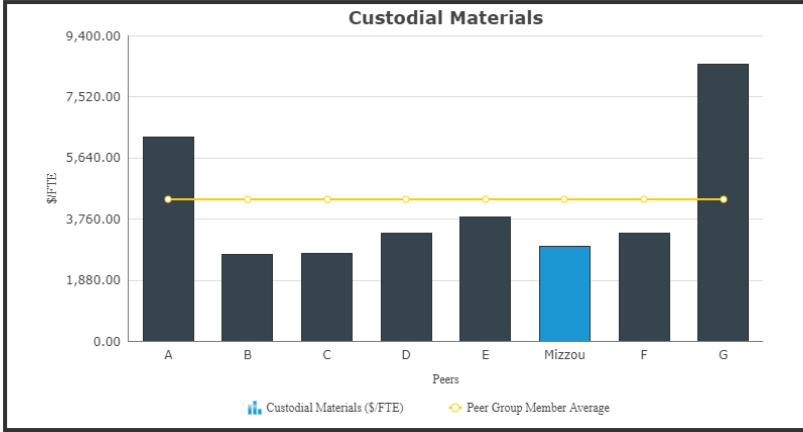
Campus Custodial Materials



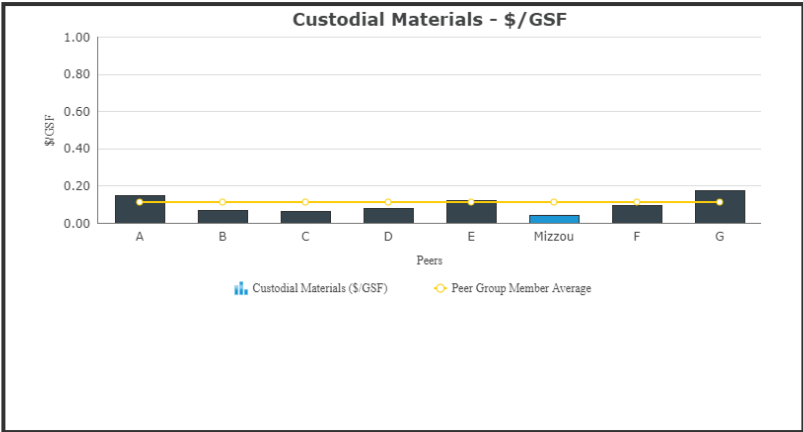
Campus Custodial Materials \$/GSF



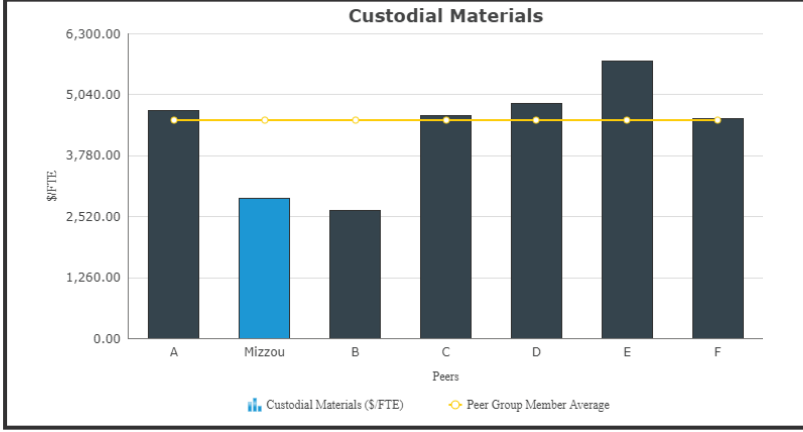
Campus Sightline Peer Comparators



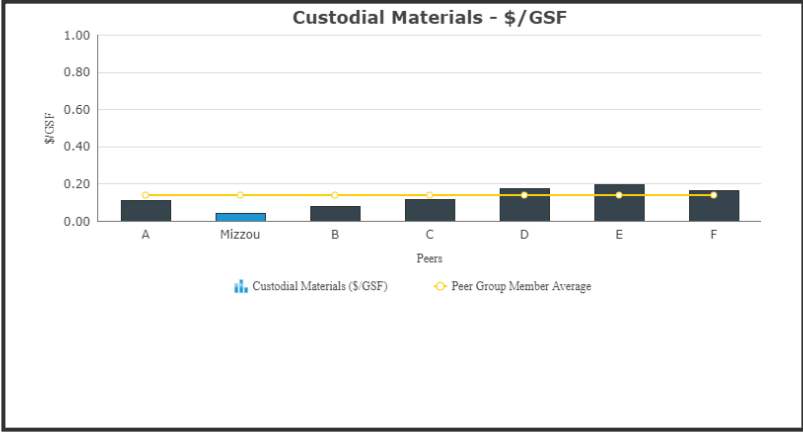
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

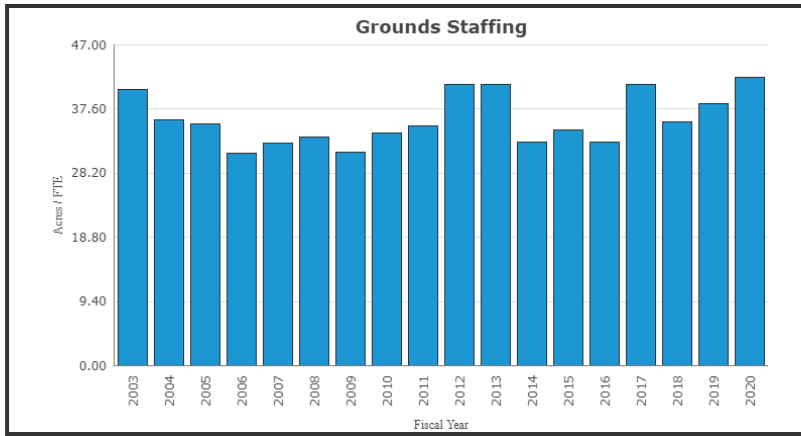


Facility Operations Outsourced Peer Comparators

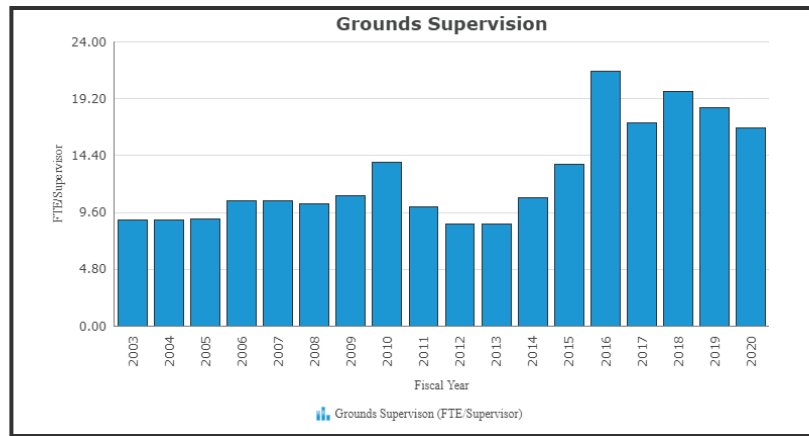


Campus - Grounds Staffing/Supervisor Performance Indicators

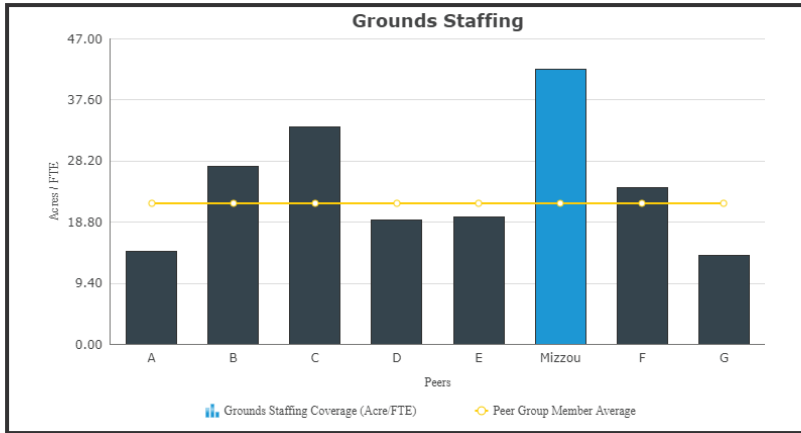
Campus Custodial Staffing



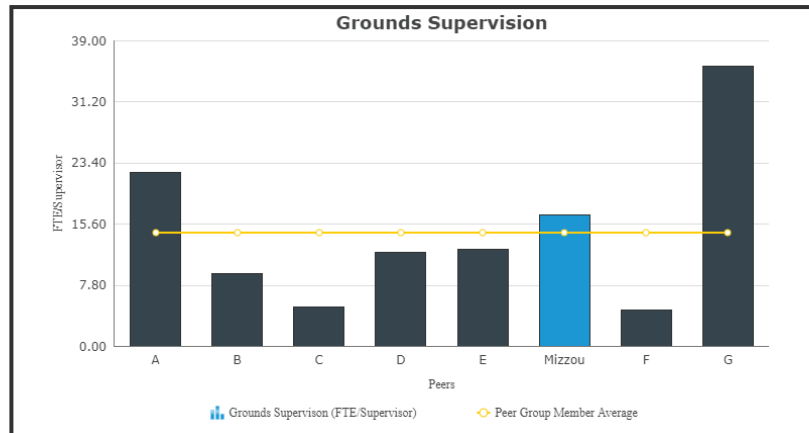
Campus Custodial Supervisor Staffing



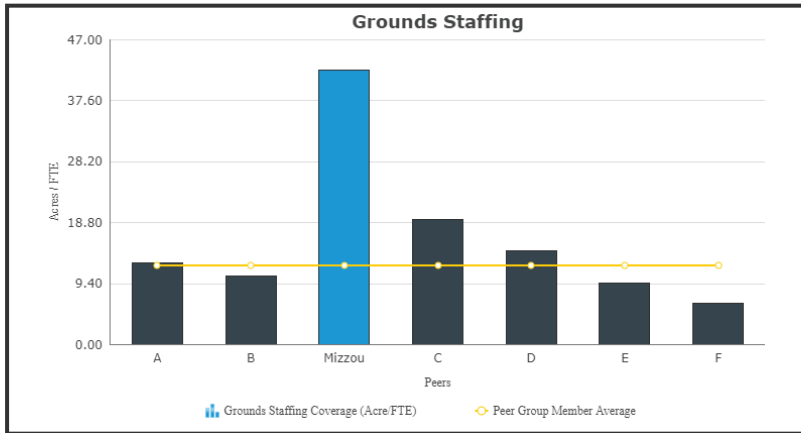
Campus Sightline Peer Comparators



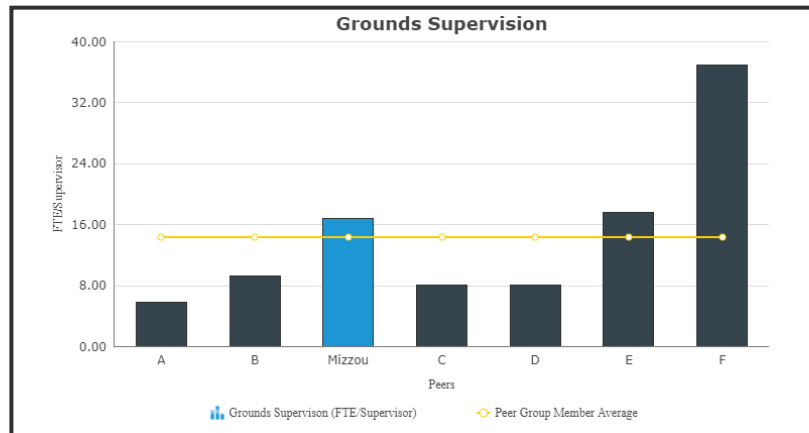
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

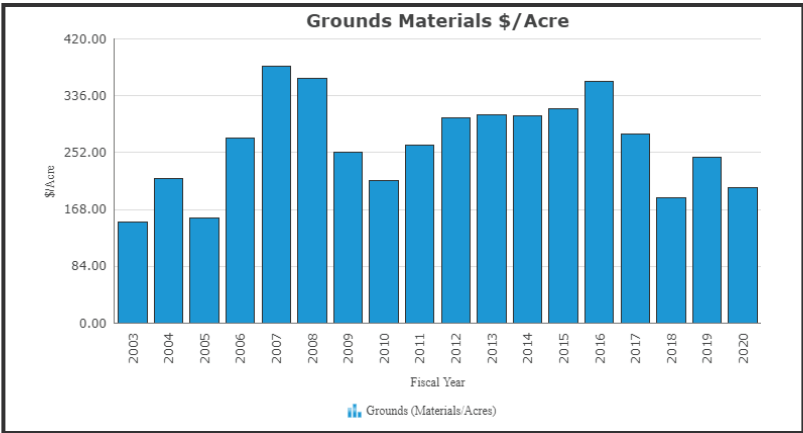
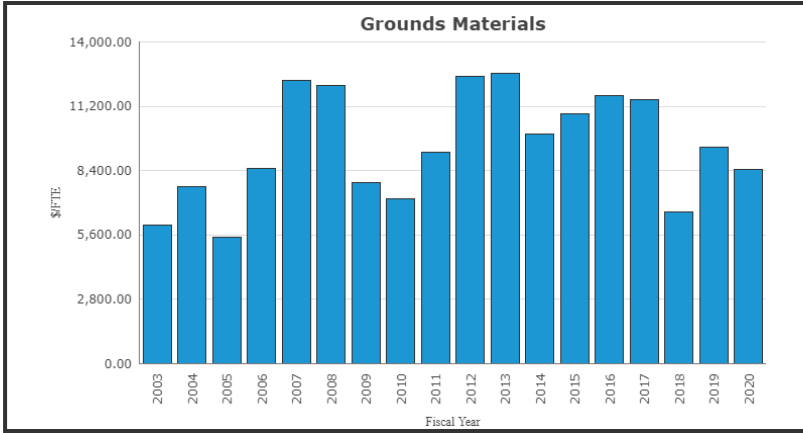


Facility Operations Outsourced Peer Comparators



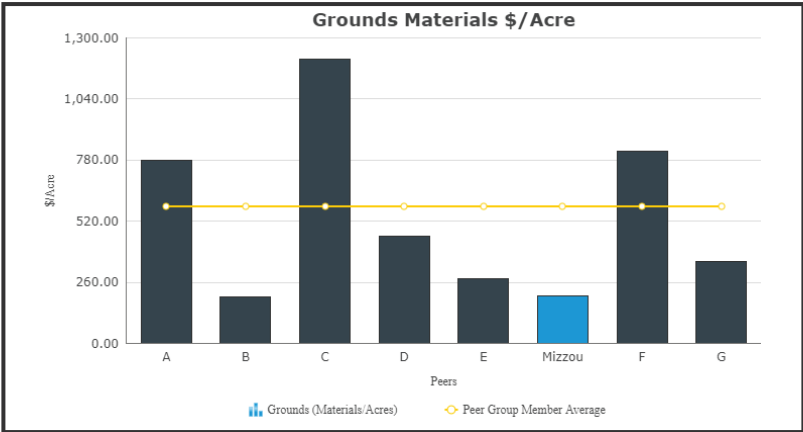
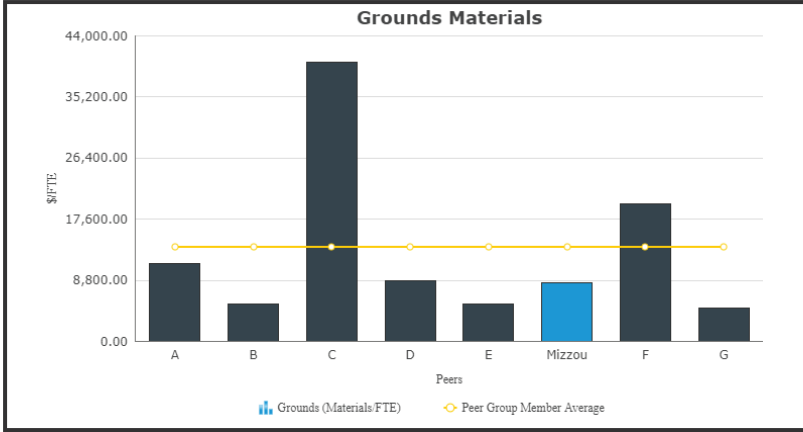
Campus - Grounds Materials Performance Indicators

Campus Grounds Materials



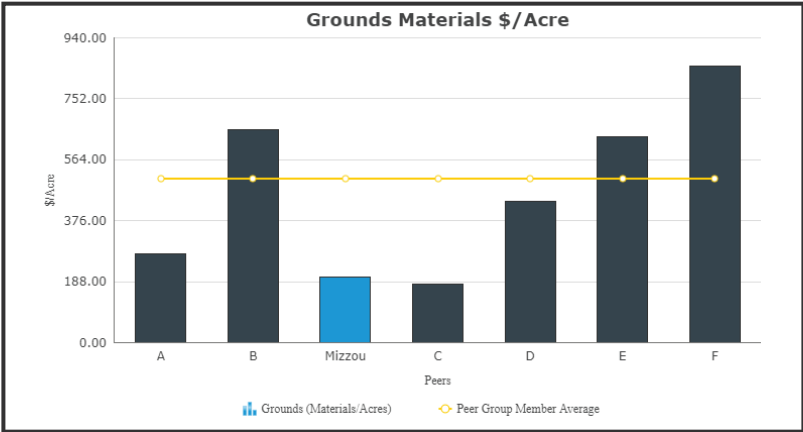
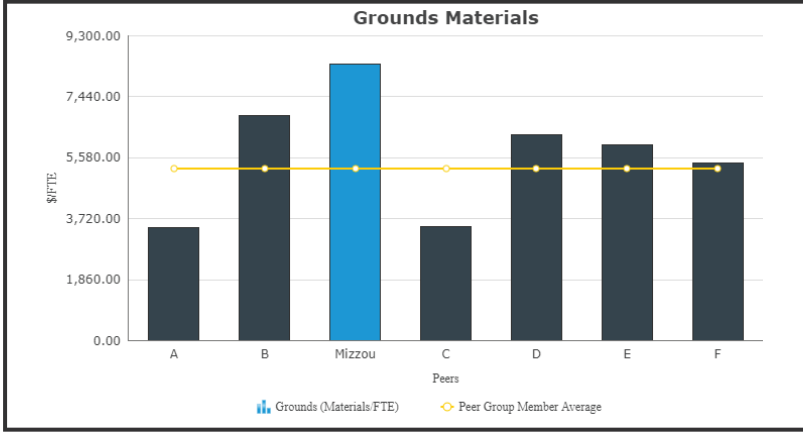
Campus Grounds Materials \$/GSF

Campus Sightline Peer Comparators



Sightline Peer Comparators

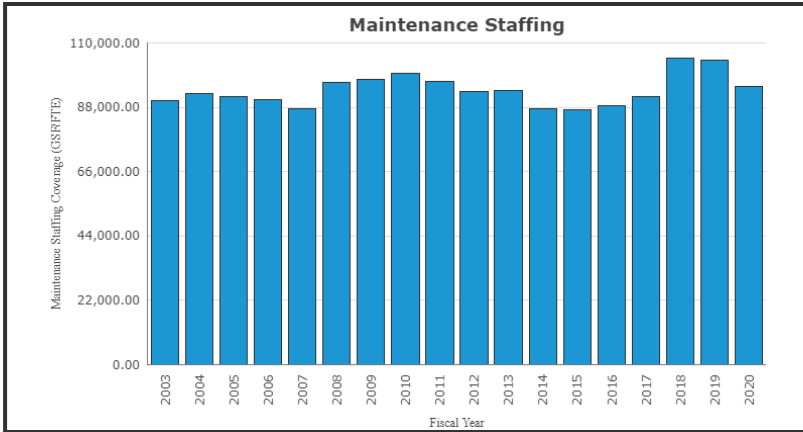
Facility Operations Outsourced Peer Comparators



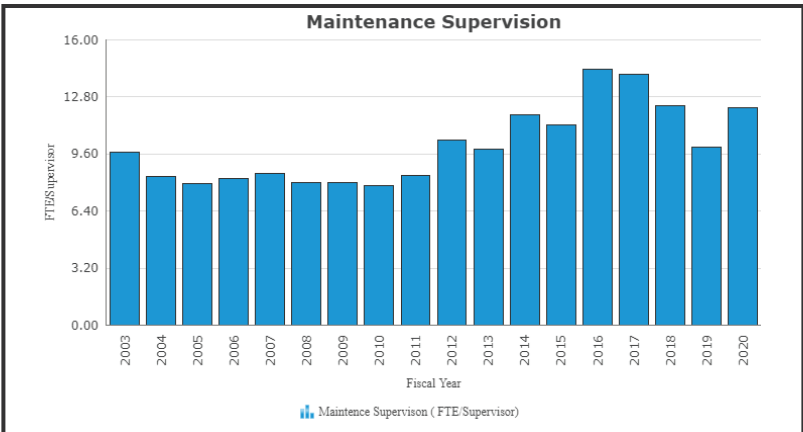
Facility Operations Outsourced Peer Comparators

Campus - Maintenance Staffing/Supervisor Performance Indicators

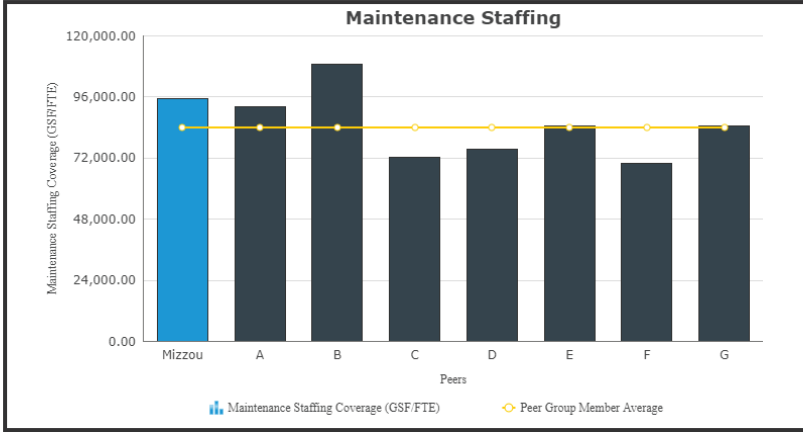
Campus Custodial Staffing



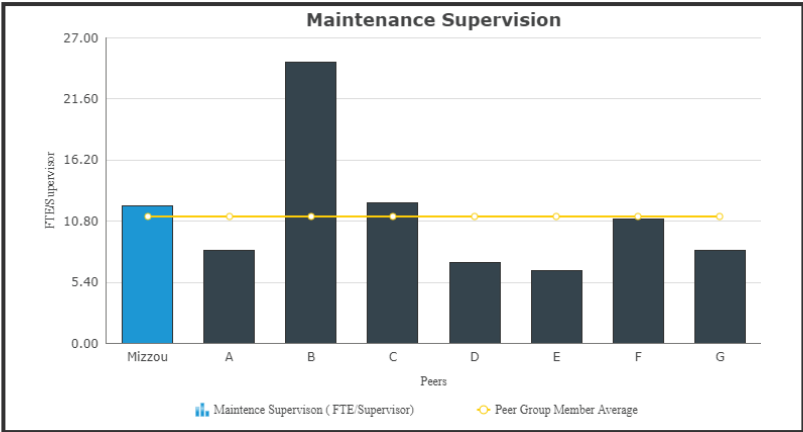
Campus Custodial Supervisor Staffing



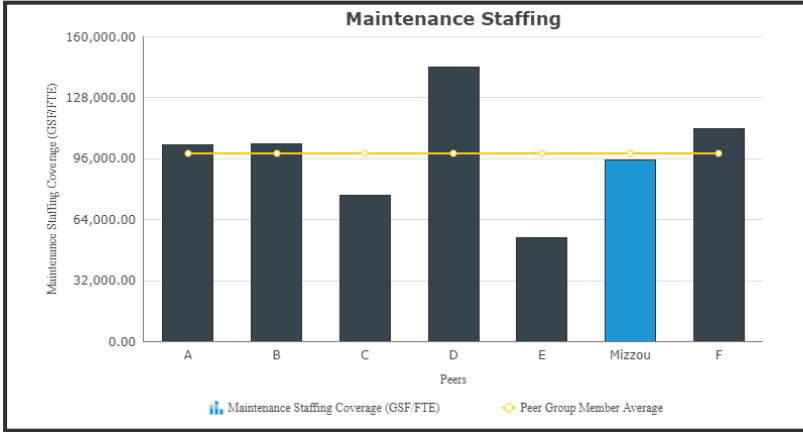
Campus Sightline Peer Comparators



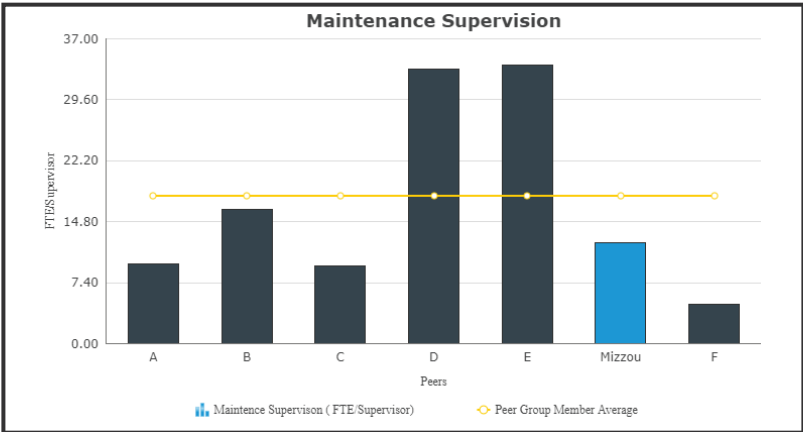
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

