

# OAKLAND COMMUNITY COLLEGE

## **OAKLAND COMMUNITY COLLEGE A VISION OF EXCELLENCE IN THE 21<sup>st</sup> CENTURY**

### **FIVE YEAR CAPITAL OUTLAY MASTER PLAN**

**Fiscal Year 2017 (7/1/16 – 6/30/17)**

**Through**

**Fiscal Year 2021 (7/1/20 – 6/30/21)**



**OAKLAND COMMUNITY COLLEGE**  
Community is our middle name.®

# **Section I**

## **Mission Statement**

# Mission Statement

## Vision

OCC is a comprehensive institution of higher learning that effectively meets community needs and student interest in a measureable manner, promoting student success.

## Mission Statement

Oakland Community College is a student-centered institution which provides high quality learning opportunities and services for individuals, communities and organizations on an accessible, affordable basis.

## Purposes

Oakland Community College provides high quality:

- Educational experiences enabling students to transfer to other institutions of higher education.
- Occupational and technical learning opportunities to improve students' employability.
- Community services, including cultural, social, and enrichment opportunities for lifelong learning.
- Opportunities in developmental education to prepare students for college-level studies.
- Workforce development training and learning opportunities to meet the needs of business and industry.

## Goals

Oakland Community College will dedicate itself to continuously to aligning its activities and educational offerings with its mission, demonstrated community need, responsible resource allocation and practices leading to student success. The following guiding principles listed under each of these four main goals identify the values used in the approach to planning changes to reach these goals.

1. Align with our mission
  - a. The college meets community need with curriculum and services that are commensurate with its mission as a public two-year post-secondary institution.
  - b. The college's primary service region is Oakland County.
  - c. Our students are those individuals who have a reasonable likelihood of directly benefiting from the curriculum and services offered by the college that supports student success.
  - d. Curriculum and related services are to be used for educational purposes and not for personal financial gain.

2. Align with community need
  - a. Offer quality curriculum which aligned with local labor market needs.
  - b. Offer quality curriculum which aligned with external professional standards.
  - c. Evaluate curricula systematically using consistent processes and procedures.
  - d. Plan curricula comprehensively in consideration of other curricular needs and resources.
  - e. Offer programs that lead to occupations that will provide for a sustainable living in Oakland County.
  - f. Curricular processes are informed by appropriate data and collaboratively vetted by administration and faculty.
3. Responsible resource allocation
  - a. The extent to which the college is able to meet community need is proportional to available resources. As resources increase and decrease, so does the college's ability to meet community need.
  - b. Offer curriculum which operates at a high section fill rate.
  - c. Establish minimum and maximum enrollment targets, based largely on the level of support services available.
4. Student success practices
  - a. Offer programs which provide students a well-defined guided pathway to completion and employment.
  - b. Offer curriculum which is designed to promote student persistence, transfer, and completion.
  - c. Actively increase student's interest in curricular offerings, thereby increasing engagement and completion.

To achieve our goals and subsequently meet our vision and ultimately mission, the college uses two processes for planning and improving services and offerings. The first is the Educational Master Plan process, which looks are big level initiatives that are not already covered in a standing process and the second are the standing processes for improvement and evaluation of curriculum referred to here as the Curriculum Life Cycle.

## Educational Master Plan (EMP)

*The following goals were established through a series of open forums involving faculty and college staff and developed into objectives to further articulate the College's Mission and Strategic Plan. The goals were given frameworks that applied standardize reporting and deliverables. These have been approved by the Board of Trustees with quarterly reports to update the college community on its progress.*

*The College's Educational Master Plan (EMP) is comprised of the following 12 objectives:*

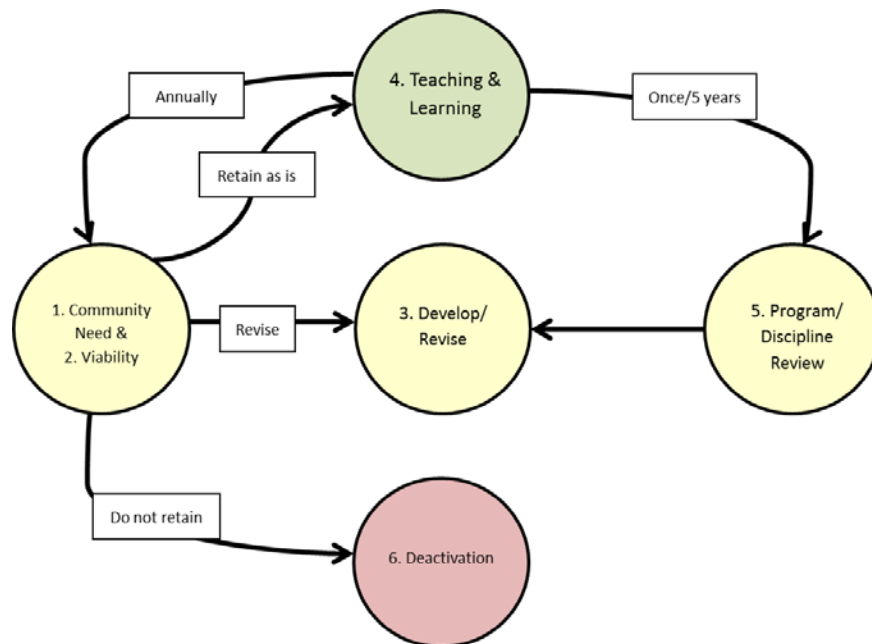
1. Provide developmental education program to cultivate the knowledge and skills necessary to succeed in college.
2. Review and revise academic offerings to ensure appropriate student learning and academic quality as directed by federal, state and accrediting agencies.
3. Set the direction for all curriculum to meet community needs and student interest.
4. Develop an honors program to enhance transferability and employability for eligible students.
5. Provide quality service learning and volunteerism opportunities to enhance student success and serve the community.
6. Improve assessment practices to enhance student learning.
7. Develop common course outcomes to provide consistency in learning outcomes regardless of location or delivery.
8. Create benchmarks for general education outcomes to provide consistency in learning outcomes regardless of location or delivery.
9. Evaluate the impact of pedagogical and curricular changes resulting from program assessment to determine efficacy of these changes.
10. Develop an enrollment management plan through the effective integration of administrative processes, student services, curriculum planning and market analysis to ensure student success, as well as develop student retention plans to improve the quality of student life and learning through comprehensive, accessible and affordable higher education initiatives.
11. Enhance early college and dual enrollment programs to ensure the ability of high school students to acquire college credit at OCC.
12. Develop strategic program of distance learning to increase access for our students and obtain Higher Learning Commission approval to offer online programming to ensure quality accredited distance learning opportunities.

## Curriculum Life Cycle (CLC)

In the CLC framework, new and existing curricula move through various processes of review, revision, implementation and for some, deactivation (figure 1). The purpose of the CLC is to align and link the various curricular processes to ensure overlap where appropriate and avoid utilizing unnecessary resources in planning phases. The CLC is designed with three main goals:

1. Conduct holistic curricular planning cyclically
2. Maintain a quality curriculum that meets local community need
3. Fulfill institutional priorities

Figure 1. Curriculum Life Cycle



## **Section II**

# **Instructional Programming**

# **Unique Characteristics of Oakland Community College's Mission and Purpose**

## **Background Information**

OCC is accredited by the Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools. In addition, ten occupational OCC programs are accredited by their respective professional organizations.

OCC has professional staff dedicated to the definition, assessment and improvement of student learning in courses and programs. Faculty, staff and administration collaborate to measure and improve student learning using holistic and cyclical processes.

OCC's current students range in age from 14 to 89. The average student age is 26 years and the median age is 19. Over 80% of these students are Oakland County residents with some 20% residing elsewhere. As is typical with most colleges today, the OCC student body is comprised of 56% females. OCC's minority populations comprise a total of 35% of the student body. On average, students take around 8 credit hours per term, with more than 70% of students attending part time.

## **Alignment with Mission and Community Need**

OCC is a vital, collaborative partner in preparing Oakland County residents for available employment in Oakland County or advanced study at four-year post-secondary institutions. By offering programs that prepare individuals for high wage, high skill, high demand occupations available in the county, OCC contributes to the continued strength and success of Oakland County's economy. OCC utilizes cyclical, holistic, data driven processes to review curricula to ensure our offerings meet the needs of the community. Data for possible new programs and existing OCC programs relating to community need are presented in appendix A.

Furthermore, OCC offers students a large return on investment for their educational experiences as the cost of OCC is the lowest currently in the state compared to two year and four year peers. Over the past 50 years, Oakland Community College (OCC) has served nearly 1,000,000 students. OCC is currently the second largest of Michigan's 28 community colleges with 21,260 students enrolled in Fall 2015.

Related to service to the community, it is worth noting as well that OCC is a moderately large employer in Oakland County with 777 full-time employees and 1,379 part-time staff and adjunct faculty.



## *Transfer Programs*

OCC offers associate degree programs that cover the first two years of bachelor's degree programs such as:

- Associate's in Business Administration
- Associate's in Liberal Arts
- Associate's in Science

In terms of OCC's goal to prepare students for advanced study, more than 1600 students transferred from OCC to another college for the first time in 2015, since starting OCC (i.e., transfers to OCC not counted). The most popular four-year transfer institutions in 2015 include Oakland University, Wayne State University, University of Michigan, University of Michigan Dearborn, University of Michigan Flint, Walsh College, Baker College, Eastern Michigan University, Central Michigan University, Madonna College, Western Michigan University, Grand Valley State University, University of Phoenix and Michigan State University.

## *Occupational Programs*

According to the Bureau of Labor Statistics, U.S. Department of Labor 10-year projections report for 2012-2021, the nation's occupations will remain consistently distributed by education level needed whereby 65% of jobs require no post-secondary education and of those jobs that do require post-secondary education, 68% require a Bachelor's or higher, 18% a Certificate level and 13% Associate's degrees

OCC offers career associate degrees designed primarily to give students the credentials they need for employment in technical and semi-professional occupations.

OCC offers seven major categories of career programs:

1. Art, Design, & Humanities- Includes programs such as Sign Language Interpreter, Baking and Pastry Arts, and Graphic Design.
2. Business & Information Technology- Includes programs such as Accounting, Cisco Networking, and Paralegal.
3. Manufacturing & Industrial Technology- Includes programs such as Automotive Repair, Mechatronics, and Welding.
4. Learning Resources- Includes programs in Library Technology.
5. Health Professions- Includes programs such as Dental Hygiene, Radiological Technology, and Surgical Technology
6. Public Services- Includes programs such as Emergency Medical Technician, Fire Fighter Studies, and Criminal Justice.
7. Social Science- Includes programs such as Early Childhood Education and Mental Health.

## Student Success

Because OCC maintains an open door admissions policy, newly enrolled students – including adult workers interested in training and retraining – are often academically under-prepared for college-level work. To help students acquire the academic skills they need to be successful in college, OCC has developed a comprehensive array of developmental programs and services to help students achieve a successful learning experience.

Each OCC campus provides a full range of personal and individualized educational and vocational ***counseling services***; courses such as “Orientation to College,” “Career Planning,” “Personal Assertiveness” and “Human Potential Seminars” assist students in attaining their educational and personal goals. The college also offers developmental classes in reading, writing and mathematics to help students enhance these skills, and its campus libraries, with links to libraries throughout southeast Michigan make a vast array of information available not only to students, but to staff, alumni and the community.

Each of OCC’s five campuses houses an ***Academic Support Center (ASC)*** available to all registered OCC students without charge. Students who wish to expand the opportunities offered in regular classes and those who are experiencing difficulty in their course work may receive assistance in the ASC.

ASC faculty can provide academic assessment and instruction in curricular and developmental areas. They will tailor an instructional support program based on areas of academic concern to fit the students’ individual needs, interest and compatibility. Highly personalized attention and self-paced programs to master core subjects such as mathematics, science, English and English as a Second Language is available. The ASC’s offer skill-enhancement programs such as study skills, reading comprehension, vocabulary and critical thinking. These centers also assist students through Student Success Seminars, supplemental instruction/study groups and tutoring.

The ACCESS program (***Accessibility Compliance Center and Educational Support Services***) provides a network of support services for special population students. These students include: students with disabilities, students whose first language is not English, academically disadvantaged students (below a 2.0 GPA), students who are single parents, teen parents, displaced homemakers and students who are enrolled in non-traditional training programs of study for their gender. The services the college offers ACCESS students include note takers, sign language interpreters, tutoring, alternative testing arrangements and specialized equipment. ACCESS offices are located on every OCC campus.

## Continuing Education – Workforce Development

Oakland Community College is an economic development asset to Oakland County employers and attracts businesses to Oakland County. The college's ***Economic and Workforce Development (EWD)*** program will continue to strengthen the economic base of Oakland County by providing assistance to the county's businesses, industries and residents in three critical areas:

- Career development for job seekers and the underemployed
- Business and industry training to strengthen the county workforce
- Economic development services to retain and attract new businesses

The more than 30 partnership agreements with corporations, agencies and educational institutions, and more than 70 companies are actively engaged in the training process.

# **Section III**

## **Staffing and Enrollment**

## Projected Enrollment Pattern in the Next Five Years

Community college enrollment is driven by the inter-play of economic, demographic, social, legislative, funding and college outreach factors. The positive economic climate and anticipated decline in the number of high school graduates is expected to place continued downward pressure on the short term outlook of enrollment.

<b>Table 1. Historical Enrollment in Credit Hours by Academic Year</b>		
<b>Academic Year</b>	<b>Credit Hours</b>	<b>1-Yr Change</b>
1995-96	441,241	
1996-97	424,000	-3.9%
1997-98	416,796	-1.7%
1998-99	418,122	0.3%
1999-00	411,453	-1.6%
2000-01	417,879	1.6%
2001-02	435,167	4.1%
2002-03	448,607	3.1%
2003-04	473,598	5.6%
2004-05	469,257	-0.9%
2005-06	476,526	1.5%
2006-07	483,680	1.5%
2007-08	495,714	2.5%
2008-09	535,776	8.1%
2009-10	616,529	15.1%
2010-11	621,798	0.9%
2011-12	611,070	-1.7%
2012-13	571,971	-6.4%
2013-14	533,507	-6.7%
2014-15	475,581	-10.9%

Looking at credit hour enrollment over the last 20 academic years, 2014-15, while dropping 11 % from the previous academic year, is roughly comparable to credit hour enrollment for 2005-06 (476,526). The college experienced rapid growth in 2008-09 (8%) and 2009-10 (15%) before finally peaking at 621,798 credit hours in 2010-11.

<b>Table 2. Average Section Size by Educational Purposes by Term, 2013/14</b>				
	<b>Summer II 2013</b>	<b>Fall 2013</b>	<b>Winter 2014</b>	<b>Summer I 2014</b>
Career/Technical	17.96	21.54	20.59	17.90
Developmental	20.29	21.50	19.99	16.45
General/Transfer	25.69	25.44	24.58	22.04

## Instructional and Support Staffing Levels

<b>Table 3. Number of Employees 2014 by Type</b>				
<b>Employee Type</b>	<b>Full Time</b>	<b>Part Time</b>	<b>Other</b>	<b>Total</b>
Executive/ Administrative/ Managerial	62	4	2	68
Faculty	262	1,534	23	1,819
Instructional Support	41	398	10	449
Other Professionals	102	3	5	110
Part Time Academy Staff	0	253	0	253
Part Time Athletics	0	32	3	35
Part Time Casual Teaching	1	45	0	46
Part Time Other	0	39	0	39
Secretarial/Clerical	117	12	5	134
Service/Maintenance	85	0	9	94
Skilled Craft	21	0	1	22
Total	691	2,320	58	3,069

<b>Table 4. Student to Faculty/Staff Ratios</b>	
<b>Student to Faculty/Staff Ratios</b>	<b>Total</b>
Student to Faculty Ratio	7.7 : 1
Student to Staff	66.9 : 1

## Projected Staffing Needs in the Next Five Years

Overall staffing levels are expected to fluctuate as enrollment shifts in response to demographic, economic and social trends.

# Appendix A

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The following table is the result of an internal college process whereby we link educational programs to occupations and examine data for the region (Oakland County and the six adjacent Counties). Classification of instructional program (CIP) codes are linked to standard occupation classification (SOC) codes to form relationships. Then, data is extracted from Economic Modeling Specialists Intl. (EMSI; [economicmodeling.com](http://economicmodeling.com)), who in turn use sources such as the Bureau of Labor Statistics to extract data on total jobs, wages, and educational requirements for occupations by region. They also incorporate completions data from the Integrated Postsecondary Educational Data System. Then, our college uses EMSI's projected job openings (proprietary model), to determine relative supply and demand in the region for each occupation. Using these key metrics, faculty and administration can determine high skill, high wage, and high demand occupations and therefore determine academic programming.

CIP Code	CIP Title	SOC Code	SOC Title	Median Wages Oakland County	2013 Gap	2014 Gap	2015 Gap	% of Persons Working Associate's Degree or below	% of Employers Requesting Associate's Degree or below
01.0605	Landscaping and Groundskeeping	11-9151	Social and Community Service Managers	\$28.42	733	360	387	31%	21%
01.0605	Landscaping and Groundskeeping	37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	\$19.74	733	360	387	81%	96%
01.0605	Landscaping and Groundskeeping	37-3011	Landscaping and Groundskeeping Workers	\$11.66	733	360	387	94%	80%
01.0605	Landscaping and Groundskeeping	37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	\$15.99	733	360	387	94%	83%
01.0605	Landscaping and Groundskeeping	37-3019	Grounds Maintenance Workers, All Other	\$13.47	733	360	387	94%	0%

03.0101	Natural Resources/Conservation, General	19-1031	Conservation Scientists	\$26.79	-124	-136	-147	13%	26%
03.0101	Natural Resources/Conservation, General	19-1032	Foresters	\$25.93	-124	-136	-147	13%	0%
03.0101	Natural Resources/Conservation, General	19-4093	Forest and Conservation Technicians	\$16.33	-124	-136	-147	54%	88%
03.0101	Natural Resources/Conservation, General	45-4011	Forest and Conservation Workers	\$13.61	-124	-136	-147	83%	51%
03.0103	Environmental Studies	19-2041	Environmental Scientists and Specialists, Including Health	\$31.63	-64	-76	-72	6%	1%
03.0103	Environmental Studies	19-4091	Environmental Science and Protection Technicians, Including Health	\$20.42	-64	-76	-72	54%	35%
03.0104	Environmental Science	19-2041	Environmental Scientists and Specialists, Including Health	\$31.63	-19	-30	-34	6%	1%
03.0104	Environmental Science	19-4091	Environmental Science and Protection Technicians, Including Health	\$20.42	-19	-30	-34	54%	35%
03.0199	Natural Resources Conservation and Research, Other	19-1031	Conservation Scientists	\$26.79	0	-1	-3	13%	26%
03.0199	Natural Resources Conservation and Research, Other	19-1032	Foresters	\$25.93	0	-1	-3	13%	0%
03.0199	Natural Resources Conservation and	19-4093	Forest and Conservation Technicians	\$16.33	0	-1	-3	54%	88%



	Research, Other								
03.0199	Natural Resources Conservation and Research, Other	45-4011	Forest and Conservation Workers	\$13.61	0	-1	-3	83%	51%
03.0201	Natural Resources Management and Policy	19-1031	Conservation Scientists	\$26.79	-14	-11	-10	13%	26%
03.0201	Natural Resources Management and Policy	19-1032	Foresters	\$25.93	-14	-11	-10	13%	0%
03.0206	Land Use Planning and Management/Development	19-1031	Conservation Scientists	\$26.79	0	0	0	13%	26%
03.0206	Land Use Planning and Management/Development	19-4093	Forest and Conservation Technicians	\$16.33	0	0	0	54%	88%
03.9999	Natural Resources and Conservation, Other	19-1031	Conservation Scientists	\$26.79	0	0	0	13%	26%
03.9999	Natural Resources and Conservation, Other	19-1032	Foresters	\$25.93	0	0	0	13%	0%
03.9999	Natural Resources and Conservation, Other	19-4093	Forest and Conservation Technicians	\$16.33	0	0	0	54%	88%
03.9999	Natural Resources and Conservation, Other	45-4011	Forest and Conservation Workers	\$13.61	0	0	0	83%	51%
04.0301	City/Urban, Community and Regional Planning	11-9041	Architectural and Engineering Managers	\$57.75	-92	-90	-79	16%	2%
04.0301	City/Urban,	19-3051	Urban and Regional	\$29.15	-92	-90	-79	7%	0%

	Community and Regional Planning		Planners						
04.0401	Environmental Design/Architecture	11-9041	Architectural and Engineering Managers	\$57.75	0	0	0	16%	2%
04.0401	Environmental Design/Architecture	17-1011	Architects, Except Landscape and Naval	\$33.05	0	0	0	10%	0%
04.0401	Environmental Design/Architecture	17-1012	Landscape Architects	\$29.46	0	0	0	10%	4%
04.0501	Interior Architecture	11-9041	Architectural and Engineering Managers	\$57.75	-9	-11	-11	16%	2%
04.0501	Interior Architecture	27-1025	Interior Designers	\$22.70	-9	-11	-11	44%	22%
04.0601	Landscape Architecture	11-9041	Architectural and Engineering Managers	\$57.75	-7	-3	-3	16%	2%
04.0601	Landscape Architecture	17-1012	Landscape Architects	\$29.46	-7	-3	-3	10%	4%
04.0901	Architectural Technology/Technician	17-3011	Architectural and Civil Drafters	\$23.17	-25	-27	-31	73%	37%
04.9999	Architecture and Related Services, Other	17-1011	Architects, Except Landscape and Naval	\$33.05	0	0	0	10%	0%
05.0101	African Studies	25-1099	Postsecondary Teachers	\$36.84	-3	-3	-7	0%	0%
05.0102	American/United States Studies/Civilization	25-1099	Postsecondary Teachers	\$36.84	-36	-29	-30	0%	0%
05.0103	Asian Studies/Civilization	25-1099	Postsecondary Teachers	\$36.84	-41	-40	-45	0%	0%
05.0104	East Asian Studies	25-1099	Postsecondary Teachers	\$36.84	-19	-22	-21	0%	0%
05.0105	Russian, Central European, East European and Eurasian Studies	25-1099	Postsecondary Teachers	\$36.84	-4	-5	-4	0%	0%

05.0107	Latin American Studies	25-1099	Postsecondary Teachers	\$36.84	-1	-1	-1	0%	0%
05.0108	Near and Middle Eastern Studies	25-1099	Postsecondary Teachers	\$36.84	-15	-16	-13	0%	0%
05.0110	Russian Studies	25-1099	Postsecondary Teachers	\$36.84	-9	-9	-11	0%	0%
05.0112	South Asian Studies	25-1099	Postsecondary Teachers	\$36.84	-3	-2	-3	0%	0%
05.0113	Southeast Asian Studies	25-1099	Postsecondary Teachers	\$36.84	-3	-3	-3	0%	0%
05.0127	Japanese Studies	25-1099	Postsecondary Teachers	\$36.84	0	0	0	0%	0%
05.0134	Latin American and Caribbean Studies	25-1099	Postsecondary Teachers	\$36.84	-9	-9	-9	0%	0%
05.0199	Area Studies, Other	25-1099	Postsecondary Teachers	\$36.84	-10	-7	-9	0%	0%
05.0201	African-American/Black Studies	25-1099	Postsecondary Teachers	\$36.84	-23	-22	-29	0%	0%
05.0202	American Indian/Native American Studies	25-1099	Postsecondary Teachers	\$36.84	0	0	0	0%	0%
05.0203	Hispanic-American, Puerto Rican, and Mexican-American/Chicano Studies	25-1099	Postsecondary Teachers	\$36.84	-3	-4	-3	0%	0%
05.0207	Women's Studies	25-1099	Postsecondary Teachers	\$36.84	-62	-67	-75	0%	0%
05.0299	Ethnic, Cultural Minority, Gender, and Group Studies, Other	25-1099	Postsecondary Teachers	\$36.84	0	0	0	0%	0%
09.0100	Communication, General	25-1099	Postsecondary Teachers	\$36.84	-59	-128	-152	0%	0%
09.0100	Communication, General	27-3011	Radio and Television Announcers	\$13.40	-59	-128	-152	61%	53%
09.0100	Communication,	27-3022	Reporters and	\$16.95	-59	-128	-152	16%	13%

	General		Correspondents						
09.0100	Communication, General	27-3031	Public Relations Specialists	\$27.49	-59	-128	-152	20%	19%
09.0100	Communication, General	27-3041	Editors	\$23.03	-59	-128	-152	16%	16%
09.0100	Communication, General	27-3043	Writers and Authors	\$22.84	-59	-128	-152	15%	42%
09.0101	Speech Communication and Rhetoric	27-3012	Public Address System and Other Announcers	\$16.70	-503	-517	-508	61%	97%
09.0101	Speech Communication and Rhetoric	27-3031	Public Relations Specialists	\$27.49	-503	-517	-508	20%	19%
09.0101	Speech Communication and Rhetoric	27-3043	Writers and Authors	\$22.84	-503	-517	-508	15%	42%
09.0102	Mass Communication/Me dia Studies	27-3022	Reporters and Correspondents	\$16.95	-37	-46	-48	16%	13%
09.0102	Mass Communication/Me dia Studies	27-3041	Editors	\$23.03	-37	-46	-48	16%	16%
09.0102	Mass Communication/Me dia Studies	27-3043	Writers and Authors	\$22.84	-37	-46	-48	15%	42%
09.0199	Communication and Media Studies, Other	27-3021	Broadcast News Analysts	\$33.80	0	0	0	16%	22%
09.0199	Communication and Media Studies, Other	27-3022	Reporters and Correspondents	\$16.95	0	0	0	16%	13%
09.0199	Communication and Media Studies, Other	27-3041	Editors	\$23.03	0	0	0	16%	16%

09.0199	Communication and Media Studies, Other	27-3043	Writers and Authors	\$22.84	0	0	0	15%	42%
09.0401	Journalism	27-3021	Broadcast News Analysts	\$33.80	-99	-101	-104	16%	22%
09.0401	Journalism	27-3022	Reporters and Correspondents	\$16.95	-99	-101	-104	16%	13%
09.0401	Journalism	27-3041	Editors	\$23.03	-99	-101	-104	16%	16%
09.0401	Journalism	27-3043	Writers and Authors	\$22.84	-99	-101	-104	15%	42%
09.0402	Broadcast Journalism	27-3011	Radio and Television Announcers	\$13.40	-6	-8	-10	61%	53%
09.0402	Broadcast Journalism	27-3021	Broadcast News Analysts	\$33.80	-6	-8	-10	16%	22%
09.0402	Broadcast Journalism	27-3022	Reporters and Correspondents	\$16.95	-6	-8	-10	16%	13%
09.0402	Broadcast Journalism	27-3041	Editors	\$23.03	-6	-8	-10	16%	16%
09.0402	Broadcast Journalism	27-3043	Writers and Authors	\$22.84	-6	-8	-10	15%	42%
09.0701	Radio and Television	27-2012	Producers and Directors	\$27.19	-418	-357	-284	26%	34%
09.0701	Radio and Television	27-3011	Radio and Television Announcers	\$13.40	-418	-357	-284	61%	53%
09.0701	Radio and Television	27-3021	Broadcast News Analysts	\$33.80	-418	-357	-284	16%	22%
09.0701	Radio and Television	27-4032	Film and Video Editors	\$28.67	-418	-357	-284	39%	40%
09.0799	Radio, Television, and Digital Communication, Other	27-2012	Producers and Directors	\$27.19	-6	-10	-10	26%	34%
09.0799	Radio, Television, and Digital Communication,	27-3011	Radio and Television Announcers	\$13.40	-6	-10	-10	61%	53%

	Other								
09.0799	Radio, Television, and Digital Communication, Other	27-3021	Broadcast News Analysts	\$33.80	-6	-10	-10	16%	22%
09.0799	Radio, Television, and Digital Communication, Other	27-3022	Reporters and Correspondents	\$16.95	-6	-10	-10	16%	13%
09.0799	Radio, Television, and Digital Communication, Other	27-4032	Film and Video Editors	\$28.67	-6	-10	-10	39%	40%
09.0901	Organizational Communication, General	27-3031	Public Relations Specialists	\$27.49	-23	-19	-16	20%	19%
09.0902	Public Relations/Image Management	11-2011	Advertising and Promotions Managers	\$53.01	-32	-41	-39	26%	41%
09.0902	Public Relations/Image Management	11-2031	Public Relations and Fundraising Managers	\$45.07	-32	-41	-39	17%	13%
09.0902	Public Relations/Image Management	27-3031	Public Relations Specialists	\$27.49	-32	-41	-39	20%	19%
09.0903	Advertising	11-2011	Advertising and Promotions Managers	\$53.01	141	103	100	26%	41%
09.0903	Advertising	27-1026	Merchandise Displayers and Window Trimmers	\$11.38	141	103	100	44%	96%
09.0903	Advertising	41-3011	Advertising Sales Agents	\$21.36	141	103	100	46%	53%
09.0905	Health Communication	21-1091	Health Educators	\$23.01	-1	-3	-2	47%	11%
09.0905	Health Communication	21-1094	Community Health Workers	\$16.26	-1	-3	-2	47%	33%

09.0905	Health Communication	21-1099	Community and Social Service Specialists, All Other	\$25.16	-1	-3	-2	47%	0%
09.0905	Health Communication	27-3031	Public Relations Specialists	\$27.49	-1	-3	-2	20%	19%
09.9999	Communication, Journalism, and Related Programs, Other	27-3041	Editors	\$23.03	-1	-3	-3	16%	16%
09.9999	Communication, Journalism, and Related Programs, Other	27-3043	Writers and Authors	\$22.84	-1	-3	-3	15%	42%
09.9999	Communication, Journalism, and Related Programs, Other	27-3099	Media and Communication Workers, All Other	\$15.32	-1	-3	-3	50%	0%
10.0105	Communications Technology/Technician	27-3099	Media and Communication Workers, All Other	\$15.32	-3	-16	-12	50%	0%
10.0105	Communications Technology/Technician	27-4012	Broadcast Technicians	\$15.34	-3	-16	-12	63%	52%
10.0105	Communications Technology/Technician	27-4014	Sound Engineering Technicians	\$18.23	-3	-16	-12	63%	68%
10.0105	Communications Technology/Technician	27-4032	Film and Video Editors	\$28.67	-3	-16	-12	39%	40%
10.0201	Photographic and Film/Video Technology/Technician and Assistant	27-4011	Audio and Video Equipment Technicians	\$20.15	0	0	0	63%	68%
10.0202	Radio and	27-4012	Broadcast Technicians	\$15.34	-11	-12	-10	63%	52%

	Television Broadcasting Technology/Technician								
10.0202	Radio and Television Broadcasting Technology/Technician	27-4031	Camera Operators, Television, Video, and Motion Picture	\$22.97	-11	-12	-10	39%	73%
10.0202	Radio and Television Broadcasting Technology/Technician	27-4032	Film and Video Editors	\$28.67	-11	-12	-10	39%	40%
10.0203	Recording Arts Technology/Technician	27-4011	Audio and Video Equipment Technicians	\$20.15	-9	-15	-13	63%	68%
10.0203	Recording Arts Technology/Technician	27-4014	Sound Engineering Technicians	\$18.23	-9	-15	-13	63%	68%
10.0301	Graphic Communications, General	51-5111	Prepress Technicians and Workers	\$18.37	6	6	6	80%	72%
10.0303	Prepress/Desktop Publishing and Digital Imaging Design	43-9031	Desktop Publishers	\$23.70	11	11	11	68%	47%
10.0303	Prepress/Desktop Publishing and Digital Imaging Design	51-5111	Prepress Technicians and Workers	\$18.37	11	11	11	80%	72%
10.0304	Animation, Interactive Technology, Video	27-1014	Multimedia Artists and Animators	\$27.08	-70	-83	-95	43%	36%



	Graphics and Special Effects								
10.9999	Communications Technologies/Technicians and Support Services, Other	27-3099	Media and Communication Workers, All Other	\$15.32	4	3	2	50%	0%
10.9999	Communications Technologies/Technicians and Support Services, Other	27-4099	Media and Communication Equipment Workers, All Other	\$32.07	4	3	2	63%	0%
11.0102	Artificial Intelligence	15-1111	Computer and Information Research Scientists	\$51.07	-1	-1	-1	9%	0%
11.0102	Artificial Intelligence	15-1132	Software Developers, Applications	\$38.30	-1	-1	-1	16%	7%
11.0102	Artificial Intelligence	15-1133	Software Developers, Systems Software	\$42.63	-1	-1	-1	16%	4%
11.0103	Information Technology	15-1111	Computer and Information Research Scientists	\$51.07	-62	-57	-37	9%	0%
11.0103	Information Technology	15-1121	Computer Systems Analysts	\$38.18	-62	-57	-37	28%	28%
11.0103	Information Technology	15-1122	Information Security Analysts	\$39.04	-62	-57	-37	43%	2%
11.0103	Information Technology	15-1132	Software Developers, Applications	\$38.30	-62	-57	-37	16%	7%
11.0103	Information Technology	15-1133	Software Developers, Systems Software	\$42.63	-62	-57	-37	16%	4%
11.0103	Information Technology	15-1134	Web Developers	\$27.78	-62	-57	-37	31%	43%
11.0103	Information Technology	15-1143	Computer Network Architects	\$40.97	-62	-57	-37	41%	25%
11.0104	Informatics	15-1111	Computer and Information Research	\$51.07	-15	-26	-33	9%	0%

			Scientists						
11.0104	Informatics	15-1132	Software Developers, Applications	\$38.30	-15	-26	-33	16%	7%
11.0104	Informatics	15-1133	Software Developers, Systems Software	\$42.63	-15	-26	-33	16%	4%
11.0199	Computer and Information Sciences, Other	11-3021	Computer and Information Systems Managers	\$51.49	-2	-2	0	27%	3%
11.0199	Computer and Information Sciences, Other	15-1111	Computer and Information Research Scientists	\$51.07	-2	-2	0	9%	0%
11.0201	Computer Programming/Programmer, General	15-1143	Computer Network Architects	\$40.97	28	-9	-258	41%	25%
11.0201	Computer Programming/Programmer, General	15-1122	Information Security Analysts	\$39.04	28	-9	-258	43%	2%
11.0201	Computer Programming/Programmer, General	15-1131	Computer Programmers	\$33.23	28	-9	-258	28%	11%
11.0201	Computer Programming/Programmer, General	15-1132	Software Developers, Applications	\$38.30	28	-9	-258	16%	7%
11.0201	Computer Programming/Programmer, General	15-1133	Software Developers, Systems Software	\$42.63	28	-9	-258	16%	4%
11.0201	Computer Programming/Programmer, General	15-1134	Web Developers	\$27.78	28	-9	-258	31%	43%
11.0201	Computer Programming/Programmer, General	15-1143	Computer Network Architects	\$40.97	28	-9	-258	41%	25%
11.0201	Computer Programming/Programmer, General	15-1151	Computer User Support Specialists	\$20.66	28	-9	-258	57%	52%

	ammer, General								
11.0201	Computer Programming/Programmer, General	15-1152	Computer Network Support Specialists	\$27.11	28	-9	-258	57%	0%
11.0201	Computer Programming/Programmer, General	51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	\$24.08	28	-9	-258	93%	56%
11.0202	Computer Programming, Specific Applications	15-1131	Computer Programmers	\$33.23	-24	-28	-23	28%	11%
11.0202	Computer Programming, Specific Applications	15-1132	Software Developers, Applications	\$38.30	-24	-28	-23	16%	7%
11.0202	Computer Programming, Specific Applications	15-1133	Software Developers, Systems Software	\$42.63	-24	-28	-23	16%	4%
11.0203	Computer Programming, Vendor/Product Certification	15-1131	Computer Programmers	\$33.23	-6	-6	-16	28%	11%
11.0401	Information Science/Studies	11-3021	Computer and Information Systems Managers	\$51.49	-143	-166	-169	27%	3%
11.0401	Information Science/Studies	15-1111	Computer and Information Research Scientists	\$51.07	-143	-166	-169	9%	0%
11.0401	Information Science/Studies	15-1133	Software Developers, Systems Software	\$42.63	-143	-166	-169	16%	4%
11.0401	Information Science/Studies	15-1199	Computer Occupations, All Other	\$39.61	-143	-166	-169	49%	16%

11.0501	Computer Systems Analysis/Analyst	15-1121	Computer Systems Analysts	\$38.18	-6	-8	-6	28%	28%
11.0501	Computer Systems Analysis/Analyst	15-1122	Information Security Analysts	\$39.04	-6	-8	-6	43%	2%
11.0501	Computer Systems Analysis/Analyst	15-1134	Web Developers	\$27.78	-6	-8	-6	31%	43%
11.0501	Computer Systems Analysis/Analyst	15-1143	Computer Network Architects	\$40.97	-6	-8	-6	41%	25%
11.0501	Computer Systems Analysis/Analyst	15-1151	Computer User Support Specialists	\$20.66	-6	-8	-6	57%	52%
11.0501	Computer Systems Analysis/Analyst	15-1152	Computer Network Support Specialists	\$27.11	-6	-8	-6	57%	0%
11.0601	Data Entry/Microcomputer Applications, General	43-9021	Data Entry Keyers	\$14.11	-1	-3	-1	81%	89%
11.0701	Computer Science	11-3021	Computer and Information Systems Managers	\$51.49	34	4	16	27%	3%
11.0701	Computer Science	15-1111	Computer and Information Research Scientists	\$51.07	34	4	16	9%	0%
11.0701	Computer Science	15-1122	Information Security Analysts	\$39.04	34	4	16	43%	2%
11.0701	Computer Science	15-1131	Computer Programmers	\$33.23	34	4	16	28%	11%
11.0701	Computer Science	15-1132	Software Developers, Applications	\$38.30	34	4	16	16%	7%
11.0701	Computer Science	15-1133	Software Developers, Systems Software	\$42.63	34	4	16	16%	4%
11.0701	Computer Science	15-1134	Web Developers	\$27.78	34	4	16	31%	43%
11.0701	Computer Science	15-1143	Computer Network Architects	\$40.97	34	4	16	41%	25%
11.0701	Computer Science	15-1151	Computer User Support Specialists	\$20.66	34	4	16	57%	52%

11.0701	Computer Science	15-1152	Computer Network Support Specialists	\$27.11	34	4	16	57%	0%
11.0701	Computer Science	15-1199	Computer Occupations, All Other	\$39.61	34	4	16	49%	16%
11.0801	Web Page, Digital/Multimedia and Information Resources Design	15-1122	Information Security Analysts	\$39.04	-79	-76	-64	43%	2%
11.0801	Web Page, Digital/Multimedia and Information Resources Design	15-1134	Web Developers	\$27.78	-79	-76	-64	31%	43%
11.0801	Web Page, Digital/Multimedia and Information Resources Design	15-1143	Computer Network Architects	\$40.97	-79	-76	-64	41%	25%
11.0801	Web Page, Digital/Multimedia and Information Resources Design	27-1014	Multimedia Artists and Animators	\$27.08	-79	-76	-64	43%	36%
11.0801	Web Page, Digital/Multimedia and Information Resources Design	27-1024	Graphic Designers	\$23.75	-79	-76	-64	44%	15%
11.0803	Computer Graphics	15-1131	Computer Programmers	\$33.23	-46	-52	-44	28%	11%
11.0803	Computer Graphics	27-1024	Graphic Designers	\$23.75	-46	-52	-44	44%	15%
11.0899	Computer Software and Media Applications, Other	27-1014	Multimedia Artists and Animators	\$27.08	-10	-3	-15	43%	36%
11.0899	Computer Software and Media Applications, Other	27-1024	Graphic Designers	\$23.75	-10	-3	-15	44%	15%
11.0901	Computer Systems Networking and	15-1121	Computer Systems Analysts	\$38.18	-191	-255	-182	28%	28%

	Telecommunication s								
11.0901	Computer Systems Networking and Telecommunication s	15-1122	Information Security Analysts	\$39.04	-191	-255	-182	43%	2%
11.0901	Computer Systems Networking and Telecommunication s	15-1134	Web Developers	\$27.78	-191	-255	-182	31%	43%
11.0901	Computer Systems Networking and Telecommunication s	15-1143	Computer Network Architects	\$40.97	-191	-255	-182	41%	25%
11.0901	Computer Systems Networking and Telecommunication s	15-1151	Computer User Support Specialists	\$20.66	-191	-255	-182	57%	52%
11.0901	Computer Systems Networking and Telecommunication s	15-1152	Computer Network Support Specialists	\$27.11	-191	-255	-182	57%	0%
11.1001	Network and System Administration/Ad ministrator	11-3021	Computer and Information Systems Managers	\$51.49	-4	-9	-9	27%	3%
11.1001	Network and System Administration/Ad ministrator	15-1122	Information Security Analysts	\$39.04	-4	-9	-9	43%	2%
11.1001	Network and System Administration/Ad ministrator	15-1134	Web Developers	\$27.78	-4	-9	-9	31%	43%

11.1001	Network and System Administration/Administrator	15-1142	Network and Computer Systems Administrators	\$35.69	-4	-9	-9	49%	23%
11.1001	Network and System Administration/Administrator	15-1143	Computer Network Architects	\$40.97	-4	-9	-9	41%	25%
11.1001	Network and System Administration/Administrator	15-1151	Computer User Support Specialists	\$20.66	-4	-9	-9	57%	52%
11.1001	Network and System Administration/Administrator	15-1152	Computer Network Support Specialists	\$27.11	-4	-9	-9	57%	0%
11.1002	System, Networking, and LAN/WAN Management/Manager	15-1122	Information Security Analysts	\$39.04	-25	-44	-76	43%	2%
11.1002	System, Networking, and LAN/WAN Management/Manager	15-1134	Web Developers	\$27.78	-25	-44	-76	31%	43%
11.1002	System, Networking, and LAN/WAN Management/Manager	15-1143	Computer Network Architects	\$40.97	-25	-44	-76	41%	25%
11.1002	System, Networking, and LAN/WAN	15-1151	Computer User Support Specialists	\$20.66	-25	-44	-76	57%	52%

	Management/Manager								
11.1002	System, Networking, and LAN/WAN Management/Manager	15-1152	Computer Network Support Specialists	\$27.11	-25	-44	-76	57%	0%
11.1003	Computer and Information Systems Security/Information Assurance	15-1122	Information Security Analysts	\$39.04	-44	-123	-113	43%	2%
11.1003	Computer and Information Systems Security/Information Assurance	15-1134	Web Developers	\$27.78	-44	-123	-113	31%	43%
11.1003	Computer and Information Systems Security/Information Assurance	15-1141	Database Administrators	\$38.34	-44	-123	-113	32%	36%
11.1003	Computer and Information Systems Security/Information Assurance	15-1142	Network and Computer Systems Administrators	\$35.69	-44	-123	-113	49%	23%
11.1003	Computer and Information Systems Security/Information Assurance	15-1143	Computer Network Architects	\$40.97	-44	-123	-113	41%	25%
11.1003	Computer and Information	15-1151	Computer User Support Specialists	\$20.66	-44	-123	-113	57%	52%



	Systems Security/Information Assurance								
11.1003	Computer and Information Systems Security/Information Assurance	15-1152	Computer Network Support Specialists	\$27.11	-44	-123	-113	57%	0%
11.1004	Web/Multimedia Management and Webmaster	15-1122	Information Security Analysts	\$39.04	-75	-69	-60	43%	2%
11.1004	Web/Multimedia Management and Webmaster	15-1134	Web Developers	\$27.78	-75	-69	-60	31%	43%
11.1004	Web/Multimedia Management and Webmaster	15-1143	Computer Network Architects	\$40.97	-75	-69	-60	41%	25%
11.1006	Computer Support Specialist	15-1143	Computer Network Architects	\$40.97	-22	-26	-24	41%	25%
11.1006	Computer Support Specialist	15-1151	Computer User Support Specialists	\$20.66	-22	-26	-24	57%	52%
11.1006	Computer Support Specialist	15-1152	Computer Network Support Specialists	\$27.11	-22	-26	-24	57%	0%
12.0301	Funeral Service and Mortuary Science, General	11-9061	Funeral Service Managers	\$38.45	22	13	13	46%	0%
12.0301	Funeral Service and Mortuary Science, General	39-4011	Embalmers	\$21.06	22	13	13	85%	52%
12.0301	Funeral Service and Mortuary Science, General	39-4021	Funeral Attendants	\$11.01	22	13	13	85%	90%
12.0301	Funeral Service and Mortuary Science, General	39-4031	Morticians, Undertakers, and Funeral Directors	\$25.72	22	13	13	64%	56%

	General								
12.0302	Funeral Direction/Service	11-9061	Funeral Service Managers	\$38.45	-6	-13	-16	46%	0%
12.0302	Funeral Direction/Service	39-4031	Morticians, Undertakers, and Funeral Directors	\$25.72	-6	-13	-16	64%	56%
12.0303	Mortuary Science and Embalming/Embalmer	39-4011	Embalmers	\$21.06	0	-2	-2	85%	52%
12.0401	Cosmetology/Cosmetologist, General	39-5012	Hairdressers, Hairstylists, and Cosmetologists	\$10.09	-406	-648	-672	95%	26%
12.0401	Cosmetology/Cosmetologist, General	39-5091	Makeup Artists, Theatrical and Performance	\$22.48	-406	-648	-672	90%	59%
12.0401	Cosmetology/Cosmetologist, General	39-5092	Manicurists and Pedicurists	\$12.48	-406	-648	-672	90%	58%
12.0401	Cosmetology/Cosmetologist, General	39-5094	Skincare Specialists	\$9.53	-406	-648	-672	90%	13%
12.0402	Barbering/Barber	39-5011	Barbers	\$10.70	-72	-87	-76	96%	45%
12.0406	Make-Up Artist/Specialist	39-5012	Hairdressers, Hairstylists, and Cosmetologists	\$10.09	0	0	0	95%	26%
12.0406	Make-Up Artist/Specialist	39-5091	Makeup Artists, Theatrical and Performance	\$22.48	0	0	0	90%	59%
12.0409	Aesthetician/Esthetician and Skin Care Specialist	39-5094	Skincare Specialists	\$9.53	-175	-181	-181	90%	13%
12.0410	Nail Technician/Specialist and Manicurist	39-5092	Manicurists and Pedicurists	\$12.48	-106	-118	-124	90%	58%
12.0412	Salon/Beauty Salon Management/Manager	39-5011	Barbers	\$10.70	-11	-20	-19	96%	45%
12.0412	Salon/Beauty Salon Management/Manager	39-5012	Hairdressers, Hairstylists, and Cosmetologists	\$10.09	-11	-20	-19	95%	26%

12.0413	Cosmetology, Barber/Styling, and Nail Instructor	39-5011	Barbers	\$10.70	-19	-34	-32	96%	45%
12.0413	Cosmetology, Barber/Styling, and Nail Instructor	39-5012	Hairdressers, Hairstylists, and Cosmetologists	\$10.09	-19	-34	-32	95%	26%
12.0414	Master Aesthetician/Esthetician	39-5094	Skincare Specialists	\$9.53	-3	0	0	90%	13%
12.0499	Cosmetology and Related Personal Grooming Arts, Other	39-5012	Hairdressers, Hairstylists, and Cosmetologists	\$10.09	-4	0	0	95%	26%
12.0500	Cooking and Related Culinary Arts, General	35-1011	Chefs and Head Cooks	\$16.93	1234	1155	1071	86%	62%
12.0500	Cooking and Related Culinary Arts, General	35-1012	First-Line Supervisors of Food Preparation and Serving Workers	\$14.48	1234	1155	1071	86%	86%
12.0500	Cooking and Related Culinary Arts, General	35-2012	Cooks, Institution and Cafeteria	\$12.38	1234	1155	1071	95%	95%
12.0500	Cooking and Related Culinary Arts, General	35-2014	Cooks, Restaurant	\$10.90	1234	1155	1071	95%	82%
12.0500	Cooking and Related Culinary Arts, General	35-2019	Cooks, All Other	\$11.97	1234	1155	1071	95%	0%
12.0500	Cooking and Related Culinary Arts, General	35-2021	Food Preparation Workers	\$10.18	1234	1155	1071	92%	87%
12.0500	Cooking and Related Culinary Arts, General	39-9021	Personal Care Aides	\$9.97	1234	1155	1071	88%	78%

12.0501	Baking and Pastry Arts/Baker/Pastry Chef	51-3011	Bakers	\$11.92	-55	-90	-96	92%	83%
12.0503	Culinary Arts/Chef Training	35-1011	Chefs and Head Cooks	\$16.93	81	43	51	86%	62%
12.0503	Culinary Arts/Chef Training	35-2013	Cooks, Private Household	\$0.00	81	43	51	95%	40%
12.0503	Culinary Arts/Chef Training	35-2014	Cooks, Restaurant	\$10.90	81	43	51	95%	82%
12.0503	Culinary Arts/Chef Training	35-2019	Cooks, All Other	\$11.97	81	43	51	95%	0%
12.0504	Restaurant, Culinary, and Catering Management/Manager	11-9051	Food Service Managers	\$21.31	39	50	55	75%	81%
12.0504	Restaurant, Culinary, and Catering Management/Manager	35-1012	First-Line Supervisors of Food Preparation and Serving Workers	\$14.48	39	50	55	86%	86%
12.0507	Food Service, Waiter/Waitress, and Dining Room Management/Manager	35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$9.00	3375	3264	3240	92%	100%
12.0507	Food Service, Waiter/Waitress, and Dining Room Management/Manager	35-3031	Waiters and Waitresses	\$8.93	3375	3264	3240	85%	94%
12.0507	Food Service, Waiter/Waitress, and Dining Room	35-3041	Food Servers, Nonrestaurant	\$10.82	3375	3264	3240	92%	72%

	Management/Manager								
12.0507	Food Service, Waiter/Waitress, and Dining Room Management/Manager	35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	\$9.08	3375	3264	3240	95%	97%
12.0507	Food Service, Waiter/Waitress, and Dining Room Management/Manager	35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	\$9.04	3375	3264	3240	82%	99%
12.0508	Institutional Food Workers	35-2011	Cooks, Fast Food	\$8.95	2089	2723	2697	95%	99%
12.0508	Institutional Food Workers	35-2012	Cooks, Institution and Cafeteria	\$12.38	2089	2723	2697	95%	95%
12.0508	Institutional Food Workers	35-2015	Cooks, Short Order	\$9.01	2089	2723	2697	95%	97%
12.0508	Institutional Food Workers	35-2021	Food Preparation Workers	\$10.18	2089	2723	2697	92%	87%
12.0508	Institutional Food Workers	35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	\$8.88	2089	2723	2697	94%	92%
13.0101	Education, General	25-1099	Postsecondary Teachers	\$36.84	-5	24	51	0%	0%
13.0101	Education, General	25-2011	Preschool Teachers, Except Special Education	\$13.99	-5	24	51	53%	69%
13.0101	Education, General	25-2012	Kindergarten Teachers, Except Special Education	\$24.46	-5	24	51	53%	14%
13.0101	Education, General	25-2021	Elementary School Teachers, Except Special Education	\$31.01	-5	24	51	5%	0%
13.0101	Education, General	25-2022	Middle School Teachers, Except Special and	\$27.61	-5	24	51	5%	0%

			Career/Technical Education						
13.0101	Education, General	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-5	24	51	4%	0%
13.0201	Bilingual and Multilingual Education	25-2059	Special Education Teachers, All Other	\$24.87	-9	-8	-7	13%	0%
13.0201	Bilingual and Multilingual Education	25-3011	Adult Basic and Secondary Education and Literacy Teachers and Instructors	\$22.41	-9	-8	-7	40%	0%
13.0201	Bilingual and Multilingual Education	25-3099	Teachers and Instructors, All Other	\$30.04	-9	-8	-7	40%	0%
13.0202	Multicultural Education	25-2059	Special Education Teachers, All Other	\$24.87	-2	-1	-1	13%	0%
13.0202	Multicultural Education	25-3011	Adult Basic and Secondary Education and Literacy Teachers and Instructors	\$22.41	-2	-1	-1	40%	0%
13.0202	Multicultural Education	25-3099	Teachers and Instructors, All Other	\$30.04	-2	-1	-1	40%	0%
13.0301	Curriculum and Instruction	25-9031	Instructional Coordinators	\$28.96	-333	-317	-234	21%	2%
13.0401	Educational Leadership and Administration, General	11-9031	Education Administrators, Preschool and Childcare Center/Program	\$26.59	-226	-164	-122	20%	31%
13.0401	Educational Leadership and Administration, General	11-9032	Education Administrators, Elementary and Secondary School	\$45.70	-226	-164	-122	20%	0%
13.0401	Educational Leadership and	11-9033	Education Administrators, Postsecondary	\$54.08	-226	-164	-122	20%	0%

	Administration, General								
13.0401	Educational Leadership and Administration, General	11-9039	Education Administrators, All Other	\$45.48	-226	-164	-122	20%	0%
13.0403	Adult and Continuing Education Administration	11-9039	Education Administrators, All Other	\$45.48	-15	-10	-7	20%	0%
13.0404	Educational, Instructional, and Curriculum Supervision	11-9031	Education Administrators, Preschool and Childcare Center/Program	\$26.59	-34	-24	-22	20%	31%
13.0404	Educational, Instructional, and Curriculum Supervision	11-9032	Education Administrators, Elementary and Secondary School	\$45.70	-34	-24	-22	20%	0%
13.0404	Educational, Instructional, and Curriculum Supervision	11-9033	Education Administrators, Postsecondary	\$54.08	-34	-24	-22	20%	0%
13.0404	Educational, Instructional, and Curriculum Supervision	11-9039	Education Administrators, All Other	\$45.48	-34	-24	-22	20%	0%
13.0406	Higher Education/Higher Education Administration	11-9033	Education Administrators, Postsecondary	\$54.08	-57	-59	-62	20%	0%
13.0406	Higher Education/Higher Education Administration	11-9039	Education Administrators, All Other	\$45.48	-57	-59	-62	20%	0%

13.0407	Community College Education	11-9033	Education Administrators, Postsecondary	\$54.08	-5	-4	-3	20%	0%
13.0409	Secondary School Administration/Principalship	11-9032	Education Administrators, Elementary and Secondary School	\$45.70	-42	-48	-49	20%	0%
13.0499	Educational Administration and Supervision, Other	11-9031	Education Administrators, Preschool and Childcare Center/Program	\$26.59	0	0	0	20%	31%
13.0499	Educational Administration and Supervision, Other	11-9032	Education Administrators, Elementary and Secondary School	\$45.70	0	0	0	20%	0%
13.0499	Educational Administration and Supervision, Other	11-9033	Education Administrators, Postsecondary	\$54.08	0	0	0	20%	0%
13.0501	Educational/Instructional Technology	25-9011	Audio-Visual and Multimedia Collections Specialists	\$22.39	-69	-83	-89	21%	37%
13.0501	Educational/Instructional Technology	25-9031	Instructional Coordinators	\$28.96	-69	-83	-89	21%	2%
13.0601	Educational Evaluation and Research	25-1099	Postsecondary Teachers	\$36.84	-4	-7	-7	0%	0%
13.0604	Educational Assessment, Testing, and Measurement	25-1099	Postsecondary Teachers	\$36.84	0	-1	-2	0%	0%
13.0901	Social and Philosophical Foundations of Education	25-1099	Postsecondary Teachers	\$36.84	-3	-4	-5	0%	0%
13.1001	Special Education and Teaching, General	25-2051	Special Education Teachers, Preschool	\$20.93	-36	-41	-12	13%	0%
13.1001	Special Education	25-2052	Special Education	\$30.10	-36	-41	-12	13%	0%



	and Teaching, General		Teachers, Kindergarten and Elementary School						
13.1001	Special Education and Teaching, General	25-2053	Special Education Teachers, Middle School	\$30.19	-36	-41	-12	13%	0%
13.1001	Special Education and Teaching, General	25-2054	Special Education Teachers, Secondary School	\$33.02	-36	-41	-12	13%	0%
13.1001	Special Education and Teaching, General	25-2059	Special Education Teachers, All Other	\$24.87	-36	-41	-12	13%	0%
13.1001	Special Education and Teaching, General	25-3098	Substitute Teachers	\$12.13	-36	-41	-12	0%	0%
13.1001	Special Education and Teaching, General	25-3099	Teachers and Instructors, All Other	\$30.04	-36	-41	-12	40%	0%
13.1003	Education/Teaching of Individuals with Hearing Impairments Including Deafness	25-2051	Special Education Teachers, Preschool	\$20.93	-5	-4	-4	13%	0%
13.1003	Education/Teaching of Individuals with Hearing Impairments Including Deafness	25-2052	Special Education Teachers, Kindergarten and Elementary School	\$30.10	-5	-4	-4	13%	0%
13.1003	Education/Teaching of Individuals with Hearing Impairments Including Deafness	25-2053	Special Education Teachers, Middle School	\$30.19	-5	-4	-4	13%	0%
13.1003	Education/Teaching of Individuals with	25-2054	Special Education Teachers, Secondary	\$33.02	-5	-4	-4	13%	0%

	Hearing Impairments Including Deafness		School						
13.1003	Education/Teaching of Individuals with Hearing Impairments Including Deafness	25-2059	Special Education Teachers, All Other	\$24.87	-5	-4	-4	13%	0%
13.1003	Education/Teaching of Individuals with Hearing Impairments Including Deafness	27-3091	Interpreters and Translators	\$20.11	-5	-4	-4	50%	12%
13.1005	Education/Teaching of Individuals with Emotional Disturbances	25-2051	Special Education Teachers, Preschool	\$20.93	-30	-27	-30	13%	0%
13.1005	Education/Teaching of Individuals with Emotional Disturbances	25-2052	Special Education Teachers, Kindergarten and Elementary School	\$30.10	-30	-27	-30	13%	0%
13.1005	Education/Teaching of Individuals with Emotional Disturbances	25-2053	Special Education Teachers, Middle School	\$30.19	-30	-27	-30	13%	0%
13.1005	Education/Teaching of Individuals with Emotional Disturbances	25-2054	Special Education Teachers, Secondary School	\$33.02	-30	-27	-30	13%	0%
13.1005	Education/Teaching of Individuals with Emotional Disturbances	25-2059	Special Education Teachers, All Other	\$24.87	-30	-27	-30	13%	0%
13.1006	Education/Teaching	25-2051	Special Education	\$20.93	-75	-66	-55	13%	0%

	of Individuals with Mental Retardation		Teachers, Preschool						
13.1006	Education/Teaching of Individuals with Mental Retardation	25-2052	Special Education Teachers, Kindergarten and Elementary School	\$30.10	-75	-66	-55	13%	0%
13.1006	Education/Teaching of Individuals with Mental Retardation	25-2053	Special Education Teachers, Middle School	\$30.19	-75	-66	-55	13%	0%
13.1006	Education/Teaching of Individuals with Mental Retardation	25-2054	Special Education Teachers, Secondary School	\$33.02	-75	-66	-55	13%	0%
13.1006	Education/Teaching of Individuals with Mental Retardation	25-2059	Special Education Teachers, All Other	\$24.87	-75	-66	-55	13%	0%
13.1008	Education/Teaching of Individuals with Orthopedic and Other Physical Health Impairments	25-2051	Special Education Teachers, Preschool	\$20.93	-3	-2	-3	13%	0%
13.1008	Education/Teaching of Individuals with Orthopedic and Other Physical Health Impairments	25-2052	Special Education Teachers, Kindergarten and Elementary School	\$30.10	-3	-2	-3	13%	0%
13.1008	Education/Teaching of Individuals with Orthopedic and Other Physical Health Impairments	25-2053	Special Education Teachers, Middle School	\$30.19	-3	-2	-3	13%	0%
13.1008	Education/Teaching of Individuals with Orthopedic and Other Physical Health Impairments	25-2054	Special Education Teachers, Secondary School	\$33.02	-3	-2	-3	13%	0%

