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:

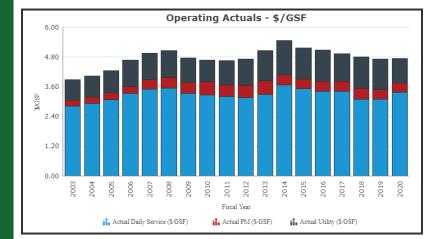
- Northwestern University
- The Pennsylvania State University
- University of Illinois Urbana/Champaign
- University of Iowa General Funds
- University of Maryland College Park
- University of Minnesota Twin Cities
- University of Wisconsin Madison

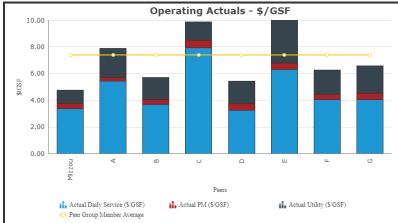
Sightlines Outsourced Comparator Institutions:

- 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





Facilities Operating Actuals with Peer Comparators

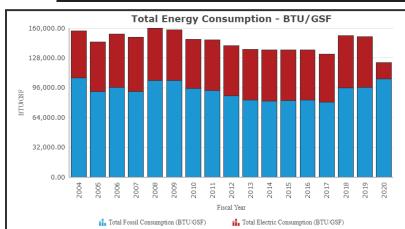
The Facilities Operating Budget Actuals Benchmark analyzes the amount spent each year to operate campus physical assets and the department that maintains them.

- <u>Daily Service</u>: Materials, labor costs, service contracts, office expense, etc. associated with the regular maintenance, cleaning and grounds keeping of the campus.
- <u>Planned Maintenance</u>: 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.
- <u>Utilities</u>: 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.

Operating Actual Expense

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

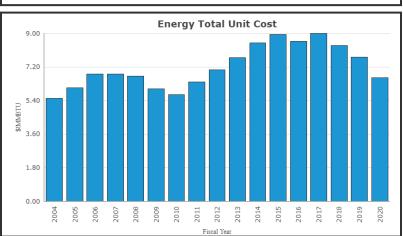
Energy

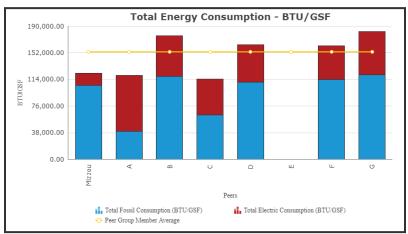
Consumption

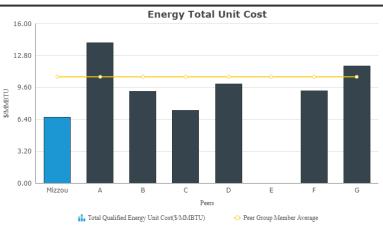
Campus

Energy Unit

Cost





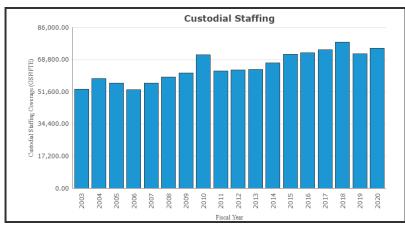


Peer Comparators Energy Consumption

Peer Energy Unit Cost

• <u>Energy Consumption</u> (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.

• <u>Energy Total Unit Cost</u> (\$/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.



Custodial

Staffing

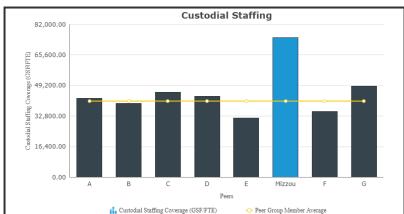
Campus

Sightline Peer

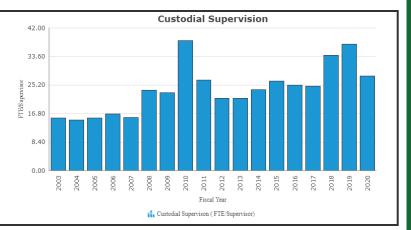
Comparators

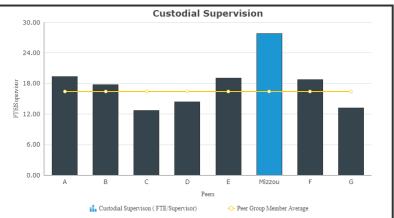
Peer

Campus - Custodial Staffing/Supervisor Performance Indicators



Custodial Staffing 82,000.00 🛱 65,600.00 49,200.00 Facility Operations Outsourced 32,800.00 Comparators 0 16,400.00 0.00 В С D А Mizzou Е F Peers 🚹 Custodial Staffing Coverage (GSF/FTE) 🔶 Peer Group Member Average





Campus Custodial Supervisor Staffing

Sightline Peer Comparators

Custodial Supervision 30.00 24.00 3 18.00 SH 12.00 6.00 0.00 А Mizzou В С D E F Peers 📊 Custodial Supervison (FTE/Supervisor) 📀 Peer Group Member Average



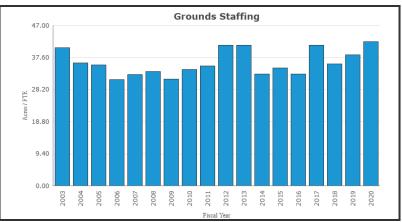
Campus - Custodial Materials Performance Indicators

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Comparators

Campus Sightline Peer Comparators

Peer



Custodial

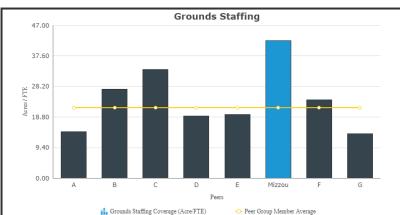
Staffing

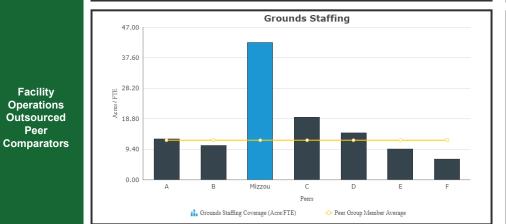
Campus

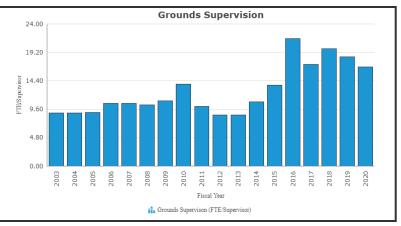
Sightline Peer

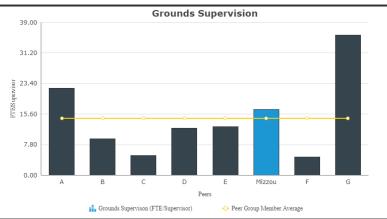
Comparators

Campus - Grounds Staffing/Supervisor Performance Indicators







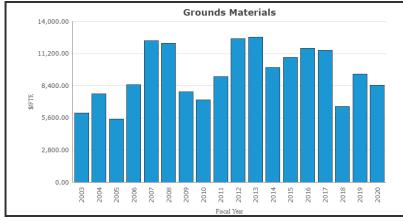


Custodial Supervisor Staffing

Campus

Sightline Peer Comparators

Grounds Supervision 40.00 32.00 24.00 FTE/S 16.00 8.00 0.00 Δ В Mizzou С D E F Peers 🚮 Grounds Supervison (FTE/Supervisor) ↔ Peer Group Member Average