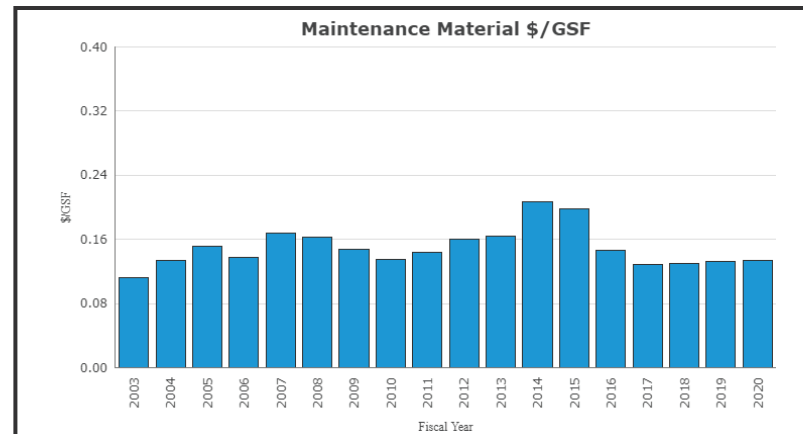
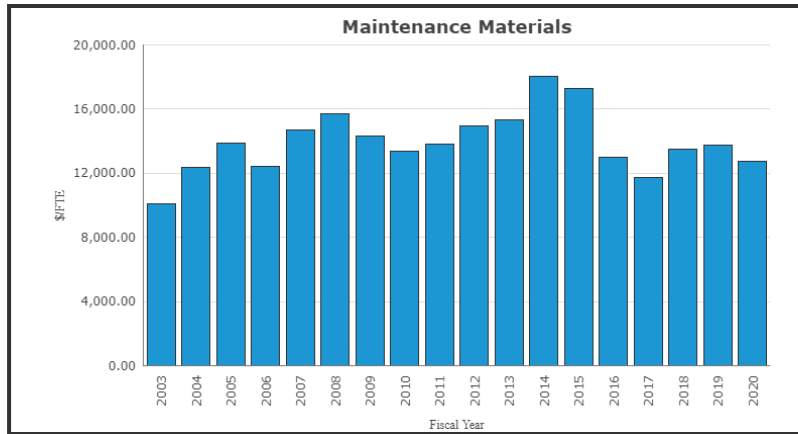


Facility Operations Outsourced Peer Comparators



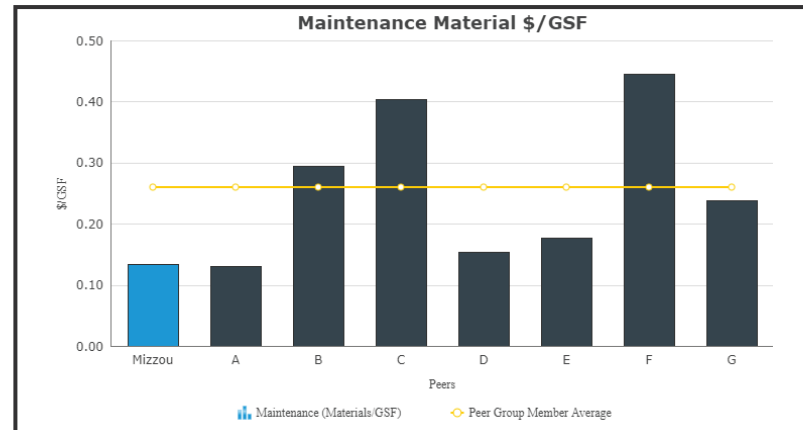
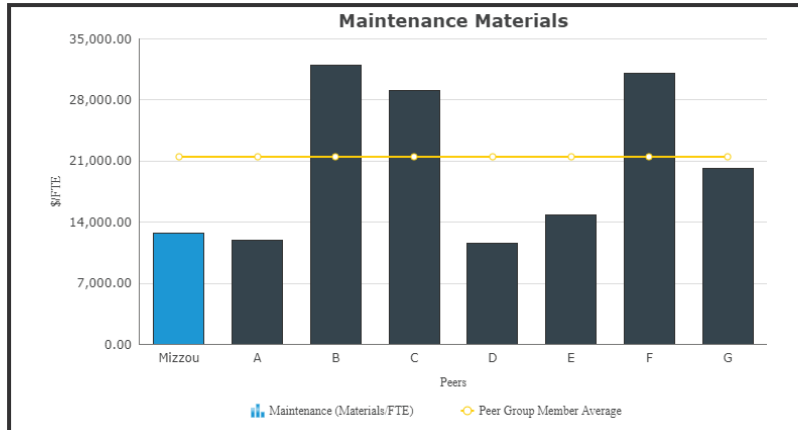
Campus - Maintenance Materials Performance Indicators

Campus Maintenance Materials



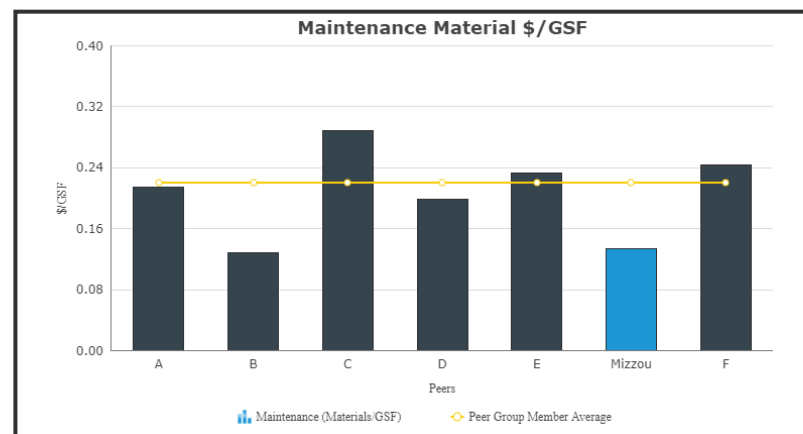
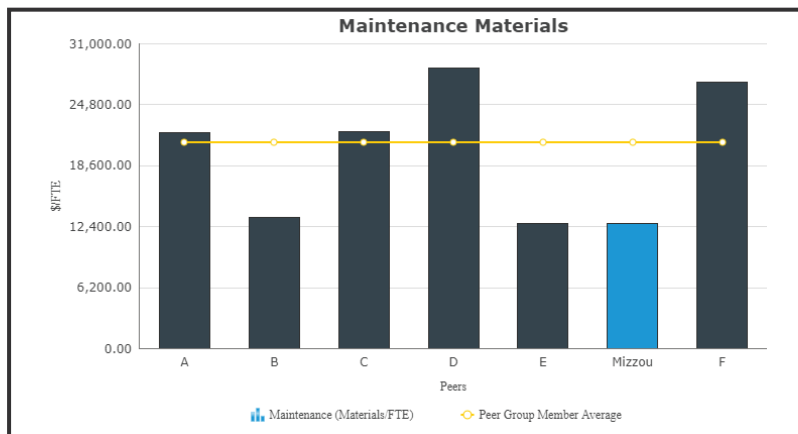
Campus Materials \$/GSF

Campus Sightline Peer Comparators



Sightline Peer Comparators

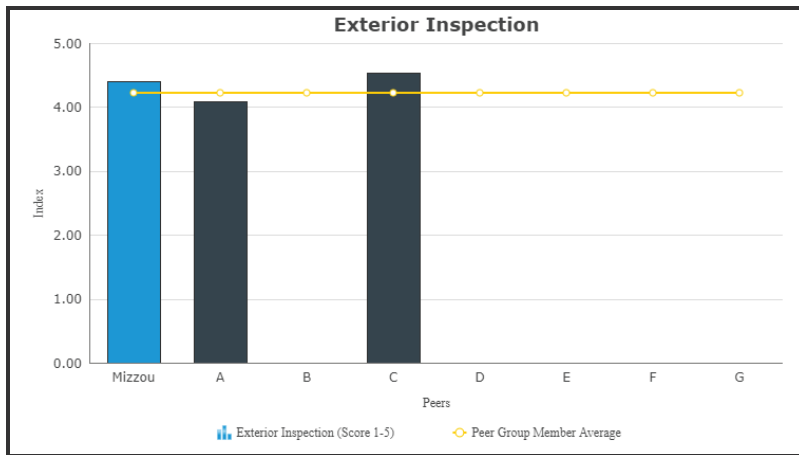
Facility Operations Outsourced Peer Comparators



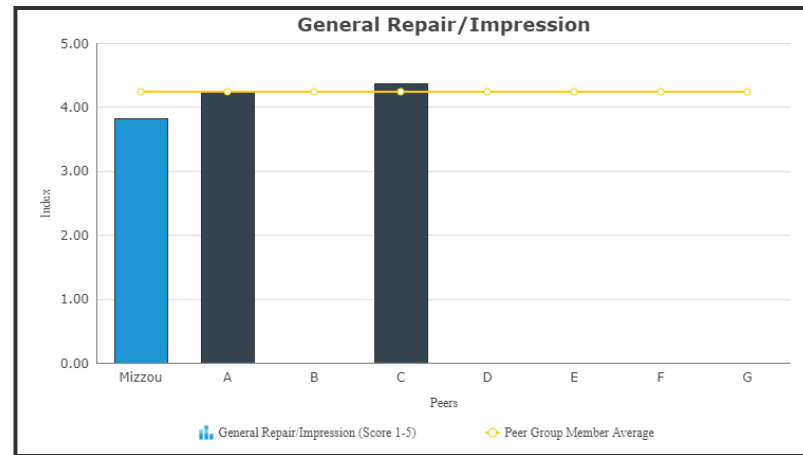
Facility Operations Outsourced Peer Comparators

MU - Campus Service Impressions with Peer Comparators

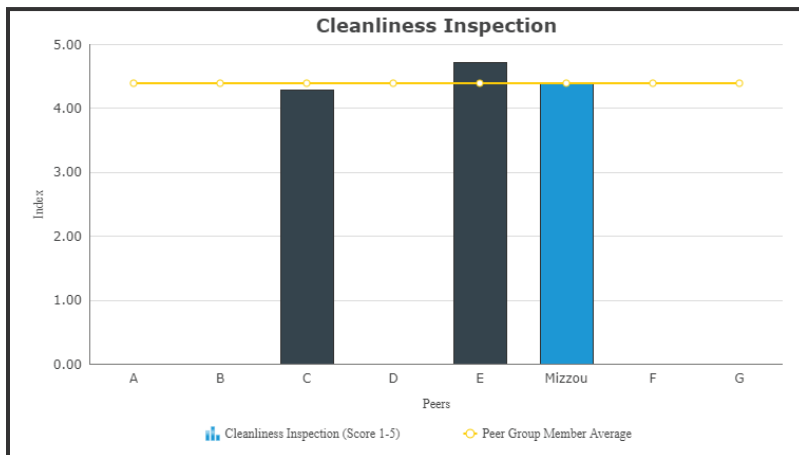
Exterior Inspection



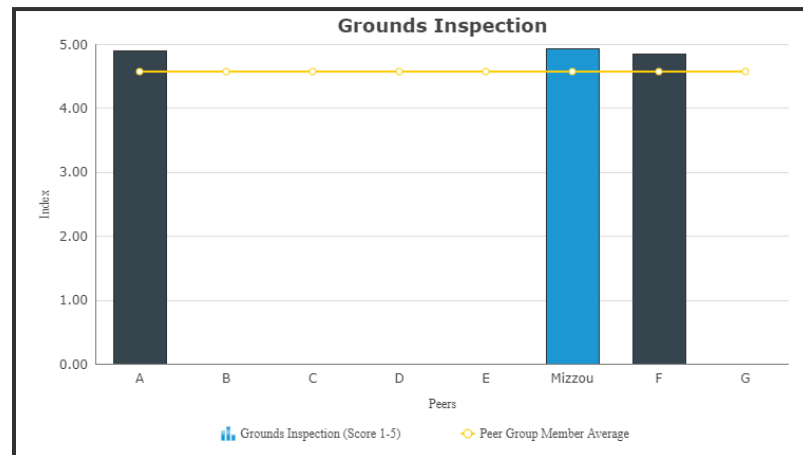
General Repair/Impression



Cleanliness Inspection



Grounds Inspection



Sightlines offers a campus inspection as a service to provide an independent judgement of campus appearance gained by an inspection of a representative sample of campus buildings and grounds. The inspection rates are on a scale of 0-5, with 0 being the lowest and 5 being the best score possible.

- **Exterior Inspection (%)** – An inspection to evaluate the condition of building envelopes/exteriors, rated on a scale of 0-4. This inspection includes exterior doorways, siding, pointing, roofs, windows, etc.
- **General Repair/Impression (%)** – An independent judgment of campus general repair/impression gained by an inspection of a representative sample of campus buildings, on a scale of 0-4. Space is inspected to.
- **Cleanliness Inspection (%)**– An independent judgment of campus cleanliness gained by an inspection of a representative sample of campus buildings, rated on a scale of 0-4. Space is inspected to determine if it is free from dirt, debris, and stocked with the proper paper products in restrooms, etc.
- **Grounds Inspection (%)** - An evaluation of grounds appearance including plantings, turf, fixtures, and walkways, rated on a scale of 0-4.

University of Missouri - Kansas City

Campus Profile

- 10,301 FTE Students
- 3,024,898 gross square feet maintained
- 15,000 feet of Steam and Condensate Pipe and Tunnels
- 1 Main Boiler Plant
- 5 Individual Boiler Plants
- 16,000 feet of Chilled Water Pipe
- 1 Main Chiller Plant
- 1 Small Chiller Plant
- 4 Individual Chiller Plants
- 24,405 feet of Domestic Water Piping
- 24,080 feet of Sewer Piping
- 16,000 feet of Electrical Distribution
- 155,200 feet of Data Conduit
- 170,000 feet of Fiber Optic Cable
- 150,500 feet of Copper OSP Cable

Sightlines Peer

Comparator Institutions:

- Indiana Univ. Purdue Univ. - Indianapolis
- The University of Alabama at Birmingham
- University of Arkansas
- University of Central Florida
- University of Missouri - St. Louis
- Virginia Commonwealth University
- Washburn University
- Wayne State University

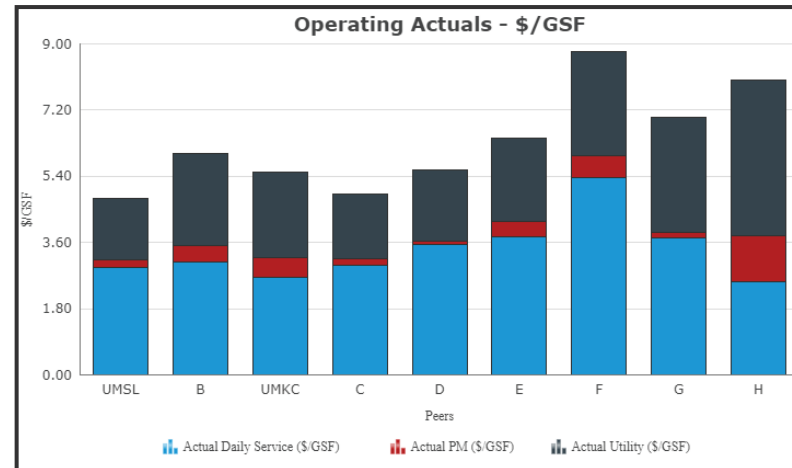
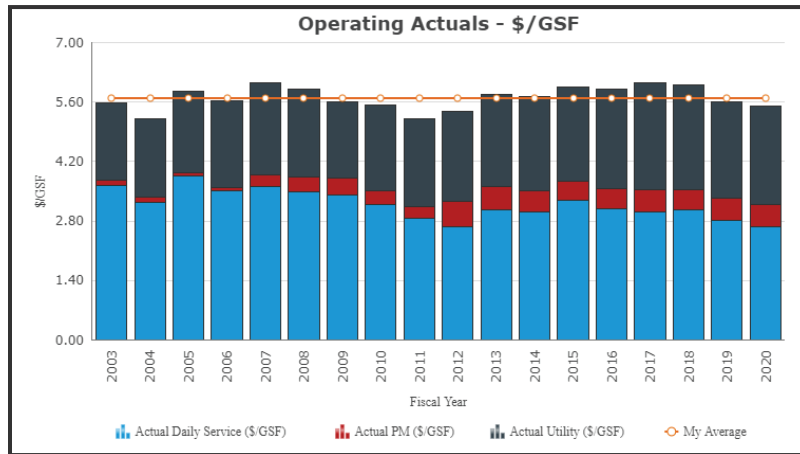
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UMKC - Operating Expense Summary

Operating Expense Summary	2016	2017	2018	2019	2020
Total Daily Service	\$9,353,770	\$9,113,488	\$9,220,579	\$8,450,770	\$8,001,122
Planned Maintenance	1,408,590	1,535,603	1,470,603	1,574,640	1,635,137
Utilities(Electric, Water, Etc.)	6,996,473	7,617,757	7,465,549	6,891,869	6,978,951
Total	\$17,758,833	\$18,266,848	\$18,156,573	\$16,917,279	\$16,615,210
Cost per GSF	\$5.87	\$6.04	\$6.00	\$5.60	\$5.50



Operating Actual Expense

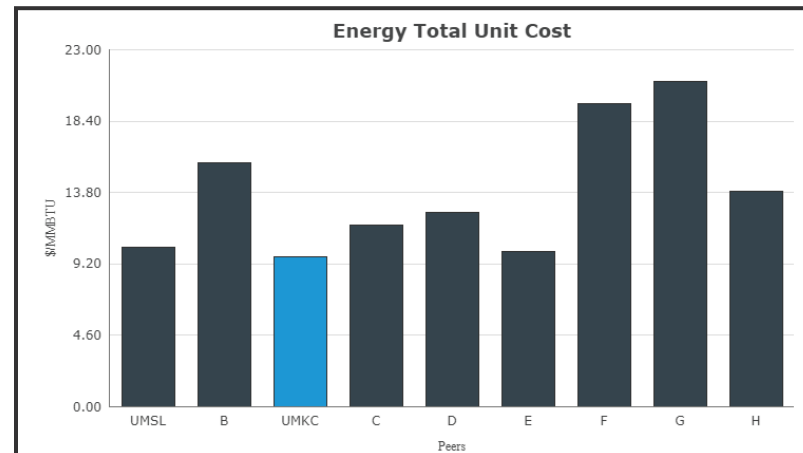
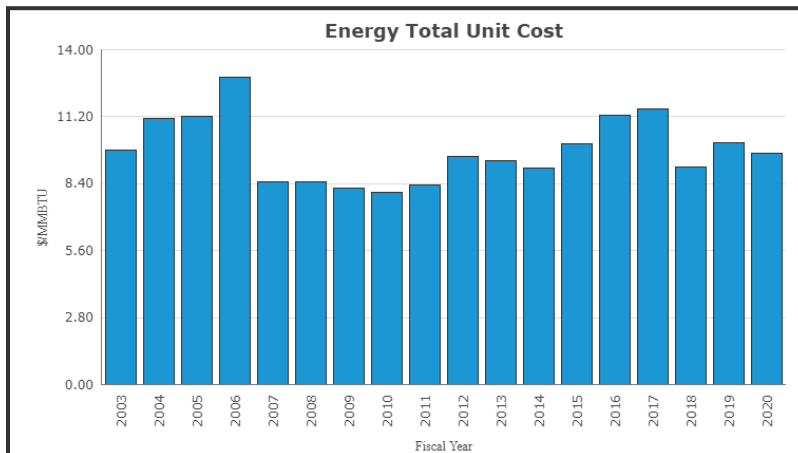
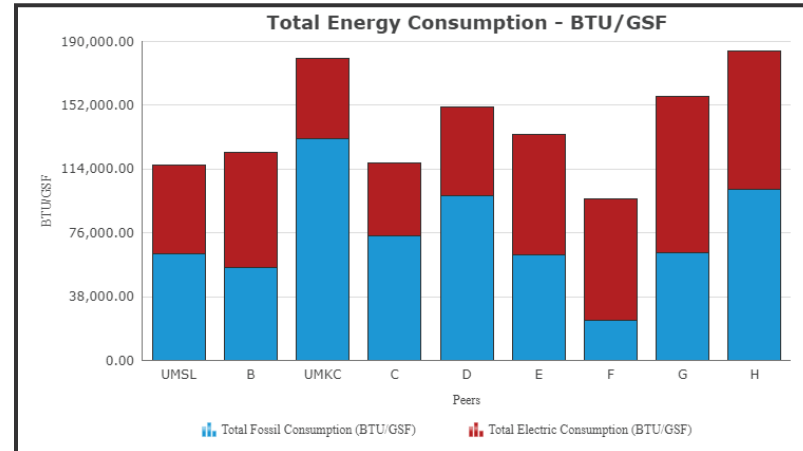
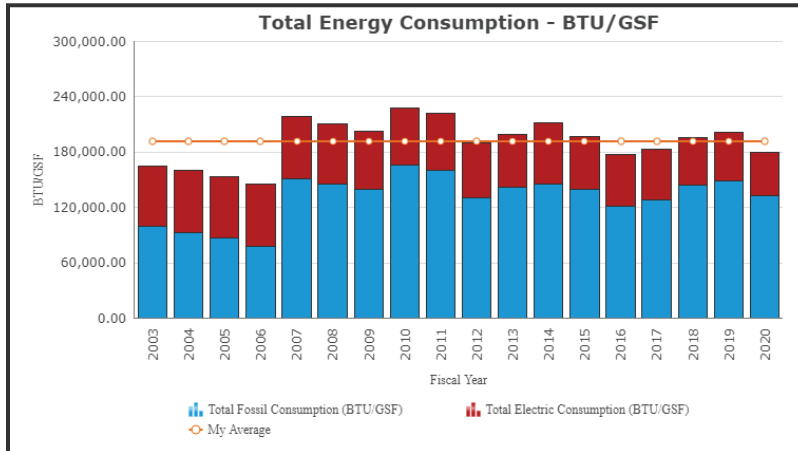
Facilities Operating Actuals with Peer Comparators

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- **Utilities:** The procurement of utility commodities, i.e. natural gas, oil, steam, electricity, water/sewer, etc. NOTE - Utilities costs do not include institutionally held people costs, plant operations or service contracts of utility systems.

UMKC - Energy Consumption & Expense Summary

Energy Consumption & Expense Summary	2016	2017	2018	2019	2020
MMBTU Used	370,414	556,180	596,916	613,878	547,000
Cost	\$6,063,318	\$6,388,297	\$5,406,992	\$6,185,840	\$5,266,826
Cost/MMBTU	\$16.37	\$11.49	\$9.06	\$10.08	\$9.63
BTU/GSF	177,166	182,693	195,361	201,302	179,374



Campus Energy Consumption

Campus Energy Unit Cost

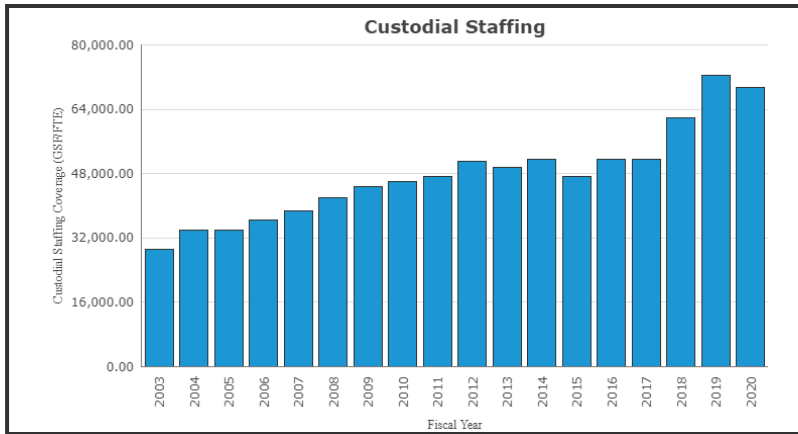
Peer Comparators Energy Consumption

Peer Energy Unit Cost

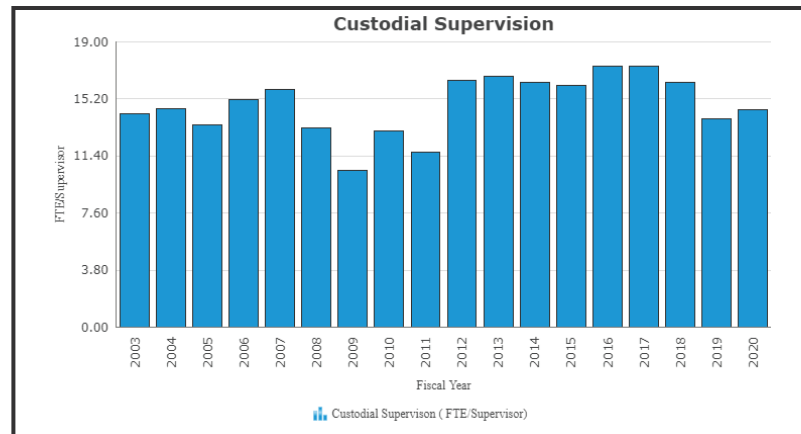
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- **Energy Total Unit Cost (\$/MMBTU):** The composite cost for an MMBTU of energy; includes electricity and all fossil fuels. Region and type of utility system (centralized, independent, co-generation, etc.) greatly influence unit cost.