13.1008	Education/Teaching of Individuals with Orthopedic and Other Physical Health Impairments	25-2059	Special Education Teachers, All Other	\$24.87	-3	-2	-3	13%	0%
13.1009	Education/Teaching of Individuals with Vision Impairments Including Blindness	25-2051	Special Education Teachers, Preschool	\$20.93	-2	-1	-2	13%	0%
13.1009	Education/Teaching of Individuals with Vision Impairments Including Blindness	25-2052	Special Education Teachers, Kindergarten and Elementary School	\$30.10	-2	-1	-2	13%	0%
13.1009	Education/Teaching of Individuals with Vision Impairments Including Blindness	25-2053	Special Education Teachers, Middle School	\$30.19	-2	-1	-2	13%	0%
13.1009	Education/Teaching of Individuals with Vision Impairments Including Blindness	25-2054	Special Education Teachers, Secondary School	\$33.02	-2	-1	-2	13%	0%
13.1009	Education/Teaching of Individuals with Vision Impairments Including Blindness	25-2059	Special Education Teachers, All Other	\$24.87	-2	-1	-2	13%	0%
13.1011	Education/Teaching of Individuals with Specific Learning Disabilities	25-2051	Special Education Teachers, Preschool	\$20.93	-51	-45	-36	13%	0%
13.1011	Education/Teaching of Individuals with Specific Learning Disabilities	25-2052	Special Education Teachers, Kindergarten and Elementary School	\$30.10	-51	-45	-36	13%	0%
13.1011	Education/Teaching	25-2053	Special Education	\$30.19	-51	-45	-36	13%	0%

	of Individuals with Specific Learning Disabilities		Teachers, Middle School						
13.1011	Education/Teaching of Individuals with Specific Learning Disabilities	25-2054	Special Education Teachers, Secondary School	\$33.02	-51	-45	-36	13%	0%
13.1011	Education/Teaching of Individuals with Specific Learning Disabilities	25-2059	Special Education Teachers, All Other	\$24.87	-51	-45	-36	13%	0%
13.1012	Education/Teaching of Individuals with Speech or Language Impairments	25-2051	Special Education Teachers, Preschool	\$20.93	-34	-35	-35	13%	0%
13.1012	Education/Teaching of Individuals with Speech or Language Impairments	25-2052	Special Education Teachers, Kindergarten and Elementary School	\$30.10	-34	-35	-35	13%	0%
13.1012	Education/Teaching of Individuals with Speech or Language Impairments	25-2053	Special Education Teachers, Middle School	\$30.19	-34	-35	-35	13%	0%
13.1012	Education/Teaching of Individuals with Speech or Language Impairments	25-2054	Special Education Teachers, Secondary School	\$33.02	-34	-35	-35	13%	0%
13.1012	Education/Teaching of Individuals with Speech or Language Impairments	25-2059	Special Education Teachers, All Other	\$24.87	-34	-35	-35	13%	0%
13.1013	Education/Teaching of Individuals with Autism	25-2051	Special Education Teachers, Preschool	\$20.93	-40	-57	-54	13%	0%

13.1013	Education/Teaching of Individuals with Autism	25-2052	Special Education Teachers, Kindergarten and Elementary School	\$30.10	-40	-57	-54	13%	0%
13.1013	Education/Teaching of Individuals with Autism	25-2053	Special Education Teachers, Middle School	\$30.19	-40	-57	-54	13%	0%
13.1013	Education/Teaching of Individuals with Autism	25-2054	Special Education Teachers, Secondary School	\$33.02	-40	-57	-54	13%	0%
13.1013	Education/Teaching of Individuals with Autism	25-2059	Special Education Teachers, All Other	\$24.87	-40	-57	-54	13%	0%
13.1019	Education/Teaching of Individuals in Secondary Special Education Programs	25-2054	Special Education Teachers, Secondary School	\$33.02	-4	-9	-15	13%	0%
13.1099	Special Education and Teaching, Other	25-2051	Special Education Teachers, Preschool	\$20.93	0	0	0	13%	0%
13.1099	Special Education and Teaching, Other	25-2052	Special Education Teachers, Kindergarten and Elementary School	\$30.10	0	0	0	13%	0%
13.1099	Special Education and Teaching, Other	25-2059	Special Education Teachers, All Other	\$24.87	0	0	0	13%	0%
13.1101	Counselor Education/School Counseling and Guidance Services	21-1012	Educational, Guidance, School, and Vocational Counselors	\$27.13	-120	-117	-110	21%	0%
13.1102	College Student Counseling and Personnel Services	21-1012	Educational, Guidance, School, and Vocational Counselors	\$27.13	-3	-7	-10	21%	0%
13.1201	Adult and Continuing Education and Teaching	25-3011	Adult Basic and Secondary Education and Literacy Teachers and Instructors	\$22.41	134	100	98	40%	0%

13.1201	Adult and Continuing Education and Teaching	25-3021	Self-Enrichment Education Teachers	\$17.24	134	100	98	40%	43%
13.1202	Elementary Education and Teaching	25-2021	Elementary School Teachers, Except Special Education	\$31.01	-512	-419	-393	5%	0%
13.1203	Junior High/Intermediate/Middle School Education and Teaching	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-2	0	0	5%	0%
13.1203	Junior High/Intermediate/Middle School Education and Teaching	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-2	0	0	4%	0%
13.1205	Secondary Education and Teaching	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-318	-264	-215	4%	0%
13.1206	Teacher Education, Multiple Levels	25-2021	Elementary School Teachers, Except Special Education	\$31.01	-5	-7	-8	5%	0%
13.1206	Teacher Education, Multiple Levels	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-5	-7	-8	4%	0%
13.1208	Waldorf/Steiner Teacher Education	25-2011	Preschool Teachers, Except Special Education	\$13.99	0	0	0	53%	69%
13.1208	Waldorf/Steiner Teacher Education	25-2021	Elementary School Teachers, Except Special Education	\$31.01	0	0	0	5%	0%
13.1208	Waldorf/Steiner	25-2022	Middle School Teachers,	\$27.61	0	0	0	5%	0%

	Teacher Education		Except Special and Career/Technical Education						
13.1208	Waldorf/Steiner Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	0	0	0	4%	0%
13.1208	Waldorf/Steiner Teacher Education	25-2059	Special Education Teachers, All Other	\$24.87	0	0	0	13%	0%
13.1208	Waldorf/Steiner Teacher Education	25-3099	Teachers and Instructors, All Other	\$30.04	0	0	0	40%	0%
13.1209	Kindergarten/Preschool Education and Teaching	25-2011	Preschool Teachers, Except Special Education	\$13.99	-8	-6	-5	53%	69%
13.1209	Kindergarten/Preschool Education and Teaching	25-2012	Kindergarten Teachers, Except Special Education	\$24.46	-8	-6	-5	53%	14%
13.1210	Early Childhood Education and Teaching	25-2011	Preschool Teachers, Except Special Education	\$13.99	-99	-107	-107	53%	69%
13.1210	Early Childhood Education and Teaching	25-2012	Kindergarten Teachers, Except Special Education	\$24.46	-99	-107	-107	53%	14%
13.1299	Teacher Education and Professional Development, Specific Levels and Methods, Other	25-3099	Teachers and Instructors, All Other	\$30.04	-170	-148	-106	40%	0%
13.1302	Art Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-29	-25	-23	5%	0%
13.1302	Art Teacher Education	25-2031	Secondary School Teachers, Except Special	\$30.81	-29	-25	-23	4%	0%



			and Career/Technical Education						
13.1303	Business Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-3	-2	-1	4%	0%
13.1305	English/Language Arts Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-105	-88	-70	5%	0%
13.1305	English/Language Arts Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-105	-88	-70	4%	0%
13.1306	Foreign Language Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-3	-2	-2	5%	0%
13.1306	Foreign Language Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-3	-2	-2	4%	0%
13.1307	Health Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-15	-16	-13	5%	0%
13.1307	Health Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-15	-16	-13	4%	0%
13.1308	Family and Consumer Sciences/Home Economics Teacher	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	0	0	0	5%	0%

	Education								
13.1308	Family and Consumer Sciences/Home Economics Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	0	0	0	4%	0%
13.1309	Technology Teacher Education/Industrial Arts Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	1	3	6	5%	0%
13.1309	Technology Teacher Education/Industrial Arts Teacher Education	25-2023	Career/Technical Education Teachers, Middle School	\$31.55	1	3	6	5%	2%
13.1309	Technology Teacher Education/Industrial Arts Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	1	3	6	4%	0%
13.1309	Technology Teacher Education/Industrial Arts Teacher Education	25-2032	Career/Technical Education Teachers, Secondary School	\$30.26	1	3	6	4%	24%
13.1310	Sales and Marketing Operations/Marketing and Distribution Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	0	0	0	4%	0%
13.1311	Mathematics Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-169	-144	-116	5%	0%
13.1311	Mathematics Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-169	-144	-116	4%	0%

13.1312	Music Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-44	-40	-36	5%	0%
13.1312	Music Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-44	-40	-36	4%	0%
13.1314	Physical Education Teaching and Coaching	27-2022	Coaches and Scouts	\$13.65	31	-11	-13	40%	34%
13.1314	Physical Education Teaching and Coaching	27-2023	Umpires, Referees, and Other Sports Officials	\$17.85	31	-11	-13	40%	77%
13.1314	Physical Education Teaching and Coaching	39-9031	Fitness Trainers and Aerobics Instructors	\$14.06	31	-11	-13	55%	51%
13.1315	Reading Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-328	-286	-211	5%	0%
13.1315	Reading Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-328	-286	-211	4%	0%
13.1316	Science Teacher Education/General Science Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-75	-72	-59	5%	0%
13.1316	Science Teacher Education/General Science Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-75	-72	-59	4%	0%
13.1317	Social Science	25-2022	Middle School Teachers,	\$27.61	-3	-1	0	5%	0%

	Teacher Education		Except Special and Career/Technical Education						
13.1317	Social Science Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-3	-1	0	4%	0%
13.1318	Social Studies Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-102	-100	-90	5%	0%
13.1318	Social Studies Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-102	-100	-90	4%	0%
13.1319	Technical Teacher Education	25-2023	Career/Technical Education Teachers, Middle School	\$31.55	11	8	4	5%	2%
13.1319	Technical Teacher Education	25-2032	Career/Technical Education Teachers, Secondary School	\$30.26	11	8	4	4%	24%
13.1320	Trade and Industrial Teacher Education	25-2023	Career/Technical Education Teachers, Middle School	\$31.55	0	0	0	5%	2%
13.1320	Trade and Industrial Teacher Education	25-2032	Career/Technical Education Teachers, Secondary School	\$30.26	0	0	0	4%	24%
13.1321	Computer Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-1	-1	-1	5%	0%
13.1321	Computer Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical	\$30.81	-1	-1	-1	4%	0%

			Education						
13.1322	Biology Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-8	-7	-7	4%	0%
13.1323	Chemistry Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-2	-1	-2	4%	0%
13.1324	Drama and Dance Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	0	0	0	4%	0%
13.1325	French Language Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-2	-3	-2	4%	0%
13.1326	German Language Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-1	-1	0	4%	0%
13.1328	History Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-10	-8	-6	5%	0%
13.1328	History Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-10	-8	-6	4%	0%
13.1329	Physics Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-1	-2	-1	4%	0%
13.1330	Spanish Language	25-2031	Secondary School	\$30.81	-9	-8	-7	4%	0%

	Teacher Education		Teachers, Except Special and Career/Technical Education						
13.1331	Speech Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	0	0	0	4%	0%
13.1332	Geography Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-3	-3	-2	4%	0%
13.1335	Psychology Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	0	0	0	4%	0%
13.1337	Earth Science Teacher Education	25-1099	Postsecondary Teachers	\$36.84	-1	-1	-1	0%	0%
13.1337	Earth Science Teacher Education	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-1	-1	-1	5%	0%
13.1337	Earth Science Teacher Education	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-1	-1	-1	4%	0%
13.1399	Teacher Education and Professional Development, Specific Subject Areas, Other	25-2022	Middle School Teachers, Except Special and Career/Technical Education	\$27.61	-19	-22	-27	5%	0%
13.1399	Teacher Education and Professional Development, Specific Subject	25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$30.81	-19	-22	-27	4%	0%

	Areas, Other								
13.1401	Teaching English as a Second or Foreign Language/ESL Language Instructor	25-3011	Adult Basic and Secondary Education and Literacy Teachers and Instructors	\$22.41	-20	-24	-31	40%	0%
13.9999	Education, Other	25-3099	Teachers and Instructors, All Other	\$30.04	28	-6	-2	40%	0%
13.9999	Education, Other	25-9099	Education, Training, and Library Workers, All Other	\$19.47	28	-6	-2	21%	0%
14.0201	Aerospace, Aeronautical and Astronautical/Space Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-168	-188	-191	16%	2%
14.0201	Aerospace, Aeronautical and Astronautical/Space Engineering	17-2011	Aerospace Engineers	\$51.66	-168	-188	-191	15%	0%
14.0501	Bioengineering and Biomedical Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-222	-229	-229	16%	2%
14.0501	Bioengineering and Biomedical Engineering	17-2031	Biomedical Engineers	\$34.41	-222	-229	-229	23%	0%
14.0701	Chemical Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-189	-192	-194	16%	2%
14.0701	Chemical Engineering	17-2041	Chemical Engineers	\$37.43	-189	-192	-194	12%	0%
14.0702	Chemical and Biomolecular Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-2	-4	-3	16%	2%
14.0702	Chemical and Biomolecular Engineering	17-2041	Chemical Engineers	\$37.43	-2	-4	-3	12%	0%
14.0702	Chemical and	17-2199	Engineers, All Other	\$43.95	-2	-4	-3	18%	7%

	Biomolecular Engineering								
14.0702	Chemical and Biomolecular Engineering	25-1099	Postsecondary Teachers	\$36.84	-2	-4	-3	0%	0%
14.0801	Civil Engineering, General	11-9041	Architectural and Engineering Managers	\$57.75	-28	13	18	16%	2%
14.0801	Civil Engineering, General	17-2051	Civil Engineers	\$32.32	-28	13	18	15%	0%
14.0803	Structural Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-2	-2	-1	16%	2%
14.0901	Computer Engineering, General	11-9041	Architectural and Engineering Managers	\$57.75	-104	-122	-120	16%	2%
14.0901	Computer Engineering, General	15-1122	Information Security Analysts	\$39.04	-104	-122	-120	43%	2%
14.0901	Computer Engineering, General	15-1132	Software Developers, Applications	\$38.30	-104	-122	-120	16%	7%
14.0901	Computer Engineering, General	15-1133	Software Developers, Systems Software	\$42.63	-104	-122	-120	16%	4%
14.0901	Computer Engineering, General	15-1134	Web Developers	\$27.78	-104	-122	-120	31%	43%
14.0901	Computer Engineering, General	15-1143	Computer Network Architects	\$40.97	-104	-122	-120	41%	25%
14.0901	Computer Engineering, General	17-2061	Computer Hardware Engineers	\$48.92	-104	-122	-120	28%	0%
14.0903	Computer Software Engineering	11-9041	Architectural and Engineering Managers	\$57.75	0	0	0	16%	2%



14.0903	Computer Software Engineering	15-1132	Software Developers, Applications	\$38.30	0	0	0	16%	7%
14.0903	Computer Software Engineering	15-1133	Software Developers, Systems Software	\$42.63	0	0	0	16%	4%
14.0999	Computer Engineering, Other	11-9041	Architectural and Engineering Managers	\$57.75	-13	-15	-12	16%	2%
14.0999	Computer Engineering, Other	15-1122	Information Security Analysts	\$39.04	-13	-15	-12	43%	2%
14.0999	Computer Engineering, Other	15-1134	Web Developers	\$27.78	-13	-15	-12	31%	43%
14.0999	Computer Engineering, Other	15-1143	Computer Network Architects	\$40.97	-13	-15	-12	41%	25%
14.1001	Electrical and Electronics Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-334	-362	-414	16%	2%
14.1001	Electrical and Electronics Engineering	17-2071	Electrical Engineers	\$40.91	-334	-362	-414	21%	13%
14.1001	Electrical and Electronics Engineering	17-2072	Electronics Engineers, Except Computer	\$38.29	-334	-362	-414	21%	3%
14.1201	Engineering Physics/Applied Physics	11-9041	Architectural and Engineering Managers	\$57.75	-12	-18	-19	16%	2%
14.1201	Engineering Physics/Applied Physics	17-2199	Engineers, All Other	\$43.95	-12	-18	-19	18%	7%
14.1301	Engineering Science	11-9041	Architectural and Engineering Managers	\$57.75	-16	-18	-20	16%	2%
14.1301	Engineering Science	17-2199	Engineers, All Other	\$43.95	-16	-18	-20	18%	7%
14.1401	Environmental/Environmental Health Engineering	11-9041	Architectural and Engineering Managers	\$57.75	26	26	28	16%	2%
14.1401	Environmental/Environmental Health Engineering	17-2081	Environmental Engineers	\$39.70	26	26	28	12%	0%

	Environmental Health Engineering								
14.1401	Environmental/Environmental Health Engineering	17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	\$41.17	26	26	28	28%	3%
14.1801	Materials Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-44	-54	-56	16%	2%
14.1801	Materials Engineering	13-1051	Cost Estimators	\$28.24	-44	-54	-56	67%	21%
14.1801	Materials Engineering	17-2131	Materials Engineers	\$40.00	-44	-54	-56	25%	3%
14.1901	Mechanical Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-185	18	67	16%	2%
14.1901	Mechanical Engineering	13-1051	Cost Estimators	\$28.24	-185	18	67	67%	21%
14.1901	Mechanical Engineering	17-2141	Mechanical Engineers	\$43.83	-185	18	67	26%	18%
14.1901	Mechanical Engineering	51-8021	Stationary Engineers and Boiler Operators	\$28.37	-185	18	67	88%	85%
14.2201	Naval Architecture and Marine Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-58	-67	-78	16%	2%
14.2201	Naval Architecture and Marine Engineering	17-2121	Marine Engineers and Naval Architects	\$46.73	-58	-67	-78	31%	2%
14.2301	Nuclear Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-77	-76	-71	16%	2%
14.2301	Nuclear Engineering	17-2161	Nuclear Engineers	\$53.56	-77	-76	-71	18%	0%
14.2501	Petroleum Engineering	11-9041	Architectural and Engineering Managers	\$57.75	3	4	4	16%	2%
14.2501	Petroleum Engineering	17-2171	Petroleum Engineers	\$57.09	3	4	4	17%	0%
14.2701	Systems	11-9041	Architectural and	\$57.75	-59	-92	-99	16%	2%

	Engineering		Engineering Managers						
14.2701	Systems Engineering	17-2199	Engineers, All Other	\$43.95	-59	-92	-99	18%	7%
14.3201	Polymer/Plastics Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-1	0	0	16%	2%
14.3201	Polymer/Plastics Engineering	17-2199	Engineers, All Other	\$43.95	-1	0	0	18%	7%
14.3301	Construction Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-12	-16	-15	16%	2%
14.3301	Construction Engineering	13-1051	Cost Estimators	\$28.24	-12	-16	-15	67%	21%
14.3301	Construction Engineering	17-2199	Engineers, All Other	\$43.95	-12	-16	-15	18%	7%
14.3501	Industrial Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-163	-75	-67	16%	2%
14.3501	Industrial Engineering	17-2112	Industrial Engineers	\$39.90	-163	-75	-67	28%	9%
14.3601	Manufacturing Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-22	-20	-21	16%	2%
14.3601	Manufacturing Engineering	13-1051	Cost Estimators	\$28.24	-22	-20	-21	67%	21%
14.3601	Manufacturing Engineering	17-2199	Engineers, All Other	\$43.95	-22	-20	-21	18%	7%
14.3901	Geological/Geophysical Engineering	11-9041	Architectural and Engineering Managers	\$57.75	-10	-8	-9	16%	2%
14.3901	Geological/Geophysical Engineering	17-2199	Engineers, All Other	\$43.95	-10	-8	-9	18%	7%
14.4401	Engineering Chemistry	11-9041	Architectural and Engineering Managers	\$57.75	-1	-2	-2	16%	2%
14.4401	Engineering Chemistry	17-2041	Chemical Engineers	\$37.43	-1	-2	-2	12%	0%
14.4401	Engineering Chemistry	17-2199	Engineers, All Other	\$43.95	-1	-2	-2	18%	7%

14.4401	Engineering Chemistry	25-1099	Postsecondary Teachers	\$36.84	-1	-2	-2	0%	0%
15.0000	Engineering Technology, General	17-3021	Aerospace Engineering and Operations Technicians	\$30.02	51	63	73	83%	41%
15.0000	Engineering Technology, General	17-3022	Civil Engineering Technicians	\$20.40	51	63	73	83%	43%
15.0000	Engineering Technology, General	17-3023	Electrical and Electronics Engineering Technicians	\$22.92	51	63	73	83%	70%
15.0000	Engineering Technology, General	17-3024	Electro-Mechanical Technicians	\$29.28	51	63	73	83%	74%
15.0000	Engineering Technology, General	17-3025	Environmental Engineering Technicians	\$23.38	51	63	73	83%	43%
15.0000	Engineering Technology, General	17-3026	Industrial Engineering Technicians	\$20.60	51	63	73	83%	52%
15.0000	Engineering Technology, General	17-3027	Mechanical Engineering Technicians	\$27.16	51	63	73	83%	69%
15.0000	Engineering Technology, General	17-3029	Engineering Technicians, Except Drafters, All Other	\$26.14	51	63	73	83%	42%
15.0000	Engineering Technology, General	17-3031	Surveying and Mapping Technicians	\$19.06	51	63	73	89%	61%
15.0101	Architectural Engineering Technology/Technician	17-3029	Engineering Technicians, Except Drafters, All Other	\$26.14	-16	-19	-23	83%	42%
15.0201	Civil Engineering	17-3022	Civil Engineering	\$20.40	-3	-2	-3	83%	43%

	Technology/Technician		Technicians						
15.0303	Electrical, Electronic and Communications Engineering Technology/Technician	17-3023	Electrical and Electronics Engineering Technicians	\$22.92	-86	-95	-31	83%	70%
15.0303	Electrical, Electronic and Communications Engineering Technology/Technician	17-3024	Electro-Mechanical Technicians	\$29.28	-86	-95	-31	83%	74%
15.0303	Electrical, Electronic and Communications Engineering Technology/Technician	17-3025	Environmental Engineering Technicians	\$23.38	-86	-95	-31	83%	43%
15.0303	Electrical, Electronic and Communications Engineering Technology/Technician	17-3029	Engineering Technicians, Except Drafters, All Other	\$26.14	-86	-95	-31	83%	42%
15.0303	Electrical, Electronic and Communications Engineering Technology/Technician	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	\$25.99	-86	-95	-31	87%	49%
15.0303	Electrical, Electronic and	49-2095	Electrical and Electronics Repairers, Powerhouse,	\$33.76	-86	-95	-31	89%	60%

	Communications Engineering Technology/Technician		Substation, and Relay						
15.0303	Electrical, Electronic and Communications Engineering Technology/Technician	49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	\$11.97	-86	-95	-31	95%	35%
15.0303	Electrical, Electronic and Communications Engineering Technology/Technician	49-2097	Electronic Home Entertainment Equipment Installers and Repairers	\$16.26	-86	-95	-31	91%	26%
15.0303	Electrical, Electronic and Communications Engineering Technology/Technician	51-2022	Electrical and Electronic Equipment Assemblers	\$14.50	-86	-95	-31	95%	92%
15.0304	Laser and Optical Technology/Technician	17-3029	Engineering Technicians, Except Drafters, All Other	\$26.14	0	0	0	83%	42%
15.0305	Telecommunications Technology/Technician	17-3023	Electrical and Electronics Engineering Technicians	\$22.92	-3	-5	-6	83%	70%
15.0399	Electrical and Electronic Engineering Technologies/Technicians, Other	17-3023	Electrical and Electronics Engineering Technicians	\$22.92	-6	-13	-23	83%	70%

15.0401	Biomedical Technology/Technician	49-9062	Medical Equipment Repairers	\$21.23	-9	-1	2	80%	73%
15.0403	Electromechanical Technology/Electromechanical Engineering Technology	51-2023	Electromechanical Equipment Assemblers	\$15.41	-12	-20	-32	95%	64%
15.0405	Robotics Technology/Technician	51-2021	Coil Winders, Tapers, and Finishers	\$16.35	-11	-13	-15	95%	97%
15.0405	Robotics Technology/Technician	51-2022	Electrical and Electronic Equipment Assemblers	\$14.50	-11	-13	-15	95%	92%
15.0405	Robotics Technology/Technician	51-2023	Electromechanical Equipment Assemblers	\$15.41	-11	-13	-15	95%	64%
15.0499	Electromechanical and Instrumentation and Maintenance Technologies/Technicians, Other	49-9069	Precision Instrument and Equipment Repairers, All Other	\$29.54	4	4	2	80%	0%
15.0499	Electromechanical and Instrumentation and Maintenance Technologies/Technicians, Other	51-2023	Electromechanical Equipment Assemblers	\$15.41	4	4	2	95%	64%
15.0501	Heating, Ventilation, Air Conditioning and Refrigeration Engineering	17-3025	Environmental Engineering Technicians	\$23.38	-460	-430	-386	83%	43%

	Technology/Technician								
15.0501	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician	49-2092	Electric Motor, Power Tool, and Related Repairers	\$24.64	-460	-430	-386	93%	61%
15.0501	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician	49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$22.67	-460	-430	-386	96%	35%
15.0503	Energy Management and Systems Technology/Technician	17-3029	Engineering Technicians, Except Drafters, All Other	\$26.14	-73	-78	-59	83%	42%
15.0506	Water Quality and Wastewater Treatment Management and Recycling Technology/Technician	51-8031	Water and Wastewater Treatment Plant and System Operators	\$21.24	37	49	49	91%	69%
15.0507	Environmental Engineering Technology/Environmental Technology	17-3025	Environmental Engineering Technicians	\$23.38	-16	-14	-11	83%	43%
15.0508	Hazardous Materials	47-4041	Hazardous Materials Removal Workers	\$22.37	0	0	0	87%	74%



	Management and Waste Technology/Technician								
15.0611	Metallurgical Technology/Technician	17-3029	Engineering Technicians, Except Drafters, All Other	\$26.14	-8	-7	-6	83%	42%
15.0612	Industrial Technology/Technician	17-3026	Industrial Engineering Technicians	\$20.60	-34	-24	-23	83%	52%
15.0613	Manufacturing Engineering Technology/Technician	17-2112	Industrial Engineers	\$39.90	-12	2	7	28%	9%
15.0613	Manufacturing Engineering Technology/Technician	17-3026	Industrial Engineering Technicians	\$20.60	-12	2	7	83%	52%
15.0613	Manufacturing Engineering Technology/Technician	27-1021	Commercial and Industrial Designers	\$36.53	-12	2	7	44%	37%
15.0701	Occupational Safety and Health Technology/Technician	29-9011	Occupational Health and Safety Specialists	\$33.65	0	0	0	40%	9%
15.0799	Quality Control and Safety Technologies/Technicians, Other	29-9011	Occupational Health and Safety Specialists	\$33.65	-1	-2	-2	40%	9%
15.0801	Aeronautical/Aerospace Engineering Technology/Technician	17-3021	Aerospace Engineering and Operations Technicians	\$30.02	0	0	0	83%	41%

15.0899	Mechanical Engineering Related Technologies/Technicians, Other	17-3027	Mechanical Engineering Technicians	\$27.16	0	0	0	83%	69%
15.1001	Construction Engineering Technology/Technician	11-9021	Construction Managers	\$41.28	-12	-10	-12	66%	16%
15.1001	Construction Engineering Technology/Technician	13-1051	Cost Estimators	\$28.24	-12	-10	-12	67%	21%
15.1001	Construction Engineering Technology/Technician	17-3022	Civil Engineering Technicians	\$20.40	-12	-10	-12	83%	43%
15.1102	Surveying Technology/Surveying	17-1021	Cartographers and Photogrammetrists	\$28.24	19	18	20	19%	35%
15.1102	Surveying Technology/Surveying	17-1022	Surveyors	\$24.46	19	18	20	19%	18%
15.1102	Surveying Technology/Surveying	17-3031	Surveying and Mapping Technicians	\$19.06	19	18	20	89%	61%
15.1201	Computer Engineering Technology/Technician	17-3023	Electrical and Electronics Engineering Technicians	\$22.92	-33	-39	-19	83%	70%
15.1301	Drafting and Design Technology/Technician, General	17-3011	Architectural and Civil Drafters	\$23.17	-17	-20	-33	73%	37%
15.1301	Drafting and Design Technology/Technician	17-3019	Drafters, All Other	\$18.53	-17	-20	-33	73%	0%

	ian, General								
15.1302	CAD/CADD Drafting and/or Design Technology/Technician	17-3011	Architectural and Civil Drafters	\$23.17	-149	-124	-75	73%	37%
15.1303	Architectural Drafting and Architectural CAD/CADD	17-3011	Architectural and Civil Drafters	\$23.17	-32	-30	-23	73%	37%
15.1306	Mechanical Drafting and Mechanical Drafting CAD/CADD	17-3013	Mechanical Drafters	\$25.23	-19	-23	-9	73%	50%
15.1399	Drafting/Design Engineering Technologies/Technicians, Other	17-3019	Drafters, All Other	\$18.53	-15	-36	-45	73%	0%
15.1501	Engineering/Industrial Management	17-3026	Industrial Engineering Technicians	\$20.60	-155	-141	-128	83%	52%
15.9999	Engineering Technologies and Engineering-Related Fields, Other	17-3024	Electro-Mechanical Technicians	\$29.28	-2	-2	-2	83%	74%
15.9999	Engineering Technologies and Engineering-Related Fields, Other	17-3029	Engineering Technicians, Except Drafters, All Other	\$26.14	-2	-2	-2	83%	42%
16.0101	Foreign Languages and Literatures, General	27-3091	Interpreters and Translators	\$20.11	-28	-29	-27	50%	12%
16.0102	Linguistics	27-3091	Interpreters and Translators	\$20.11	-81	-92	-95	50%	12%
16.0103	Language Interpretation and Translation	27-3091	Interpreters and Translators	\$20.11	-4	-3	-3	50%	12%

16.0104	Comparative Literature	25-1099	Postsecondary Teachers	\$36.84	-13	-14	-10	0%	0%
16.0301	Chinese Language and Literature	27-3091	Interpreters and Translators	\$20.11	0	-1	-2	50%	12%
16.0302	Japanese Language and Literature	27-3091	Interpreters and Translators	\$20.11	-18	-23	-24	50%	12%
16.0303	Korean Language and Literature	27-3091	Interpreters and Translators	\$20.11	0	0	0	50%	12%
16.0399	East Asian Languages, Literatures, and Linguistics, Other	27-3091	Interpreters and Translators	\$20.11	-3	-2	-2	50%	12%
16.0400	Slavic Languages, Literatures, and Linguistics, General	27-3091	Interpreters and Translators	\$20.11	-4	-4	-6	50%	12%
16.0402	Russian Language and Literature	27-3091	Interpreters and Translators	\$20.11	-4	-4	-5	50%	12%
16.0407	Polish Language and Literature	27-3091	Interpreters and Translators	\$20.11	-3	-4	-3	50%	12%
16.0500	Germanic Languages, Literatures, and Linguistics, General	27-3091	Interpreters and Translators	\$20.11	0	0	0	50%	12%
16.0501	German Language and Literature	27-3091	Interpreters and Translators	\$20.11	-62	-67	-70	50%	12%
16.0601	Modern Greek Language and Literature	27-3091	Interpreters and Translators	\$20.11	-4	-4	-4	50%	12%
16.0900	Romance Languages, Literatures, and Linguistics, General	27-3091	Interpreters and Translators	\$20.11	-3	-4	-5	50%	12%
16.0901	French Language and Literature	27-3091	Interpreters and Translators	\$20.11	-56	-58	-64	50%	12%

16.0902	Italian Language and Literature	27-3091	Interpreters and Translators	\$20.11	-5	-4	-3	50%	12%
16.0904	Portuguese Language and Literature	27-3091	Interpreters and Translators	\$20.11	0	0	0	50%	12%
16.0905	Spanish Language and Literature	27-3091	Interpreters and Translators	\$20.11	-190	-212	-221	50%	12%
16.0999	Romance Languages, Literatures, and Linguistics, Other	27-3091	Interpreters and Translators	\$20.11	-1	-2	-2	50%	12%
16.1101	Arabic Language and Literature	27-3091	Interpreters and Translators	\$20.11	-5	-5	-11	50%	12%
16.1102	Hebrew Language and Literature	27-3091	Interpreters and Translators	\$20.11	-5	-6	-7	50%	12%
16.1103	Ancient Near Eastern and Biblical Languages, Literatures, and Linguistics	27-3091	Interpreters and Translators	\$20.11	-4	-3	-1	50%	12%
16.1199	Middle/Near Eastern and Semitic Languages, Literatures, and Linguistics, Other	27-3091	Interpreters and Translators	\$20.11	-36	-40	-38	50%	12%
16.1200	Classics and Classical Languages, Literatures, and Linguistics, General	27-3091	Interpreters and Translators	\$20.11	-16	-15	-15	50%	12%
16.1202	Ancient/Classical Greek Language and Literature	27-3091	Interpreters and Translators	\$20.11	-1	-2	-1	50%	12%
16.1203	Latin Language and Literature	27-3091	Interpreters and Translators	\$20.11	-6	-6	-6	50%	12%

16.1601	American Sign Language (ASL)	27-3091	Interpreters and Translators	\$20.11	-12	-16	-15	50%	12%
16.1603	Sign Language Interpretation and Translation	27-3091	Interpreters and Translators	\$20.11	-26	-36	-45	50%	12%
19.0101	Family and Consumer Sciences/Human Sciences, General	25-9021	Farm and Home Management Advisors	\$23.31	-7	-5	-5	21%	0%
19.0203	Consumer Merchandising/Retailing Management	11-2021	Marketing Managers	\$57.06	45	34	38	33%	8%
19.0203	Consumer Merchandising/Retailing Management	11-2022	Sales Managers	\$51.67	45	34	38	33%	24%
19.0203	Consumer Merchandising/Retailing Management	13-1161	Market Research Analysts and Marketing Specialists	\$30.15	45	34	38	23%	0%
19.0203	Consumer Merchandising/Retailing Management	25-9021	Farm and Home Management Advisors	\$23.31	45	34	38	21%	0%
19.0203	Consumer Merchandising/Retailing Management	41-1011	First-Line Supervisors of Retail Sales Workers	\$18.08	45	34	38	75%	86%
19.0501	Foods, Nutrition, and Wellness Studies, General	29-1031	Dietitians and Nutritionists	\$25.30	165	93	48	25%	0%
19.0501	Foods, Nutrition, and Wellness Studies, General	29-2051	Dietetic Technicians	\$13.70	165	93	48	82%	94%
19.0501	Foods, Nutrition, and Wellness Studies, General	39-9021	Personal Care Aides	\$9.97	165	93	48	88%	78%
19.0604	Facilities Planning	27-1025	Interior Designers	\$22.70	0	0	0	44%	22%

	and Management								
19.0701	Human Development and Family Studies, General	25-9021	Farm and Home Management Advisors	\$23.31	-1	-1	0	21%	0%
19.0702	Adult Development and Aging	25-9021	Farm and Home Management Advisors	\$23.31	-21	-16	-13	21%	0%
19.0704	Family Systems	25-9021	Farm and Home Management Advisors	\$23.31	-11	-8	-1	21%	0%
19.0706	Child Development	21-1093	Social and Human Service Assistants	\$12.82	490	375	384	60%	41%
19.0706	Child Development	25-2011	Preschool Teachers, Except Special Education	\$13.99	490	375	384	53%	69%
19.0706	Child Development	39-9011	Childcare Workers	\$9.94	490	375	384	84%	74%
19.0707	Family and Community Services	25-9021	Farm and Home Management Advisors	\$23.31	-169	-218	-235	21%	0%
19.0708	Child Care and Support Services Management	25-2011	Preschool Teachers, Except Special Education	\$13.99	-94	-89	-74	53%	69%
19.0709	Child Care Provider/Assistant	39-9011	Childcare Workers	\$9.94	190	103	97	84%	74%
19.0799	Human Development, Family Studies, and Related Services, Other	25-9021	Farm and Home Management Advisors	\$23.31	-2	-1	-2	21%	0%
19.0905	Apparel and Textile Marketing Management	11-2021	Marketing Managers	\$57.06	-11	-15	-14	33%	8%
19.0905	Apparel and Textile Marketing Management	13-1022	Wholesale and Retail Buyers, Except Farm Products	\$25.28	-11	-15	-14	66%	75%

22.0001	Pre-Law Studies	23-1011	Lawyers	\$49.25	-5	-5	-3	1%	0%
22.0001	Pre-Law Studies	23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	\$51.60	-5	-5	-3	1%	19%
22.0001	Pre-Law Studies	23-1022	Arbitrators, Mediators, and Conciliators	\$22.27	-5	-5	-3	1%	12%
22.0001	Pre-Law Studies	23-1023	Judges, Magistrate Judges, and Magistrates	\$36.54	-5	-5	-3	1%	23%
22.0101	Law	23-1011	Lawyers	\$49.25	-421	-480	-470	1%	0%
22.0101	Law	23-1012	Judicial Law Clerks	\$23.14	-421	-480	-470	12%	14%
22.0101	Law	23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	\$51.60	-421	-480	-470	1%	19%
22.0101	Law	23-1022	Arbitrators, Mediators, and Conciliators	\$22.27	-421	-480	-470	1%	12%
22.0101	Law	23-1023	Judges, Magistrate Judges, and Magistrates	\$36.54	-421	-480	-470	1%	23%
22.0201	Advanced Legal Research/Studies, General	23-1011	Lawyers	\$49.25	-22	-22	-21	1%	0%
22.0205	Banking, Corporate, Finance, and Securities Law	23-1011	Lawyers	\$49.25	-2	-2	-1	1%	0%
22.0210	International Business, Trade, and Tax Law	23-1011	Lawyers	\$49.25	-2	-3	-4	1%	0%
22.0211	Tax Law/Taxation	23-1011	Lawyers	\$49.25	-3	-4	-2	1%	0%
22.0299	Legal Research and Advanced Professional Studies, Other	23-1011	Lawyers	\$49.25	-2	-1	-1	1%	0%
22.0301	Legal Administrative	43-6012	Legal Secretaries	\$23.04	86	66	57	81%	77%



	Assistant/Secretary								
22.0302	Legal Assistant/Paralegal	23-2011	Paralegals and Legal Assistants	\$23.68	-142	-151	-141	58%	47%
22.0302	Legal Assistant/Paralegal	23-2093	Title Examiners, Abstractors, and Searchers	\$19.47	-142	-151	-141	59%	98%
22.0302	Legal Assistant/Paralegal	23-2099	Legal Support Workers, All Other	\$27.34	-142	-151	-141	59%	0%
22.0399	Legal Support Services, Other	23-2011	Paralegals and Legal Assistants	\$23.68	0	0	0	58%	47%
22.0399	Legal Support Services, Other	23-2099	Legal Support Workers, All Other	\$27.34	0	0	0	59%	0%
22.9999	Legal Professions and Studies, Other	13-1041	Compliance Officers	\$36.36	-3	-4	-3	42%	39%
22.9999	Legal Professions and Studies, Other	23-1011	Lawyers	\$49.25	-3	-4	-3	1%	0%
22.9999	Legal Professions and Studies, Other	23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	\$51.60	-3	-4	-3	1%	19%
22.9999	Legal Professions and Studies, Other	23-1022	Arbitrators, Mediators, and Conciliators	\$22.27	-3	-4	-3	1%	12%
22.9999	Legal Professions and Studies, Other	23-1023	Judges, Magistrate Judges, and Magistrates	\$36.54	-3	-4	-3	1%	23%
23.0101	English Language and Literature, General	25-1099	Postsecondary Teachers	\$36.84	-614	-597	-568	0%	0%
23.1301	Writing, General	27-3043	Writers and Authors	\$22.84	-37	-38	-42	15%	42%
23.1302	Creative Writing	27-3041	Editors	\$23.03	-53	-57	-57	16%	16%
23.1302	Creative Writing	27-3043	Writers and Authors	\$22.84	-53	-57	-57	15%	42%
23.1303	Professional, Technical, Business, and Scientific Writing	27-3041	Editors	\$23.03	17	29	35	16%	16%

23.1303	Professional, Technical, Business, and Scientific Writing	27-3042	Technical Writers	\$29.45	17	29	35	26%	51%
23.1303	Professional, Technical, Business, and Scientific Writing	27-3043	Writers and Authors	\$22.84	17	29	35	15%	42%
23.1304	Rhetoric and Composition	25-1099	Postsecondary Teachers	\$36.84	-5	-5	-4	0%	0%
23.1402	American Literature (United States)	25-1099	Postsecondary Teachers	\$36.84	-5	-3	-4	0%	0%
23.1404	English Literature (British and Commonwealth)	25-1099	Postsecondary Teachers	\$36.84	0	0	0	0%	0%
23.9999	English Language and Literature/Letters, Other	25-1099	Postsecondary Teachers	\$36.84	-1	-2	-2	0%	0%
24.0101	Liberal Arts and Sciences/Liberal Studies	25-1099	Postsecondary Teachers	\$36.84	-1708	-2256	-2699	0%	0%
25.0101	Library and Information Science	25-4021	Librarians	\$26.38	-177	-186	-177	14%	2%
25.0101	Library and Information Science	25-9011	Audio-Visual and Multimedia Collections Specialists	\$22.39	-177	-186	-177	21%	37%
25.0301	Library and Archives Assisting	25-4031	Library Technicians	\$15.42	183	158	161	67%	17%
25.0301	Library and Archives Assisting	25-9011	Audio-Visual and Multimedia Collections Specialists	\$22.39	183	158	161	21%	37%
25.0301	Library and Archives Assisting	43-4121	Library Assistants, Clerical	\$10.28	183	158	161	56%	88%

26.0101	Biology/Biological Sciences, General	11-9121	Natural Sciences Managers	\$50.45	-925	-950	-998	11%	6%
26.0101	Biology/Biological Sciences, General	19-1029	Biological Scientists, All Other	\$21.96	-925	-950	-998	4%	2%
26.0101	Biology/Biological Sciences, General	19-1099	Life Scientists, All Other	\$25.60	-925	-950	-998	2%	0%
26.0102	Biomedical Sciences, General	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-10	-13	-16	2%	0%
26.0202	Biochemistry	11-9121	Natural Sciences Managers	\$50.45	-124	-142	-151	11%	6%
26.0202	Biochemistry	19-1021	Biochemists and Biophysicists	\$29.39	-124	-142	-151	4%	0%
26.0202	Biochemistry	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-124	-142	-151	2%	0%
26.0203	Biophysics	11-9121	Natural Sciences Managers	\$50.45	-12	-15	-15	11%	6%
26.0203	Biophysics	19-1021	Biochemists and Biophysicists	\$29.39	-12	-15	-15	4%	0%
26.0203	Biophysics	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-12	-15	-15	2%	0%
26.0204	Molecular Biology	11-9121	Natural Sciences Managers	\$50.45	-40	-51	-77	11%	6%
26.0204	Molecular Biology	19-1029	Biological Scientists, All Other	\$21.96	-40	-51	-77	4%	2%
26.0204	Molecular Biology	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-40	-51	-77	2%	0%
26.0209	Radiation Biology/Radiobiology	11-9121	Natural Sciences Managers	\$50.45	0	0	0	11%	6%
26.0209	Radiation Biology/Radiobiology	19-1029	Biological Scientists, All Other	\$21.96	0	0	0	4%	2%
26.0210	Biochemistry and Molecular Biology	19-1021	Biochemists and Biophysicists	\$29.39	-6	-6	-6	4%	0%

26.0210	Biochemistry and Molecular Biology	19-1022	Microbiologists	\$30.13	-6	-6	-6	4%	5%
26.0301	Botany/Plant Biology	11-9121	Natural Sciences Managers	\$50.45	0	0	0	11%	6%
26.0301	Botany/Plant Biology	19-1029	Biological Scientists, All Other	\$21.96	0	0	0	4%	2%
26.0403	Anatomy	11-9121	Natural Sciences Managers	\$50.45	-2	-2	-3	11%	6%
26.0403	Anatomy	19-1029	Biological Scientists, All Other	\$21.96	-2	-2	-3	4%	2%
26.0403	Anatomy	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-2	-2	-3	2%	0%
26.0406	Cell/Cellular and Molecular Biology	19-1029	Biological Scientists, All Other	\$21.96	-117	-118	-128	4%	2%
26.0499	Cell/Cellular Biology and Anatomical Sciences, Other	11-9121	Natural Sciences Managers	\$50.45	-5	-5	-4	11%	6%
26.0499	Cell/Cellular Biology and Anatomical Sciences, Other	19-1021	Biochemists and Biophysicists	\$29.39	-5	-5	-4	4%	0%
26.0499	Cell/Cellular Biology and Anatomical Sciences, Other	19-1022	Microbiologists	\$30.13	-5	-5	-4	4%	5%
26.0499	Cell/Cellular Biology and Anatomical Sciences, Other	19-1023	Zoologists and Wildlife Biologists	\$26.73	-5	-5	-4	4%	0%
26.0499	Cell/Cellular Biology and Anatomical Sciences, Other	19-1029	Biological Scientists, All Other	\$21.96	-5	-5	-4	4%	2%
26.0502	Microbiology, General	11-9121	Natural Sciences Managers	\$50.45	-51	-53	-49	11%	6%
26.0502	Microbiology, General	19-1022	Microbiologists	\$30.13	-51	-53	-49	4%	5%
26.0503	Medical	11-9121	Natural Sciences	\$50.45	0	0	0	11%	6%

	Microbiology and Bacteriology		Managers						
26.0503	Medical Microbiology and Bacteriology	19-1029	Biological Scientists, All Other	\$21.96	0	0	0	4%	2%
26.0503	Medical Microbiology and Bacteriology	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	0	0	0	2%	0%
26.0507	Immunology	11-9121	Natural Sciences Managers	\$50.45	-8	-8	-6	11%	6%
26.0507	Immunology	19-1029	Biological Scientists, All Other	\$21.96	-8	-8	-6	4%	2%
26.0507	Immunology	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-8	-8	-6	2%	0%
26.0508	Microbiology and Immunology	11-9121	Natural Sciences Managers	\$50.45	-5	-8	-9	11%	6%
26.0508	Microbiology and Immunology	19-1022	Microbiologists	\$30.13	-5	-8	-9	4%	5%
26.0508	Microbiology and Immunology	19-1029	Biological Scientists, All Other	\$21.96	-5	-8	-9	4%	2%
26.0508	Microbiology and Immunology	25-1099	Postsecondary Teachers	\$36.84	-5	-8	-9	0%	0%
26.0707	Animal Physiology	11-9121	Natural Sciences Managers	\$50.45	0	0	0	11%	6%
26.0707	Animal Physiology	19-1023	Zoologists and Wildlife Biologists	\$26.73	0	0	0	4%	0%
26.0707	Animal Physiology	19-1029	Biological Scientists, All Other	\$21.96	0	0	0	4%	2%
26.0709	Wildlife Biology	19-1023	Zoologists and Wildlife Biologists	\$26.73	-3	-4	-4	4%	0%
26.0804	Animal Genetics	11-9121	Natural Sciences Managers	\$50.45	0	0	0	11%	6%
26.0804	Animal Genetics	19-1029	Biological Scientists, All Other	\$21.96	0	0	0	4%	2%

26.0806	Human/Medical Genetics	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-12	-12	-14	2%	0%
26.0901	Physiology, General	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-8	-12	-20	2%	0%
26.0902	Molecular Physiology	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-4	-6	-6	2%	0%
26.0908	Exercise Physiology	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-11	-17	-19	2%	0%
26.0908	Exercise Physiology	29-1128	Exercise Physiologists	\$22.49	-11	-17	-19	15%	0%
26.0908	Exercise Physiology	29-1129	Therapists, All Other	\$28.40	-11	-17	-19	15%	0%
26.0910	Pathology/Experimental Pathology	11-9121	Natural Sciences Managers	\$50.45	-4	-6	-6	11%	6%
26.0910	Pathology/Experimental Pathology	19-1029	Biological Scientists, All Other	\$21.96	-4	-6	-6	4%	2%
26.0910	Pathology/Experimental Pathology	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-4	-6	-6	2%	0%
26.0911	Oncology and Cancer Biology	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-4	-6	-5	2%	0%
26.1001	Pharmacology	11-9121	Natural Sciences Managers	\$50.45	-6	-6	-6	11%	6%
26.1001	Pharmacology	19-1029	Biological Scientists, All Other	\$21.96	-6	-6	-6	4%	2%
26.1001	Pharmacology	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-6	-6	-6	2%	0%
26.1004	Toxicology	11-9121	Natural Sciences Managers	\$50.45	-4	-5	-5	11%	6%
26.1004	Toxicology	19-1029	Biological Scientists, All Other	\$21.96	-4	-5	-5	4%	2%
26.1004	Toxicology	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-4	-5	-5	2%	0%
26.1005	Molecular Toxicology	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-1	-1	-1	2%	0%
26.1006	Environmental	19-1042	Medical Scientists, Except	\$49.47	-1	0	0	2%	0%

	Toxicology		Epidemiologists						
26.1102	Biostatistics	11-9121	Natural Sciences Managers	\$50.45	-32	-39	-39	11%	6%
26.1102	Biostatistics	15-2041	Statisticians	\$35.23	-32	-39	-39	11%	3%
26.1102	Biostatistics	19-1029	Biological Scientists, All Other	\$21.96	-32	-39	-39	4%	2%
26.1102	Biostatistics	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-32	-39	-39	2%	0%
26.1103	Bioinformatics	15-1111	Computer and Information Research Scientists	\$51.07	-8	-12	-10	9%	0%
26.1103	Bioinformatics	15-1132	Software Developers, Applications	\$38.30	-8	-12	-10	16%	7%
26.1103	Bioinformatics	15-1199	Computer Occupations, All Other	\$39.61	-8	-12	-10	49%	16%
26.1301	Ecology	11-9121	Natural Sciences Managers	\$50.45	-2	-2	-3	11%	6%
26.1301	Ecology	19-1023	Zoologists and Wildlife Biologists	\$26.73	-2	-2	-3	4%	0%
26.1301	Ecology	19-1029	Biological Scientists, All Other	\$21.96	-2	-2	-3	4%	2%
26.1301	Ecology	19-1099	Life Scientists, All Other	\$25.60	-2	-2	-3	2%	0%
26.1304	Aquatic Biology/Limnology	19-1029	Biological Scientists, All Other	\$21.96	0	-1	-1	4%	2%
26.1309	Epidemiology	19-1041	Epidemiologists	\$36.21	-74	-89	-90	2%	0%
26.1309	Epidemiology	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-74	-89	-90	2%	0%
26.1310	Ecology and Evolutionary Biology	11-9121	Natural Sciences Managers	\$50.45	-41	-42	-52	11%	6%
26.1310	Ecology and Evolutionary Biology	19-1029	Biological Scientists, All Other	\$21.96	-41	-42	-52	4%	2%

26.1310	Ecology and Evolutionary Biology	25-1099	Postsecondary Teachers	\$36.84	-41	-42	-52	0%	0%
26.1501	Neuroscience	11-9121	Natural Sciences Managers	\$50.45	-204	-230	-261	11%	6%
26.1501	Neuroscience	19-1029	Biological Scientists, All Other	\$21.96	-204	-230	-261	4%	2%
26.1503	Neurobiology and Anatomy	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	0	0	0	2%	0%
26.9999	Biological and Biomedical Sciences, Other	11-9121	Natural Sciences Managers	\$50.45	-36	-35	-39	11%	6%
26.9999	Biological and Biomedical Sciences, Other	19-1099	Life Scientists, All Other	\$25.60	-36	-35	-39	2%	0%
27.0101	Mathematics, General	11-9121	Natural Sciences Managers	\$50.45	-318	-349	-355	11%	6%
27.0101	Mathematics, General	15-2021	Mathematicians	\$51.41	-318	-349	-355	11%	0%
27.0101	Mathematics, General	15-2041	Statisticians	\$35.23	-318	-349	-355	11%	3%
27.0101	Mathematics, General	15-2099	Mathematical Science Occupations, All Other	\$30.53	-318	-349	-355	11%	0%
27.0301	Applied Mathematics, General	11-9121	Natural Sciences Managers	\$50.45	-18	-23	-30	11%	6%
27.0301	Applied Mathematics, General	15-2021	Mathematicians	\$51.41	-18	-23	-30	11%	0%
27.0301	Applied Mathematics, General	15-2041	Statisticians	\$35.23	-18	-23	-30	11%	3%
27.0301	Applied Mathematics,	15-2091	Mathematical Technicians	\$27.89	-18	-23	-30	11%	0%



	General								
27.0301	Applied Mathematics, General	15-2099	Mathematical Science Occupations, All Other	\$30.53	-18	-23	-30	11%	0%
27.0305	Financial Mathematics	11-9121	Natural Sciences Managers	\$50.45	-9	-23	-31	11%	6%
27.0305	Financial Mathematics	13-2051	Financial Analysts	\$36.46	-9	-23	-31	14%	0%
27.0305	Financial Mathematics	13-2099	Financial Specialists, All Other	\$30.34	-9	-23	-31	41%	9%
27.0305	Financial Mathematics	15-2021	Mathematicians	\$51.41	-9	-23	-31	11%	0%
27.0305	Financial Mathematics	15-2099	Mathematical Science Occupations, All Other	\$30.53	-9	-23	-31	11%	0%
27.0305	Financial Mathematics	19-3011	Economists	\$35.74	-9	-23	-31	1%	0%
27.0305	Financial Mathematics	25-1099	Postsecondary Teachers	\$36.84	-9	-23	-31	0%	0%
27.0399	Applied Mathematics, Other	11-9121	Natural Sciences Managers	\$50.45	-7	-4	-4	11%	6%
27.0399	Applied Mathematics, Other	15-2021	Mathematicians	\$51.41	-7	-4	-4	11%	0%
27.0399	Applied Mathematics, Other	15-2099	Mathematical Science Occupations, All Other	\$30.53	-7	-4	-4	11%	0%
27.0501	Statistics, General	11-9121	Natural Sciences Managers	\$50.45	-85	-107	-118	11%	6%
27.0501	Statistics, General	15-2041	Statisticians	\$35.23	-85	-107	-118	11%	3%
30.0101	Biological and Physical Sciences	11-9121	Natural Sciences Managers	\$50.45	-4	-4	-2	11%	6%
30.0501	Peace Studies and Conflict Resolution	21-1029	Social Workers, All Other	\$22.68	-5	-1	-1	22%	0%
30.0501	Peace Studies and Conflict Resolution	23-1022	Arbitrators, Mediators, and Conciliators	\$22.27	-5	-1	-1	1%	12%

30.0601	Systems Science and Theory	11-9121	Natural Sciences Managers	\$50.45	-2	-2	-3	11%	6%
30.0801	Mathematics and Computer Science	11-9121	Natural Sciences Managers	\$50.45	-5	-5	-6	11%	6%
30.0801	Mathematics and Computer Science	15-1199	Computer Occupations, All Other	\$39.61	-5	-5	-6	49%	16%
30.1201	Historic Preservation and Conservation	19-3093	Historians	\$25.53	-27	-28	-27	10%	18%
30.1201	Historic Preservation and Conservation	25-4011	Archivists	\$21.02	-27	-28	-27	16%	3%
30.1202	Cultural Resource Management and Policy Analysis	19-3093	Historians	\$25.53	-2	-1	0	10%	18%
30.1202	Cultural Resource Management and Policy Analysis	25-4011	Archivists	\$21.02	-2	-1	0	16%	3%
30.1299	Historic Preservation and Conservation, Other	19-3093	Historians	\$25.53	-1	-1	-1	10%	18%
30.1299	Historic Preservation and Conservation, Other	25-4011	Archivists	\$21.02	-1	-1	-1	16%	3%
30.1301	Medieval and Renaissance Studies	19-3093	Historians	\$25.53	-3	0	-1	10%	18%
30.1401	Museology/Museum Studies	25-4011	Archivists	\$21.02	-8	-10	-12	16%	3%
30.1401	Museology/Museum Studies	25-4012	Curators	\$24.44	-8	-10	-12	16%	1%
30.1401	Museology/Museum Studies	25-4013	Museum Technicians and Conservators	\$16.40	-8	-10	-12	16%	9%
30.1501	Science, Technology and Society	11-9121	Natural Sciences Managers	\$50.45	-24	-38	-52	11%	6%

30.1601	Accounting and Computer Science	13-2011	Accountants and Auditors	\$31.68	0	0	0	22%	6%
30.1601	Accounting and Computer Science	15-1199	Computer Occupations, All Other	\$39.61	0	0	0	49%	16%
30.1701	Behavioral Sciences	19-1029	Biological Scientists, All Other	\$21.96	-11	-14	-14	4%	2%
30.1701	Behavioral Sciences	19-1099	Life Scientists, All Other	\$25.60	-11	-14	-14	2%	0%
30.1701	Behavioral Sciences	19-3039	Psychologists, All Other	\$41.26	-11	-14	-14	1%	0%
30.1701	Behavioral Sciences	19-3099	Social Scientists and Related Workers, All Other	\$34.64	-11	-14	-14	10%	0%
30.1701	Behavioral Sciences	21-1094	Community Health Workers	\$16.26	-11	-14	-14	47%	33%
30.1701	Behavioral Sciences	21-1099	Community and Social Service Specialists, All Other	\$25.16	-11	-14	-14	47%	0%
30.1801	Natural Sciences	11-9121	Natural Sciences Managers	\$50.45	-1	-10	-11	11%	6%
30.1801	Natural Sciences	19-1099	Life Scientists, All Other	\$25.60	-1	-10	-11	2%	0%
30.1801	Natural Sciences	19-2099	Physical Scientists, All Other	\$45.70	-1	-10	-11	1%	4%
30.1901	Nutrition Sciences	11-9121	Natural Sciences Managers	\$50.45	-9	-13	-15	11%	6%
30.1901	Nutrition Sciences	19-1029	Biological Scientists, All Other	\$21.96	-9	-13	-15	4%	2%
30.1901	Nutrition Sciences	19-1099	Life Scientists, All Other	\$25.60	-9	-13	-15	2%	0%
30.1901	Nutrition Sciences	29-1031	Dietitians and Nutritionists	\$25.30	-9	-13	-15	25%	0%
30.1901	Nutrition Sciences	29-2051	Dietetic Technicians	\$13.70	-9	-13	-15	82%	94%
30.2001	International/Global Studies	19-3094	Political Scientists	\$35.37	-52	-131	-206	10%	0%
30.2201	Ancient Studies/Civilization	19-3093	Historians	\$25.53	-19	-15	-13	10%	18%

