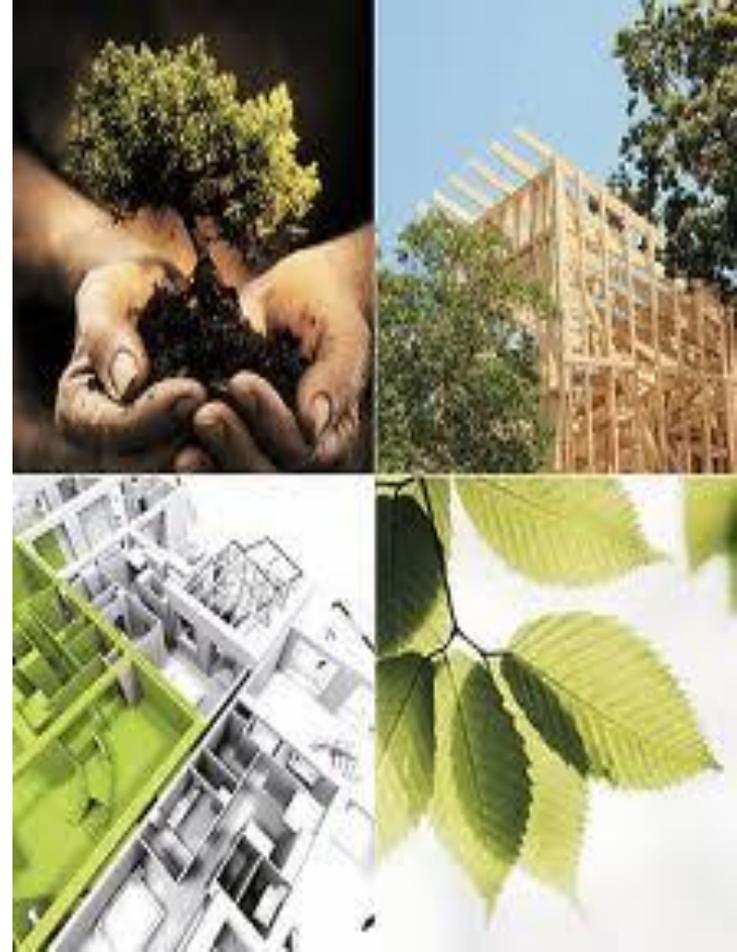


THE ENERGY EFFICIENCY REVOLUTION

Clean Energy Economy
Conference 2015

SUNY PI
Utica, New York

June 11, 2015



Presented by:

J.K. Hage III, Esq.
Amy Porter, Paraprofessional

www.hagelaw.com

283 Genesee Street
Utica, NY 13501

(315) 797-9850



HAGE & HAGE LLC

Hage & Hage LLC was founded in 1931. Its practice is at the intersection of law, business and sustainability. Its passion for innovation and sustainability is reflected in the design, construction and operation of its LEED Gold-certified office building in Utica, NY.

- ⊙ Municipal Counsel
- ⊙ Corporate Counsel
- ⊙ Strategic Business Consulting
- ⊙ Green Consulting



HAGE & HAGE LLC

◎ **J.K. Hage III, Esq.**

JK is a 1978 graduate of Albany Law School and he attended Hamilton College and Oxford University. He studied for his Ph. D. (ABT) in Romance Languages at New York University and the University of Madrid. Bar admissions: New York 1979, Alaska 1985

◎ **Amy Porter**

Amy is a senior paraprofessional and has been with Hage & Hage for over 26 years. She serves as the firm's Practice Manager and Regulatory/Sustainability Paraprofessional.