Campus - Custodial Staffing/Supervisor Performance Indicators

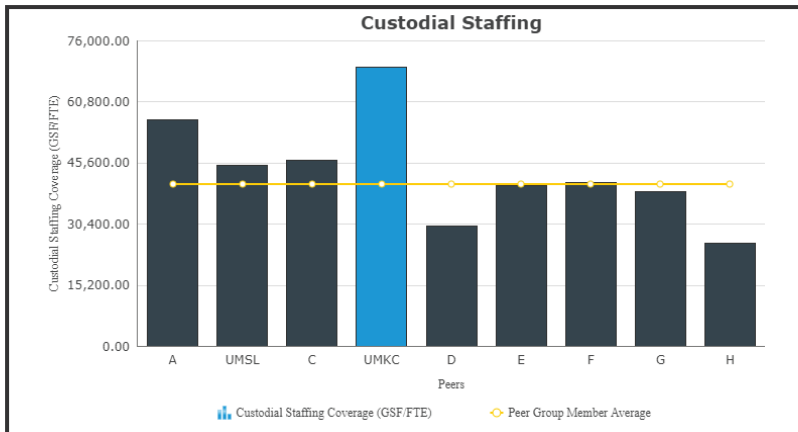
Campus Custodial Staffing



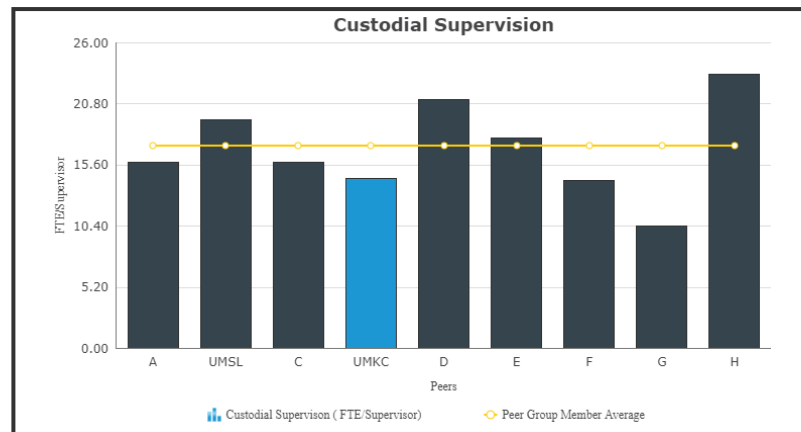
Campus Custodial Supervisor Staffing



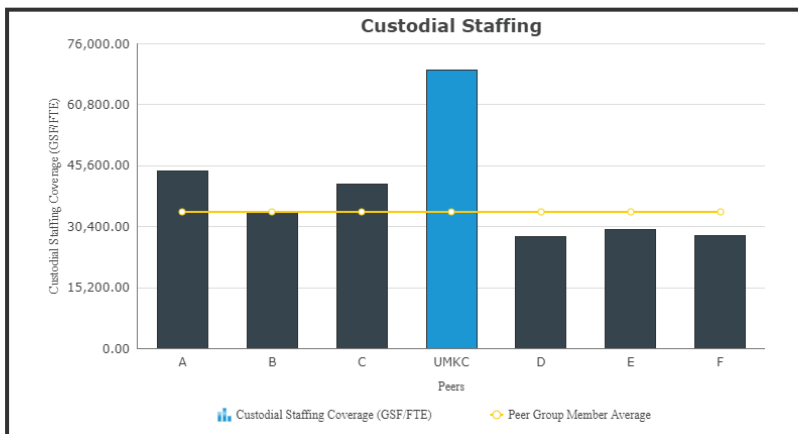
Campus Sightline Peer Comparators



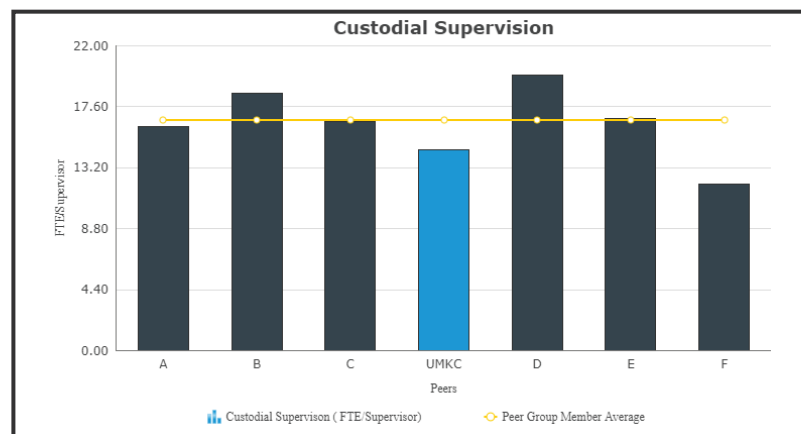
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

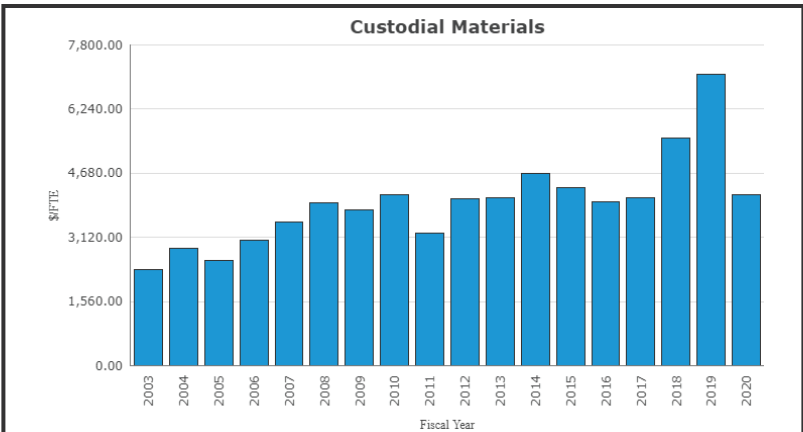
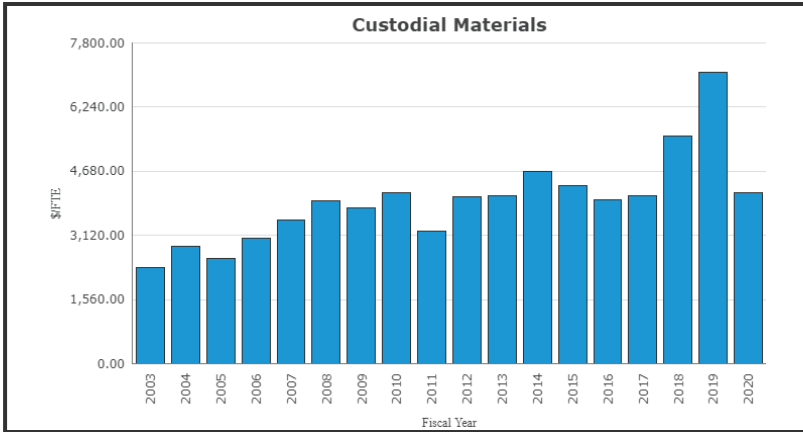


Facility Operations Outsourced Peer Comparators



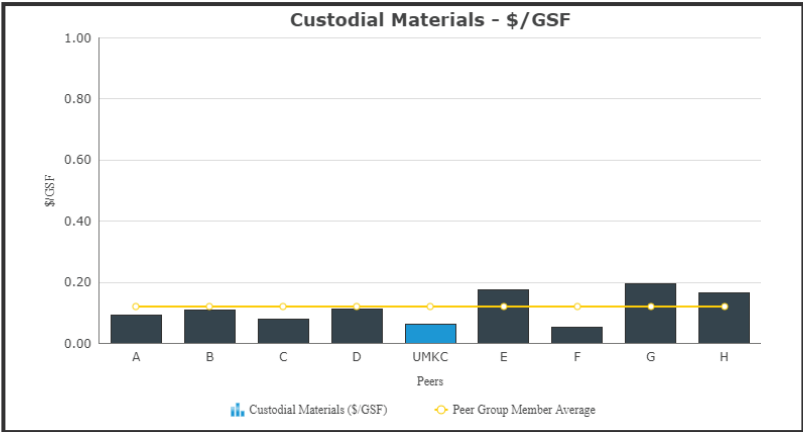
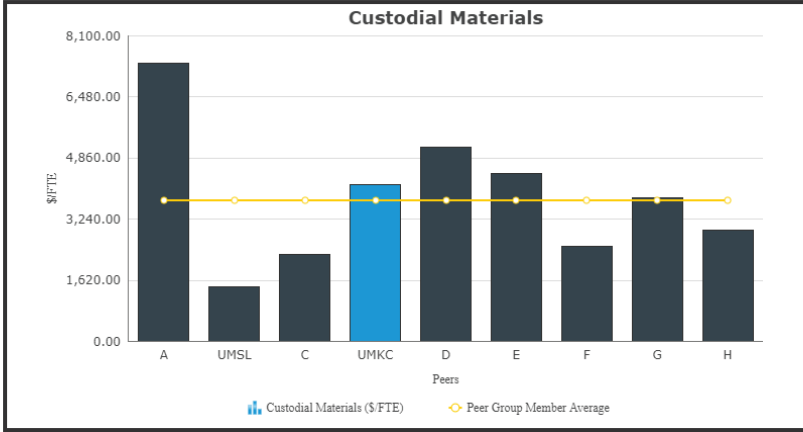
Campus - Custodial Materials Performance Indicators

Campus Custodial Materials



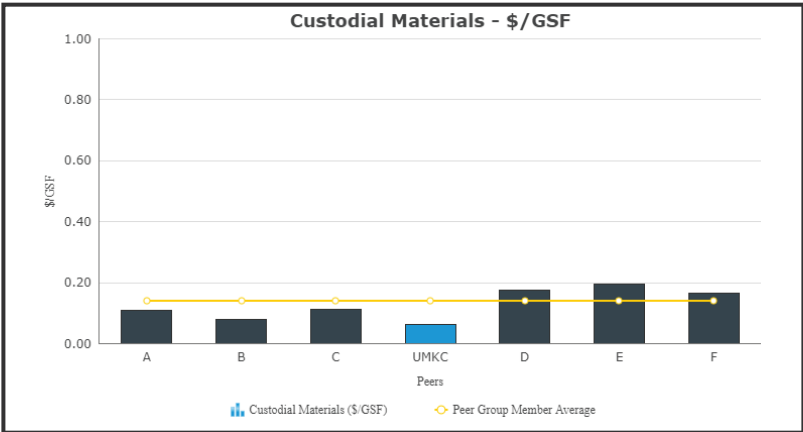
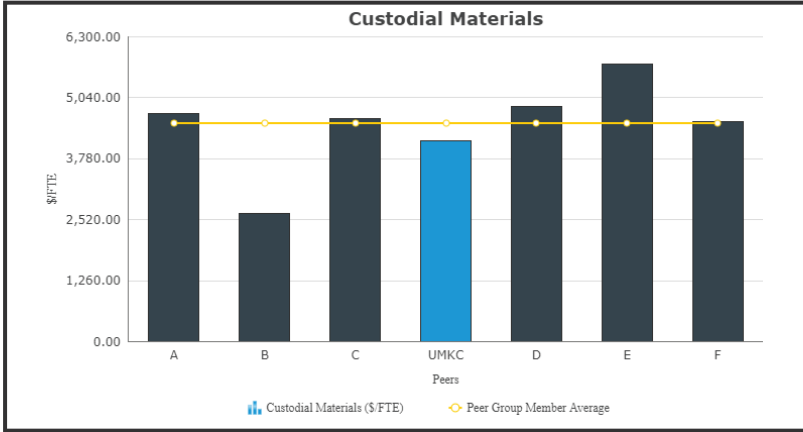
Campus Custodial Materials \$/GSF

Campus Sightline Peer Comparators



Sightline Peer Comparators

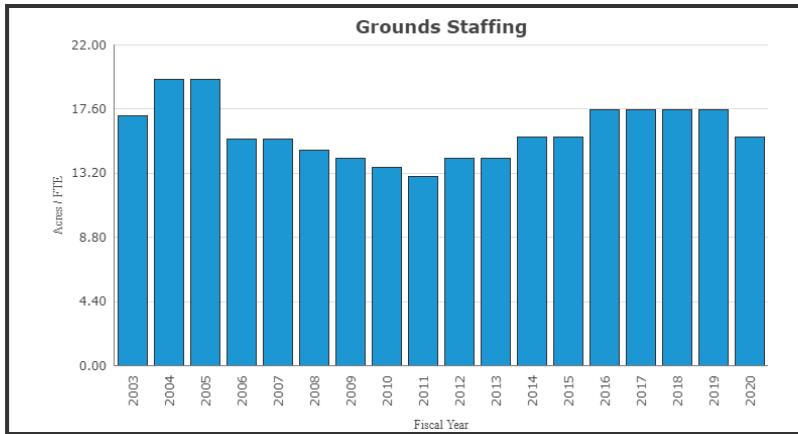
Facility Operations Outsourced Peer Comparators



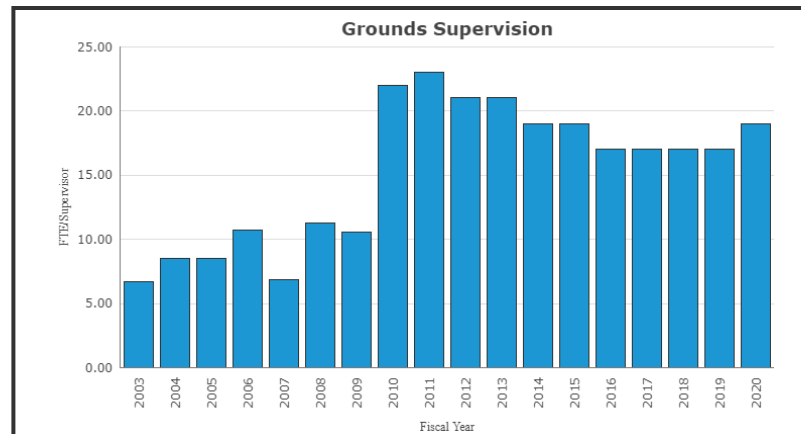
Facility Operations Outsourced Peer Comparators

Campus - Grounds Staffing/Supervisor Performance Indicators

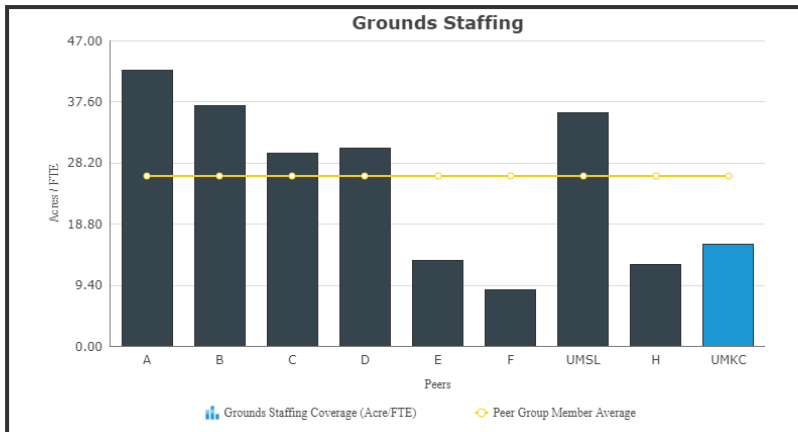
Campus Custodial Staffing



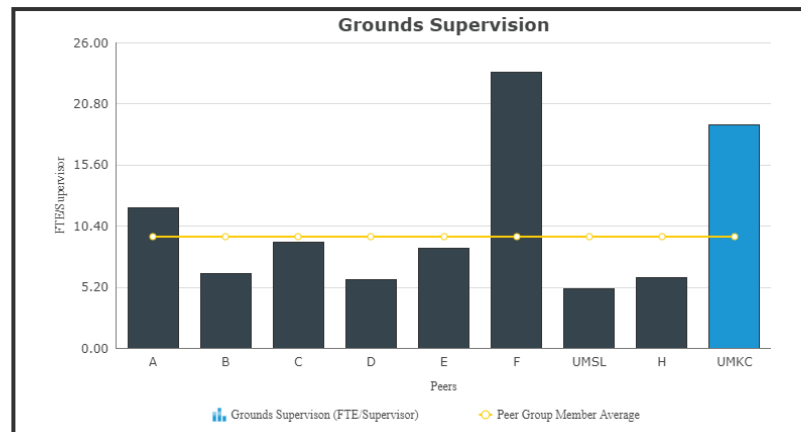
Campus Custodial Supervisor Staffing



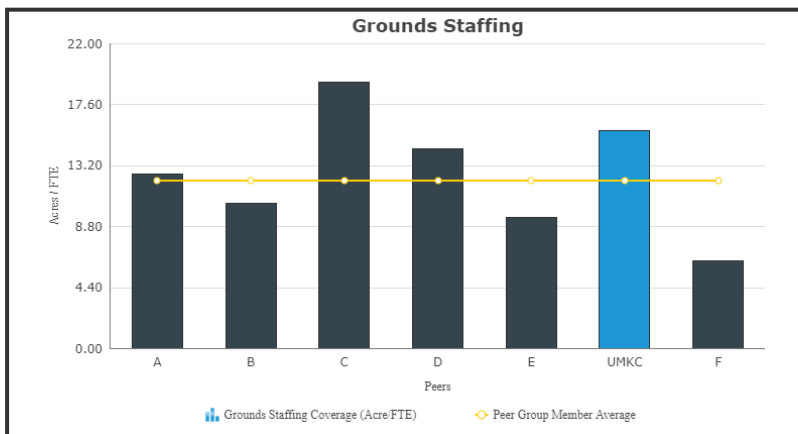
Campus Sightline Peer Comparators



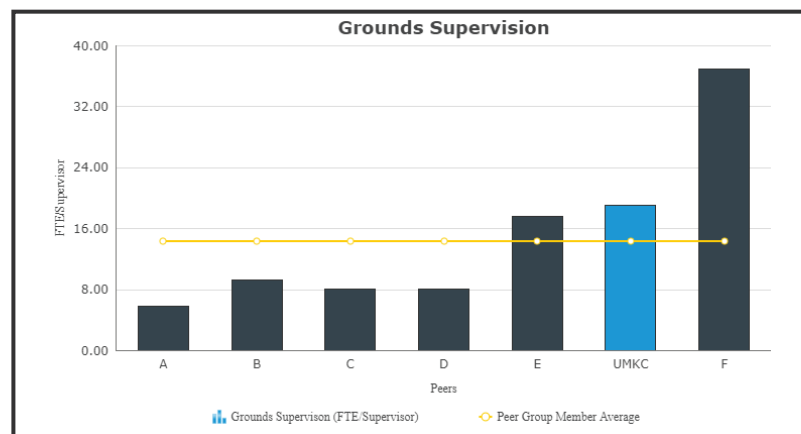
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

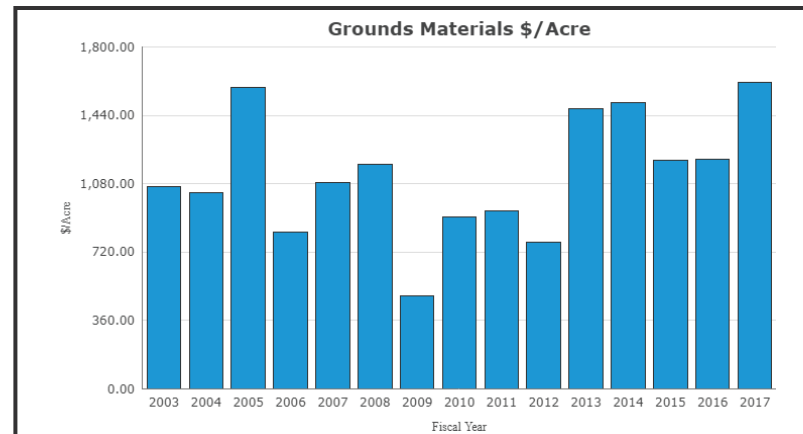
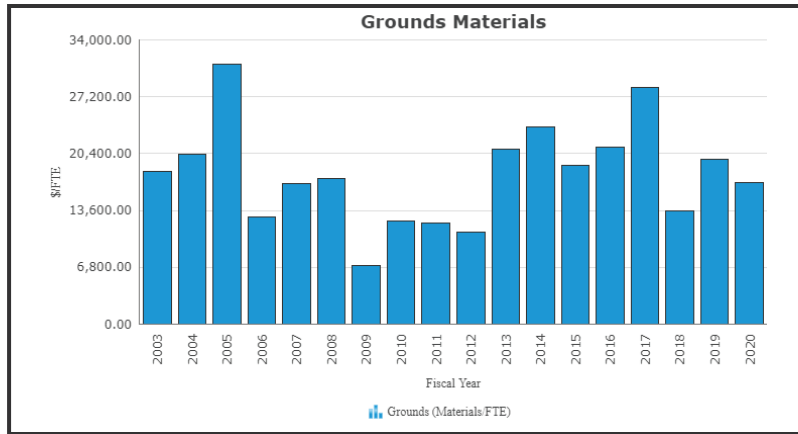


Facility Operations Outsourced Peer Comparators



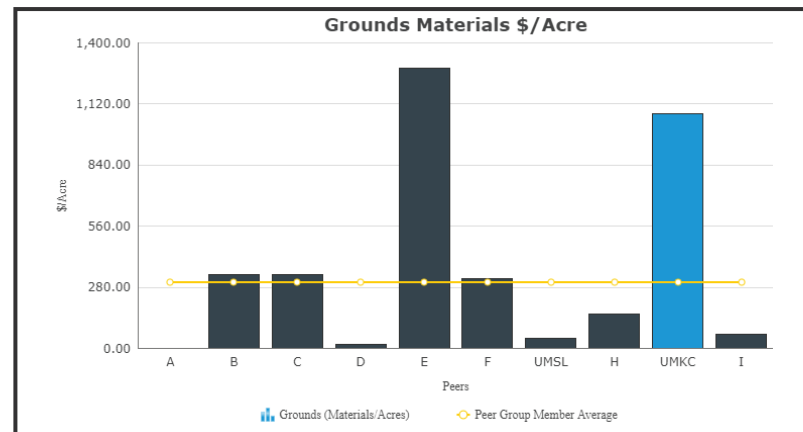
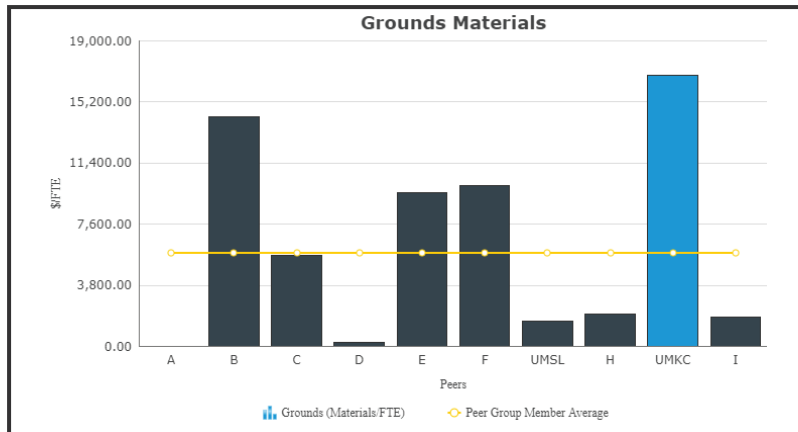
Campus - Grounds Materials Performance Indicators

Campus Grounds Materials



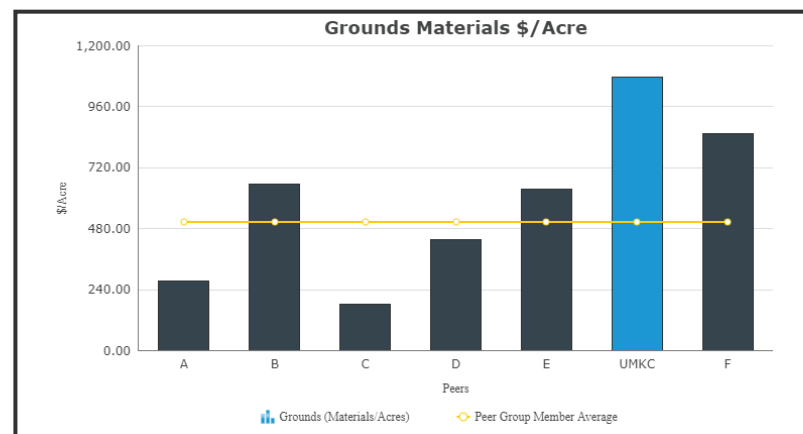
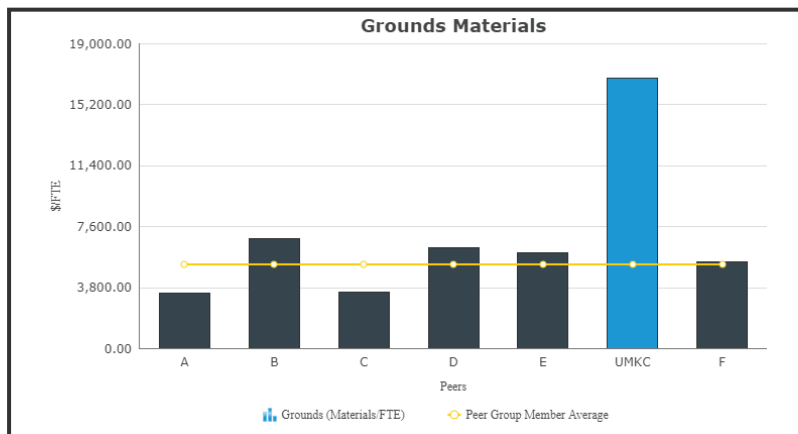
Campus Grounds Materials \$/GSF

Campus Sightline Peer Comparators



Sightline Peer Comparators

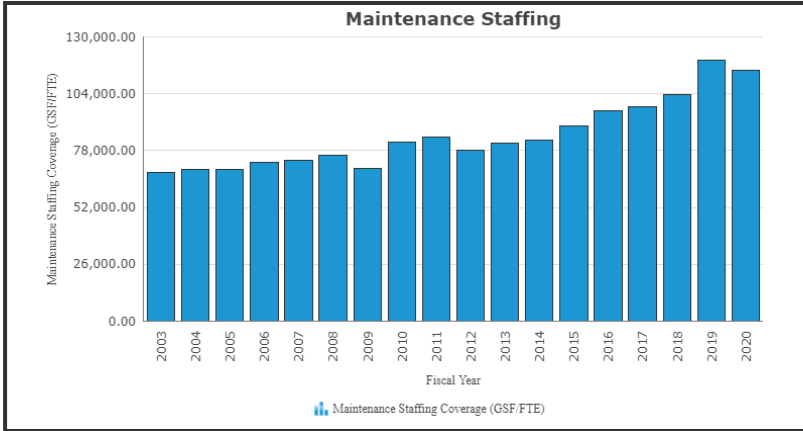
Facility Operations Outsourced Peer Comparators



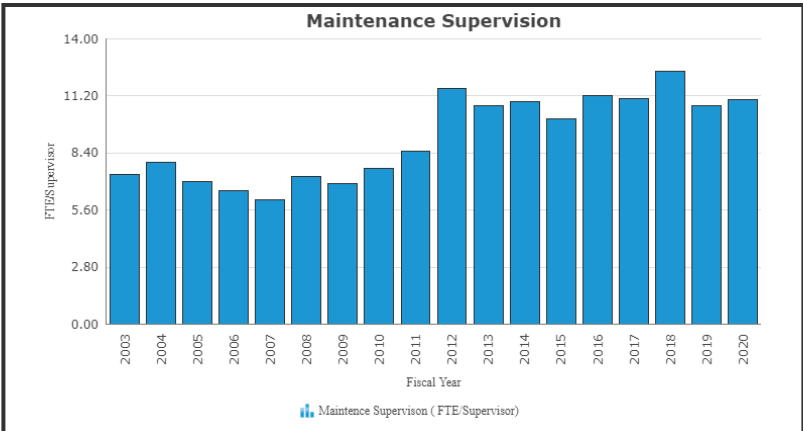
Facility Operations Outsourced Peer Comparators