30.2202	Classical, Ancient Mediterranean and Near Eastern Studies and Archaeology	19-3093	Historians	\$25.53	-6	-5	-5	10%	18%
30.2801	Dispute Resolution	13-1071	Human Resources Specialists	\$27.43	-4	-6	-6	43%	47%
30.2801	Dispute Resolution	13-1075	Labor Relations Specialists	\$31.90	-4	-6	-6	43%	0%
30.2801	Dispute Resolution	23-1022	Arbitrators, Mediators, and Conciliators	\$22.27	-4	-6	-6	1%	12%
30.3001	Computational Science	11-9121	Natural Sciences Managers	\$50.45	0	0	0	11%	6%
30.3001	Computational Science	15-1199	Computer Occupations, All Other	\$39.61	0	0	0	49%	16%
30.3001	Computational Science	15-2099	Mathematical Science Occupations, All Other	\$30.53	0	0	0	11%	0%
30.3001	Computational Science	25-1099	Postsecondary Teachers	\$36.84	0	0	0	0%	0%
30.3301	Sustainability Studies	25-1099	Postsecondary Teachers	\$36.84	0	-1	-1	0%	0%
31.0101	Parks, Recreation and Leisure Studies	27-2023	Umpires, Referees, and Other Sports Officials	\$17.85	0	0	0	40%	77%
31.0101	Parks, Recreation and Leisure Studies	39-9032	Recreation Workers	\$10.21	0	0	0	55%	42%
31.0301	Parks, Recreation and Leisure Facilities Management, General	39-9032	Recreation Workers	\$10.21	0	0	0	55%	42%
31.0501	Health and Physical Education/Fitness, General	27-2021	Athletes and Sports Competitors	\$17.26	26	6	5	40%	99%
31.0501	Health and Physical Education/Fitness, General	27-2022	Coaches and Scouts	\$13.65	26	6	5	40%	34%

	General								
31.0501	Health and Physical Education/Fitness, General	39-9031	Fitness Trainers and Aerobics Instructors	\$14.06	26	6	5	55%	51%
31.0504	Sport and Fitness Administration/Management	27-2022	Coaches and Scouts	\$13.65	171	55	54	40%	34%
31.0504	Sport and Fitness Administration/Management	39-9031	Fitness Trainers and Aerobics Instructors	\$14.06	171	55	54	55%	51%
31.0504	Sport and Fitness Administration/Management	39-9032	Recreation Workers	\$10.21	171	55	54	55%	42%
31.0599	Health and Physical Education/Fitness, Other	39-9032	Recreation Workers	\$10.21	-3	-14	-11	55%	42%
31.9999	Parks, Recreation, Leisure, and Fitness Studies, Other	27-2023	Umpires, Referees, and Other Sports Officials	\$17.85	0	0	0	40%	77%
31.9999	Parks, Recreation, Leisure, and Fitness Studies, Other	39-9032	Recreation Workers	\$10.21	0	0	0	55%	42%
38.0101	Philosophy	25-1099	Postsecondary Teachers	\$36.84	-101	-97	-103	0%	0%
38.0103	Ethics	25-1099	Postsecondary Teachers	\$36.84	0	-1	-1	0%	0%
38.0201	Religion/Religious Studies	25-1099	Postsecondary Teachers	\$36.84	-12	-11	-10	0%	0%
38.0203	Christian Studies	25-1099	Postsecondary Teachers	\$36.84	0	-1	-3	0%	0%
38.0206	Jewish/Judaic Studies	25-1099	Postsecondary Teachers	\$36.84	-8	-15	-26	0%	0%
38.0299	Religion/Religious Studies, Other	25-1099	Postsecondary Teachers	\$36.84	-3	-3	0	0%	0%
39.0201	Bible/Biblical Studies	21-2021	Directors, Religious Activities and Education	\$15.56	25	6	2	34%	18%

39.0301	Missions/Missionary Studies and Missiology	21-2021	Directors, Religious Activities and Education	\$15.56	0	0	0	34%	18%
39.0401	Religious Education	21-2021	Directors, Religious Activities and Education	\$15.56	13	4	2	34%	18%
39.0501	Religious/Sacred Music	27-2041	Music Directors and Composers	\$22.89	-2	-4	-2	46%	39%
39.0601	Theology/Theological Studies	21-2011	Clergy	\$20.25	-18	-53	-58	25%	32%
39.0602	Divinity/Ministry	21-2011	Clergy	\$20.25	-4	-14	-16	25%	32%
39.0604	Pre-Theology/Pre-Ministerial Studies	21-2011	Clergy	\$20.25	0	-2	-2	25%	32%
39.0606	Talmudic Studies	25-1099	Postsecondary Teachers	\$36.84	-9	-4	-5	0%	0%
39.0699	Theological and Ministerial Studies, Other	21-2011	Clergy	\$20.25	20	-2	-3	25%	32%
39.0699	Theological and Ministerial Studies, Other	21-2099	Religious Workers, All Other	\$15.07	20	-2	-3	41%	0%
39.0701	Pastoral Studies/Counseling	21-2011	Clergy	\$20.25	1	0	0	25%	32%
39.0701	Pastoral Studies/Counseling	21-2099	Religious Workers, All Other	\$15.07	1	0	0	41%	0%
39.0702	Youth Ministry	21-2011	Clergy	\$20.25	6	1	2	25%	32%
39.0702	Youth Ministry	21-2021	Directors, Religious Activities and Education	\$15.56	6	1	2	34%	18%
39.0799	Pastoral Counseling and Specialized Ministries, Other	21-2011	Clergy	\$20.25	-1	-6	-8	25%	32%
39.9999	Theology and Religious Vocations, Other	21-2011	Clergy	\$20.25	0	0	0	25%	32%
40.0101	Physical Sciences	11-9121	Natural Sciences	\$50.45	-2	-2	0	11%	6%

			Managers						
40.0201	Astronomy	11-9121	Natural Sciences Managers	\$50.45	-14	-14	-13	11%	6%
40.0201	Astronomy	19-2011	Astronomers	\$58.32	-14	-14	-13	7%	0%
40.0401	Atmospheric Sciences and Meteorology, General	11-9121	Natural Sciences Managers	\$50.45	-13	-13	-19	11%	6%
40.0401	Atmospheric Sciences and Meteorology, General	19-2021	Atmospheric and Space Scientists	\$29.94	-13	-13	-19	9%	0%
40.0501	Chemistry, General	19-4031	Chemical Technicians	\$18.82	-163	-182	-128	66%	76%
40.0501	Chemistry, General	51-8091	Chemical Plant and System Operators	\$25.12	-163	-182	-128	91%	80%
40.0501	Chemistry, General	11-9121	Natural Sciences Managers	\$50.45	-163	-182	-128	11%	6%
40.0501	Chemistry, General	19-2031	Chemists	\$29.83	-163	-182	-128	7%	4%
40.0506	Physical Chemistry	11-9121	Natural Sciences Managers	\$50.45	0	0	0	11%	6%
40.0506	Physical Chemistry	19-2031	Chemists	\$29.83	0	0	0	7%	4%
40.0507	Polymer Chemistry	11-9121	Natural Sciences Managers	\$50.45	-5	-5	-8	11%	6%
40.0507	Polymer Chemistry	19-2031	Chemists	\$29.83	-5	-5	-8	7%	4%
40.0599	Chemistry, Other	11-9121	Natural Sciences Managers	\$50.45	-8	-12	-16	11%	6%
40.0599	Chemistry, Other	19-2031	Chemists	\$29.83	-8	-12	-16	7%	4%
40.0601	Geology/Earth Science, General	11-9121	Natural Sciences Managers	\$50.45	-39	-49	-56	11%	6%
40.0601	Geology/Earth Science, General	19-2042	Geoscientists, Except Hydrologists and Geographers	\$30.72	-39	-49	-56	6%	0%
40.0601	Geology/Earth	19-2043	Hydrologists	\$31.26	-39	-49	-56	6%	0%

	Science, General								
40.0607	Oceanography, Chemical and Physical	11-9121	Natural Sciences Managers	\$50.45	-1	0	0	11%	6%
40.0607	Oceanography, Chemical and Physical	19-2042	Geoscientists, Except Hydrologists and Geographers	\$30.72	-1	0	0	6%	0%
40.0607	Oceanography, Chemical and Physical	19-2043	Hydrologists	\$31.26	-1	0	0	6%	0%
40.0699	Geological and Earth Sciences/Geosciences, Other	11-9121	Natural Sciences Managers	\$50.45	-3	-2	0	11%	6%
40.0699	Geological and Earth Sciences/Geosciences, Other	19-2042	Geoscientists, Except Hydrologists and Geographers	\$30.72	-3	-2	0	6%	0%
40.0801	Physics, General	11-9121	Natural Sciences Managers	\$50.45	-118	-124	-132	11%	6%
40.0801	Physics, General	19-2012	Physicists	\$54.50	-118	-124	-132	7%	6%
40.0899	Physics, Other	11-9121	Natural Sciences Managers	\$50.45	-7	-2	0	11%	6%
40.0899	Physics, Other	19-2012	Physicists	\$54.50	-7	-2	0	7%	6%
40.1001	Materials Science	11-9041	Architectural and Engineering Managers	\$57.75	0	-1	0	16%	2%
40.1001	Materials Science	19-2032	Materials Scientists	\$35.73	0	-1	0	7%	4%
40.9999	Physical Sciences, Other	11-9121	Natural Sciences Managers	\$50.45	-1	-9	-8	11%	6%
40.9999	Physical Sciences, Other	19-2099	Physical Scientists, All Other	\$45.70	-1	-9	-8	1%	4%
41.0101	Biology Technician/Biotech	19-4021	Biological Technicians	\$16.79	93	79	80	46%	12%



	nology Laboratory Technician								
41.9999	Science Technologies/Technicians, Other	19-4091	Environmental Science and Protection Technicians, Including Health	\$20.42	39	11	9	54%	35%
41.9999	Science Technologies/Technicians, Other	19-4099	Life, Physical, and Social Science Technicians, All Other	\$15.62	39	11	9	54%	40%
42.0101	Psychology, General	19-3031	Clinical, Counseling, and School Psychologists	\$29.26	-1157	-1094	-1011	1%	0%
42.0101	Psychology, General	19-3032	Industrial-Organizational Psychologists	\$0.00	-1157	-1094	-1011	1%	0%
42.0101	Psychology, General	19-3039	Psychologists, All Other	\$41.26	-1157	-1094	-1011	1%	0%
42.2703	Developmental and Child Psychology	19-3031	Clinical, Counseling, and School Psychologists	\$29.26	-4	-3	-2	1%	0%
42.2703	Developmental and Child Psychology	19-3039	Psychologists, All Other	\$41.26	-4	-3	-2	1%	0%
42.2704	Experimental Psychology	19-3039	Psychologists, All Other	\$41.26	-162	-360	-553	1%	0%
42.2706	Physiological Psychology/Psychobiology	19-3039	Psychologists, All Other	\$41.26	-254	-261	-273	1%	0%
42.2707	Social Psychology	19-3039	Psychologists, All Other	\$41.26	-15	-18	-17	1%	0%
42.2799	Research and Experimental Psychology, Other	11-9199	Managers, All Other	\$45.74	-3	-3	-3	46%	9%
42.2799	Research and Experimental Psychology, Other	19-3039	Psychologists, All Other	\$41.26	-3	-3	-3	1%	0%
42.2799	Research and Experimental Psychology, Other	25-1099	Postsecondary Teachers	\$36.84	-3	-3	-3	0%	0%

42.2801	Clinical Psychology	19-3031	Clinical, Counseling, and School Psychologists	\$29.26	-130	-136	-138	1%	0%
42.2803	Counseling Psychology	19-3031	Clinical, Counseling, and School Psychologists	\$29.26	-62	-66	-65	1%	0%
42.2804	Industrial and Organizational Psychology	19-3032	Industrial-Organizational Psychologists	\$0.00	-12	-14	-16	1%	0%
42.2805	School Psychology	19-3031	Clinical, Counseling, and School Psychologists	\$29.26	-19	-20	-24	1%	0%
42.2806	Educational Psychology	19-3039	Psychologists, All Other	\$41.26	-21	-28	-30	1%	0%
42.2811	Family Psychology	19-3039	Psychologists, All Other	\$41.26	-3	0	0	1%	0%
42.2812	Forensic Psychology	19-3039	Psychologists, All Other	\$41.26	-4	-5	-5	1%	0%
42.2813	Applied Psychology	11-9199	Managers, All Other	\$45.74	-2	-6	-14	46%	9%
42.2813	Applied Psychology	19-3039	Psychologists, All Other	\$41.26	-2	-6	-14	1%	0%
42.2813	Applied Psychology	25-1099	Postsecondary Teachers	\$36.84	-2	-6	-14	0%	0%
42.9999	Psychology, Other	19-3039	Psychologists, All Other	\$41.26	-12	-17	-15	1%	0%
43.0102	Corrections	33-1011	First-Line Supervisors of Correctional Officers	\$31.18	-23	-21	-38	71%	96%
43.0102	Corrections	33-1012	First-Line Supervisors of Police and Detectives	\$35.71	-23	-21	-38	59%	68%
43.0102	Corrections	33-3012	Correctional Officers and Jailers	\$25.06	-23	-21	-38	86%	84%
43.0103	Criminal Justice/Law Enforcement Administration	33-1012	First-Line Supervisors of Police and Detectives	\$35.71	-447	-443	-375	59%	68%
43.0104	Criminal Justice/Safety Studies	33-1012	First-Line Supervisors of Police and Detectives	\$35.71	-290	-335	-345	59%	68%
43.0107	Criminal Justice/Police Science	33-3011	Bailiffs	\$18.03	-14	-62	-80	86%	87%

43.0107	Criminal Justice/Police Science	33-3021	Detectives and Criminal Investigators	\$42.90	-14	-62	-80	46%	61%
43.0107	Criminal Justice/Police Science	33-3051	Police and Sheriff's Patrol Officers	\$27.65	-14	-62	-80	66%	83%
43.0107	Criminal Justice/Police Science	33-9021	Private Detectives and Investigators	\$20.09	-14	-62	-80	50%	75%
43.0107	Criminal Justice/Police Science	33-9031	Gaming Surveillance Officers and Gaming Investigators	\$16.37	-14	-62	-80	84%	58%
43.0109	Security and Loss Prevention Services	33-3052	Transit and Railroad Police	\$26.53	180	135	136	66%	86%
43.0109	Security and Loss Prevention Services	33-9031	Gaming Surveillance Officers and Gaming Investigators	\$16.37	180	135	136	84%	58%
43.0109	Security and Loss Prevention Services	33-9032	Security Guards	\$11.63	180	135	136	84%	98%
43.0111	Criminalistics and Criminal Science	33-3021	Detectives and Criminal Investigators	\$42.90	-1	-2	-5	46%	61%
43.0111	Criminalistics and Criminal Science	33-3051	Police and Sheriff's Patrol Officers	\$27.65	-1	-2	-5	66%	83%
43.0112	Securities Services Administration/Management	33-1099	First-Line Supervisors of Protective Service Workers, All Other	\$19.93	180	135	136	71%	0%
43.0112	Securities Services Administration/Management	33-9031	Gaming Surveillance Officers and Gaming Investigators	\$16.37	180	135	136	84%	58%
43.0112	Securities Services Administration/Management	33-9032	Security Guards	\$11.63	180	135	136	84%	98%
43.0112	Securities Services Administration/Management	33-9099	Protective Service Workers, All Other	\$12.90	180	135	136	73%	0%

	nagement								
43.0199	Corrections and Criminal Justice, Other	33-3012	Correctional Officers and Jailers	\$25.06	-14	-11	-13	86%	84%
43.0201	Fire Prevention and Safety Technology/Technician	33-1021	First-Line Supervisors of Fire Fighting and Prevention Workers	\$34.05	18	15	15	77%	76%
43.0201	Fire Prevention and Safety Technology/Technician	33-2021	Fire Inspectors and Investigators	\$30.32	18	15	15	71%	66%
43.0203	Fire Science/Fire-fighting	33-2011	Firefighters	\$25.04	37	37	46	79%	68%
43.0203	Fire Science/Fire-fighting	33-2021	Fire Inspectors and Investigators	\$30.32	37	37	46	71%	66%
43.0203	Fire Science/Fire-fighting	33-2022	Forest Fire Inspectors and Prevention Specialists	\$18.19	37	37	46	71%	9%
43.0301	Homeland Security	11-9161	Emergency Management Directors	\$36.21	0	-6	-9	42%	23%
43.0301	Homeland Security	11-9199	Managers, All Other	\$45.74	0	-6	-9	46%	9%
43.0301	Homeland Security	33-1012	First-Line Supervisors of Police and Detectives	\$35.71	0	-6	-9	59%	68%
43.0302	Crisis/Emergency/Disaster Management	11-9161	Emergency Management Directors	\$36.21	-1	-5	-6	42%	23%
43.0302	Crisis/Emergency/Disaster Management	11-9199	Managers, All Other	\$45.74	-1	-5	-6	46%	9%
43.0302	Crisis/Emergency/Disaster Management	33-1012	First-Line Supervisors of Police and Detectives	\$35.71	-1	-5	-6	59%	68%
43.9999	Homeland Security, Law Enforcement, Firefighting and Related Protective Services, Other	33-1099	First-Line Supervisors of Protective Service Workers, All Other	\$19.93	147	126	125	71%	0%

43.9999	Homeland Security, Law Enforcement, Firefighting and Related Protective Services, Other	33-3041	Parking Enforcement Workers	\$17.79	147	126	125	71%	82%
43.9999	Homeland Security, Law Enforcement, Firefighting and Related Protective Services, Other	33-3052	Transit and Railroad Police	\$26.53	147	126	125	66%	86%
43.9999	Homeland Security, Law Enforcement, Firefighting and Related Protective Services, Other	33-9011	Animal Control Workers	\$18.42	147	126	125	82%	90%
43.9999	Homeland Security, Law Enforcement, Firefighting and Related Protective Services, Other	33-9031	Gaming Surveillance Officers and Gaming Investigators	\$16.37	147	126	125	84%	58%
43.9999	Homeland Security, Law Enforcement, Firefighting and Related Protective Services, Other	33-9091	Crossing Guards	\$10.24	147	126	125	94%	100%
43.9999	Homeland Security, Law Enforcement, Firefighting and Related Protective Services, Other	33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	\$9.20	147	126	125	73%	66%
43.9999	Homeland Security, Law Enforcement, Firefighting and Related Protective	33-9099	Protective Service Workers, All Other	\$12.90	147	126	125	73%	0%

	Services, Other								
44.0000	Human Services, General	11-9151	Social and Community Service Managers	\$28.42	300	269	269	31%	21%
44.0000	Human Services, General	21-1011	Substance Abuse and Behavioral Disorder Counselors	\$22.09	300	269	269	21%	52%
44.0000	Human Services, General	21-1012	Educational, Guidance, School, and Vocational Counselors	\$27.13	300	269	269	21%	0%
44.0000	Human Services, General	21-1013	Marriage and Family Therapists	\$23.50	300	269	269	21%	0%
44.0000	Human Services, General	21-1014	Mental Health Counselors	\$20.73	300	269	269	21%	1%
44.0000	Human Services, General	21-1015	Rehabilitation Counselors	\$18.78	300	269	269	21%	24%
44.0000	Human Services, General	21-1019	Counselors, All Other	\$24.14	300	269	269	21%	0%
44.0000	Human Services, General	21-1021	Child, Family, and School Social Workers	\$22.89	300	269	269	22%	0%
44.0000	Human Services, General	21-1022	Healthcare Social Workers	\$25.87	300	269	269	22%	0%
44.0000	Human Services, General	21-1023	Mental Health and Substance Abuse Social Workers	\$21.02	300	269	269	22%	7%
44.0000	Human Services, General	21-1029	Social Workers, All Other	\$22.68	300	269	269	22%	0%
44.0000	Human Services, General	21-1091	Health Educators	\$23.01	300	269	269	47%	11%
44.0000	Human Services, General	21-1092	Probation Officers and Correctional Treatment Specialists	\$28.79	300	269	269	25%	7%
44.0000	Human Services, General	21-1093	Social and Human Service Assistants	\$12.82	300	269	269	60%	41%
44.0000	Human Services,	21-1094	Community Health	\$16.26	300	269	269	47%	33%

	General		Workers						
44.0000	Human Services, General	21-1099	Community and Social Service Specialists, All Other	\$25.16	300	269	269	47%	0%
44.0201	Community Organization and Advocacy	11-9151	Social and Community Service Managers	\$28.42	-7	-21	-30	31%	21%
44.0201	Community Organization and Advocacy	21-1094	Community Health Workers	\$16.26	-7	-21	-30	47%	33%
44.0201	Community Organization and Advocacy	21-1099	Community and Social Service Specialists, All Other	\$25.16	-7	-21	-30	47%	0%
44.0201	Community Organization and Advocacy	43-4061	Eligibility Interviewers, Government Programs	\$22.90	-7	-21	-30	59%	76%
44.0401	Public Administration	11-1011	Chief Executives	\$83.29	-160	-171	-168	33%	4%
44.0401	Public Administration	11-1021	General and Operations Managers	\$47.38	-160	-171	-168	51%	52%
44.0401	Public Administration	11-1031	Legislators	\$10.85	-160	-171	-168	33%	0%
44.0401	Public Administration	11-3011	Administrative Services Managers	\$37.84	-160	-171	-168	59%	53%
44.0401	Public Administration	11-3071	Transportation, Storage, and Distribution Managers	\$43.57	-160	-171	-168	71%	15%
44.0401	Public Administration	11-9131	Postmasters and Mail Superintendents	\$38.07	-160	-171	-168	46%	90%
44.0401	Public Administration	11-9151	Social and Community Service Managers	\$28.42	-160	-171	-168	31%	21%
44.0401	Public Administration	11-9199	Managers, All Other	\$45.74	-160	-171	-168	46%	9%
44.0501	Public Policy Analysis, General	11-1011	Chief Executives	\$83.29	-108	-109	-102	33%	4%

44.0501	Public Policy Analysis, General	11-1031	Legislators	\$10.85	-108	-109	-102	33%	0%
44.0501	Public Policy Analysis, General	13-1041	Compliance Officers	\$36.36	-108	-109	-102	42%	39%
44.0701	Social Work	21-1013	Marriage and Family Therapists	\$23.50	-724	-800	-887	21%	0%
44.0701	Social Work	21-1019	Counselors, All Other	\$24.14	-724	-800	-887	21%	0%
44.0701	Social Work	21-1021	Child, Family, and School Social Workers	\$22.89	-724	-800	-887	22%	0%
44.0701	Social Work	21-1029	Social Workers, All Other	\$22.68	-724	-800	-887	22%	0%
44.0701	Social Work	21-1092	Probation Officers and Correctional Treatment Specialists	\$28.79	-724	-800	-887	25%	7%
44.0702	Youth Services/Administration	21-1021	Child, Family, and School Social Workers	\$22.89	-3	-6	-9	22%	0%
44.9999	Public Administration and Social Service Professions, Other	11-1011	Chief Executives	\$83.29	-18	-17	-13	33%	4%
44.9999	Public Administration and Social Service Professions, Other	11-1031	Legislators	\$10.85	-18	-17	-13	33%	0%
44.9999	Public Administration and Social Service Professions, Other	11-9199	Managers, All Other	\$45.74	-18	-17	-13	46%	9%
45.0101	Social Sciences, General	19-3099	Social Scientists and Related Workers, All Other	\$34.64	-199	-125	-17	10%	0%
45.0101	Social Sciences, General	19-4061	Social Science Research Assistants	\$14.69	-199	-125	-17	54%	17%



45.0201	Anthropology	19-3091	Anthropologists and Archeologists	\$26.13	-195	-203	-205	10%	0%
45.0299	Anthropology, Other	19-3091	Anthropologists and Archeologists	\$26.13	-43	-50	-48	10%	0%
45.0301	Archeology	19-3091	Anthropologists and Archeologists	\$26.13	0	0	0	10%	0%
45.0401	Criminology	19-3041	Sociologists	\$35.38	-90	-99	-103	10%	0%
45.0601	Economics, General	19-3011	Economists	\$35.74	-641	-614	-604	1%	0%
45.0601	Economics, General	19-3022	Survey Researchers	\$19.50	-641	-614	-604	10%	0%
45.0602	Applied Economics	13-1161	Market Research Analysts and Marketing Specialists	\$30.15	-22	-28	-35	23%	0%
45.0602	Applied Economics	19-3011	Economists	\$35.74	-22	-28	-35	1%	0%
45.0602	Applied Economics	19-3022	Survey Researchers	\$19.50	-22	-28	-35	10%	0%
45.0605	International Economics	19-3011	Economists	\$35.74	-1	-2	-1	1%	0%
45.0699	Economics, Other	19-3011	Economists	\$35.74	-45	-74	-70	1%	0%
45.0701	Geography	19-3092	Geographers	\$37.51	-33	-30	-29	10%	0%
45.0702	Geographic Information Science and Cartography	17-1021	Cartographers and Photogrammetrists	\$28.24	-1	0	0	19%	35%
45.0702	Geographic Information Science and Cartography	17-3031	Surveying and Mapping Technicians	\$19.06	-1	0	0	89%	61%
45.0901	International Relations and Affairs	11-1031	Legislators	\$10.85	-24	-25	-31	33%	0%
45.0901	International Relations and Affairs	19-3094	Political Scientists	\$35.37	-24	-25	-31	10%	0%
45.1001	Political Science and Government, General	19-3094	Political Scientists	\$35.37	-703	-685	-666	10%	0%
45.1099	Political Science and	19-3094	Political Scientists	\$35.37	0	0	0	10%	0%

	Government, Other								
45.1101	Sociology	19-3041	Sociologists	\$35.38	-392	-372	-358	10%	0%
45.1201	Urban Studies/Affairs	19-3041	Sociologists	\$35.38	-15	-20	-24	10%	0%
45.1301	Sociology and Anthropology	11-9199	Managers, All Other	\$45.74	-3	-4	-3	46%	9%
45.1301	Sociology and Anthropology	19-3041	Sociologists	\$35.38	-3	-4	-3	10%	0%
45.1301	Sociology and Anthropology	19-3091	Anthropologists and Archeologists	\$26.13	-3	-4	-3	10%	0%
45.1301	Sociology and Anthropology	25-1099	Postsecondary Teachers	\$36.84	-3	-4	-3	0%	0%
45.9999	Social Sciences, Other	19-3099	Social Scientists and Related Workers, All Other	\$34.64	-16	-17	-16	10%	0%
46.0000	Construction Trades, General	11-9021	Construction Managers	\$41.28	745	381	430	66%	16%
46.0000	Construction Trades, General	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	\$31.17	745	381	430	89%	79%
46.0000	Construction Trades, General	47-2011	Boilermakers	\$31.69	745	381	430	97%	72%
46.0000	Construction Trades, General	47-2021	Brickmasons and Blockmasons	\$29.13	745	381	430	96%	95%
46.0000	Construction Trades, General	47-2022	Stonemasons	\$21.10	745	381	430	96%	70%
46.0000	Construction Trades, General	47-2031	Carpenters	\$24.67	745	381	430	93%	73%
46.0000	Construction Trades, General	47-2041	Carpet Installers	\$23.13	745	381	430	95%	98%
46.0000	Construction Trades, General	47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	\$20.23	745	381	430	95%	96%

46.0000	Construction Trades, General	47-2043	Floor Sanders and Finishers	\$21.21	745	381	430	95%	99%
46.0000	Construction Trades, General	47-2044	Tile and Marble Setters	\$22.22	745	381	430	95%	82%
46.0000	Construction Trades, General	47-2051	Cement Masons and Concrete Finishers	\$20.89	745	381	430	97%	87%
46.0000	Construction Trades, General	47-2053	Terrazzo Workers and Finishers	\$22.05	745	381	430	97%	96%
46.0000	Construction Trades, General	47-2071	Paving, Surfacing, and Tamping Equipment Operators	\$23.20	745	381	430	99%	81%
46.0000	Construction Trades, General	47-2072	Pile-Driver Operators	\$0.00	745	381	430	97%	83%
46.0000	Construction Trades, General	47-2073	Operating Engineers and Other Construction Equipment Operators	\$24.07	745	381	430	97%	82%
46.0000	Construction Trades, General	47-2081	Drywall and Ceiling Tile Installers	\$18.75	745	381	430	98%	80%
46.0000	Construction Trades, General	47-2082	Tapers	\$29.50	745	381	430	98%	96%
46.0000	Construction Trades, General	47-2111	Electricians	\$30.91	745	381	430	93%	34%
46.0000	Construction Trades, General	47-2121	Glaziers	\$18.63	745	381	430	95%	87%
46.0000	Construction Trades, General	47-2131	Insulation Workers, Floor, Ceiling, and Wall	\$19.28	745	381	430	97%	99%
46.0000	Construction Trades, General	47-2132	Insulation Workers, Mechanical	\$23.68	745	381	430	97%	77%
46.0000	Construction Trades, General	47-2141	Painters, Construction and Maintenance	\$20.35	745	381	430	93%	80%
46.0000	Construction Trades, General	47-2142	Paperhangers	\$21.31	745	381	430	93%	96%
46.0000	Construction Trades, General	47-2151	Pipelayers	\$20.70	745	381	430	96%	98%

46.0000	Construction Trades, General	47-2152	Plumbers, Pipefitters, and Steamfitters	\$30.86	745	381	430	96%	35%
46.0000	Construction Trades, General	47-2161	Plasterers and Stucco Masons	\$29.54	745	381	430	98%	99%
46.0000	Construction Trades, General	47-2171	Reinforcing Iron and Rebar Workers	\$29.39	745	381	430	96%	91%
46.0000	Construction Trades, General	47-2181	Roofers	\$19.16	745	381	430	97%	86%
46.0000	Construction Trades, General	47-2211	Sheet Metal Workers	\$25.37	745	381	430	97%	61%
46.0000	Construction Trades, General	47-2221	Structural Iron and Steel Workers	\$25.35	745	381	430	96%	85%
46.0000	Construction Trades, General	47-3011	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	\$20.52	745	381	430	97%	82%
46.0000	Construction Trades, General	47-3012	Helpers--Carpenters	\$8.95	745	381	430	97%	97%
46.0000	Construction Trades, General	47-3013	Helpers--Electricians	\$14.28	745	381	430	97%	79%
46.0000	Construction Trades, General	47-3014	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	\$13.36	745	381	430	97%	95%
46.0000	Construction Trades, General	47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	\$14.50	745	381	430	97%	64%
46.0000	Construction Trades, General	47-3016	Helpers--Roofers	\$13.59	745	381	430	97%	84%
46.0000	Construction Trades, General	47-3019	Helpers, Construction Trades, All Other	\$12.99	745	381	430	97%	0%
46.0201	Carpentry/Carpenter	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	\$31.17	22	7	14	89%	79%
46.0201	Carpentry/Carpenter	47-2031	Carpenters	\$24.67	22	7	14	93%	73%

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46.0201	Carpentry/Carpenter	47-3012	Helpers--Carpenters	\$8.95	22	7	14	97%	97%
46.0302	Electrician	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	\$31.17	279	123	177	89%	79%
46.0302	Electrician	47-2111	Electricians	\$30.91	279	123	177	93%	34%
46.0302	Electrician	47-3013	Helpers--Electricians	\$14.28	279	123	177	97%	79%
46.0302	Electrician	49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	\$33.76	279	123	177	89%	60%
46.0302	Electrician	49-2098	Security and Fire Alarm Systems Installers	\$22.23	279	123	177	90%	63%
46.0302	Electrician	49-9097	Signal and Track Switch Repairers	\$0.00	279	123	177	90%	68%
46.0401	Building/Property Maintenance	37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	\$16.88	379	361	389	89%	77%
46.0401	Building/Property Maintenance	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	\$31.17	379	361	389	89%	79%
46.0401	Building/Property Maintenance	49-9071	Maintenance and Repair Workers, General	\$16.83	379	361	389	94%	53%
46.0412	Building/Construction Site Management/Manager	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	\$31.17	-7	-24	-16	89%	79%
46.0412	Building/Construction Site Management/Manager	49-9095	Manufactured Building and Mobile Home Installers	\$14.60	-7	-24	-16	96%	99%
46.0502	Pipefitting/Pipefitter and Sprinkler	47-2152	Plumbers, Pipefitters, and Steamfitters	\$30.86	108	35	60	96%	35%

	Fitter								
46.0503	Plumbing Technology/Plumber	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	\$31.17	88	25	28	89%	79%
46.0503	Plumbing Technology/Plumber	47-2151	Pipelayers	\$20.70	88	25	28	96%	98%
46.0503	Plumbing Technology/Plumber	47-2152	Plumbers, Pipefitters, and Steamfitters	\$30.86	88	25	28	96%	35%
46.0503	Plumbing Technology/Plumber	47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	\$14.50	88	25	28	97%	64%
46.0503	Plumbing Technology/Plumber	47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	\$16.87	88	25	28	91%	84%
47.0103	Communications Systems Installation and Repair Technology	27-4013	Radio Operators	\$0.00	54	49	49	63%	68%
47.0103	Communications Systems Installation and Repair Technology	43-2099	Communications Equipment Operators, All Other	\$16.77	54	49	49	61%	0%
47.0103	Communications Systems Installation and Repair Technology	49-2021	Radio, Cellular, and Tower Equipment Installers and Repairs	\$28.16	54	49	49	87%	67%
47.0103	Communications Systems Installation and Repair Technology	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	\$25.99	54	49	49	87%	49%
47.0103	Communications Systems Installation	49-2097	Electronic Home Entertainment Equipment	\$16.26	54	49	49	91%	26%

	and Repair Technology		Installers and Repairers						
47.0103	Communications Systems Installation and Repair Technology	49-9052	Telecommunications Line Installers and Repairers	\$19.11	54	49	49	90%	90%
47.0103	Communications Systems Installation and Repair Technology	49-9061	Camera and Photographic Equipment Repairers	\$18.61	54	49	49	80%	69%
47.0103	Communications Systems Installation and Repair Technology	51-2022	Electrical and Electronic Equipment Assemblers	\$14.50	54	49	49	95%	92%
47.0104	Computer Installation and Repair Technology/Technician	49-2011	Computer, Automated Teller, and Office Machine Repairers	\$17.57	43	19	26	75%	77%
47.0104	Computer Installation and Repair Technology/Technician	49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	\$25.56	43	19	26	89%	75%
47.0201	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	17-3025	Environmental Engineering Technicians	\$23.38	-119	-155	-210	83%	43%
47.0201	Heating, Air Conditioning, Ventilation and	49-2092	Electric Motor, Power Tool, and Related Repairers	\$24.64	-119	-155	-210	93%	61%

	Refrigeration Maintenance Technology/Technician								
47.0201	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$22.67	-119	-155	-210	96%	35%
47.0399	Heavy/Industrial Equipment Maintenance Technologies, Other	47-5071	Roustabouts, Oil and Gas	\$21.91	-2	0	1	94%	100%
47.0399	Heavy/Industrial Equipment Maintenance Technologies, Other	49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	\$33.76	-2	0	1	89%	60%
47.0399	Heavy/Industrial Equipment Maintenance Technologies, Other	49-9011	Mechanical Door Repairers	\$20.85	-2	0	1	95%	97%
47.0399	Heavy/Industrial Equipment Maintenance Technologies, Other	49-9041	Industrial Machinery Mechanics	\$24.70	-2	0	1	94%	40%
47.0399	Heavy/Industrial Equipment Maintenance Technologies, Other	49-9043	Maintenance Workers, Machinery	\$19.65	-2	0	1	96%	72%
47.0399	Heavy/Industrial Equipment Maintenance	49-9044	Millwrights	\$32.15	-2	0	1	97%	72%



	Technologies, Other								
47.0603	Autobody/Collision and Repair Technology/Technician	49-3021	Automotive Body and Related Repairers	\$24.31	48	11	10	97%	73%
47.0603	Autobody/Collision and Repair Technology/Technician	49-3022	Automotive Glass Installers and Repairers	\$16.60	48	11	10	96%	70%
47.0603	Autobody/Collision and Repair Technology/Technician	51-9122	Painters, Transportation Equipment	\$27.74	48	11	10	97%	74%
47.0604	Automobile/Automotive Mechanics Technology/Technician	49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	\$28.40	-42	-160	-284	89%	55%
47.0604	Automobile/Automotive Mechanics Technology/Technician	49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	\$11.97	-42	-160	-284	95%	35%
47.0604	Automobile/Automotive Mechanics Technology/Technician	49-3023	Automotive Service Technicians and Mechanics	\$18.12	-42	-160	-284	96%	38%
47.0607	Airframe Mechanics and Aircraft Maintenance Technology/Technician	49-2091	Avionics Technicians	\$30.17	-106	-178	-192	87%	87%
47.0607	Airframe Mechanics and Aircraft Maintenance Technology/Technician	49-3011	Aircraft Mechanics and Service Technicians	\$29.12	-106	-178	-192	90%	37%

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47.0607	Airframe Mechanics and Aircraft Maintenance Technology/Technician	51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	\$24.59	-106	-178	-192	93%	68%
47.0608	Aircraft Powerplant Technology/Technician	49-3011	Aircraft Mechanics and Service Technicians	\$29.12	-49	0	0	90%	37%
47.0608	Aircraft Powerplant Technology/Technician	51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	\$24.59	-49	0	0	93%	68%
47.0609	Avionics Maintenance Technology/Technician	49-2091	Avionics Technicians	\$30.17	0	0	0	87%	87%
47.0609	Avionics Maintenance Technology/Technician	51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	\$24.59	0	0	0	93%	68%
47.0611	Motorcycle Maintenance and Repair Technology/Technician	49-3052	Motorcycle Mechanics	\$16.30	-24	-26	-22	96%	70%
47.9999	Mechanic and Repair Technologies/Technicians, Other	39-1012	Slot Supervisors	\$18.29	84	93	95	68%	95%
47.9999	Mechanic and Repair Technologies/Technicians, Other	47-4041	Hazardous Materials Removal Workers	\$22.37	84	93	95	87%	74%
47.9999	Mechanic and	49-3093	Tire Repairers and	\$12.99	84	93	95	95%	100%

	Repair Technologies/Technicians, Other		Changers						
48.0503	Machine Shop Technology/Assistant	51-2041	Structural Metal Fabricators and Fitters	\$20.50	30	45	45	96%	68%
48.0503	Machine Shop Technology/Assistant	51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$17.87	30	45	45	93%	68%
48.0503	Machine Shop Technology/Assistant	51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	\$17.78	30	45	45	97%	92%
48.0503	Machine Shop Technology/Assistant	51-4041	Machinists	\$20.22	30	45	45	97%	45%
48.0503	Machine Shop Technology/Assistant	51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	\$16.40	30	45	45	96%	76%
48.0503	Machine Shop Technology/Assistant	51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	\$16.71	30	45	45	94%	85%
48.0503	Machine Shop Technology/Assistant	51-4192	Layout Workers, Metal and Plastic	\$22.36	30	45	45	96%	87%
48.0503	Machine Shop Technology/Assistant	51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	\$13.00	30	45	45	94%	95%
48.0503	Machine Shop Technology/Assistant	51-4194	Tool Grinders, Filers, and Sharpeners	\$20.78	30	45	45	95%	76%
48.0503	Machine Shop	51-4199	Metal Workers and Plastic	\$13.55	30	45	45	96%	0%

	Technology/Assistant		Workers, All Other						
48.0507	Tool and Die Technology/Technician	51-4111	Tool and Die Makers	\$27.76	31	40	45	96%	29%
48.0508	Welding Technology/Welder	51-4121	Welders, Cutters, Solderers, and Brazers	\$17.74	116	63	56	98%	74%
48.0508	Welding Technology/Welder	51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	\$20.34	116	63	56	98%	77%
48.0510	Computer Numerically Controlled (CNC) Machinist Technology/CNC Machinist	51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$17.87	77	117	124	93%	68%
48.0510	Computer Numerically Controlled (CNC) Machinist Technology/CNC Machinist	51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	\$24.08	77	117	124	93%	56%
48.0599	Precision Metal Working, Other	51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	\$13.00	0	0	0	94%	95%
48.0599	Precision Metal Working, Other	51-4199	Metal Workers and Plastic Workers, All Other	\$13.55	0	0	0	96%	0%
49.0101	Aeronautics/Aviation/Aerospace Science and Technology, General	11-3071	Transportation, Storage, and Distribution Managers	\$43.57	0	0	0	71%	15%
49.0102	Airline/Commercial	53-2011	Airline Pilots, Copilots,	\$62.54	151	143	139	28%	10%

	/Professional Pilot and Flight Crew		and Flight Engineers						
49.0102	Airline/Commercial /Professional Pilot and Flight Crew	53-2012	Commercial Pilots	\$34.47	151	143	139	28%	43%
49.0104	Aviation/Airway Management and Operations	11-3071	Transportation, Storage, and Distribution Managers	\$43.57	-16	-20	-24	71%	15%
49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	53-3021	Bus Drivers, Transit and Intercity	\$15.96	1266	942	989	92%	81%
49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	53-3022	Bus Drivers, School or Special Client	\$15.12	1266	942	989	92%	92%
49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	53-3032	Heavy and Tractor-Trailer Truck Drivers	\$18.57	1266	942	989	95%	83%
49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	53-3033	Light Truck or Delivery Services Drivers	\$14.29	1266	942	989	95%	100%
49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	53-3041	Taxi Drivers and Chauffeurs	\$10.15	1266	942	989	83%	89%
49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	53-4021	Railroad Brake, Signal, and Switch Operators	\$26.63	1266	942	989	88%	94%
49.0205	Truck and Bus Driver/Commercial	53-4031	Railroad Conductors and Yardmasters	\$28.85	1266	942	989	88%	92%

	Vehicle Operator and Instructor								
49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	53-4041	Subway and Streetcar Operators	\$31.19	1266	942	989	91%	91%
49.0205	Truck and Bus Driver/Commercial Vehicle Operator and Instructor	53-4099	Rail Transportation Workers, All Other	\$32.11	1266	942	989	91%	0%
50.0101	Visual and Performing Arts, General	27-1012	Craft Artists	\$15.90	-4	-1	-6	43%	72%
50.0101	Visual and Performing Arts, General	27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	\$26.34	-4	-1	-6	43%	62%
50.0101	Visual and Performing Arts, General	27-1019	Artists and Related Workers, All Other	\$28.59	-4	-1	-6	43%	0%
50.0101	Visual and Performing Arts, General	27-4021	Photographers	\$14.80	-4	-1	-6	52%	87%
50.0102	Digital Arts	25-1099	Postsecondary Teachers	\$36.84	-5	-13	-10	0%	0%
50.0102	Digital Arts	27-1011	Art Directors	\$29.73	-5	-13	-10	43%	9%
50.0102	Digital Arts	27-1014	Multimedia Artists and Animators	\$27.08	-5	-13	-10	43%	36%
50.0102	Digital Arts	27-1019	Artists and Related Workers, All Other	\$28.59	-5	-13	-10	43%	0%
50.0102	Digital Arts	27-1024	Graphic Designers	\$23.75	-5	-13	-10	44%	15%
50.0102	Digital Arts	27-4021	Photographers	\$14.80	-5	-13	-10	52%	87%
50.0201	Crafts/Craft Design, Folk Art and Artisanry	27-1012	Craft Artists	\$15.90	-15	-16	-16	43%	72%

50.0201	Crafts/Craft Design, Folk Art and Artisanry	27-1019	Artists and Related Workers, All Other	\$28.59	-15	-16	-16	43%	0%
50.0301	Dance, General	27-2031	Dancers	\$18.66	-37	-41	-49	76%	85%
50.0301	Dance, General	27-2032	Choreographers	\$22.83	-37	-41	-49	76%	56%
50.0401	Design and Visual Communications, General	27-1021	Commercial and Industrial Designers	\$36.53	-67	-89	-68	44%	37%
50.0401	Design and Visual Communications, General	27-1024	Graphic Designers	\$23.75	-67	-89	-68	44%	15%
50.0401	Design and Visual Communications, General	27-1027	Set and Exhibit Designers	\$14.54	-67	-89	-68	44%	16%
50.0401	Design and Visual Communications, General	27-1029	Designers, All Other	\$32.97	-67	-89	-68	44%	0%
50.0402	Commercial and Advertising Art	27-1019	Artists and Related Workers, All Other	\$28.59	-136	-153	-141	43%	0%
50.0402	Commercial and Advertising Art	27-1021	Commercial and Industrial Designers	\$36.53	-136	-153	-141	44%	37%
50.0402	Commercial and Advertising Art	27-1024	Graphic Designers	\$23.75	-136	-153	-141	44%	15%
50.0404	Industrial and Product Design	27-1021	Commercial and Industrial Designers	\$36.53	-52	-61	-58	44%	37%
50.0404	Industrial and Product Design	27-1024	Graphic Designers	\$23.75	-52	-61	-58	44%	15%
50.0404	Industrial and Product Design	27-1029	Designers, All Other	\$32.97	-52	-61	-58	44%	0%
50.0407	Fashion/Apparel Design	27-1022	Fashion Designers	\$31.64	-36	-45	-31	44%	65%
50.0408	Interior Design	27-1025	Interior Designers	\$22.70	-81	-95	-84	44%	22%
50.0409	Graphic Design	27-1011	Art Directors	\$29.73	-162	-206	-210	43%	9%

50.0409	Graphic Design	27-1014	Multimedia Artists and Animators	\$27.08	-162	-206	-210	43%	36%
50.0409	Graphic Design	27-1019	Artists and Related Workers, All Other	\$28.59	-162	-206	-210	43%	0%
50.0409	Graphic Design	27-1024	Graphic Designers	\$23.75	-162	-206	-210	44%	15%
50.0409	Graphic Design	51-9123	Painting, Coating, and Decorating Workers	\$14.35	-162	-206	-210	97%	96%
50.0410	Illustration	27-1019	Artists and Related Workers, All Other	\$28.59	-55	-53	-49	43%	0%
50.0410	Illustration	27-1027	Set and Exhibit Designers	\$14.54	-55	-53	-49	44%	16%
50.0410	Illustration	27-1029	Designers, All Other	\$32.97	-55	-53	-49	44%	0%
50.0411	Game and Interactive Media Design	25-1099	Postsecondary Teachers	\$36.84	-16	-29	-25	0%	0%
50.0411	Game and Interactive Media Design	27-1014	Multimedia Artists and Animators	\$27.08	-16	-29	-25	43%	36%
50.0499	Design and Applied Arts, Other	27-1021	Commercial and Industrial Designers	\$36.53	0	0	0	44%	37%
50.0499	Design and Applied Arts, Other	27-1027	Set and Exhibit Designers	\$14.54	0	0	0	44%	16%
50.0499	Design and Applied Arts, Other	27-1029	Designers, All Other	\$32.97	0	0	0	44%	0%
50.0501	Drama and Dramatics/Theatre Arts, General	27-2011	Actors	\$11.26	-101	-104	-115	43%	88%
50.0501	Drama and Dramatics/Theatre Arts, General	27-2012	Producers and Directors	\$27.19	-101	-104	-115	26%	34%
50.0501	Drama and Dramatics/Theatre Arts, General	27-2099	Entertainers and Performers, Sports and Related Workers, All Other	\$21.20	-101	-104	-115	60%	0%



50.0502	Technical Theatre/Theatre Design and Technology	27-1027	Set and Exhibit Designers	\$14.54	-14	-14	-16	44%	16%
50.0504	Playwriting and Screenwriting	27-3043	Writers and Authors	\$22.84	0	0	0	15%	42%
50.0506	Acting	27-2011	Actors	\$11.26	-2	-3	-3	43%	88%
50.0509	Musical Theatre	25-1099	Postsecondary Teachers	\$36.84	-4	-10	-14	0%	0%
50.0509	Musical Theatre	27-2011	Actors	\$11.26	-4	-10	-14	43%	88%
50.0509	Musical Theatre	27-2012	Producers and Directors	\$27.19	-4	-10	-14	26%	34%
50.0509	Musical Theatre	27-2031	Dancers	\$18.66	-4	-10	-14	76%	85%
50.0509	Musical Theatre	27-2032	Choreographers	\$22.83	-4	-10	-14	76%	56%
50.0509	Musical Theatre	27-2041	Music Directors and Composers	\$22.89	-4	-10	-14	46%	39%
50.0509	Musical Theatre	27-2042	Musicians and Singers	\$21.28	-4	-10	-14	46%	70%
50.0599	Dramatic/Theatre Arts and Stagecraft, Other	27-2011	Actors	\$11.26	-12	-10	-8	43%	88%
50.0599	Dramatic/Theatre Arts and Stagecraft, Other	27-2012	Producers and Directors	\$27.19	-12	-10	-8	26%	34%
50.0599	Dramatic/Theatre Arts and Stagecraft, Other	27-2099	Entertainers and Performers, Sports and Related Workers, All Other	\$21.20	-12	-10	-8	60%	0%
50.0601	Film/Cinema/Video Studies	27-2012	Producers and Directors	\$27.19	-150	-144	-158	26%	34%
50.0602	Cinematography and Film/Video Production	27-2012	Producers and Directors	\$27.19	-23	-33	-42	26%	34%
50.0602	Cinematography and Film/Video Production	27-4031	Camera Operators, Television, Video, and Motion Picture	\$22.97	-23	-33	-42	39%	73%

50.0602	Cinematography and Film/Video Production	27-4032	Film and Video Editors	\$28.67	-23	-33	-42	39%	40%
50.0605	Photography	27-4021	Photographers	\$14.80	-104	-110	-106	52%	87%
50.0699	Film/Video and Photographic Arts, Other	27-4021	Photographers	\$14.80	-2	-2	-1	52%	87%
50.0701	Art/Art Studies, General	27-1012	Craft Artists	\$15.90	-416	-377	-276	43%	72%
50.0701	Art/Art Studies, General	27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	\$26.34	-416	-377	-276	43%	62%
50.0701	Art/Art Studies, General	27-4021	Photographers	\$14.80	-416	-377	-276	52%	87%
50.0702	Fine/Studio Arts, General	27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	\$26.34	-15	-12	-13	43%	62%
50.0702	Fine/Studio Arts, General	27-1019	Artists and Related Workers, All Other	\$28.59	-15	-12	-13	43%	0%
50.0703	Art History, Criticism and Conservation	25-4011	Archivists	\$21.02	-71	-66	-68	16%	3%
50.0703	Art History, Criticism and Conservation	25-4012	Curators	\$24.44	-71	-66	-68	16%	1%
50.0703	Art History, Criticism and Conservation	25-4013	Museum Technicians and Conservators	\$16.40	-71	-66	-68	16%	9%
50.0705	Drawing	27-1012	Craft Artists	\$15.90	-6	-8	-7	43%	72%
50.0705	Drawing	27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	\$26.34	-6	-8	-7	43%	62%
50.0705	Drawing	27-1014	Multimedia Artists and Animators	\$27.08	-6	-8	-7	43%	36%

50.0706	Intermedia/Multimedia	27-1011	Art Directors	\$29.73	0	0	0	43%	9%
50.0706	Intermedia/Multimedia	27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	\$26.34	0	0	0	43%	62%
50.0706	Intermedia/Multimedia	27-1014	Multimedia Artists and Animators	\$27.08	0	0	0	43%	36%
50.0708	Painting	27-1012	Craft Artists	\$15.90	-10	-12	-14	43%	72%
50.0708	Painting	27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	\$26.34	-10	-12	-14	43%	62%
50.0708	Painting	27-1014	Multimedia Artists and Animators	\$27.08	-10	-12	-14	43%	36%
50.0709	Sculpture	27-1012	Craft Artists	\$15.90	-9	-8	-8	43%	72%
50.0709	Sculpture	27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	\$26.34	-9	-8	-8	43%	62%
50.0710	Printmaking	27-1012	Craft Artists	\$15.90	-6	-5	-8	43%	72%
50.0710	Printmaking	27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	\$26.34	-6	-5	-8	43%	62%
50.0710	Printmaking	27-1014	Multimedia Artists and Animators	\$27.08	-6	-5	-8	43%	36%
50.0712	Fiber, Textile and Weaving Arts	27-1012	Craft Artists	\$15.90	-7	-7	-7	43%	72%
50.0713	Metal and Jewelry Arts	27-1012	Craft Artists	\$15.90	-8	-8	-7	43%	72%
50.0799	Fine Arts and Art Studies, Other	27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	\$26.34	-27	-33	-38	43%	62%
50.0799	Fine Arts and Art Studies, Other	27-1019	Artists and Related Workers, All Other	\$28.59	-27	-33	-38	43%	0%
50.0901	Music, General	27-2042	Musicians and Singers	\$21.28	-72	-78	-79	46%	70%

50.0902	Music History, Literature, and Theory	25-1099	Postsecondary Teachers	\$36.84	-13	-14	-13	0%	0%
50.0906	Conducting	27-2041	Music Directors and Composers	\$22.89	-9	-10	-11	46%	39%
50.0907	Keyboard Instruments	27-2042	Musicians and Singers	\$21.28	-4	-6	-9	46%	70%
50.0910	Jazz/Jazz Studies	27-2042	Musicians and Singers	\$21.28	-2	-3	-3	46%	70%
50.0911	Stringed Instruments	27-2042	Musicians and Singers	\$21.28	-1	-1	-2	46%	70%
50.0912	Music Pedagogy	27-2042	Musicians and Singers	\$21.28	-3	-3	-2	46%	70%
50.0913	Music Technology	25-1099	Postsecondary Teachers	\$36.84	-15	-24	-22	0%	0%
50.0913	Music Technology	27-2041	Music Directors and Composers	\$22.89	-15	-24	-22	46%	39%
50.0913	Music Technology	27-4014	Sound Engineering Technicians	\$18.23	-15	-24	-22	63%	68%
50.0999	Music, Other	27-2041	Music Directors and Composers	\$22.89	-10	-7	-7	46%	39%
50.0999	Music, Other	27-2042	Musicians and Singers	\$21.28	-10	-7	-7	46%	70%
50.1001	Arts, Entertainment,and Media Management, General	11-9199	Managers, All Other	\$45.74	-1	-1	-4	46%	9%
50.1001	Arts, Entertainment,and Media Management, General	13-1011	Agents and Business Managers of Artists, Performers, and Athletes	\$24.04	-1	-1	-4	42%	41%
50.1001	Arts, Entertainment,and Media Management,	25-1099	Postsecondary Teachers	\$36.84	-1	-1	-4	0%	0%

	General								
50.1002	Fine and Studio Arts Management	11-9199	Managers, All Other	\$45.74	-1	-1	-3	46%	9%
50.1002	Fine and Studio Arts Management	13-1011	Agents and Business Managers of Artists, Performers, and Athletes	\$24.04	-1	-1	-3	42%	41%
50.1003	Music Management	27-2041	Music Directors and Composers	\$22.89	0	0	0	46%	39%
50.1004	Theatre/Theatre Arts Management	11-9199	Managers, All Other	\$45.74	-10	-8	-6	46%	9%
50.1004	Theatre/Theatre Arts Management	27-2012	Producers and Directors	\$27.19	-10	-8	-6	26%	34%
50.9999	Visual and Performing Arts, Other	27-1019	Artists and Related Workers, All Other	\$28.59	-14	-14	-11	43%	0%
50.9999	Visual and Performing Arts, Other	27-2042	Musicians and Singers	\$21.28	-14	-14	-11	46%	70%
51.0000	Health Services/Allied Health/Health Sciences, General	29-1011	Chiropractors	\$38.84	81	76	121	2%	4%
51.0000	Health Services/Allied Health/Health Sciences, General	29-1022	Oral and Maxillofacial Surgeons	\$58.08	81	76	121	1%	0%
51.0000	Health Services/Allied Health/Health Sciences, General	29-1041	Optometrists	\$48.12	81	76	121	1%	0%
51.0000	Health Services/Allied Health/Health Sciences, General	29-1081	Podiatrists	\$44.23	81	76	121	0%	8%

51.0000	Health Services/Allied Health/Health Sciences, General	29-1131	Veterinarians	\$51.59	81	76	121	2%	0%
51.0000	Health Services/Allied Health/Health Sciences, General	29-2081	Opticians, Dispensing	\$16.69	81	76	121	83%	69%
51.0000	Health Services/Allied Health/Health Sciences, General	31-9099	Healthcare Support Workers, All Other	\$15.12	81	76	121	87%	47%
51.0201	Communication Sciences and Disorders, General	29-1127	Speech-Language Pathologists	\$34.60	-28	-35	-47	1%	0%
51.0201	Communication Sciences and Disorders, General	29-1181	Audiologists	\$32.78	-28	-35	-47	2%	0%
51.0202	Audiology/Audiologist	29-1181	Audiologists	\$32.78	-6	-7	-6	2%	0%
51.0203	Speech-Language Pathology/Pathologist	29-1127	Speech-Language Pathologists	\$34.60	-14	-16	-17	1%	0%
51.0401	Dentistry	29-1021	Dentists, General	\$63.37	-139	-155	-132	1%	0%
51.0501	Dental Clinical Sciences, General	29-1029	Dentists, All Other Specialists	\$53.81	0	0	0	1%	0%
51.0502	Advanced General Dentistry	29-1021	Dentists, General	\$63.37	-4	-4	-2	1%	0%
51.0503	Oral Biology and Oral and Maxillofacial Pathology	29-1029	Dentists, All Other Specialists	\$53.81	-3	-3	-3	1%	0%
51.0505	Dental Materials	29-1029	Dentists, All Other Specialists	\$53.81	0	0	0	1%	0%

51.0506	Endodontics/Endodontology	29-1029	Dentists, All Other Specialists	\$53.81	-8	-9	-9	1%	0%
51.0508	Orthodontics/Orthodontology	29-1023	Orthodontists	\$87.20	-19	-20	-17	1%	0%
51.0509	Pediatric Dentistry/Pedodontics	29-1021	Dentists, General	\$63.37	-4	-4	-4	1%	0%
51.0510	Periodontics/Periodontology	29-1029	Dentists, All Other Specialists	\$53.81	-10	-10	-8	1%	0%
51.0511	Prosthodontics/Prosthodontology	29-1024	Prosthodontists	\$0.00	-4	-2	-2	1%	0%
51.0599	Advanced/Graduate Dentistry and Oral Sciences, Other	29-1029	Dentists, All Other Specialists	\$53.81	-5	-4	-6	1%	0%
51.0602	Dental Hygiene/Hygienist	29-2021	Dental Hygienists	\$30.77	-58	-23	47	64%	79%
51.0603	Dental Laboratory Technology/Technician	51-9081	Dental Laboratory Technicians	\$20.15	24	36	39	87%	66%
51.0699	Dental Services and Allied Professions, Other	29-1021	Dentists, General	\$63.37	34	43	0	1%	0%
51.0699	Dental Services and Allied Professions, Other	29-1022	Oral and Maxillofacial Surgeons	\$58.08	34	43	0	1%	0%
51.0699	Dental Services and Allied Professions, Other	29-1023	Orthodontists	\$87.20	34	43	0	1%	0%
51.0699	Dental Services and Allied Professions, Other	29-1024	Prosthodontists	\$0.00	34	43	0	1%	0%
51.0699	Dental Services and Allied Professions, Other	29-1029	Dentists, All Other Specialists	\$53.81	34	43	0	1%	0%

