

Contact: Joan Racki

REGISTER OF UNIVERSITY OF IOWA
CAPITAL IMPROVEMENT BUSINESS TRANSACTIONS

Actions Requested: Consider recommending approval of:

1. The following actions for the **West Campus Energy Plant – Construct Facility** project, a major capital project as defined by Board policy:
 - a. Acknowledge receipt of the University's initial submission of information to address the Board's capital project evaluation criteria (see Attachment A);
 - b. Accept the Board Office recommendation that the project meets the necessary criteria for Board consideration; and
 - c. Authorize permission to proceed with project planning, including the design professional selection process.

2. The following actions for the **Madison Street Residence Hall – Construct Facility** project, a major capital project as defined by Board policy.
 - a. Acknowledge receipt of the University's final submission of information to address the Board's capital project evaluation criteria (see Attachment B);
 - b. Accept the Board Office recommendation that the project meets the necessary criteria for Board consideration;
 - c. Approve the schematic design, and project description and budget (\$95,000,000), with the understanding that approval will constitute final Board approval and authorization to proceed with construction; and
 - d. Approve the financing plan and adopt A Resolution Declaring an Official Intent Under Treasury Regulation 1.150-2 to Issue Debt to Reimburse The State University of Iowa for Certain Original Expenditures Paid in Connection with the Construction of a New Residence Hall (Madison Street Residence Hall).

Executive Summary:

The University requests permission to proceed with project planning for the **West Campus Energy Plant – Construct Facility** project, which would construct a new combined heat and power (CHP) facility to supplement utility services provided by the Main Campus Power Plant. The new plant, to be located adjacent to the University of Iowa Hospitals and Clinics new back-up power facility being constructed on the north side of the Finkbine Commuter Lot (lot 65) (see Attachment C for location), would provide critically important redundancy and future growth options at a location away from the Iowa River flood plain and in proximity to the University's Health Care complex and a majority of the research-related facilities. The new facility would be connected to the existing campus utility distribution system. The estimated project cost of \$75 million would be funded by Utility System Revenue Bonds.

The University requests approval of the schematic design, and project description and budget (\$95,000,000) for the **Madison Street Residence Hall – Construct Facility** project. The residence hall would be constructed on the site of the Iowa City old water plant. (The location is shown in the schematic design booklet included with the Board's agenda materials.) The

new, 12-story residence hall would provide housing for 1,000 to 1,050 students (primarily freshmen) and provide dining services for 2,000 students. The cost associated with the housing portion of project is estimated at \$85,000,000; the cost associated with the kitchen/dining service portion of the project is estimated at \$10,000,000. The project would be funded by Dormitory Revenue Bonds. The University made the following assumptions in developing the financing plan (through FY 2025). (See Attachment D.)

- Residence hall occupancy: Fall 2014 occupancy (residence halls and off-campus apartments leased by the University) was 5,921. Fall 2015 occupancy is estimated at 6,505 while Fall 2016 occupancy will drop to 6,157 due the closing of Quadrangle Hall. Fall 2017 occupancy is projected at 7,180 with the opening of the Madison Street Residence Hall and is projected to remain at that level through FY 2025.
- Rate increase assumptions: Average room and board rate increases from FY 2016 through FY 2025 will be at the rate of inflation which is assumed to be 2.5% for the residence halls and leased off-campus apartments. In addition, in FY 2017 through FY 2019, a supplemental 0.5% is included in all rates to partially fund the debt service costs for the Madison Street Residence Hall.
- Cost increases: Assumption of a 2.5% across the board annual increase in expenses (salaries, utilities, insurance, maintenance and repair, etc).
- Three series of Dormitory Revenue Bonds would be sold for the project (\$35 million each in 2015, 2016, and 2017, netting \$95 million in project proceeds). The University has worked with Springsted, the Board's municipal advisor, to structure the proposed bond issues to moderate debt service increases by having a significant portion of the principal repayment begin as existing debt service obligations are reduced. The maximum annual debt service on the bonds for the Madison Street Residence Hall is estimated at \$7.4 million.
- The University's residence system currently has \$86.9 million in outstanding debt; annual debt service payments on the existing debt are approximately \$8.5 million in FY 2015 through FY 2020, before decreasing to approximately \$7.6 million for FY 2021, with further reductions beyond that year. The last maturity of the existing bonds is FY 2034.
- To issue new bonds, the parity provisions of the bond covenants must be met. These require a coverage ratio of at least 135%. A ten year forecast shows that net revenues divided by projected annual debt service for the new bonds results in an annual debt service coverage ratio ranging from 171% in FY 2021 to 184% in FY 2017. Net revenues as a percent of maximum annual debt service results in a coverage ratio of 148% at its lowest point in FY 2017. The largest debt service payment of approximately \$13.5 million is projected to occur in FY 2021.