Campus - Maintenance Staffing/Supervisor Performance Indicators

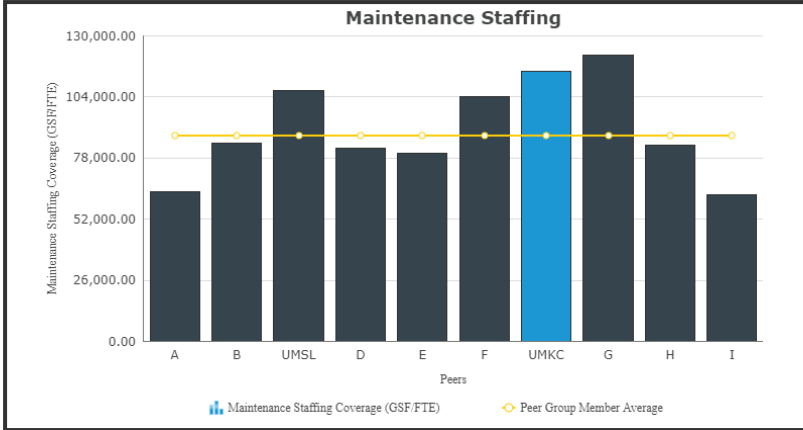
Campus Custodial Staffing



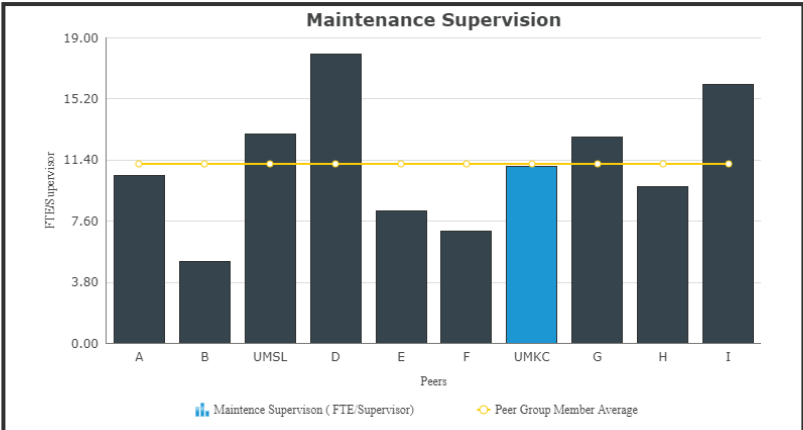
Campus Custodial Supervisor Staffing



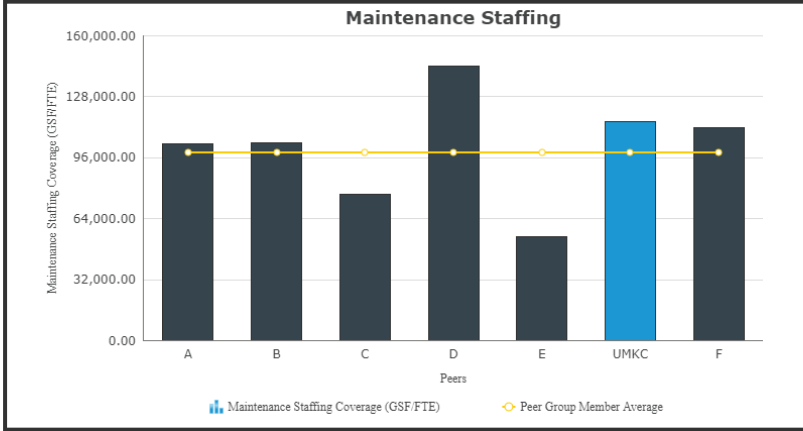
Campus Sightline Peer Comparators



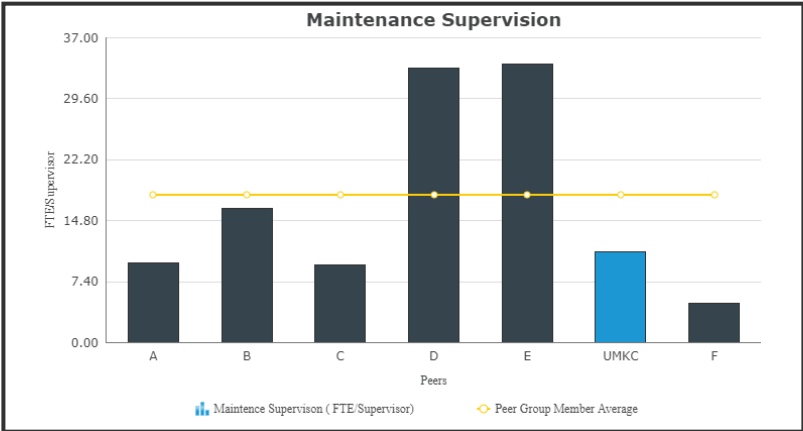
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

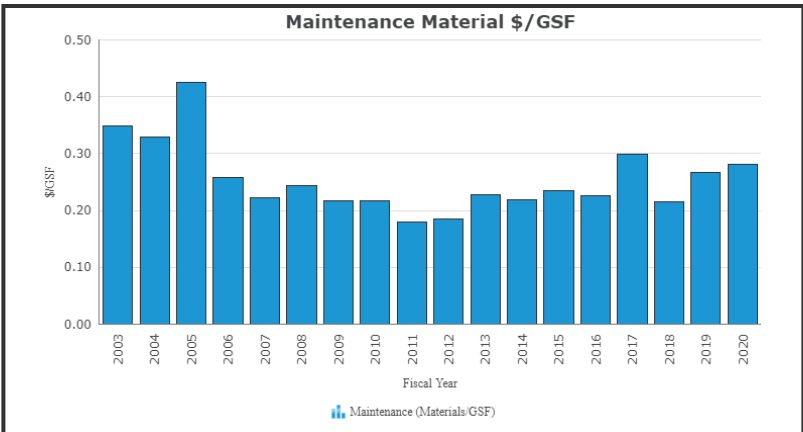
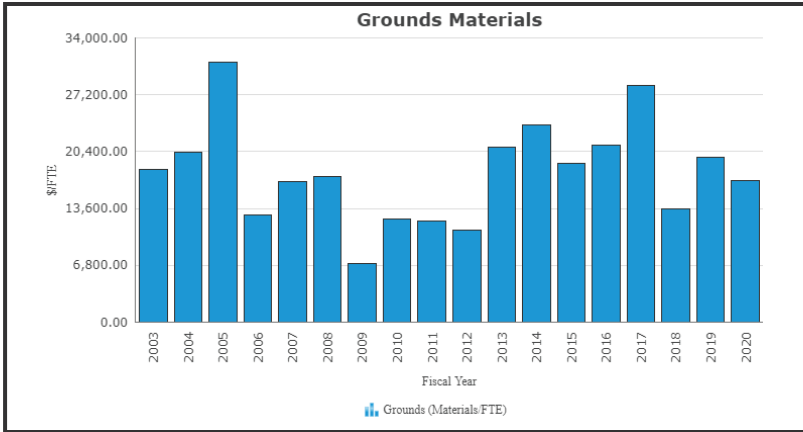


Facility Operations Outsourced Peer Comparators



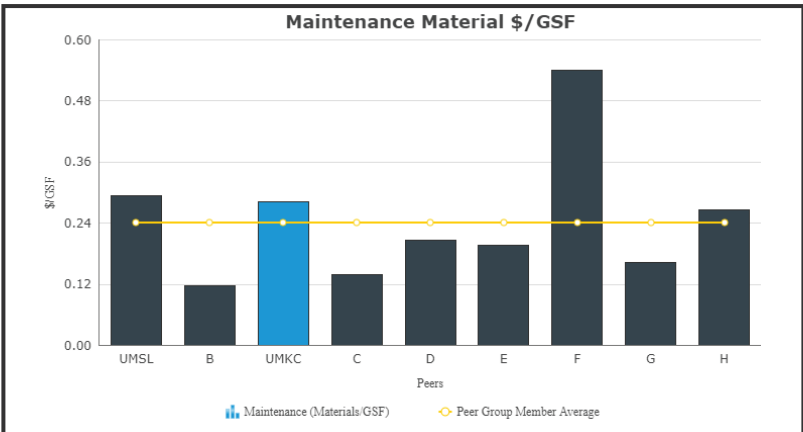
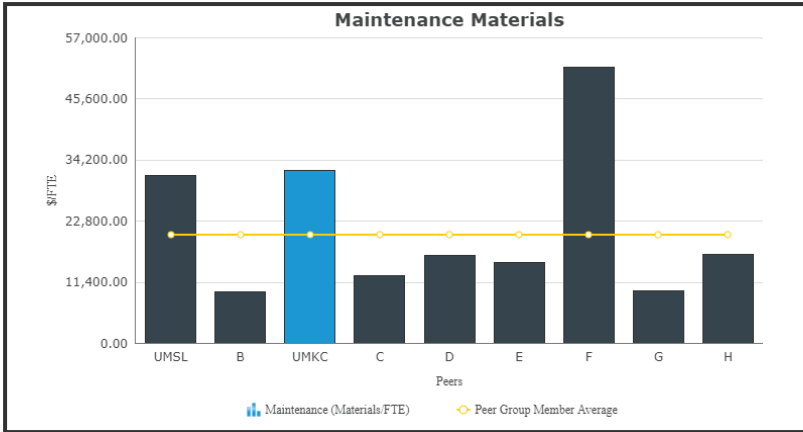
Campus - Maintenance Materials Performance Indicators

Campus Maintenance Materials



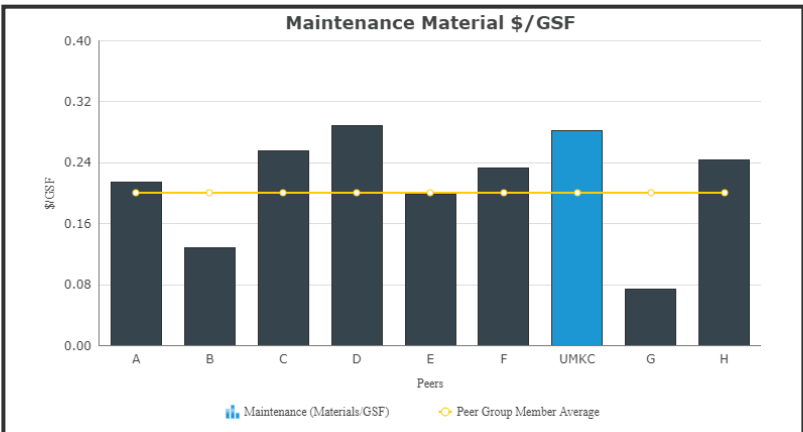
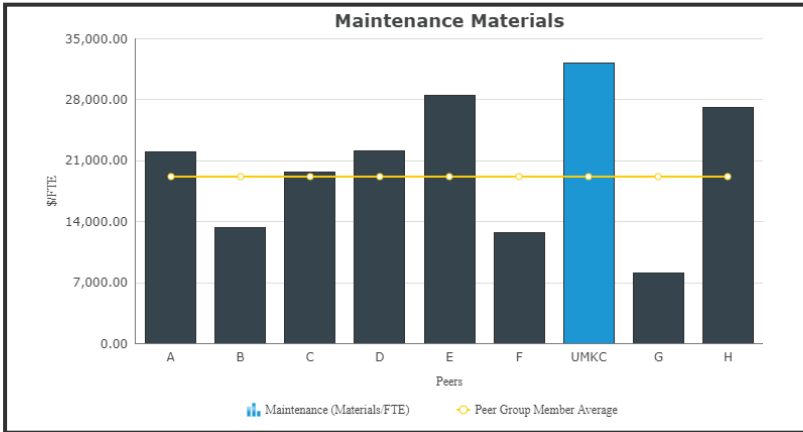
Campus Materials \$/GSF

Campus Sightline Peer Comparators



Sightline Peer Comparators

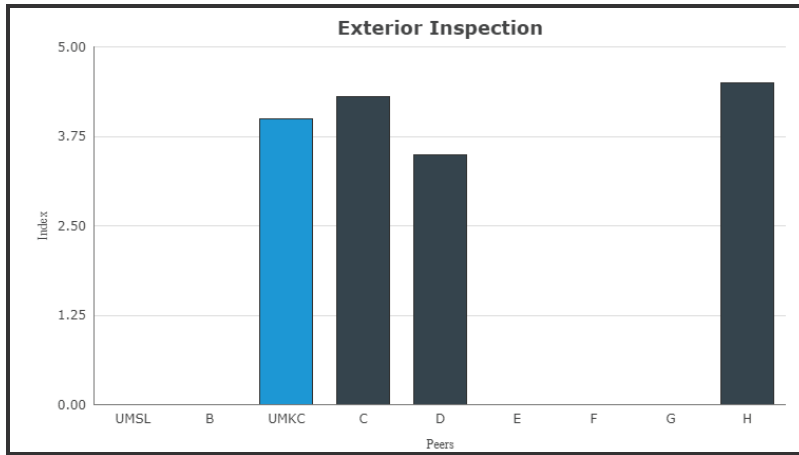
Facility Operations Outsourced Peer Comparators



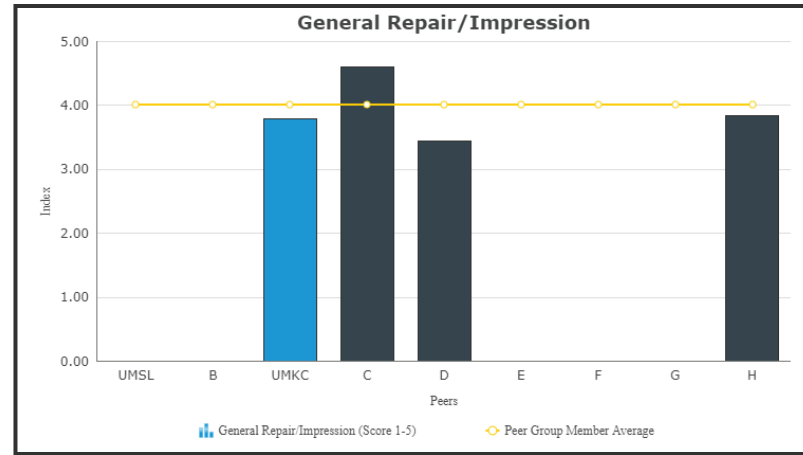
Facility Operations Outsourced Peer Comparators

UMKC - Campus Service Impressions with Peer Comparators

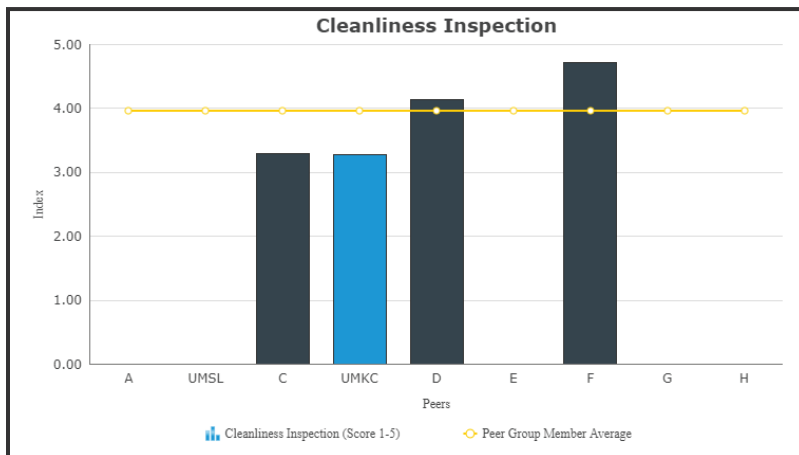
Exterior Inspection



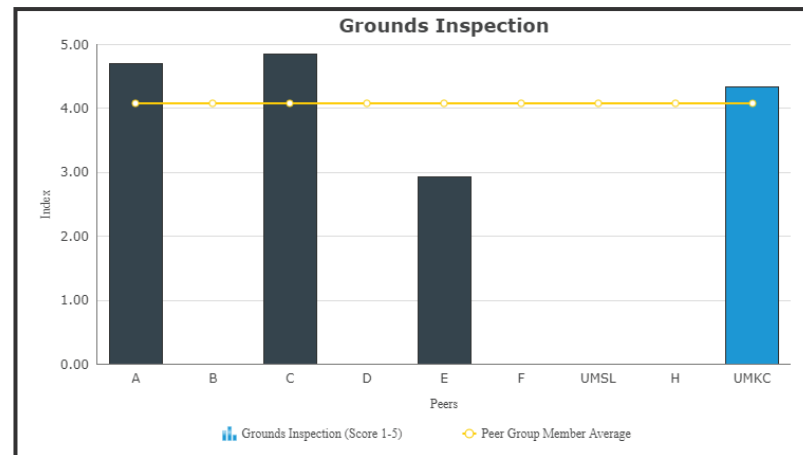
General Repair/Impression



Cleanliness Inspection



Grounds Inspection



Sightlines offers a campus inspection as a service to provide an independent judgement of campus appearance gained by an inspection of a representative sample of campus buildings and grounds. The inspection rates are on a scale of 0-5, with 0 being the lowest and 5 being the best score possible.

- **Exterior Inspection (%)** – An inspection to evaluate the condition of building envelopes/exteriors, rated on a scale of 0-4. This inspection includes exterior doorways, siding, pointing, roofs, windows, etc.
- **General Repair/Impression (%)** – An independent judgment of campus general repair/impression gained by an inspection of a representative sample of campus buildings, on a scale of 0-4. Space is inspected to.
- **Cleanliness Inspection (%)**– An independent judgment of campus cleanliness gained by an inspection of a representative sample of campus buildings, rated on a scale of 0-4. Space is inspected to determine if it is free from dirt, debris, and stocked with the proper paper products in restrooms, etc.
- **Grounds Inspection (%)** - An evaluation of grounds appearance including plantings, turf, fixtures, and walkways, rated on a scale of 0-4.

Missouri University of Science and Technology

Campus Profile

- 6,725 FTE Students
- 2,016,476 gross square feet maintained
- 11,000 feet of Domestic Water
- 7,000 feet of Soft Water Distribution
- 20,400 feet of Chilled and Heating Water Distribution Pipe
- 2,250 feet of Balance Chilled Water
- 5,000 feet of Storm Water Sewer
- 10,000 feet of Sanitary Sewer
- 10,500 feet of Electrical Distribution

Sightlines Peer

Comparator Institutions:

- Carnegie Mellon University
- Georgia Institute of Technology
- Massachusetts Institute of Technology
- New Jersey Institute of Technology
- Rensselaer Polytechnic Institute
- Rose-Hulman Institute of Technology
- Tennessee Technological University
- Worcester Polytechnic Institute

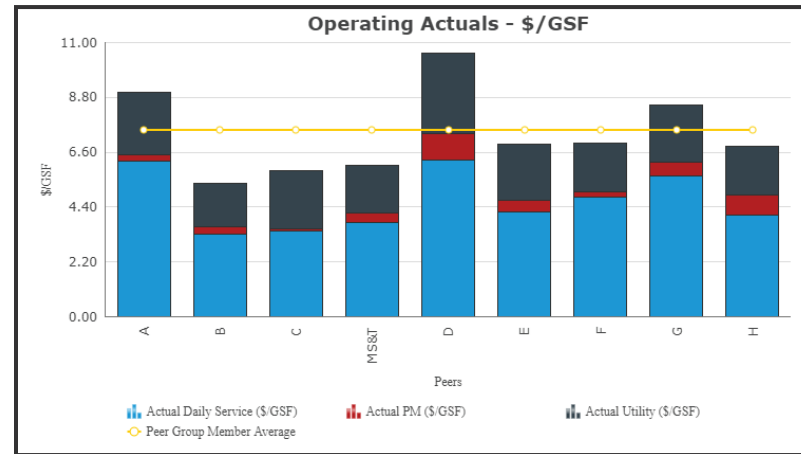
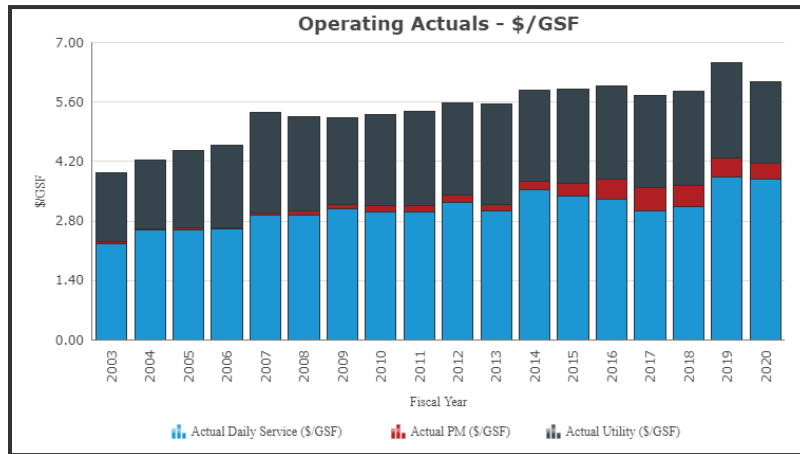
Sightlines Outsourced

Comparator Institutions:

- Chapman University
- Lewis & Clark College
- Nova Southeastern University
- Saint Mary's College of California
- The Catholic University of America
- Widener University

S&T - Operating Expense Summary

Operating Expense Summary	2016	2017	2018	2019	2020
Total Daily Service	\$6,502,355	\$6,017,259	\$6,204,391	\$7,692,473	\$7,598,397
Planned Maintenance	\$900,675	\$1,071,743	\$993,825	\$917,563	\$782,560
Utilities(Electric, Water, Etc.)	\$4,202,957	\$4,165,544	\$4,299,456	\$4,386,411	\$3,752,914
Total	\$11,605,987	\$11,254,546	\$11,497,672	\$12,996,447	\$12,133,871
Cost per GSF	\$5.97	\$5.74	\$5.85	\$6.51	\$6.05



Operating Actual Expense

Facilities Operating Actuals with Peer Comparators

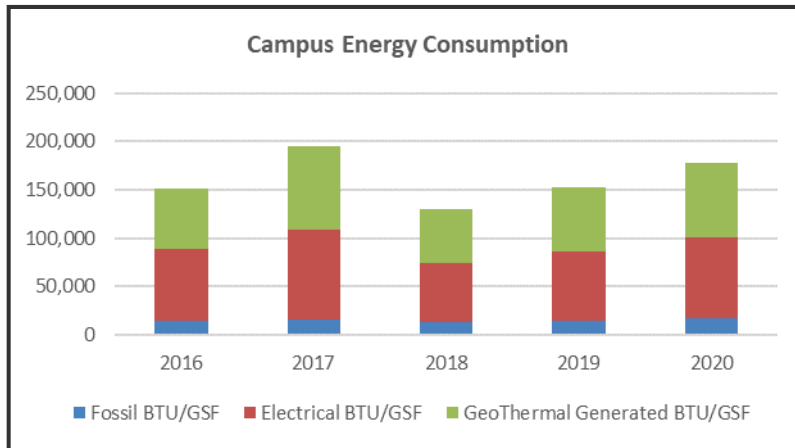
The Facilities Operating Budget Actuals Benchmark analyzes the amount spent each year to operate campus physical assets and the department that maintains them.

- **Daily Service:** Materials, labor costs, service contracts, office expense, etc. associated with the regular maintenance, cleaning and grounds keeping of the campus.
- **Planned Maintenance:** Materials, labor costs, service contracts, etc. that enhance or extend the useful life of campus buildings and components. Some examples include changing belts and filters on HVAC equipment, elevator service contracts, sprinkler and fire alarm system testing/maintenance contracts, etc.
- **Utilities:** The procurement of utility commodities, i.e. natural gas, oil, steam, electricity, water/sewer, etc. NOTE - Utilities costs do not include institutionally held people costs, plant operations or service contracts of utility systems.

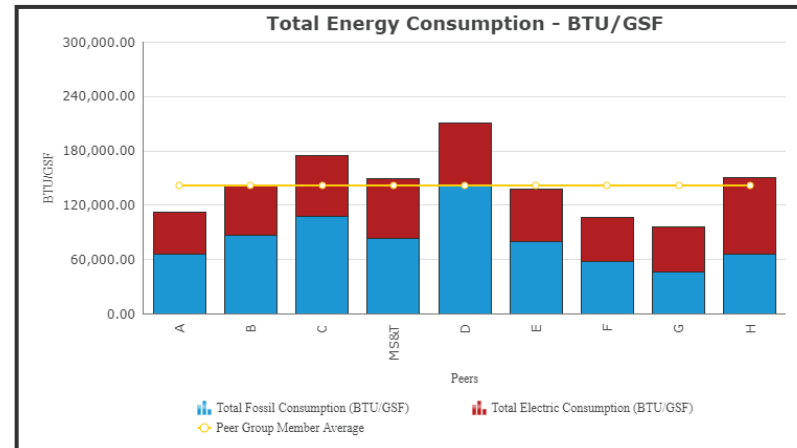
S&T - Energy Consumption & Expense Summary

Energy Consumption & Expense Summary	2016	2017	2018	2019	2020
MMBTU Purchased	165,601	163,871	170,020	171,946	159,424
MMBTU Geothermal Produced	165,601	175,080	190,951	191,654	179,039
Cost	\$3,005,300	\$2,941,387	\$3,050,004	\$3,077,595	\$2,690,838
Cost/MMBTU	\$10.77	\$10.45	\$10.97	\$10.81	\$10.21
BTU/GSF	150,871	158,270	159,760	160,010	148,335

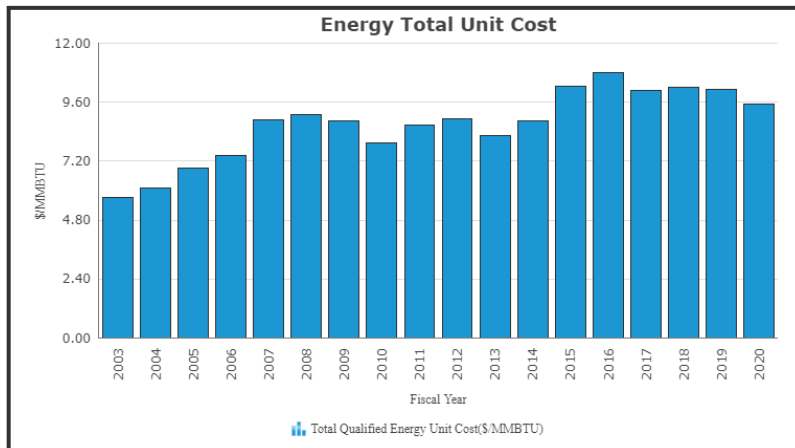
Campus Energy Consumption



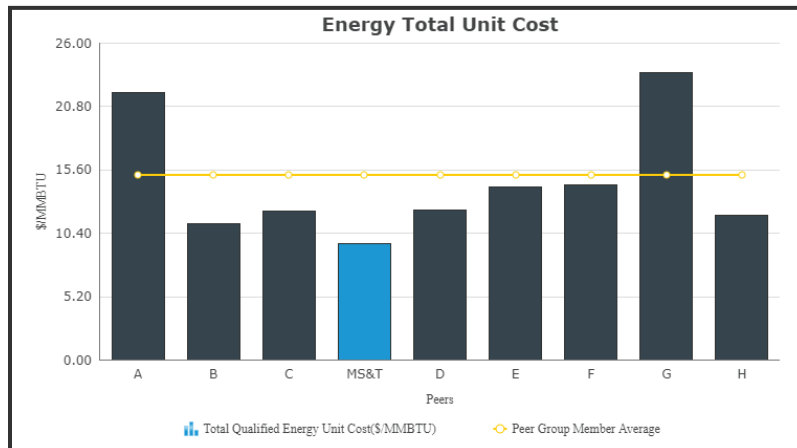
Peer Comparators Energy Consumption



Campus Energy Unit Cost



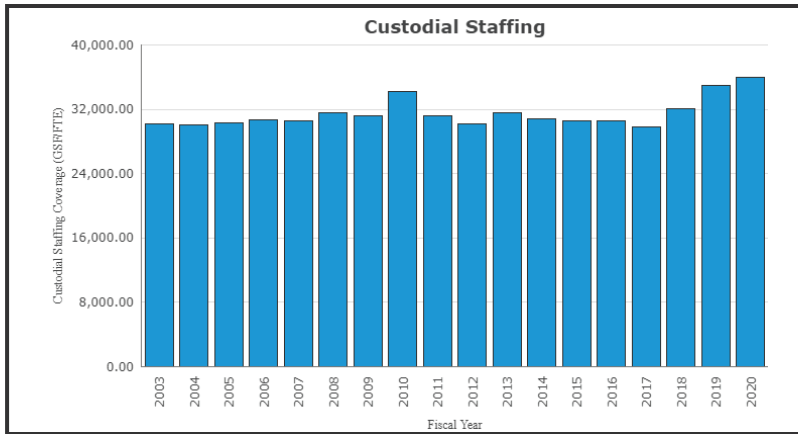
Peer Energy Unit Cost



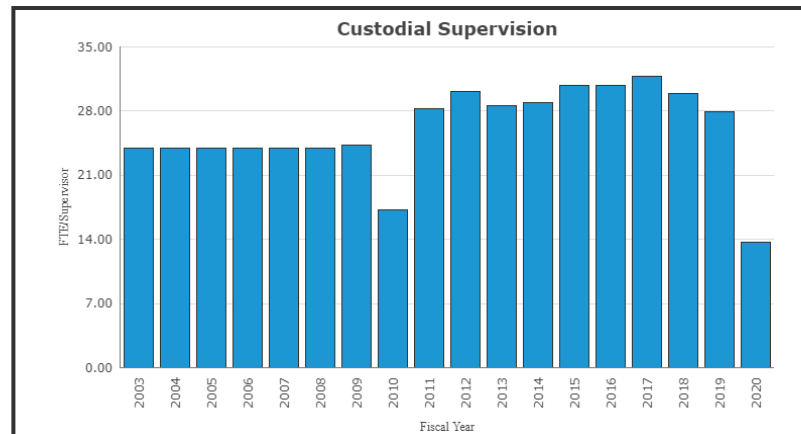
- **Energy Consumption (BTU/GSF):** The sum of fossil and electric BTU's per square foot the campus consumes each year. Energy consumption is influenced by many factors including region/climate, type of institution, technical complexity, utility systems, campus backlog, etc.
- **Energy Total Unit Cost (\$/MMBTU):** The composite cost for an MMBTU of energy; includes electricity and all fossil fuels. Region and type of utility system (centralized, independent, co-generation, etc.) greatly influence unit cost.