51.0699	Dental Services and Allied Professions, Other	29-2021	Dental Hygienists	\$30.77	34	43	0	64%	79%
51.0699	Dental Services and Allied Professions, Other	31-9091	Dental Assistants	\$16.37	34	43	0	91%	29%
51.0701	Health/Health Care Administration/Management	11-9111	Medical and Health Services Managers	\$42.03	-320	-358	-403	40%	3%
51.0702	Hospital and Health Care Facilities Administration/Management	11-9111	Medical and Health Services Managers	\$42.03	-43	-38	-23	40%	3%
51.0705	Medical Office Management/Administration	31-9092	Medical Assistants	\$13.70	-17	-19	-17	91%	35%
51.0706	Health Information/Medical Records Administration/Administrator	11-9111	Medical and Health Services Managers	\$42.03	0	-1	-3	40%	3%
51.0707	Health Information/Medical Records Technology/Technician	29-2071	Medical Records and Health Information Technicians	\$17.77	-136	-159	-153	81%	89%
51.0710	Medical Office Assistant/Specialist	31-9092	Medical Assistants	\$13.70	-213	-116	-62	91%	35%
51.0710	Medical Office Assistant/Specialist	43-6013	Medical Secretaries	\$15.51	-213	-116	-62	81%	80%
51.0711	Medical/Health Management and Clinical Assistant/Specialist	11-3011	Administrative Services Managers	\$37.84	29	44	54	59%	53%



51.0711	Medical/Health Management and Clinical Assistant/Specialist	43-1011	First-Line Supervisors of Office and Administrative Support Workers	\$24.00	29	44	54	68%	56%
51.0712	Medical Reception/Receptionist	31-9092	Medical Assistants	\$13.70	411	342	385	91%	35%
51.0712	Medical Reception/Receptionist	43-4171	Receptionists and Information Clerks	\$12.77	411	342	385	85%	87%
51.0713	Medical Insurance Coding Specialist/Coder	29-2071	Medical Records and Health Information Technicians	\$17.77	-78	-82	-54	81%	89%
51.0713	Medical Insurance Coding Specialist/Coder	31-9092	Medical Assistants	\$13.70	-78	-82	-54	91%	35%
51.0714	Medical Insurance Specialist/Medical Biller	43-6013	Medical Secretaries	\$15.51	-740	-650	-517	81%	80%
51.0716	Medical Administrative/Executive Assistant and Medical Secretary	31-9092	Medical Assistants	\$13.70	-106	-127	-56	91%	35%
51.0716	Medical Administrative/Executive Assistant and Medical Secretary	43-6011	Executive Secretaries and Executive Administrative Assistants	\$23.51	-106	-127	-56	81%	87%
51.0716	Medical Administrative/Executive Assistant and Medical Secretary	43-6013	Medical Secretaries	\$15.51	-106	-127	-56	81%	80%
51.0717	Medical Staff Services Technology/Technician	11-9111	Medical and Health Services Managers	\$42.03	-1	-1	-1	40%	3%

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51.0799	Health and Medical Administrative Services, Other	11-9111	Medical and Health Services Managers	\$42.03	-9	-8	-8	40%	3%
51.0801	Medical/Clinical Assistant	31-9092	Medical Assistants	\$13.70	-3248	-2594	-1923	91%	35%
51.0801	Medical/Clinical Assistant	31-9093	Medical Equipment Preparers	\$16.18	-3248	-2594	-1923	87%	75%
51.0803	Occupational Therapist Assistant	31-2011	Occupational Therapy Assistants	\$20.52	-47	-38	-36	85%	96%
51.0803	Occupational Therapist Assistant	31-2012	Occupational Therapy Aides	\$14.52	-47	-38	-36	85%	81%
51.0805	Pharmacy Technician/Assistant	29-2052	Pharmacy Technicians	\$13.68	-224	-205	-139	82%	83%
51.0805	Pharmacy Technician/Assistant	31-9095	Pharmacy Aides	\$9.89	-224	-205	-139	74%	82%
51.0806	Physical Therapy Technician/Assistant	31-2021	Physical Therapist Assistants	\$20.27	-56	-29	-40	80%	100%
51.0806	Physical Therapy Technician/Assistant	31-2022	Physical Therapist Aides	\$11.58	-56	-29	-40	80%	87%
51.0808	Veterinary/Animal Health Technology/Technician and Veterinary Assistant	29-2056	Veterinary Technologists and Technicians	\$15.31	26	-15	-39	82%	82%
51.0808	Veterinary/Animal Health Technology/Technician and Veterinary Assistant	31-9096	Veterinary Assistants and Laboratory Animal Caretakers	\$12.80	26	-15	-39	81%	90%

51.0811	Pathology/Pathologist Assistant	29-2055	Surgical Technologists	\$20.44	-8	-9	-9	82%	69%
51.0812	Respiratory Therapy Technician/Assistant	29-2054	Respiratory Therapy Technicians	\$23.14	-15	-14	-14	82%	72%
51.0899	Allied Health and Medical Assisting Services, Other	29-2099	Health Technologists and Technicians, All Other	\$18.38	0	0	0	69%	57%
51.0899	Allied Health and Medical Assisting Services, Other	29-9099	Healthcare Practitioners and Technical Workers, All Other	\$18.78	0	0	0	40%	29%
51.0899	Allied Health and Medical Assisting Services, Other	31-9092	Medical Assistants	\$13.70	0	0	0	91%	35%
51.0899	Allied Health and Medical Assisting Services, Other	31-9093	Medical Equipment Preparers	\$16.18	0	0	0	87%	75%
51.0901	Cardiovascular Technology/Technologist	29-2031	Cardiovascular Technologists and Technicians	\$24.93	-11	-11	-22	77%	76%
51.0902	Electrocardiograph Technology/Technician	29-2031	Cardiovascular Technologists and Technicians	\$24.93	-9	-7	-11	77%	76%
51.0903	Electroneurodiagnostic/Electroencephalographic Technology/Technologist	29-2099	Health Technologists and Technicians, All Other	\$18.38	-11	-11	-11	69%	57%
51.0904	Emergency Medical Technology/Technician (EMT Paramedic)	29-2041	Emergency Medical Technicians and Paramedics	\$14.93	-3	15	3	85%	53%
51.0904	Emergency Medical Technology/Technician	53-3011	Ambulance Drivers and Attendants, Except	\$9.99	-3	15	3	89%	91%

	ian (EMT Paramedic)		Emergency Medical Technicians						
51.0905	Nuclear Medical Technology/Technologist	29-2033	Nuclear Medicine Technologists	\$31.58	-6	-6	-3	77%	65%
51.0907	Medical Radiologic Technology/Science - Radiation Therapist	29-1124	Radiation Therapists	\$33.07	31	20	17	56%	53%
51.0907	Medical Radiologic Technology/Science - Radiation Therapist	29-2034	Radiologic Technologists	\$25.76	31	20	17	77%	67%
51.0907	Medical Radiologic Technology/Science - Radiation Therapist	29-2035	Magnetic Resonance Imaging Technologists	\$27.67	31	20	17	77%	74%
51.0908	Respiratory Care Therapy/Therapist	29-1126	Respiratory Therapists	\$26.09	6	-12	-5	71%	83%
51.0908	Respiratory Care Therapy/Therapist	29-2054	Respiratory Therapy Technicians	\$23.14	6	-12	-5	82%	72%
51.0909	Surgical Technology/Technologist	29-2055	Surgical Technologists	\$20.44	-220	-244	-281	82%	69%
51.0910	Diagnostic Medical Sonography/Sonographer and Ultrasound Technician	29-2032	Diagnostic Medical Sonographers	\$28.91	6	10	10	77%	47%
51.0911	Radiologic Technology/Science - Radiographer	29-2034	Radiologic Technologists	\$25.76	6	1	2	77%	67%
51.0911	Radiologic Technology/Science	29-2035	Magnetic Resonance Imaging Technologists	\$27.67	6	1	2	77%	74%

	- Radiographer								
51.0912	Physician Assistant	29-1071	Physician Assistants	\$45.81	-10	7	0	26%	13%
51.0913	Athletic Training/Trainer	29-9091	Athletic Trainers	\$20.07	20	5	3	40%	0%
51.0917	Polysomnography	29-2099	Health Technologists and Technicians, All Other	\$18.38	-20	-21	-16	69%	57%
51.0999	Allied Health Diagnostic, Intervention, and Treatment Professions, Other	29-2032	Diagnostic Medical Sonographers	\$28.91	41	33	28	77%	47%
51.0999	Allied Health Diagnostic, Intervention, and Treatment Professions, Other	29-2034	Radiologic Technologists	\$25.76	41	33	28	77%	67%
51.0999	Allied Health Diagnostic, Intervention, and Treatment Professions, Other	29-2099	Health Technologists and Technicians, All Other	\$18.38	41	33	28	69%	57%
51.0999	Allied Health Diagnostic, Intervention, and Treatment Professions, Other	29-9099	Healthcare Practitioners and Technical Workers, All Other	\$18.78	41	33	28	40%	29%
51.1001	Blood Bank Technology Specialist	29-2012	Medical and Clinical Laboratory Technicians	\$16.03	0	0	0	48%	58%
51.1004	Clinical/Medical Laboratory Technician	29-2012	Medical and Clinical Laboratory Technicians	\$16.03	71	145	141	48%	58%
51.1005	Clinical Laboratory Science/Medical	29-2011	Medical and Clinical Laboratory Technologists	\$27.12	-32	-10	3	48%	21%

	Technology/Technologist								
51.1007	Histologic Technology/Histotechnologist	29-2011	Medical and Clinical Laboratory Technologists	\$27.12	0	0	0	48%	21%
51.1008	Histologic Technician	29-2012	Medical and Clinical Laboratory Technicians	\$16.03	4	6	6	48%	58%
51.1009	Phlebotomy Technician/Phlebotomist	29-1199	Health Diagnosing and Treating Practitioners, All Other	\$37.91	-112	-115	-106	13%	5%
51.1009	Phlebotomy Technician/Phlebotomist	31-9097	Phlebotomists	\$14.10	-112	-115	-106	90%	38%
51.1011	Renal/Dialysis Technologist/Technician	29-2011	Medical and Clinical Laboratory Technologists	\$27.12	-22	-3	8	48%	21%
51.1011	Renal/Dialysis Technologist/Technician	29-2099	Health Technologists and Technicians, All Other	\$18.38	-22	-3	8	69%	57%
51.1102	Pre-Medicine/Pre-Medical Studies	29-1069	Physicians and Surgeons, All Other	\$66.27	4	6	4	1%	1%
51.1102	Pre-Medicine/Pre-Medical Studies	29-1071	Physician Assistants	\$45.81	4	6	4	26%	13%
51.1102	Pre-Medicine/Pre-Medical Studies	31-9092	Medical Assistants	\$13.70	4	6	4	91%	35%
51.1103	Pre-Pharmacy Studies	29-1051	Pharmacists	\$53.61	2	1	2	2%	0%
51.1103	Pre-Pharmacy Studies	29-2052	Pharmacy Technicians	\$13.68	2	1	2	82%	83%
51.1103	Pre-Pharmacy Studies	31-9095	Pharmacy Aides	\$9.89	2	1	2	74%	82%
51.1105	Pre-Nursing Studies	29-1141	Registered Nurses	\$32.92	0	0	0	45%	40%
51.1105	Pre-Nursing Studies	29-2061	Licensed Practical and Licensed Vocational	\$22.34	0	0	0	95%	55%

			Nurses						
51.1201	Medicine	29-1062	Family and General Practitioners	\$84.21	-92	-42	-43	1%	0%
51.1201	Medicine	29-1069	Physicians and Surgeons, All Other	\$66.27	-92	-42	-43	1%	1%
51.1401	Medical Scientist	19-1041	Epidemiologists	\$36.21	-1	-1	-3	2%	0%
51.1401	Medical Scientist	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	-1	-1	-3	2%	0%
51.1501	Substance Abuse/Addiction Counseling	21-1011	Substance Abuse and Behavioral Disorder Counselors	\$22.09	-8	-8	-8	21%	52%
51.1501	Substance Abuse/Addiction Counseling	21-1014	Mental Health Counselors	\$20.73	-8	-8	-8	21%	1%
51.1502	Psychiatric/Mental Health Services Technician	29-2053	Psychiatric Technicians	\$16.58	30	20	13	82%	56%
51.1502	Psychiatric/Mental Health Services Technician	31-1013	Psychiatric Aides	\$12.44	30	20	13	91%	88%
51.1504	Community Health Services/Liaison/Counseling	21-1091	Health Educators	\$23.01	-76	-84	-91	47%	11%
51.1504	Community Health Services/Liaison/Counseling	21-1094	Community Health Workers	\$16.26	-76	-84	-91	47%	33%
51.1504	Community Health Services/Liaison/Counseling	21-1099	Community and Social Service Specialists, All Other	\$25.16	-76	-84	-91	47%	0%
51.1506	Clinical Pastoral Counseling/Patient Counseling	21-1013	Marriage and Family Therapists	\$23.50	-1	-4	-5	21%	0%
51.1506	Clinical Pastoral Counseling/Patient Counseling	21-2011	Clergy	\$20.25	-1	-4	-5	25%	32%

	Counseling								
51.1507	Psychoanalysis and Psychotherapy	19-3031	Clinical, Counseling, and School Psychologists	\$29.26	0	0	0	1%	0%
51.1508	Mental Health Counseling/Counselor	21-1014	Mental Health Counselors	\$20.73	-16	-10	-11	21%	1%
51.1509	Genetic Counseling/Counselor	21-1019	Counselors, All Other	\$24.14	-5	-6	-6	21%	0%
51.1509	Genetic Counseling/Counselor	29-9092	Genetic Counselors	\$30.35	-5	-6	-6	40%	0%
51.1599	Mental and Social Health Services and Allied Professions, Other	21-1011	Substance Abuse and Behavioral Disorder Counselors	\$22.09	9	8	7	21%	52%
51.1599	Mental and Social Health Services and Allied Professions, Other	21-1014	Mental Health Counselors	\$20.73	9	8	7	21%	1%
51.1599	Mental and Social Health Services and Allied Professions, Other	21-1019	Counselors, All Other	\$24.14	9	8	7	21%	0%
51.1599	Mental and Social Health Services and Allied Professions, Other	21-1093	Social and Human Service Assistants	\$12.82	9	8	7	60%	41%
51.1599	Mental and Social Health Services and Allied Professions, Other	21-1099	Community and Social Service Specialists, All Other	\$25.16	9	8	7	47%	0%
51.1803	Ophthalmic Technician/Technol	29-2057	Ophthalmic Medical Technicians	\$21.76	5	3	2	82%	65%



	ogist								
51.1803	Ophthalmic Technician/Technologist	29-2099	Health Technologists and Technicians, All Other	\$18.38	5	3	2	69%	57%
51.1803	Ophthalmic Technician/Technologist	31-9092	Medical Assistants	\$13.70	5	3	2	91%	35%
51.2001	Pharmacy	29-1051	Pharmacists	\$53.61	15	-15	-19	2%	0%
51.2002	Pharmacy Administration and Pharmacy Policy and Regulatory Affairs	29-1051	Pharmacists	\$53.61	0	0	0	2%	0%
51.2003	Pharmaceutics and Drug Design	29-1051	Pharmacists	\$53.61	1	-1	-1	2%	0%
51.2004	Medicinal and Pharmaceutical Chemistry	29-1051	Pharmacists	\$53.61	1	-1	-1	2%	0%
51.2006	Clinical and Industrial Drug Development	29-1051	Pharmacists	\$53.61	2	-2	-3	2%	0%
51.2010	Pharmaceutical Sciences	19-1042	Medical Scientists, Except Epidemiologists	\$49.47	2	0	-1	2%	0%
51.2010	Pharmaceutical Sciences	29-1051	Pharmacists	\$53.61	2	0	-1	2%	0%
51.2099	Pharmacy, Pharmaceutical Sciences, and Administration, Other	29-1051	Pharmacists	\$53.61	0	0	0	2%	0%
51.2201	Public Health, General	11-9111	Medical and Health Services Managers	\$42.03	-4	-6	-7	40%	3%
51.2201	Public Health, General	21-1094	Community Health Workers	\$16.26	-4	-6	-7	47%	33%

51.2201	Public Health, General	21-1099	Community and Social Service Specialists, All Other	\$25.16	-4	-6	-7	47%	0%
51.2202	Environmental Health	29-9011	Occupational Health and Safety Specialists	\$33.65	-26	-34	-34	40%	9%
51.2202	Environmental Health	29-9012	Occupational Health and Safety Technicians	\$24.13	-26	-34	-34	40%	39%
51.2205	Health/Medical Physics	19-2012	Physicists	\$54.50	-10	-11	-9	7%	6%
51.2206	Occupational Health and Industrial Hygiene	29-9011	Occupational Health and Safety Specialists	\$33.65	-18	-25	-24	40%	9%
51.2206	Occupational Health and Industrial Hygiene	29-9012	Occupational Health and Safety Technicians	\$24.13	-18	-25	-24	40%	39%
51.2207	Public Health Education and Promotion	21-1091	Health Educators	\$23.01	-61	-69	-77	47%	11%
51.2207	Public Health Education and Promotion	21-1094	Community Health Workers	\$16.26	-61	-69	-77	47%	33%
51.2207	Public Health Education and Promotion	21-1099	Community and Social Service Specialists, All Other	\$25.16	-61	-69	-77	47%	0%
51.2210	International Public Health/International Health	21-1091	Health Educators	\$23.01	-3	0	0	47%	11%
51.2211	Health Services Administration	11-9111	Medical and Health Services Managers	\$42.03	-24	-26	-28	40%	3%
51.2299	Public Health, Other	11-9111	Medical and Health Services Managers	\$42.03	-7	-15	-18	40%	3%
51.2305	Music Therapy/Therapist	29-1128	Exercise Physiologists	\$22.49	-4	-5	-5	15%	0%
51.2305	Music	29-1129	Therapists, All Other	\$28.40	-4	-5	-5	15%	0%

	Therapy/Therapist								
51.2306	Occupational Therapy/Therapist	29-1122	Occupational Therapists	\$32.25	-19	-43	-57	10%	0%
51.2307	Orthotist/Prosthetist	29-2091	Orthotists and Prosthetists	\$32.99	-24	-25	-27	69%	0%
51.2307	Orthotist/Prosthetist	51-9082	Medical Appliance Technicians	\$21.40	-24	-25	-27	87%	67%
51.2308	Physical Therapy/Therapist	29-1123	Physical Therapists	\$39.85	39	73	57	9%	0%
51.2309	Therapeutic Recreation/Recreational Therapy	29-1125	Recreational Therapists	\$23.51	7	2	0	30%	0%
51.2310	Vocational Rehabilitation Counseling/Counselor	21-1015	Rehabilitation Counselors	\$18.78	13	5	2	21%	24%
51.2399	Rehabilitation and Therapeutic Professions, Other	29-1128	Exercise Physiologists	\$22.49	-1	-1	-1	15%	0%
51.2399	Rehabilitation and Therapeutic Professions, Other	29-1129	Therapists, All Other	\$28.40	-1	-1	-1	15%	0%
51.2602	Home Health Aide/Home Attendant	31-1011	Home Health Aides	\$10.00	1498	1363	1211	91%	51%
51.2602	Home Health Aide/Home Attendant	39-9021	Personal Care Aides	\$9.97	1498	1363	1211	88%	78%
51.2703	Medical Illustration/Medical Illustrator	27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	\$26.34	0	0	0	43%	62%
51.2706	Medical Informatics	15-1111	Computer and Information Research Scientists	\$51.07	-1	-3	-9	9%	0%

51.2706	Medical Informatics	15-1132	Software Developers, Applications	\$38.30	-1	-3	-9	16%	7%
51.2706	Medical Informatics	15-1199	Computer Occupations, All Other	\$39.61	-1	-3	-9	49%	16%
51.3101	Dietetics/Dietitian	29-1031	Dietitians and Nutritionists	\$25.30	-29	-39	-42	25%	0%
51.3101	Dietetics/Dietitian	29-2051	Dietetic Technicians	\$13.70	-29	-39	-42	82%	94%
51.3103	Dietetic Technician	29-2051	Dietetic Technicians	\$13.70	-2	-2	-1	82%	94%
51.3104	Dietitian Assistant	29-2051	Dietetic Technicians	\$13.70	0	0	0	82%	94%
51.3199	Dietetics and Clinical Nutrition Services, Other	29-1031	Dietitians and Nutritionists	\$25.30	-8	-11	-12	25%	0%
51.3501	Massage Therapy/Therapeutic Massage	31-9011	Massage Therapists	\$21.54	-446	-471	-407	74%	12%
51.3801	Registered Nursing/Registered Nurse	29-1141	Registered Nurses	\$32.92	-1107	-1326	-1422	45%	40%
51.3802	Nursing Administration	11-9111	Medical and Health Services Managers	\$42.03	-24	-26	-23	40%	3%
51.3803	Adult Health Nurse/Nursing	29-1141	Registered Nurses	\$32.92	-16	-30	-38	45%	40%
51.3803	Adult Health Nurse/Nursing	29-1171	Nurse Practitioners	\$43.89	-16	-30	-38	3%	0%
51.3804	Nurse Anesthetist	29-1151	Nurse Anesthetists	\$81.70	-54	-49	-52	9%	0%
51.3805	Family Practice Nurse/Nursing	29-1141	Registered Nurses	\$32.92	-6	-9	-13	45%	40%
51.3805	Family Practice Nurse/Nursing	29-1171	Nurse Practitioners	\$43.89	-6	-9	-13	3%	0%
51.3806	Maternal/Child Health and Neonatal Nurse/Nursing	29-1141	Registered Nurses	\$32.92	-8	-13	-19	45%	40%

51.3806	Maternal/Child Health and Neonatal Nurse/Nursing	29-1171	Nurse Practitioners	\$43.89	-8	-13	-19	3%	0%
51.3807	Nurse Midwife/Nursing Midwifery	29-1161	Nurse Midwives	\$46.31	-1	0	0	3%	0%
51.3808	Nursing Science	29-1141	Registered Nurses	\$32.92	3	5	3	45%	40%
51.3808	Nursing Science	29-1151	Nurse Anesthetists	\$81.70	3	5	3	9%	0%
51.3808	Nursing Science	29-1161	Nurse Midwives	\$46.31	3	5	3	3%	0%
51.3808	Nursing Science	29-1171	Nurse Practitioners	\$43.89	3	5	3	3%	0%
51.3809	Pediatric Nurse/Nursing	29-1141	Registered Nurses	\$32.92	0	0	0	45%	40%
51.3809	Pediatric Nurse/Nursing	29-1171	Nurse Practitioners	\$43.89	0	0	0	3%	0%
51.3810	Psychiatric/Mental Health Nurse/Nursing	29-1141	Registered Nurses	\$32.92	-2	-4	-6	45%	40%
51.3810	Psychiatric/Mental Health Nurse/Nursing	29-1171	Nurse Practitioners	\$43.89	-2	-4	-6	3%	0%
51.3811	Public Health/Community Nurse/Nursing	29-1141	Registered Nurses	\$32.92	-6	-10	-12	45%	40%
51.3811	Public Health/Community Nurse/Nursing	29-1171	Nurse Practitioners	\$43.89	-6	-10	-12	3%	0%
51.3812	Perioperative/Operating Room and Surgical Nurse/Nursing	29-1141	Registered Nurses	\$32.92	-3	-3	-3	45%	40%
51.3812	Perioperative/Operating Room and	29-1171	Nurse Practitioners	\$43.89	-3	-3	-3	3%	0%

	Surgical Nurse/Nursing								
51.3816	Emergency Room/Trauma Nursing	25-1099	Postsecondary Teachers	\$36.84	0	0	0	0%	0%
51.3816	Emergency Room/Trauma Nursing	29-1141	Registered Nurses	\$32.92	0	0	0	45%	40%
51.3816	Emergency Room/Trauma Nursing	29-1171	Nurse Practitioners	\$43.89	0	0	0	3%	0%
51.3817	Nursing Education	25-1099	Postsecondary Teachers	\$36.84	-31	-34	-29	0%	0%
51.3818	Nursing Practice	11-9111	Medical and Health Services Managers	\$42.03	4	2	0	40%	3%
51.3818	Nursing Practice	29-1141	Registered Nurses	\$32.92	4	2	0	45%	40%
51.3818	Nursing Practice	29-1171	Nurse Practitioners	\$43.89	4	2	0	3%	0%
51.3819	Palliative Care Nursing	25-1099	Postsecondary Teachers	\$36.84	0	-1	-2	0%	0%
51.3819	Palliative Care Nursing	29-1141	Registered Nurses	\$32.92	0	-1	-2	45%	40%
51.3819	Palliative Care Nursing	29-1171	Nurse Practitioners	\$43.89	0	-1	-2	3%	0%
51.3820	Clinical Nurse Leader	29-1141	Registered Nurses	\$32.92	-3	-2	0	45%	40%
51.3820	Clinical Nurse Leader	29-1171	Nurse Practitioners	\$43.89	-3	-2	0	3%	0%
51.3821	Geriatric Nurse/Nursing	25-1099	Postsecondary Teachers	\$36.84	-1	-2	-4	0%	0%
51.3821	Geriatric Nurse/Nursing	29-1141	Registered Nurses	\$32.92	-1	-2	-4	45%	40%
51.3821	Geriatric Nurse/Nursing	29-1171	Nurse Practitioners	\$43.89	-1	-2	-4	3%	0%
51.3822	Women's Health	25-1099	Postsecondary Teachers	\$36.84	0	0	0	0%	0%

	Nurse/Nursing								
51.3822	Women's Health Nurse/Nursing	29-1141	Registered Nurses	\$32.92	0	0	0	45%	40%
51.3822	Women's Health Nurse/Nursing	29-1171	Nurse Practitioners	\$43.89	0	0	0	3%	0%
51.3899	Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing, Other	25-1099	Postsecondary Teachers	\$36.84	1	0	0	0%	0%
51.3899	Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing, Other	29-1141	Registered Nurses	\$32.92	1	0	0	45%	40%
51.3899	Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing, Other	29-1151	Nurse Anesthetists	\$81.70	1	0	0	9%	0%
51.3899	Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing, Other	29-1161	Nurse Midwives	\$46.31	1	0	0	3%	0%
51.3899	Registered Nursing, Nursing Administration, Nursing Research and Clinical	29-1171	Nurse Practitioners	\$43.89	1	0	0	3%	0%

	Nursing, Other								
51.3902	Nursing Assistant/Aide and Patient Care Assistant/Aide	31-1014	Nursing Assistants	\$13.07	-78	259	256	91%	75%
51.3902	Nursing Assistant/Aide and Patient Care Assistant/Aide	31-1015	Orderlies	\$13.59	-78	259	256	91%	0%
51.3999	Practical Nursing, Vocational Nursing and Nursing Assistants, Other	29-1141	Registered Nurses	\$32.92	-99	-156	-138	45%	40%
52.0101	Business/Commerce, General	11-1011	Chief Executives	\$83.29	-406	-399	-371	33%	4%
52.0101	Business/Commerce, General	11-1021	General and Operations Managers	\$47.38	-406	-399	-371	51%	52%
52.0101	Business/Commerce, General	11-2022	Sales Managers	\$51.67	-406	-399	-371	33%	24%
52.0101	Business/Commerce, General	11-3011	Administrative Services Managers	\$37.84	-406	-399	-371	59%	53%
52.0101	Business/Commerce, General	11-3051	Industrial Production Managers	\$51.56	-406	-399	-371	56%	40%
52.0101	Business/Commerce, General	11-3071	Transportation, Storage, and Distribution Managers	\$43.57	-406	-399	-371	71%	15%
52.0101	Business/Commerce, General	11-9021	Construction Managers	\$41.28	-406	-399	-371	66%	16%
52.0101	Business/Commerce, General	11-9151	Social and Community Service Managers	\$28.42	-406	-399	-371	31%	21%
52.0101	Business/Commerce, General	11-9199	Managers, All Other	\$45.74	-406	-399	-371	46%	9%
52.0101	Business/Commerce, General	13-1051	Cost Estimators	\$28.24	-406	-399	-371	67%	21%
52.0101	Business/Commerce	13-1111	Management Analysts	\$39.82	-406	-399	-371	23%	24%



	e, General								
52.0201	Business Administration and Management, General	11-3031	Financial Managers	\$53.59	-2831	-2834	-2619	39%	29%
52.0201	Business Administration and Management, General	11-3071	Transportation, Storage, and Distribution Managers	\$43.57	-2831	-2834	-2619	71%	15%
52.0201	Business Administration and Management, General	11-9151	Social and Community Service Managers	\$28.42	-2831	-2834	-2619	31%	21%
52.0201	Business Administration and Management, General	13-2031	Budget Analysts	\$35.25	-2831	-2834	-2619	32%	20%
52.0201	Business Administration and Management, General	13-2052	Personal Financial Advisors	\$29.91	-2831	-2834	-2619	19%	7%
52.0201	Business Administration and Management, General	13-2053	Insurance Underwriters	\$27.41	-2831	-2834	-2619	46%	16%
52.0201	Business Administration and Management, General	41-3031	Securities, Commodities, and Financial Services Sales Agents	\$29.80	-2831	-2834	-2619	30%	42%
52.0201	Business Administration and Management, General	11-1011	Chief Executives	\$83.29	-2831	-2834	-2619	33%	4%
52.0201	Business	11-1021	General and Operations	\$47.38	-2831	-2834	-2619	51%	52%

	Administration and Management, General		Managers						
52.0201	Business Administration and Management, General	11-2022	Sales Managers	\$51.67	-2831	-2834	-2619	33%	24%
52.0201	Business Administration and Management, General	11-3011	Administrative Services Managers	\$37.84	-2831	-2834	-2619	59%	53%
52.0201	Business Administration and Management, General	11-3051	Industrial Production Managers	\$51.56	-2831	-2834	-2619	56%	40%
52.0201	Business Administration and Management, General	11-3071	Transportation, Storage, and Distribution Managers	\$43.57	-2831	-2834	-2619	71%	15%
52.0201	Business Administration and Management, General	11-9021	Construction Managers	\$41.28	-2831	-2834	-2619	66%	16%
52.0201	Business Administration and Management, General	11-9151	Social and Community Service Managers	\$28.42	-2831	-2834	-2619	31%	21%
52.0201	Business Administration and Management, General	11-9199	Managers, All Other	\$45.74	-2831	-2834	-2619	46%	9%
52.0201	Business Administration and Management,	13-1051	Cost Estimators	\$28.24	-2831	-2834	-2619	67%	21%

	General								
52.0201	Business Administration and Management, General	13-1111	Management Analysts	\$39.82	-2831	-2834	-2619	23%	24%
52.0201	Business Administration and Management, General	37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	\$16.88	-2831	-2834	-2619	89%	77%
52.0201	Business Administration and Management, General	39-1011	Gaming Supervisors	\$21.36	-2831	-2834	-2619	68%	87%
52.0201	Business Administration and Management, General	39-1021	First-Line Supervisors of Personal Service Workers	\$17.46	-2831	-2834	-2619	74%	49%
52.0203	Logistics, Materials, and Supply Chain Management	11-3071	Transportation, Storage, and Distribution Managers	\$43.57	-53	-60	-66	71%	15%
52.0203	Logistics, Materials, and Supply Chain Management	13-1081	Logisticians	\$41.08	-53	-60	-66	58%	18%
52.0204	Office Management and Supervision	11-3011	Administrative Services Managers	\$37.84	350	301	342	59%	53%
52.0204	Office Management and Supervision	43-1011	First-Line Supervisors of Office and Administrative Support Workers	\$24.00	350	301	342	68%	56%
52.0206	Non-Profit/Public/Organizational Management	11-9151	Social and Community Service Managers	\$28.42	-27	-25	-22	31%	21%
52.0206	Non-Profit/Public/Organizational Management	11-9199	Managers, All Other	\$45.74	-27	-25	-22	46%	9%

	zational Management								
52.0207	Customer Service Management	43-1011	First-Line Supervisors of Office and Administrative Support Workers	\$24.00	26	21	11	68%	56%
52.0208	E-Commerce/Electronic Commerce	41-1011	First-Line Supervisors of Retail Sales Workers	\$18.08	21	17	25	75%	86%
52.0211	Project Management	11-9199	Managers, All Other	\$45.74	-1	-6	-20	46%	9%
52.0211	Project Management	25-1099	Postsecondary Teachers	\$36.84	-1	-6	-20	0%	0%
52.0213	Organizational Leadership	13-1111	Management Analysts	\$39.82	-23	-25	-24	23%	24%
52.0213	Organizational Leadership	25-1099	Postsecondary Teachers	\$36.84	-23	-25	-24	0%	0%
52.0302	Accounting Technology/Technician and Bookkeeping	13-2082	Tax Preparers	\$17.59	364	328	406	50%	65%
52.0302	Accounting Technology/Technician and Bookkeeping	43-3021	Billing and Posting Clerks	\$17.00	364	328	406	83%	84%
52.0302	Accounting Technology/Technician and Bookkeeping	43-3031	Bookkeeping, Accounting, and Auditing Clerks	\$17.84	364	328	406	83%	77%
52.0302	Accounting Technology/Technician and Bookkeeping	43-3041	Gaming Cage Workers	\$17.71	364	328	406	89%	93%
52.0302	Accounting Technology/Technician	43-3051	Payroll and Timekeeping Clerks	\$19.24	364	328	406	81%	69%

	ian and Bookkeeping								
52.0302	Accounting Technology/Technician and Bookkeeping	43-4011	Brokerage Clerks	\$21.33	364	328	406	59%	67%
52.0302	Accounting Technology/Technician and Bookkeeping	43-9111	Statistical Assistants	\$26.91	364	328	406	67%	29%
52.0303	Auditing	13-2011	Accountants and Auditors	\$31.68	-3	-2	-2	22%	6%
52.0305	Accounting and Business/Management	11-3031	Financial Managers	\$53.59	-25	-14	-9	39%	29%
52.0305	Accounting and Business/Management	13-2011	Accountants and Auditors	\$31.68	-25	-14	-9	22%	6%
52.0305	Accounting and Business/Management	13-2051	Financial Analysts	\$36.46	-25	-14	-9	14%	0%
52.0399	Accounting and Related Services, Other	43-3031	Bookkeeping, Accounting, and Auditing Clerks	\$17.84	7	-1	8	83%	77%
52.0401	Administrative Assistant and Secretarial Science, General	43-6011	Executive Secretaries and Executive Administrative Assistants	\$23.51	234	205	260	81%	87%
52.0401	Administrative Assistant and Secretarial Science, General	43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$16.97	234	205	260	81%	94%
52.0402	Executive Assistant/Executive Secretary	43-6011	Executive Secretaries and Executive Administrative Assistants	\$23.51	87	97	112	81%	87%

52.0402	Executive Assistant/Executive Secretary	43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$16.97	87	97	112	81%	94%
52.0408	General Office Occupations and Clerical Services	43-3061	Procurement Clerks	\$18.98	2437	2155	2175	71%	60%
52.0408	General Office Occupations and Clerical Services	43-4021	Correspondence Clerks	\$18.33	2437	2155	2175	83%	98%
52.0408	General Office Occupations and Clerical Services	43-4031	Court, Municipal, and License Clerks	\$19.14	2437	2155	2175	81%	85%
52.0408	General Office Occupations and Clerical Services	43-4071	File Clerks	\$10.88	2437	2155	2175	78%	92%
52.0408	General Office Occupations and Clerical Services	43-4151	Order Clerks	\$15.79	2437	2155	2175	83%	99%
52.0408	General Office Occupations and Clerical Services	43-4161	Human Resources Assistants, Except Payroll and Timekeeping	\$19.91	2437	2155	2175	71%	77%
52.0408	General Office Occupations and Clerical Services	43-4171	Receptionists and Information Clerks	\$12.77	2437	2155	2175	85%	87%
52.0408	General Office Occupations and Clerical Services	43-4199	Information and Record Clerks, All Other	\$17.23	2437	2155	2175	77%	0%
52.0408	General Office Occupations and Clerical Services	43-5011	Cargo and Freight Agents	\$17.13	2437	2155	2175	83%	101%
52.0408	General Office Occupations and Clerical Services	43-5051	Postal Service Clerks	\$26.03	2437	2155	2175	83%	96%

52.0408	General Office Occupations and Clerical Services	43-5052	Postal Service Mail Carriers	\$27.30	2437	2155	2175	86%	100%
52.0408	General Office Occupations and Clerical Services	43-5053	Postal Service Mail Sorters, Processors, and Processing Machine Operators	\$26.00	2437	2155	2175	85%	95%
52.0408	General Office Occupations and Clerical Services	43-5071	Shipping, Receiving, and Traffic Clerks	\$15.30	2437	2155	2175	92%	92%
52.0408	General Office Occupations and Clerical Services	43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	\$13.63	2437	2155	2175	88%	93%
52.0408	General Office Occupations and Clerical Services	43-9022	Word Processors and Typists	\$17.07	2437	2155	2175	81%	99%
52.0408	General Office Occupations and Clerical Services	43-9041	Insurance Claims and Policy Processing Clerks	\$16.91	2437	2155	2175	77%	91%
52.0408	General Office Occupations and Clerical Services	43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	\$13.01	2437	2155	2175	89%	99%
52.0408	General Office Occupations and Clerical Services	43-9061	Office Clerks, General	\$14.25	2437	2155	2175	80%	61%
52.0408	General Office Occupations and Clerical Services	43-9071	Office Machine Operators, Except Computer	\$14.26	2437	2155	2175	86%	100%
52.0408	General Office Occupations and Clerical Services	43-9199	Office and Administrative Support Workers, All Other	\$16.94	2437	2155	2175	68%	0%
52.0410	Traffic, Customs, and Transportation Clerk/Technician	43-5071	Shipping, Receiving, and Traffic Clerks	\$15.30	29	25	25	92%	92%

52.0410	Traffic, Customs, and Transportation Clerk/Technician	53-6041	Traffic Technicians	\$23.12	29	25	25	89%	19%
52.0410	Traffic, Customs, and Transportation Clerk/Technician	53-6051	Transportation Inspectors	\$47.38	29	25	25	83%	40%
52.0410	Traffic, Customs, and Transportation Clerk/Technician	53-6099	Transportation Workers, All Other	\$15.34	29	25	25	89%	0%
52.0411	Customer Service Support/Call Center/Teleservice Operation	43-2021	Telephone Operators	\$17.11	1320	1354	1440	87%	100%
52.0411	Customer Service Support/Call Center/Teleservice Operation	43-4051	Customer Service Representatives	\$15.18	1320	1354	1440	76%	50%
52.0499	Business Operations Support and Secretarial Services, Other	43-9199	Office and Administrative Support Workers, All Other	\$16.94	6	4	7	68%	0%
52.0501	Business/Corporate Communications	27-3041	Editors	\$23.03	0	0	0	16%	16%
52.0501	Business/Corporate Communications	27-3042	Technical Writers	\$29.45	0	0	0	26%	51%
52.0501	Business/Corporate Communications	27-3043	Writers and Authors	\$22.84	0	0	0	15%	42%
52.0601	Business/Managerial Economics	19-3011	Economists	\$35.74	-10	-13	-11	1%	0%
52.0601	Business/Managerial Economics	19-3022	Survey Researchers	\$19.50	-10	-13	-11	10%	0%
52.0701	Entrepreneurship/Entrepreneurial Studies	11-1011	Chief Executives	\$83.29	-51	-52	-50	33%	4%



52.0701	Entrepreneurship/Entrepreneurial Studies	11-1021	General and Operations Managers	\$47.38	-51	-52	-50	51%	52%
52.0701	Entrepreneurship/Entrepreneurial Studies	11-9151	Social and Community Service Managers	\$28.42	-51	-52	-50	31%	21%
52.0701	Entrepreneurship/Entrepreneurial Studies	11-9199	Managers, All Other	\$45.74	-51	-52	-50	46%	9%
52.0703	Small Business Administration/Management	11-9199	Managers, All Other	\$45.74	-19	-19	-19	46%	9%
52.0799	Entrepreneurial and Small Business Operations, Other	11-9199	Managers, All Other	\$45.74	-19	-16	-15	46%	9%
52.0801	Finance, General	11-3031	Financial Managers	\$53.59	16	-18	6	39%	29%
52.0801	Finance, General	13-2031	Budget Analysts	\$35.25	16	-18	6	32%	20%
52.0801	Finance, General	13-2041	Credit Analysts	\$24.21	16	-18	6	37%	41%
52.0801	Finance, General	13-2051	Financial Analysts	\$36.46	16	-18	6	14%	0%
52.0801	Finance, General	13-2052	Personal Financial Advisors	\$29.91	16	-18	6	19%	7%
52.0801	Finance, General	13-2072	Loan Officers	\$25.91	16	-18	6	49%	57%
52.0801	Finance, General	13-2099	Financial Specialists, All Other	\$30.34	16	-18	6	41%	9%
52.0804	Financial Planning and Services	13-2052	Personal Financial Advisors	\$29.91	161	113	105	19%	7%
52.0804	Financial Planning and Services	41-3031	Securities, Commodities, and Financial Services Sales Agents	\$29.80	161	113	105	30%	42%
52.0806	International Finance	11-3031	Financial Managers	\$53.59	-1	-2	-1	39%	29%
52.0899	Finance and Financial	11-3031	Financial Managers	\$53.59	20	17	18	39%	29%

	Management Services, Other								
52.0899	Finance and Financial Management Services, Other	13-2071	Credit Counselors	\$20.79	20	17	18	49%	47%
52.0901	Hospitality Administration/Management, General	11-9051	Food Service Managers	\$21.31	16	-34	-31	75%	81%
52.0901	Hospitality Administration/Management, General	11-9081	Lodging Managers	\$26.22	16	-34	-31	59%	60%
52.0903	Tourism and Travel Services Management	11-9199	Managers, All Other	\$45.74	-1	-3	-5	46%	9%
52.0903	Tourism and Travel Services Management	39-7012	Travel Guides	\$16.40	-1	-3	-5	55%	84%
52.0904	Hotel/Motel Administration/Management	11-9051	Food Service Managers	\$21.31	70	59	59	75%	81%
52.0904	Hotel/Motel Administration/Management	11-9081	Lodging Managers	\$26.22	70	59	59	59%	60%
52.0904	Hotel/Motel Administration/Management	39-9041	Residential Advisors	\$13.30	70	59	59	72%	39%
52.0905	Restaurant/Food Services Management	11-9051	Food Service Managers	\$21.31	1	-3	-2	75%	81%
52.0907	Meeting and Event Planning	13-1121	Meeting, Convention, and Event Planners	\$21.95	7	6	8	40%	50%
52.0907	Meeting and Event Planning	13-1199	Business Operations Specialists, All Other	\$31.75	7	6	8	44%	37%

52.0907	Meeting and Event Planning	27-3031	Public Relations Specialists	\$27.49	7	6	8	20%	19%
52.0999	Hospitality Administration/Management, Other	11-9199	Managers, All Other	\$45.74	0	0	0	46%	9%
52.1001	Human Resources Management/Personnel Administration, General	11-3111	Compensation and Benefits Managers	\$40.28	-169	-151	-90	40%	5%
52.1001	Human Resources Management/Personnel Administration, General	11-3121	Human Resources Managers	\$45.35	-169	-151	-90	43%	5%
52.1001	Human Resources Management/Personnel Administration, General	11-3131	Training and Development Managers	\$43.38	-169	-151	-90	34%	12%
52.1001	Human Resources Management/Personnel Administration, General	13-1071	Human Resources Specialists	\$27.43	-169	-151	-90	43%	47%
52.1001	Human Resources Management/Personnel Administration, General	13-1075	Labor Relations Specialists	\$31.90	-169	-151	-90	43%	0%
52.1001	Human Resources Management/Personnel Administration,	13-1141	Compensation, Benefits, and Job Analysis Specialists	\$29.00	-169	-151	-90	52%	10%

	General								
52.1001	Human Resources Management/Personnel Administration, General	13-1151	Training and Development Specialists	\$26.20	-169	-151	-90	48%	3%
52.1002	Labor and Industrial Relations	11-3121	Human Resources Managers	\$45.35	-6	-6	-5	43%	5%
52.1002	Labor and Industrial Relations	13-1071	Human Resources Specialists	\$27.43	-6	-6	-5	43%	47%
52.1002	Labor and Industrial Relations	13-1075	Labor Relations Specialists	\$31.90	-6	-6	-5	43%	0%
52.1003	Organizational Behavior Studies	13-1071	Human Resources Specialists	\$27.43	-136	-144	-122	43%	47%
52.1003	Organizational Behavior Studies	13-1075	Labor Relations Specialists	\$31.90	-136	-144	-122	43%	0%
52.1004	Labor Studies	13-1071	Human Resources Specialists	\$27.43	-2	-2	-3	43%	47%
52.1004	Labor Studies	13-1075	Labor Relations Specialists	\$31.90	-2	-2	-3	43%	0%
52.1005	Human Resources Development	13-1151	Training and Development Specialists	\$26.20	-73	-81	-76	48%	3%
52.1099	Human Resources Management and Services, Other	13-1071	Human Resources Specialists	\$27.43	-1	-1	-2	43%	47%
52.1099	Human Resources Management and Services, Other	13-1075	Labor Relations Specialists	\$31.90	-1	-1	-2	43%	0%
52.1099	Human Resources Management and Services, Other	39-1021	First-Line Supervisors of Personal Service Workers	\$17.46	-1	-1	-2	74%	49%
52.1101	International Business/Trade/Commerce	11-1011	Chief Executives	\$83.29	109	93	98	33%	4%

52.1101	International Business/Trade/Commerce	11-1021	General and Operations Managers	\$47.38	109	93	98	51%	52%
52.1101	International Business/Trade/Commerce	11-3071	Transportation, Storage, and Distribution Managers	\$43.57	109	93	98	71%	15%
52.1101	International Business/Trade/Commerce	13-1081	Logisticians	\$41.08	109	93	98	58%	18%
52.1101	International Business/Trade/Commerce	43-5071	Shipping, Receiving, and Traffic Clerks	\$15.30	109	93	98	92%	92%
52.1101	International Business/Trade/Commerce	53-6041	Traffic Technicians	\$23.12	109	93	98	89%	19%
52.1201	Management Information Systems, General	11-3021	Computer and Information Systems Managers	\$51.49	-133	-134	-137	27%	3%
52.1201	Management Information Systems, General	15-1131	Computer Programmers	\$33.23	-133	-134	-137	28%	11%
52.1206	Information Resources Management	11-3021	Computer and Information Systems Managers	\$51.49	-10	-10	-2	27%	3%
52.1301	Management Science	15-2031	Operations Research Analysts	\$39.71	0	0	0	30%	0%
52.1304	Actuarial Science	15-2011	Actuaries	\$47.28	13	-4	-10	1%	0%
52.1399	Management Sciences and Quantitative Methods, Other	15-2031	Operations Research Analysts	\$39.71	32	37	34	30%	0%
52.1403	International Marketing	11-2021	Marketing Managers	\$57.06	0	0	0	33%	8%
52.1403	International	13-1161	Market Research Analysts	\$30.15	0	0	0	23%	0%

	Marketing		and Marketing Specialists						
52.1499	Marketing, Other	11-2021	Marketing Managers	\$57.06	-1	-1	-4	33%	8%
52.1499	Marketing, Other	11-2022	Sales Managers	\$51.67	-1	-1	-4	33%	24%
52.1501	Real Estate	11-9141	Property, Real Estate, and Community Association Managers	\$20.51	261	101	105	61%	36%
52.1501	Real Estate	13-2021	Appraisers and Assessors of Real Estate	\$27.77	261	101	105	51%	49%
52.1501	Real Estate	41-9021	Real Estate Brokers	\$29.18	261	101	105	52%	63%
52.1501	Real Estate	41-9022	Real Estate Sales Agents	\$18.12	261	101	105	52%	79%
52.1601	Taxation	13-2011	Accountants and Auditors	\$31.68	-14	-14	-14	22%	6%
52.1601	Taxation	13-2061	Financial Examiners	\$36.48	-14	-14	-14	20%	4%
52.1601	Taxation	13-2081	Tax Examiners and Collectors, and Revenue Agents	\$34.98	-14	-14	-14	52%	47%
52.1601	Taxation	13-2082	Tax Preparers	\$17.59	-14	-14	-14	50%	65%
52.1803	Retailing and Retail Operations	41-1011	First-Line Supervisors of Retail Sales Workers	\$18.08	3026	2835	2860	75%	86%
52.1803	Retailing and Retail Operations	41-2011	Cashiers	\$9.39	3026	2835	2860	89%	98%
52.1803	Retailing and Retail Operations	41-2012	Gaming Change Persons and Booth Cashiers	\$13.42	3026	2835	2860	89%	97%
52.1803	Retailing and Retail Operations	41-2031	Retail Salespersons	\$10.13	3026	2835	2860	74%	90%
52.1803	Retailing and Retail Operations	41-3099	Sales Representatives, Services, All Other	\$22.26	3026	2835	2860	54%	0%
52.1803	Retailing and Retail Operations	41-9011	Demonstrators and Product Promoters	\$10.90	3026	2835	2860	81%	95%
52.1803	Retailing and Retail Operations	41-9099	Sales and Related Workers, All Other	\$13.20	3026	2835	2860	59%	0%
52.1803	Retailing and Retail Operations	43-5081	Stock Clerks and Order Fillers	\$10.78	3026	2835	2860	91%	100%
52.1803	Retailing and Retail	53-3031	Driver/Sales Workers	\$13.11	3026	2835	2860	95%	100%

	Operations								
52.1804	Selling Skills and Sales Operations	11-9081	Lodging Managers	\$26.22	3200	3219	3379	59%	60%
52.1804	Selling Skills and Sales Operations	13-1121	Meeting, Convention, and Event Planners	\$21.95	3200	3219	3379	40%	50%
52.1804	Selling Skills and Sales Operations	41-1011	First-Line Supervisors of Retail Sales Workers	\$18.08	3200	3219	3379	75%	86%
52.1804	Selling Skills and Sales Operations	41-2021	Counter and Rental Clerks	\$11.28	3200	3219	3379	83%	99%
52.1804	Selling Skills and Sales Operations	41-2022	Parts Salespersons	\$15.32	3200	3219	3379	92%	89%
52.1804	Selling Skills and Sales Operations	41-2031	Retail Salespersons	\$10.13	3200	3219	3379	74%	90%
52.1804	Selling Skills and Sales Operations	41-3041	Travel Agents	\$14.17	3200	3219	3379	65%	52%
52.1804	Selling Skills and Sales Operations	41-3099	Sales Representatives, Services, All Other	\$22.26	3200	3219	3379	54%	0%
52.1804	Selling Skills and Sales Operations	41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$38.53	3200	3219	3379	53%	50%
52.1804	Selling Skills and Sales Operations	41-9031	Sales Engineers	\$37.61	3200	3219	3379	32%	34%
52.1804	Selling Skills and Sales Operations	41-9041	Telemarketers	\$11.84	3200	3219	3379	82%	100%
52.1804	Selling Skills and Sales Operations	41-9091	Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	\$9.11	3200	3219	3379	81%	100%
52.1804	Selling Skills and Sales Operations	41-9099	Sales and Related Workers, All Other	\$13.20	3200	3219	3379	59%	0%
52.1804	Selling Skills and Sales Operations	43-4081	Hotel, Motel, and Resort Desk Clerks	\$10.69	3200	3219	3379	82%	100%
52.1804	Selling Skills and	43-4181	Reservation and	\$18.28	3200	3219	3379	73%	98%

	Sales Operations		Transportation Ticket Agents and Travel Clerks						
52.1899	General Merchandising, Sales, and Related Marketing Operations, Other	41-1012	First-Line Supervisors of Non-Retail Sales Workers	\$34.65	102	61	54	61%	67%
52.1899	General Merchandising, Sales, and Related Marketing Operations, Other	41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$27.67	102	61	54	53%	22%
52.1899	General Merchandising, Sales, and Related Marketing Operations, Other	41-9099	Sales and Related Workers, All Other	\$13.20	102	61	54	59%	0%
52.1904	Apparel and Accessories Marketing Operations	13-1022	Wholesale and Retail Buyers, Except Farm Products	\$25.28	14	30	42	66%	75%
52.1904	Apparel and Accessories Marketing Operations	41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$27.67	14	30	42	53%	22%
52.1905	Tourism and Travel Services Marketing Operations	41-3041	Travel Agents	\$14.17	0	0	0	65%	52%
52.1905	Tourism and Travel Services Marketing Operations	43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	\$18.28	0	0	0	73%	98%
52.1906	Tourism Promotion Operations	43-4181	Reservation and Transportation Ticket	\$18.28	0	0	0	73%	98%



			Agents and Travel Clerks						
52.2001	Construction Management	13-1051	Cost Estimators	\$28.24	-74	-72	-63	67%	21%
52.2001	Construction Management	11-9021	Construction Managers	\$41.28	-74	-72	-63	66%	16%
52.9999	Business, Management, Marketing, and Related Support Services, Other	11-9151	Social and Community Service Managers	\$28.42	1697	1258	1248	31%	21%
52.9999	Business, Management, Marketing, and Related Support Services, Other	11-9199	Managers, All Other	\$45.74	1697	1258	1248	46%	9%
52.9999	Business, Management, Marketing, and Related Support Services, Other	13-1199	Business Operations Specialists, All Other	\$31.75	1697	1258	1248	44%	37%
52.9999	Business, Management, Marketing, and Related Support Services, Other	41-1011	First-Line Supervisors of Retail Sales Workers	\$18.08	1697	1258	1248	75%	86%
52.9999	Business, Management, Marketing, and Related Support Services, Other	41-1012	First-Line Supervisors of Non-Retail Sales Workers	\$34.65	1697	1258	1248	61%	67%
52.9999	Business, Management, Marketing, and Related Support	41-3099	Sales Representatives, Services, All Other	\$22.26	1697	1258	1248	54%	0%

	Services, Other								
52.9999	Business, Management, Marketing, and Related Support Services, Other	41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$38.53	1697	1258	1248	53%	50%
52.9999	Business, Management, Marketing, and Related Support Services, Other	41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$27.67	1697	1258	1248	53%	22%
52.9999	Business, Management, Marketing, and Related Support Services, Other	41-9099	Sales and Related Workers, All Other	\$13.20	1697	1258	1248	59%	0%
54.0101	History, General	19-3093	Historians	\$25.53	-460	-463	-452	10%	18%
54.0105	Public/Applied History	25-4011	Archivists	\$21.02	-22	-19	-16	16%	3%
54.0105	Public/Applied History	25-4012	Curators	\$24.44	-22	-19	-16	16%	1%
54.0105	Public/Applied History	25-4013	Museum Technicians and Conservators	\$16.40	-22	-19	-16	16%	9%
54.0199	History, Other	19-3093	Historians	\$25.53	-4	-5	-5	10%	18%

## **Section IV**

### **Facility Assessment**

# Facility Assessment

A comprehensive facility condition assessment was completed by ISES Corporation in March 2013. This report was performed to accomplish the following objectives:

- Provide an inventory of the college's facilities in a database format to be easily updated and maintained by OCC personnel and allow for quick access to facilities information.
- Determine the condition of the buildings and grounds at OCC and provide the data in a concise format, allowing quick determination of the current replacement value and condition of each facility.
- Determine a Facilities Condition Index (FCI) for each building, each campus and OCC as a whole. The FCI is a benchmark index that rates the condition of existing college buildings and is used by the facilities managers nationwide to quantify and prioritize deferred maintenance projects for capital planning purposes.
- Assist OCC in meeting the goals of its Mission Statement through timely maintenance of the physical backbone of the college – the buildings of OCC.

The following reports (included herein) were prepared by ISES Corporation.

1. ISES Executive Summary – Facility Condition Assessment
  - Identifies the summary condition of each facility
  - Replacement value of existing buildings
  - Utility system conditions
2. ISES Asset Summary
  - Facility infrastructure conditions

**EXECUTIVE SUMMARY**  
**OAKLAND COMMUNITY COLLEGE**  
**FACILITY CONDITION ASSESSMENT**  
**March 2013**

**PREPARED BY:**  
**JONATHAN C. THOMAS, PE**  
**DIRECTOR OF SPECIAL OPERATIONS**



## TABLE OF CONTENTS

### SECTION ONE: SUMMARY OF CONDITIONS AND CONCLUSIONS

1.1 Introduction.....	1
1.2 Summary of Findings.....	2
A. CRV and FCNI Definition and Utilization .....	2
B. Analysis of Overall Campus Conditions .....	3
C. Analysis of Building Conditions.....	4
D. Analysis of System Codes .....	5
E. Analysis of Project Classifications .....	9
R. Analysis of Priority Classifications.....	10
1.3 Conclusions and Recommendations for Facility Improvement.....	12
1.4 Additional Considerations.....	13

### SECTION TWO: FCA DATA AND COMPARISONS

2.1 Detailed Facility Inventory .....	15
2.2 Detailed Project Totals Matrix	
Figure 1 – Oakland Community College .....	18
Figure 2 – Auburn Hills .....	19
Figure 3 – District Office.....	20
Figure 4 – Highland Lakes.....	21
Figure 5 – Orchard Ridge.....	22
Figure 6 – Royal Oaks .....	23
Figure 7 – Southfield .....	24
2.3 ISES Client History and FCNI Comparison Table and Graphs	
Figure 8 - Client History and Comparison Table - Oakland Community College.....	25
Figure 9 - FCNI Comparison showing Average Quadrants - OCC.....	26
Figure 10 - FCNI Comparison showing Trend Bands - OCC.....	26
Figure 11 - Client History and Comparison Table - Campus breakout .....	27
Figure 12 - FCNI Comparison showing Average Quadrants - Campus breakout.....	28



Figure 13 - FCNI Comparison showing Trend Bands - Campus breakout.....	28
2.4 Project Cost Distribution Charts	
Figure 14 – Oakland Community College .....	29
Figure 15 – Auburn Hills .....	30
Figure 16 – District Office.....	31
Figure 17 – Highland Lakes.....	32
Figure 18 – Orchard Ridge.....	33
Figure 19 – Royal Oaks .....	34
Figure 20 – Southfield .....	35
2.5 Summary of FCNI and Project Costs - Oakland Community College .....	36
2.6 Summary of FCNI and Project Costs - by Campus.....	39
2.7 Summary of Average Age and Facility Use Types .....	42

## SUMMARY OF CONDITIONS AND CONCLUSIONS

### 1.1 Introduction

The Oakland Community College District (OCC) was founded in 1964 and opened in 1965. The District consists of five campuses that serve the District's educational mission in Oakland County, MI. These campuses are profiled in the following table:

CAMPUS	YEAR OPENED	ENCLOSED SQUARE FOOTAGE	SPECIALTY
Auburn Hills	1965	627,928	Technology
Highland Lakes	1965	383,343	Healthcare
Orchard Ridge	1967	492,641	Design/Professional Services
Royal Oak	1982	535,872	Arts/Professional Services
Southfield	1980	164,004	Healthcare

OCC also has two business sites within their facilities portfolio. The District Office is located in Bloomfield, MI. This office serves as the main administrative center for the college. The Pontiac Center located in Pontiac, MI houses several college-wide administrative and academic services.

In the third quarter of calendar year 2012, OCC contracted with ISES Corporation to perform Facility Condition Assessment (FCA) services for the District facility portfolio. This contract was awarded during a competitive bidding process. These services were applied to all facilities with the exception of the Pontiac Center. The following observations and conclusions are based on a thorough assessment of 78 facilities and 5 sites by ISES Corporation. This represents the evaluation of over 2.2 million gross square feet.