H&H

Hage & Hage

THE HAGE BUILDING

283 GENESEE STREET, UTICA, NY



LEED® NC Gold
2009







VERSADRILL

ADVANTAGE F-800

VERSADRILL

Americ
& Ditch
315

VERSADRILL

15187-SC











THE HAGE BUILDING

BEFORE



AFTER





THE HAGE BUILDING

BEFORE



AFTER



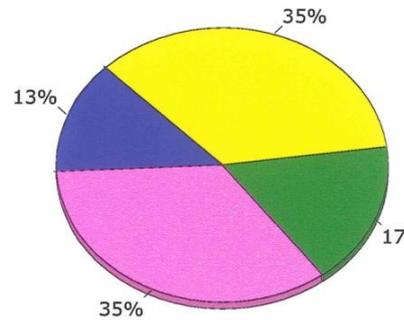


Reference Building Energy Consumption

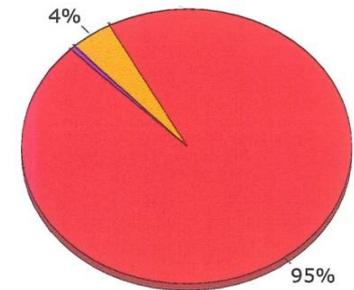
Annual Energy Consumption by Enduse

	Electricity kWh (x000)	Natural Gas MBtu	Steam Btu	Chilled Water Btu
Space Cool	27.67	-	-	-
Heat Reject.	-	-	-	-
Refrigeration	-	-	-	-
Space Heat	-	922.65	-	-
HP Supp.	-	-	-	-
Hot Water	-	39.98	-	-
Vent. Fans	71.87	-	-	-
Pumps & Aux.	0.23	6.36	-	-
Ext. Usage	-	-	-	-
Misc. Equip.	34.33	-	-	-
Task Lights	-	-	-	-
Area Lights	73.77	-	-	-
Total	207.87	968.99	-	-

- Area Lighting
- Exterior Usage
- Water Heating
- Refrigeration
- Task Lighting
- Pumps & Aux.
- Ht Pump Supp.
- Heat Rejection
- Misc. Equipment
- Ventilation Fans
- Space Heating
- Space Cooling



Electricity



Natural Gas

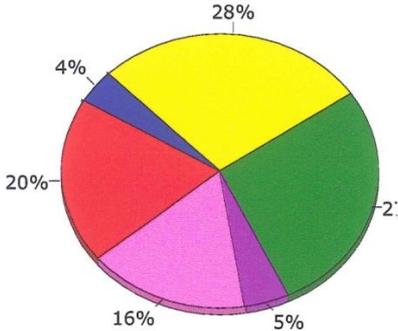


Actual Design Building Energy Consumption

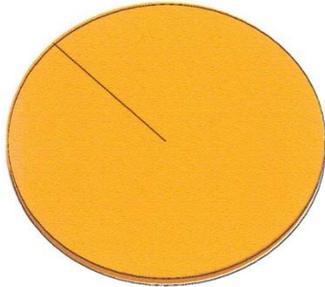
Annual Energy Consumption by Enduse

	Electricity kWh (x000)	Natural Gas Btu (x000)	Steam Btu	Chilled Water Btu
Space Cool	5.17	-	-	-
Heat Reject.	-	-	-	-
Refrigeration	-	-	-	-
Space Heat	24.76	-	-	-
HP Supp.	-	-	-	-
Hot Water	-	40,003	-	-
Vent. Fans	20.81	-	-	-
Pumps & Aux.	5.80	-	-	-
Ext. Usage	-	-	-	-
Misc. Equip.	34.33	-	-	-
Task Lights	-	-	-	-
Area Lights	35.56	-	-	-
Total	126.42	40,003	-	-

- Area Lighting
- Exterior Usage
- Water Heating
- Refrigeration
- Task Lighting
- Pumps & Aux.
- Ht Pump Supp.
- Heat Rejection
- Misc. Equipment
- Ventilation Fans
- Space Heating
- Space Cooling



Electricity



Natural Gas



ENERGY MODELING RESULTS

	Reference Building	The Hage Building
Electric Consumption (kWh)	207,870	126,420
<i>Gas Consumption (Btu)</i>	<i>968,990,000</i>	<i>40,000,000</i>
Gas Consumption (kWh)	283,914	11,720
Total Consumption (kWh)	491,784	138,140
	ENERGY SAVINGS	71.91%



JOHNSON PARK CENTER

JCTOD Outreach, Inc. dba Johnson Park Center (JPC) is a faith based New York nonprofit organization that promotes positive change, revitalization and community development in the heart of Cornhill, the poorest neighborhood in the City of Utica, NY.

JPC provides emergency and permanent supportive housing for women, children and families, as well as a range of community-based support services in the areas of nutrition, recreation, mentoring and advocacy. Its programs build hope and empowerment, and help individuals become self-sufficient, contributing members of the community.