Campus - Custodial Staffing/Supervisor Performance Indicators

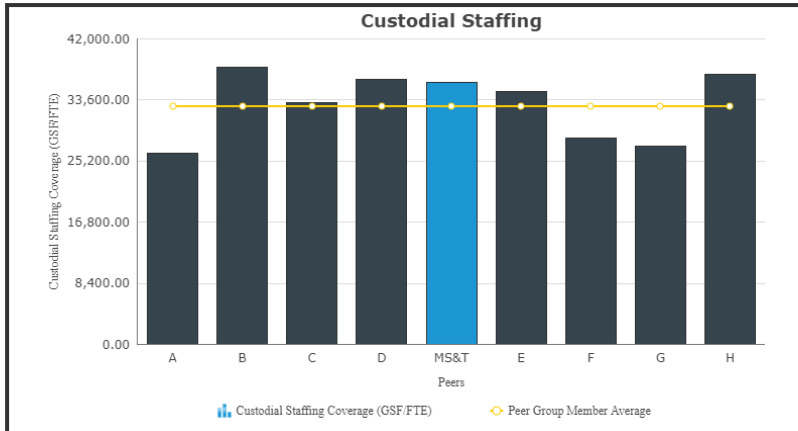
Campus Custodial Staffing



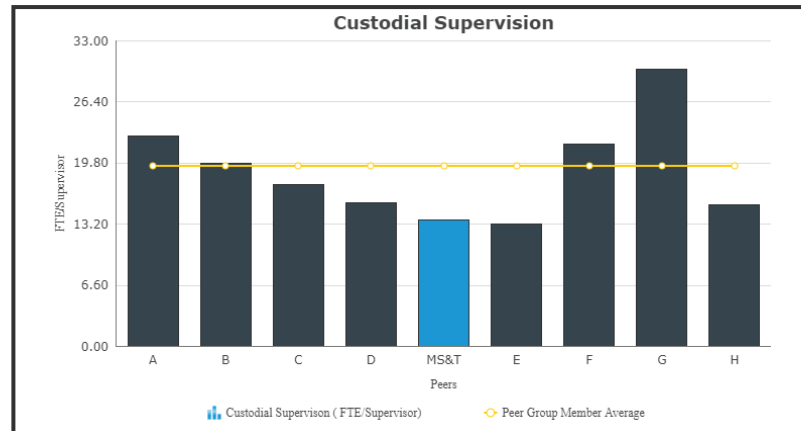
Campus Custodial Supervisor Staffing



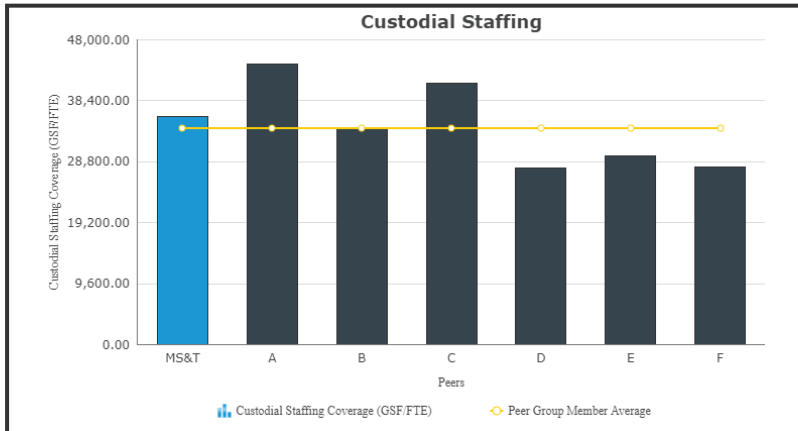
Campus Sightline Peer Comparators



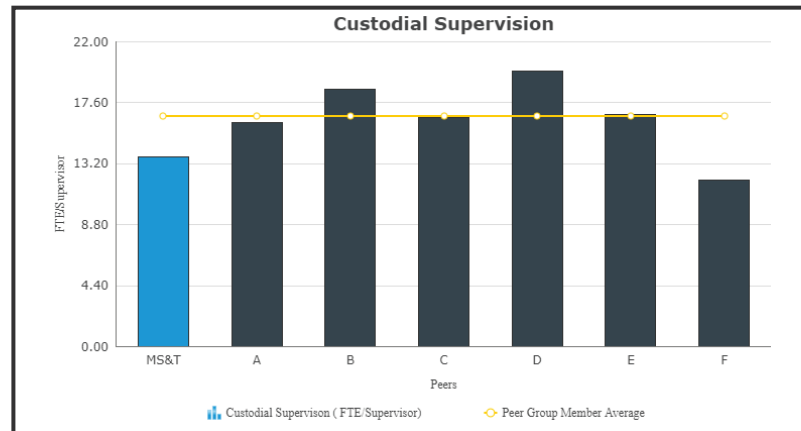
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

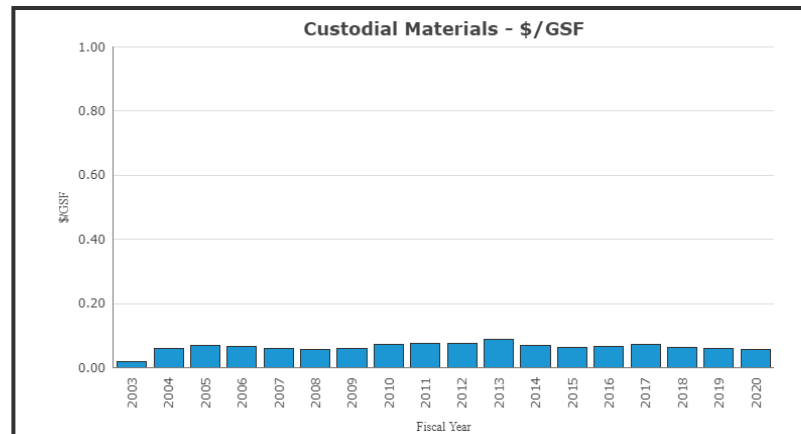
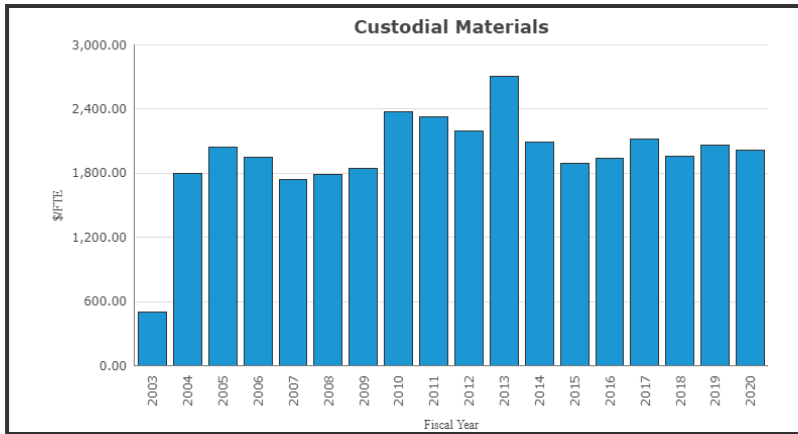


Facility Operations Outsourced Peer Comparators



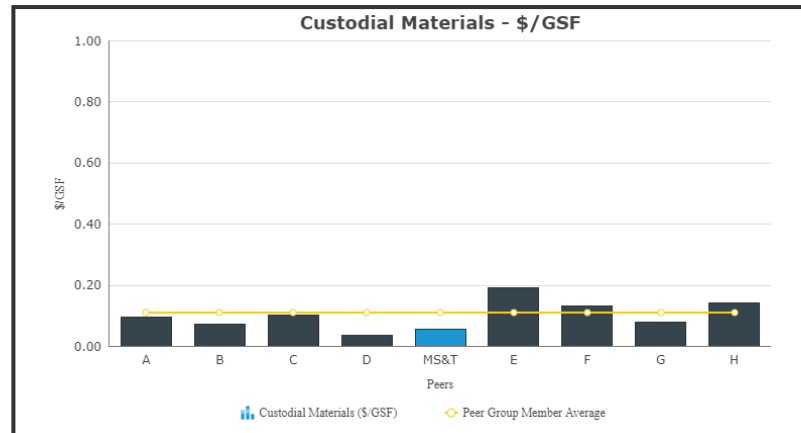
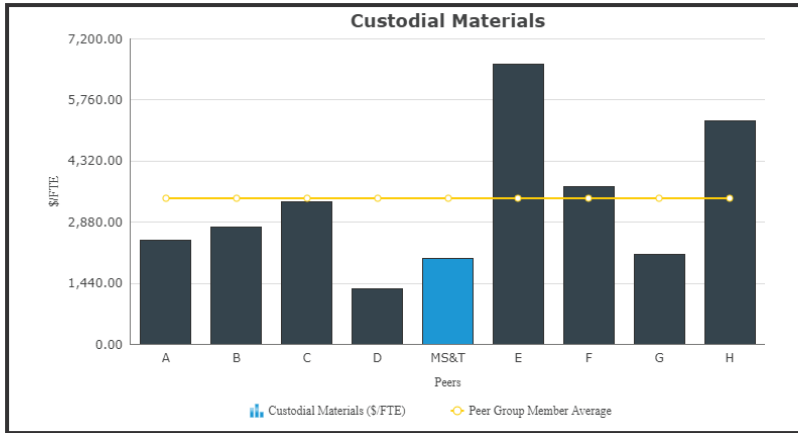
Campus - Custodial Materials Performance Indicators

Campus Custodial Materials



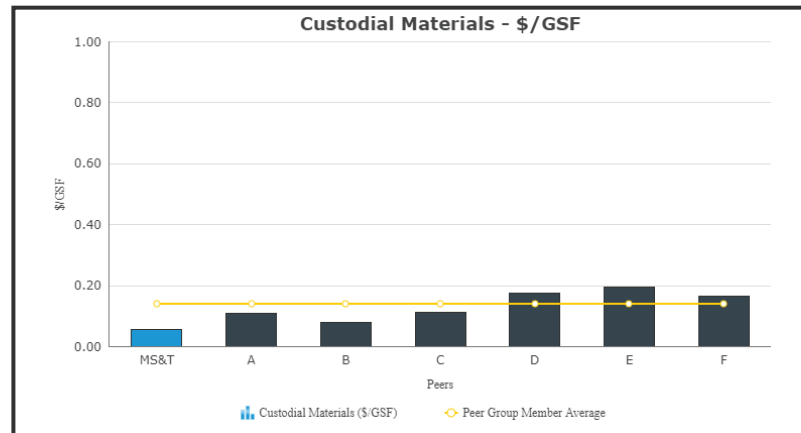
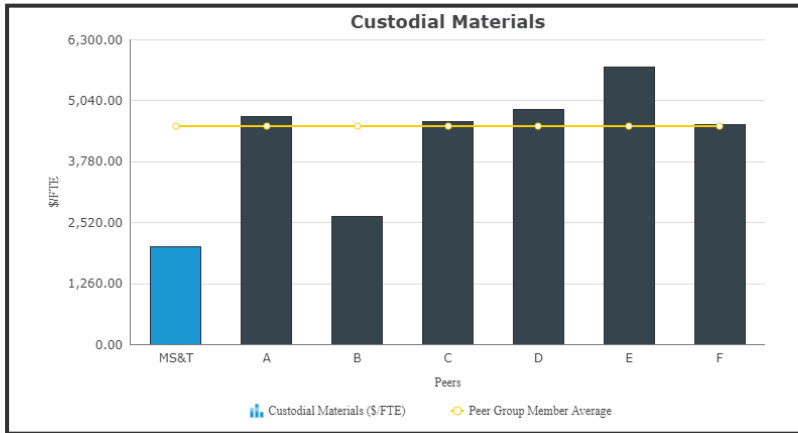
Campus Custodial Materials \$/GSF

Campus Sightline Peer Comparators



Sightline Peer Comparators

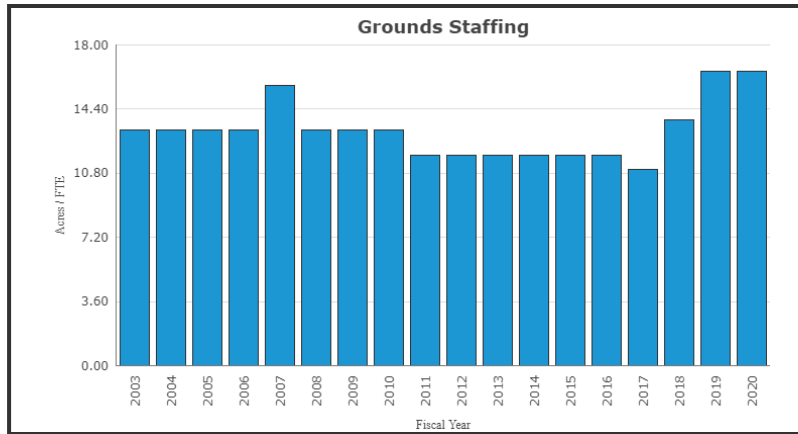
Facility Operations Outsourced Peer Comparators



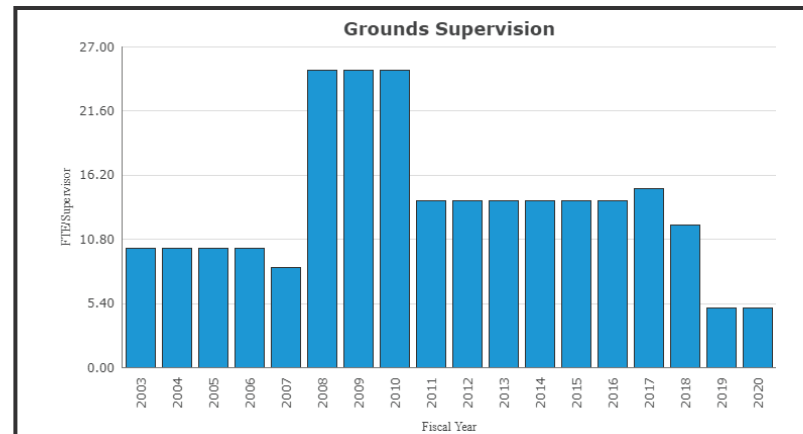
Facility Operations Outsourced Peer Comparators

Campus - Grounds Staffing/Supervisor Performance Indicators

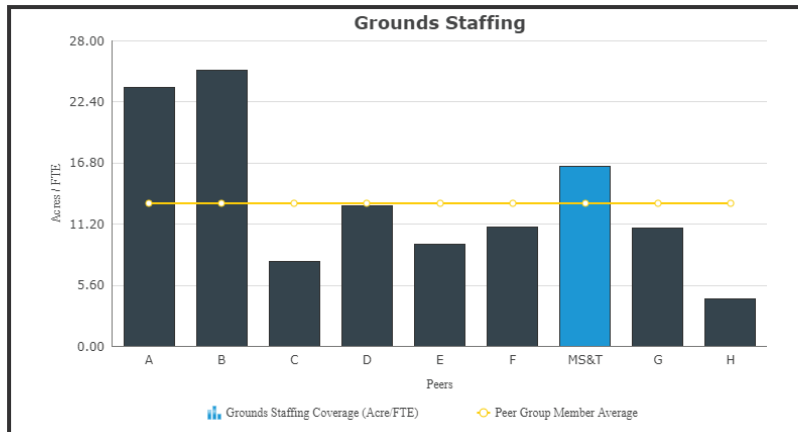
Campus Custodial Staffing



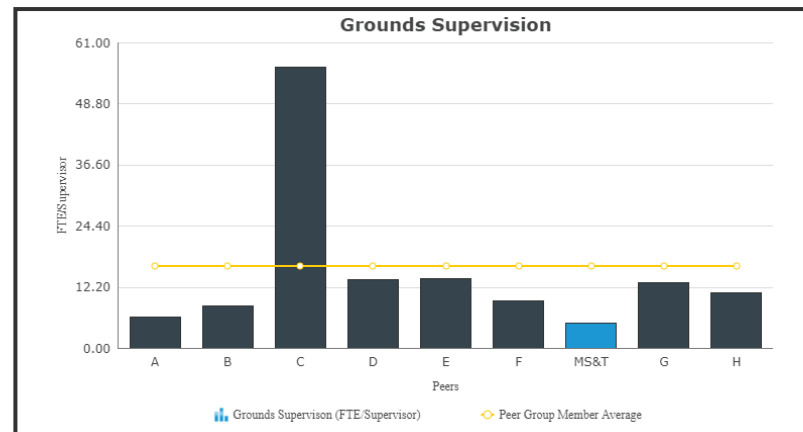
Campus Custodial Supervisor Staffing



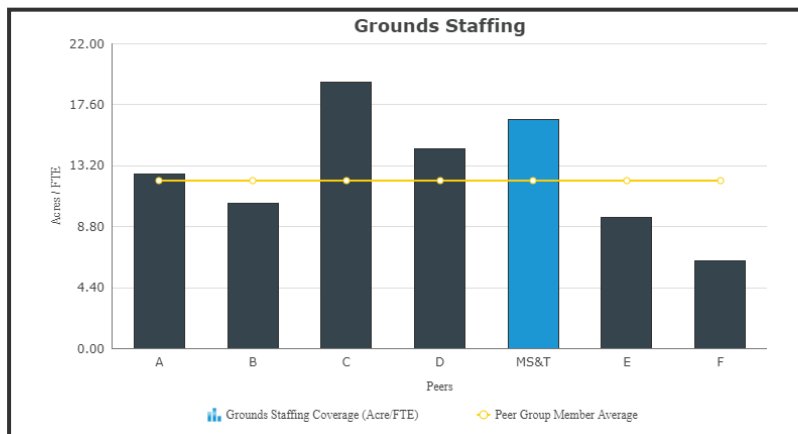
Campus Sightline Peer Comparators



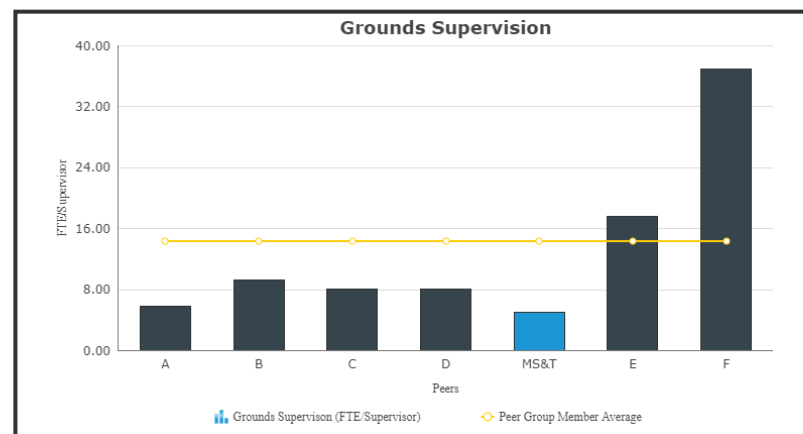
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

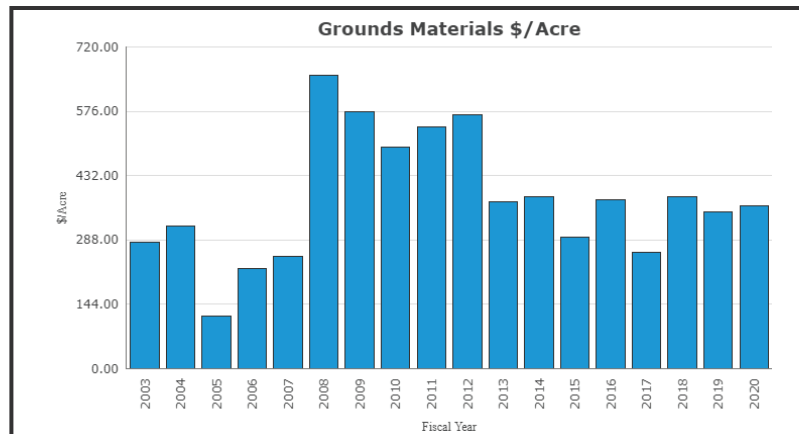
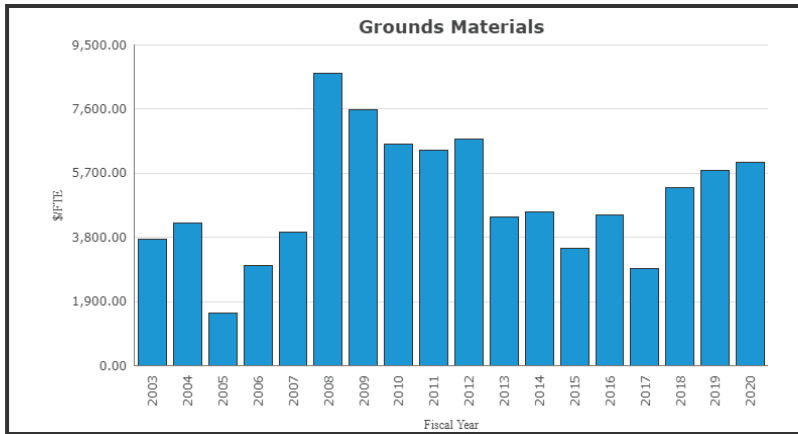


Facility Operations Outsourced Peer Comparators



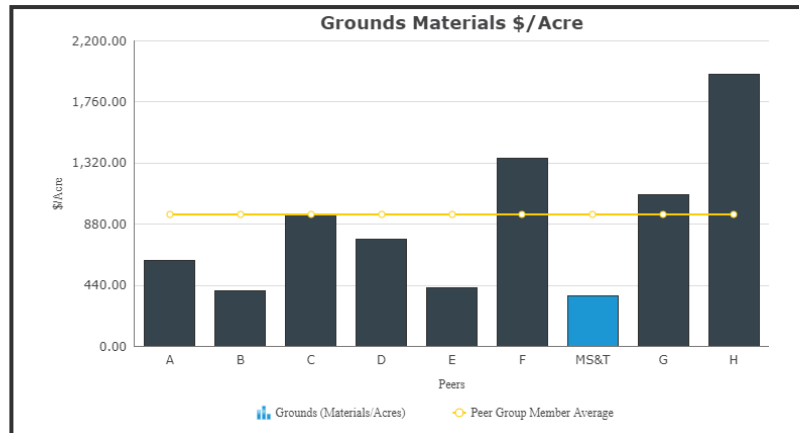
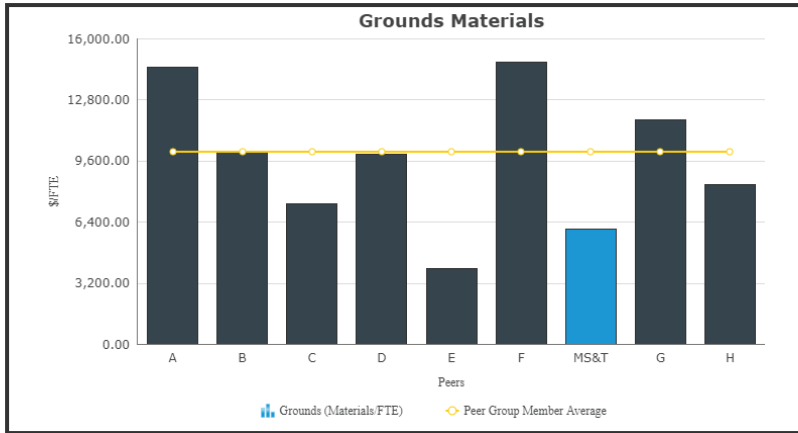
Campus - Grounds Materials Performance Indicators