Grounds

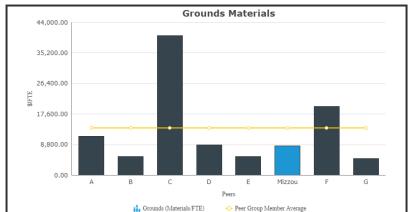
Materials

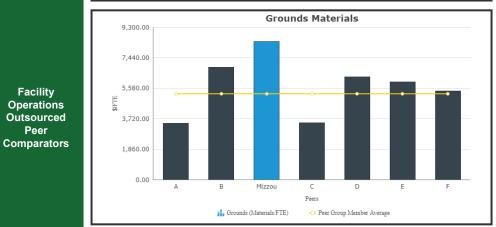
Campus

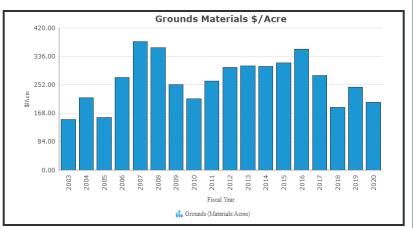
Sightline Peer

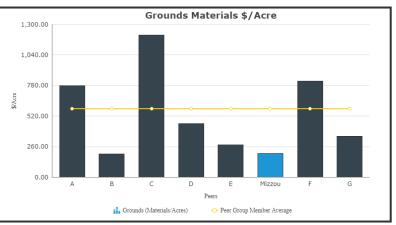
Comparators

Campus - Grounds Materials Performance Indicators







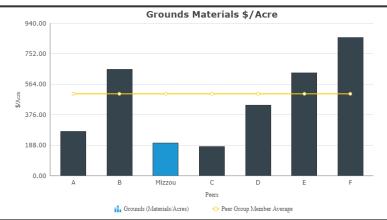


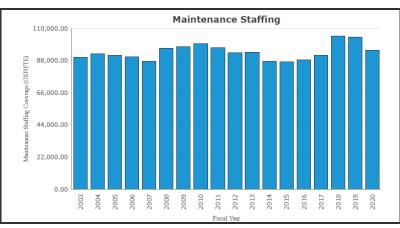
Campus

Grounds

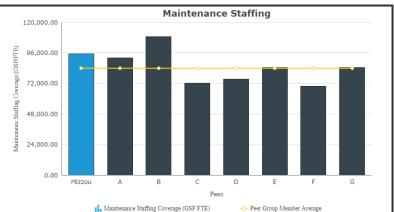
Materials \$/GSF

Sightline Peer Comparators

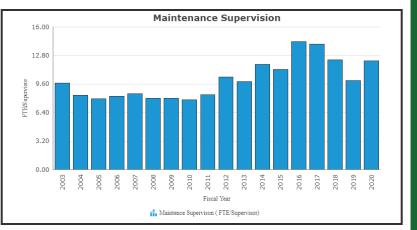


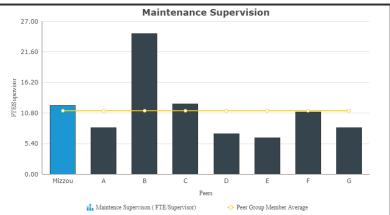


Campus - Maintenance Staffing/Supervisor Performance Indicators



Maintenance Staffing 160,000.00 £ 128,000.00 96,000.00 64,000.00 32,000.00 0.00 С D А В E Mizzou F Peers 📊 Maintenance Staffing Coverage (GSF/FTE) 🔶 Peer Group Member Average





Campus

Custodial

Supervisor

Staffing

Sightline Peer Comparators

Maintenance Supervision 37.00 29.60 g 22.20 FTESS 14.80 7.40 0.00 А В С D Е Mizzou F Peers Maintence Supervison (FTE/Supervisor) ↔ Peer Group Member Average

Facility Operations Outsourced Peer Comparators

Facility Operations Outsourced Peer Comparators

Campus

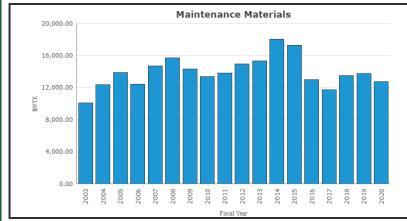
Custodial

Staffing

Campus

Sightline Peer

Comparators



Maintenance

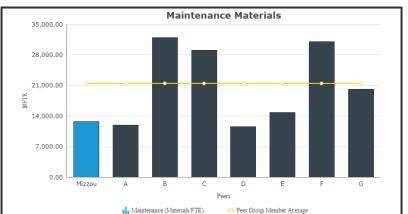
Materials

Campus

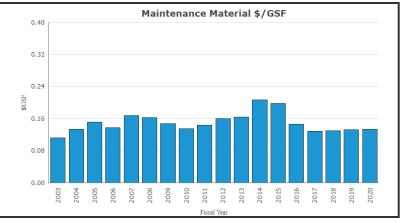
Sightline Peer

Comparators

Campus - Maintenance Materials Performance Indicators



Maintenance Materials 31,000.00 24,800.00 18,600.00 Facility \$/FTE Operations Outsourced 12,400.00 Peer Comparators 6,200.00 0.00 А В С D Mizzou Е F Peers Maintenance (Materials/FTE) ↔ Peer Group Member Average

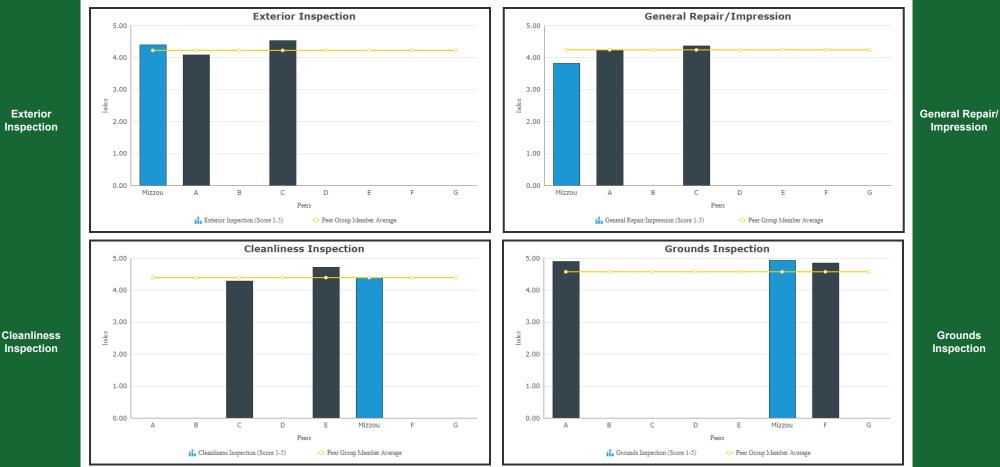


Maintenance Material \$/GSF 0.50 0.40 0.30 \$/GSF 0.20 0.10 0.00 Mizzou А В С D Е F G Peers Maintenance (Materials/GSF) 📀 Peer Group Member Average

Campus Materials \$/GSF

Sightline Peer Comparators

Maintenance Material \$/GSF 0.40 0.32 0.24 SIGSF 0.16 0.08 0.00 А В С D Е Mizzou F Peers Maintenance (Materials/GSF) ↔ Peer Group Member Average



MU - Campus Service Impressions with Peer Comparators

Exterior

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 ٠ 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:

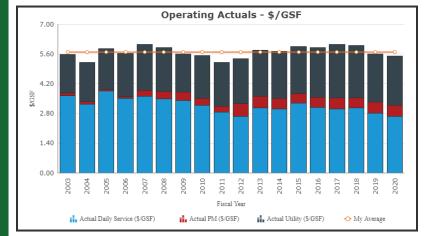
- Indiana Univ. Purdue Univ. Indianapolis
- The University of Alabama at Birmingham
- University of Arkansas
- University of Central Florida
- University of Missouri St. Louis
- Virginia Commonwealth University
- Washburn University
- Wayne State University

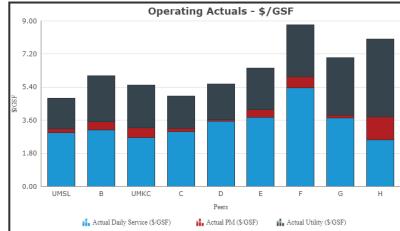
Sightlines Outsourced Comparator Institutions:

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

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





Facilities

Operating

Actuals with

Peer

Comparators

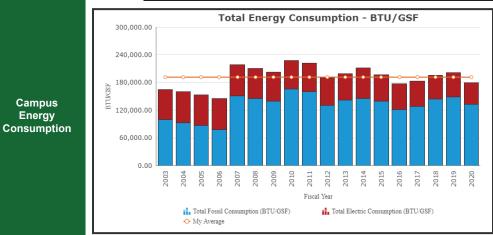
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Operating Actual Expense