At its September 2014 meeting, the Board authorized the University to consider the use of an alternative delivery method in lieu of the traditional design-bid-build process and to seek authorization from the Executive Director to proceed with the method selected. Consistent with this authorization, the Executive Director approved the use of the design-build method for this project; this method was chosen as the University determined that it was the only available delivery method which would enable completion of the project before the fall 2017 semester. With design criteria for the project provided as part of the project requirements in the request

for proposals, the design process is being expedited, with more project dollars directed to construction. As a single function facility, a new residence hall optimally fits the project type needs of design-build, as the number of beds becomes the measurement of value and the product to be delivered is clear.

Details of the Projects:

West Campus Energy Plant – Construct Facility

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed with Project Planning Initial Review and Consideration of Capital Project Evaluation Criteria		Mar. 2015	Requested
		Mar. 2015	Received Report

It is anticipated that the new Combined Heat and Power (CHP) facility would initially be capable of delivering 150 klbs (kilopounds)/hr steam to the campus and could be expanded up to 300 klbs/hr without altering the building's footprint. The CHP facility could also provide back-up electrical generation (approximately 8 MW [megawatts]) in the event of a power failure from MidAmerican Energy, the local electrical energy provider. The added electrical generation will also provide peaking power during MidAmerican summer curtailment periods, positioning the University to negotiate more favorable power rates and incentives. While the facility will be fueled by natural gas, the proposed building site allows options for future biofuel sources via the adjacent rail line.

The existing west campus utilities distribution systems would be upgraded and extended to the CHP facility as part of the project. Direct buried, redundant steam and condensate lines will be installed to transport the steam produced at the CHP facility. The new distribution system will also include extending water distribution piping. The CHP facility will be connected to the nearby electrical Substation U (one of two providing power to the UI campus).

UIHC patient care services and University research activities require reliable and redundant utility services. The University believes that campus growth (e.g., Children's Hospital, Pappajohn Biomedical Research Building) and lessons learned from the 2008 flood make addressing long-term basic campus utility services imperative. (The temporary boilers installed after the 2008 flood and adjacent to UIHC and Kinnick Stadium have an additional useful life of approximately four years.) The Main Power Plant's location also creates distribution risk, as current steam lines must cross the river to reach UIHC and the west campus.

This project is needed to maintain firm steam generating capacity and to address the increasing demand for steam. (Firm capacity is defined as having enough steam generating capacity when the largest campus boiler is out of service.) Firm steam capacity must be maintained to provide and protect patient care services at UIHC and the University's research enterprise. Steam produced by this project is also essential to provide heating for the residence halls and to maintain adequate temperatures in classrooms and office spaces throughout campus.

The steam generated by the current Main Power Plant also powers one-half of the chilled water plant supply (for building cooling and process chilled water) for the campus. Finally, developing two geographically dispersed plants will provide a higher level of protection against natural disaster risks.