For the purposes of developing a meaningful analysis of the OCC facilities portfolio, buildings were grouped together into sensible management zones. In the case of OCC, these zones are aligned with the campuses. The list of buildings in each campus is shown in Section 2.1.

The table below breaks down the space usage within the assessed OCC buildings. This distribution is consistent with higher education institutions of its size. Note that a special use type is displayed for the



Combined Regional Emergency Services Training (CREST) facilities at the Auburn Hills campus. These facilities are not normally occupied facilities but are utilized for public safety training programs. Although the CREST facilities require capital improvements and are justified for inclusion in this study, they are utilized in a different manner than the rest of the portfolio.

GROUP	ASSET COUNT	SQUARE FOOTAGE	PCT (%)
Classroom	22	857,510	38.2
Parking Structure	2	330,975	14.8
Laboratory	7	270,363	12.1
Student Union	3	186,276	8.3
Office	7	180,536	8.1
Gymnasium	4	152,788	6.8
Library	3	71,251	3.2
Shops / Trades	9	57,712	2.6
Theater	2	43,383	1.9
Warehouse	11	33,049	1.5
Retail	1	29,909	1.3
CREST	7	28,138	1.3
<b>TOTAL</b>	<b>78</b>	<b>2,241,890</b>	<b>100.0%</b>

The FCA process was supervised by Daniel P. Cherewick, PE, Director of Physical Facilities, OCC. The analysis was directed by Jonathan C. Thomas, PE, Director of Special Operations, ISES Corporation. Survey team members consisting of architectural and engineering inspectors collected, evaluated, and compiled the data for the study.

## 1.2 Summary of Findings

### A. CRV and FCNI Definition and Utilization

The Facility Condition Needs Index (FCNI) provides a relative measure for the objective comparison of building condition. The index is a simple calculation, derived by dividing total project costs (for the total ten-year window covered by the FCA) by the total Current Replacement Value (CRV). When applying the index as an evaluation tool, the lower the number, the better the facility condition. It should also be noted that this is an index, not a percentage. It can, especially in the case of historic facilities, exceed 1.00. The

CRV represents the cost to replace an existing building with one of similar use type and size on the same site. This includes demolition, site preparation, professional fees, and construction costs.

There are two main approaches employed in this summary report of applying the FCNI to analyze the data derived from an FCA. The first approach involves looking at individual facilities. When applying it to a single facility, the lower the FCNI, the better. In terms of assessing where a facility falls within a range of conditions, the following standards can be applied.

INDIVIDUAL BUILDING FCNI RANGE	CONDITION DESCRIPTION
0.00 – 0.10	Excellent condition, typically new construction
0.11 – 0.20	Good condition, renovations occur on schedule
0.21 – 0.30	Fair condition, in need of normal renovation
0.31 – 0.50	Below average condition, major renovation required
0.51 – 0.59	Poor condition, total renovation indicated
0.60 and above	Complete facility replacement indicated

The above ranges represent averages based upon ISES Corporation experience extending over Facility Condition Assessment projects spanning the past 25 plus years. The reader is cautioned, however, to examine each facility independently for mitigating factors (i.e., historic structures, temporary structures, facilities with abnormally low replacement costs, such as warehouses, etc.).

The second approach supported by use of the FCNI employed in this report is for comparing groups of facilities to other groupings. Comparisons in this vein form the basis of analysis for comparing the overall state of facilities to another comparable grouping. Figure 8 in Section 2.3 provides a listing of relevant ISES Corporation historical data for other institutions for which we have provided FCA services. Subsequently, the OCC campuses will be compared with each other using the FCNI.

## **B. Analysis of Overall Campus Conditions**

The FCA process for OCC culminated in a database of deficiencies that should be addressed over the next ten years. For the 78 buildings and 5 sites evaluated for this Executive Summary, ISES identified

\$151,259,842 in project recommendations. When compared to the \$640,509,385 replacement value for the facilities in the study, the subsequent FCNI equals 0.24.

Compared to the sample set derived from ISES client history, the facilities are in average condition. Figure 8 in Section 2.3 shows that OCC has a higher portfolio-wide FCNI than similar institutions. However, it is younger than 82 percent of those same institutions. The expected FCNI for the OCC facilities portfolio is 0.20 based on the comparative data. Figure 9 in Section 2.3 shows that OCC has a below average FCNI but is also younger than the average portfolio in the sample set. Figure 10 in Section 2.3 exhibits that, even though the expected FCNI for the portfolio would be 0.20, OCC is within an acceptable range of the mean, given its average age per square foot.

Figures 11 through 13 in Section 2.3 offer opportunities for analysis at the group level as Figures 1 through 3 did for the portfolio level. The Southfield Campus is in excellent condition, even for its young age. The Highland Lakes Campus and District Office are also in excellent condition, even though they are relatively old. Orchard Ridge is within an acceptable range of average condition for its age. Auburn Hills, although within an acceptable range, is close to being in fair condition for its age. The Royal Oak Campus is in poor condition for its age as a whole.

### **C. Analysis of Building Conditions**

The FCNI Report Cumulative in Section 2.5 outlines the conditions of the individual facilities in descending order by FCNI. If all facilities in the list were considered equal with regard to the mission of the college, a prudent approach would be to apply funding in the order of the buildings on that list. The table on the following page outlines the twelve buildings with the highest FCNIs.

ASSET CODE	NAME	ASSET USE	YEAR BUILT	GSF	CRV	TOTAL PROJECT COSTS	FCNI
ROD	FINE ARTS	CL	1980	30,160	\$9,148,250	\$5,411,891	0.59
HLHH	HIGHLAND HALL	CL	1928	68,741	\$21,077,370	\$11,518,112	0.55
AHF1	GENERAL ASSEMBLY - MAIN AND ADDITION	CL	1970	25,550	\$8,503,810	\$4,644,569	0.55
AHC	JOSEPH E HILL	CL	1970	56,169	\$17,439,910	\$9,179,801	0.53
ROE	LILA R JONES-JOHNSON THEATER	TH	1980	30,750	\$10,451,280	\$5,242,491	0.50
ROA1	CLASSROOM	CL	1980	28,443	\$9,466,680	\$4,430,008	0.47
HLPE	PHYSICAL EDUCATION	GM	1977	35,098	\$9,658,270	\$4,422,748	0.46
AHA	EARL M ANDERSON	CL	1970	104,725	\$29,198,590	\$12,611,175	0.43
AHE	BUSINESS, SCIENCE AND ART	CL	1980	28,819	\$9,591,830	\$3,931,413	0.41
AHMT2	MICHIGAN TECHNICAL ED CTR - ANNEX	WH	2000	10,859	\$2,179,160	\$847,169	0.39
ORH	COMMUNITY ACTIVITY	GM	1977	70,357	\$18,410,320	\$6,929,531	0.38
AHD	GEORGE R MOSHER	CL	1975	52,197	\$16,370,600	\$5,712,591	0.35

The FCNI by Campus report in Section 2.6 illustrates the FCNI rankings by building group. The Auburn Hills Campus has the most subjects in the top twelve. Royal Oaks has the second most. These observations are consistent with those made at the group FCNI level. A potential strategy would be to apply funding to these facilities. Also, they are geographically proximate, and economies of scale could potentially be garnered.

#### **D. Analysis of System Codes**

Another viable approach for capital planning is to analyze common building systems for needs. The table on the following page summarizes system project backlog by weight of total backlog. This information was derived from a review of the data in Sections 2.2 and 2.4. Data representing ISES client history statistics has been included for comparative purposes.

Note that the basis for the qualitative judgments in the following analyses is based on statistical metrics. If a proportion is between 0.5 and 0.9 standard deviations away from the mean, it is regarded as being close to out of range. If a proportion is between 1.0 and 1.9 standard deviations away from the mean, it is regarded as being out of range. If proportion is 2.0 standard deviations away or higher, it is regarded as being considerably, or significantly, out of range.

	AC	EL	ES	FS	HE	HV	IS	PL	SI	VT
	-----ALL NUMBERS IN PERCENTAGES-----									
Auburn Hills	1.2	16.8	15.1	4.6	0.0	25.8	19.6	11.0	3.8	2.1
District Office	5.8	9.5	23.2	7.0	0.0	18.5	21.6	11.3	2.9	0.0
Highland Lakes	4.3	17.2	8.4	7.5	0.0	19.8	19.0	12.5	5.4	5.9
Orchard Ridge	3.5	18.6	6.8	12.8	0.4	14.1	17.2	15.4	5.5	5.6
Royal Oak	0.1	19.9	21.5	8.2	0.0	21.4	23.9	2.5	1.4	1.1
Southfield	0.0	21.9	21.2	8.5	0.0	13.5	31.3	0.0	3.8	0.0
<b>OCC Total</b>	<b>2.2</b>	<b>17.9</b>	<b>13.0</b>	<b>8.0</b>	<b>0.1</b>	<b>20.5</b>	<b>19.9</b>	<b>10.9</b>	<b>4.2</b>	<b>3.5</b>
<b>ISES Historical Average</b>	<b>4.3</b>	<b>14.6</b>	<b>11.6</b>	<b>8.0</b>	<b>1.0</b>	<b>31.8</b>	<b>17.3</b>	<b>9.2</b>	<b>0.9</b>	<b>1.3</b>

(AC – Accessibility, EL-Electrical, ES-Exterior Structure, FS-Fire / Life Safety, HE-Health, HV-HVAC, IS-Interior Finishes / Systems, PL-Plumbing, SI-Site, VT-Vertical Transportation)

Accessibility projects are recommended as such to eliminate barriers to disabled individuals and are typically relatively low-cost initiatives. These projects comprise 2.2 percent of the project backlog. Compared with a typical 4.3 percent of the project backlog, OCC appears to be in a relatively solid position with regard to having accessible facilities. The District Office site proportion is higher and close to being out of range from the mean. This site is a viable candidate for accessibility project completion. Over the entire portfolio, restroom renovation and stair safety projects are the most prevalent accessibility projects. Each of these projects appears in approximately 15 percent of the facilities. Interior door accessibility projects are the next most frequent recommendations.

The electrical project backlog, at 17.9 percent, is close to being out of range of the average of 14.6 percent. The Southfield Campus is higher and considerably out of range from the mean. The Royal Oak and Orchard Ridge campuses are higher and out of range from the mean. Interior lighting upgrades are the most frequently occurring electrical projects at a rate of approximately 43 percent of the buildings. Close behind the recommended interior lighting upgrades are major electrical distribution network renovations at a rate of 42 percent of the buildings.

Exterior structure projects are concerned with exterior envelope systems primarily consisting of roofs, exterior walls and finishes, and fenestrations. The proportion of these projects is 13 percent, which is

higher but within range of the average of 11.6 percent. The District Office site is higher and considerably out of range of the mean. The Royal Oak and Southfield campuses are higher and out of range of the mean. These sites are candidates for exterior finish work. The most prevalent needs are roof replacements, which occur at a rate of 68 percent. Exterior wall finishes recommendations occur at a rate of 61 percent of the buildings.

Fire and life safety projects comprise 8 percent of the project backlog, which is exactly the expected proportion. The Orchard Ridge Campus has a proportion of such projects that is out of range and higher than the mean. The campus is a candidate for completion of fire and life safety projects. The most frequently occurring fire / life safety projects are fire alarm system replacements and installations. These occur at a rate of 51 percent of the buildings. Fire alarm systems are typically recommended for replacement at a minimum of fifteen years regardless of component condition. Other aspects such as technological obsolescence factor into such recommendations. Sprinkler system installation projects are the next most prevalent and occur at a rate of 22 percent of the buildings. It is unlikely that the sprinkler system renovation projects will have to be completed unless a major renovation is implemented.

Health related project recommendations within the OCC portfolio are low relative to the sample set. These projects typically revolve around kitchen or laboratory cold box equipment and abatement of asbestos-containing materials (ACM). All of the health related projects in the backlog pertain to food service cold boxes at the Orchard Ridge Campus.

Heating, ventilation, and air conditioning (HVAC) projects comprise 20.5 percent of the backlog, which is under and out of range of the sample set average of 31.8 percent. HVAC projects are typically the most expensive project per square foot. The overall proportion is below the mean and so are the proportions of the individual campuses and sites. The recommendation for replacement of unitary HVAC systems is the most prevalent HVAC project at a rate of 53 percent of the facilities. Central HVAC controls system renovations are the next most prevalent at a rate of 22 percent.

Interior finish and system projects comprise 19.9 percent of the project backlog, which is higher but within range of the expected proportion of 17.3 percent. All groups are above the mean. The Southfield Campus is higher and significantly out of range from the mean. The Royal Oak Campus is higher and out of range from the average. Interior wall finish recommendations occur at a rate of 80 percent, floor finishes occur at a rate of 74 percent, and ceiling finish upgrades occur at a rate of 57 percent. These are fairly benign interior finish projects, which indicate a need for an overall cosmetic update of the finishes throughout the facilities.

Plumbing system projects comprise 10.9 percent of the project backlog, which is higher than the expected 9.2 percent but within statistical range. The Orchard Ridge Campus has a proportion of plumbing needs that is higher and out of range from the average. Highland Lakes, Auburn Hills, and the District Office site are all higher and close to being out of range from the mean. The most prevalent plumbing projects within the backlog involve sanitary and stormwater drain piping inside the facilities. These projects occur at a rate of 38 percent. Domestic water supply piping projects occur at the next highest rate at 34 percent.

Site projects make up less than 4.2 percent of the project backlog. This portion is well above the sample set average of 0.9 percent. This significantly high proportion is due to the fact that the OCC landscaping, hardscape, and site lighting systems were assessed more acutely than for the typical ISES client. The most prevalent site projects are vehicular paving recommendations followed by pedestrian paving improvements.

Vertical transportation projects generally pertain to elevators, escalators, and dumbwaiters. All of these projects in the OCC backlog pertain to passenger or freight elevators. The 3.5 percent proportion of vertical transportation projects is higher and significantly out of range from the expected proportion of 1.3 percent. Highland Lakes and Orchard Ridge are the furthest away from the mean. The proportions for both of these campuses are higher and significantly out of range as well. Auburn Hills is higher and close to being out of range from the mean. Reinvestment in the elevators within these groups of buildings should be considered.

### E. Analysis of Project Classifications

The ISES project classifications can indicate the severity of the recommendations within the project backlog. Three project classifications have been applied as follows:

- A. Plant / Program Adaption: Expenditures required to adapt the physical plant to the evolving needs of the institution and to changing codes or standards. These are expenditures beyond normal maintenance. Examples include compliance with changing codes (e.g. accessibility), facility alterations required by changed teaching or research methods, and improvements occasioned by the adoption of modern technology (e.g., the use of personal computer networks).
- B. Deferred Maintenance: Refers to expenditures for repairs which were not accomplished as a part of normal maintenance or capital repair which have accumulated to the point that facility deterioration is evident and could impair the proper functioning of the facility. Costs estimated for deferred maintenance projects should include compliance with applicable codes, even if such compliance requires expenditures beyond those essential to affect the needed repairs. Deferred maintenance projects represent catch up expenses.
- C. Capital Renewal: A subset of regular or normal facility maintenance which refers to major repairs or the replacement / rebuilding of major facility components (e.g., roof replacement at the end of its normal useful life is capital repair; roof replacement several years after its normal useful life is deferred maintenance).

	Plant / Program Adaption	Deferred Maintenance	Capital Renewal
-----ALL NUMBERS IN PERCENTAGES-----			
Auburn Hills	4.8	34.6	60.6
District Office	8.7	36.7	54.6
Highland Lakes	13.1	41.3	45.6
Orchard Ridge	16.2	19.4	64.4
Royal Oak	4.9	44.9	50.2
Southfield	0.0	0.7	99.3
<b>OCC Total</b>	<b>9.3</b>	<b>32.3</b>	<b>58.4</b>
<b>ISES Historical Average</b>	<b>15.8</b>	<b>33.6</b>	<b>50.6</b>



OCC has a lower than average Plant / Program Adaption need. At 9.3 percent, it is close to being out of range from the 15.8 percent expected proportion. Inferences from these data are consistent with the low proportion of accessibility projects. It is also consistent with the low proportion of projects recommended in Year 1 of this assessment scope. This will be discussed in the next section. With the exception of one campus, all of the building groups are below the mean with regard to Plant / Program Adaption proportion. The Orchard Ridge Campus is just above the mean for this project classification.

Deferred Maintenance and Capital Renewal projects are typically inversely proportional. The ratio is typically three Capital Renewal need dollars to every two Deferred Maintenance need dollars. The OCC project backlog is consistent with this proportion, but it is actually closer to two Capital Renewal projects to every Deferred Maintenance project. The OCC Deferred Maintenance proportion is very near the expected value. The Capital Renewal proportion is higher and close to being out of range from the mean. This is a favorable position for OCC overall.

Note that the Royal Oak Campus has the highest proportion of Deferred Maintenance-classified projects. This campus is higher and close to being out of range from the mean. This is an indication of more severe projects at the Royal Oak Campus than at other campuses.

#### **F. Analysis of Priority Classifications**

Analysis of the project priority classes yields data regarding the urgency of the project backlog. The following table identifies the priority classes in which the projects were placed. The priority classes are time based as indicated in the table on the following page. Priority Class 1 houses projects that are recommended to be completed on an immediate basis. Priority Class 2 contains projects that are recommended to be completed within Year 1. Since these projects typically represent a small part of the total project backlog, they have been combined into a Year 1 category.

	Priority 1 and 2 (Year 1)	Priority 3 (Years 2-5)	Priority 4 (Years 6-10)
	-----ALL NUMBERS IN PERCENTAGES-----		
Auburn Hills	3.6	51.0	45.4
District Office	5.4	67.7	27.0
Highland Lakes	10.1	69.6	20.3
Orchard Ridge	13.4	55.1	31.5
Royal Oak	4.9	55.5	39.7
Southfield	0.0	25.7	74.3
<b>OCC Total</b>	<b>7.5</b>	<b>55.6</b>	<b>36.9</b>
<b>ISES Historical Average</b>	<b>12.4</b>	<b>62.4</b>	<b>24.7</b>

The analyses of the priority classes and project classifications typically yield corresponding inferences. Priorities 1 and 2 contain a high proportion of Plant / Program Adaption projects and some Deferred Maintenance. Priority 3 contains a mix of all project classifications. Priority 4 contains mostly Capital Renewal projects since these are recommended on the basis of statistical projections. In some cases, Priority 4 can contain some Plant / Program Adaption projects as well. Deferred Maintenance projects are typically more urgent than Priority 4 allows.

The Priority 1 and Priority 2, or Year 1, proportion comprises 7.5 percent of the project backlog. This is lower and close to out of range of the 12.4 percent mean. The Orchard Ridge Campus has the highest proportion of Year 1 projects but is very close to the expected value. This is a favorable position for OCC. These projects should be considered for completion in the near term. Having such a small amount of them allows for manageable project completion.

Priority 3 and Priority 4 projects are typically inversely proportional, with Priority 3 making up the definitive majority. In this particular case, the Priority 3 proportion is lower and close to being out of range of the mean. The Priority 4 proportion is higher and out of range from the mean. This indicates a favorable position for OCC. Although there are many projects that need to be completed, OCC has time to properly plan them.

### **1.3 Conclusions and Recommendations for Facility Improvement**

The preceding sections of this report, supported by the graphs and charts contained in Section 2, illustrate that the current overall condition is average. However, the facility condition is lower than expected given the average age of the portfolio. One could make the inference that the facilities are deteriorating more rapidly than they should.

From a group perspective, the Royal Oak Campus represents the most immediate need for reinvestment. Royal Oak may be followed by Auburn Hills in priority. Given the young age of these campuses, piecemeal updating may be a suitable strategy. Orchard Ridge and the District Office are of comparable condition to the aforementioned groups. However, given their older age, facility replacements or comprehensive renovations may be more suitable than piecemeal updates. Please note that these are not definitive conclusions.

The building level analysis confirms the group level analysis. However, it also indicates that the Highland Lakes has facilities in need of near-term reinvestment. These facilities include Highland Hall and the Physical Education building. The Orchard Ridge Campus Community Center is also in need of funding for facilities renewal projects.

The projects recommended during the Facility Condition Assessment effort are fortunately less severe than expected, and OCC has more time to plan and fund them than a typical ISES client. The project backlog is more severe and urgent at the Royal Oak Campus, Highland Lakes Campus, and the District Office site. Regardless of proportions, it is recommended that Accessibility, Fire / Life Safety, and Vertical Transportation projects be considered for funding. Such projects affect overall building safety and usability. Additionally, such projects typically comprise the bulk of the Year 1 and Plant Adaption-classified projects.

With regards to FCNI, the most effective method of keeping it down is to holistically reinvest in existing facilities. This means either razing and rebuilding or gut and renovating them. Such project work also has implications on making maintenance organizations more effective. Note that this new construction will

have a positive effect on the FCNI only if existing buildings are replaced with new. If new structures are built but the older facilities kept in service, any existing FCNI problems will be exacerbated. In addition, if the maintenance staff is not expanded in the event of adding incremental square footage to the portfolio, the FCNI issues will become more difficult to manage.

If it is impossible to fully gut and renovate or raze and replace a facility, consider bundling ISES projects intelligently. For example, if an expensive HVAC system renewal project is justified and funded, consider undertaking any exterior envelope projects in concert with it. Replacing roofs, windows, and exterior doors will produce maximum energy savings which will allow for as short a payback period as possible. For economies of scale, electrical and plumbing projects could also be combined.

#### **1.4 Financial Modeling**

The ISES Asset Management System (AMS) software and database application features a funding modeling tool which can estimate the effects of funding levels on the FCNI. Utilizing this tool, it was calculated that, in order for OCC to maintain the current FCNI of 0.24, \$10.1 million would have to be reinvested annually. This equates to 1.57 percent of plant value on an annual basis. Note that this figure is an annuity and does account for 3 percent inflation. The model also incorporates a 1 percent portfolio growth rate (rate at which square footage is added), and a 1.5 percent plant deterioration rate (the rate at which new capital project needs arise). If the reinvestment rate is lower than 1.57 percent of plant value, then the FCNI at the end of the tenth year will be higher than it was in the first. For instance, if 1 percent of plant value, or \$6.4 million, is reinvested annually, then the resultant FCNI is estimated to be 0.28. Conversely, if 2.5 percent of plant value, or \$16 million, is reinvested annually, then the resultant FCNI is estimated to be 0.16.

The table on the following page breaks down three sample funding scenarios geared at homogenizing the FCNI over the different campuses. If the OCC strategy is to maintain the current FCNI of 0.24, then Auburn Hills should be the primary recipient of funding at a rate of 30 percent of the funding. Although this may not be a realistic approach, it does demonstrate the power of the funding modeling tool in exhibiting a theoretical approach.

GROUP	1.0% REINVESTMENT (ENDING FCNI = 0.28)	MAINTAIN FCNI 1.57% REINVESTMENT (ENDING FCNI = 0.24)	2.5% REINVESTMENT (ENDING FCNI = 0.16)
Auburn Hills	2.0	3.2	5.0
District Office	0.1	0.2	0.2
Highland Lakes	1.3	2.0	3.1
Orchard Ridge	1.6	2.5	4.0
Royal Oak	0.8	1.3	2.0
Southfield	0.6	1.0	1.6
<b>OCC Total</b>	<b>6.4</b>	<b>10.1</b>	<b>16.0</b>

Figures expressed in \$Million / year

The listed ending FCNIs are after a period of ten years. Keep in mind that this model is theoretical. Also, note that this model takes into account all money that goes towards renewing the facilities and their components. This money includes funding from all sources, such as annual Deferred Maintenance and Capital Renewal funding, major renovation funding, donor funding, program-related grant funding, etc.

## FCA DATA AND COMPARISONS

### 2.1 Detailed Facility Inventory

ASSET CODE	ASSET NAME	ASSET USE	YEAR BUILT	GSF	CRV (\$)	TOTAL PROJECT COSTS	FCNI
AHA	Earl M Anderson	CL	1970	104,725	29,198,590	12,611,175	0.43
AHB	Administration	OF	1975	34,511	11,063,880	3,280,408	0.30
AHC	Joseph E Hill	CL	1970	56,169	17,439,910	9,179,801	0.53
AHD	George R Mosher	CL	1975	52,197	16,370,600	5,712,591	0.35
AHE	Business, Science And Art	CL	1980	28,819	9,591,830	3,931,413	0.41
AHF1	General Assembly - Main and Addition	CL	1970	25,550	8,503,810	4,644,569	0.55
AHF2	General Assembly - Addition	CL	1998	49,907	15,744,160	2,034,874	0.13
AHG1	Bookstore/IT/Public Safety	RT	2008	29,909	10,580,310	828,223	0.08
AHG2	Student Union Addition	SU	2008	36,792	12,608,990	222,431	0.02
AHGCS	Grounds Covered Storage	WH	2008	4,036	1,232,230	0	0.00
AHGM	Grounds Maintenance	WH	2008	3,494	1,066,750	10,484	0.01
AHH	Health Education	GM	1977	35,138	9,669,270	287,778	0.03
AHH1	Weightlifting and Classroom Addition	GM	2010	12,195	3,819,840	16,458	0.00
AHJ	Criminal Justice	CL	1981	21,378	7,503,460	801,837	0.11
AHK	Child Care Center	OF	1991	3,491	1,041,890	162,424	0.16
AHL	Landscape Greenhouse	GR	1993	1,991	327,940	14,638	0.04
AHMT1	Michigan Technical Education Ctr - Main	CL	2000	27,561	9,173,130	2,404,448	0.26
AHMT2	Michigan Technical Education Ctr - Annex	WH	2000	10,859	2,179,160	847,169	0.39
AHP	Power House	PP	1970	13,298	4,060,010	264,149	0.07
AHS1	CREST - Training Center	CL	2002	10,655	3,910,810	576,072	0.15
AHS10	CREST - Ranch	RS	2001	1,890	559,650	95,540	0.17
AHS2	CREST - Control Tower	CL	2003	1,352	841,460	42,465	0.05
AHS3	CREST - Pole Barn Metal Bldg (CREST Stg)	WH	2008	1,739	530,930	8,045	0.02
AHS4	CREST - Burn Building	CL	2003	13,350	8,308,770	121,957	0.01
AHS5	CREST - Motel	DM	2002	3,415	1,413,910	106,702	0.08
AHS6	CREST - Two-Story	RS	2001	2,700	799,500	100,778	0.13
AHS7	CREST - Bank	OF	2002	1,800	620,190	84,723	0.14
AHS8	CREST - Convenience Store/Gas Station	RT	2002	3,000	613,020	134,443	0.22
AHS9	CREST - Cape Cod	RS	2001	1,983	587,190	89,462	0.15
AHSD	Salt Dome	WH	2008	987	162,570	0	0.00
AHSI	Auburn Hills Campus Site	SI	1970	NA	NA	1,992,099	NA
AHT	Advanced Technology Center	CL	1983	38,060	12,272,450	3,722,664	0.30
<b>AUBURN HILLS</b>				<b>632,952</b>	<b>\$201,796,211</b>	<b>\$54,329,820</b>	<b>0.27</b>

OAKLAND COMMUNITY COLLEGE  
Facility Condition Assessment  
*Executive Summary*



ASSET CODE	ASSET NAME	ASSET USE	YEAR BUILT	GSF	CRV (\$)	TOTAL PROJECT COSTS (\$)	FCNI
DOGB	George A Bee Administration Center	OF	1965	26,230	8,195,040	2,124,350	0.26
DOMH	Doris Mosher Foundation House	OF	1925	4,889	1,684,500	556,854	0.33
<b>DISTRICT OFFICE</b>				<b>31,119</b>	<b>\$9,879,540</b>	<b>\$2,681,204</b>	<b>0.27</b>
HLCP	Central Plant	ST	1999	8,135	2,483,700	219,375	0.09
HLGB1	Grounds Building	ST	1998	3,175	969,360	104,099	0.11
HLGB2	Grounds Covered Storage	WH	1998	3,997	658,350	25,697	0.04
HLGB3	Salt Dome	WH	2005	900	148,240	0	0.00
HLHH	Highland Hall	CL	1928	68,741	21,077,370	11,518,112	0.55
HLHOH	High Oaks Hall	CL	1929	46,822	14,770,940	1,774,654	0.12
HLLH	Levinson Hall (Science)	LB	1977	42,327	18,699,960	1,683,874	0.09
HLLHA	Levinson Hall Addition (Health)	LB	2006	38,130	13,623,560	382,017	0.03
HLMB	Metal Building (Old Salt Storage)	WH	1998	1,200	197,650	52,003	0.26
HLPAV	Pavilion	WH	1994	2,025	333,540	48,283	0.14
HLPE	Physical Education	GM	1977	35,098	9,658,270	4,422,748	0.46
HLPH	Pump House	PP	1965	1,500	247,070	8,909	0.04
HLRC	Redwood Center	ST	1927	4,098	1,251,160	92,015	0.07
HLSC	Student Center	SU	1972	31,120	11,008,700	2,023,091	0.18
HLSI	Highland Lakes Campus Site	SI	1977	NA	NA	1,638,015	NA
HLWH	Woodland Hall (North)	CL	1980	42,505	13,705,740	1,149,270	0.08
HLWHA	Woodland Hall Addition (South)	OF	2008	54,470	16,657,200	547,915	0.03
<b>HIGHLAND LAKES</b>				<b>384,244</b>	<b>\$125,490,811</b>	<b>\$25,690,077</b>	<b>0.20</b>
ORA	Classroom Building A and Addition	LB	1967	36,363	11,725,250	2,672,060	0.23
ORB	Classroom Building B	LB	1967	26,555	9,928,780	2,203,979	0.22
ORC	Classroom Building C	LB	1967	26,627	11,049,140	1,574,580	0.14
ORD	Classroom Building D	LB	1967	28,561	10,678,820	2,666,689	0.25
ORE	Power House	PP	1967	17,581	5,132,950	920,884	0.18
ORF	Classroom Building F	CL	1967	28,280	9,412,430	2,903,747	0.31
ORG	Classroom Building G	CL	1967	26,781	8,913,520	1,627,139	0.18
ORH	Community Activity	GM	1977	70,357	18,410,320	6,929,531	0.38
ORJ	Tirrell Hall	SU	1967	118,364	37,184,050	7,740,780	0.21
ORK	Martin L. King Jr. Library	LY	1967	40,181	12,704,430	3,809,369	0.30
ORL	Arts Building	CL	1967	28,967	9,345,620	2,510,465	0.27
ORM	Administration	OF	1967	27,383	8,555,270	2,341,508	0.27
ORN	Grounds Garage	ST	1972	4,008	1,223,680	298,945	0.24
ORP	Pump House	WH	1967	1,060	323,630	0	0.00
ORSI	Orchard Ridge Campus Site	SI	1967	NA	NA	2,271,493	NA
ORT	Smith Theatre	TH	1982	12,633	4,777,040	699,440	0.15
<b>ORCHARD RIDGE</b>				<b>493,702</b>	<b>\$159,364,931</b>	<b>\$41,170,609</b>	<b>0.26</b>

OAKLAND COMMUNITY COLLEGE  
Facility Condition Assessment  
*Executive Summary*



ASSET CODE	ASSET NAME	ASSET USE	YEAR BUILT	GSF	CRV (\$)	TOTAL PROJECT COSTS	FCNI
ROA1	Classroom	CL	1980	28,443	9,466,680	4,430,008	0.47
ROA2	Classroom Addition	CL	1999	21,080	7,398,870	793,735	0.11
ROB	Administration	CL	1980	38,036	12,264,710	3,086,323	0.25
ROC	Learning Resources Center	LY	1980	20,188	6,947,900	902,419	0.13
ROD	Fine Arts	CL	1980	30,160	9,148,250	5,411,891	0.59
ROE	Lila R Jones-Johnson Theater	TH	1980	30,750	10,451,280	5,242,491	0.50
ROG	Grounds Building	WH	1935	2,752	840,210	240,911	0.29
ROM	Mall	OF	1980	29,562	9,236,060	1,475,846	0.16
ROP	Power House	PP	1982	3,926	2,698,650	288,871	0.11
ROPS1	Parking Structure - North	PK	1983	155,975	6,337,260	689,465	0.11
ROPS2	Parking Structure - South	PK	1999	175,000	7,087,500	671,437	0.09
ROSI	Royal Oak Campus Site	SI	1980	NA	NA	247,352	NA
<b>ROYAL OAK</b>				<b>535,873</b>	<b>\$81,877,371</b>	<b>23,480,749</b>	<b>0.29</b>
SFSF1	Southfield - Building A	CL	1979	81,322	24,704,000	2,642,825	0.11
SFSF2	Southfield - Building A Addition	LY	1999	10,882	4,516,430	749,856	0.17
SFSF3	Southfield - Building B	LB	2010	71,800	32,880,090	370,145	0.01
SFSI	Southfield Campus Site	SI	1979	NA	NA	144,558	NA
<b>SOUTHFIELD</b>				<b>164,005</b>	<b>\$62,100,521</b>	<b>3,907,383</b>	<b>0.06</b>
<b>GRAND TOTALS</b>				<b>2,241,890</b>	<b>\$640,509,380</b>	<b>\$151,259,842</b>	<b>0.24</b>



## 2.2 Detailed Project Total Matrices

**Figure 1 – Oakland Community College**

SYSTEM DESCRIPTION	PRIORITIES				TOTALS (\$)
	1	2	3	4	
ACCESSIBILITY	0	582,281	2,398,759	366,375	3,347,416
ELECTRICAL	0	1,474,561	13,648,766	11,884,289	27,007,616
EXTERIOR	0	72,414	9,525,704	10,066,038	19,664,156
FIRE/LIFE SAFETY	0	9,044,812	430,597	2,638,736	12,114,144
HEALTH	0	0	144,693	0	144,693
HVAC	0	28,916	20,001,392	10,949,647	30,979,955
INTERIOR FINISHES/SYS	0	0	23,748,784	6,286,059	30,034,843
PLUMBING	0	72,378	6,689,320	9,680,535	16,442,233
SITE	0	60,659	3,184,448	3,045,950	6,291,057
VERT. TRANSPORTATION	0	0	4,349,989	883,742	5,233,731
<b>TOTALS</b>	<b>\$0</b>	<b>\$11,336,021</b>	<b>\$84,122,452</b>	<b>\$55,801,370</b>	<b>\$151,259,842</b>

CAPITAL RENEWAL	\$88,302,601
DEFERRED MAINTENANCE	\$48,931,720
PLANT/PROGRAM ADAPTION	\$14,025,521
CURRENT REPLACEMENT VALUE	\$640,509,385
FACILITY CONDITION NEEDS INDEX (FCNI)	0.24

**GROSS SQUARE FEET** 2,241,890

**TOTAL PROJECT COST PER  
SQUARE FOOT** \$67.47

**Figure 2 – Auburn Hills**

SYSTEM DESCRIPTION	PRIORITIES				TOTALS (\$)
	1	2	3	4	
ACCESSIBILITY	0	408,722	164,739	74,679	648,141
ELECTRICAL	0	747,496	2,569,175	5,805,199	9,121,870
EXTERIOR	0	7,729	5,222,668	2,969,829	8,200,225
FIRE/LIFE SAFETY	0	795,605	214,007	1,464,438	2,474,050
HVAC	0	0	8,130,695	5,887,492	14,018,187
INTERIOR FINISHES/SYS	0	0	8,683,145	1,990,270	10,673,415
PLUMBING	0	0	740,090	5,238,743	5,978,833
SITE	0	0	856,848	1,219,366	2,076,215
VERT. TRANSPORTATION	0	0	1,138,885	0	1,138,885
<b>TOTALS</b>	<b>\$0</b>	<b>\$1,959,552</b>	<b>\$27,720,253</b>	<b>\$24,650,016</b>	<b>\$54,329,820</b>

CAPITAL RENEWAL	\$32,922,439
DEFERRED MAINTENANCE	\$18,798,478
PLANT/PROGRAM ADAPTION	\$2,608,903
CURRENT REPLACEMENT VALUE	\$201,796,211
FACILITY CONDITION NEEDS INDEX (FCNI)	0.27

**GROSS SQUARE FEET**      **632,952**

**TOTAL PROJECT COST PER  
SQUARE FOOT**      **\$85.84**

**Figure 3 – District Office**

SYSTEM DESCRIPTION	PRIORITIES				TOTALS (\$)
	1	2	3	4	
ACCESSIBILITY	0	11,086	145,587	0	156,673
ELECTRICAL	0	0	234,378	21,415	255,793
EXTERIOR	0	55,677	452,355	112,994	621,027
FIRE/LIFE SAFETY	0	77,271	18,533	91,835	187,639
HVAC	0	0	0	496,458	496,458
INTERIOR FINISHES/SYS	0	0	580,431	0	580,431
PLUMBING	0	0	304,167	0	304,167
SITE	0	0	79,017	0	79,017
<b>TOTALS</b>	<b>\$0</b>	<b>\$144,034</b>	<b>\$1,814,467</b>	<b>\$722,703</b>	<b>\$2,681,204</b>

CAPITAL RENEWAL	\$1,463,054
DEFERRED MAINTENANCE	\$984,206
PLANT/PROGRAM ADAPTION	\$233,944
CURRENT REPLACEMENT VALUE	\$9,879,540
FACILITY CONDITION NEEDS INDEX (FCNI)	0.27

GROSS SQUARE FEET	31,119
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TOTAL PROJECT COST PER SQUARE FOOT	\$86.16
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**Figure 4 – Highland Lakes**

SYSTEM DESCRIPTION	PRIORITIES				TOTALS (\$)
	1	2	3	4	
ACCESSIBILITY	0	147,040	922,896	24,880	1,094,816
ELECTRICAL	0	607,146	2,972,857	835,764	4,415,767
EXTERIOR	0	0	549,344	1,597,580	2,146,924
FIRE/LIFE SAFETY	0	1,818,402	76,027	29,317	1,923,746
HVAC	0	0	4,989,586	106,270	5,095,856
INTERIOR FINISHES/SYS	0	0	3,884,646	990,455	4,875,101
PLUMBING	0	0	1,949,753	1,272,274	3,222,027
SITE	0	14,106	1,268,611	113,302	1,396,019
VERT. TRANSPORTATION	0	0	1,264,680	255,142	1,519,822
<b>TOTALS</b>	<b>\$0</b>	<b>\$2,586,693</b>	<b>\$17,878,400</b>	<b>\$5,224,985</b>	<b>\$25,690,077</b>

CAPITAL RENEWAL	\$11,722,738
DEFERRED MAINTENANCE	\$10,606,198
PLANT/PROGRAM ADAPTION	\$3,361,141
CURRENT REPLACEMENT VALUE	\$125,490,811
FACILITY CONDITION NEEDS INDEX (FCNI)	0.20

<b>GROSS SQUARE FEET</b>	<b>384,244</b>
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<b>TOTAL PROJECT COST PER SQUARE FOOT</b>	<b>\$66.86</b>
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**Figure 5 – Orchard Ridge**

SYSTEM DESCRIPTION	PRIORITIES				TOTALS (\$)
	1	2	3	4	
ACCESSIBILITY	0	0	1,158,505	266,815	1,425,320
ELECTRICAL	0	119,919	7,422,554	133,898	7,676,371
EXTERIOR	0	9,009	1,108,717	1,695,938	2,813,664
FIRE/LIFE SAFETY	0	5,225,875	43,843	0	5,269,719
HEALTH	0	0	144,693	0	144,693
HVAC	0	28,916	1,968,374	3,823,633	5,820,924
INTERIOR FINISHES/SYS	0	0	4,567,174	2,505,245	7,072,418
PLUMBING	0	72,378	3,661,637	2,622,111	6,356,126
SITE	0	46,553	913,785	1,311,155	2,271,493
VERT. TRANSPORTATION	0	0	1,691,282	628,600	2,319,882
<b>TOTALS</b>	<b>\$0</b>	<b>\$5,502,650</b>	<b>\$22,680,564</b>	<b>\$12,987,395</b>	<b>\$41,170,609</b>

CAPITAL RENEWAL \$26,520,403

DEFERRED MAINTENANCE \$7,978,798

PLANT/PROGRAM ADAPTION \$6,671,408

CURRENT REPLACEMENT VALUE \$159,364,931

FACILITY CONDITION NEEDS INDEX (FCNI) 0.26

GROSS SQUARE FEET 493,702

TOTAL PROJECT COST PER  
SQUARE FOOT \$83.39

**Figure 6 – Royal Oak**

SYSTEM DESCRIPTION	PRIORITIES				TOTALS (\$)
	1	2	3	4	
ACCESSIBILITY	0	15,434	7,032	0	22,466
ELECTRICAL	0	0	439,226	4,244,145	4,683,371
EXTERIOR	0	0	2,190,032	2,864,503	5,054,535
FIRE/LIFE SAFETY	0	1,127,659	78,187	722,636	1,928,481
HVAC	0	0	4,824,044	198,856	5,022,901
INTERIOR FINISHES/SYS	0	0	5,132,391	479,070	5,611,461
PLUMBING	0	0	33,673	547,407	581,080
SITE	0	0	63,742	257,569	321,311
VERT. TRANSPORTATION	0	0	255,142	0	255,142
<b>TOTALS</b>	<b>\$0</b>	<b>\$1,143,092</b>	<b>\$13,023,470</b>	<b>\$9,314,187</b>	<b>\$23,480,749</b>

CAPITAL RENEWAL	\$11,795,803
DEFERRED MAINTENANCE	\$10,534,822
PLANT/PROGRAM ADAPTION	\$1,150,124
CURRENT REPLACEMENT VALUE	\$81,877,371
FACILITY CONDITION NEEDS INDEX (FCNI)	0.29

<b>GROSS SQUARE FEET</b>	<b>535,873</b>
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<b>TOTAL PROJECT COST PER SQUARE FOOT</b>	<b>\$43.82</b>
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**Figure 7 – Southfield**

SYSTEM DESCRIPTION	PRIORITIES				TOTALS (\$)
	1	2	3	4	
ELECTRICAL	0	0	10,576	843,868	854,444
EXTERIOR	0	0	2,587	825,193	827,780
FIRE/LIFE SAFETY	0	0	0	330,509	330,509
HVAC	0	0	88,693	436,938	525,631
INTERIOR FINISHES/SYS	0	0	900,997	321,019	1,222,016
SITE	0	0	2,444	144,558	147,002
<b>TOTALS</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,005,298</b>	<b>\$2,902,085</b>	<b>\$3,907,383</b>

CAPITAL RENEWAL	\$3,878,164
DEFERRED MAINTENANCE	\$29,219
PLANT/PROGRAM ADAPTION	\$0
CURRENT REPLACEMENT VALUE	\$62,100,521
FACILITY CONDITION NEEDS INDEX (FCNI)	0.06

<b>GROSS SQUARE FEET</b>	<b>164,005</b>
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<b>TOTAL PROJECT COST PER SQUARE FOOT</b>	<b>\$23.82</b>
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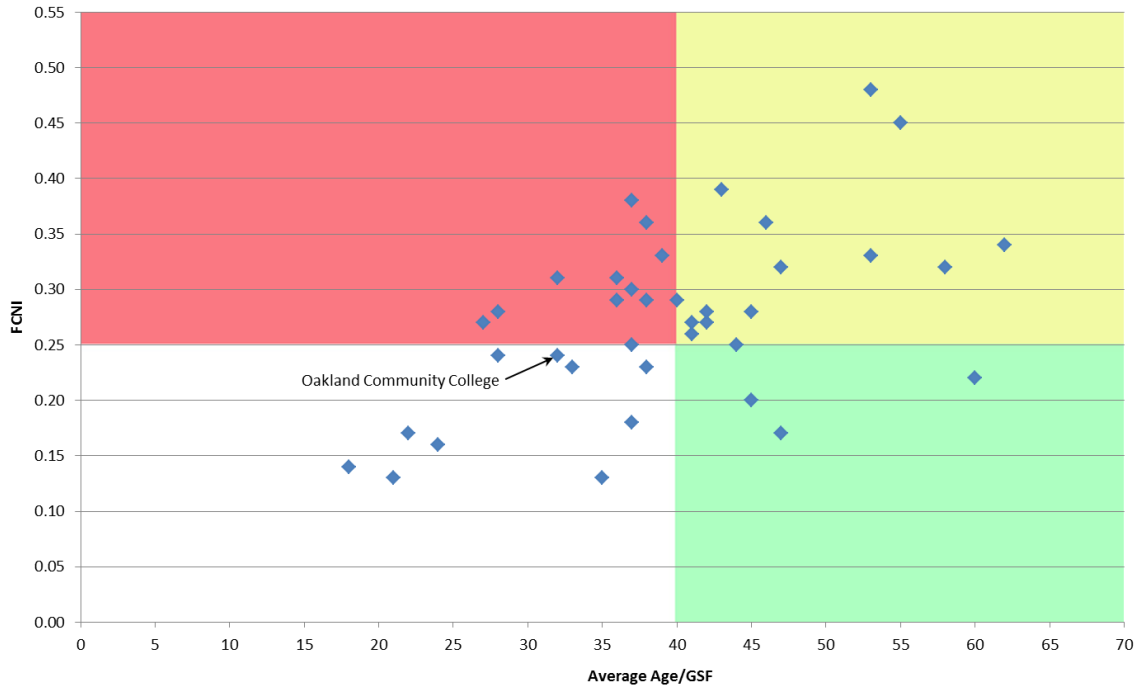
## 2.3 ISES Client History and FCNI Comparison Table and Graphs

**Figure 8 – Oakland Community College**

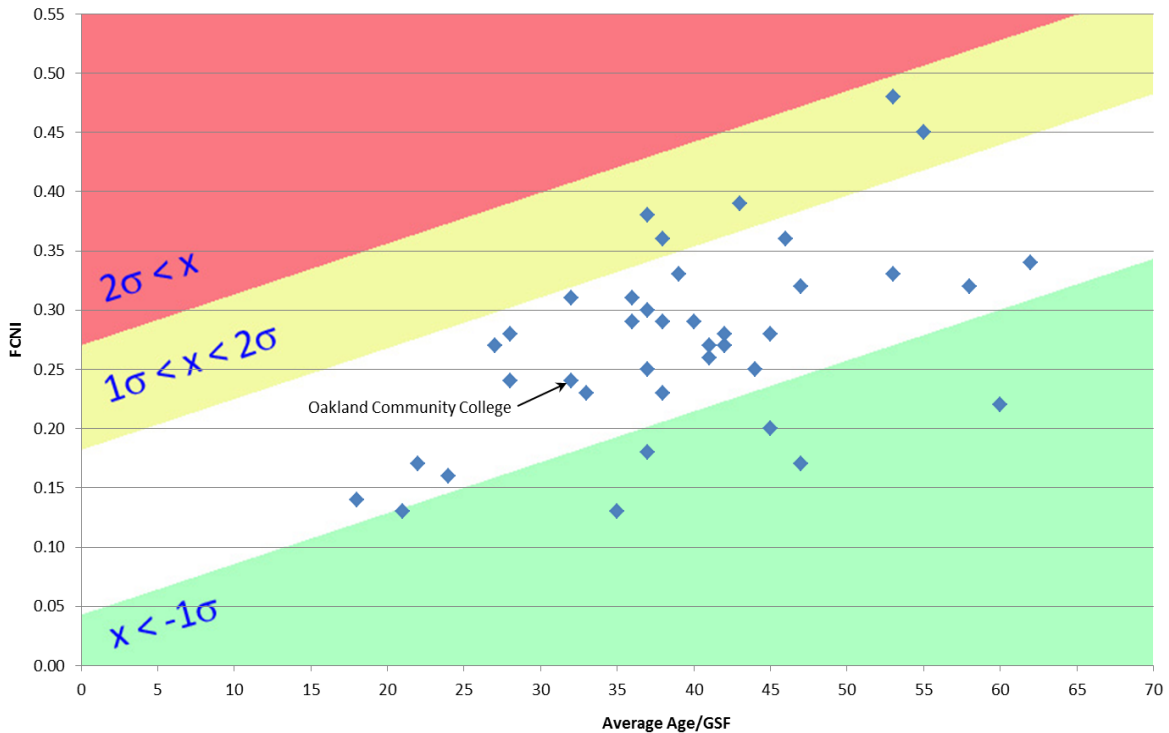
Sampling of ISES Client History List										
Client Name	Year of Inspection	Facility Condition Needs Index	Gross Square Feet	Asset Count	Average Year Built	Avg. Age at Insp.	Project Backlog per Square Foot	Total Backlog	FCNI Percent Rank	Avg Age Percent Rank
California State University Channel Islands	2010	0.13	919,735	32	1975	35	\$49.48	\$45,505,298	100%	74%
University of Central Florida	2012	0.13	3,995,608	73	1991	21	\$50.90	\$203,387,274	100%	98%
University of North Florida	2008	0.14	1,720,437	28	1990	18	\$40.40	\$69,498,230	95%	100%
Chapman University	2011	0.16	2,269,636	39	1986	24	\$55.81	\$117,240,683	89%	93%
University of Puget Sound	2012	0.17	1,213,642	41	1965	47	\$66.08	\$80,194,365	90%	19%
Pepperdine University	2008	0.17	1,483,295	54	1986	22	\$61.59	\$91,362,453	90%	95%
Florida State University	2011	0.18	6,899,036	114	1974	37	\$58.31	\$402,295,512	85%	66%
Tulane University Uptown Campus	2011	0.20	4,018,500	73	1966	45	\$71.26	\$286,356,411	82%	27%
Stanford University II	2007	0.22	2,512,843	47	1947	60	\$80.58	\$202,481,536	79%	3%
Florida A&M University	2012	0.23	1,430,308	40	1974	38	\$78.20	\$111,855,752	77%	56%
New College of Florida	2011	0.23	626,400	55	1978	33	\$81.84	\$51,264,744	77%	77%
<b>Oakland Community College</b>	<b>2012</b>	<b>0.24</b>	<b>2,241,895</b>	<b>78</b>	<b>1980</b>	<b>32</b>	<b>\$67.47</b>	<b>\$151,259,842</b>	<b>72%</b>	<b>82%</b>
University of California San Diego	2012	0.24	3,908,630	81	1984	28	\$127.24	\$497,342,367	72%	87%
Johns Hopkins University	2012	0.25	4,239,199	54	1968	44	\$100.91	\$427,776,950	66%	29%
San Diego State University	2012	0.25	3,200,642	41	1975	37	\$102.21	\$327,138,710	66%	66%
San Francisco State University	2003	0.26	1,908,545	21	1962	41	\$70.16	\$133,898,966	61%	43%
University of Missouri Kansas City	2008	0.27	2,419,857	38	1966	42	\$79.96	\$193,486,256	58%	37%
University of West Georgia	2004	0.27	1,334,306	36	1963	41	\$45.01	\$60,061,598	58%	43%
Portland Community College	2010	0.27	2,055,698	39	1983	27	\$93.49	\$192,190,548	58%	90%
East Carolina University	2009	0.28	4,003,456	67	1964	45	\$92.83	\$371,660,376	50%	27%
University of Rochester	2007	0.28	5,387,635	23	1965	42	\$91.78	\$494,470,898	50%	37%
Northern Michigan University	2000	0.28	3,298,899	48	1972	28	\$50.77	\$167,481,965	50%	87%
Portland State University	2008	0.29	4,062,486	37	1968	40	\$70.03	\$284,495,209	43%	45%
Valdosta State University	2004	0.29	985,822	19	1966	38	\$46.06	\$45,409,388	43%	56%
University of Hawai'i at Mānoa	2010	0.29	3,998,778	60	1974	36	\$134.73	\$538,771,415	43%	72%
Black Hawk College	2011	0.30	562,976	19	1974	37	\$114.82	\$64,639,609	35%	66%
Morehouse College	2007	0.31	844,948	24	1971	36	\$66.97	\$56,583,054	32%	72%
Rowan University	2005	0.31	1,940,879	44	1962	32	\$74.51	\$144,619,873	32%	82%
Kenyon College	2007	0.32	825,023	52	1949	58	\$84.38	\$69,612,041	27%	6%
Oklahoma State University	2009	0.32	3,086,167	40	1962	47	\$111.29	\$343,450,807	27%	19%
Missouri University of Science and Technology	2010	0.33	1,549,304	43	1957	53	\$135.40	\$209,770,169	22%	14%
California State University Los Angeles	2005	0.33	1,908,641	20	1966	39	\$99.30	\$189,533,235	22%	48%
Princeton University	2010	0.34	2,188,267	141	1948	62	\$55.13	\$120,630,439	16%	0%
University of Massachusetts Lowell	2011	0.36	3,066,964	43	1965	46	\$147.56	\$452,572,591	14%	22%
California Polytechnic State University San Luis Obispo	2006	0.36	859,028	36	1968	38	\$77.06	\$66,198,105	14%	56%
University of California Irvine	2007	0.38	336,208	26	1970	37	\$89.47	\$30,082,075	8%	66%
University of Missouri-St. Louis	2010	0.39	1,750,014	39	1967	43	\$154.57	\$270,494,377	6%	32%
University of Alabama	2005	0.45	5,509,132	134	1950	55	\$51.75	\$285,113,705	3%	8%
Miami University, Ohio	2007	0.48	1,527,840	30	1954	53	\$94.23	\$143,963,945	0%	14%
<b>Averages</b>	<b>2009</b>	<b>0.00</b>	<b>2,463,864</b>	<b>49</b>	<b>1969</b>	<b>40</b>	<b>\$83.19</b>	<b>\$204,978,225</b>		



**Figure 9 - FCNI Comparison showing Average Quadrants – Oakland Community College**



**Figure 10 - FCNI Comparison showing Trend Bands - Oakland Community College**



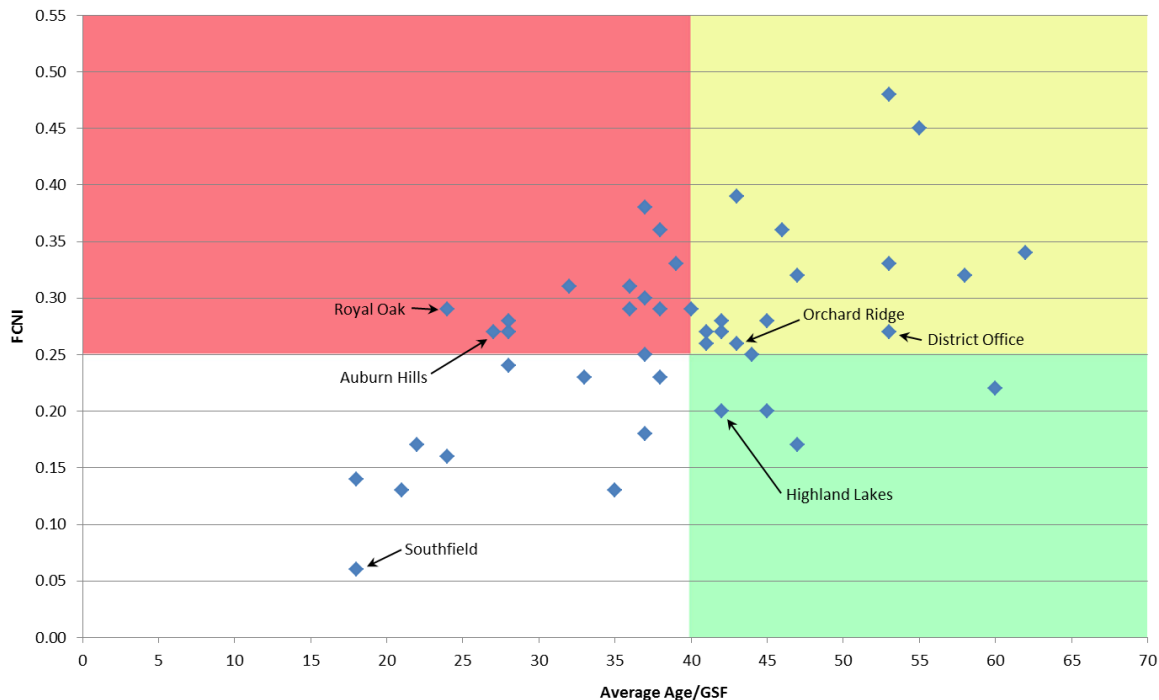
OAKLAND COMMUNITY COLLEGE  
Facility Condition Assessment  
*Executive Summary*