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



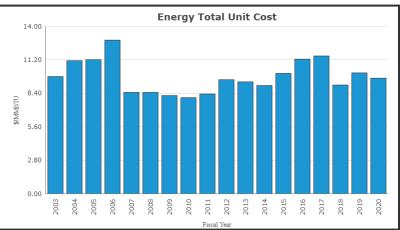
Campus

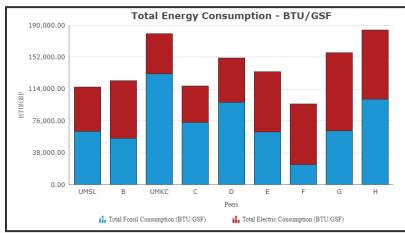
Energy

Campus

Energy Unit

Cost





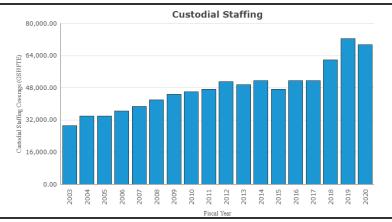
Energy Total Unit Cost 23.00 18.40 13.80 \$?MMBTU 9.20 4.60 0.00 UMSL В UMKC С D Е F G Н Peers

Peer Comparators Energy Consumption

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 ٠ 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 ٠ system (centralized, independent, co-generation, etc.) greatly influence unit cost.



Custodial

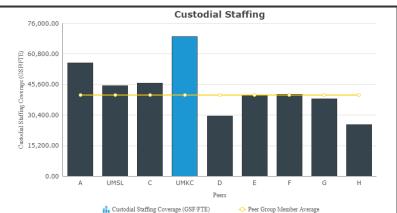
Staffing

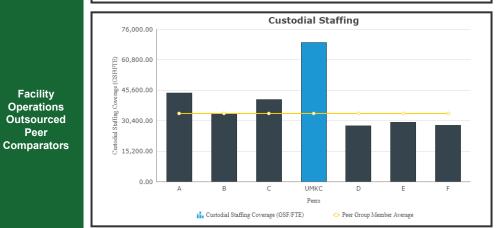
Campus

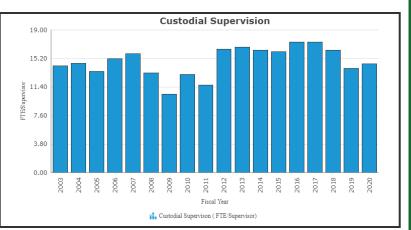
Sightline Peer

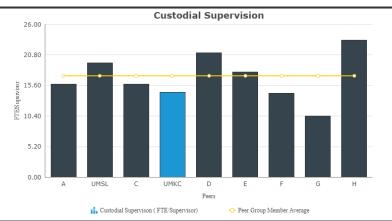
Comparators

Campus - Custodial Staffing/Supervisor Performance Indicators





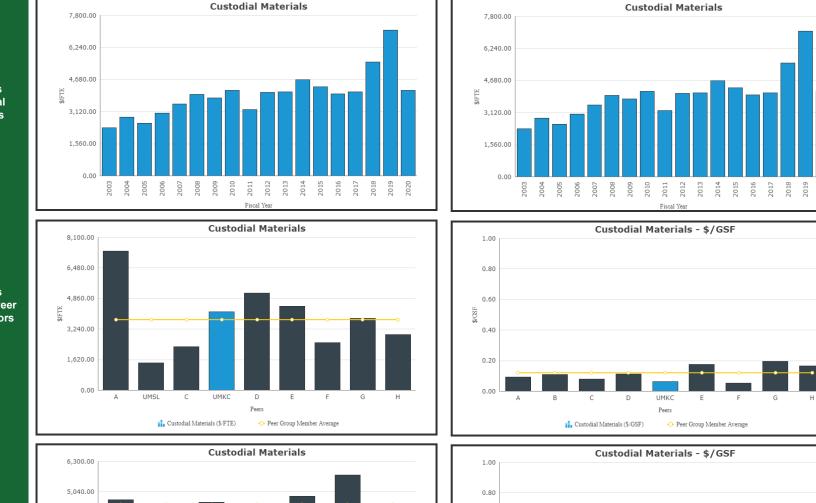




Campus Custodial Supervisor Staffing

Sightline Peer Comparators

Custodial Supervision 22.00 17.60 a 13.20 FTE/S 8.80 4.40 0.00 А В С UMKC D E F Peers 📊 Custodial Supervison (FTE/Supervisor) 📀 Peer Group Member Average



Campus - Custodial Materials Performance Indicators

UMKC

Peers

Custodial Materials (\$/FTE)

D

📀 Peer Group Member Average

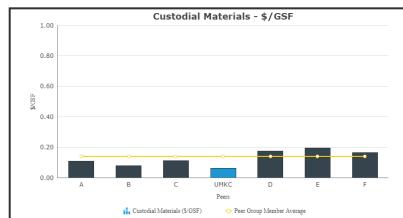
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Campus Custodial Materials

Campus Sightline Peer Comparators

Facility Operations Outsourced Peer Comparators



Facility Operations Outsourced Peer Comparators

Campus

Custodial

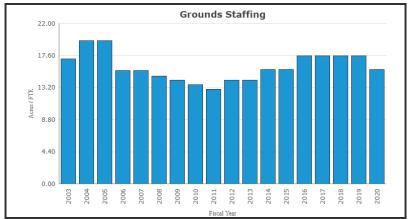
Materials \$/GSF

Sightline Peer

Comparators

020





Custodial

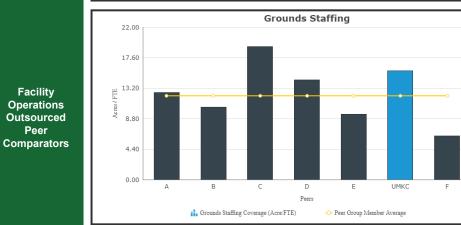
Staffing

Campus

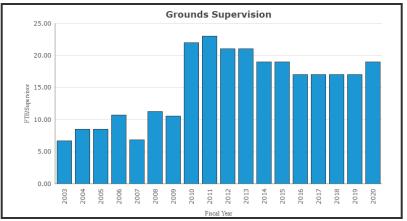
Sightline Peer

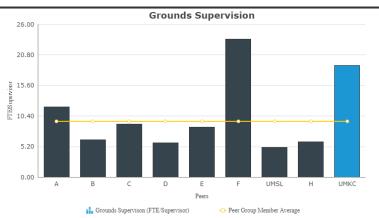
Comparators

Grounds Staffing 47.00 37.60 28.20 日 18.80 9.40 0.00 А В С D Е UMSL UMKC F н Peers Grounds Staffing Coverage (Acre/FTE) 🔶 Peer Group Member Average











Campus

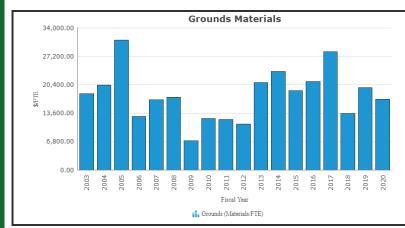
Custodial

Supervisor

Staffing

Grounds Supervision 40.00 32.00 24.00 SH 16.00 8.00 0.00 Δ В С D Е UMKC F Peers 🚮 Grounds Supervison (FTE/Supervisor) ↔ Peer Group Member Average