Campus Grounds Materials



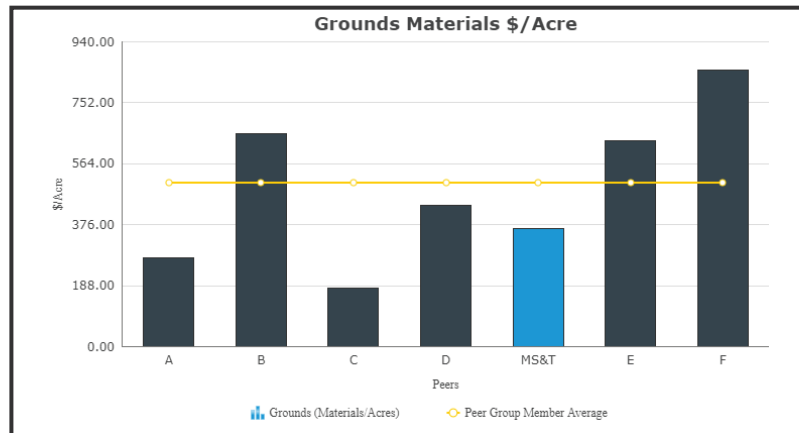
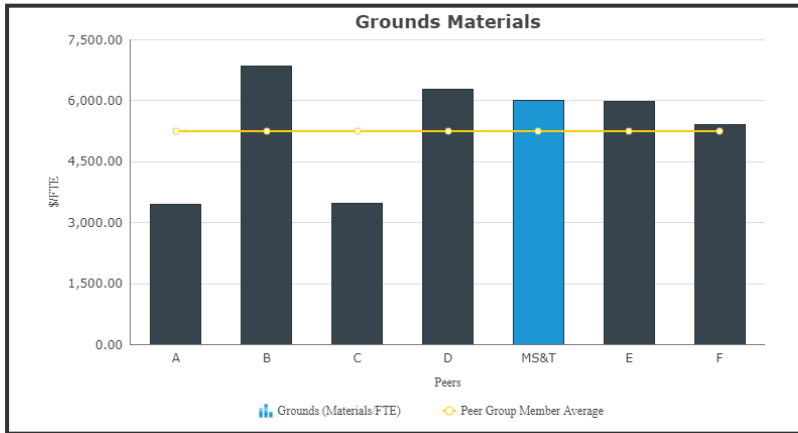
Campus Grounds Materials \$/GSF

Campus Sightline Peer Comparators



Sightline Peer Comparators

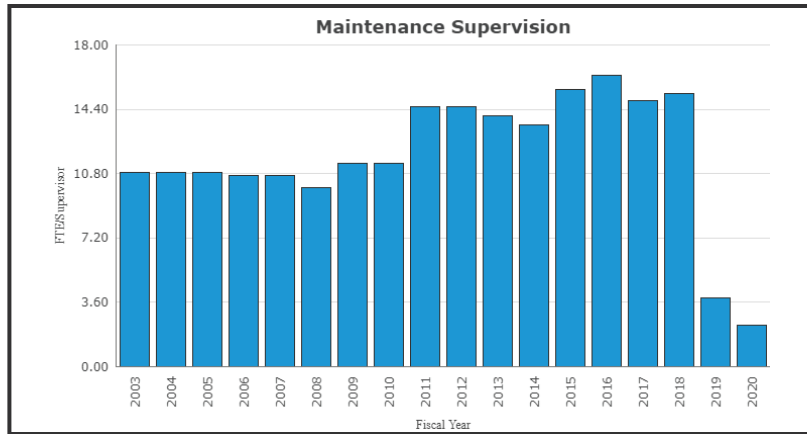
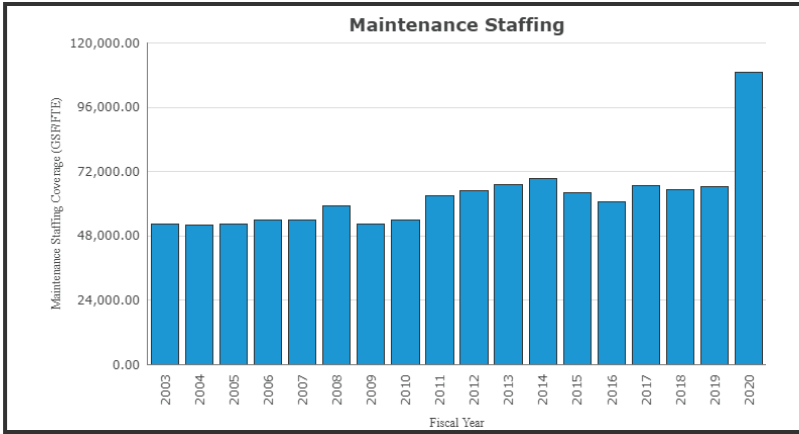
Facility Operations Outsourced Peer Comparators



Facility Operations Outsourced Peer Comparators

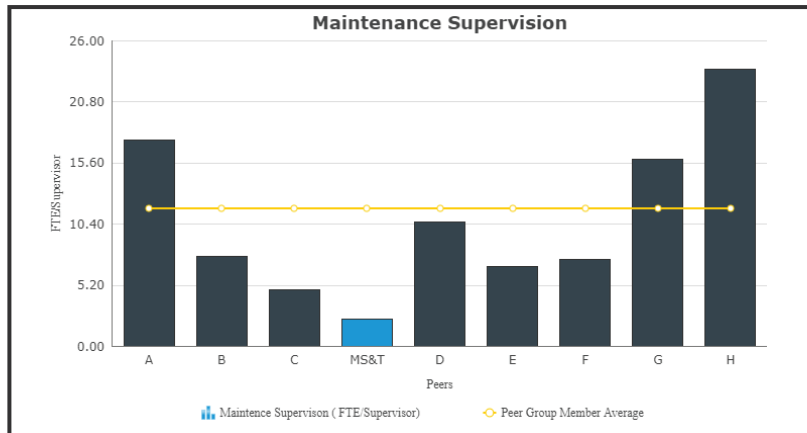
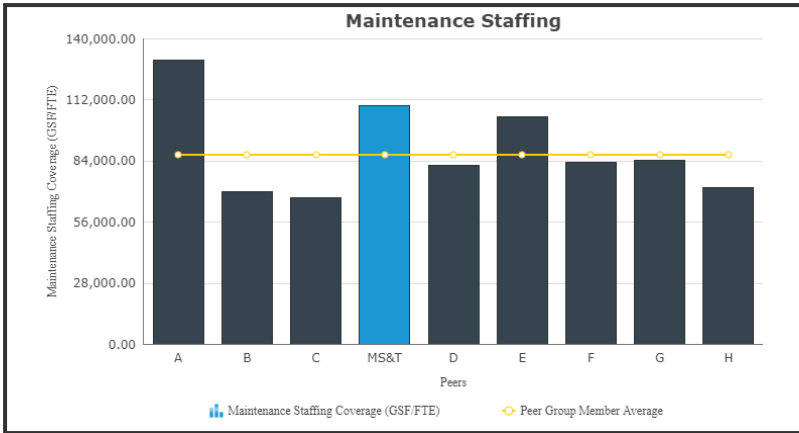
Campus - Maintenance Staffing/Supervisor Performance Indicators

Campus Custodial Staffing



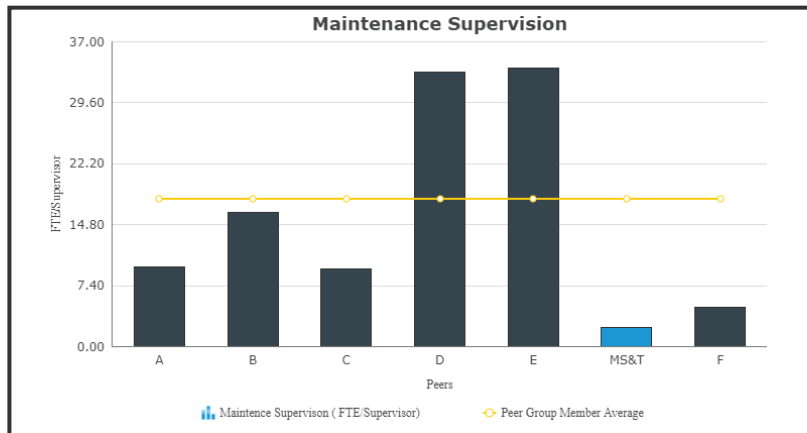
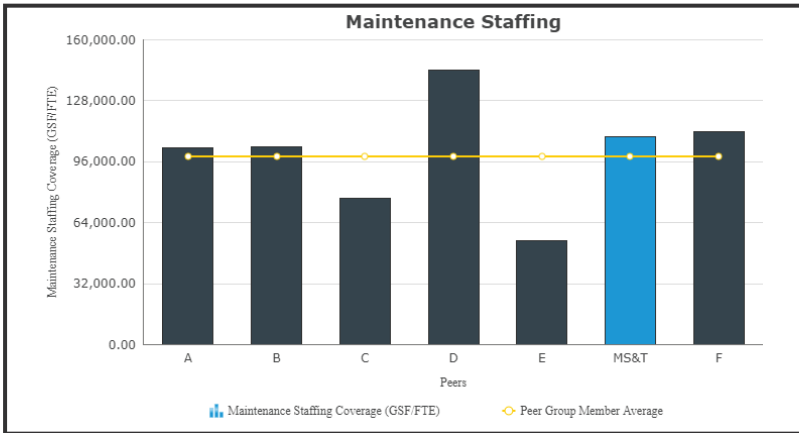
Campus Custodial Supervisor Staffing

Campus Sightline Peer Comparators



Sightline Peer Comparators

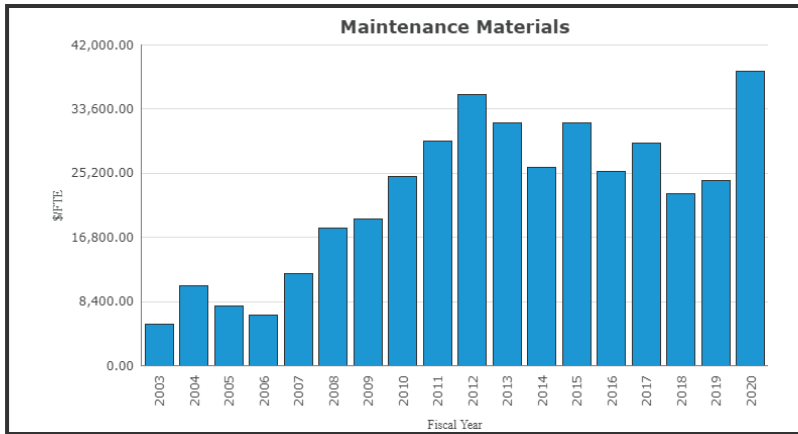
Facility Operations Outsourced Peer Comparators



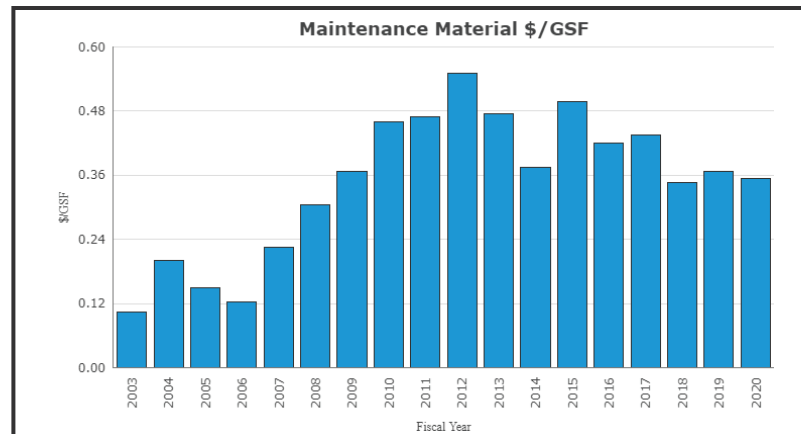
Facility Operations Outsourced Peer Comparators

Campus - Maintenance Materials Performance Indicators

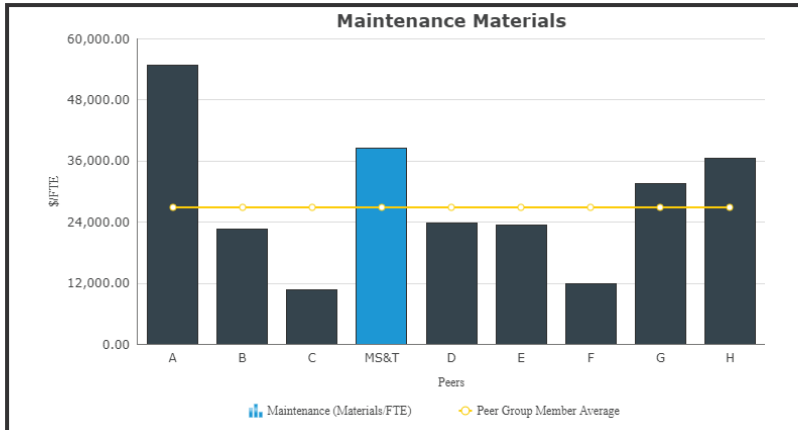
Campus Maintenance Materials



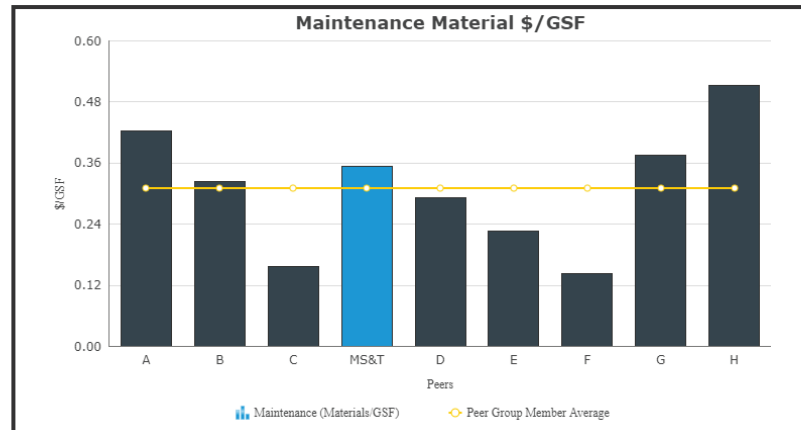
Campus Materials \$/GSF



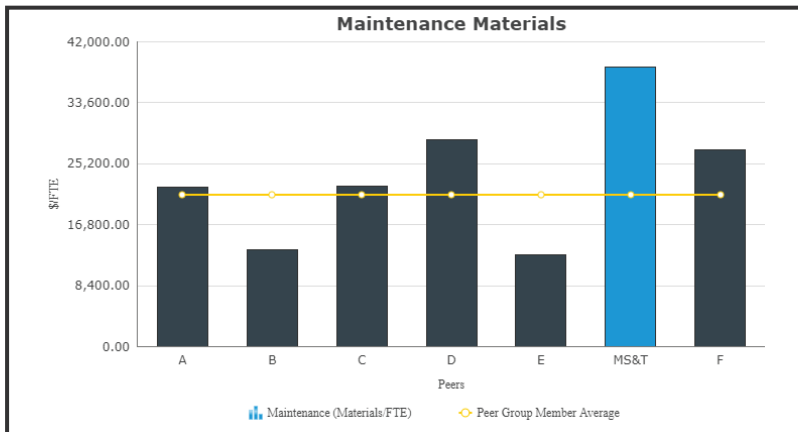
Campus Sightline Peer Comparators



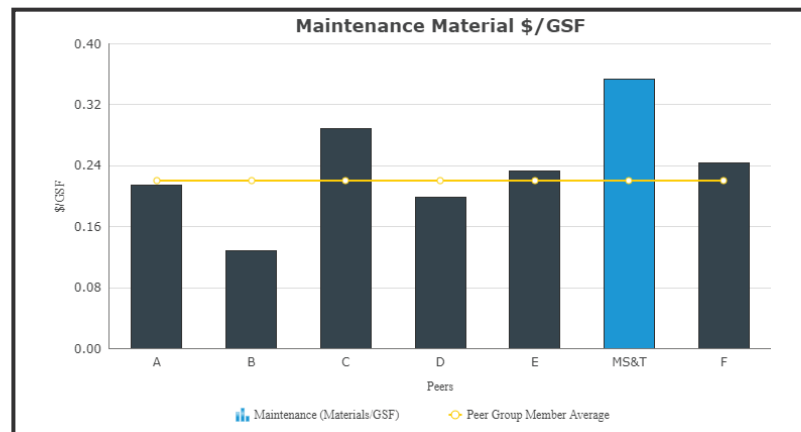
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

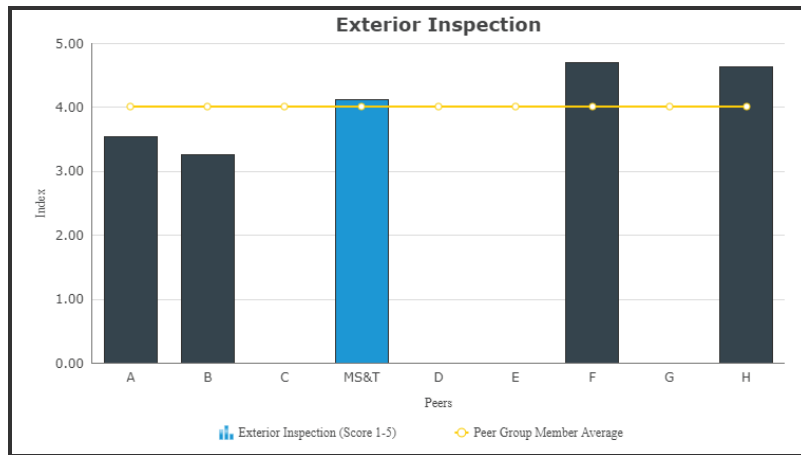


Facility Operations Outsourced Peer Comparators

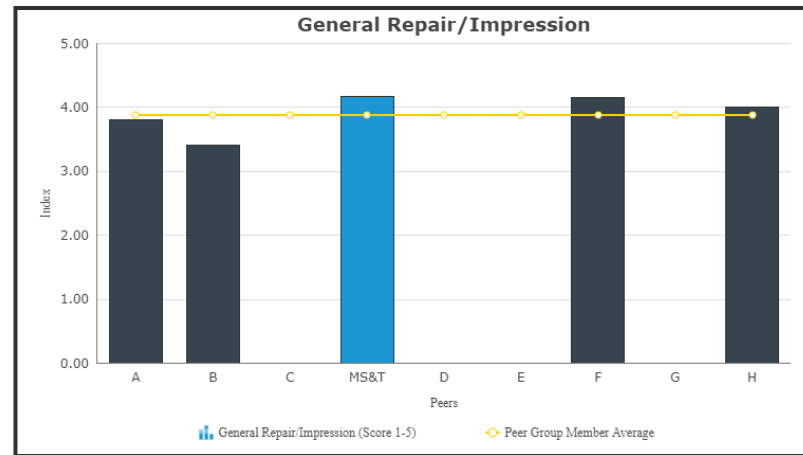


S&T - Campus Service Impressions with Peer Comparators

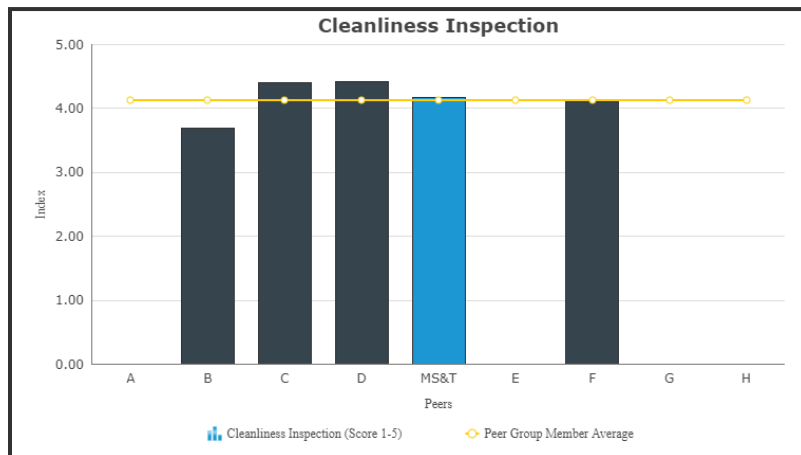
Exterior Inspection



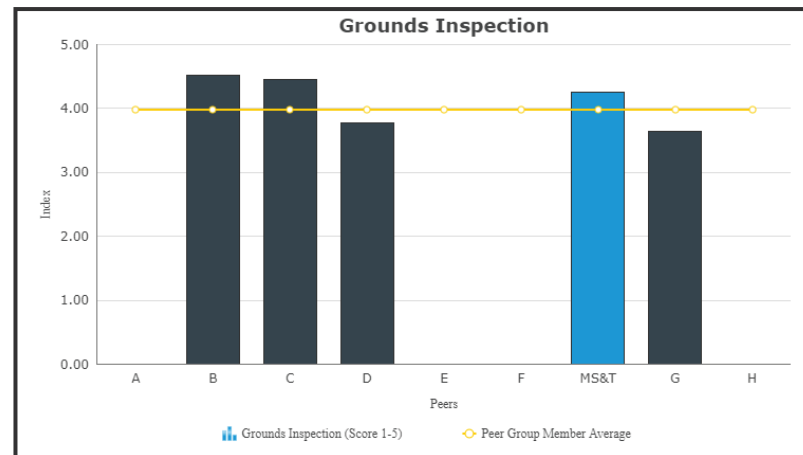
General Repair/Impression



Cleanliness Inspection



Grounds Inspection



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- **Grounds Inspection (%)** - An evaluation of grounds appearance including plantings, turf, fixtures, and walkways, rated on a scale of 0-4.

University of Missouri - St. Louis

Campus Profile

- 7,013 FTE students
- 2,771,404 gross square feet maintained
- 53,000 feet of Domestic Water Distribution
- 14,000 feet of Domestic Water Plant Fire Water
- 10,000 feet of Chilled Water Distribution
- 65,000 feet of Storm Sewer
- 32,000 feet of Sanitary Sewer
- 45,000 feet of Electric Distribution
- 59,000 feet of Data Distribution
- 25,000 feet of Video Distribution
- 23,000 feet of Telephone Distribution
- 1 Electric Substation
- 24,000 feet of Natural Gas Distribution

Sightlines Peer

Comparator Institutions:

- Bloomsburg University of PA
- Edinboro University of PA
- Jackson State University - E&G
- Kutztown University of PA
- Millersville University of PA
- Missouri University of Science and Technology
- Portland State University - E&G
- University of Massachusetts - Dartmouth
- University of Missouri - Kansas City
- West Chester University of PA

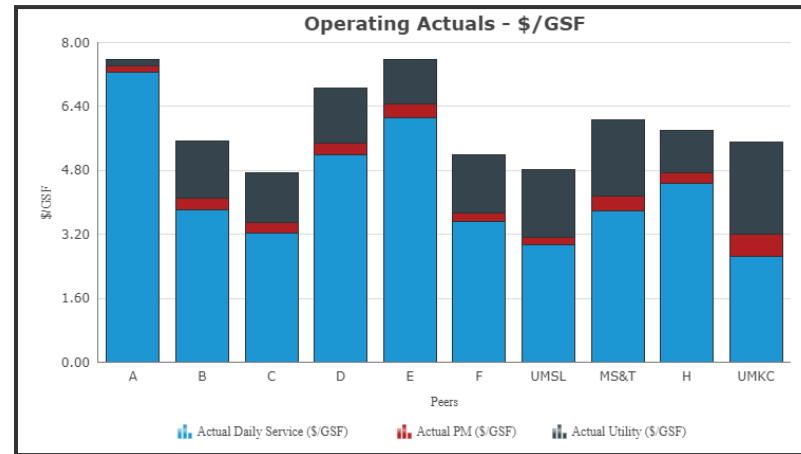
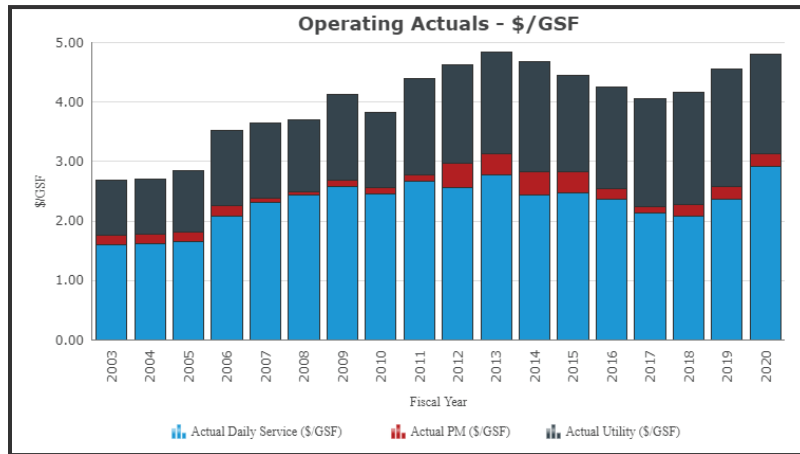
Sightlines Outsourced

Comparator Institutions:

- Chapman University
- Drew University
- Jackson State University
- Lewis & Clark College
- Nova Southeastern University
- Saint Mary's College of California
- The Catholic University of America
- Widener University

UMSL - Operating Expense Summary

Operating Expense Summary	2016	2017	2018	2019	2020
Total Daily Service	\$5,997,232	\$5,708,222	\$5,748,286	\$6,523,660	\$8,081,827
Planned Maintenance	\$491,968	\$319,757	\$543,436	\$591,670	\$576,850
Utilities(Electric, Water, Etc.)	\$4,581,292	\$5,092,149	\$5,197,279	\$5,454,261	\$4,586,200
Total	\$11,070,492	\$11,120,128	\$11,489,001	\$12,569,591	\$13,244,877
Cost per GSF	\$4.25	\$4.06	\$4.16	\$4.54	\$4.80



Operating Actual Expense

Facilities Operating Actuals with Peer Comparators

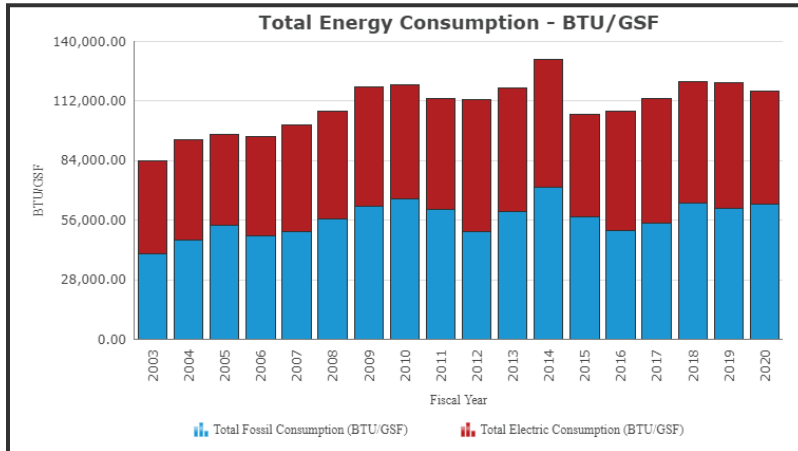
The Facilities Operating Budget Actuals Benchmark analyzes the amount spent each year to operate campus physical assets and the department that maintains them.