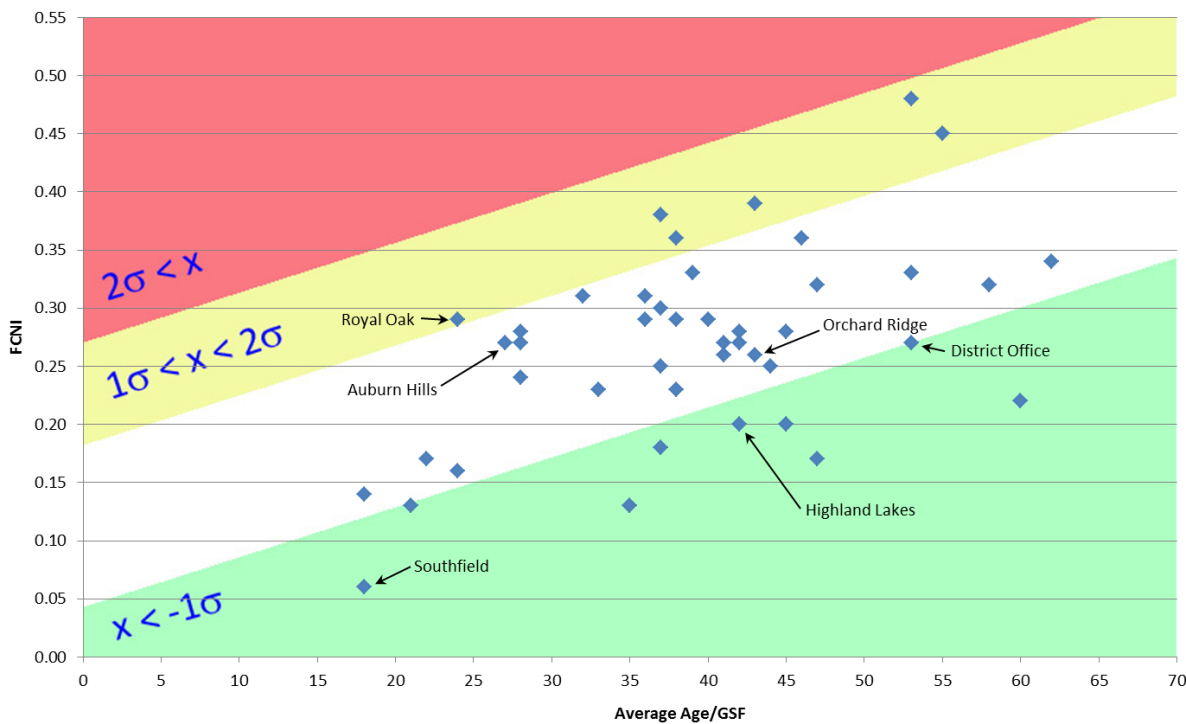
**Figure 11 – Campus breakout**

Sampling of ISES Client History List										
Client Name	Year of Inspection	Facility Condition Needs Index	Gross Square Feet	Asset Count	Average Year Built	Avg. Age at Insp.	Project Backlog per Square Foot	Total Backlog	FCNI Percent Rank	Avg Age Percent Rank
<b>Oakland Community College - Southfield</b>	<b>2012</b>	<b>0.06</b>	<b>164,005</b>	<b>3</b>	<b>1994</b>	<b>18</b>	<b>\$23.82</b>	<b>\$3,907,383</b>	<b>100%</b>	<b>100%</b>
California State University Channel Islands	2010	0.13	919,735	32	1975	35	\$49.48	\$45,505,298	98%	73%
University of Central Florida	2012	0.13	3,995,608	73	1991	21	\$50.90	\$203,387,274	98%	96%
University of North Florida	2008	0.14	1,720,437	28	1990	18	\$40.40	\$69,498,230	94%	100%
Chapman University	2011	0.16	2,269,636	39	1986	24	\$55.81	\$117,240,683	89%	91%
University of Puget Sound	2012	0.17	1,213,642	41	1965	47	\$66.08	\$80,194,365	89%	19%
Pepperdine University	2008	0.17	1,483,295	54	1986	22	\$61.59	\$91,362,453	89%	94%
Florida State University	2011	0.18	6,899,036	114	1974	37	\$58.31	\$402,295,512	84%	66%
Tulane University Uptown Campus	2011	0.20	4,018,500	73	1966	45	\$71.26	\$286,356,411	82%	26%
<b>Oakland Community College - Highland Lakes</b>	<b>2012</b>	<b>0.20</b>	<b>384,244</b>	<b>16</b>	<b>1970</b>	<b>42</b>	<b>\$66.86</b>	<b>\$25,690,077</b>	<b>82%</b>	<b>40%</b>
Stanford University II	2007	0.22	2,512,843	47	1947	60	\$80.58	\$202,481,536	77%	3%
Florida A&M University	2012	0.23	1,430,308	40	1974	38	\$78.20	\$111,855,752	75%	56%
New College of Florida	2011	0.23	626,400	55	1978	33	\$81.84	\$51,264,744	75%	75%
University of California San Diego	2012	0.24	3,908,630	81	1984	28	\$127.24	\$497,342,367	70%	84%
Johns Hopkins University	2012	0.25	4,239,199	54	1968	44	\$100.91	\$427,776,950	68%	28%
San Diego State University	2012	0.25	3,200,642	41	1975	37	\$102.21	\$327,138,710	68%	66%
<b>Oakland Community College - Orchard Ridge</b>	<b>2012</b>	<b>0.26</b>	<b>493,702</b>	<b>15</b>	<b>1969</b>	<b>43</b>	<b>\$83.39</b>	<b>\$41,170,609</b>	<b>63%</b>	<b>33%</b>
San Francisco State University	2003	0.26	1,908,545	21	1962	41	\$70.16	\$133,898,966	63%	45%
<b>Oakland Community College - District Office</b>	<b>2012</b>	<b>0.27</b>	<b>31,119</b>	<b>2</b>	<b>1959</b>	<b>53</b>	<b>\$86.16</b>	<b>\$2,681,204</b>	<b>59%</b>	<b>14%</b>
University of Missouri Kansas City	2008	0.27	2,419,857	38	1966	42	\$79.96	\$193,486,256	59%	40%
University of West Georgia	2004	0.27	1,334,306	36	1963	41	\$45.01	\$60,061,598	59%	45%
<b>Oakland Community College - Auburn Hills</b>	<b>2012</b>	<b>0.27</b>	<b>632,952</b>	<b>31</b>	<b>1984</b>	<b>28</b>	<b>\$85.84</b>	<b>\$54,329,820</b>	<b>59%</b>	<b>84%</b>
Portland Community College	2010	0.27	2,055,698	39	1983	27	\$93.49	\$192,190,548	59%	87%
East Carolina University	2009	0.28	4,003,456	67	1964	45	\$92.83	\$371,660,376	47%	26%
University of Rochester	2007	0.28	5,387,635	23	1965	42	\$91.78	\$494,470,898	47%	40%
Northern Michigan University	2000	0.28	3,298,899	48	1972	28	\$50.77	\$167,481,965	47%	84%
Portland State University	2008	0.29	4,062,486	37	1968	40	\$70.03	\$284,495,209	40%	47%
Valdosta State University	2004	0.29	985,822	19	1966	38	\$46.06	\$45,409,388	40%	56%
University of Hawai'i at Mānoa	2010	0.29	3,998,778	60	1974	36	\$134.73	\$538,771,415	40%	70%
<b>Oakland Community College - Royal Oak</b>	<b>2012</b>	<b>0.29</b>	<b>535,873</b>	<b>11</b>	<b>1988</b>	<b>24</b>	<b>\$43.82</b>	<b>\$23,480,749</b>	<b>40%</b>	<b>91%</b>
Black Hawk College	2011	0.30	562,976	19	1974	37	\$114.82	\$64,639,609	31%	66%
Morehouse College	2007	0.31	844,948	24	1971	36	\$66.97	\$56,583,054	28%	70%
Rowan University	2005	0.31	1,940,879	44	1962	32	\$74.51	\$144,619,873	28%	77%
Kenyon College	2007	0.32	825,023	52	1949	58	\$84.38	\$69,612,041	24%	5%
Oklahoma State University	2009	0.32	3,086,167	40	1962	47	\$111.29	\$343,450,807	24%	19%
Missouri University of Science and Technology	2010	0.33	1,549,304	43	1957	53	\$135.40	\$209,770,169	19%	14%
California State University Los Angeles	2005	0.33	1,908,641	20	1966	39	\$99.30	\$189,533,235	19%	49%
Princeton University	2010	0.34	2,188,267	141	1948	62	\$55.13	\$120,630,439	14%	0%
University of Massachusetts Lowell	2011	0.36	3,066,964	43	1965	46	\$147.56	\$452,572,591	12%	21%
California Polytechnic State University San Luis Obispo	2006	0.36	859,028	36	1968	38	\$77.06	\$66,198,105	12%	56%
University of California Irvine	2007	0.38	336,208	26	1970	37	\$89.47	\$30,082,075	7%	66%
University of Missouri-St. Louis	2010	0.39	1,750,014	39	1967	43	\$154.57	\$270,494,377	5%	33%
University of Alabama	2005	0.45	5,509,132	134	1950	55	\$51.75	\$285,113,705	3%	7%
Miami University, Ohio	2007	0.48	1,527,840	30	1954	53	\$94.23	\$143,963,945	0%	14%
<b>Averages</b>	<b>2009</b>	<b>0.00</b>	<b>2,183,879</b>	<b>44</b>	<b>1970</b>	<b>39</b>	<b>\$83.19</b>	<b>\$181,685,245</b>		

**Figure 12 - FCNI Comparison showing Average Quadrants - Campus breakout**

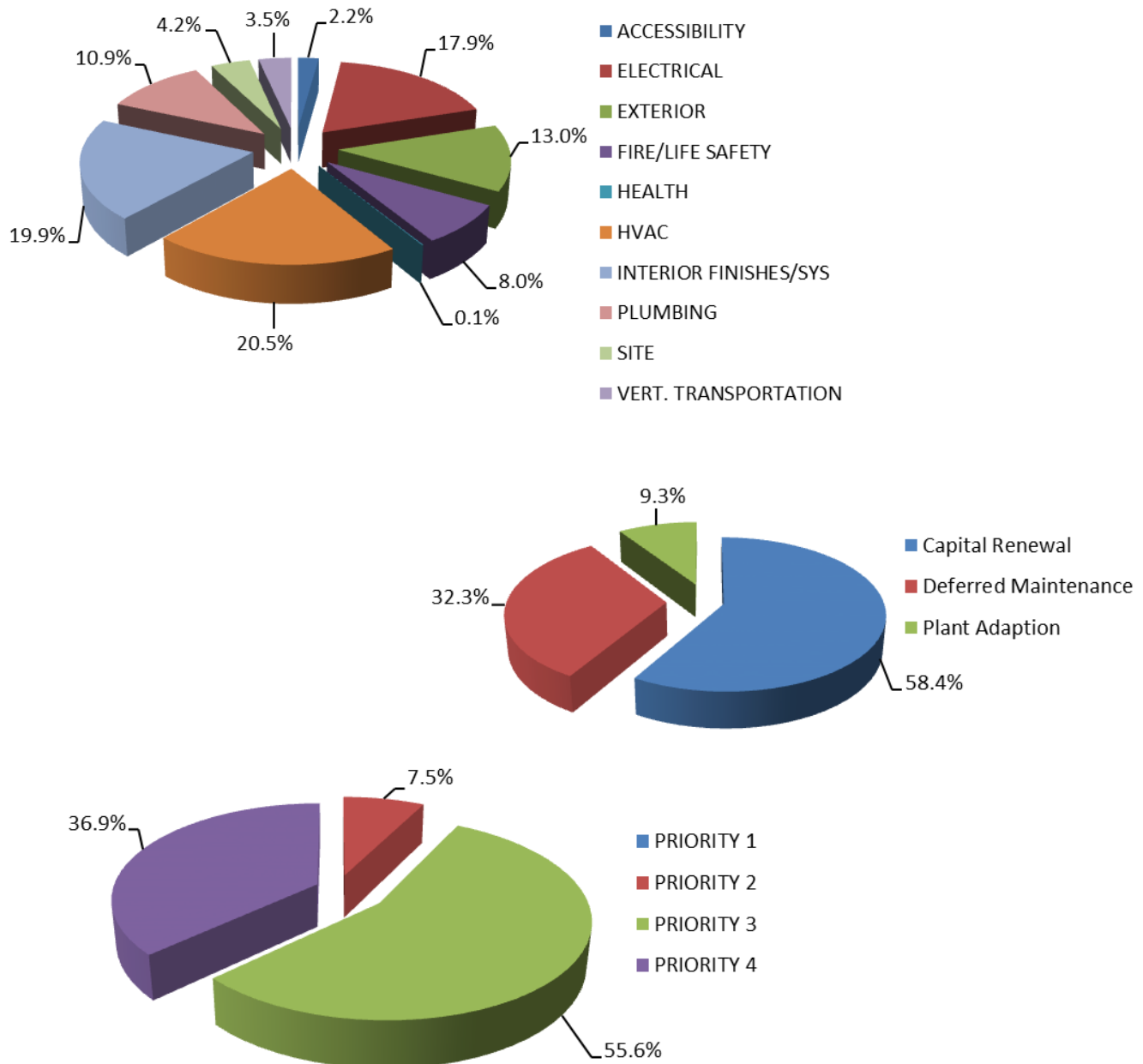


**Figure 13 - FCNI Comparison showing Trend Bands - Campus breakout**

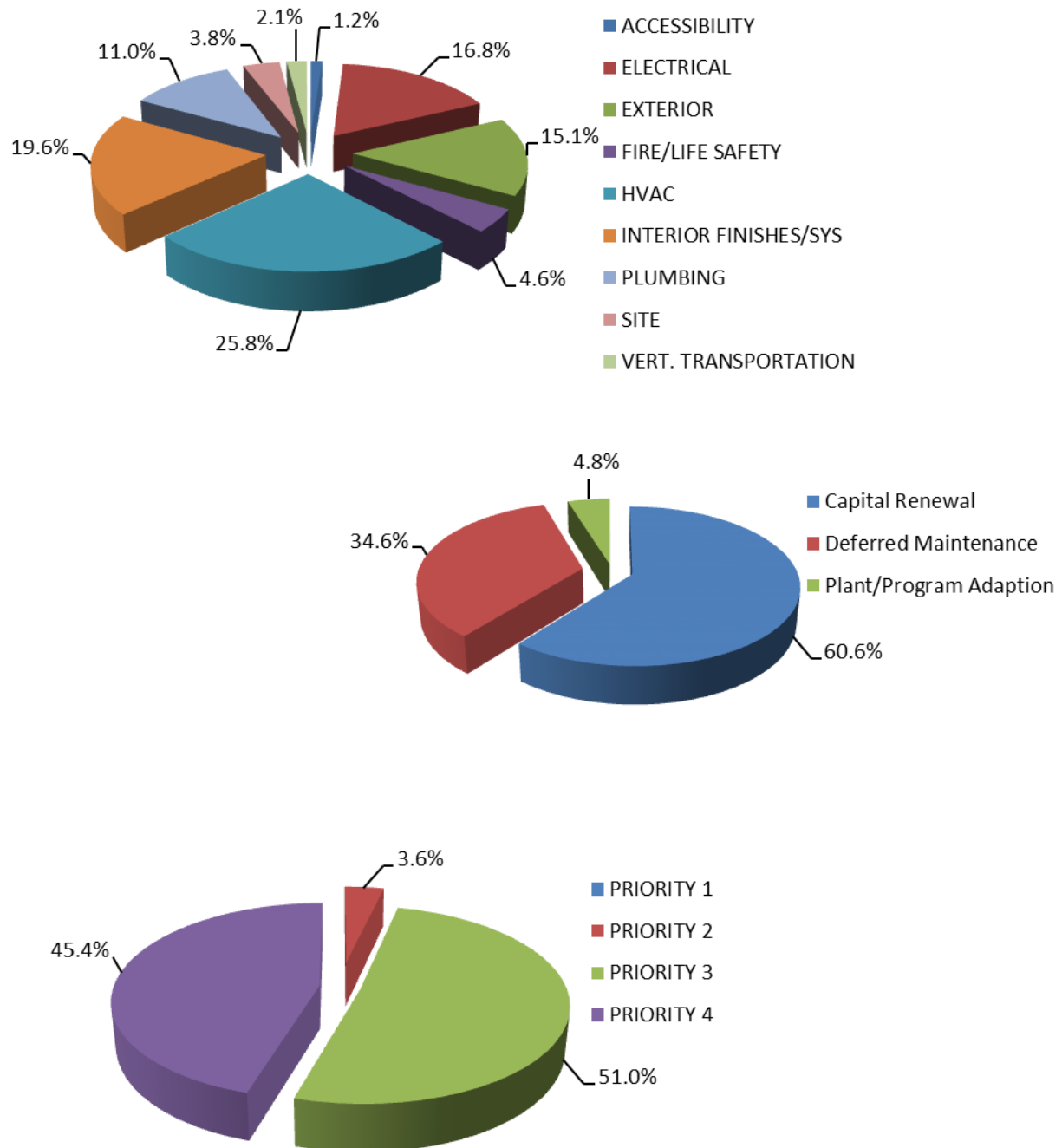


## 2.4 Project Cost Distribution Charts

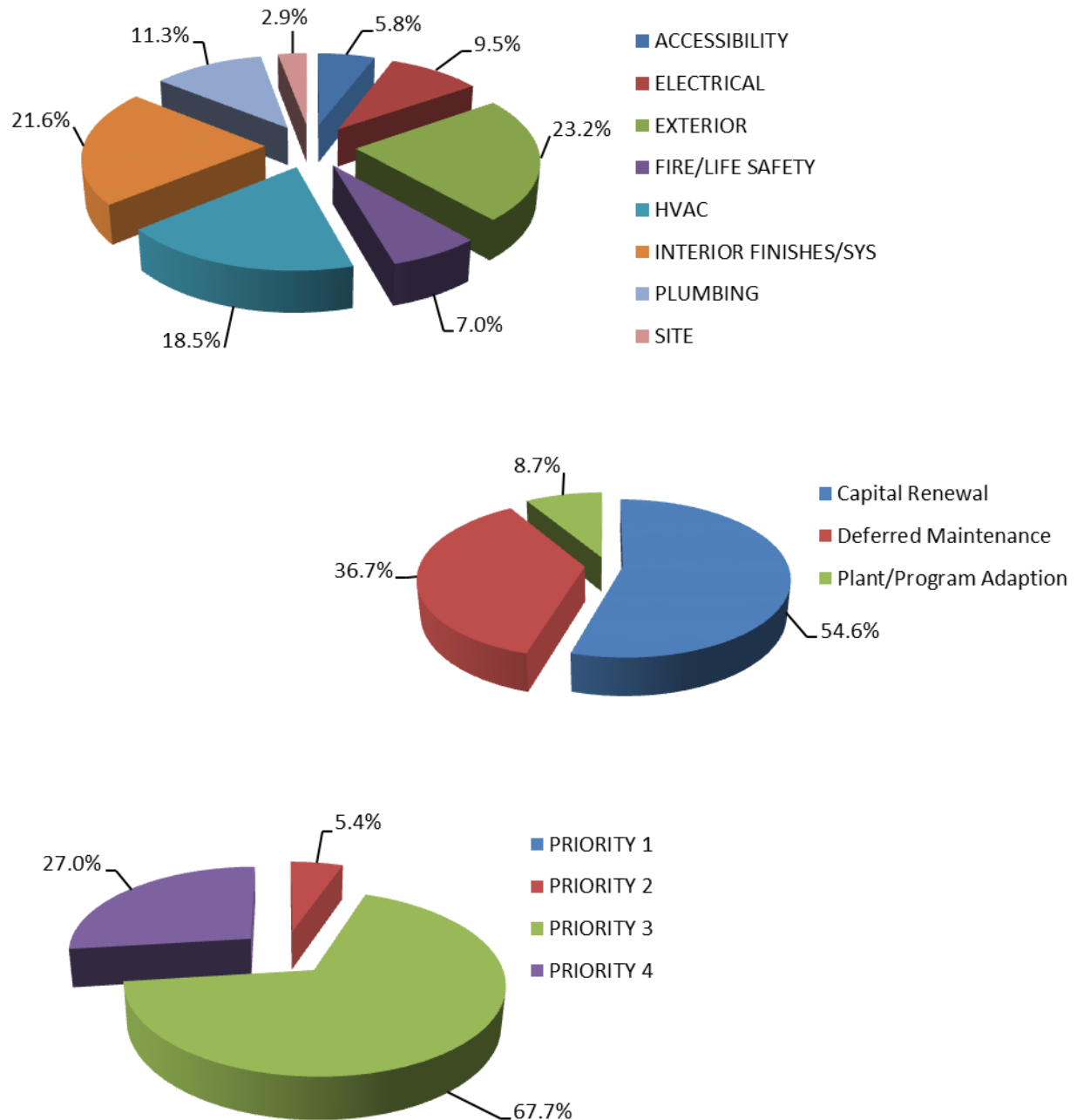
**Figure 14 - Oakland Community College**



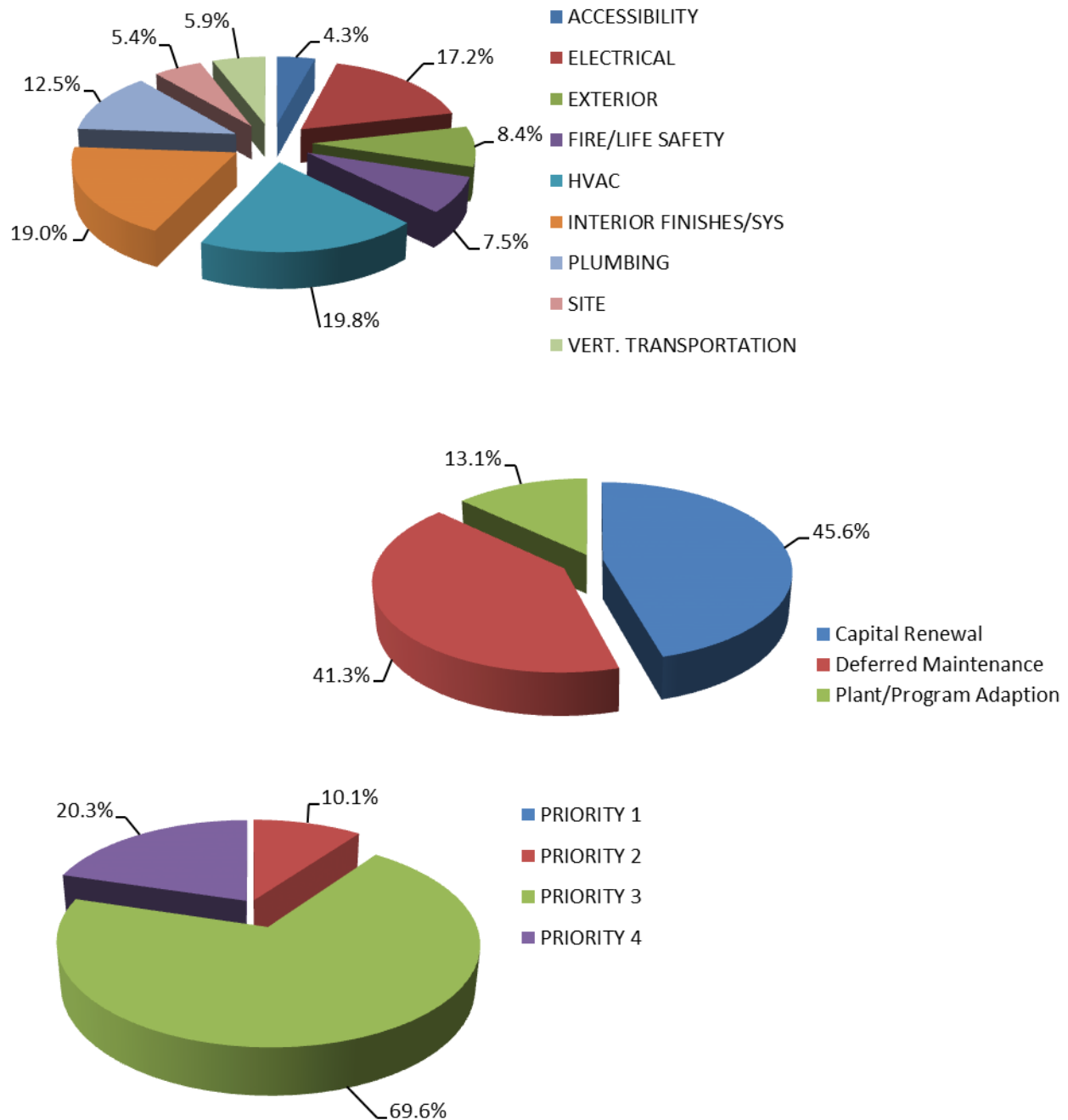
**Figure 15 – Auburn Hills**



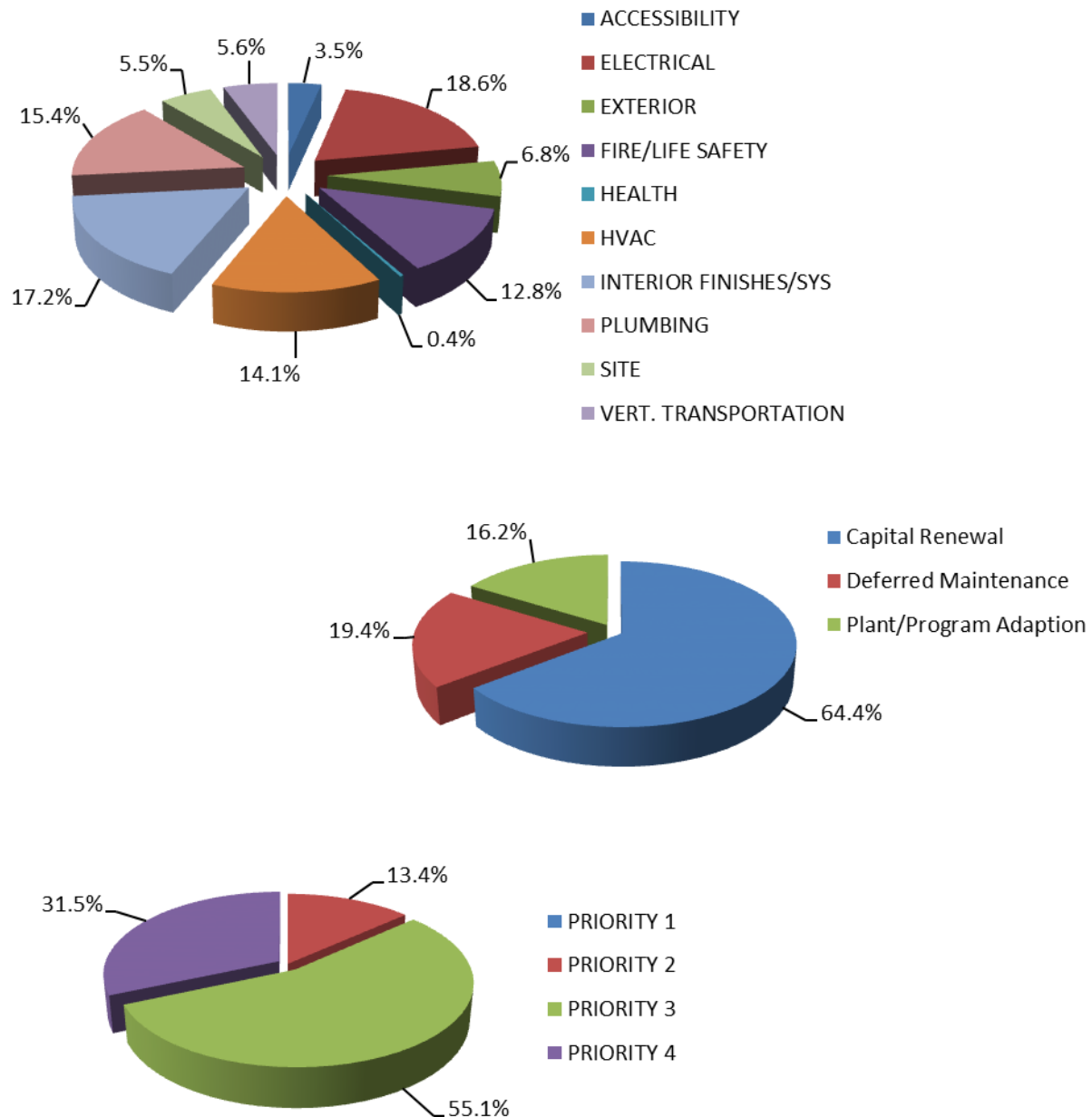
**Figure 16 – District Office**



**Figure 17 – Highland Lakes**

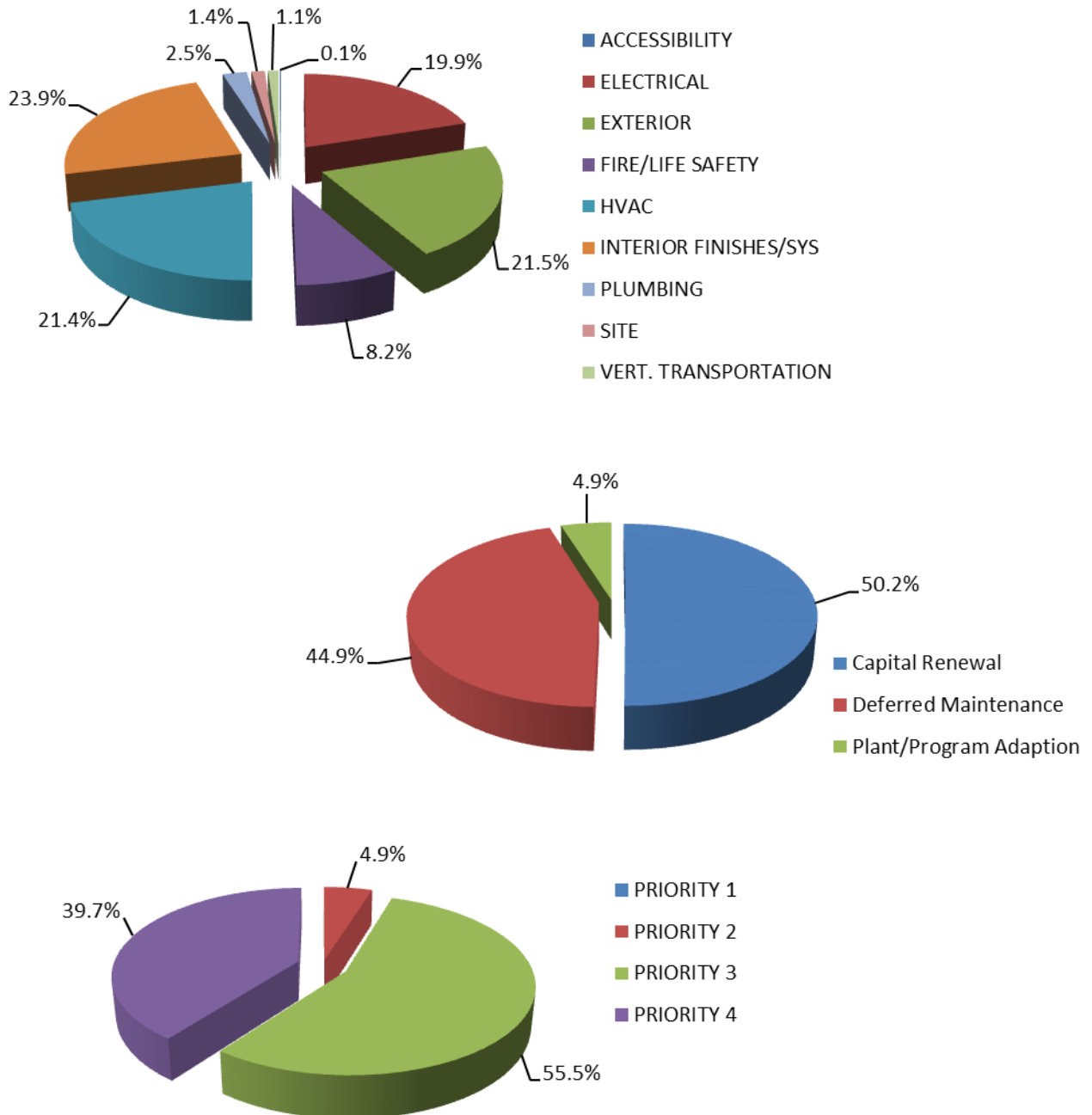


**Figure 18 – Orchard Ridge**

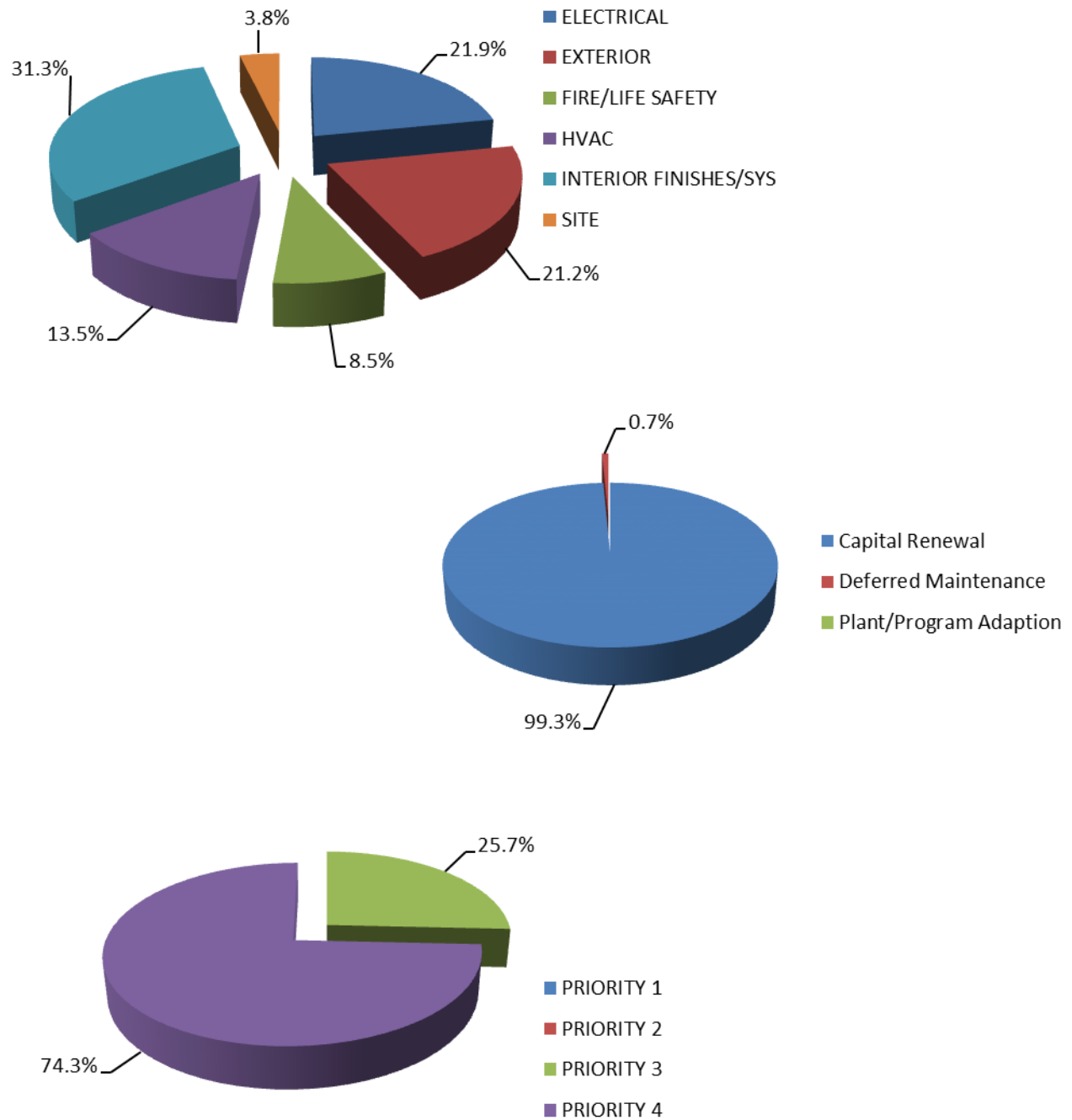




**Figure 19 – Royal Oak**



**Figure 20 - Southfield**



## 2.5 Summary of FCNI and Project Costs - Oakland Community College

ASSET CODE	ASSET NAME	ASSET USE	YEAR BUILT	GSF	CRV(\$)	TOTAL PROJECT COSTS	FCNI
<b>&gt; 0.50</b>							
ROD	Fine Arts	CL	1980	30,160	9,148,250	5,411,891	0.59
HLHH	Highland Hall	CL	1928	68,741	21,077,370	11,518,112	0.55
AHF1	General Assembly - Main and Addition	CL	1970	25,550	8,503,810	4,644,569	0.55
AHC	Joseph E Hill	CL	1970	56,169	17,439,910	9,179,801	0.53
ROE	Lila R Jones-Johnson Theater	TH	1980	30,750	10,451,280	5,242,491	0.50
<b>0.49 - 0.40</b>							
ROA1	Classroom	CL	1980	28,443	9,466,680	4,430,008	0.47
HLPE	Physical Education	GM	1977	35,098	9,658,270	4,422,748	0.46
AHA	Earl M Anderson	CL	1970	104,725	29,198,590	12,611,175	0.43
AHE	Business, Science and Art	CL	1980	28,819	9,591,830	3,931,413	0.41
<b>0.39 - 0.30</b>							
AHMT2	Michigan Technical Ed Ctr - Annex	WH	2000	10,859	2,179,160	847,169	0.39
ORH	Community Activity	GM	1977	70,357	18,410,320	6,929,531	0.38
AHD	George R Mosher	CL	1975	52,197	16,370,600	5,712,591	0.35
DOMH	Doris Mosher Foundation House	OF	1925	4,889	1,684,500	556,854	0.33
ORF	Classroom Building F	CL	1967	28,280	9,412,430	2,903,747	0.31
AHT	Advanced Technology Center	CL	1983	38,060	12,272,450	3,722,664	0.30
ORK	Martin L. King Jr. Library	LY	1967	40,181	12,704,430	3,809,369	0.30
AHB	Administration	OF	1975	34,511	11,063,880	3,280,408	0.30
<b>0.29 - 0.20</b>							
ROG	Grounds Building	WH	1935	2,752	840,210	240,911	0.29
ORM	Administration	OF	1967	27,383	8,555,270	2,341,508	0.27
ORL	Arts Building	CL	1967	28,967	9,345,620	2,510,465	0.27
HLMB	Metal Building (Old Salt Storage)	WH	1998	1,200	197,650	52,003	0.26
AHMT1	Michigan Technical Ed Ctr - Main	CL	2000	27,561	9,173,130	2,404,448	0.26
DOGB	George A Bee Administration Center	OF	1965	26,230	8,195,040	2,124,350	0.26
ROB	Administration	CL	1980	38,036	12,264,710	3,086,323	0.25
ORD	Classroom Building D	LB	1967	28,561	10,678,820	2,666,689	0.25
ORN	Grounds Garage	ST	1972	4,008	1,223,680	298,945	0.24
ORA	Classroom Building A and Addition	LB	1967	36,363	11,725,250	2,672,060	0.23
ORB	Classroom Building B	LB	1967	26,555	9,928,780	2,203,979	0.22
AHS8	CREST - Convenience Store/Gas Station	RT	2002	3,000	613,020	134,443	0.22
ORJ	Tirrell Hall	SU	1967	118,364	37,184,050	7,740,780	0.21
HLSC	Student Center	SU	1972	31,120	11,008,700	2,023,091	0.18
ORG	Classroom Building G	CL	1967	26,781	8,913,520	1,627,139	0.18
ORE	Power House	PP	1967	17,581	5,132,950	920,884	0.18

OAKLAND COMMUNITY COLLEGE  
Facility Condition Assessment  
*Executive Summary*



ASSET CODE	ASSET NAME	ASSET USE	YEAR BUILT	GSF	CRV (\$)	TOTAL PROJECT COSTS	FCNI
<b>0.19 - 0.10</b>							
AHS10	CREST - Ranch	RS	2001	1,890	559,650	95,540	0.17
SFSF2	Southfield - Building A Addition	LY	1999	10,882	4,516,430	749,856	0.17
ROM	Mall	OF	1980	29,562	9,236,060	1,475,846	0.16
AHK	Child Care Center	OF	1991	3,491	1,041,890	162,424	0.16
AHS9	CREST - Cape Cod	RS	2001	1,983	587,190	89,462	0.15
AHS1	CREST - Training Center	CL	2002	10,655	3,910,810	576,072	0.15
ORT	Smith Theatre	TH	1982	12,633	4,777,040	699,440	0.15
HLPVAV	Pavilion	WH	1994	2,025	333,540	48,283	0.14
ORC	Classroom Building C	LB	1967	26,627	11,049,140	1,574,580	0.14
AHS7	CREST - Bank	OF	2002	1,800	620,190	84,723	0.14
ROC	Learning Resources Center	LY	1980	20,188	6,947,900	902,419	0.13
AHF2	General Assembly - Addition	CL	1998	49,907	15,744,160	2,034,874	0.13
AHS6	CREST - Two-Story	RS	2001	2,700	799,500	100,778	0.13
HLHOH	High Oaks Hall	CL	1929	46,822	14,770,940	1,774,654	0.12
ROPS1	Parking Structure - North	PK	1983	155,975	6,337,260	689,465	0.11
HLGB1	Grounds Building	ST	1998	3,175	969,360	104,099	0.11
ROA2	Classroom Addition	CL	1999	21,080	7,398,870	793,735	0.11
ROP	Power House	PP	1982	3,926	2,698,650	288,871	0.11
SFSF1	Southfield - Building A	CL	1979	81,322	24,704,000	2,642,825	0.11
AHJ	Criminal Justice	CL	1981	21,378	7,503,460	801,837	0.11
<b>0.09 - 0.00</b>							
ROPS2	Parking Structure - South	PK	1999	175,000	7,087,500	671,437	0.09
HLLH	Levinson Hall (Science)	LB	1977	42,327	18,699,960	1,683,874	0.09
HLCP	Central Plant	ST	1999	8,135	2,483,700	219,375	0.09
HLWH	Woodland Hall (North)	CL	1980	42,505	13,705,740	1,149,270	0.08
AHG1	Bookstore/IT/Public Safety	RT	2008	29,909	10,580,310	828,223	0.08
AHS5	CREST - Motel	DM	2002	3,415	1,413,910	106,702	0.08
HLRC	Redwood Center	ST	1927	4,098	1,251,160	92,015	0.07
AHP	Power House	PP	1970	13,298	4,060,010	264,149	0.07
AHS2	CREST - Control Tower	CL	2003	1,352	841,460	42,465	0.05
AHL	Landscape Greenhouse	GR	1993	1,991	327,940	14,638	0.04
HLGB2	Grounds Covered Storage	WH	1998	3,997	658,350	25,697	0.04
HLPH	Pump House	PP	1965	1,500	247,070	8,909	0.04
HLWHA	Woodland Hall Addition (South)	OF	2008	54,470	16,657,200	547,915	0.03
AHH	Health Education	GM	1977	35,138	9,669,270	287,778	0.03
HLLHA	Levinson Hall Addition (Health)	LB	2006	38,130	13,623,560	382,017	0.03
AHG2	Student Union Addition	SU	2008	36,792	12,608,990	222,431	0.02
AHS3	CREST - Pole Barn Metal Bldg (CREST Stg)	WH	2008	1,739	530,930	8,045	0.02
AHS4	CREST - Burn Building	CL	2003	13,350	8,308,770	121,957	0.01
SFSF3	Southfield - Building B	LB	2010	71,800	32,880,090	370,145	0.01

OAKLAND COMMUNITY COLLEGE  
Facility Condition Assessment  
*Executive Summary*



ASSET CODE	ASSET NAME	ASSET USE	YEAR BUILT	GSF	CRV (\$)	TOTAL PROJECT COSTS	FCNI
AHGM	Grounds Maintenance	WH	2008	3,494	1,066,750	10,484	0.01
AHH1	Weightlifting & Classroom Addition	GM	2010	12,195	3,819,840	16,458	0.00
AHGCS	Grounds Covered Storage	WH	2008	4,036	1,232,230	0	0.00
AHSD	Salt Dome	WH	2008	987	162,570	0	0.00
HLGB3	Salt Dome	WH	2005	900	148,240	0	0.00
ORP	Pump House	WH	1967	1,060	323,630	0	0.00
AHSI	Auburn Hills Campus Site	SI	1970			1,992,099	
HLSI	Highland Lakes Campus Site	SI	1977			\$1,638,015	
ORSI	Orchard Ridge Campus Site	SI	1967			2,271,493	
ROSI	Royal Oak Campus Site	SI	1980			\$247,352	
SFSI	Southfield Campus Site	SI	1979			144,558	

## 2.6 Summary of FCNI and Project Costs - by Campus

ASSET CODE	NAME	ASSET USE	YEAR BUILT	GSF	CRV	TOTAL PROJECT COSTS	FCNI
AHF1	General Assembly - Main and Addition	CL	1970	25,550	8,503,810	4,644,569	0.55
AHC	Joseph E Hill	CL	1970	56,169	17,439,910	9,179,801	0.53
AHA	Earl M Anderson	CL	1970	104,725	29,198,590	12,611,175	0.43
AHE	Business, Science And Art	CL	1980	28,819	9,591,830	3,931,413	0.41
AHMT2	Michigan Technical Ed Ctr - Annex	WH	2000	10,859	2,179,160	847,169	0.39
AHD	George R Mosher	CL	1975	52,197	16,370,600	5,712,591	0.35
AHT	Advanced Technology Ctr	CL	1983	38,060	12,272,450	3,722,664	0.30
AHB	Administration	OF	1975	34,511	11,063,880	3,280,408	0.30
AHMT1	Michigan Technical Ed Ctr - Main	CL	2000	27,561	9,173,130	2,404,448	0.26
AHS8	CREST - Convenience Store/ Gas Station	RT	2002	3,000	613,020	134,443	0.22
AHS10	CREST - Ranch	RS	2001	1,890	559,650	95,540	0.17
AHK	Child Care Center	OF	1991	3,491	1,041,890	162,424	0.16
AHS9	CREST - Cape Cod	RS	2001	1,983	587,190	89,462	0.15
AHS1	CREST - Training Center	CL	2002	10,655	3,910,810	576,072	0.15
AHS7	CREST - Bank	OF	2002	1,800	620,190	84,723	0.14
AHF2	General Assembly - Addition	CL	1998	49,907	15,744,160	2,034,874	0.13
AHS6	CREST - Two-Story	RS	2001	2,700	799,500	100,778	0.13
AHJ	Criminal Justice	CL	1981	21,378	7,503,460	801,837	0.11
AHG1	Bookstore/IT/Public Safety	RT	2008	29,909	10,580,310	828,223	0.08
AHS5	CREST - Motel	DM	2002	3,415	1,413,910	106,702	0.08
AHP	Power House	PP	1970	13,298	4,060,010	264,149	0.07
AHS2	CREST - Control Tower	CL	2003	1,352	841,460	42,465	0.05
AHL	Landscape Greenhouse	GR	1993	1,991	327,940	14,638	0.04
AHH	Health Education	GM	1977	35,138	9,669,270	287,778	0.03
AHG2	Student Union Addition	SU	2008	36,792	12,608,990	222,431	0.02
AHS3	CREST - Pole Barn Metal Bldg (CREST Stg)	WH	2008	1,739	530,930	8,045	0.02
AHS4	CREST - Burn Building	CL	2003	13,350	8,308,770	121,957	0.01
AHGM	Grounds Maintenance	WH	2008	3,494	1,066,750	10,484	0.01
AHH1	Weightlifting & Classroom Addition	GM	2010	12,195	3,819,840	16,458	0.00
AHGCS	Grounds Covered Storage	WH	2008	4,036	1,232,230	0	0.00
AHSD	Salt Dome	WH	2008	987	162,570	0	0.00
AHSI	Auburn Hills Campus Site	SI	1970			1,992,099	
AUBURN HILLS CAMPUS TOTALS			1984	627,928	\$200,401,410	\$54,329,820	0.27

OAKLAND COMMUNITY COLLEGE  
Facility Condition Assessment  
*Executive Summary*



ASSET CODE	NAME	ASSET USE	YEAR BUILT	GSF	CRV	TOTAL PROJECT COSTS	FCNI
DOMH	Doris Mosher Foundation House	OF	1925	4,889	\$1,684,500	\$556,854	0.33
DOGB	George A. Bee Administration Ctr	OF	1965	26,230	\$8,195,040	\$2,124,350	0.26
DISTRICT OFFICE TOTALS			1959	31,119	\$9,879,540	\$2,681,204	0.27
HLHH	Highland Hall	CL	1928	68,741	\$21,077,370	\$11,518,112	0.55
HLPE	Physical Education	GM	1977	35,098	\$9,658,270	\$4,422,748	0.46
HLMB	Metal Building (Old Salt Storage)	WH	1998	1,200	\$197,650	\$52,003	0.26
HLSC	Student Center	SU	1972	31,120	\$11,008,700	\$2,023,091	0.18
HLPAV	Pavilion	WH	1994	2,025	\$333,540	\$48,283	0.14
HLHOH	High Oaks Hall	CL	1929	46,822	\$14,770,940	\$1,774,654	0.12
HLGB1	Grounds Building	ST	1998	3,175	\$969,360	\$104,099	0.11
HLLH	Levinson Hall (Science)	LB	1977	42,327	\$18,699,960	\$1,683,874	0.09
HLCP	Central Plant	ST	1999	8,135	\$2,483,700	\$219,375	0.09
HLWH	Woodland Hall (North)	CL	1980	42,505	\$13,705,740	\$1,149,270	0.08
HLRC	Redwood Center	ST	1927	4,098	\$1,251,160	\$92,015	0.07
HLGB2	Grounds Covered Storage	WH	1998	3,997	\$658,350	\$25,697	0.04
HLPH	Pump House	PP	1965	1,500	\$247,070	\$8,909	0.04
HLWHA	Woodland Hall Adtn (South)	OF	2008	54,470	\$16,657,200	\$547,915	0.03
HLLHA	Levinson Hall Adtn (Health)	LB	2006	38,130	\$13,623,560	\$382,017	0.03
HLGB3	Salt Dome	WH	2005	900	148,240	0	0.00
HLSI	Highland Lakes Campus Site	SI	1977			\$1,638,015	
HIGHLAND LAKES CAMPUS TOTALS			1970	383,343	\$125,342,570	\$25,690,077	0.20
ORH	Community Activity	GM	1977	70,357	18,410,320	6,929,531	0.38
ORF	Classroom Building F	CL	1967	28,280	9,412,430	2,903,747	0.31
ORK	Martin L. King Jr. Library	LY	1967	40,181	12,704,430	3,809,369	0.30
ORM	Administration	OF	1967	27,383	8,555,270	2,341,508	0.27
ORL	Arts Building	CL	1967	28,967	9,345,620	2,510,465	0.27
ORD	Classroom Building D	LB	1967	28,561	10,678,820	2,666,689	0.25
ORN	Grounds Garage	ST	1972	4,008	1,223,680	298,945	0.24
ORA	Classroom Building A & Adtn	LB	1967	36,363	11,725,250	2,672,060	0.23
ORB	Classroom Building B	LB	1967	26,555	9,928,780	2,203,979	0.22
ORJ	Tirrell Hall	SU	1967	118,364	37,184,050	7,740,780	0.21
ORG	Classroom Building G	CL	1967	26,781	8,913,520	1,627,139	0.18
ORE	Power House	PP	1967	17,581	5,132,950	920,884	0.18
ORT	Smith Theatre	TH	1982	12,633	4,777,040	699,440	0.15
ORC	Classroom Building C	LB	1967	26,627	11,049,140	1,574,580	0.14
ORP	Pump House	WH	1967	1,060	323,630	0	0.00
ORSI	Orchard Ridge Campus Site	SI	1967			2,271,493	
ORCHARD RIDGE CAMPUS TOTALS			1969	492,641	\$159,041,300	\$41,170,609	0.26

OAKLAND COMMUNITY COLLEGE  
Facility Condition Assessment  
*Executive Summary*



ASSET CODE	NAME	ASSET USE	YEAR BUILT	GSF	CRV	TOTAL PROJECT COSTS	FCNI
ROD	Fine Arts	CL	1980	30,160	\$9,148,250	\$5,411,891	0.59
ROE	Lila R Jones-Johnson Theater	TH	1980	30,750	\$10,451,280	\$5,242,491	0.50
ROA1	Classroom	CL	1980	28,443	\$9,466,680	\$4,430,008	0.47
ROG	Grounds Building	WH	1935	2,752	\$840,210	\$240,911	0.29
ROB	Administration	CL	1980	38,036	\$12,264,710	\$3,086,323	0.25
ROM	Mall	OF	1980	29,562	\$9,236,060	\$1,475,846	0.16
ROC	Learning Resources Center	LY	1980	20,188	\$6,947,900	\$902,419	0.13
ROPS1	Parking Structure - North	PK	1983	155,975	\$6,337,260	\$689,465	0.11
ROA2	Classroom Addition	CL	1999	21,080	\$7,398,870	\$793,735	0.11
ROP	Power House	PP	1982	3,926	\$2,698,650	\$288,871	0.11
ROPS2	Parking Structure - South	PK	1999	175,000	\$7,087,500	\$671,437	0.09
ROSI	Royal Oak Campus Site	SI	1980			\$247,352	
ROYAL OAKS CAMPUS TOTALS			1988	535,872	\$81,877,370	\$23,480,749	0.29
SFSF2	Southfield - Building A Addition	LY	1999	10,882	4,516,430	749,856	0.17
SFSF1	Southfield - Building A	CL	1979	81,322	24,704,000	2,642,825	0.11
SFSF3	Southfield - Building B	LB	2010	71,800	32,880,090	370,145	0.01
SFSI	Southfield Campus Site	SI	1979			144,558	
SOUTHFIELD TOTALS			1994	164,004	\$62,100,520	\$3,907,383	0.06
GRAND TOTALS				2,241,890	\$640,509,380	\$151,259,842	0.24



## 2.7 Summary of Average Age and Facility Use Types

YEAR	# OF FACILITIES	% OF GSF	GSF	AVG. AGE
Pre-1960	5	5.7	127,302	84
1960 - 1969	14	19.4	434,433	45
1970 - 1979	13	26.1	585,820	38
1980 - 1989	13	21.4	480,435	31
1990 - 1999	11	12.5	280,883	11
2000 - Present	22	14.9	333,017	5
<b>TOTALS</b>	<b>78</b>	<b>100.0%</b>	<b>2,241,890</b>	<b>32</b>

ASSET TYPE CODE	DESCRIPTION	# OF ASSETS	% OF GSF	GSF
CL	Classroom / Academic	23	38.8	870,860
DM	Dormitory / Apartments	1	0.2	3,415
GM	Gymnasium / Athletics	4	6.8	152,788
GR	Greenhouse	1	0.1	1,991
LB	Laboratory	7	12.1	270,363
LY	Library	3	3.2	71,251
OF	Office / Administrative	8	8.1	182,336
PK	Parking / Garage	2	14.8	330,975
PP	Physical Plant / Utility	4	1.6	36,305
RS	Residential / Single Family	3	0.3	6,573
RT	Retail	2	1.5	32,909
SI	Site	5	NA	NA
ST	Shops / Trades	4	0.9	19,416
SU	Student Union	3	8.3	186,276
TH	Theater / Auditorium	2	1.9	43,383
WH	Warehouse / Storage / Utility	11	1.5	33,049
<b>TOTALS</b>		<b>83</b>	<b>100.0%</b>	<b>2,241,890</b>

## Classroom Utilization

Fall 2014 classroom utilization is based on 30 count seats for enhanced classrooms. The morning is from 8:00am – 11:55am; afternoon 12:00pm – 5:55pm; evening 6:00pm – 9:55pm.

### Auburn Hills:

Morning	Monday – Thursday	44%
Afternoon	Monday – Thursday	37%
Evening	Monday – Thursday	51%
	Friday	7%
	Saturday	3%

### Highland Lakes:

Morning	Monday – Thursday	42%
Afternoon	Monday – Thursday	32%
Evening	Monday – Thursday	46%
	Friday	10%

### Orchard Ridge:

Morning	Monday – Thursday	71%
	Friday	35%
	Saturday	14%
Afternoon	Monday – Thursday	72%
	Friday	24%
Evening	Monday – Thursday	65%

### Royal Oak:

Morning	Monday – Thursday	55%
Afternoon	Monday – Thursday	53%
Evening	Monday – Thursday	55%
	Friday/Saturday	15%

### Southfield:

Morning	Monday – Thursday	45%
Afternoon	Monday – Thursday	30%
Evening	Monday – Thursday	45%
	Friday/Saturday	15%

# Mandated Facility Standards & Space Allocation by Campus

Below are the mandated facility standards for specific programs and the campuses square footage distribution for the program areas:

- Ceramics – MIOSHA
- Culinary – State/County Health Department
- Photo (analogue) – MIOSHA
- All Science Labs – MIOSHA
- Auto and Body Lab – DEQ, EPA, MIOSHA
- Nursing – MIOSHA
- Radiation Therapy Technology – MIOSHA & Equipment Certification
- Respiratory Therapy – MIOSHA
- Surgical Technology - MIOSHA

## *Auburn Hills*

- Advanced Engineering & Technology 76,436 Sq. Ft.
- Emergency Services 2,374
- Humanities 10,481
- Life Science 32,015
- Physical Science 1,215

## *Highland Lake*

- Dental 7,500 Sq. Ft.
- Nursing 6,340
- Massage Therapy 1,132
- Medical Assist 3,380

## *Orchard Ridge*

- Life Science 26,627 Sq. Ft.
- Business Administration 28,280
- Performing Arts 28,967
- Culinary 85,500
- Humanities 9,870
- Learning Resources 22,953
- Physical Education 46,765
- Computer Information Systems 6,789

## *Royal Oak*

- Ceramics 7,000 Sq. Ft.
- CIS & Court Reporting 5,800
- Management Technology 7,500
- Photography 5,800

### *Southfield*

➤ All Science Labs	15,500 Sq. Ft.
➤ Diagnostic Medical Sonography	750
➤ Nursing	5,500
➤ Radiation Therapy Technology	1,750
➤ Respiratory Therapy	1,650
➤ Surgical Technology	1,650

## **Enterprise-Wide Energy Plan**

A strategy is being developed to replace the current ad hoc energy plan with a comprehensive enterprise-wide energy management program. Currently the energy audits have not been completed for all campuses. The timetable for this is to be determined and will be part of the new energy management program.

## **Land owned by Oakland Community College**

Below is the property that OCC possesses along with its acreage. At this time OCC has the capacity for future development.

➤ Auburn Hills Campus, Auburn Hills	170 acres
➤ Highland Lakes Campus, Waterford	157 acres
➤ Orchard Ridge Campus, Farmington Hills	147 acres
➤ Royal Oak Campus, Royal Oak	7 acres
➤ Southfield Campus, Southfield	31 acres
➤ District Office, Bloomfield Hills	8 acres

OCC does not have any State Building Authority leases.

# **Section V**

## **Implementation Plan**

**The Five-Year Capital Outlay Plan should identify the schedule, by which the institution proposes to address major capital deficiencies, and:**

- a. Prioritize major capital projects requested from the State, including a brief project description and estimated cost, in the format provided. (Adjust previously developed or prior year's figures utilizing industry standard CPI indexes where appropriate).**

Due to significant changes in our local economic landscape, OCC has redirected its focus as an institution and we will be presenting a new project for consideration in the 2016-2017 process.

- b. If applicable, provide an estimate relative to the institution's current deferred maintenance backlog. Define the impact of addressing deferred maintenance and structural repairs, including programmatic impact, immediately versus over the next five years.**

Refer to the Major Maintenance and Renovation Priorities document contained on next page.

- c. Include the status of on-going projects financed with State Building Authority resources and explain how completion coincides with the overall Five-year Capital Outlay Plan.**

There are no on-going projects financed with the State Building Authority at this time.

- d. Identify to the extent possible, a rate of return on planned expenditures. This could be expressed as operations "savings" that a planned capital expenditure would yield in future years.**

Not applicable.

- e. Where applicable, consider alternatives to new infrastructure, such as distance learning.**

Currently offer a variety of distance learning classes.

- f. Identify a maintenance schedule for major maintenance items in excess of \$1,000,000 for fiscal year 2017 through fiscal year 2021.**

Refer to the Major Maintenance and Renovation Priorities document contained on next page.

- g. Identify the amount on non-routine maintenance institution has budgeted for in its current fiscal year and relevant sources of financing.**

Refer to the Major Maintenance and Renovation Priorities document contained on next page. Sources of financing are funded from the capital operating budget.