Grounds

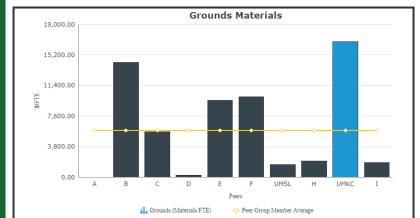
Materials

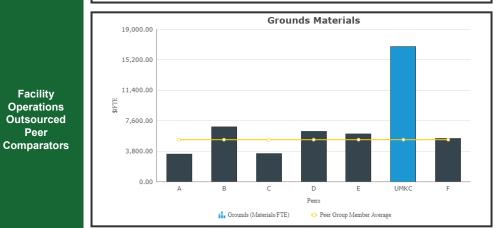
Campus

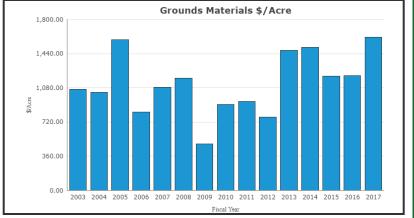
Sightline Peer

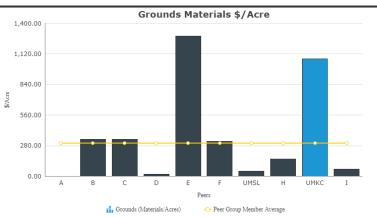
Comparators

Campus - Grounds Materials Performance Indicators









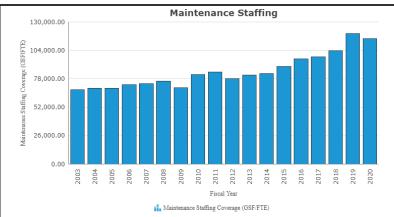
Materials \$/GSF

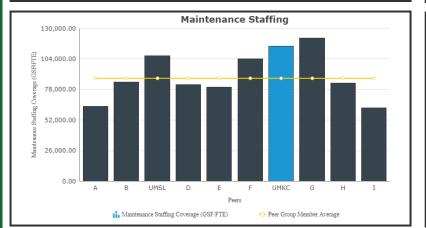
Campus

Grounds

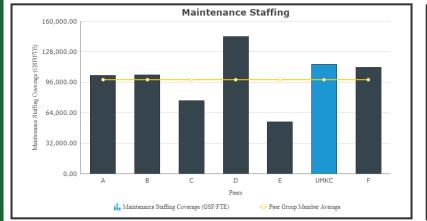
Sightline Peer Comparators

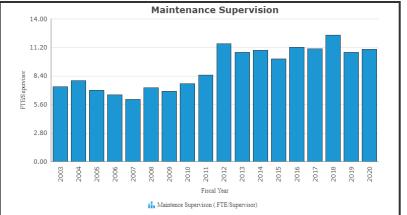
Grounds Materials \$/Acre 1,200.00 960.00 720.00 8 480.00 240.00 0.00 А В С D Е UMKC F Peers Grounds (Materials/Acres) 📀 Peer Group Member Average

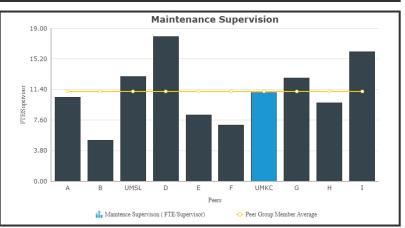






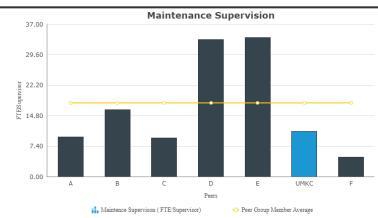






Campus Custodial Supervisor Staffing

Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

-21-

Campus - Maintenance Staffing/Supervisor Performance Indicators

Campus

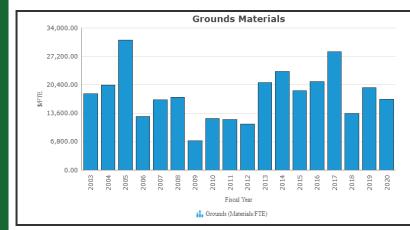
Custodial

Staffing

Campus

Sightline Peer

Comparators



Maintenance

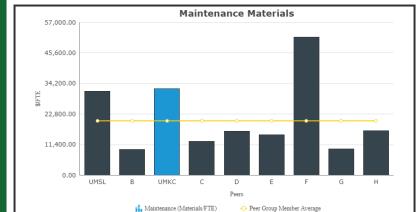
Materials

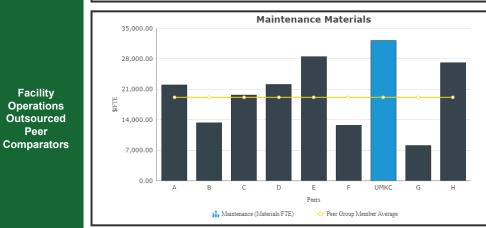
Campus

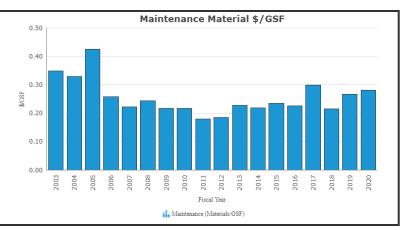
Sightline Peer

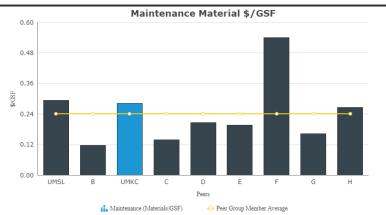
Comparators

Campus - Maintenance Materials Performance Indicators







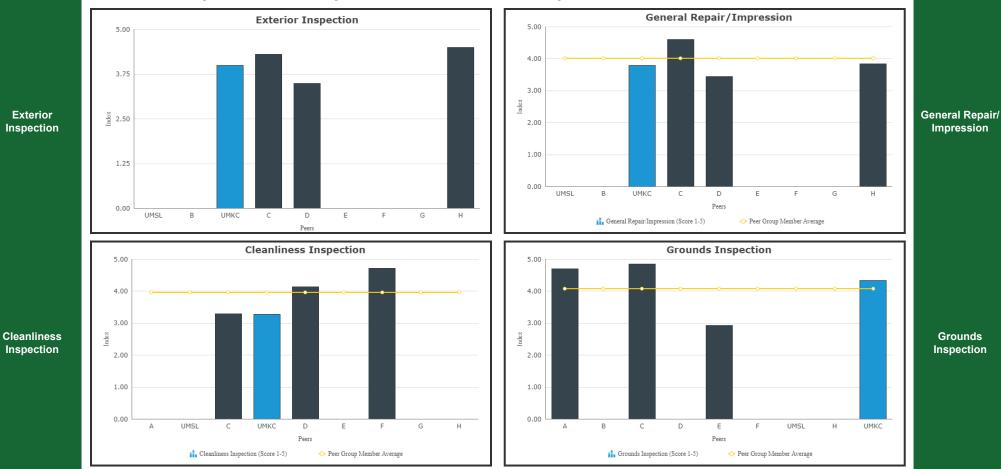


Campus

Materials \$/GSF

Sightline Peer Comparators

Maintenance Material \$/GSF 0.40 0.32 0.24 SIGSF 0.16 0.08 0.00 А В С D Е F UMKC G Н Peers Maintenance (Materials/GSF) ↔ Peer Group Member Average



UMKC - Campus Service Impressions with Peer Comparators

Exterior

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 ٠ 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 ٠ 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.

-23-

Missouri University of Science and Technology Campus Profile Sightlines Peer

- 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:

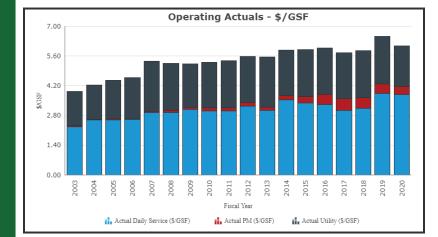
- Carnegie Mellon University
- Georgia Institute of Technology
- Massachusetts Institute of Technology
- New Jersey Institute of Technology
- Rensselaer Polytechnic Institute
- Rose-Hulman Institute of Technology
- Tennessee Technological University
- Worcester Polytechnic Institute

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

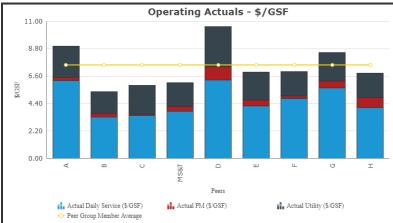
Operating Expense Summary	2016	2017	2018	2019	2020
Total Daily Service	\$6,502,355	\$6,017,259	\$6,204,391	\$7,692,473	\$7,598,397
Planned Maintenance	\$900,675	\$1,071,743	\$993,825	\$917,563	\$782,560
Utilities(Electric, Water, Etc.)	\$4,202,957	\$4,165,544	\$4,299,456	\$4,386,411	\$3,752,914
Total	\$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