Madison Street Residence Hall – Construct Facility

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed with Project Planning		Sept. 2014	Approved
Initial Review and Consideration of Capital Project Evaluation Criteria		Sept. 2014	Received Report
Consideration of Use of an Alternative Delivery Method		Sept. 2014	Approved
Permission to Utilize Design-Build-Bridging Design Professional Agreement – Bridging Documents (FEH Associates; Des Moines)	\$ 128,850	Nov. 2014	Not Required*
		Dec. 2014	Not Required*
Schematic Design		Mar. 2015	Requested
Project Description and Budget	95,000,000	Mar. 2015	Requested
Final Review and Consideration of Capital Project Evaluation Criteria		Mar. 2015	Receive Report

*Approved by Executive Director, as delegated by Board and/or consistent with Board policies

This project is to be completed as a design-build project with the technical assistance of FEH Consultants of Des Moines, IA. The selection of the design-build team for this project followed the two-step process used for the Hawkeye Tennis & Recreation Complex – Indoor Turf Addition project and the Biomedical Research Support Facility project - Request for Qualifications (RFQ) and a response to the Request for Proposals (RFP).

Six teams provided responses to the RFQ. Three firms were selected to receive and respond to the Request for Proposals. The submissions included a technical proposal to address design performance requirement compliance; design creativity, context and approach; project and team management plan; and a project schedule, plus a separate cost proposal / bid. Each of the teams made a presentation to a group which included individuals from the University's Departments of Facilities Management, and Housing & Dining, and the Board Office. The scoring of the technical proposal was done individually by voting members of the entities listed above. After receipt and recording of the scoring of the technical proposals, the cost proposal / bid was formally opened and added to the average of the scores of technical proposal via a pre-established calculation form. The winning proposal/bid was submitted by Miron Construction Company (Cedar Rapids) in conjunction with Rohrbach Associates Architects (Iowa City).

The new facility will consist of a single 12-story (plus mechanical penthouse) building located on the north end of Madison Street, west of the North Campus Parking Ramp. There will be a public/emergency access entry off of Madison Street and a more public / primary student access entry off of the T. Anne Cleary Walkway. The first floor is located above the 500 year flood elevation plus 2 feet.

The façade will relate to the contextual materials of the neighborhood and will consist of masonry veneer, punched windows, and curtainwall glazing. The masonry veneer will be both brick and limestone or cast stone. Vision glass is clear. Spandrel glass or a metal panel covers the edge of the slab where glazing spans over two floors. Major overhangs at the southeast entry and loading dock soffits are metal panel.

The first floor, which will provide a major entry from Madison Street, will include building support areas such as storage, mechanical, electrical service, generator loading dock, trash/recycling, and custodial operations. The first floor will also have a central laundry and a student fitness center. Food service functions (a kitchen, servery, and dining spaces) are on the second floor. The third floor, which serves as the primary student entry floor from the T. Anne Cleary Walkway, will provide a residential lobby with a reception desk, residence life administrative offices, a study lounge with six study rooms, a multi-purpose room, game room, and three hall coordinator apartments. Floors 4-12 are designed for three defined “houses” per floor, supporting individual living / learning communities; floor 3 also includes one house. Space is provided for a resident assistant for each house.

The following summarizes the square footage included in the building program and schematic design:

<u>Function</u>	<u>Net Assignable Square Feet</u>
Residential Floor Space (dorm rooms house study rooms, lounge etc.)	143,160
Other Building Spaces (front desk, mail room, seminar room, hall coordinator apartments, multi-purpose room, game room, laundry) etc	15,862
Dining Areas	17,252
Food Service Receiving & Storage	5,080
Kitchen (includes circulation within)	5,413
Food Service Staff Spaces	6,897
Serving Areas (includes circulation)	5,500
Learning Commons	1,650
Administrative Suite	1,035
Support Functions (custodial, housekeeping, maintenance, mechanical / electrical)	21,322
Support Functions (mechanical penthouse)	3,320
Building Circulation Functions (Madison Street lobby)	<u>1,260</u>
Total Net Assignable Square Feet	227,751
Anticipated Gross Square Feet	303,071

Project Budget

Design & Construction	\$83,241,140
Planning & Management	3,494,201
Furniture & Equipment	4,264,659
Contingency	<u>4,000,000</u>
TOTAL	<u>\$95,000,000</u>

Source of Funds:
Dormitory Revenue Bonds

West Campus Energy Plant – Construct Facility
Evaluation Criteria

Since the project meets the Board's definition of a major capital project, the University has provided the following information in response to the Board's evaluation criteria.