- **Daily Service:** Materials, labor costs, service contracts, office expense, etc. associated with the regular maintenance, cleaning and grounds keeping of the campus.
- **Planned Maintenance:** Materials, labor costs, service contracts, etc. that enhance or extend the useful life of campus buildings and components. Some examples include changing belts and filters on HVAC equipment, elevator service contracts, sprinkler and fire alarm system testing/maintenance contracts, etc.
- **Utilities:** The procurement of utility commodities, i.e. natural gas, oil, steam, electricity, water/sewer, etc. NOTE - Utilities costs do not include institutionally held people costs, plant operations or service contracts of utility systems.

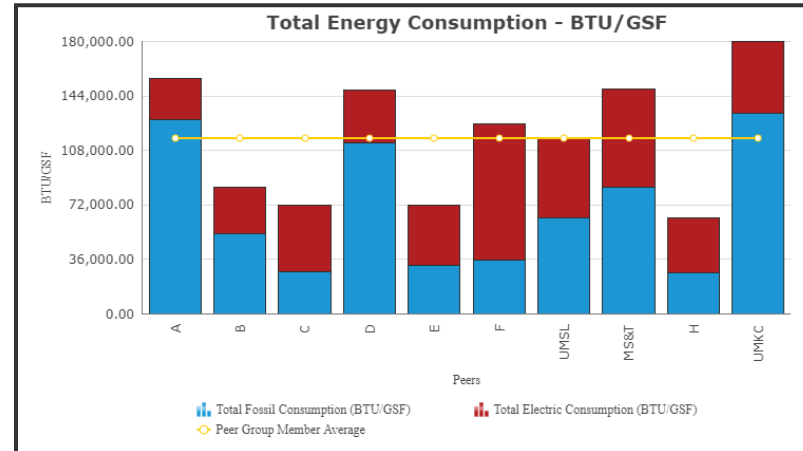
UMSL - Energy Consumption & Expense Summary

Energy Consumption & Expense Summary	2016	2017	2018	2019	2020
MMBTU Used	293,663	326,058	338,111	338,291	324,795
Cost	\$4,127,322	\$3,802,972	\$3,792,884	\$3,794,196	\$3,328,460
Cost/MMBTU	\$14.05	\$11.66	\$11.22	\$11.22	\$10.25
BTU/GSF	107,041	113,004	120,818	120,524	116,263

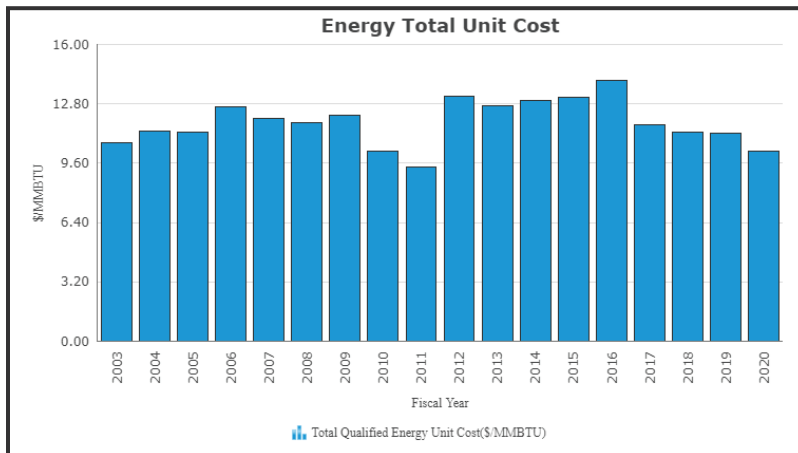
Campus Energy Consumption



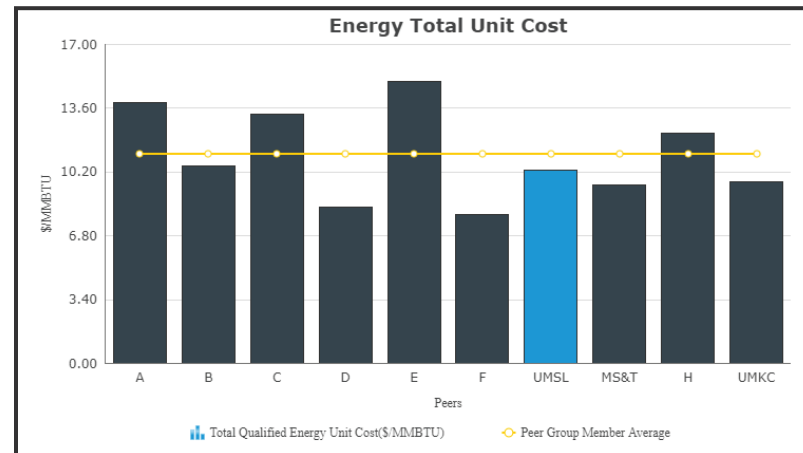
Peer Comparators Energy Consumption



Campus Energy Unit Cost



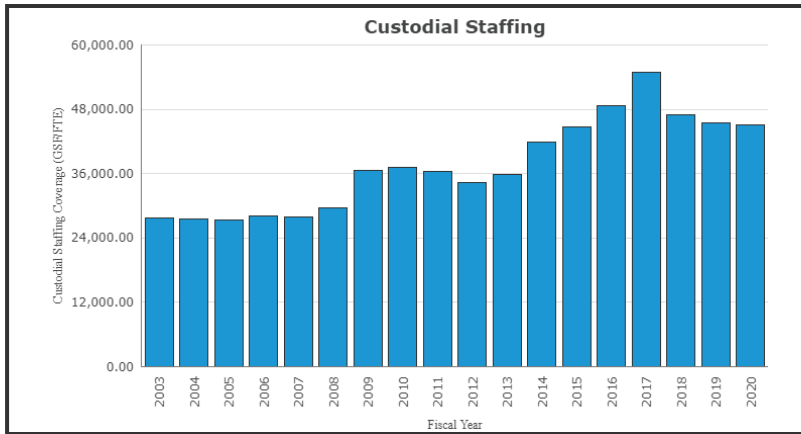
Peer Energy Unit Cost



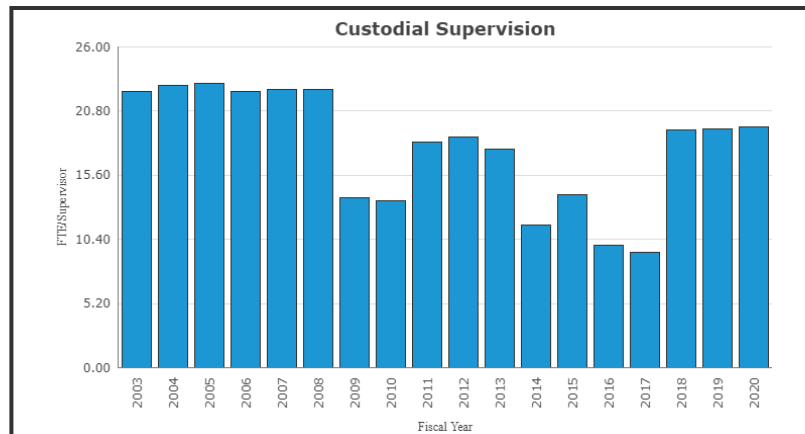
- **Energy Consumption (BTU/GSF):** The sum of fossil and electric BTU's per square foot the campus consumes each year. Energy consumption is influenced by many factors including region/climate, type of institution, technical complexity, utility systems, campus backlog, etc.
- **Energy Total Unit Cost (\$/MMBTU):** The composite cost for an MMBTU of energy; includes electricity and all fossil fuels. Region and type of utility system (centralized, independent, co-generation, etc.) greatly influence unit cost.

Campus - Custodial Staffing/Supervisor Performance Indicators

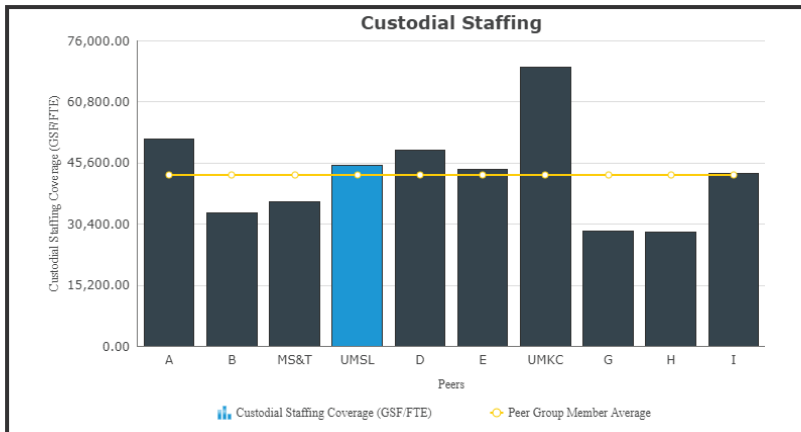
Campus Custodial Staffing



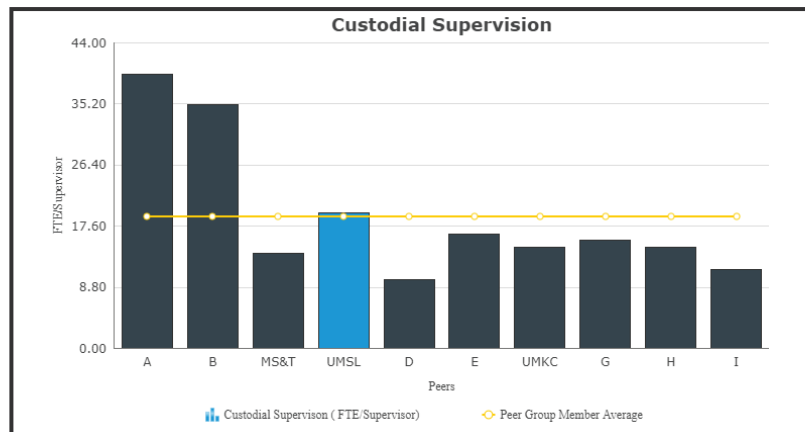
Campus Custodial Supervisor Staffing



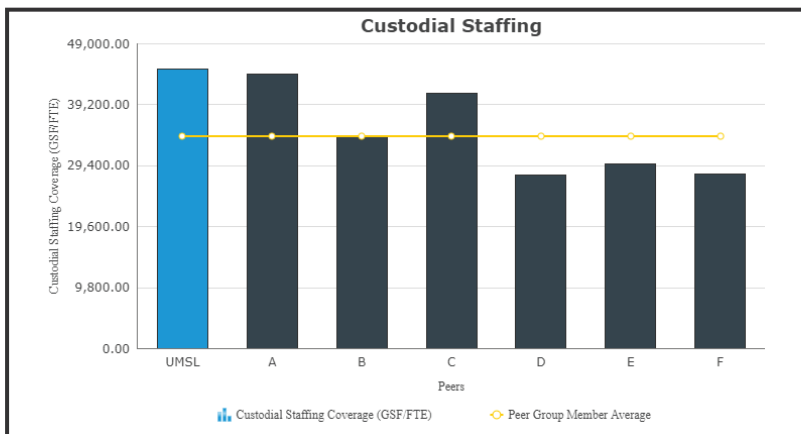
Campus Sightline Peer Comparators



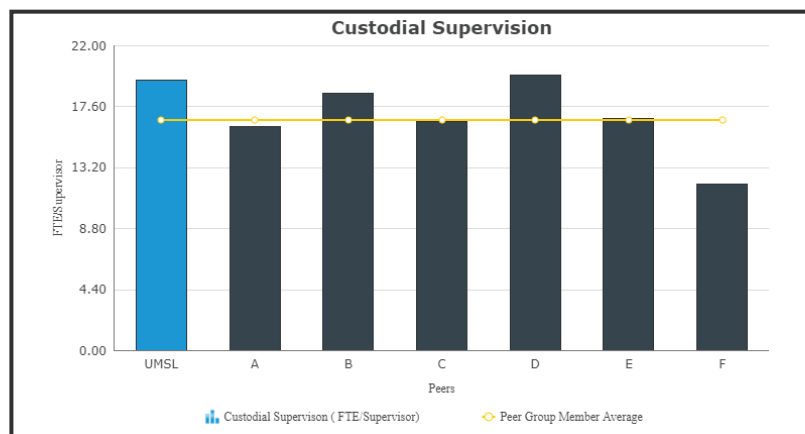
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

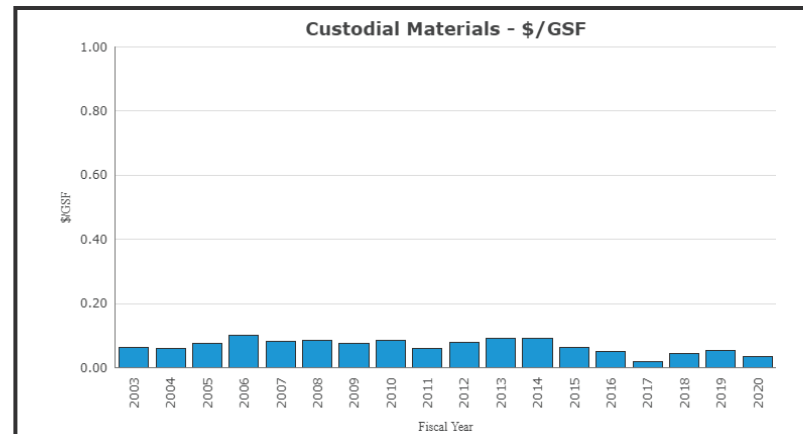
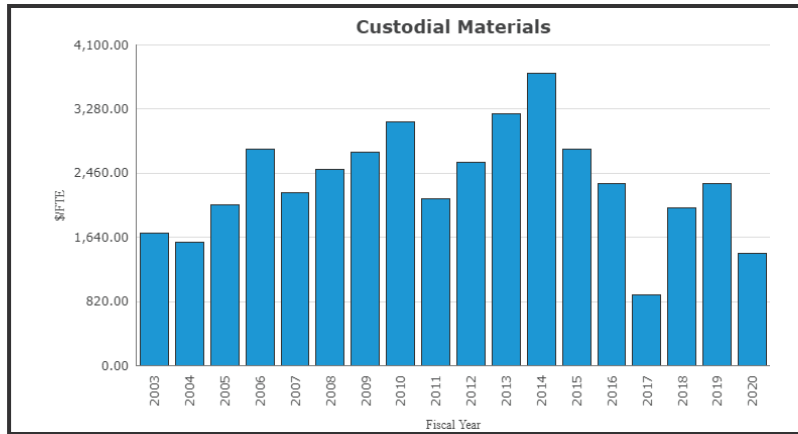


Facility Operations Outsourced Peer Comparators



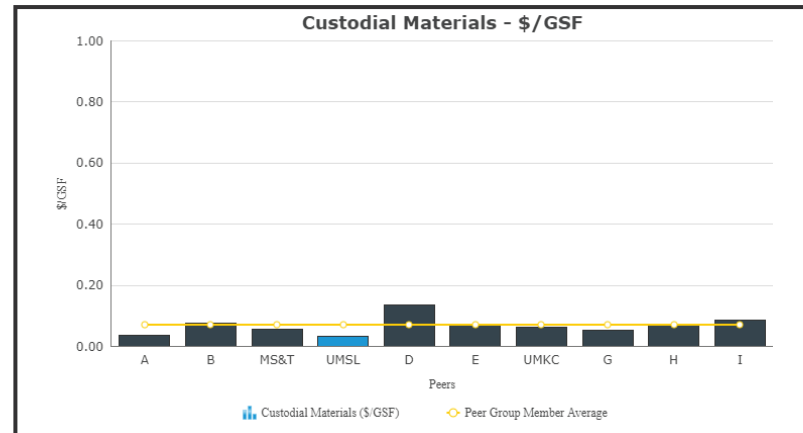
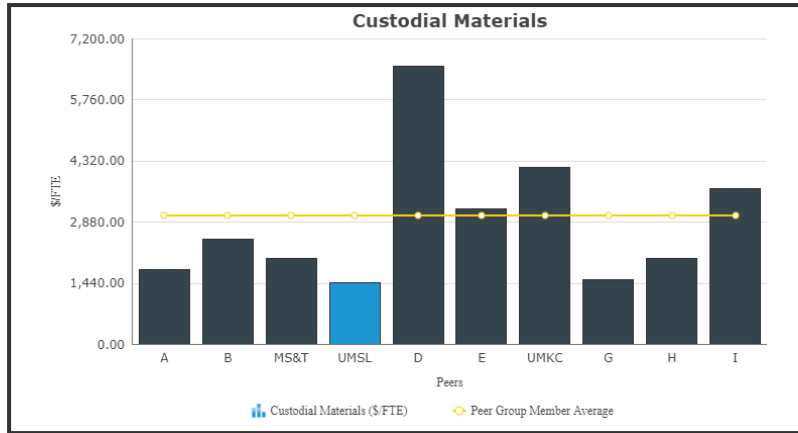
Campus - Custodial Materials Performance Indicators

Campus Custodial Materials



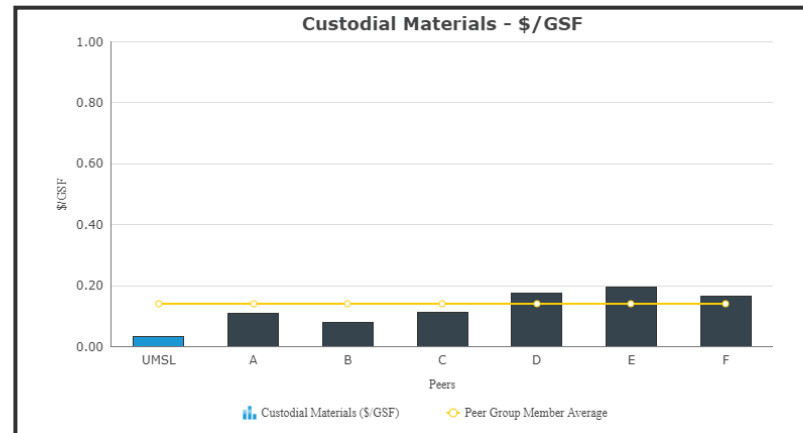
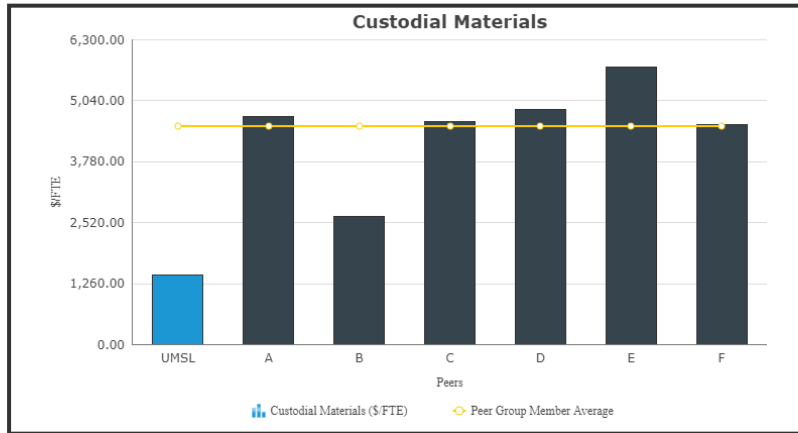
Campus Custodial Materials \$/GSF

Campus Sightline Peer Comparators



Sightline Peer Comparators

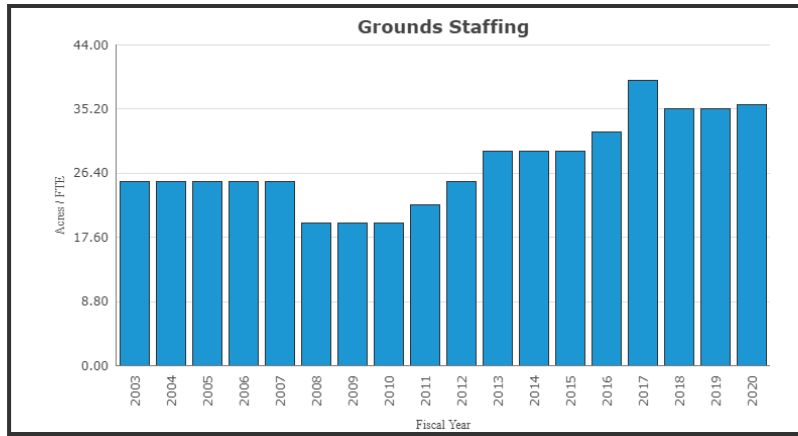
Facility Operations Outsourced Peer Comparators



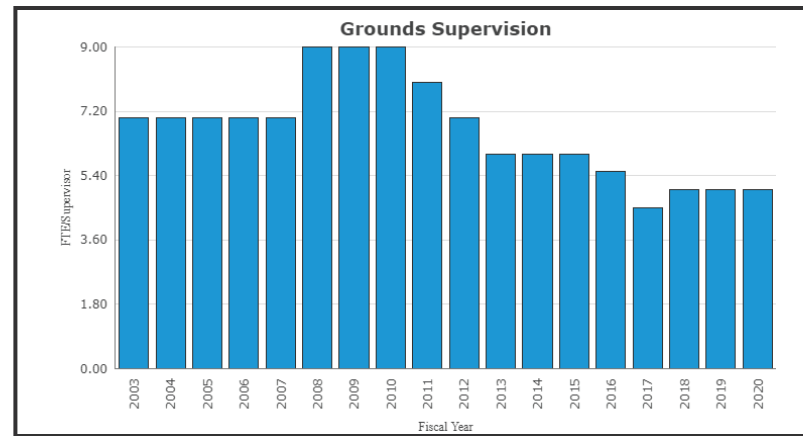
Facility Operations Outsourced Peer Comparators

Campus - Grounds Staffing/Supervisor Performance Indicators

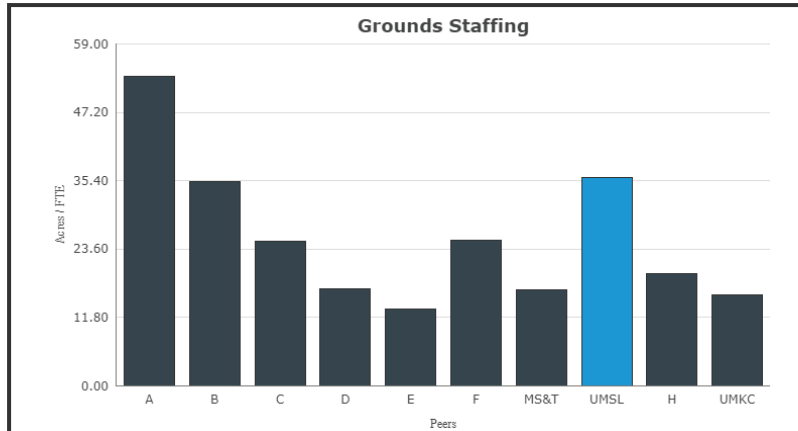
Campus Custodial Staffing



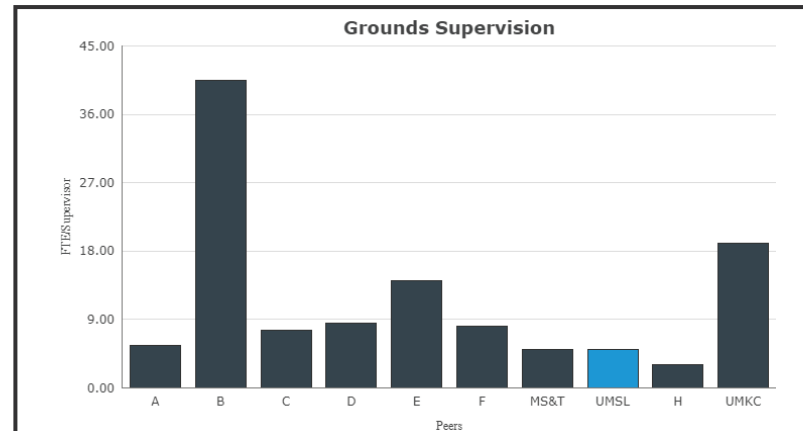
Campus Custodial Supervisor Staffing



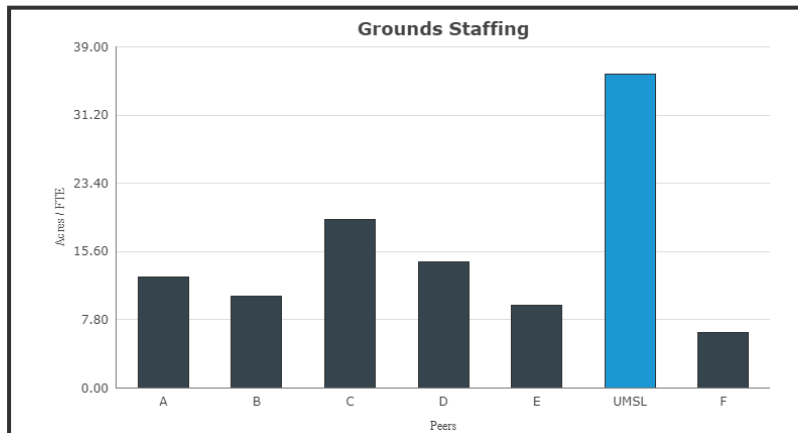
Campus Sightline Peer Comparators



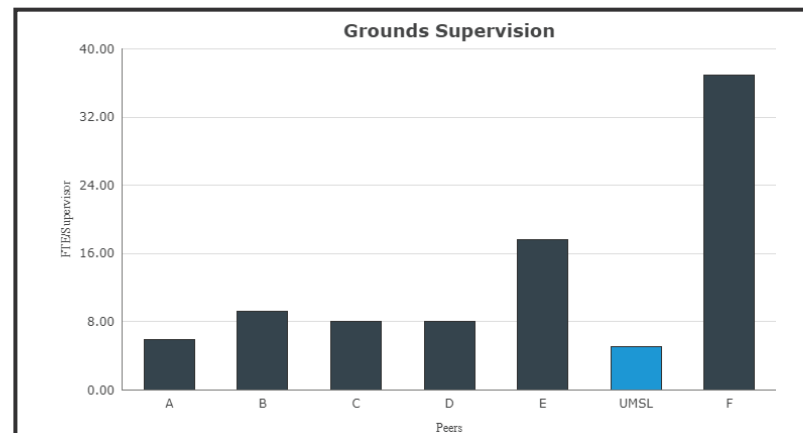
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