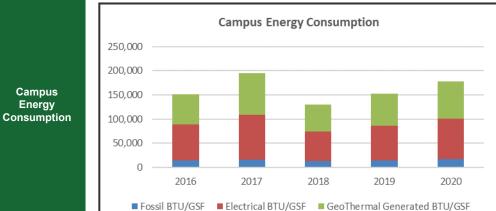
Facilities Operating Actuals with Peer Comparators

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

- <u>Daily Service</u>: Materials, labor costs, service contracts, office expense, etc. associated with the regular maintenance, cleaning and grounds keeping of the campus.
- <u>Planned Maintenance</u>: 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.
- <u>Utilities</u>: 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



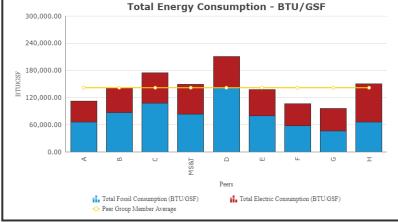
Energy

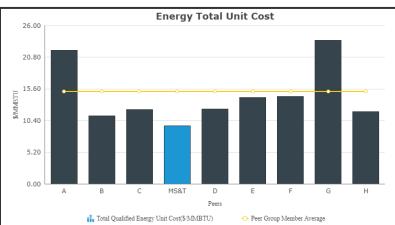
Campus

Energy Unit

Cost

Energy Total Unit Cost 12.00 9.60 7.20 \$/MMBTU 4.80 2.40 0.00 2010 2012 2013 2014 2015 2016 2017 2018 2019 2003 2004 2005 2006 2007 2008 2009 2011 2020 Fiscal Year Total Qualified Energy Unit Cost(\$/MMBTU)



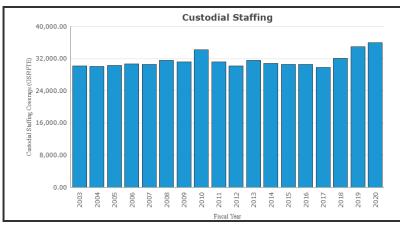


Peer Comparators Energy Consumption

> 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 ٠ system (centralized, independent, co-generation, etc.) greatly influence unit cost.



Custodial

Staffing

Campus

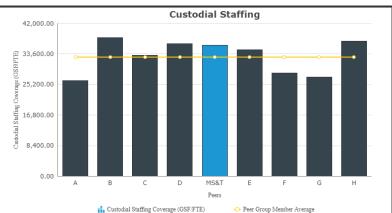
Sightline Peer

Comparators

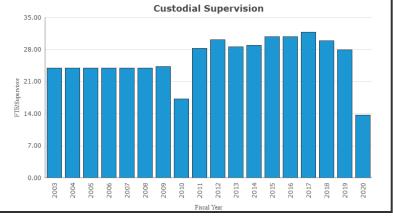
Facility

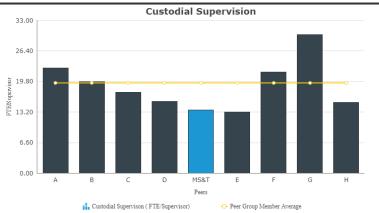
Peer

Campus - Custodial Staffing/Supervisor Performance Indicators



Custodial Staffing 48,000.00 ፼ 38,400.00 ឆ្គំ 28,800.00 Operations Outsourced ∉ 19,200.00 Comparators 9,600.00 5 0.00 А В С D Е MS&T F Peers 🚹 Custodial Staffing Coverage (GSF/FTE) 🔶 Peer Group Member Average





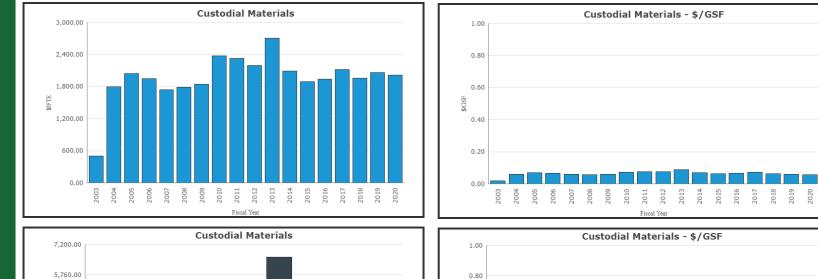
Campus Custodial Supervisor Staffing

Sightline Peer Comparators

Custodial Supervision 22.00 17.60 a 13.20 FTESS 8.80 4.40 0.00 MS&T Α В С D E F Peers 📊 Custodial Supervison (FTE/Supervisor) 📀 Peer Group Member Average

Facility Operations Outsourced Peer Comparators

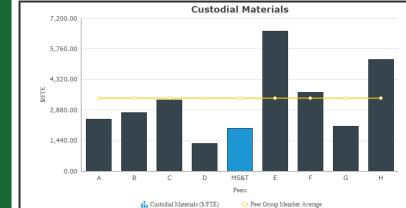
-27-

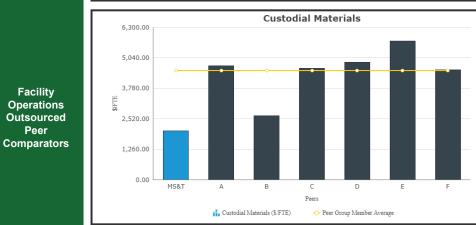


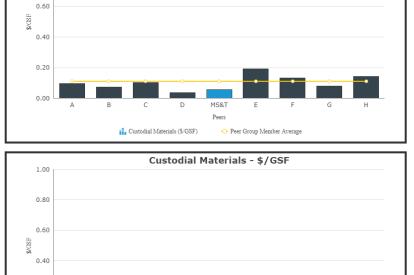
Campus - Custodial Materials Performance Indicators

Campus Custodial Materials









Campus Custodial Materials \$/GSF

Sightline Peer Comparators

Facility Operations Outsourced Peer Comparators

0.20

0.00

MS&T

Δ

В

Custodial Materials (\$/GSF)

С

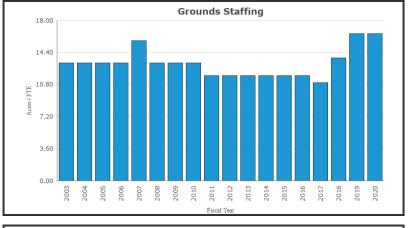
Peers

D

🔶 Peer Group Member Average

Е

F



Custodial

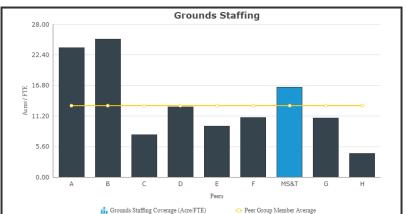
Staffing

Campus

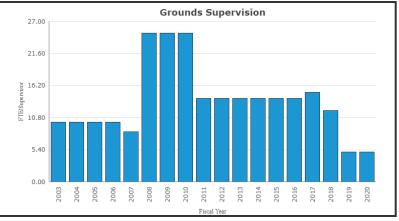
Sightline Peer

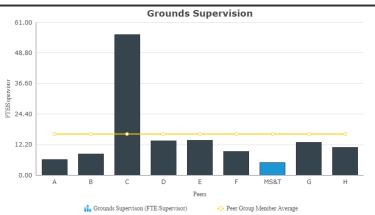
Comparators

Campus - Grounds Staffing/Supervisor Performance Indicators



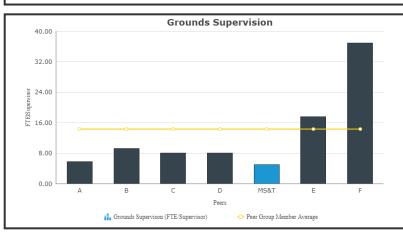
Grounds Staffing 22.00 17.60 13.20) ELI Facility Operations Outsourced 2 8.80 Peer Comparators 4.40 0.00 D А В С MS&T E F Peers 📊 Grounds Staffing Coverage (Acre/FTE) ↔ Peer Group Member Average