JPC, through its Founder/CEO Dr. Rev. Maria A. Scates, has revitalized the Johnson Park-Cornhill Community and created a beautiful, clean, green, and safe place where the homeless, the poor & needy can go for assistance.

www.johnsonparkcenter.org

26 Johnson Park, Utica, NY

Tel: (315) 734-9608



JOHNSON PARK APARTMENTS V



210-12 Arthur Street
Utica, NY



1418 West Street
Utica, NY



LEED® for Homes
Platinum 2012



JOHNSON PARK APARTMENTS V

- ⊙ Gut rehabilitation
- ⊙ 3 closed geothermal wells at each house
- ⊙ PV Solar with 60 solar panels on each house
- ⊙ 90% air circulation per 24hr day
- ⊙ Hot water on demand for office use
- ⊙ Induction ovens in each unit
- ⊙ Rainwater harvesting



LEED® for Homes
Platinum 2012





Arthur









- 60 Solar Panels
- 5 Inverters 3000 Watts
- 4 Disconnect Switches
- 5 Production Meters
- Reverse Metering







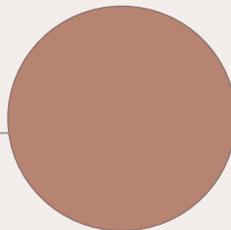
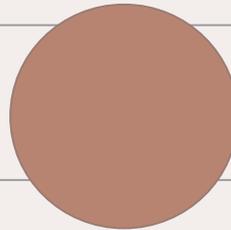
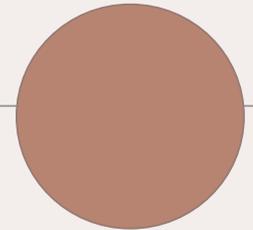
ENERGY COMPARISON

6 Month: August to February

JPA 1, \$4,932

JPA 4, \$3,411

JPA 5, \$1,094



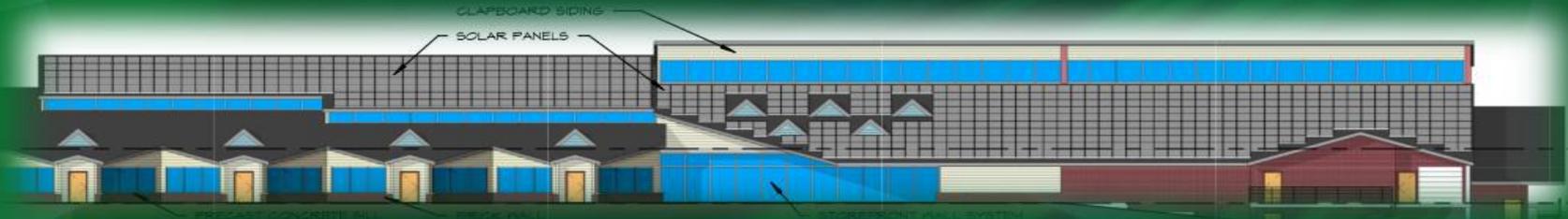


GREEN COMMUNITIES PROJECT

- ◎ Johnson Park Apartments VI
- ◎ Johnson Park Apartments VII
- ◎ Johnson Park Apartments VIII
- ◎ Habitat for Humanity Home
- ◎ Multi-Purpose Childcare & Family Center
- ◎ Energy, Maintenance & Technology Center

MULTIPURPOSE CHILDCARE AND FAMILY CENTER

Facilities



- **Multi-purpose gym/dining area**
- **Exercise / fitness center**
- **Computer lab and Media Center. Campus-wide Wi-Fi**
- **Full Teen Center with game room, club rooms and lobby**

8 classrooms

7 offices

2 conference
rooms

Commercial
Kitchen





ENERGY MAINTENANCE AND TECHNOLOGY CENTER



C. Lamb, Sponholz & Architects

JPA ENERGY TECHNOLOGY &
MAINTENANCE CENTER
CORNHILL DISTRICT, UTICA, NY

DATE	07/01/10
DESIGNED BY	EPG
CHECKED BY	CLT
APPROVED BY	CLT
SCALE	
PROJECT NUMBER	0403
DATE PLOTTED	
PROP. 3D VIEWS	
DRAWING NUMBER	
P-1	
SCALE	AS SHOWN