Institutional Mission / Strategic Plan: This project will construct a new West Campus Energy Plant to supplement utility services provided by the Main Campus Power Plant. The new plant will provide critically important redundancy and future growth options at a location away from the Iowa River flood plain and in proximity to the UI Health Care complex and a majority of UI research-related facilities. The project will establish a new Combined Heat and Power (CHP) facility on the west side of the University of Iowa main campus and will be connected to the existing campus utility distribution system.

The new CHP facility will be located adjacent to the new University of Iowa Hospital and Clinics (UIHC) back-up power facility being constructed on the north side of the Finkbine Commuter Lot (lot 65). It is anticipated the CPH facility will initially be capable of delivering 150 klbs/hr steam to the campus and could be expanded up to 300 klbs/hr without altering the building's footprint. The CHP facility could also provide back-up electrical generation (approximately 8 MW) in the event of a power failure from MidAmerican Energy. The added electrical generation will also provide peaking power during MidAmerican summer curtailment periods; positioning the UI to negotiate more favorable power rates and incentives. While the facility will be fueled by natural gas, the proposed building site allows options for future biofuel sources via the adjacent rail line.

Campus growth (e.g., Children's Hospital, Pappajohn Biomedical Research Building) and lessons learned from the 2008 flood make addressing long-term basic campus utility services imperative. This project will address the need to maintain firm steam generating capacity and will address the increasing demand for steam on the UI campus. Firm capacity is defined as having enough steam generating capacity when the largest campus boiler is out of service. Firm steam capacity must be maintained to provide and protect patient care services at UIHC as well as UI's expansive research enterprise. Steam produced by this project is also essential to provide heating for the residence halls and to maintain adequate temperatures in classrooms and office spaces throughout campus.

The steam generated by the current Main Power Plant also powers one-half of the chilled water plant supply (for building cooling and process chilled water) for the campus. Redundancy and long-term growth needs for steam production will be addressed by this second generation plant. Additionally, developing two geographically dispersed plants will provide a higher level of protection against natural disaster risks.

Other Alternatives Explored: Currently, the University of Iowa main campus has a total steam generating capacity of 605 klbs/hr which includes 480 klbs/hr at the Main Power Plant, 40 klbs/hr within the UIHC complex, and 85 klbs/hr at the **temporary** West Campus Steam Plant. This **temporary** plant is located immediately adjacent to UIHC and Kinnick Stadium. The **temporary** West Campus Steam Plant has housed two temporary steam boilers since the 2008 flood. This facility was not built to provide a permanent source of steam. The life-span of these temporary steam boilers has been exceeded and Power Plant staff is working on extending service life an additional four years. Due to its proximity to multiple major public and medical buildings (UIHC), the **temporary** West Campus Steam Plant site is within an area where

additional emissions would impact the ability to comply with air emissions permit limits. If this location was to be made permanent, extensive emission controls and unacceptable operational limitations would be required. These factors preclude replacement or modernization of the steam boilers at this site. As these temporary boilers are critical to the appropriate supply of steam to the UIHC complex, they will remain in service until the new CHP facility is complete.

All steam service for the UIHC complex and all facilities on the west side of the campus rely on the UI's Main Power Plant which was built in 1929. The Main Power Plant is immediately adjacent to the Iowa River making it susceptible to flooding despite the substantial efforts undertaken to protect it, particularly since the 2008 flood. The Main Power Plant's location also creates distribution risk, as current steam lines must cross the river to reach UIHC and the west campus. The Main Power Plant's site is land-locked/built-out and offers limited long-term growth or modernization options.