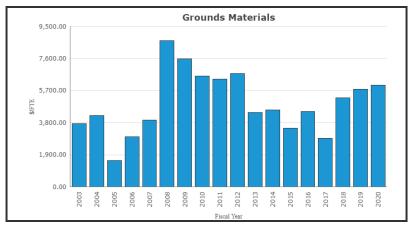




Campus Custodial Supervisor Staffing

Sightline Peer Comparators





Grounds

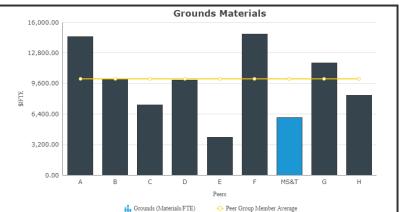
Materials

Campus

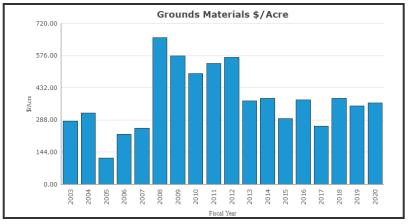
Sightline Peer

Comparators

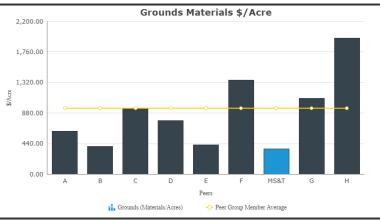
Campus - Grounds Materials Performance Indicators



Grounds Materials 7,500.00 6,000.00 4,500.00 Facility \$/FTE Operations Outsourced 3,000.00 Peer Comparators 1,500.00 0.00 В С D MS&T Е А F Peers Grounds (Materials/FTE) ↔ Peer Group Member Average



Campus Grounds Materials \$/GSF

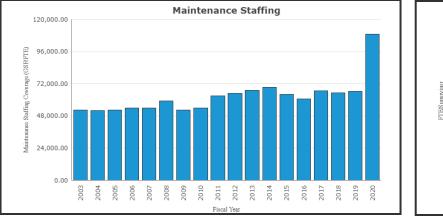


Sightline Peer Comparators

Grounds Materials \$/Acre 940.00 752.00 564.00 818 376.00 188.00 0.00 А В С D MS&T Е F Peers Grounds (Materials/Acres) 📀 Peer Group Member Average

Facility Operations Outsourced Peer Comparators

-30-



Custodial

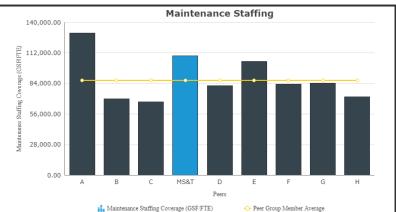
Staffing

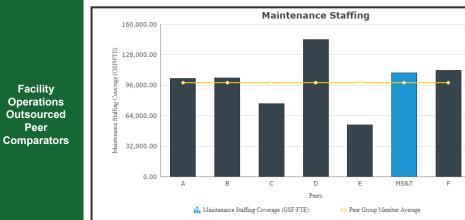
Campus

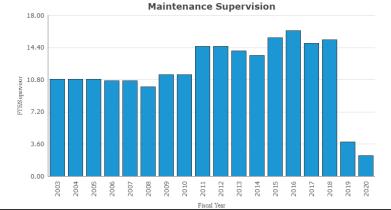
Sightline Peer

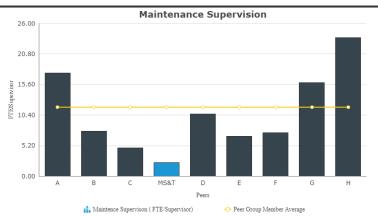
Comparators

Campus - Maintenance Staffing/Supervisor Performance Indicators



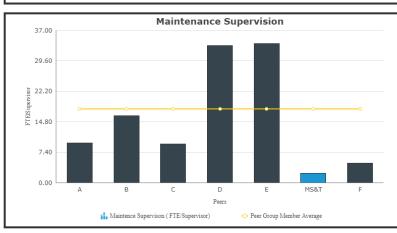


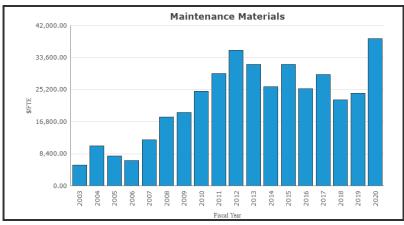




Campus Custodial Supervisor Staffing

Sightline Peer Comparators





Maintenance

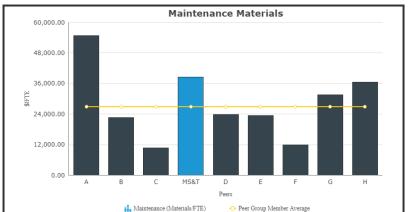
Materials

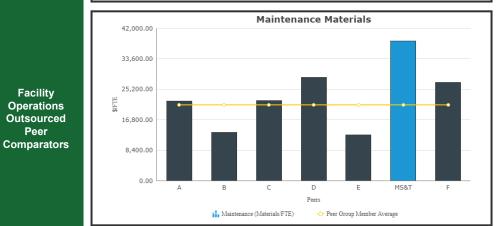
Campus

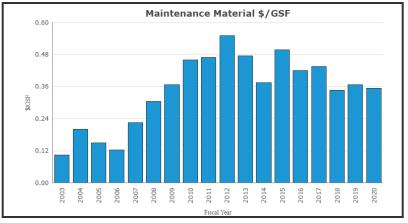
Sightline Peer

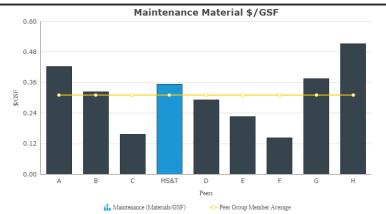
Comparators

Campus - Maintenance Materials Performance Indicators





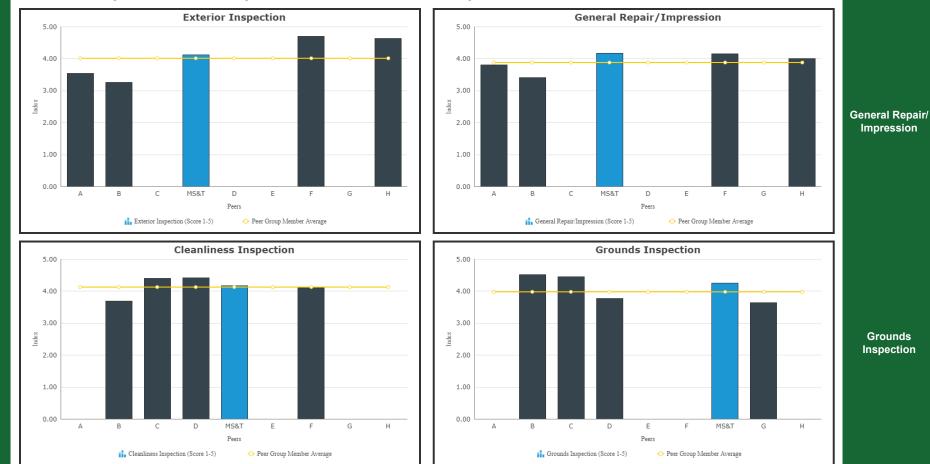




Campus Materials \$/GSF

Sightline Peer Comparators

Maintenance Material \$/GSF 0.40 0.32 0.24 SIGSF 0.16 0.08 0.00 А В С D Е MS&T F Peers Maintenance (Materials/GSF) ↔ Peer Group Member Average



S&T - Campus Service Impressions with Peer Comparators

Exterior

Inspection

Cleanliness

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.
- <u>General Repair/Impression</u> (%) 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.
- <u>Cleanliness Inspection</u> (%)– 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.
- <u>Grounds Inspection</u> (%) 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:

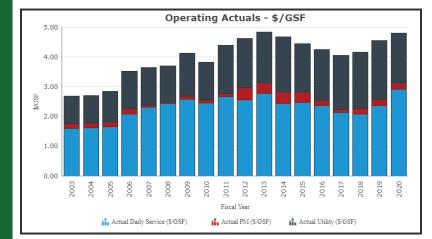
- Bloomsburg University of PA
- Edinboro University of PA
- Jackson State University E&G
- Kutztown University of PA
- Millersville University of PA
- Missouri University of Science and Technology
- Portland State University E&G
- · University of Massachusetts Dartmouth
- University of Missouri Kansas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