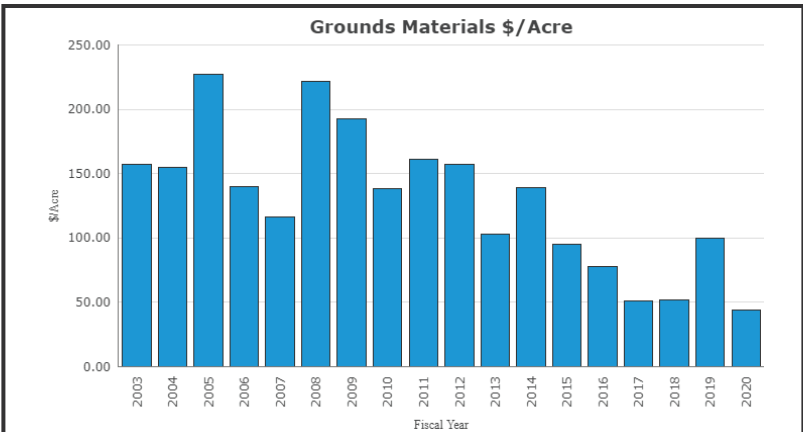
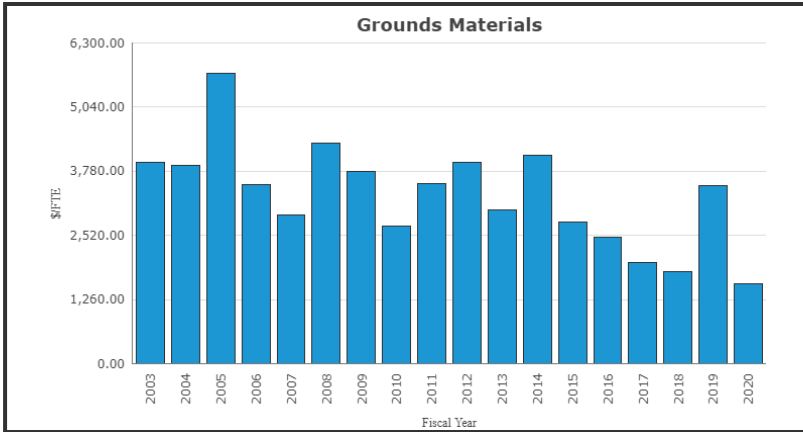


Facility Operations Outsourced Peer Comparators



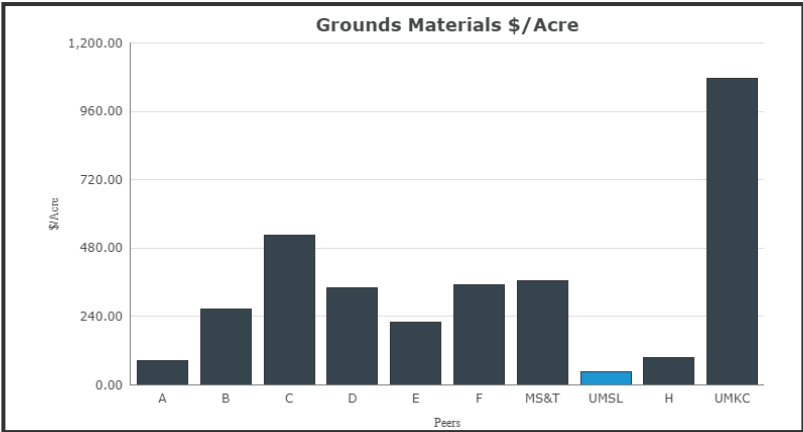
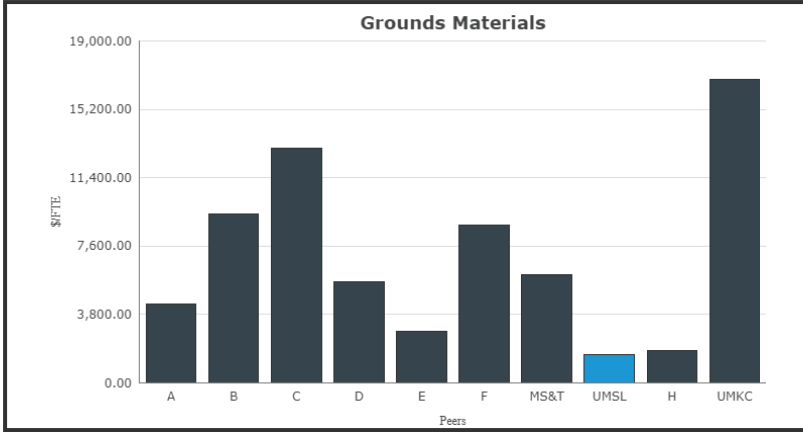
Campus - Grounds Materials Performance Indicators

Campus
Grounds
Materials



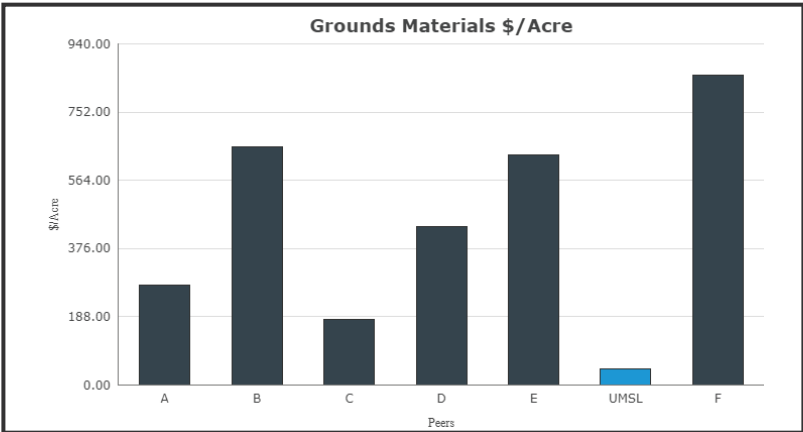
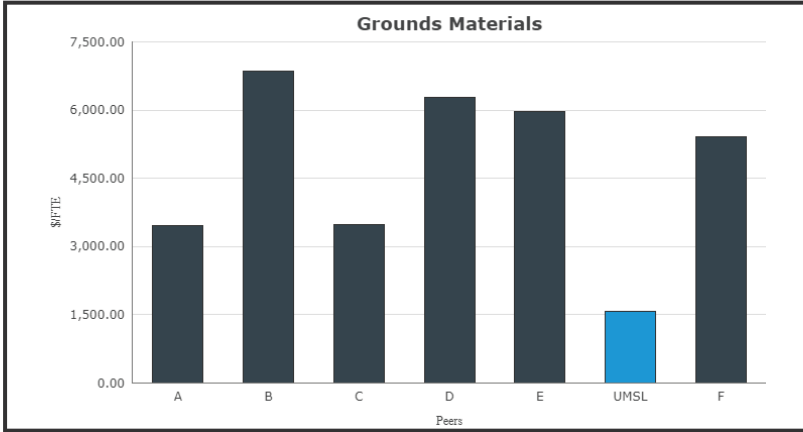
Campus
Grounds
Materials \$/GSF

Campus
Sightline Peer
Comparators



Sightline Peer
Comparators

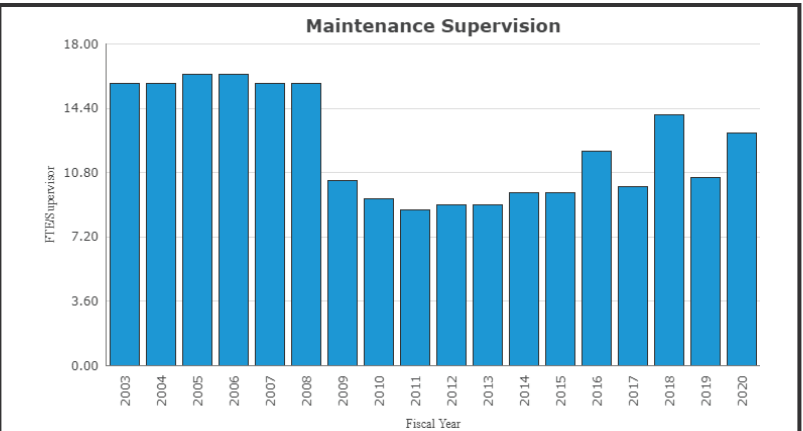
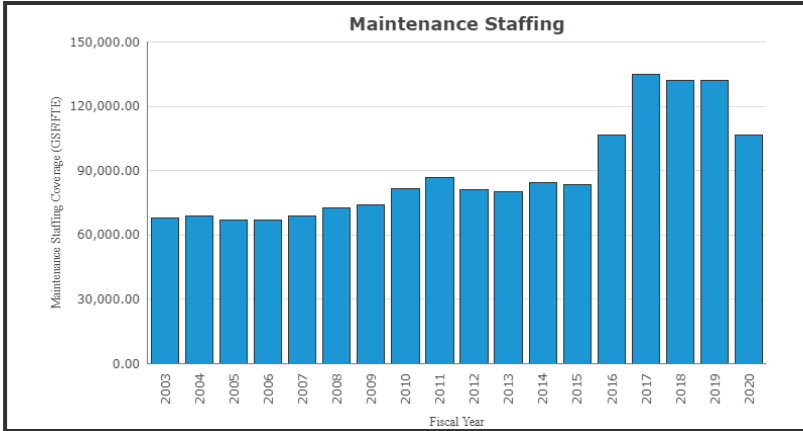
Facility
Operations
Outsourced
Peer
Comparators



Facility
Operations
Outsourced
Peer
Comparators

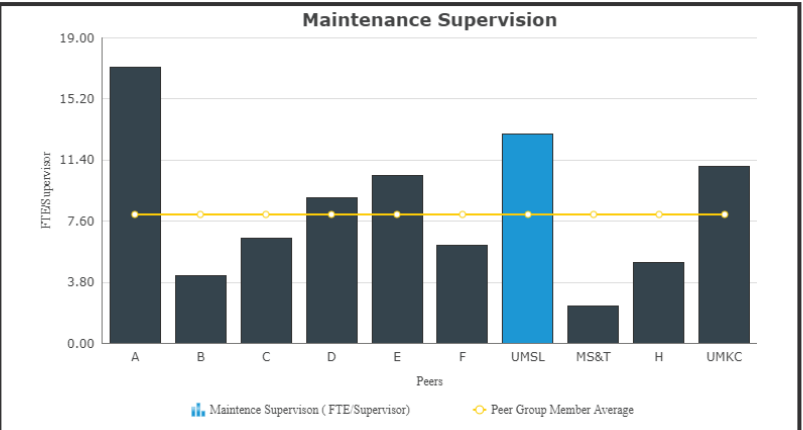
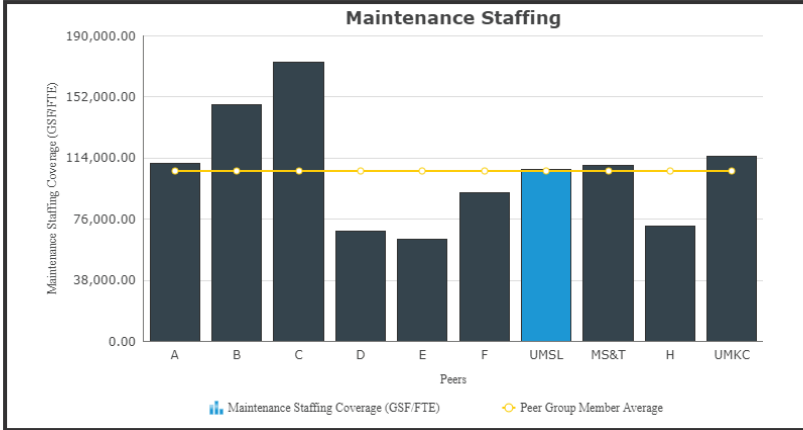
Campus - Maintenance Staffing/Supervisor Performance Indicators

Campus Custodial Staffing



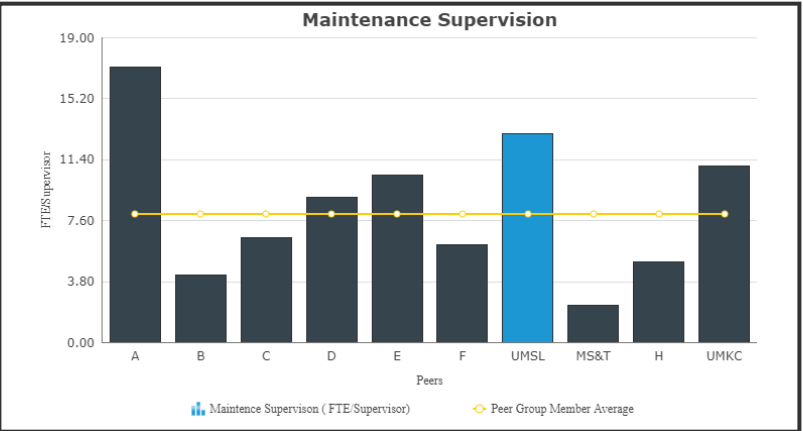
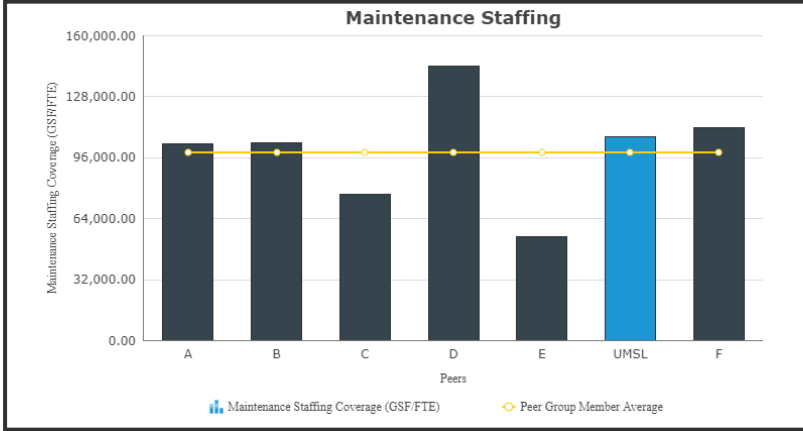
Campus Custodial Supervisor Staffing

Campus Sightline Peer Comparators



Sightline Peer Comparators

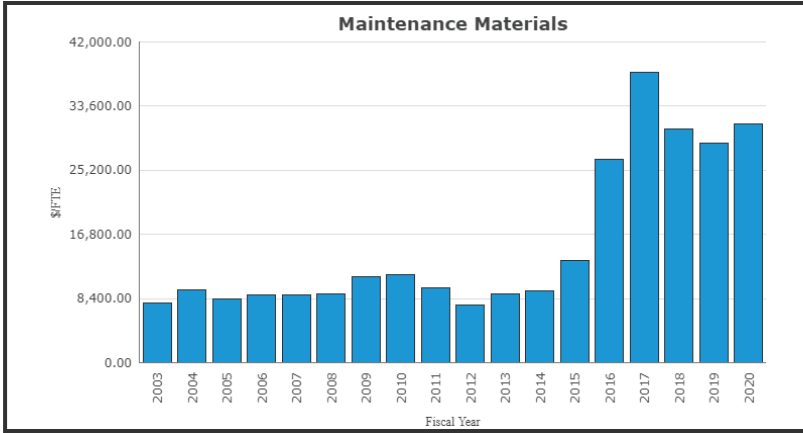
Facility Operations Outsourced Peer Comparators



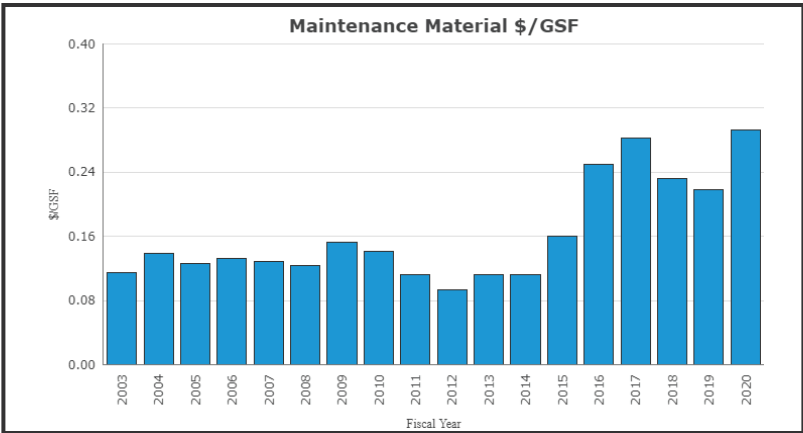
Facility Operations Outsourced Peer Comparators

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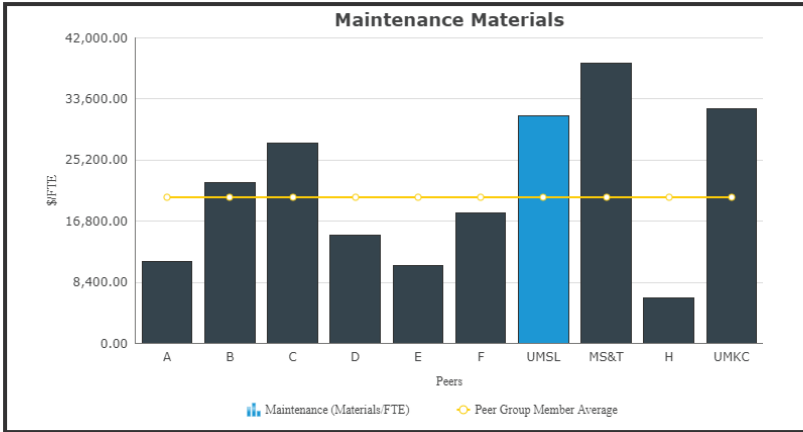
Campus Maintenance Materials



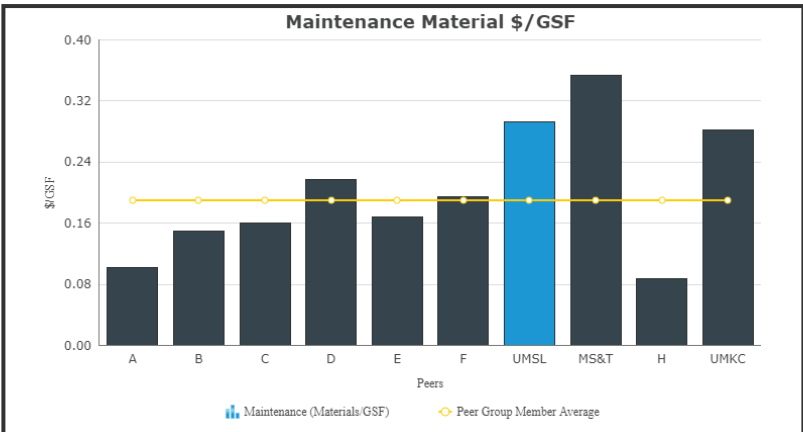
Campus Materials \$/GSF



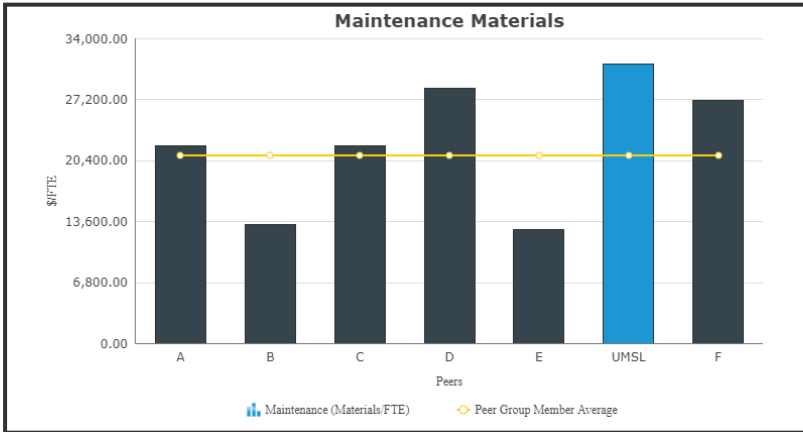
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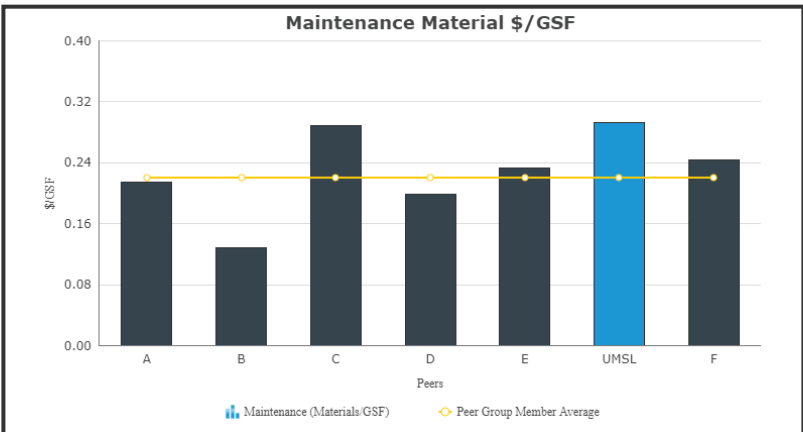
Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

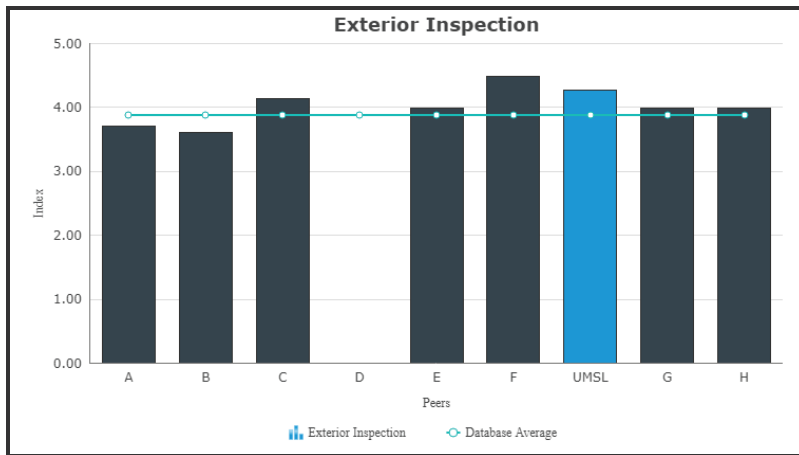


Facility Operations Outsourced Peer Comparators

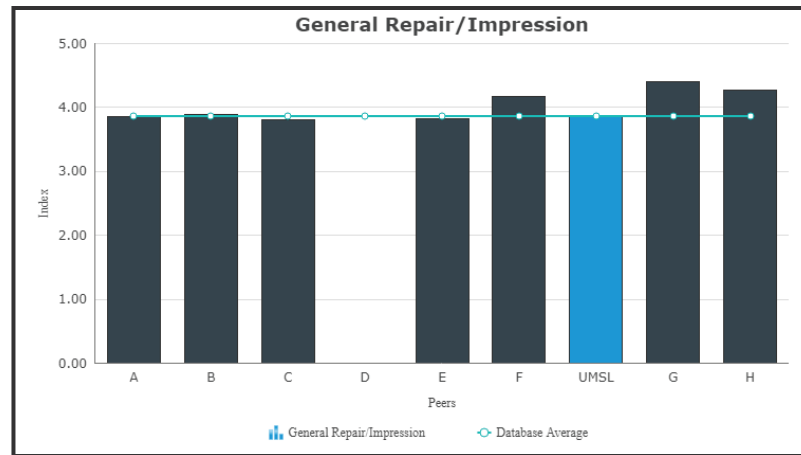


UMSL - Campus Service Impressions with Peer Comparators

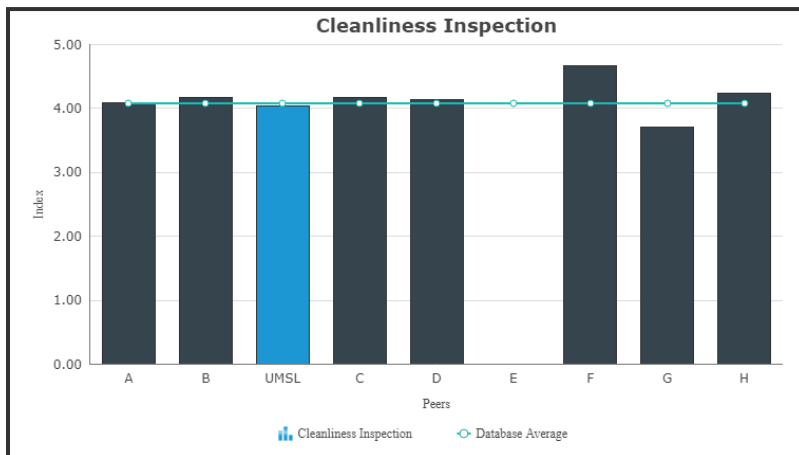
Exterior Inspection



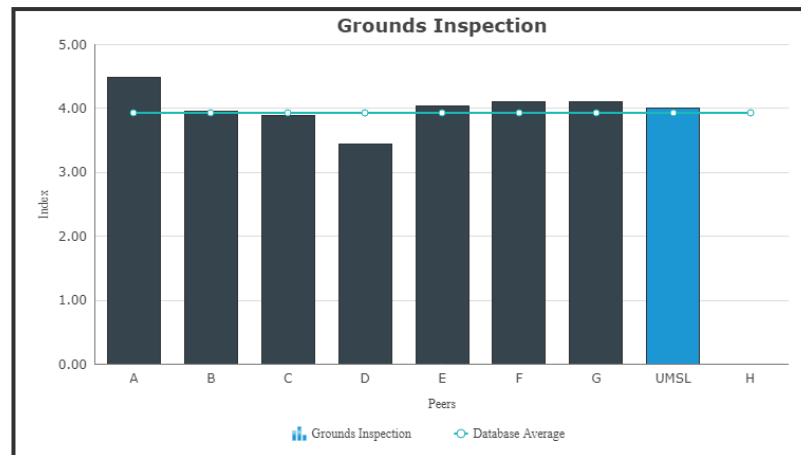
General Repair/Impression



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University of Missouri System

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Division of Finance
Facilities Planning and Development
University of Missouri System

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