Impact on Other Facilities and Square Footage: The West Campus temporary boilers will be demolished upon completion of this project.

Financial Resources for Construction Project: The project will be funded through the sale of utility system revenue bonds and repaid through charges to University utility customers.

Financial Resources for Operations and Maintenance: Operating and maintenance funds will be generated from the sale of utilities to University customers.

External Forces Justifying Approval: This project is needed to maintain firm steam generating capacity and to address the increasing demand for steam on the UI campus. Firm capacity is defined as having enough steam generating capacity when the largest campus boiler is out of service. Firm steam capacity must be maintained to provide and protect patient care services at UIHC as well as UI's expansive research enterprise. Steam produced by this project is also essential to provide heating for the residence halls and to maintain adequate temperatures in classrooms and office spaces throughout campus.

The steam generated by the current Main Power Plant also powers one-half of the chilled water plant supply (for building cooling and process chilled water) for the campus. Redundancy and long-term growth needs for steam production will be addressed by this second generation plant. Developing two geographically dispersed plants will provide a higher level of protection against natural disaster risks.

Madison Street Residence Hall – Construct Facility
Evaluation Criteria

Since the project meets the Board's definition of a major capital project, the University has provided the following information in response to the Board's evaluation criteria.

Institutional Mission / Strategic Plan: University Housing & Dining complements the academic mission of the University of Iowa by providing clean, well-maintained, secure, healthy, and affordable housing and dining options designed to meet the diverse and evolving developmental, educational, and nutritional needs of students living in a multicultural community. The University's desire is to house a mixture of first year and upperclass students in the residence halls. The University is committed to house the first year class in the residence halls. In order to do that within the current housing capacity, the University has had to limit the number of returning students to the halls.

Other Alternatives Explored: The University of Iowa owns residence hall facilities that house over 5,600 students. Most of the facilities are clustered in two locations associated with major dining facilities: the West Campus near Hillcrest and the East Campus near Burge Hall. Other residence halls not immediately adjacent to these dining facilities include the Mayflower Residence Hall on North Dubuque Street and the Parklawn Residence Hall at the corner of Park Road and Riverside Drive. Both of these facilities have cooking facilities in the student rooms.

The UI Housing System has been at full capacity for more than a decade. The University has not constructed a new residence hall since 1968 (Slater Hall) until the 108 bed addition to Burge Hall in 2009 and the Mary Louise Petersen Residence Hall that is currently under construction with a planned completion date of May 2015. During that period of time the student body has grown from approximately 19,000 to more than 31,000 students. This has created stress on the availability of on-campus housing. University Housing & Dining, in response to increased enrollments, currently leases Centerstone Apartments, Bloomington Street Apartments and Dubuque Street Apartments, adding 223 beds to the residence hall inventory.

The design of modern residence halls has advanced significantly over time and the University must keep pace to remain competitive and meet the housing desires of prospective students. Modernized residential facilities will enhance UI efforts to recruit and retain top students and in achieving UI student success goals.

In examining various siting options for the proposed residence hall, convenient access to food service facilities was critical. Existing food service facilities at Burge and Hillcrest are at, or approaching, full capacity. Therefore, the Madison Street Residence Hall will add dining capacity to serve an additional 2,000 resident students relieving the pressure on Burge Hall created by the addition to Burge Hall and the leased facilities served by Burge.