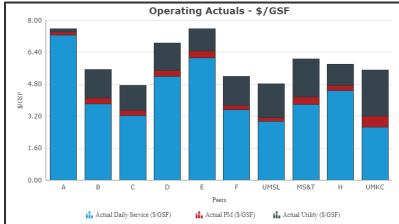
Operating Expense Summary	2016	2017	2018	2019	2020
Total Daily Service	\$5,997,232	\$5,708,222	\$5,748,286	\$6,523,660	\$8,081,827
Planned Maintenance	\$491,968	\$319,757	\$543,436	\$591,670	\$576,850
Utilities(Electric, Water, Etc.)	\$4,581,292	\$5,092,149	\$5,197,279	\$5,454,261	\$4,586,200
Total	\$11,070,492	\$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



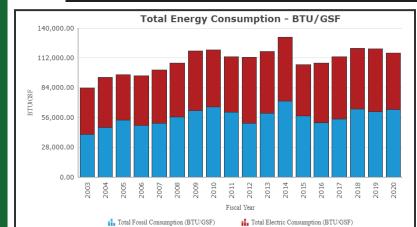
Facilities Operating Actuals with Peer Comparators

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.
- <u>Planned Maintenance</u>: 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.
- <u>Utilities</u>: 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

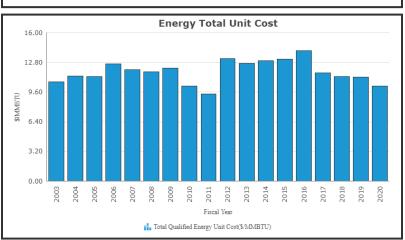
Energy

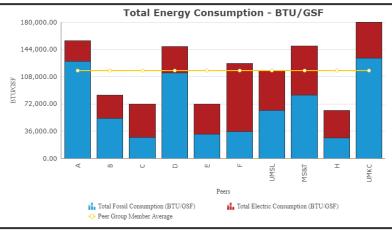
Consumption

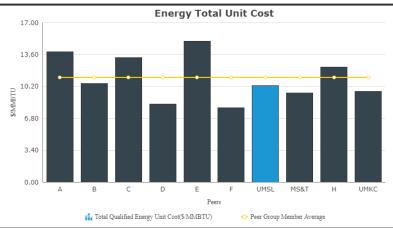
Campus

Energy Unit

Cost





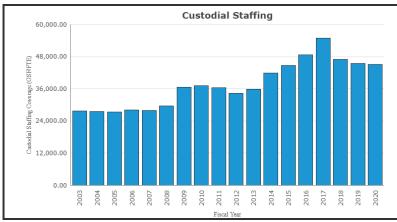


Peer Comparators Energy Consumption

> Peer Energy Unit Cost

• <u>Energy Consumption</u> (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.

• <u>Energy Total Unit Cost</u> (\$/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.



Custodial

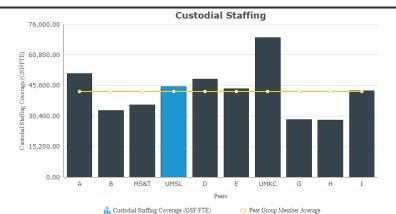
Staffing

Campus

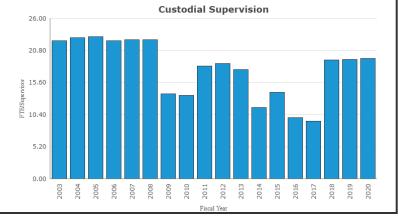
Sightline Peer

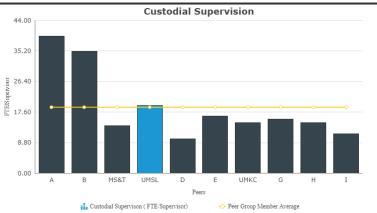
Comparators

Campus - Custodial Staffing/Supervisor Performance Indicators



Custodial Staffing 49,000.00 ፼ 39,200.00 <u>چ</u> 29,400.00 Facility Operations Outsourced 19,600.00 Peer Comparators 9,800.00 5 0.00 UMSL Α В С D Е F Peers 🚹 Custodial Staffing Coverage (GSF/FTE) 🔶 Peer Group Member Average







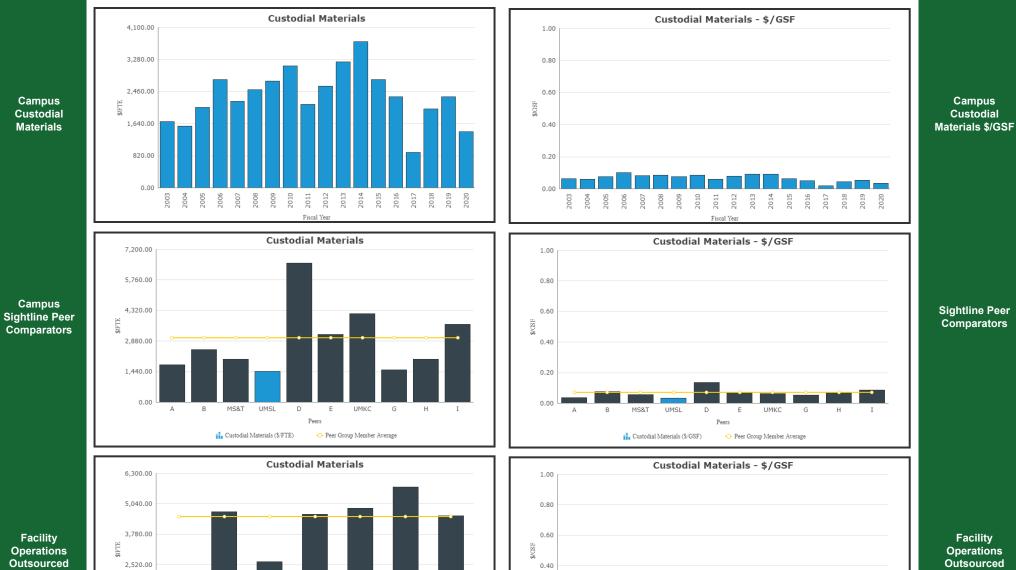
Campus

Custodial

Supervisor

Staffing

Custodial Supervision 22.00 17.60 a 13.20 FTESS 8.80 4.40 0.00 UMSL Α В С D E F Peers 📊 Custodial Supervison (FTE/Supervisor) 📀 Peer Group Member Average



Custodial

Sightline Peer

Comparators

Facility

Operations

Outsourced

Peer

Comparators

Campus - Custodial Materials Performance Indicators

Facility Operations Outsourced Peer Comparators

1,260.00

0.00

UMSL

А

В

Custodial Materials (\$/FTE)

С

Peers

D

🔶 Peer Group Member Average

Е

F

0.20

0.00

UMSL

Δ

В

Custodial Materials (\$/GSF)

С

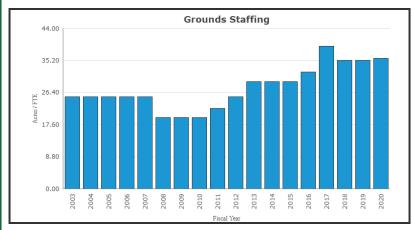
Peers

D

🔶 Peer Group Member Average

Е

F



Custodial

Staffing

Campus

Sightline Peer

Comparators

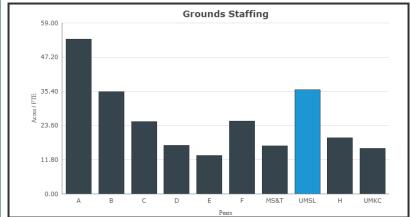
Facility

Operations

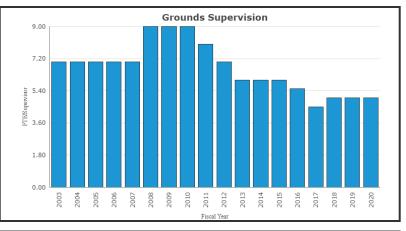
Outsourced

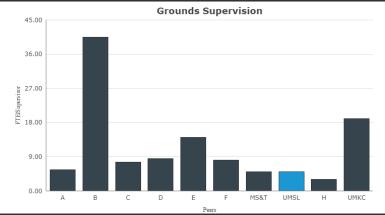
Peer

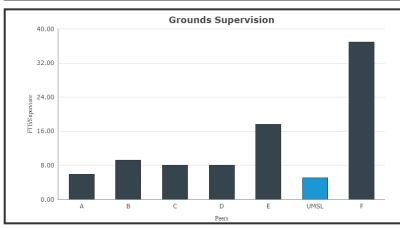
Campus - Grounds Staffing/Supervisor Performance Indicators