	Title	Project Number	Priority Class		Estimated Project Cost	Project Class		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
A - Building	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	AHAEL01	2	Electrical	\$165,228	Plant Adaption										\$ 165,227.98	
	CENTRAL TRANSITION STAIR RECONSTRUCTION	AHAFS03	2	Fire/Life Safety	\$119,351	Plant Adaption										\$ 119,350.89	
	INTERIOR DOOR UPGRADES	AHAAC01	3	Accessibility	\$23,760	Plant Adaption		\$23,760									
	INTERIOR LIGHTING UPGRADE	AHAEL03	3	Electrical	\$553,415	Deferred Maintenance		\$553,415									
	BUILDING EXTERIOR REFURBISHING	AHAES01	3	Exterior Structure	\$118,811	Deferred Maintenance					\$118,811						
	EXTERIOR DOOR REPLACEMENT	AHAES02	3	Exterior Structure	\$261,997	Deferred Maintenance					\$261,997						
	HVAC SYSTEM REPLACEMENT	AHAHV01	3	HVAC	\$3,957,629	Deferred Maintenance		\$3,957,629									
	REPLACE UNITARY HVAC SYSTEMS	AHAHV02	3	HVAC	\$188,880	Deferred Maintenance		\$188,880									
	COMPUTER ROOM AC UNIT REPLACEMENT	AHAHV03	3	HVAC	\$133,342	Deferred Maintenance		\$133,342									
	REFINISH FLOORING	AHAIS01	3	Interior Finishes/Systems	\$813,721	Deferred Maintenance		\$813,721									
	REFINISH WALLS	AHAIS02	3	Interior Finishes/Systems	\$220,813	Deferred Maintenance											
	REFINISH CEILINGS	AHAIS03	3	Interior Finishes/Systems	\$367,921	Deferred Maintenance											
	REPLACE INTERIOR DOORS	AHAIS04	3	Interior Finishes/Systems	\$107,730	Deferred Maintenance		\$107,730									
	RESTROOM RENOVATION	AHAIS05	3	Interior Finishes/Systems	\$115,151	Deferred Maintenance		\$115,151									
	SITE PAVING UPGRADES	AHASI01	3	Site	\$114,787	Deferred Maintenance					\$114,787						
	COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION	AHAVT01	3	Vertical Transportation	\$330,824	Deferred Maintenance											\$330,824
	BUILT-UP ROOF REPLACEMENT	AHAES04	3	Exterior Structure	\$999,896	Capital Renewal				\$999,896							
	REPLACE 277/480 V SWITCHGEAR AND DISTRIBUTION PANEL ASSEMBLY	AHAEL02	4	Electrical	\$87,056	Capital Renewal		\$87,056									
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	AHAEL04	4	Electrical	\$1,938,730	Capital Renewal		\$1,938,730									
	WINDOW REPLACEMENT	AHAES03	4	Exterior Structure	\$230,323	Capital Renewal					\$230,323						
Site	FIRE ALARM SYSTEM REPLACEMENT	AHAFS01	4	Fire/Life Safety	\$385,935	Capital Renewal										\$ 385,935.28	
	REPLACE SPRINKLER HEADS	AHAFS02	4	Fire/Life Safety	\$77,884	Capital Renewal										\$ 77,883.68	
	WATER SUPPLY PIPING REPLACEMENT	AHAPL01	4	Plumbing	\$785,057	Capital Renewal		\$785,057									
	DRAIN PIPING REPLACEMENT	AHAPL02	4	Plumbing	\$1,175,946	Capital Renewal		\$1,175,946									
	PARKING AND ROADS REPAIR ALLOWANCE	AHSISI03	3	Site	\$496,911	Deferred Maintenance		\$496,911									
	TENNIS COURT RESURFACING	AHSIES01	3	Exterior Structure	\$64,872	Capital Renewal		\$64,872									
	GENERAL CONCRETE SIDEWALK REPAIR ALLOWANCE	AHSISI01	3	Site	\$46,365	Capital Renewal											\$46,365
	CREST CONCRETE SIDEWALK REPAIR ALLOWANCE	AHSISI02	3	Site	\$9,180	Capital Renewal		\$9,180									
	CREST PARKING AND ROADS REPAIR ALLOWANCE	AHSISI04	3	Site	\$27,591	Capital Renewal		\$27,591									
	LANDSCAPING REFURBISHING ALLOWANCE	AHSISI05	3	Site	\$165,536	Capital Renewal					\$165,536						
B - Building	SELECTIVE PARKING LOT AND ROAD REPAVING	AHSISI06	4	Site	\$1,259,964	Capital Renewal								\$1,259,964			
	RESTROOM RENOVATIONS	AHBAC01	2	Accessibility	\$93,352	Plant Adaption		\$93,352									
	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	AHBEL01	2	Electrical	\$99,128	Plant Adaption										\$ 99,128.23	
	INTERIOR DOOR UPGRADES	AHBAC02	3	Accessibility	\$27,452	Plant Adaption									\$27,452		
	CENTRAL STAIR HANDRAIL UPGRADES	AHBAC03	3	Accessibility	\$1,742	Plant Adaption				\$1,742							
	INTERIOR LIGHTING UPGRADE	AHBEL02	3	Electrical	\$81,365	Deferred Maintenance					\$81,365						
	SITE PAVING REPAIRS	AHBSI01	3	Site	\$9,564	Deferred Maintenance					\$9,564						
	EXTERIOR DOOR REPLACEMENTS	AHBES01	3	Exterior Structure	\$96,235	Capital Renewal							\$96,235				
	BUILT-UP ROOF REPLACEMENT	AHBES03	3	Exterior Structure	\$239,731	Capital Renewal					\$239,731						
	REFINISH FLOORING	AHBIS01	3	Interior Finishes/Systems	\$326,583	Capital Renewal								\$326,583			
	REFINISH WALLS	AHBIS02	3	Interior Finishes/Systems	\$95,473	Capital Renewal								\$95,473			
	REFINISH CEILINGS	AHBIS03	3	Interior Finishes/Systems	\$256,168	Capital Renewal								\$256,168			
	KITCHENETTE UPGRADE	AHBIS04	3	Interior Finishes/Systems	\$11,039	Capital Renewal								\$11,039			
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	AHBEL03	4	Electrical	\$768,684	Capital Renewal									\$768,684		
	WINDOW REPLACEMENT	AHBES02	4	Exterior Structure	\$614,196	Capital Renewal									\$614,196		
	FIRE ALARM SYSTEM REPLACEMENT	AHBFS01	4	Fire/Life Safety	\$127,181	Capital Renewal										\$ 127,180.83	
	REPLACE SPLIT DX SYSTEMS	AHBHV01	4	HVAC	\$12,054	Capital Renewal					\$12,054						

## Major Maintenance and Renovation Priorities

Title		Project Number	Priority Class	Estimated Project Cost		Project Class	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
	WATER SUPPLY PIPING REPLACEMENT	AHBPL01	4	Plumbing	\$237,467	Capital Renewal						\$237,467					
	DRAIN PIPING REPLACEMENT	AHBPL02	4	Plumbing	\$355,456	Capital Renewal						\$355,456					
	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	AHCEL01	2	Electrical	\$114,278	Plant Adaption									\$ 114,278.32		
C - Building	FIRE SPRINKLER SYSTEM EXTENSION	AHCF502	2	Fire/Life Safety	\$92,011	Plant Adaption				\$92,011							
	SELECTIVE INTERIOR DOOR HARDWARE UPGRADES	AHCAC01	3	Accessibility	\$15,794	Plant Adaption		\$15,794									
	LAB FLOORING UPGRADES	AHCIS01	3	Interior Finishes/Systems	\$511,540	Plant Adaption		\$511,540									
	INTERIOR LIGHTING UPGRADE	AHCEL03	3	Electrical	\$282,297	Deferred Maintenance		\$282,297									
	FUME HOOD REPLACEMENT	AHCHV02	3	HVAC	\$542,542	Deferred Maintenance		\$542,542									
	LABORATORY CASEWORK UPGRADES	AHCIS05	3	Interior Finishes/Systems	\$841,334	Deferred Maintenance		\$841,334									
	BUILT-UP ROOF REPLACEMENT	AHCES04	3	Exterior Structure	\$462,523	Capital Renewal				\$462,523							
	STANDARD CARPETING UPGRADES	AHCIS02	3	Interior Finishes/Systems	\$288,874	Capital Renewal				\$288,874							
	STANDARD INTERIOR WALL REFINISHING	AHCIS03	3	Interior Finishes/Systems	\$104,739	Capital Renewal				\$104,739							
	ACOUSTICAL CEILING SYSTEM UPGRADES	AHCIS04	3	Interior Finishes/Systems	\$293,199	Capital Renewal				\$293,199							
	SECOND FLOOR RESTROOM RENOVATIONS	AHCIS06	3	Interior Finishes/Systems	\$120,986	Capital Renewal				\$120,986							
	REPLACE 277/480 V SWITCHGEAR AND DISTRIBUTION PANEL ASSEMBLY	AHCEL02	4	Electrical	\$32,646	Capital Renewal		\$32,646									
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	AHCEL04	4	Electrical	\$1,253,601	Capital Renewal		\$1,253,601									
	EXTERIOR SIDING REFURBISHING	AHCES01	4	Exterior Structure	\$80,969	Capital Renewal	\$80,969										
	SELECTIVE EXTERIOR DOOR REPLACEMENTS	AHCES02	4	Exterior Structure	\$40,507	Capital Renewal							\$40,507				
	SELECTIVE WINDOW UPGRADES	AHCES03	4	Exterior Structure	\$96,060	Capital Renewal							\$96,060				
	FIRE ALARM SYSTEM REPLACEMENT	AHCF501	4	Fire/Life Safety	\$206,995	Capital Renewal									\$ 206,995.46		
	HVAC SYSTEM REPLACEMENT	AHCHV01	4	HVAC	\$2,765,769	Capital Renewal		\$2,765,769									
	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	AHCLP01	4	Plumbing	\$40,668	Capital Renewal		\$40,668									
	WATER SUPPLY PIPING REPLACEMENT	AHCLP02	4	Plumbing	\$585,700	Capital Renewal		\$585,700									
	DRAIN PIPING REPLACEMENT	AHCLP03	4	Plumbing	\$877,423	Capital Renewal		\$877,423									
	REPLACE SUMP PUMPS	AHCLP04	4	Plumbing	\$11,957	Capital Renewal		\$11,957									
	D - Building	RESTROOM RENOVATION	AHDAC01	2	Accessibility	\$310,447	Plant Adaption	\$310,447									
		INSTALL EMERGENCY GENERATOR AND POWER NETWORK	AHDEL01	2	Electrical	\$110,934	Plant Adaption									\$ 110,934.20	
		FIRE SPRINKLER SYSTEM INSTALLATION	AHDFS02	2	Fire/Life Safety	\$575,346	Plant Adaption					\$575,346					
		INTERIOR STAIR TREAD UPGRADES	AHDAC02	3	Accessibility	\$27,089	Deferred Maintenance				\$27,089						
INTERIOR LIGHTING UPGRADE		AHDEL04	3	Electrical	\$88,453	Deferred Maintenance					\$88,453						
RESTORE BRICK VENEER		AHDES01	3	Exterior Structure	\$67,037	Deferred Maintenance				\$67,037							
EXTERIOR DOOR REPLACEMENT		AHDES02	3	Exterior Structure	\$72,875	Deferred Maintenance							\$72,875				
EXTERIOR GLAZING REPLACEMENTS		AHDES03	3	Exterior Structure	\$704,258	Deferred Maintenance								\$704,258			
REFINISH CEILINGS		AHDIS03	3	Interior Finishes/Systems	\$387,468	Deferred Maintenance					\$387,468						
DOMESTIC WATER HEATER REPLACEMENT		AHDPL01	3	Plumbing	\$5,964	Deferred Maintenance									\$ 5,963.53		
COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION		AHDVT01	3	Vertical Transportation	\$330,824	Deferred Maintenance						\$330,824					
STANDARD FLOORING UPGRADES		AHDIS01	3	Interior Finishes/Systems	\$532,127	Capital Renewal					\$532,127						
REFINISH WALLS		AHDIS02	3	Interior Finishes/Systems	\$169,575	Capital Renewal					\$169,575						
REPLACE INTERIOR DOORS		AHDIS04	3	Interior Finishes/Systems	\$176,994	Capital Renewal					\$176,994						
REPLACE PRIMARY SERVICE TRANSFORMER		AHDEL02	4	Electrical	\$63,066	Capital Renewal									\$ 63,065.60		
REPLACE 277/480 VOLT SWITCHBOARD		AHDEL03	4	Electrical	\$43,528	Capital Renewal									\$ 43,527.92		
UPGRADE ELECTRICAL DISTRIBUTION NETWORK		AHDEL05	4	Electrical	\$1,005,667	Capital Renewal									\$ 1,005,667.25		





	Title	Project Number	Priority Class	Estimated Project Cost	Project Class	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	SELECTIVE BRICK REPOINTING	AHF2ES01	4	Exterior Structure	\$47,298	Capital Renewal								\$ 47,297.99	
	EXTERIOR DOOR REPLACEMENTS	AHF2ES02	4	Exterior Structure	\$199,406	Capital Renewal								\$ 199,406.35	
	FIRE ALARM SYSTEM REPLACEMENT	AHF2FS01	4	Fire/Life Safety	\$183,919	Capital Renewal								\$ 183,918.58	
	PUMP REPLACEMENT	AHF2HV02	4	HVAC	\$28,909	Capital Renewal								\$ 28,909.24	
	GENERAL FLOORING UPGRADES	AHF2IS01	4	Interior Finishes/Systems	\$541,753	Capital Renewal			\$541,753						
	ACOUSTICAL CEILING UPGRADES	AHF2IS03	4	Interior Finishes/Systems	\$246,930	Capital Renewal							\$246,930		
	SIDEWALK AND RAMP REPAIRS	AHF2SI01	4	Site	\$22,164	Capital Renewal				\$22,164					
G - Building	BUILT-UP ROOF REPLACEMENT	AHG1ES02	3	Exterior Structure	\$267,787	Capital Renewal								\$ 267,787.03	
	WINDOW REPLACEMENT	AHG1ES01	4	Exterior Structure	\$239,182	Capital Renewal								\$ 239,182.11	
	STANDARD FLOORING UPGRADES	AHG1IS01	4	Interior Finishes/Systems	\$276,876	Capital Renewal								\$ 276,875.83	
	STANDARD WALL REFINISHING	AHG1IS02	4	Interior Finishes/Systems	\$87,921	Capital Renewal								\$ 87,920.99	
	STANDARD FLOORING UPGRADES	AHG2IS01	4	Interior Finishes/Systems	\$120,401	Capital Renewal								\$ 120,401.21	
	SELECTIVE INTERIOR WALL REFINISHING	AHG2IS02	4	Interior Finishes/Systems	\$113,724	Capital Renewal								\$ 113,723.76	
	REPLACE CONTROLS AIR COMPRESSOR	AHHHV01	3	HVAC	\$8,032	Deferred Maintenance					\$8,032				
H - Building	REFINISH WALLS	AHH1IS01	4	Interior Finishes/Systems	\$17,323	Capital Renewal								\$ 17,323.20	
	REFINISH FLOORING	AHHIS01	4	Interior Finishes/Systems	\$20,111	Capital Renewal								\$ 20,111.48	
	REFINISH WALLS	AHHIS02	4	Interior Finishes/Systems	\$44,140	Capital Renewal								\$ 44,139.93	
	DOMESTIC WATER HEATER REPLACEMENT	AHHPL01	4	Plumbing	\$19,217	Capital Renewal								\$ 19,217.08	
	WATER SUPPLY PIPING REPLACEMENT	AHHPL02	4	Plumbing	\$84,723	Capital Renewal								\$ 84,722.91	
	DRAIN PIPING REPLACEMENT	AHHPL03	4	Plumbing	\$126,684	Capital Renewal								\$ 126,684.06	
	INTERIOR LIGHTING UPGRADE	AHJEL01	3	Electrical	\$56,809	Deferred Maintenance								\$ 56,808.62	
J - Building	HEATING AND VENTILATING UNIT REPLACEMENT	AHJHV01	3	HVAC	\$137,008	Deferred Maintenance								\$ 137,007.70	
	SITE PAVING UPGRADES	AHJSI01	3	Site	\$5,313	Deferred Maintenance			\$5,313						
	EXTERIOR DOOR REPLACEMENT	AHJES01	3	Exterior Structure	\$102,077	Capital Renewal								\$ 102,077.30	
	WINDOW REPLACEMENT	AHJES02	4	Exterior Structure	\$308,574	Capital Renewal								\$ 308,574.43	
	BUILT-UP ROOF REPLACEMENT	AHJES03	4	Exterior Structure	\$58,515	Capital Renewal								\$ 58,515.19	
	REFINISH FLOORING	AHJIS01	4	Interior Finishes/Systems	\$129,468	Capital Renewal								\$ 129,467.74	
	REFINISH WALLS	AHJIS02	4	Interior Finishes/Systems	\$46,228	Capital Renewal								\$ 46,227.83	
K - Building	ELECTRICAL SYSTEM REPAIRS	AHKELO2	3	Electrical	\$7,395	Deferred Maintenance								\$ 7,394.70	
	DOMESTIC WATER HEATER REPLACEMENT	AHKPL01	3	Plumbing	\$2,982	Deferred Maintenance								\$ 2,981.77	
	SITE PAVING UPGRADES	AHKSI01	3	Site	\$8,501	Deferred Maintenance			\$8,501						
	BUILT-UP ROOF REPLACEMENT	AHKES01	3	Exterior Structure	\$49,288	Capital Renewal			\$49,288						
	REFINISH FLOORING	AHKIS01	3	Interior Finishes/Systems	\$38,230	Capital Renewal									\$38,230
	REFINISH WALLS	AHKIS02	3	Interior Finishes/Systems	\$4,828	Capital Renewal									\$4,828
	WARMING KITCHEN CABINETRY UPGRADE	AHKIS03	3	Interior Finishes/Systems	\$22,646	Capital Renewal									\$22,646
M-TEC	INTERIOR LIGHTING UPGRADE	AHKELO1	4	Electrical	\$37,092	Capital Renewal									\$37,092
	ELECTRICAL SYSTEM REPAIRS	AHMT2EL01	3	Electrical	\$9,014	Capital Renewal			\$9,014						
	CONCRETE PANEL RECAULKING	AHMT2ES01	3	Exterior Structure	\$575,476	Capital Renewal			\$575,476						
	SELECTIVE FLOORING UPGRADES	AHMT2IS01	3	Interior Finishes/Systems	\$18,626	Capital Renewal			\$18,626						
	SELECT WALL REFINISHING	AHMT2IS02	3	Interior Finishes/Systems	\$4,665	Capital Renewal			\$4,665						
	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	AHMT1EL01	2	Electrical	\$65,248	Plant Adaption								\$ 65,247.81	
	SITE PAVING UPGRADES	AHMT1SI01	3	Site	\$8,501	Deferred Maintenance			\$8,501						
	ELECTRICAL SYSTEM REPAIRS	AHMT1EL02	3	Electrical	\$59,992	Capital Renewal			\$59,992						
	EXTERIOR FACADE UPGRADES	AHMT1ES01	3	Exterior Structure	\$45,528	Capital Renewal			\$45,528						
	FIRE ALARM SYSTEM REPLACEMENT	AHMT1FS01	3	Fire/Life Safety	\$101,569	Capital Renewal								\$ 101,568.53	
	REFINISH FLOORING	AHMT1IS01	3	Interior Finishes/Systems	\$238,529	Capital Renewal			\$238,529						
	EXTERIOR DOOR REPLACEMENT	AHMT1ES02	4	Exterior Structure	\$40,854	Capital Renewal								\$ 40,854.18	
	BUILT-UP ROOF REPLACEMENT	AHMT1ES03	4	Exterior Structure	\$215,758	Capital Renewal								\$ 215,758.17	
	REPLACE SPRINKLER HEADS	AHMT1FS02	4	Fire/Life Safety	\$20,497	Capital Renewal								\$ 20,497.04	
	UPGRADE TRANE AND LIEBERT UNITS	AHMT1HV01	4	HVAC	\$1,289,325	Capital Renewal	\$1,289,325								
	HVAC CONTROL SYSTEM UPGRADE	AHMT1HV02	4	HVAC	\$145,208	Capital Renewal	\$145,208								
	REFINISH WALLS	AHMT1IS02	4	Interior Finishes/Systems	\$95,310	Capital Renewal			\$95,310						
	REFINISH CEILINGS	AHMT1IS03	4	Interior Finishes/Systems	\$204,538	Capital Renewal			\$204,538						
	EXTERIOR DOOR REPLACEMENT	AHMT2ES02	4	Exterior Structure	\$12,717	Capital Renewal								\$ 12,717.14	
	BUILT-UP ROOF REPLACEMENT	AHMT2ES03	4	Exterior Structure	\$167,737	Capital Renewal						\$167,737			

	Title	Project Number	Priority Class	Estimated Project Cost	Project Class		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	FIRE ALARM SYSTEM REPLACEMENT	AHMT2FS01	4	Fire/Life Safety	\$40,018	Capital Renewal									\$ 40,017.88	
	REPLACE SPRINKLER HEADS	AHMT2FS02	4	Fire/Life Safety	\$8,076	Capital Renewal									\$ 8,075.80	
	FURNACE REPLACEMENT	AHMT2HV01	4	HVAC	\$15,048	Capital Renewal	\$15,048									
	STAFF AREA CEILING UPGRADES	AHMT2IS03	4	Interior Finishes/Systems	\$40,330	Capital Renewal				\$40,330						
T - Building	INTERIOR STAIR TOWER HANDRAIL UPGRADES	AHTAC01	3	Accessibility	\$3,484	Plant Adaption	\$3,484									
	INTERIOR LIGHTING UPGRADE	AHTEL03	3	Electrical	\$397,116	Deferred Maintenance	\$397,116									
	ELECTRICAL SYSTEM REPAIRS	AHTEL04	3	Electrical	\$80,027	Deferred Maintenance	\$80,027									
	EXTERIOR DOOR REPLACEMENT	AHTES02	3	Exterior Structure	\$50,758	Deferred Maintenance									\$ 50,757.55	
	BREEZEWAY ROOF UPGRADE	AHTES05	3	Exterior Structure	\$60,839	Deferred Maintenance	\$60,839									
	REPLACE SPRINKLER HEADS	AHTFS01	3	Fire/Life Safety	\$28,305	Deferred Maintenance									\$ 28,305.10	
	HVAC SYSTEM REPLACEMENT	AHTHV01	3	HVAC	\$1,946,336	Deferred Maintenance	\$1,946,336									
	REFINISH FLOORING	AHTIS01	3	Interior Finishes/Systems	\$104,328	Deferred Maintenance				\$104,328						
	REFINISH WALLS	AHTIS02	3	Interior Finishes/Systems	\$87,056	Deferred Maintenance				\$87,056						
	REFINISH CEILINGS	AHTIS03	3	Interior Finishes/Systems	\$175,720	Deferred Maintenance				\$175,720						
	COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION	AHTVT01	3	Vertical Transportation	\$268,556	Deferred Maintenance				\$268,556						
	SELECTIVE WINDOW UPGRADES AND SHADING FILM APPLICATION	AHTES03	3	Exterior Structure	\$167,756	Capital Renewal	\$167,756									
	RESTROOM RENOVATION	AHTAC02	4	Accessibility	\$78,606	Capital Renewal	\$78,606									
	REPLACE 277/480 V SWITCHGEAR AND	AHTEL02	4	Electrical	\$43,528	Capital Renewal	\$43,528									
	EXTERIOR SIDING REFURBISHING	AHTES01	4	Exterior Structure	\$52,788	Capital Renewal	\$52,788									
Greenhouse	GENERAL ROOFING UPGRADES	AHTES04	4	Exterior Structure	\$265,031	Capital Renewal				\$265,031						
	REPLACE SPLIT DX SYSTEMS	AHTHV02	4	HVAC	\$6,027	Capital Renewal	\$6,027									
	ELECTRICAL SYSTEM REPAIRS	AHLEL02	3	Electrical	\$1,595	Deferred Maintenance				\$1,595						
	FURNACE REPLACEMENT	AHLHV01	3	HVAC	\$3,762	Deferred Maintenance	\$3,762									
Grounds	INTERIOR LIGHTING UPGRADE	AHLEL01	3	Electrical	\$10,051	Capital Renewal				\$10,051						
	REFINISH WALLS	AHGMIS01	4	Interior Finishes/Systems	\$6,927	Capital Renewal									\$ 6,926.92	
Power House	DOMESTIC WATER HEATER REPLACEMENT	AHGMPL01	4	Plumbing	\$4,109	Capital Renewal									\$ 4,108.73	
	INTERIOR LIGHTING UPGRADE	AHPPEL02	3	Electrical	\$11,176	Deferred Maintenance									\$ 11,176.28	
	REFINISH WALLS	AHPIS01	3	Interior Finishes/Systems	\$29,231	Deferred Maintenance									\$ 29,230.89	
	DOMESTIC WATER HEATER REPLACEMENT	AHPPL01	3	Plumbing	\$8,217	Deferred Maintenance							\$8,217			
	REPLACE EMERGENCY GENERATOR	AHPPEL01	4	Electrical	\$20,068	Capital Renewal									\$ 20,067.88	
	RESTORE BRICK VENEER	AHPES01	4	Exterior Structure	\$19,845	Capital Renewal					\$19,845					
	SOUTH EXTERIOR DOOR REPLACEMENTS	AHPES02	4	Exterior Structure	\$9,108	Capital Renewal					\$9,108					
	BUILT-UP ROOF REPLACEMENT	AHPES03	4	Exterior Structure	\$100,055	Capital Renewal									\$ 100,055.15	
	FIRE ALARM SYSTEM REPLACEMENT	AHPFS01	4	Fire/Life Safety	\$49,006	Capital Renewal									\$ 49,006.15	
	REPLACE SPLIT DX SYSTEMS	AHPHV01	4	HVAC	\$6,027	Capital Renewal				\$6,027						
	LOCKER ROOM RENOVATION	AHPIS02	4	Interior Finishes/Systems	\$25,303	Capital Renewal							\$25,303			
	BUILT-UP ROOF REPAIR	AHS7ES02	2	Exterior Structure	\$1,637	Deferred Maintenance	\$1,637									
	INTERIOR WALL REFINISHING	AHS7IS01	3	Interior Finishes/Systems	\$1,843	Deferred Maintenance								\$1,843		
	MAIN ROOF REPLACEMENT	AHS7ES01	4	Exterior Structure	\$53,768	Capital Renewal					\$53,768					
Crest - Bank	REPLACE SPLIT DX SYSTEM	AHS7HV01	4	HVAC	\$10,451	Capital Renewal					\$10,451					
	STANDARD CEILING UPGRADES	AHS7IS02	4	Interior Finishes/Systems	\$14,846	Capital Renewal					\$14,846					
Crest - Burn Bldg	SELECT MASONRY REPOINTING	AHS4ES01	3	Exterior Structure	\$28,013	Capital Renewal				\$28,013						
	CONCRETE ROOF DECK RECOATING	AHS4ES02	4	Exterior Structure	\$33,007	Capital Renewal										\$33,007
	ELECTRICAL SYSTEM REPAIRS	AHS4EL01	4	Electrical	\$17,612	Capital Renewal					\$17,612					
	FIRE ALARM SYSTEM REPLACEMENT	AHS4FS01	4	Fire/Life Safety	\$49,198	Capital Renewal	\$49,198									
Crest - Cape Cod	FURNACE REPLACEMENT	AHS4HV01	4	HVAC	\$1,411	Capital Renewal					\$1,411					
	UPGRADE UNITARY HVAC SYSTEMS	AHS9HV01	4	HVAC	\$21,188	Plant Adaption					\$21,188					
	INTERIOR WALL REFINISHING	AHS9IS01	3	Interior Finishes/Systems	\$6,443	Deferred Maintenance					\$6,443					
	PITCHED ASPHALT SHINGLE ROOF REPLACEMENT	AHS9ES03	3	Exterior Structure	\$14,579	Capital Renewal					\$14,579					
	STANDARD CEILING REFINISHING	AHS9IS02	3	Interior Finishes/Systems	\$3,230	Capital Renewal					\$3,230					
	EXTERIOR SIDING REPLACEMENT	AHS9ES01	4	Exterior Structure	\$15,794	Capital Renewal									\$ 15,793.88	
	EXTERIOR DOOR AND STOOP REFURBISHING	AHS9ES02	4	Exterior Structure	\$14,971	Capital Renewal					\$14,971					
	SELECTIVE INTERIOR DOOR AND HARDWARE	AHS9IS03	4	Interior Finishes/Systems	\$6,544	Capital Renewal					\$6,544					
	DOMESTIC WATER HEATER REPLACEMENT	AHS9PLO1	4	Plumbing	\$4,109	Capital Renewal		\$4,109								

	Title	Project Number	Priority Class	Estimated Project Cost	Project Class		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Crest - Control Tower	FIRE ALARM SYSTEM INSTALLATION	AHS2FS01	2	Fire/Life Safety	\$4,982	Plant Adaption	\$4,982									
	REPLACE SPLIT DX SYSTEM	AHS2HV01	4	HVAC	\$13,464	Capital Renewal					\$13,464					
	REFINISH FLOORING	AHS2IS01	4	Interior Finishes/Systems	\$12,866	Capital Renewal					\$12,866					
	REFINISH WALLS	AHS2IS02	4	Interior Finishes/Systems	\$2,251	Capital Renewal					\$2,251					
	REFINISH CEILINGS	AHS2IS03	4	Interior Finishes/Systems	\$11,134	Capital Renewal					\$11,134					
Crest - Store	BUILT-UP ROOF REPAIR ALLOWANCE	AHS8ES03	2	Exterior Structure	\$1,861	Deferred Maintenance	\$1,861									
	EXTERIOR FACADE CLEANING	AHS8ES01	3	Exterior Structure	\$4,002	Deferred Maintenance				\$4,002						
	INTERIOR WALL REFINISHING	AHS8IS01	3	Interior Finishes/Systems	\$2,316	Capital Renewal					\$2,316					
	STANDARD ACOUSTICAL CEILING UPGRADES	AHS8IS02	3	Interior Finishes/Systems	\$24,743	Capital Renewal					\$24,743					
	BUILT-UP ROOF REPLACEMENT	AHS8ES02	4	Exterior Structure	\$56,091	Capital Renewal					\$56,091					
	UPGRADE UNITARY HVAC SYSTEMS	AHS8HV01	4	HVAC	\$40,099	Capital Renewal									\$ 40,099.25	
	ENTRY SIDEWALK REPAIR	AHS8SI01	4	Site	\$1,344	Capital Renewal	\$1,344									
Crest - Motel	FIRE ALARM SYSTEM INSTALLATION	AHS5FS01	3	Fire/Life Safety	\$12,585	Plant Adaption	\$12,585									
	EXTERIOR HOTEL DOOR REPLACEMENTS	AHS5ES01	3	Exterior Structure	\$14,671	Deferred Maintenance				\$14,671						
	REFINISH WALLS	AHS5IS01	3	Interior Finishes/Systems	\$7,291	Capital Renewal					\$7,291					
	REFINISH CEILINGS	AHS5IS02	3	Interior Finishes/Systems	\$13,475	Capital Renewal					\$13,475					
	SITE PAVING UPGRADES	AHS5SI01	3	Site	\$9,645	Capital Renewal	\$9,645									
	EXTERIOR LIGHTING REPLACEMENT	AHS5EL01	4	Electrical	\$3,228	Capital Renewal					\$3,228					
	UPGRADE NATURAL GAS FURNACE SYSTEM	AHS5HV01	4	HVAC	\$40,391	Capital Renewal									\$ 40,390.84	
	REPLACE INTERIOR DOORS	AHS5IS03	4	Interior Finishes/Systems	\$11,026	Capital Renewal					\$11,026					
Crest - Barn	OVERHEAD DOOR THRESHOLD REPAIR	AHS3ES01	2	Exterior Structure	\$4,638	Deferred Maintenance	\$4,638									
Crest - Ranch	FIRE ALARM SYSTEM INSTALLATION	AHS10FS01	2	Fire/Life Safety	\$6,965	Plant Adaption	\$6,965									
	EXTERIOR DOOR AND ENTRY STOOP UPGRADES	AHS10ES02	3	Exterior Structure	\$15,248	Deferred Maintenance					\$15,248					
	STANDARD INTERIOR WALL REFINISHING	AHS10IS01	3	Interior Finishes/Systems	\$6,818	Deferred Maintenance					\$6,818					
	PITCHED ASPHALT SHINGLE ROOF REPLACEMENT	AHS10ES03	3	Exterior Structure	\$26,550	Capital Renewal									\$ 26,550.20	
	PAINTED CEILING REFINISHING	AHS10IS02	3	Interior Finishes/Systems	\$3,083	Capital Renewal					\$3,083					
	EXTERIOR SIDING REPAINTING	AHS10ES01	4	Exterior Structure	\$10,137	Capital Renewal					\$10,137					
	UPGRADE UNITARY HVAC SYSTEMS	AHS10HV01	4	HVAC	\$21,123	Capital Renewal									\$ 21,123.07	
	INTERIOR DOOR REPAIR ALLOWANCE	AHS10IS03	4	Interior Finishes/Systems	\$10,638	Capital Renewal					\$10,638					
Crest - Training Center	REPLACE VARIABLE FREQUENCY DRIVES	AHS1EL01	3	Electrical	\$8,613	Capital Renewal									\$ 8,612.70	
	GENERAL ROOFING UPGRADES	AHS1ES02	3	Exterior Structure	\$170,844	Capital Renewal									\$ 170,843.67	
	FIRE ALARM SYSTEM REPLACEMENT	AHS1FS01	3	Fire/Life Safety	\$39,266	Capital Renewal									\$ 39,266.07	
	REPLACE SPLIT DX SYSTEM	AHS1HV02	3	HVAC	\$9,040	Capital Renewal									\$ 9,040.19	
	SELECTIVE FLOORING UPGRADES	AHS1IS01	3	Interior Finishes/Systems	\$61,904	Capital Renewal							\$61,904			
	INTERIOR WALL REFINISHING	AHS1IS02	3	Interior Finishes/Systems	\$20,586	Capital Renewal									\$ 20,585.58	
	GENERAL CEILING UPGRADES	AHS1IS03	3	Interior Finishes/Systems	\$56,176	Capital Renewal									\$ 56,176.02	
	DOMESTIC WATER HEATER REPLACEMENT	AHS1PL01	3	Plumbing	\$7,704	Capital Renewal									\$ 7,703.85	
	ENTRY DOOR REPLACEMENT	AHS1ES01	4	Exterior Structure	\$38,151	Capital Renewal									\$ 38,151.39	
	REPLACE AIR-COOLED CHILLER	AHS1HV01	4	HVAC	\$124,453	Capital Renewal									\$ 124,452.98	
	NATURAL GAS FURNACE REPLACEMENT	AHS1HV03	4	HVAC	\$7,524	Capital Renewal									\$ 7,523.78	
	HVAC CONTROL SYSTEM UPGRADE	AHS1HV04	4	HVAC	\$62,098	Capital Renewal									\$ 62,097.62	
Two Story	EXTERIOR DOOR AND ENTRY STOOP UPGRADES	AHS6ES02	3	Exterior Structure	\$17,374	Deferred Maintenance				\$17,374						
	STANDARD INTERIOR WALL REFINISHING	AHS6IS01	3	Interior Finishes/Systems	\$4,763	Deferred Maintenance						\$4,763				
	PITCHED ASPHALT SHINGLE ROOF REPLACEMENT	AHS6ES03	3	Exterior Structure	\$18,925	Capital Renewal									\$ 18,925.48	
	PAINTED CEILING REFINISHING	AHS6IS02	3	Interior Finishes/Systems	\$2,643	Capital Renewal					\$2,643					
	EXTERIOR SIDING REPAINTING	AHS6ES01	4	Exterior Structure	\$14,104	Capital Renewal						\$14,104				

Major Maintenance and Renovation Priorities

Crest -	Title	Project Number	Priority Class	Estimated Project Cost	Project Class		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
	REPLACE SPLIT DX SYSTEM	AHS6HV01	4	HVAC	\$13,935	Capital Renewal									\$ 13,934.53	
	INTERIOR DOOR REPAIR ALLOWANCE	AHS6IS03	4	Interior Finishes/Systems	\$8,317	Capital Renewal									\$ 8,316.74	
	DOMESTIC WATER HEATER REPLACEMENT	AHS6PL01	4	Plumbing	\$4,109	Capital Renewal									\$ 4,108.73	
	REPLACE SUMP PUMP	AHS6PL02	4	Plumbing	\$11,957	Capital Renewal									\$ 11,956.85	
Totals							\$19,601,076.89	\$7,765,380.70	\$2,114,878.08	\$5,562,979.22	\$2,320,978.77	\$2,241,142.09	\$2,799,940.57	\$2,475,442.74	\$11,624,876.81	\$512,992.70

**Plant / Program Adaption** - Expenditures required to adapt the physical plant to the evolving needs of the institution and to change codes or standards. These are expenditures beyond normal maintenance.

**Deferred Maintenance** - Refers to expenditures for repairs which were not accomplished as a part of normal maintenance or capital repair which have accumulated to the point that facility deterioration is evident and could impair the proper functioning of the facility. Costs estimated for deferred maintenance projects should include compliance with applicable codes, even if such compliance requires expenditures beyond those essential to affect the needed repairs. Deferred maintenance projects represent catch up expenses.

**Capital Renewal** - A subset of regular or normal facility maintenance which refers to major repairs or the replacement/rebuilding of major facility components (e.g. roof replacement at the end of its normal useful life is capital repair; roof replacement several years after its normal useful life is deferred maintenance)

Bloomfield, Michigan

Major Maintenance and Renovation Priorities

Title		Project Number	Priority	Class	Category	Cost	Project Class	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
Foundation House	FIRST FLOOR RESTROOM RENOVATION	DOMHAC01	2	Accessibility		\$11,669	Plant Adaption	\$11,669										
	PITCHED ASPHALT SHINGLE ROOF REPLACEMENT	DOMHES04	2	Exterior Structure		\$58,604	Deferred Maintenance	\$58,604										
	FIRE ALARM SYSTEM INSTALLATION	DOMHFS01	2	Fire/Life Safety		\$18,017	Plant Adaption	\$18,017										
	NEW SECONDARY EGRESS STAIR INSTALLATION	DOMHFS02	2	Fire/Life Safety		\$63,316	Plant Adaption	\$63,316										
	SELECTIVE DOOR HARDWARE UPGRADES	DOMHAC02	3	Accessibility		\$5,265	Plant Adaption				\$5,265							
	INTERIOR STAIR UPGRADES	DOMHAC03	3	Accessibility		\$10,446	Plant Adaption	\$10,446										
	INTERIOR LIGHTING UPGRADE	DOMHEL01	3	Electrical		\$67,126	Deferred Maintenance				\$67,126							
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	DOMHEL02	3	Electrical		\$114,183	Deferred Maintenance			\$114,183								
	EXTERIOR FACADE RESTORATION	DOMHES01	3	Exterior Structure		\$31,255	Deferred Maintenance	\$31,255										
	EXTERIOR DOOR UPGRADES	DOMHES02	3	Exterior Structure		\$20,895	Deferred Maintenance	\$20,895										
	SELECTIVE WINDOW REPLACEMENT	DOMHES03	3	Exterior Structure		\$7,216	Deferred Maintenance				\$7,216							
	REFINISH FLOORING	DOMHIS01	3	Interior Finishes/Systems		\$46,740	Capital Renewal				\$46,740							
	REFINISH WALLS	DOMHIS02	3	Interior Finishes/Systems		\$14,093	Capital Renewal				\$14,093							
	REFINISH CEILINGS	DOMHIS03	3	Interior Finishes/Systems		\$15,056	Capital Renewal				\$15,056							
	SELECTIVE INTERIOR DOOR REPLACEMENTS	DOMHIS04	3	Interior Finishes/Systems		\$7,350	Deferred Maintenance		\$7,350									
	SECOND FLOOR RESTROOM RENOVATION	DOMHIS05	3	Interior Finishes/Systems		\$17,504	Deferred Maintenance			\$17,504								
	WATER SUPPLY PIPING REPLACEMENT	DOMHPL01	3	Plumbing		\$21,596	Deferred Maintenance				\$21,596							
	DRAIN PIPING REPLACEMENT	DOMHPL02	3	Plumbing		\$32,320	Deferred Maintenance				\$32,320							
	BOILER REPLACEMENT	DOMHHV01	4	HVAC		\$8,412	Capital Renewal							\$8,412				
	REPLACE SPLIT DX SYSTEMS	DOMHHV02	4	HVAC		\$15,067	Capital Renewal									\$15,067		
District Office	RESTROOM AND STAFF LOCKER ROOM RENOVATION	DOGBAC01	3	Accessibility		\$132,655	Plant Adaption	\$132,655										
	INTERIOR DOOR SIGNAGE UPGRADES	DOGBAC02	3	Accessibility		\$4,875	Plant Adaption		\$4,875									
	INTERIOR LIGHTING UPGRADE	DOGBEL01	3	Electrical		\$65,391	Deferred Maintenance	\$65,391										
	SELECTIVE EXTERIOR DOOR REPLACEMENT	DOGBES02	3	Exterior Structure		\$25,434	Deferred Maintenance		\$25,434									
	BUILT-UP ROOF REPLACEMENT	DOGBES04	3	Exterior Structure		\$391,337	Capital Renewal	\$391,337										
	REPLACE SPRINKLER HEADS	DOGBFS02	3	Fire/Life Safety		\$19,507	Deferred Maintenance				\$19,507							
	GENERAL FLOORING UPGRADES	DOGBIS01	3	Interior Finishes/Systems		\$224,769	Capital Renewal			\$224,769								
	GENERAL INTERIOR WALL REFINISHING	DOGBIS02	3	Interior Finishes/Systems		\$90,710	Deferred Maintenance			\$90,710								
	ACOUSTICAL CEILING UPGRADES	DOGBIS03	3	Interior Finishes/Systems		\$194,724	Deferred Maintenance			\$194,724								
	DOMESTIC WATER HEATER REPLACEMENT	DOGBPL01	3	Plumbing		\$4,109	Capital Renewal				\$4,109							
	WATER SUPPLY PIPING REPLACEMENT	DOGBPL02	3	Plumbing		\$104,828	Deferred Maintenance				\$104,828							
	DRAIN PIPING REPLACEMENT	DOGBPL03	3	Plumbing		\$157,306	Deferred Maintenance				\$157,306							
	SITE PAVING MAINTENANCE	DOGBSI01	3	Site		\$83,171	Capital Renewal			\$83,171								
	ELECTRICAL SYSTEM REPAIRS	DOGBEL02	4	Electrical		\$22,541	Capital Renewal						\$22,541					
	MECHANICAL SCREEN WALL RESTORATION	DOGBES01	4	Exterior Structure		\$3,622	Capital Renewal					\$3,622						
	SELECTIVE WINDOW REPLACEMENTS	DOGBES03	4	Exterior Structure		\$115,313	Capital Renewal							\$115,313				
	FIRE ALARM SYSTEM REPLACEMENT	DOGBFS01	4	Fire/Life Safety		\$96,663	Capital Renewal									\$96,663		
	REPLACE UNITARY HVAC SYSTEMS	DOGBHV01	4	HVAC		\$365,736	Capital Renewal					\$365,736						
	COMPUTER ROOM AC UNIT REPLACEMENT	DOGBHV02	4	HVAC		\$133,342	Capital Renewal					\$133,342						
	Totals								\$803,585	\$37,660	\$725,060	\$495,161	\$502,701	\$22,541	\$123,725	\$15,067	\$96,663	\$0

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**Deferred Maintenance** - Refers to expenditures for repairs which were not accomplished as a part of normal maintenance or capital repair which have accumulated to the point that facility deterioration is evident and could impair the proper functioning of the facility. Costs

**Capital Renewal** - A subset of regular or normal facility maintenance which refers to major repairs or the replacement/rebuilding of major facility components (e.g. roof replacement at the end of its normal useful life is capital repair; roof replacement several years after

## Major Maintenance and Renovation Priorities

	Title	Project Number	Priority Class	Category	Cost	Project Class	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
Central Plant	ELECTRICAL SYSTEM REPAIRS	HLCPEL02	3	Electrical	\$7,229	Capital Renewal							\$7,229				
	DOMESTIC WATER HEATER REPLACEMENT	HLCPPL01	3	Plumbing	\$2,982	Capital Renewal			\$2,982								
	INTERIOR LIGHTING UPGRADE	HLCPEL01	4	Electrical	\$43,336	Capital Renewal							\$43,336				
	BUILT-UP ROOF REPLACEMENT	HLCPES01	4	Exterior Structure	\$109,966	Capital Renewal								\$109,966			
	FIRE ALARM SYSTEM REPLACEMENT	HLCPF501	4	Fire/Life Safety	\$29,979	Capital Renewal									\$29,979		
	EXHAUST FAN REPLACEMENT	HLCPHV01	4	HVAC	\$25,459	Capital Renewal							\$25,459				
	REPLACE SEWAGE EJECTORS	HLCPPLQ2	4	Plumbing	\$11,957	Capital Renewal			\$11,957								
GROUNDS BUILDING	ELECTRICAL SYSTEM REPAIRS	HLGB1EL02	3	Electrical	\$2,821	Capital Renewal							\$2,821				
	FIRE ALARM SYSTEM REPLACEMENT	HLGB1FS01	3	Fire/Life Safety	\$11,701	Capital Renewal									\$11,701		
	VINYL TILE UPGRADE	HLGB1S01	3	Interior Finishes/Systems	\$433	Capital Renewal	\$433										
	DOMESTIC WATER HEATER REPLACEMENT	HLGB1PL01	3	Plumbing	\$3,727	Capital Renewal							\$3,727				
	INTERIOR LIGHTING UPGRADE	HLGB1EL01	4	Electrical	\$16,914	Capital Renewal							\$16,914				
	EXTERIOR LIGHTING REPLACEMENT	HLGB1EL03	4	Electrical	\$4,649	Capital Renewal							\$4,649				
	REPLACE SPLIT DX SYSTEM	HLGB1HV01	4	HVAC	\$9,040	Capital Renewal			\$9,040								
	EXHAUST FAN REPLACEMENT	HLGB1HV02	4	HVAC	\$36,767	Capital Renewal							\$36,767				
	PUMP REPLACEMENT	HLGB1HV03	4	HVAC	\$11,564	Capital Renewal							\$11,564				
	REPLACE SEWAGE EJECTORS	HLGB1PLO2	4	Plumbing	\$11,957	Capital Renewal							\$11,957				
	ELECTRICAL SYSTEM REPAIRS	HLGB2EL02	3	Electrical	\$3,201	Capital Renewal							\$3,201				
	INTERIOR LIGHTING UPGRADE	HLGB2EL01	4	Electrical	\$20,178	Capital Renewal							\$20,178				
	EXTERIOR LIGHTING REPLACEMENT	HLGB2EL03	4	Electrical	\$2,789	Capital Renewal							\$2,789				
	REPLACE EXIT SIGNS	HLGB2FS01	4	Fire/Life Safety	\$879	Capital Renewal							\$879				
High Oaks Hall	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	HLHOHEL02	2	Electrical	\$109,493	Plant Adaption									\$109,493		
	FIRE SPRINKLER SYSTEM INSTALLATION	HLHOHFS01	2	Fire/Life Safety	\$516,100	Plant Adaption										\$516,100	
	STAIR SAFETY UPGRADES	HLHOHAC02	3	Accessibility	\$10,446	Plant Adaption									\$10,446		
	RESTROOM RENOVATION	HLHOHIS03	3	Interior Finishes/Systems	\$11,669	Capital Renewal	\$11,669										
	WATER SUPPLY PIPING REPLACEMENT	HLHOHPLO1	3	Plumbing	\$106,067	Deferred Maintenance									\$106,067		
	DRAIN PIPING REPLACEMENT	HLHOHPLO2	3	Plumbing	\$158,607	Deferred Maintenance									\$158,607		
	COMPREHENSIVE FREIGHT ELEVATOR MODERNIZATION	HLHOHVT01	3	Vertical Transporation	\$228,451	Deferred Maintenance										\$228,451	
	BUILDING ENTRY ACCESSIBILITY UPGRADES	HLHOHAC01	4	Accessibility	\$15,659	Plant Adaption		\$15,659									
	BUILT-UP ROOF REPLACEMENT	HLHOHES01	4	Exterior Structure	\$153,286	Capital Renewal			\$153,286								
	REPLACE CARPETING	HLHOHIS01	4	Interior Finishes/Systems	\$459,079	Capital Renewal						\$459,079					
	REFINISH WALLS	HLHOHIS02	4	Interior Finishes/Systems	\$52,345	Capital Renewal								\$52,345			
	SIDEWALK CURB CUT UPGRADES	HLISIAC01	2	Accessibility	\$26,411	Plant Adaption				\$26,411							
	GENERAL CONCRETE SIDEWALK REPAIR ALLOWANCE	HLISISIO1	3	Site	\$64,105	Capital Renewal			\$64,105								
	PARKING AND ROAD PAVING UPGRADES	HLISISIO3	3	Site	\$874,715	Capital Renewal		\$874,715									
Site	TENNIS COURT RESURFACING	HLISISIO5	3	Site	\$64,872	Deferred Maintenance				\$64,872							
	SITE LIGHTING UPGRADE	HLSEL01	4	Electrical	\$539,349	Capital Renewal					\$539,349						
	REPAIR ROOFING AND BUILDING ENVELOPES	New	3	Exterior Structure	\$250,000	Capital Renewal	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000		
	LANDSCAPING REFURBISHING ALLOWANCE	HLISISIO2	4	Site	\$119,259	Capital Renewal			\$119,259								
	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	HLLHEL02	2	Electrical	\$105,709	Plant Adaption									\$105,709		
	RESTROOM RENOVATION	HL LHAC01	3	Accessibility	\$163,366	Plant Adaption	\$163,366										
	REPLACE SECONDARY STEP-DOWN TRANSFORMERS	HL LHEL01	3	Electrical	\$16,439	Capital Renewal	\$16,439										
LEVINSON HALL	STAIR AND RAILING SAFETY UPGRADES	HL LHFS01	3	Fire/Life Safety	\$46,745	Plant Adaption				\$46,745							
	REPLACE SPLIT DX SYSTEM	HL LHHV01	3	HVAC	\$6,027	Capital Renewal			\$6,027								
	NEW CARPETING	HL LHIS01	3	Interior Finishes/Systems	\$154,264	Capital Renewal			\$154,264								
	REFINISH WALLS	HL LHIS02	3	Interior Finishes/Systems	\$119,925	Capital Renewal								\$119,925			
	LABORATORY CASEWORK UPGRADES	HL LHIS03	3	Interior Finishes/Systems	\$318,262	Capital Renewal		\$318,262									
	COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION	HL LHVT01	3	Vertical Transporation	\$330,824	Deferred Maintenance						\$330,824					
	EXTERIOR REPAIRS AND SPOT CLEANING	HL LHES01	4	Exterior Structure	\$62,650	Capital Renewal			\$62,650								
	BUILT-UP ROOF REPLACEMENT	HL LHES02	4	Exterior Structure	\$448,190	Capital Renewal								\$448,190			
	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	HL LHAELO1	2	Electrical	\$102,175	Plant Adaption									\$102,175		
	NEW CARPETING	HL LHAI01	3	Interior Finishes/Systems	\$119,412	Capital Renewal		\$119,412									
	REFINISH WALLS AND CEILINGS	HL LHAI02	3	Interior Finishes/Systems	\$76,992	Capital Renewal								\$76,992			
	ELECTRICAL SYSTEM REPAIRS	HL LHAELO2	4	Electrical	\$91,468	Capital Renewal							\$91,468				
	REPLACE SPLIT DX SYSTEMS	HL LHAHV01	4	HVAC	\$12,054	Capital Renewal								\$12,054			
	Old Salt Storage	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	HL MBEL02	3	Electrical	\$13,294	Capital Renewal									\$13,294	
EXTERIOR DOOR REPLACEMENT		HL MBES01	3	Exterior Structure	\$22,633	Capital Renewal									\$22,633		
INTERIOR REPAIRS		HL MBIS01	3	Interior Finishes/Systems	\$12,752	Capital Renewal									\$12,752		
INTERIOR LIGHTING UPGRADE		HL MBEL01	4	Electrical	\$6,058	Capital Renewal									\$6,058		

Major Maintenance and Renovation Priorities

		Priority		Estimated Project												
Title		Project Number	Class	Category	Cost	Project Class	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Pavilion	BUILDING ENTRY ACCESSIBILITY UPGRADES	HLPVAC01	3	Accessibility	\$18,137	Plant Adaption						\$18,137				
	INTERIOR LIGHTING UPGRADE	HLPAVE01	3	Electrical	\$10,223	Capital Renewal						\$10,223				
	ELECTRICAL SYSTEM REPAIRS	HLPAVE02	3	Electrical	\$1,622	Deferred Maintenance						\$1,622				
	EXTERIOR LIGHTING REPLACEMENT	HLPAVE03	3	Electrical	\$3,719	Capital Renewal						\$3,719				
	DOOR REPLACEMENT	HLPVES01	3	Exterior Structure	\$17,121	Capital Renewal						\$17,121				
PHYSICAL EDUCATION	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	HLPEEL01	2	Electrical	\$99,622	Plant Adaption									\$99,622	
	FIRE SPRINKLER SYSTEM INSTALLATION	HLPEFS01	2	Fire/Life Safety	\$386,871	Plant Adaption	\$386,871									
	SERVICE COUNTER ACCESSIBILITY UPGRADE	HLPEAC01	3	Accessibility	\$2,254	Plant Adaption	\$2,254									
	RESTROOM RENOVATION	HLPEAC02	3	Accessibility	\$106,541	Plant Adaption	\$106,541									
	LOCKER ROOM RENOVATION	HLPEAC03	3	Accessibility	\$97,055	Plant Adaption	\$97,055									
	INTERIOR DOOR UPGRADES	HLPEAC04	3	Accessibility	\$18,426	Plant Adaption	\$18,426									
	REPLACE 277/480 V SWITCHGEAR AND DISTRIBUTION PANEL ASSEMBLY	HLPEEL02	3	Electrical	\$21,764	Deferred Maintenance	\$21,764									
	INTERIOR LIGHTING UPGRADE	HLPEEL03	3	Electrical	\$283,569	Deferred Maintenance	\$283,569									
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	HLPEEL04	3	Electrical	\$410,645	Capital Renewal	\$410,645									
	EXTERIOR LIGHTING REPLACEMENT	HLPEEL05	3	Electrical	\$2,462	Deferred Maintenance	\$2,462									
	EXTERIOR REPAIRS AND STRUCTURAL ASSESSMENT	HLPEES01	3	Exterior Structure	\$91,093	Capital Renewal	\$91,093									
	HVAC SYSTEM REPLACEMENT	HLPEHV01	3	HVAC	\$1,708,116	Deferred Maintenance	\$1,708,116									
	INSTALL AIR-COOLED CHILLER	HLPEHV02	3	HVAC	\$174,327	Plant Adaption	\$174,327									
	NEW CARPET AND VINYL FLOORING	HLPEIS01	3	Interior Finishes/Systems	\$9,516	Capital Renewal	\$9,516									
	UPGRADE GYMNASIUM FLOORING	HLPEIS02	3	Interior Finishes/Systems	\$273,986	Capital Renewal	\$273,986									
	REFINISH WALLS	HLPEIS03	3	Interior Finishes/Systems	\$33,064	Capital Renewal	\$33,064									
	REFINISH CEILINGS	HLPEIS04	3	Interior Finishes/Systems	\$13,421	Capital Renewal	\$13,421									
	REPLACE STANDARD CASEWORK	HLPEIS05	3	Interior Finishes/Systems	\$15,027	Capital Renewal	\$15,027									
	BLEACHER SEATING UPGRADE	HLPEIS06	3	Interior Finishes/Systems	\$119,961	Capital Renewal	\$119,961									
	IMPROVE DRAINAGE ON NORTH ELEVATION	HLPESIO1	3	Site	\$296,194	Capital Renewal	\$296,194									
	BUILT-UP ROOF REPLACEMENT	HLPEES02	4	Exterior Structure	\$69,019	Capital Renewal	\$69,019									
	WATER SUPPLY PIPING REPLACEMENT	HLPEPL01	4	Plumbing	\$169,253	Capital Renewal	\$169,253									
	DRAIN PIPING REPLACEMENT	HLPEPL02	4	Plumbing	\$253,080	Capital Renewal	\$253,080									
Pump House	EXTERIOR LIGHTING REPLACEMENT	HLPHEL03	2	Electrical	\$930	Deferred Maintenance	\$930									
	ELECTRICAL SYSTEM REPAIRS	HLPHEL02	3	Electrical	\$579	Capital Renewal	\$579									
	INTERIOR LIGHTING UPGRADE	HLPHEL01	4	Electrical	\$3,775	Capital Renewal	\$3,775									
	PITCHED ASPHALT SHINGLE ROOF REPLACEMENT	HLPHES01	4	Exterior Structure	\$4,094	Capital Renewal	\$4,094									
	EXTERIOR LIGHTING REPLACEMENT	HLRCEL02	3	Electrical	\$4,649	Capital Renewal	\$4,649									
	REPLACE SPLIT DX SYSTEM (SERVING UNIT VENTILATOR)	HLRCHV01	3	HVAC	\$9,040	Capital Renewal						\$9,040				
	REPLACE ROOFS	HLRCE001	4	Exterior Structure	\$48,057	Capital Renewal				\$48,057						
	EXHAUST FAN REPLACEMENT	HLRCHV02	4	HVAC	\$16,973	Capital Renewal				\$16,973						
	RESTROOM RENOVATION	HLSCAC01	2	Accessibility	\$128,359	Plant Adaption	\$128,359									
	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	HLSCEL02	2	Electrical	\$96,273	Plant Adaption									\$96,273	
STUDENT CENTER	DECK UPGRADE	HLSCSI01	2	Site	\$14,848	Deferred Maintenance									\$14,848	
	REPLACE SECONDARY STEP-DOWN TRANSFORMERS	HLSCEL01	3	Electrical	\$26,876	Capital Renewal			\$26,876							
	STAIR AND ATRIUM SAFETY UPGRADES	HLSCFS01	3	Fire/Life Safety	\$21,578	Plant Adaption			\$21,578							
	REPLACE SPLIT DX SYSTEM	HLSCHV01	3	HVAC	\$6,027	Capital Renewal			\$6,027							
	COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION	HLSCVT01	3	Vertial Transporation	\$330,824	Capital Renewal						\$330,824				
	BUILT-UP ROOF REPLACEMENT	HLSCES01	4	Exterior Structure	\$239,592	Capital Renewal			\$239,592							
	NEW CARPETING	HLSCIS01	4	Interior Finishes/Systems	\$285,675	Capital Renewal			\$285,675							
	REFINISH WALLS	HLSCIS02	4	Interior Finishes/Systems	\$98,442	Capital Renewal								\$98,442		
	WATER SUPPLY PIPING REPLACEMENT	HLSCPL01	4	Plumbing	\$348,323	Capital Renewal									\$348,323	
	DRAIN PIPING REPLACEMENT	HLSCPL02	4	Plumbing	\$520,679	Capital Renewal									\$520,679	
	REPLACE SEWAGE EJECTORS	HLSCPL03	4	Plumbing	\$11,957	Capital Renewal					\$11,957					
	REPLACE SECONDARY STEP-DOWN TRANSFORMERS	HLWHEL02	3	Electrical	\$24,189	Capital Renewal		\$24,189								
	BUILT-UP ROOF REPLACEMENT	HLWHES01	3	Exterior Structure	\$326,565	Capital Renewal		\$326,565								
	REPLACE SPLIT DX SYSTEMS	HLWHHV01	3	HVAC	\$6,027	Capital Renewal					\$6,027					
	NEW CARPETING	HLWHIS01	3	Interior Finishes/Systems	\$370,234	Capital Renewal				\$370,234						
	INTERIOR DOOR UPGRADES	HLWHAC01	4	Accessibility	\$10,529	Plant Adaption	\$10,529									
	REFINISH WALLS	HLWHIS02	4	Interior Finishes/Systems	\$146,986	Capital Renewal				\$146,986						
	REPLACE SEWAGE EJECTORS	HLWHPL01	4	Plumbing	\$11,957	Capital Renewal		\$11,957								
	COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION	HLWHVT01	4	Vertial Transporation	\$268,556	Capital Renewal					\$268,556					
	NEW CARPETING	HLWHAI01	3	Interior Finishes/Systems	\$385,089	Capital Renewal			\$385,089							
	REFINISH WALLS AND CEILINGS	HLWHAI02	3	Interior Finishes/Systems	\$191,632	Capital Renewal								\$191,632		
							\$4,925,466	\$1,715,759	\$1,573,406	\$745,279	\$844,862	\$743,497	\$776,058	\$1,134,545	\$1,793,659	\$744,551



Major Maintenance and Renovation Priorities

Title	Project Number	Priority	Category	Estimated Project		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
		Class		Cost	Project Class										

**Plant / Program Adaption** - Expenditures required to adapt the physical plant to the evolving needs of the institution and to change codes or standards. These are expenditures beyond normal maintenance.