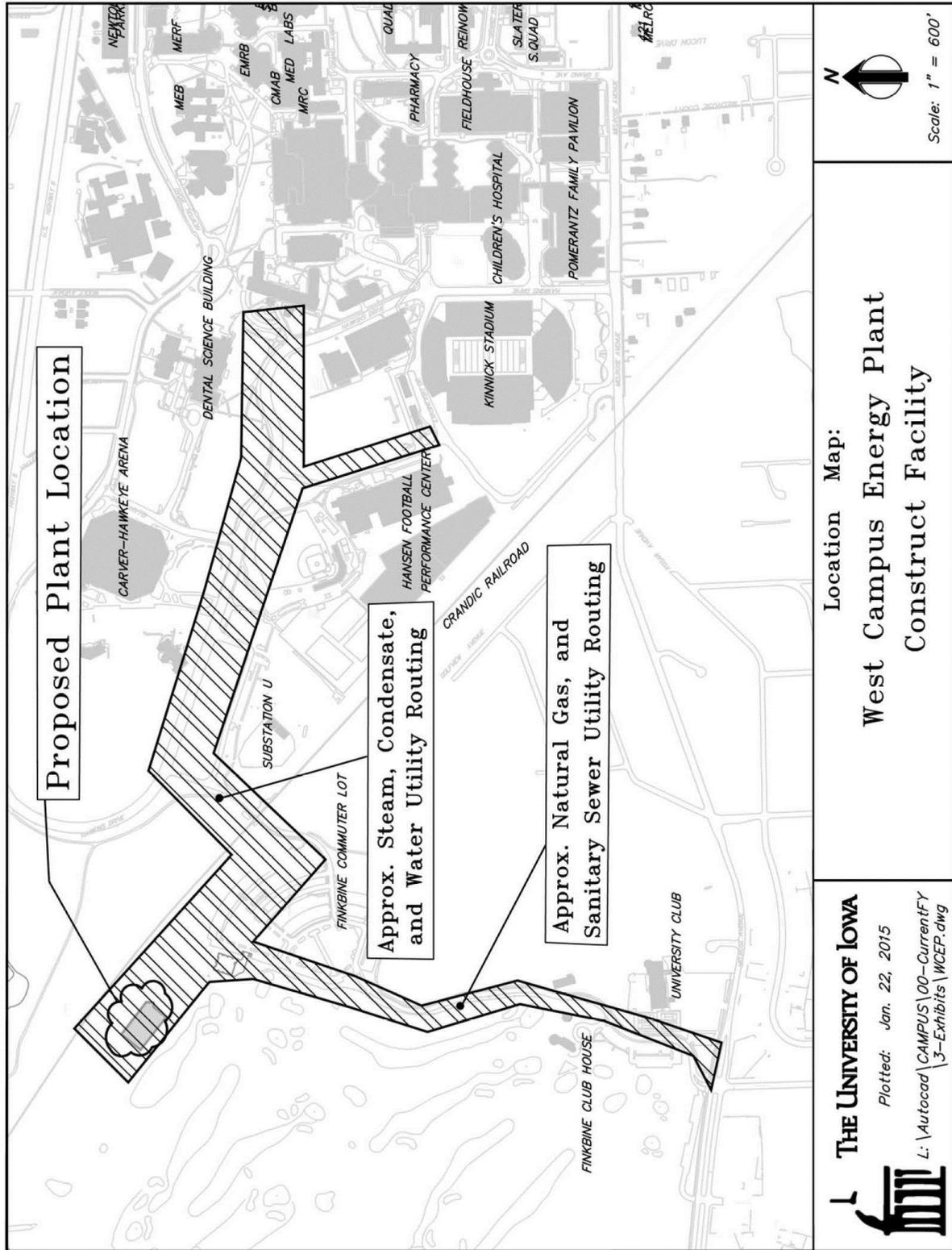
Impact on Other Facilities and Square Footage: In October 2014, the Board approved the University's request to demolish the former Iowa City water plant - the site of the new residence hall. This new Madison Street Residence Hall project will add between 1,000 and 1,050 beds.

Financial Resources for Construction Project: Dormitory Revenue Bonds.

Financial Resources for Operations and Maintenance: Operating and maintenance funding, as is the case for all UI Housing facilities, will be provided by revenues generated by the Housing system.