Grounds Staffing 39.00 31.20 23.40 ELJ saroy 15.60 Comparators 7.80 0.00 А В С D Е UMSL F Peers

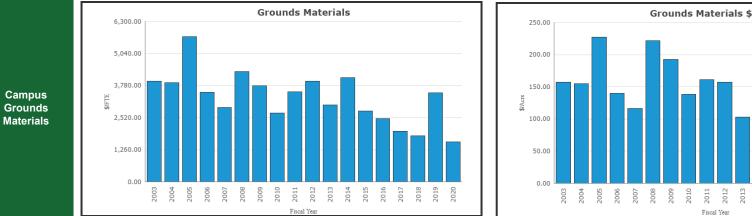






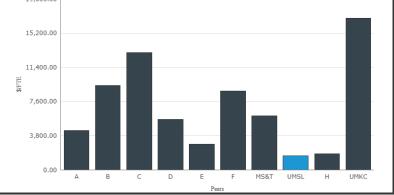
Campus Custodial Supervisor Staffing

Sightline Peer Comparators

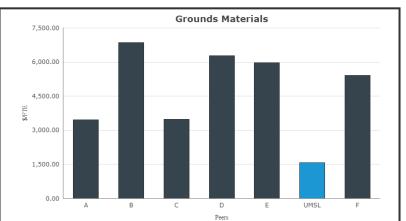


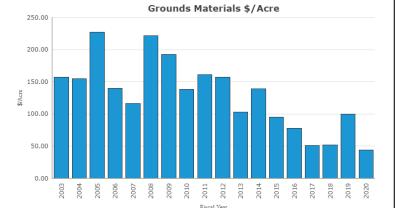
Campus - Grounds Materials Performance Indicators



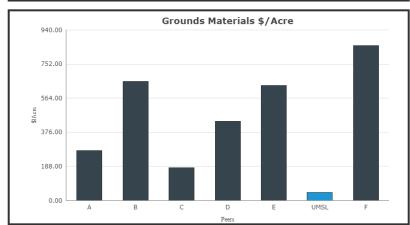


Facility Operations Outsourced Peer Comparators



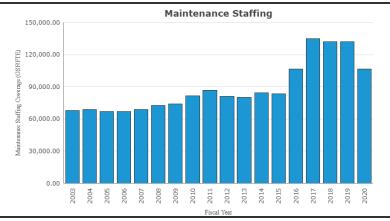


Grounds Materials \$/Acre 1,200.00 960.00 720.00 MAG 480.00 240.00 0.00 А В С F MS&T UMSL Н UMKC D Е Peers



Campus Grounds Materials \$/GSF

Sightline Peer Comparators



Custodial

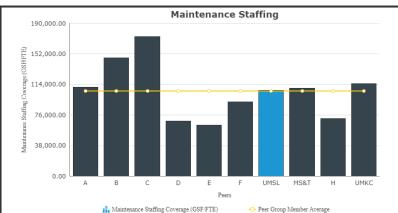
Staffing

Campus

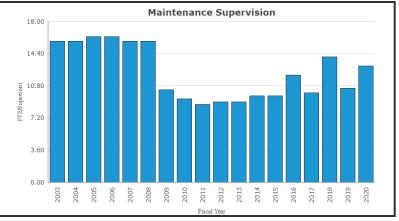
Sightline Peer

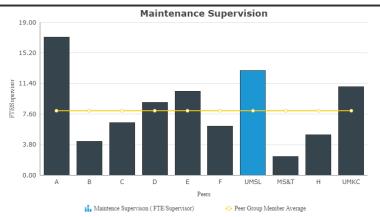
Comparators

Campus - Maintenance Staffing/Supervisor Performance Indicators



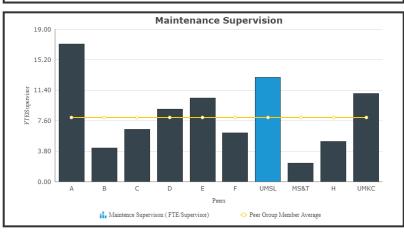
Maintenance Staffing 160,000.00 £ 128,000.00 96,000.00 Facility Operations Outsourced 64,000.00 Peer Comparators 32,000.00 0.00 С D UMSL А В E Peers 📊 Maintenance Staffing Coverage (GSF/FTE) 🔶 Peer Group Member Average





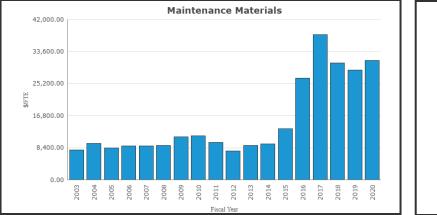
Campus Custodial Supervisor Staffing

Sightline Peer Comparators



Facility Operations Outsourced Peer Comparators

F



Maintenance

Materials

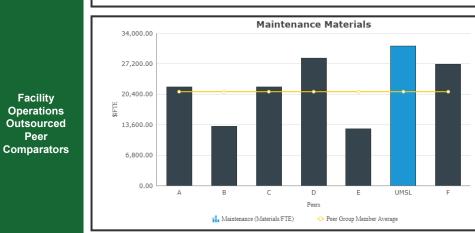
Campus

Sightline Peer

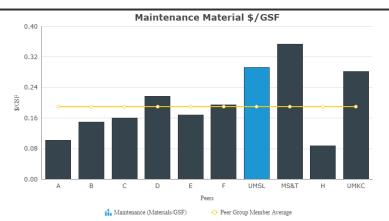
Comparators

Campus - Maintenance Materials Performance Indicators

Maintenance Materials 42,000.00 33,600.00 25,200.00 \$/FTE 16,800.00 8,400.00 0.00 А В С D UMSL MS&T UMKC Е F Н Peers Maintenance (Materials/FTE) 📀 Peer Group Member Average

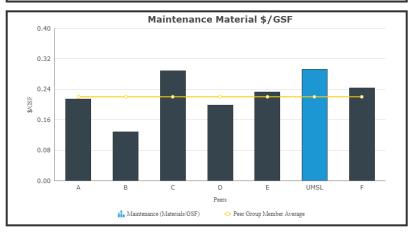


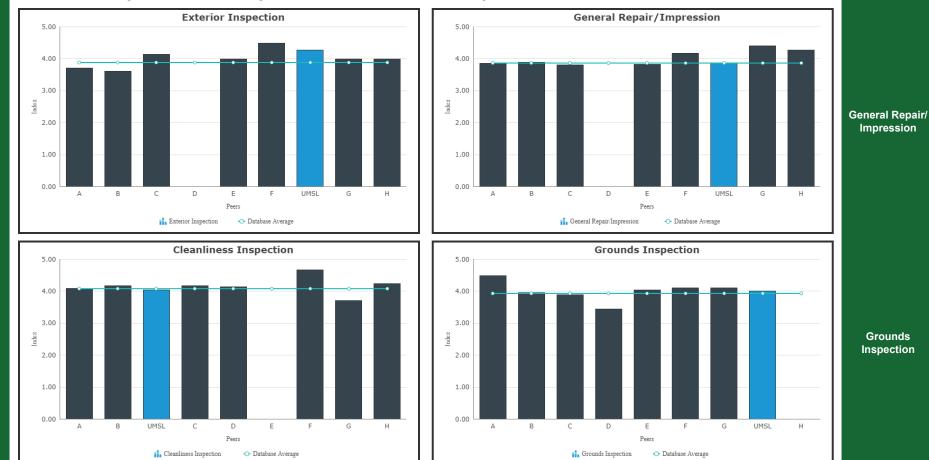




Campus Materials \$/GSF

Sightline Peer Comparators





UMSL - Campus Service Impressions with Peer Comparators

Exterior

Inspection

Cleanliness

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 ٠ 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 ٠ 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.

Grounds Inspection

Impression

www.umsystem.edu

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