**Deferred Maintenance** - Refers to expenditures for repairs which were not accomplished as a part of normal maintenance or capital repair which have accumulated to the point that facility deterioration is evident and could impair the proper functioning of the facility. Costs estimated for deferred maintenance projects should include compliance with applicable codes, even if such compliance requires expenditures beyond those essential to affect the needed repairs. Deferred maintenance projects represent catch up expenses.

**Capital Renewal** - A subset of regular or normal facility maintenance which refers to major repairs or the replacement/rebuilding of major facility components (e.g. roof replacement at the end of its normal useful life is capital repair; roof replacement several years after its normal useful life is deferred maintenance)

Farmington Hills, Michigan

Major Maintenance and Renovation Priorities

Bldg	Title	Project Number	Priority	Category	Estimated Project		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
			Class		Cost	Project Class										
M - Building	FIRE SPRINKLER SYSTEM INSTALLATION	ORMFS01	2	Fire/Life Safety	\$301,832	Plant Adaption	\$301,832									
	INTERIOR DOOR UPGRADES	ORMAC02	3	Accessibility	\$40,010	Plant Adaption	\$40,010									
	STAIR SAFETY UPGRADES	ORMAC03	3	Accessibility	\$40,801	Plant Adaption	\$40,801									
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ORMEL01	3	Electrical	\$579,928	Capital Renewal	\$579,928									
	REPLACE TERMINAL UNITS	ORMHV01	3	HVAC	\$130,224	Deferred Maintenance	\$130,224									
	REPLACE SPLIT DX SYSTEMS	ORMHV02	3	HVAC	\$3,013	Capital Renewal	\$3,013									
	HEAT EXCHANGER REPLACEMENT	ORMHV03	3	HVAC	\$39,973	Deferred Maintenance	\$39,973									
	EXHAUST FAN REPLACEMENT	ORMHV04	3	HVAC	\$21,517	Deferred Maintenance	\$21,517									
	REFINISH FLOORING	ORMIS01	3	Interior Finishes/Systems	\$129,090	Capital Renewal	\$129,090									
	WATER SUPPLY PIPING REPLACEMENT	ORMPL01	3	Plumbing	\$109,436	Capital Renewal	\$109,436									
	DRAIN PIPING REPLACEMENT	ORMPL02	3	Plumbing	\$164,220	Capital Renewal	\$164,220									
	COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION	ORMVT01	3	Vertical Transporation	\$330,824	Deferred Maintenance	\$330,824									
	INTERIOR PATH OF TRAVEL ACCESSIBILITY UPGRADES	ORMAC01	4	Accessibility	\$2,645	Plant Adaption	\$2,645									
	RESTROOM RENOVATION	ORMAC04	4	Accessibility	\$154,454	Capital Renewal	\$154,454									
	MINOR EXTERIOR REPAIRS AND CLEANING	ORMES01	4	Exterior Structure	\$7,311	Capital Renewal	\$7,311									
	PUMP REPLACEMENT	ORMHV05	4	HVAC	\$17,346	Capital Renewal	\$17,346									
	HVAC CONTROL SYSTEM UPGRADE	ORMHV06	4	HVAC	\$117,264	Capital Renewal	\$117,264									
	REFINISH WALLS	ORMIS02	4	Interior Finishes/Systems	\$94,690	Capital Renewal	\$94,690									
	REFINISH CEILINGS	ORMIS03	4	Interior Finishes/Systems	\$180,030	Capital Renewal	\$180,030									
L - Building	FIRE SPRINKLER SYSTEM INSTALLATION	ORLFS01	2	Fire/Life Safety	\$319,291	Plant Adaption									\$319,291	
	STAIR SAFETY UPGRADES	ORLAC01	3	Accessibility	\$34,081	Plant Adaption									\$34,081	
	INTERIOR LIGHTING UPGRADE	ORLEL01	3	Electrical	\$168,177	Deferred Maintenance									\$168,177	
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ORLEL02	3	Electrical	\$653,382	Capital Renewal									\$653,382	
	REPLACE TERMINAL UNITS	ORLHV01	3	HVAC	\$138,300	Deferred Maintenance									\$138,300	
	REPLACE SPLIT DX SYSTEMS	ORLHV02	3	HVAC	\$3,013	Capital Renewal									\$3,013	
	HEAT EXCHANGER REPLACEMENT	ORLHV03	3	HVAC	\$39,973	Deferred Maintenance									\$39,973	
	EXHAUST FAN REPLACEMENT	ORLHV04	3	HVAC	\$68,272	Capital Renewal									\$68,272	
	NEW CARPETING	ORLIS01	3	Interior Finishes/Systems	\$78,561	Capital Renewal									\$78,561	
	REFINISH CEILINGS	ORLIS03	3	Interior Finishes/Systems	\$147,828	Capital Renewal									\$147,828	
	REPLACE STANDARD CASEWORK	ORLIS04	3	Interior Finishes/Systems	\$33,812	Capital Renewal									\$33,812	
	PLUMBING FIXTURE REPLACEMENT	ORLPL01	3	Plumbing	\$20,490	Capital Renewal									\$20,490	
	WATER SUPPLY PIPING REPLACEMENT	ORLPL02	3	Plumbing	\$219,797	Deferred Maintenance									\$219,797	
	DRAIN PIPING REPLACEMENT	ORLPL03	3	Plumbing	\$329,161	Deferred Maintenance									\$329,161	
	EXTERIOR CLEANING AND MINOR REPAIRS	ORLES01	4	Exterior Structure	\$7,311	Capital Renewal									\$7,311	
	PUMP REPLACEMENT	ORLHV05	4	HVAC	\$17,346	Capital Renewal									\$17,346	
	HVAC CONTROL SYSTEM UPGRADE	ORLHV06	4	HVAC	\$138,106	Capital Renewal									\$138,106	
	REFINISH WALLS	ORLIS02	4	Interior Finishes/Systems	\$49,294	Capital Renewal									\$49,294	
	RESTROOM RENOVATION	ORLIS05	4	Interior Finishes/Systems	\$176,253	Capital Renewal									\$176,253	
A - Building	FIRE SPRINKLER SYSTEM INSTALLATION	ORAFS01	2	Fire/Life Safety	\$400,815	Plant Adaption						\$400,815				
	STAIR SAFETY UPGRADES	ORAAC02	3	Accessibility	\$24,389	Plant Adaption						\$24,389				
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ORAEI02	3	Electrical	\$421,418	Capital Renewal						\$421,418				
	EXTERIOR CLEANING AND MINOR REPAIRS	ORAES01	3	Exterior Structure	\$8,226	Capital Renewal						\$8,226				
	MEMBRANE ROOF REPLACEMENT	ORAES03	3	Exterior Structure	\$5,266	Capital Renewal						\$5,266				
	REPLACE SPLIT DX SYSTEM	ORAHV01	3	HVAC	\$3,013	Capital Renewal						\$3,013				
	HEAT EXCHANGER REPLACEMENT	ORAHV02	3	HVAC	\$39,973	Deferred Maintenance						\$39,973				
	EXHAUST FAN REPLACEMENT	ORAHV03	3	HVAC	\$1,809	Deferred Maintenance						\$1,809				
	PUMP REPLACEMENT	ORAHV04	3	HVAC	\$17,346	Capital Renewal						\$17,346				
	REFINISH FLOORING	ORAIS01	3	Interior Finishes/Systems	\$327,219	Capital Renewal						\$327,219				
	REFINISH WALLS	ORAIS02	3	Interior Finishes/Systems	\$89,493	Capital Renewal						\$89,493				
	REFINISH CEILINGS	ORAIS03	3	Interior Finishes/Systems	\$225,989	Capital Renewal						\$225,989				
	WATER SUPPLY PIPING REPLACEMENT	ORAPL01	3	Plumbing	\$196,958	Capital Renewal						\$196,958				
	DRAIN PIPING REPLACEMENT	ORAPL02	3	Plumbing	\$294,931	Capital Renewal						\$294,931				
	DRINKING FOUNTAIN ACCESSIBILITY UPGRADES	ORAAC01	4	Accessibility	\$20,261	Plant Adaption						\$20,261				
	REPLACE 277/480 V SWITCHGEAR AND DISTRIBUTION PANEL ASSEMBLY	ORAEI01	4	Electrical	\$21,764	Capital Renewal						\$21,764				

## Major Maintenance and Renovation Priorities

Bldg	Title	Project Number	Priority	Estimated Project				2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
			Class	Category	Cost	Project Class											
	WINDOW REPLACEMENT	ORAE02	4	Exterior Structure	\$194,151	Capital Renewal							\$194,151				
	HVAC CONTROL SYSTEM UPGRADE	ORAHV05	4	HVAC	\$185,700	Capital Renewal							\$185,700				
	LABORATORY CASEWORK UPGRADES	ORAI04	4	Interior Finishes/Systems	\$2,995	Capital Renewal							\$2,995				
	COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION	ORAVT01	4	Vertical Transporation	\$330,824	Capital Renewal							\$330,824				
B - Building	FIRE SPRINKLER SYSTEM INSTALLATION	ORBFS01	2	Fire/Life Safety	\$292,705	Plant Adaption					\$292,705						
	STAIR SAFETY UPGRADES	ORBAC01	3	Accessibility	\$26,121	Plant Adaption					\$26,121						
	ELECTRICAL SYSTEM REPAIRS	ORBEL01	3	Electrical	\$74,723	Deferred Maintenance					\$74,723						
	MINOR EXTERIOR REPAIRS AND CLEANING	ORBES01	3	Exterior Structure	\$8,684	Deferred Maintenance					\$8,684						
	MEMBRANE ROOF REPLACEMENT	ORBES03	3	Exterior Structure	\$5,266	Capital Renewal					\$5,266						
	REPLACE SPLIT DX SYSTEM	ORBHV01	3	HVAC	\$3,013	Capital Renewal					\$3,013						
	FUME HOOD REPLACEMENT	ORBHV02	3	HVAC	\$379,779	Deferred Maintenance					\$379,779						
	HEAT EXCHANGER REPLACEMENT	ORBHV03	3	HVAC	\$39,973	Deferred Maintenance					\$39,973						
	REFINISH FLOORING	ORBIS01	3	Interior Finishes/Systems	\$238,473	Capital Renewal					\$238,473						
	REFINISH WALLS	ORBIS02	3	Interior Finishes/Systems	\$55,705	Capital Renewal					\$55,705						
	RESTROOM RENOVATION	ORBIS04	3	Interior Finishes/Systems	\$176,253	Capital Renewal					\$176,253						
	UPGRADE CEILING FINISHES	ORBIS05	3	Interior Finishes/Systems	\$166,361	Capital Renewal					\$166,361						
	PARTIAL WATER SUPPLY PIPING REPLACEMENT	ORBPL01	3	Plumbing	\$161,782	Deferred Maintenance					\$161,782						
	PARTIAL DRAIN PIPING REPLACEMENT	ORBPL02	3	Plumbing	\$241,866	Deferred Maintenance					\$241,866						
	WINDOW REPLACEMENT	ORBES02	4	Exterior Structure	\$205,224	Capital Renewal					\$205,224						
	PUMP REPLACEMENT	ORBHV04	4	HVAC	\$17,346	Capital Renewal					\$17,346						
	HVAC CONTROL SYSTEM UPGRADE	ORBHV05	4	HVAC	\$189,133	Capital Renewal					\$189,133						
LABORATORY CASEWORK UPGRADES	ORBIS03	4	Interior Finishes/Systems	\$37,443	Capital Renewal					\$37,443							
C - Building	FIRE SPRINKLER SYSTEM INSTALLATION	ORCFS01	2	Fire/Life Safety	\$293,499	Plant Adaption								\$293,499			
	STAIR SAFETY UPGRADES	ORCAC02	3	Accessibility	\$20,895	Plant Adaption								\$20,895			
	REPLACE SPLIT DX SYSTEM	ORCHV01	3	HVAC	\$3,013	Capital Renewal								\$3,013			
	HEAT EXCHANGER REPLACEMENT	ORCHV02	3	HVAC	\$123,249	Deferred Maintenance								\$123,249			
	EXHAUST FAN REPLACEMENT	ORCHV03	3	HVAC	\$1,809	Deferred Maintenance								\$1,809			
	NEW CARPETING	ORCIS01	3	Interior Finishes/Systems	\$95,415	Capital Renewal								\$95,415			
	COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION	ORCVT01	3	Vertical Transporation	\$330,824	Deferred Maintenance								\$330,824			
	INTERIOR AMENITY ACCESSIBILITY UPGRADES	ORCAC01	4	Accessibility	\$10,130	Plant Adaption								\$10,130			
	ELECTRICAL SYSTEM REPAIRS	ORCEL01	4	Electrical	\$91,479	Capital Renewal								\$91,479			
	EXTERIOR CLEANING AND REPAIRS	ORCES01	4	Exterior Structure	\$6,947	Capital Renewal								\$6,947			
	WINDOW REPLACEMENT	ORCES02	4	Exterior Structure	\$163,884	Capital Renewal								\$163,884			
	PUMP REPLACEMENT	ORCHV04	4	HVAC	\$54,928	Capital Renewal								\$54,928			
	HVAC CONTROL SYSTEM UPGRADE	ORCHV05	4	HVAC	\$238,640	Capital Renewal								\$238,640			
	REFINISH WALLS	ORCIS02	4	Interior Finishes/Systems	\$55,836	Capital Renewal								\$55,836			
	REFINISH CEILINGS	ORCIS03	4	Interior Finishes/Systems	\$166,814	Capital Renewal								\$166,814			
D - Building	FIRE SPRINKLER SYSTEM INSTALLATION	ORDFS01	2	Fire/Life Safety	\$314,816	Plant Adaption	\$314,816										
	STAIR SAFETY UPGRADES	ORDAC02	3	Accessibility	\$44,524	Plant Adaption	\$44,524										
	INTERIOR LIGHTING UPGRADE	ORDEL01	3	Electrical	\$308,525	Capital Renewal	\$308,525										
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ORDEL02	3	Electrical	\$696,654	Capital Renewal	\$696,654										
	EXTERIOR REPAIRS AND CLEANING	ORDES01	3	Exterior Structure	\$7,857	Capital Renewal	\$7,857										
	REPLACE SPLIT DX SYSTEMS	ORDHV01	3	HVAC	\$3,013	Capital Renewal	\$3,013										
	HEAT EXCHANGER REPLACEMENT	ORDHV02	3	HVAC	\$49,966	Deferred Maintenance	\$49,966										
	NEW CARPETING	ORDIS01	3	Interior Finishes/Systems	\$248,537	Capital Renewal	\$248,537										
	REFINISH WALLS	ORDIS02	3	Interior Finishes/Systems	\$59,522	Capital Renewal	\$59,522										
	REFINISH CEILINGS	ORDIS03	3	Interior Finishes/Systems	\$143,201	Capital Renewal	\$143,201										
	REPLACE DETERIORATED INTERIOR DOORS	ORDIS04	3	Interior Finishes/Systems	\$35,793	Capital Renewal	\$35,793										
	REPLACE SERVICE SINKS AND HAND WASHING SINKS	ORDPL01	3	Plumbing	\$17,369	Deferred Maintenance	\$17,369										
	WATER SUPPLY PIPING REPLACEMENT	ORDPL02	3	Plumbing	\$174,003	Capital Renewal	\$174,003										
	DRAIN PIPING REPLACEMENT	ORDPL03	3	Plumbing	\$260,136	Capital Renewal	\$260,136										
	INTERIOR AMENITY ACCESSIBILITY UPGRADES	ORDAC01	4	Accessibility	\$30,391	Plant Adaption	\$30,391										
	WINDOW REPLACEMENT	ORDES02	4	Exterior Structure	\$186,031	Capital Renewal	\$186,031										
	PUMP REPLACEMENT	ORDHV03	4	HVAC	\$23,127	Capital Renewal	\$23,127										
	HVAC CONTROL SYSTEM UPGRADE	ORDHV04	4	HVAC	\$203,420	Capital Renewal	\$203,420										

## Farmington Hills, Michigan

## Major Maintenance and Renovation Priorities

Bldg	Title	Project Number	Priority Class	Category	Estimated Project Cost	Project Class	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
G - Building	FIRE SPRINKLER SYSTEM INSTALLATION	ORGF501	2	Fire/Life Safety	\$295,196	Plant Adaption								\$295,196		
	DRINKING FOUNTAIN ACCESSIBILITY UPGRADES	ORGAC01	3	Accessibility	\$10,130	Plant Adaption								\$10,130		
	STAIR SAFETY UPGRADES	ORGAC03	3	Accessibility	\$51,486	Plant Adaption								\$51,486		
	EXTERIOR REPAIRS AND CLEANING	ORGES01	3	Exterior Structure	\$6,070	Capital Renewal								\$6,070		
	REPLACE SPLIT DX SYSTEMS	ORGHV01	3	HVAC	\$3,013	Capital Renewal								\$3,013		
	HEAT EXCHANGER REPLACEMENT	ORGHV02	3	HVAC	\$29,979	Deferred Maintenance								\$29,979		
	REFINISH WALLS	ORGIS02	3	Interior Finishes/Systems	\$56,113	Capital Renewal								\$56,113		
	WATER SUPPLY PIPING REPLACEMENT	ORGPL01	3	Plumbing	\$149,884	Capital Renewal								\$149,884		
	DRAIN PIPING REPLACEMENT	ORGPL02	3	Plumbing	\$224,049	Capital Renewal								\$224,049		
	INTERIOR DOOR UPGRADES	ORGAC02	4	Accessibility	\$5,265	Plant Adaption								\$5,265		
	WINDOW REPLACEMENT	ORGES02	4	Exterior Structure	\$286,428	Capital Renewal								\$286,428		
	EXHAUST FAN REPLACEMENT	ORGHV03	4	HVAC	\$8,809	Capital Renewal								\$8,809		
	PUMP REPLACEMENT	ORGHV04	4	HVAC	\$14,455	Capital Renewal								\$14,455		
	HVAC CONTROL SYSTEM UPGRADE	ORGHV05	4	HVAC	\$141,099	Capital Renewal								\$141,099		
H - Building	NEW CARPETING	ORGIS01	4	Interior Finishes/Systems	\$262,821	Capital Renewal								\$262,821		
	REFINISH CEILINGS	ORGIS03	4	Interior Finishes/Systems	\$167,885	Capital Renewal								\$167,885		
	INSTALL EMERGENCY GENERATOR AND POWER NETWORK	ORHEL01	2	Electrical	\$126,224	Plant Adaption			\$126,224							
	FIRE SPRINKLER SYSTEM INSTALLATION	ORHFS01	2	Fire/Life Safety	\$775,517	Plant Adaption			\$775,517							
	DOMESTIC HOT WATER HEAT EXCHANGER REPLACEMENT	ORHPL01	2	Plumbing	\$73,943	Deferred Maintenance			\$73,943							
	RESTROOM RENOVATION	ORHAC01	3	Accessibility	\$214,017	Plant Adaption			\$214,017							
	REPLACE PRIMARY SERVICE TRANSFORMER	ORHEL02	3	Electrical	\$63,066	Deferred Maintenance			\$63,066							
	REPLACE 277/480 V SWITCHGEAR AND DISTRIBUTION PANEL ASSEMBLY	ORHEL03	3	Electrical	\$108,820	Deferred Maintenance			\$108,820							
	INTERIOR LIGHTING UPGRADE	ORHEL04	3	Electrical	\$540,462	Deferred Maintenance			\$540,462							
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ORHEL05	3	Electrical	\$783,551	Capital Renewal			\$783,551							
	EXTERIOR LIGHTING REPLACEMENT	ORHEL06	3	Electrical	\$10,993	Deferred Maintenance			\$10,993							
	EXTERIOR REPAIRS	ORHES01	3	Exterior Structure	\$103,741	Capital Renewal			\$103,741							
	EXTERIOR DOOR REPLACEMENT	ORHES02	3	Exterior Structure	\$7,336	Capital Renewal			\$7,336							
	BUILT-UP ROOF REPLACEMENT	ORHES03	3	Exterior Structure	\$916,383	Capital Renewal			\$916,383							
	REFINISH FLOORING	ORHIS01	3	Interior Finishes/Systems	\$43,143	Capital Renewal			\$43,143							
	UPGRADE GYMNASIUM FLOORING	ORHIS02	3	Interior Finishes/Systems	\$244,358	Capital Renewal			\$244,358							
	REFINISH WALLS	ORHIS03	3	Interior Finishes/Systems	\$88,361	Capital Renewal			\$88,361							
	REFINISH CEILINGS	ORHIS04	3	Interior Finishes/Systems	\$121,446	Capital Renewal			\$121,446							
	REPLACE A PERCENTAGE OF INTERIOR DOORS	ORHIS05	3	Interior Finishes/Systems	\$19,090	Capital Renewal			\$19,090							
GROUNDS GARAGE	REPLACE POOL MECHANICAL EQUIPMENT	ORHPL04	3	Plumbing	\$191,755	Deferred Maintenance			\$191,755							
	HVAC SYSTEM REPLACEMENT	ORHHV01	4	HVAC	\$1,628,655	Capital Renewal			\$1,628,655							
	LOCKER ROOM RENOVATION	ORHIS06	4	Interior Finishes/Systems	\$427,490	Capital Renewal			\$427,490							
	WATER SUPPLY PIPING REPLACEMENT	ORHPL02	4	Plumbing	\$322,426	Capital Renewal			\$322,426							
	DRAIN PIPING REPLACEMENT	ORHPL03	4	Plumbing	\$483,064	Capital Renewal			\$483,064							
	OVERHEAD DOOR REPLACEMENT	ORNES05	2	Exterior Structure	\$9,482	Deferred Maintenance					\$9,482					
	INSTALL BATTERY BACKUP EMERGENCY LIGHTS AND EXIT SIGNS	ORNFS01	2	Fire/Life Safety	\$8,050	Plant Adaption					\$8,050					
	INSTALL SPLIT DX HVAC SYSTEM	ORNHV01	2	HVAC	\$9,040	Plant Adaption					\$9,040					
	INTERIOR LIGHTING UPGRADE	ORNEL01	3	Electrical	\$21,351	Capital Renewal					\$21,351					
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ORNEL02	3	Electrical	\$69,036	Capital Renewal					\$69,036					
	EXTERIOR LIGHTING REPLACEMENT	ORNEL03	3	Electrical	\$3,719	Capital Renewal					\$3,719					
	BUILT-UP ROOF REPLACEMENT	ORNES01	3	Exterior Structure	\$46,614	Capital Renewal					\$46,614					
	EXTERIOR REPAIRS	ORNES03	3	Exterior Structure	\$22,286	Capital Renewal					\$22,286					
	EXHAUST FAN REPLACEMENT	ORNHV02	3	HVAC	\$8,486	Deferred Maintenance					\$8,486					
	FURNACE REPLACEMENT	ORNHV03	3	HVAC	\$11,286	Deferred Maintenance					\$11,286					
	PLUMBING FIXTURE REPLACEMENT	ORNPL02	3	Plumbing	\$12,812	Capital Renewal					\$12,812					
	REPLACE GREASE TRAP AND FLOOR DRAIN	ORNPL03	3	Plumbing	\$10,468	Deferred Maintenance					\$10,468					
	REPLACE SHOP AIR COMPRESSOR	ORNPL04	3	Plumbing	\$4,430	Capital Renewal					\$4,430					
	PITCHED METAL ROOF REPLACEMENT	ORNES02	4	Exterior Structure	\$37,070	Capital Renewal					\$37,070					
	OVERHEAD DOOR REPLACEMENT	ORNES04	4	Exterior Structure	\$28,447	Capital Renewal					\$28,447					

Farmington Hills, Michigan

Major Maintenance and Renovation Priorities

Bldg	Title	Project Number	Priority	Category	Estimated Project		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
			Class		Cost	Project Class										
K - Building	DOMESTIC WATER HEATER REPLACEMENT	ORNPL01	4	Plumbing	\$12,326	Capital Renewal					\$12,326					
	FIRE SPRINKLER SYSTEM EXTENSION	ORKFS01	2	Fire/Life Safety	\$437,759	Plant Adaption				\$437,759						
	RETURN AIR FAN REPLACEMENT	ORKHV01	2	HVAC	\$21,397	Deferred Maintenance				\$21,397						
	REPLACE DOMESTIC WATER RE- CIRCULATION PUMP	ORKPL01	2	Plumbing	\$2,240	Deferred Maintenance				\$2,240						
	STAIR AND RAILING SAFETY UPGRADES	ORKAC01	3	Accessibility	\$59,146	Plant Adaption				\$59,146						
	REPLACE 277/480 V SWITCHGEAR AND DISTRIBUTION PANEL ASSEMBLY	ORKEL01	3	Electrical	\$43,528	Deferred Maintenance				\$43,528						
	INTERIOR LIGHTING UPGRADE	ORKEL02	3	Electrical	\$232,376	Deferred Maintenance				\$232,376						
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ORKEL03	3	Electrical	\$463,540	Capital Renewal				\$463,540						
	REPLACE TERMINAL UNITS	ORKHV02	3	HVAC	\$185,369	Capital Renewal				\$185,369						
	HEAT EXCHANGER REPLACEMENT	ORKHV04	3	HVAC	\$49,966	Deferred Maintenance				\$49,966						
	EXHAUST FAN REPLACEMENT	ORKHV05	3	HVAC	\$30,944	Deferred Maintenance				\$30,944						
	PUMP REPLACEMENT	ORKHV06	3	HVAC	\$8,673	Deferred Maintenance				\$8,673						
	NEW CARPETING	ORKIS01	3	Interior Finishes/Systems	\$394,231	Capital Renewal				\$394,231						
	REFINISH WALLS	ORKIS02	3	Interior Finishes/Systems	\$73,175	Capital Renewal				\$73,175						
	REFINISH CEILINGS	ORKIS03	3	Interior Finishes/Systems	\$214,487	Capital Renewal				\$214,487						
	COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION	ORKVT01	3	Vertical Transporation	\$330,824	Deferred Maintenance				\$330,824						
	EXTERIOR REPAIRS AND CLEANING	ORKES01	4	Exterior Structure	\$80,842	Capital Renewal				\$80,842						
	WINDOW REPLACEMENT	ORKES02	4	Exterior Structure	\$280,522	Capital Renewal				\$280,522						
	REPLACE SPLIT DX SYSTEMS	ORKHV03	4	HVAC	\$3,013	Capital Renewal				\$3,013						
	HVAC CONTROL SYSTEM UPGRADE	ORKHV07	4	HVAC	\$220,549	Capital Renewal				\$220,549						
	RESTROOM RENOVATION	ORKIS04	4	Interior Finishes/Systems	\$401,940	Capital Renewal				\$401,940						
	WATER SUPPLY PIPING REPLACEMENT	ORKPL02	4	Plumbing	\$190,164	Capital Renewal				\$190,164						
	DRAIN PIPING REPLACEMENT	ORKPL03	4	Plumbing	\$284,956	Capital Renewal				\$284,956						
Site	SITE RAIL UPGRADES	ORSISIO5	2	Site	\$49,000	Deferred Maintenance	\$49,000									
	LANDSCAPING UPGRADE	ORSISIO1	3	Site	\$242,400	Capital Renewal				\$242,400						
	PARKING AND ROADS REPAIR ALLOWANCE	ORSISIO3	3	Site	\$652,954	Capital Renewal	\$163,239	\$163,239	\$163,239							
	POND DREDGING	ORSISIO4	3	Site	\$40,746	Deferred Maintenance			\$40,746							
	SIDEWALK REPAIR ALLOWANCE	ORSISIO6	3	Site	\$25,726	Capital Renewal	\$5,145.26	\$5,145.26	\$5,145.26	\$5,145.26						
Power House	SELECTIVE PARKING LOT AND ROAD REPAVING	ORSISIO2	4	Site	\$1,380,086	Capital Renewal				\$1,380,086						
	FIRE SPRINKLER SYSTEM EXTENSION	OREFS01	2	Fire/Life Safety	\$148,561	Plant Adaption										\$148,561
	INTERIOR LIGHTING UPGRADE	OREEL01	3	Electrical	\$89,510	Deferred Maintenance										\$89,510
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	OREEL02	3	Electrical	\$144,911	Capital Renewal										\$144,911
	EXTERIOR LIGHTING REPLACEMENT	OREEL03	3	Electrical	\$3,719	Capital Renewal										\$3,719
	EXTERIOR REPAIRS AND CLEANING	ORES01	3	Exterior Structure	\$22,286	Capital Renewal										\$22,286
	REPLACE EXIT SIGNS	OREFS02	3	Fire/Life Safety	\$5,682	Deferred Maintenance										\$5,682
	STAIR SAFETY UPGRADES	OREFS03	3	Fire/Life Safety	\$20,892	Plant Adaption										\$20,892
	REPLACE HVAC UNIT IN THE MAINTENANCE OFFICES	OREHV01	3	HVAC	\$22,137	Deferred Maintenance										\$22,137
	HEAT EXCHANGER REPLACEMENT	OREHV02	3	HVAC	\$9,993	Deferred Maintenance										\$9,993
	REPLACE CONTROLS AIR COMPRESSOR	OREHV03	3	HVAC	\$8,032	Deferred Maintenance										\$8,032
	REPLACE STANDARD CASEWORK	OREIS01	3	Interior Finishes/Systems	\$15,024	Capital Renewal										\$15,024
	LOCKER ROOM RENOVATION	OREIS02	3	Interior Finishes/Systems	\$29,173	Capital Renewal										\$29,173
	PLUMBING FIXTURE REPLACEMENT	OREPL01	3	Plumbing	\$24,921	Capital Renewal										\$24,921
	WATER SUPPLY PIPING REPLACEMENT	OREPL02	3	Plumbing	\$75,809	Capital Renewal										\$75,809
	DRAIN PIPING REPLACEMENT	OREPL03	3	Plumbing	\$113,346	Capital Renewal										\$113,346
	COMPREHENSIVE FREIGHT ELEVATOR MODERNIZATION	OREVT01	3	Vertical Transporation	\$228,451	Deferred Maintenance										\$228,451
	MEMBRANE ROOF REPLACEMENT	OREES02	4	Exterior Structure	\$6,851	Capital Renewal										\$6,851
Smith Theater																
	FIRE SPRINKLER SYSTEM INSTALLATION	ORTFS01	2	Fire/Life Safety	\$139,248	Plant Adaption		\$139,248								
	INTERIOR AMENITY ACCESSIBILITY UPGRADES	ORTAC01	3	Accessibility	\$2,254	Plant Adaption		\$2,254								
	THEATER ACCESSIBILITY UPGRADES	ORTAC02	3	Accessibility	\$17,987	Plant Adaption		\$17,987								
	RESTROOM RENOVATION	ORTAC03	3	Accessibility	\$115,151	Plant Adaption		\$115,151								
	INTERIOR LIGHTING UPGRADE	ORTELO1	3	Electrical	\$155,426	Capital Renewal		\$155,426								
	HEAT EXCHANGER REPLACEMENT	ORTHV01	3	HVAC	\$56,628	Capital Renewal										
	REFINISH FLOORING	ORTIS01	3	Interior Finishes/Systems	\$72,889	Capital Renewal		\$72,889								
Smith Theater	REFINISH WALLS	ORTIS02	3	Interior Finishes/Systems	\$7,455	Capital Renewal		\$7,455								

Farmington Hills, Michigan

Major Maintenance and Renovation Priorities

Bldg	Title	Project Number	Priority	Category	Estimated Project		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
			Class		Cost	Project Class										
	DOMESTIC WATER HEATER REPLACEMENT	ORTPL01	3	Plumbing	\$3,326	Deferred Maintenance		\$3,326								
	ELECTRICAL SYSTEM REPAIRS	ORTELO2	4	Electrical	\$27,695	Capital Renewal		\$27,695								
	HVAC CONTROL SYSTEM UPGRADE	ORTHV02	4	HVAC	\$99,653	Capital Renewal		\$99,653								
	REFINISH CEILINGS	ORTIS03	4	Interior Finishes/Systems	\$38,499	Capital Renewal		\$38,499								
J - Building	FIRE SPRINKLER SYSTEM INSTALLATION	ORJFS01	2	Fire/Life Safety	\$1,454,144	Plant Adaption		\$1,454,144								
	INSTALL SECONDARY EGRESS FROM DAYCARE CENTER	ORJFS03	2	Fire/Life Safety	\$7,466	Plant Adaption		\$7,466								
	RESTROOM RENOVATION	ORJAC02	3	Accessibility	\$186,704	Plant Adaption		\$186,704								
	STAIR SAFETY UPGRADES	ORJAC03	3	Accessibility	\$61,201	Plant Adaption		\$61,201								
	INTERIOR LIGHTING UPGRADE	ORJEL01	3	Electrical	\$603,544	Deferred Maintenance		\$603,544								
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ORJEL02	3	Electrical	\$1,203,442	Deferred Maintenance		\$1,203,442								
	BALCONY GUARDRAIL IMPROVEMENTS	ORJFS02	3	Fire/Life Safety	\$19,574	Plant Adaption		\$19,574								
	FOOD SERVICE COLD BOX UPGRADES	ORJHE01	3	Health	\$152,300	Capital Renewal		\$152,300								
	HEAT EXCHANGER REPLACEMENT	ORJHV02	3	HVAC	\$236,505	Deferred Maintenance		\$236,505								
	EXHAUST FAN REPLACEMENT	ORJHV03	3	HVAC	\$90,169	Deferred Maintenance		\$90,169								
	REFINISH CEILINGS	ORJIS03	3	Interior Finishes/Systems	\$760,627	Capital Renewal		\$760,627								
	PARTIAL PLUMBING FIXTURE REPLACEMENT	ORJPL01	3	Plumbing	\$51,538	Capital Renewal		\$51,538								
	REPLACE SEWAGE EJECTORS	ORJPL04	3	Plumbing	\$11,957	Deferred Maintenance		\$11,957								
	COMPREHENSIVE FREIGHT ELEVATOR MODERNIZATION	ORJVT01	3	Vertical Transporation	\$228,451	Deferred Maintenance		\$228,451								
	COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION	ORJVT02	3	Vertical Transporation	\$330,824	Deferred Maintenance		\$330,824								
	INTERIOR PATH OF TRAVEL ACCESSIBILITY UPGRADES	ORJAC01	4	Accessibility	\$57,697	Plant Adaption		\$57,697								
	EXTERIOR REPAIRS AND CLEANING	ORJES01	4	Exterior Structure	\$125,871	Capital Renewal		\$125,871								
	REPLACE SPLIT DX SYSTEMS	ORJHV01	4	HVAC	\$3,013	Capital Renewal		\$3,013								
	HVAC CONTROL SYSTEM UPGRADE	ORJHV04	4	HVAC	\$520,722	Capital Renewal		\$520,722								
	RENEW FLOORING	ORJIS01	4	Interior Finishes/Systems	\$287,452	Capital Renewal		\$287,452								
	REFINISH WALLS	ORJIS02	4	Interior Finishes/Systems	\$245,592	Capital Renewal		\$245,592								
	REPLACE A PERCENTAGE OF INTERIOR DOORS	ORJIS04	4	Interior Finishes/Systems	\$41,919	Capital Renewal		\$41,919								
	WATER SUPPLY PIPING REPLACEMENT	ORJPL02	4	Plumbing	\$587,728	Capital Renewal		\$587,728								
	DRAIN PIPING REPLACEMENT	ORJPL03	4	Plumbing	\$879,300	Capital Renewal		\$879,300								
totals							\$5,488,878	\$9,052,334	\$7,502,969	\$7,957,122	\$314,903	\$2,812,539	\$1,657,361	\$1,712,684	\$2,642,449	\$969,298

**Plant / Program Adaption** - Expenditures required to adapt the physical plant to the evolving needs of the institution and to change codes or standards. These are expenditures beyond normal maintenance.

**Deferred Maintenance** - Refers to expenditures for repairs which were not accomplished as a part of normal maintenance or capital repair which have accumulated to the point that facility deterioration is evident and could impair the proper

**Capital Renewal** - A subset of regular or normal facility maintenance which refers to major repairs or the replacement/rebuilding of major facility components (e.g. roof replacement at the end of its normal useful life is capital repair; roof

	Title	Project Number	Priority Class	Estimated Project	Project Class	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
B - Building	GLAZED BRICK VENEER REPAIR WORK	ROBES01	3	Exterior Structure	\$5,937	Deferred Maintenance					\$5,937				
	EXTERIOR METAL SANDWICH PANEL SYSTEM UPGRADE	ROBES02	3	Exterior Structure	\$312,434	Deferred Maintenance			\$312,434						
	GENERAL CARPETING UPGRADES	ROBIS01	3	Interior Finishes/Systems	\$272,817	Deferred Maintenance				\$272,817					
	INTERIOR WALL REFINISHING AND REPLACEMENTS	ROBIS02	3	Interior Finishes/Systems	\$437,779	Deferred Maintenance				\$437,779					
	ACOUSTICAL CEILING UPGRADES	ROBIS03	3	Interior Finishes/Systems	\$231,620	Deferred Maintenance				\$231,620					
	SELECTIVE INTERIOR DOOR UPGRADES	ROBIS04	3	Interior Finishes/Systems	\$110,560	Deferred Maintenance				\$110,560					
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ROBEL01	4	Electrical	\$881,589	Capital Renewal						\$881,589			
	WINDOW REPLACEMENT	ROBES03	4	Exterior Structure	\$153,549	Capital Renewal			\$153,549						
	BUILT-UP ROOF REPLACEMENT	ROBES04	4	Exterior Structure	\$377,930	Capital Renewal					\$377,930				
	FIRE ALARM SYSTEM REPLACEMENT	ROBFS01	4	Fire/Life Safety	\$140,171	Capital Renewal									\$140,171
A - Building	REPLACE SPLIT DX SYSTEMS	ROBHV01	4	HVAC	\$24,107	Capital Renewal					\$24,107				
	GLAZED BRICK VENEER REPAIR WORK	ROA1ES01	3	Exterior Structure	\$8,314	Capital Renewal					\$8,314				
	EXTERIOR METAL SANDWICH PANEL UPGRADES	ROA1ES02	3	Exterior Structure	\$437,530	Deferred Maintenance			\$437,530						
	HVAC SYSTEM REPLACEMENT	ROA1HV01	3	HVAC	\$1,501,438	Deferred Maintenance			\$1,501,438						
	REPLACE CARPETING	ROA1IS01	3	Interior Finishes/Systems	\$230,711	Capital Renewal			\$230,711						
	REPLACE PANEL WALLS	ROA1IS02	3	Interior Finishes/Systems	\$284,956	Deferred Maintenance			\$284,956						
	REFINISH CEILINGS	ROA1IS03	3	Interior Finishes/Systems	\$166,517	Capital Renewal			\$166,517						
	REPLACE INTERIOR DOORS	ROA1IS04	3	Interior Finishes/Systems	\$43,847	Deferred Maintenance			\$43,847						
	REPLACE PRIMARY SERVICE TRANSFORMER	ROA1EL01	4	Electrical	\$78,710	Capital Renewal						\$78,710			
	REPLACE 277/480 V SWITCHGEAR AND DISTRIBUTION PANEL ASSEMBLY	ROA1EL02	4	Electrical	\$87,056	Capital Renewal						\$87,056			
D - Building	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ROA1EL03	4	Electrical	\$680,307	Capital Renewal						\$680,307			
	WINDOW REPLACEMENT	ROA1ES03	4	Exterior Structure	\$531,516	Capital Renewal			\$531,516						
	BUILT-UP ROOF REPLACEMENT	ROA1ES04	4	Exterior Structure	\$187,645	Capital Renewal					\$187,645				
	FIRE ALARM SYSTEM REPLACEMENT	ROA1FS01	4	Fire/Life Safety	\$104,819	Capital Renewal									\$104,819
	REPLACE SPLIT DX SYSTEMS	ROA1HV02	4	HVAC	\$6,027	Capital Renewal					\$6,027				
	ELECTRICAL SYSTEM REPAIRS	ROA2EL01	3	Electrical	\$48,390	Capital Renewal									\$48,390
	REPLACE SPLIT DX SYSTEMS	ROA2HV01	3	HVAC	\$6,027	Capital Renewal					\$6,027				
	HVAC CONTROL SYSTEM UPGRADE	ROA2HV02	3	HVAC	\$117,267	Capital Renewal									\$117,267
	REFINISH FLOORING	ROA2IS01	3	Interior Finishes/Systems	\$216,770	Capital Renewal		\$216,770							
	REFINISH WALLS	ROA2IS02	3	Interior Finishes/Systems	\$42,411	Capital Renewal		\$42,411							
D - Building	DOMESTIC WATER HEATER REPLACEMENT	ROA2PL01	3	Plumbing	\$2,236	Deferred Maintenance			\$2,236						
	BUILT-UP ROOF REPLACEMENT	ROA2ES01	4	Exterior Structure	\$135,144	Capital Renewal					\$135,144				
	FIRE ALARM SYSTEM REPLACEMENT	ROA2FS01	4	Fire/Life Safety	\$77,685	Capital Renewal									\$77,685
	REPLACE SPRINKLER HEADS	ROA2FS02	4	Fire/Life Safety	\$15,677	Capital Renewal				\$15,677					
	REFINISH CEILINGS	ROA2IS03	4	Interior Finishes/Systems	\$173,858	Capital Renewal				\$173,858					
	INTERIOR DOOR HARDWARE AND SIGNAGE UPGRADES	RODAC01	3	Accessability	\$7,402	Plant Adaption			\$7,402						
	INTERIOR LIGHTING UPGRADE	RODEL01	3	Electrical	\$149,584	Deferred Maintenance				\$149,584					
	EXTERIOR METAL SANDWICH PANEL UPGRADES	RODES01	3	Exterior Structure	\$496,677	Deferred Maintenance			\$496,677						
	REPLACE SPRINKLER HEADS	RODFS02	3	Fire/Life Safety	\$22,430	Deferred Maintenance			\$22,430						
	REFINISH FLOORING	RODIS01	3	Interior Finishes/Systems	\$148,916	Deferred Maintenance			\$148,916						
D - Building	STUDIO AREA GUT RENOVATIONS	RODIS02	3	Interior Finishes/Systems	\$491,423	Deferred Maintenance			\$491,423						
	REFINISH WALLS	RODIS03	3	Interior Finishes/Systems	\$207,029	Capital Renewal			\$207,029						
	REFINISH CEILINGS	RODIS04	3	Interior Finishes/Systems	\$176,579	Deferred Maintenance			\$176,579						
	RESTROOM RENOVATION	RODIS05	3	Interior Finishes/Systems	\$63,255	Capital Renewal			\$63,255						
	LOCKER ROOM RENOVATION	RODIS06	3	Interior Finishes/Systems	\$62,048	Capital Renewal			\$62,048						
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	RODEL02	4	Electrical	\$646,322	Capital Renewal			\$670,300			\$646,322			
	WINDOW REPLACEMENT	RODES02	4	Exterior Structure	\$670,300	Capital Renewal			\$670,300						
	BUILT-UP ROOF REPLACEMENT	RODES03	4	Exterior Structure	\$267,117	Capital Renewal					\$267,117				
	FIRE ALARM SYSTEM REPLACEMENT	RODFS01	4	Fire/Life Safety	\$111,146	Capital Renewal									\$111,146
	REPLACE SPLIT DX SYSTEMS	RODHV02	4	HVAC	\$6,027	Capital Renewal					\$6,027				
D - Building	DRAIN PIPING REPLACEMENT	RODPL01	4	Plumbing	\$217,267	Capital Renewal						\$217,267			
	FIRE ALARM SYSTEM INSTALLATION	ROGFS01	2	Fire/Life Safety	\$6,490	Plant Adaption					\$6,490				
	INTERIOR LIGHTING UPGRADE	ROGEL01	3	Electrical	\$14,660	Deferred Maintenance					\$14,660				
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ROGEL02	3	Electrical	\$47,402	Deferred Maintenance					\$47,402				
	EXTERIOR DOOR REPLACEMENTS	ROGES02	3	Exterior Structure	\$22,633	Capital Renewal					\$22,633				
	WINDOW REPLACEMENT	ROGES03	3	Exterior Structure	\$4,429	Deferred Maintenance					\$4,429				
	OFFICE FLOORING UPGRADE	ROGIS01	3	Interior Finishes/Systems	\$1,334	Deferred Maintenance					\$1,334				
	INTERIOR WALL REFINISHING	ROGIS02	3	Interior Finishes/Systems	\$6,443	Deferred Maintenance					\$6,443				
	OFFICE AND GARAGE CEILING UPGRADE	ROGIS03	3	Interior Finishes/Systems	\$2,052	Deferred Maintenance					\$2,052				
	RESTROOM RENOVATION	ROGIS05	3	Interior Finishes/Systems	\$14,744	Deferred Maintenance					\$14,744				
D - Building	WATER SUPPLY PIPING REPLACEMENT	ROGPL01	3	Plumbing	\$12,403	Deferred Maintenance					\$12,403				
	DRAIN PIPING REPLACEMENT	ROGPL02	3	Plumbing	\$18,568	Deferred Maintenance					\$18,568				
	EXTERIOR FACADE REPLACEMENT	ROGES01	4	Exterior Structure	\$58,801	Capital Renewal					\$58,801				
	BUILT-UP ROOF REPLACEMENT	ROGES04	4	Exterior Structure	\$41,169	Capital Renewal					\$41,169				
	OFFICE INTERIOR DOOR UPGRADES	ROGIS04	4	Interior Finishes/Systems	\$2,450	Capital Renewal					\$2,450				
	ROOFTOP SERVICE DOOR REPLACEMENT	ROCES01	3	Exterior Structure	\$3,668	Capital Renewal					\$3,668				
	BUILT-UP ROOF REPLACEMENT	ROCES02	3	Exterior Structure	\$142,152	Capital Renewal					\$142,152				
	GLASS CURTAINWALL REFURBISHING	ROCES03	3	Exterior Structure	\$199,361	Capital Renewal				\$199,361					
	REPLACE SPRINKLER HEADS	ROCF02	3	Fire/Life Safety	\$15,014	Deferred Maintenance				\$15,014					
	REPLACE CARPETING	ROCIS01	3	Interior Finishes/Systems	\$166,605	Capital Renewal				\$166,605					
D - Building	INTERIOR WALL REFINISHING	ROCIS02	3	Interior Finishes/Systems	\$5,058	Capital Renewal				\$5,058					

Royal Oak, Michigan

Major Maintenance and Renovation Priorities

		Title	Project Number	Priority Class	Estimated Project		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
C - Bldg		DOMESTIC WATER HEATER REPLACEMENT	ROCPLO1	3	Plumbing	\$2,236	Deferred Maintenance							\$2,236				
		UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ROCELO1	4	Electrical	\$253,547	Capital Renewal							\$253,547				
		FIRE ALARM SYSTEM REPLACEMENT	ROCF501	4	Fire/Life Safety	\$74,397	Capital Renewal										\$74,397	
		REPLACE SPLIT DX SYSTEMS	ROCHV01	4	HVAC	\$12,054	Capital Renewal					\$12,054						
		STANDARD CEILING FINISH UPGRADES	ROCIS03	4	Interior Finishes/Systems	\$75,770	Capital Renewal					\$75,770						
E - Building		LIGHTING CONTROL SYSTEM RENEWAL	ROEEL02	3	Electrical	\$52,884	Deferred Maintenance					\$52,884						
		EXTERIOR METAL SANDWICH PANEL UPGRADES	ROEES01	3	Exterior Structure	\$453,734	Deferred Maintenance			\$453,734								
		REPLACE SPRINKLER HEADS	ROEFS02	3	Fire/Life Safety	\$22,869	Deferred Maintenance				\$22,869							
		HVAC SYSTEM REPLACEMENT	ROEHV01	3	HVAC	\$2,025,517	Deferred Maintenance	\$2,025,517										
		STUDIO AREA GUT RENOVATIONS	ROEIS02	3	Interior Finishes/Systems	\$485,585	Deferred Maintenance	\$485,585										
		REFINISH CEILINGS	ROEIS04	3	Interior Finishes/Systems	\$158,425	Capital Renewal				\$158,425							
		REPLACE INTERIOR DOORS	ROEIS05	3	Interior Finishes/Systems	\$36,752	Capital Renewal				\$36,752							
		FIXED SEATING UPGRADE	ROEIS06	3	Interior Finishes/Systems	\$291,506	Capital Renewal				\$291,506							
		UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ROEEL01	4	Electrical	\$795,168	Capital Renewal								\$795,168			
		REPLACE PRIMARY SERVICE TRANSFORMERS	ROEEL03	4	Electrical	\$173,104	Capital Renewal								\$173,104			
		EXTERIOR DOOR REPLACEMENT	ROEES02	4	Exterior Structure	\$40,346	Capital Renewal			\$40,346								
		MULTI-LEVEL BUILT-UP ROOF REPLACEMENT	ROEES03	4	Exterior Structure	\$291,511	Capital Renewal						\$291,511					
		FIRE ALARM SYSTEM REPLACEMENT	ROEFS01	4	Fire/Life Safety	\$113,321	Capital Renewal										\$113,321	
		GENERAL FLOORING UPGRADES	ROEIS01	4	Interior Finishes/Systems	\$203,440	Capital Renewal										\$203,440	
		REFINISH WALLS	ROEIS03	4	Interior Finishes/Systems	\$41,514	Capital Renewal										\$41,514	
		WATER SUPPLY PIPING REPLACEMENT	ROEPL01	4	Plumbing	\$133,283	Capital Renewal										\$133,283	
		DRAIN PIPING REPLACEMENT	ROEPL02	4	Plumbing	\$199,147	Capital Renewal										\$199,147	
Mail		GLAZED BRICK VENEER REPAIR WORK	ROMES01	3	Exterior Structure	\$19,939	Deferred Maintenance					\$19,939						
		REPLACE SPRINKLER HEADS	ROMFS02	3	Fire/Life Safety	\$21,985	Deferred Maintenance								\$21,985			
		REFINISH FLOORING	ROMIS01	3	Interior Finishes/Systems	\$287,160	Capital Renewal								\$287,160			
		REFINISH WALLS	ROMIS02	3	Interior Finishes/Systems	\$3,425	Capital Renewal								\$3,425			
		COMPREHENSIVE HYDRAULIC ELEVATOR MODERNIZATION	ROMVT01	3	Vertical Transporation	\$268,556	Deferred Maintenance								\$268,556			
		UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ROMELO1	4	Electrical	\$626,075	Capital Renewal								\$626,075			
		BUILT-UP ROOF REPLACEMENT	ROMES02	4	Exterior Structure	\$198,072	Capital Renewal					\$198,072						
		FIRE ALARM SYSTEM REPLACEMENT	ROMFS01	4	Fire/Life Safety	\$108,943	Capital Renewal										\$108,943	
		REPLACE SPLIT DX SYSTEMS	ROMHV01	4	HVAC	\$12,054	Capital Renewal						\$12,054					
		REFINISH CEILINGS	ROMIS03	4	Interior Finishes/Systems	\$7,226	Capital Renewal								\$7,226			
		GUARDRAIL CABLING REPLACEMENTS	ROP1SF01	2	Fire/Life Safety	\$95,051	Plant Adaption									\$95,051		
North Parking Structure		FIRE ALARM SYSTEM INSTALLATION	ROP1SF02	2	Fire/Life Safety	\$343,543	Plant Adaption							\$343,543				
		INSTALL EXIT SIGNS AND EMERGENCY LIGHTS	ROP1SF03	2	Fire/Life Safety	\$21,449	Plant Adaption								\$21,449			
		PARKING LIGHTING UPGRADE	ROP1SEL01	3	Electrical	\$149,397	Deferred Maintenance								\$149,397			
		LANDSCAPING UPKEEP	ROP1SIO1	3	Site	\$5,401	Capital Renewal								\$5,401			
		SITE PAVING UPGRADES	ROP1SIO2	3	Site	\$48,871	Deferred Maintenance								\$48,871			
		EXTERIOR METAL PANEL MAINTENANCE	ROP1SE01	4	Exterior Structure	\$62,000	Capital Renewal								\$62,000			
		FIRE ALARM SYSTEM INSTALLATION	ROP2FS01	2	Fire/Life Safety	\$385,446	Plant Adaption								\$385,446			
South Parking Structure		INSTALL EXIT SIGNS AND EMERGENCY LIGHTS	ROP2FS02	2	Fire/Life Safety	\$21,449	Plant Adaption								\$21,449			
		PRECAST CONCRETE FINISH REPAIRS AND RECAULKING	ROP2ZES01	3	Exterior Structure	\$82,249	Capital Renewal									\$82,249		
		PARKING LIGHTING UPGRADE	ROP2ZEL01	4	Electrical	\$177,772	Capital Renewal										\$177,772	
		SITE PAVING UPGRADES	ROP2SIO1	4	Site	\$39,820	Capital Renewal									\$39,820		
		RESTORE BRICK VENEER	ROPES01	3	Exterior Structure	\$20,309	Deferred Maintenance						\$20,309					
Power House		BUILT-UP ROOF REPLACEMENT	ROPES02	3	Exterior Structure	\$26,125	Capital Renewal						\$26,125					
		UPGRADE ELECTRICAL DISTRIBUTION NETWORK	ROPELO1	4	Electrical	\$67,623	Capital Renewal									\$67,623		
		FIRE ALARM SYSTEM REPLACEMENT	ROPFS01	4	Fire/Life Safety	\$14,468	Capital Renewal										\$14,468	
		PUMP REPLACEMENT	ROPHV01	4	HVAC	\$149,043	Capital Renewal										\$149,043	
		DRAIN PIPING REPLACEMENT	ROPPL01	4	Plumbing	\$26,489	Capital Renewal										\$26,489	
Site		SIDEWALK CURB CUT UPGRADES	ROSIAC01	2	Accessibility	\$16,245	Plant Adaption										\$16,245	
		GENERAL CONCRETE SIDEWALK REPAIR ALLOWANCE	ROSISIO1	3	Site	\$12,821	Capital Renewal										\$12,821	
		LANDSCAPING REFURBISHING ALLOWANCE	ROSISIO2	4	Site	\$125,774	Capital Renewal										\$125,774	
		PARKING LOT PAVING UPGRADES	ROSISIO3	4	Site	\$105,516	Capital Renewal										\$105,516	

**Plant / Program Adaption** - Expenditures required to adapt the physical plant to the evolving needs of the institution and to change codes or standards. These are expenditures beyond normal maintenance.

**Deferred Maintenance** - Refers to expenditures for repairs which were not accomplished as a part of normal maintenance or capital repair which have accumulated to the point that facility deterioration is evident and could impair the proper functioning of the facility. Costs

**Capital Renewal** - A subset of regular or normal facility maintenance which refers to major repairs or the replacement/rebuilding of major facility components (e.g. roof replacement at the end of its normal useful life is capital repair; roof replacement several years after its



## Major Maintenance and Renovation Priorities

	Title	Project Number	Priority		Estimated Project Cost	Project Class										
			Class	Category			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
A - Building	EXHAUST FAN REPLACEMENT	SFSF1HV02	3	HVAC	\$25,459	Deferred Maintenance				\$25,459						
	REFINISH FLOORING	SFSF1IS01	3	Interior Finishes/Systems	\$604,030	Capital Renewal	\$604,030									
	REFINISH WALLS	SFSF1IS02	3	Interior Finishes/Systems	\$148,503	Capital Renewal		\$148,503								
	UPGRADE ELECTRICAL DISTRIBUTION NETWORK	SFSF1EL01	4	Electrical	\$888,233	Capital Renewal							\$888,233			
	EXTERIOR SIDING RECAULKING	SFSF1ES01	4	Exterior Struture	\$57,457	Capital Renewal				\$57,457						
	MEMBRANE ROOF REPLACEMENT	SFSF1ES02	4	Exterior Struture	\$608,555	Capital Renewal				\$608,555						
	PITCHED METAL ROOF REPLACEMENT	SFSF1ES03	4	Exterior Struture	\$23,286	Capital Renewal					\$23,286					
	FIRE ALARM SYSTEM REPLACEMENT	SFSF1FS01	4	Fire/Life Safety	\$299,690	Capital Renewal								\$299,690		
A - Bldg. Addition	COOLING TOWER REPLACEMENT	SFSF1HV01	4	HVAC	\$126,553	Capital Renewal					\$126,553					
	ELECTRICAL SYSTEM REPAIRS	SFSF2EL01	3	Electrical	\$11,133	Capital Renewal			\$11,133							
	LOWER FLOOR CONCRETE RETAINING WALL REPAIRS	SFSF2ES01	3	Exterior Struture	\$2,723	Deferred Maintenance			\$2,723							
	HVAC CONTROL SYSTEM UPGRADE	SFSF2HV02	3	HVAC	\$67,896	Capital Renewal			\$67,896							
	STANDARD CARPETING UPGRADES	SFSF2IS01	3	Interior Finishes/Systems	\$118,155	Capital Renewal		\$118,155								
	STANDARD INTERIOR WALL REFINISHING	SFSF2IS02	3	Interior Finishes/Systems	\$25,969	Capital Renewal		\$25,969								
	WESTERN EXTERIOR SIDEWALK RAMP REPAIRS	SFSF2SI01	3	Site	\$2,573	Deferred Maintenance			\$2,573							
	EXTERIOR SIDING RECAULKING	SFSF2ES02	4	Exterior Struture	\$11,152	Capital Renewal					\$11,152					
	EXTERIOR DOOR REPLACEMENT	SFSF2ES03	4	Exterior Struture	\$12,717	Capital Renewal					\$12,717					
	MEMBRANE ROOF REPLACEMENT	SFSF2ES04	4	Exterior Struture	\$155,409	Capital Renewal					\$155,409					
	FIRE ALARM SYSTEM REPLACEMENT	SFSF2FS01	4	Fire/Life Safety	\$40,103	Capital Renewal										\$40,103
	REPLACE SPRINKLER HEADS	SFSF2FS02	4	Fire/Life Safety	\$8,093	Capital Renewal					\$8,093					
	COMPUTER ROOM AC UNIT REPLACEMENT	SFSF2HV01	4	HVAC	\$333,356	Capital Renewal							\$333,356			
B - Building	REFINISH WALLS	SFSF3IS02	3	Interior Finishes/Systems	\$51,709	Capital Renewal									\$51,709	
	REFINISH FLOORING	SFSF3IS01	4	Interior Finishes/Systems	\$337,896	Capital Renewal									\$337,896	
Site	CONCRETE SIDEWALK REPAIR ALLOWANCE	SFSISIO1	4	Site	\$9,616	Capital Renewal						\$9,616				
	LANDSCAPING REFURBISHING ALLOWANCE	SFSISIO2	4	Site	\$51,029	Capital Renewal						\$51,029				
	PARKING LOT PAVING UPGRADES	SFSISIO3	4	Site	\$91,513	Capital Renewal						\$91,513				
totals							\$604,030	\$292,627	\$84,325	\$25,459	\$876,669	\$278,711	\$1,221,589	\$299,690	\$389,605	\$40,103

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