External Forces Justifying Approval: The projected growth of UI's freshman class is expected to outpace the availability of beds within a relatively short time frame. While the proposed Madison Street facility is under construction, the University will continue to utilize various housing alternatives to meet the expected demand for on-campus or near-campus housing. These interim solutions may include additional use/lease agreements with local and proximate apartment owners. In addition to satisfying critical short-term housing needs, these interim options will allow the UI to advance the benefits of living-learning communities, where students studying in a particular academic field can live together, sharing experiences and common interests.

Adding capacity to UI housing stock will also allow existing halls to be modernized to meet student and institutional needs.



Proposed Plant Location

Approx. Steam, Condensate,
and Water Utility Routing

Approx. Natural Gas, and
Sanitary Sewer Utility Routing



Scale: 1" = 600'

Location Map:
West Campus Energy Plant
Construct Facility

 **THE UNIVERSITY OF IOWA**
Plotted: Jan. 22, 2015
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UNIVERSITY OF IOWA - UNIVERSITY HOUSING & DINING
PRO FORMA FINANCIAL SUMMARY

	Actual FY2014	Revised Estimate FY2015	Preliminary Budget FY2016	Estimated FY2017	Estimated FY2018	Estimated FY2019	Estimated FY2020	Estimated FY2021	Estimated FY2022	Estimated FY2023	Estimated FY2024	Estimated FY2025
OPERATING REVENUES:												
Room, Board & Apartment Contract Revenues	\$ 55,774,222	\$ 57,080,711	\$ 64,715,651	\$ 63,411,209	\$ 74,180,160	\$ 76,140,181	\$ 77,826,166	\$ 79,554,301	\$ 81,325,638	\$ 83,141,260	\$ 85,002,271	\$ 86,909,808
Interest Income	698,112	742,964	713,371	785,145	822,137	853,712	860,162	844,487	815,995	839,355	825,288	806,844
Other Revenues	12,253,046	12,065,345	13,423,250	13,398,566	13,448,265	13,448,265	13,448,265	13,448,265	13,448,265	13,448,265	13,448,265	13,448,265
Total Operating Revenues	68,725,380	69,889,020	78,852,272	77,594,920	88,450,562	90,442,159	92,134,593	93,847,052	95,589,899	97,428,880	99,275,824	101,164,918
OPERATING EXPENSES:												
Salaries, Wages & Benefits	22,680,774	22,684,809	25,087,044	25,317,929	29,382,195	30,116,750	30,869,669	31,641,411	32,432,446	33,243,257	34,074,338	34,926,196
Cost of Food or Goods Sold	9,246,978	9,738,126	11,187,967	11,100,563	12,314,173	12,622,027	12,937,578	13,261,017	13,592,542	13,932,356	14,280,665	14,637,682
Utilities	6,325,603	6,074,414	7,050,220	6,817,239	8,679,086	8,896,063	9,118,465	9,346,427	9,580,088	9,819,590	10,065,080	10,316,707
Repairs & Maintenance	3,199,232	3,519,715	3,748,296	3,752,003	4,295,003	4,402,378	4,512,437	4,625,248	4,740,879	4,859,401	4,980,868	5,105,408
Other Operating Expenses	10,612,280	9,745,911	10,517,614	10,681,845	11,124,073	11,402,175	11,687,229	11,979,410	12,278,895	12,585,867	12,900,514	13,223,027
Total Operating Expenses	52,044,867	51,762,975	57,591,141	57,669,579	65,794,530	67,459,393	68,125,378	70,853,913	72,624,850	74,440,471	76,301,463	78,209,020
NET REVENUES FROM OPERATIONS	16,680,513	18,126,045	21,261,131	19,925,341	22,656,032	23,002,766	23,009,215	22,993,539	22,965,049	22,988,409	22,974,341	22,955,898
Debt Service	6,940,926	8,580,555	9,667,910	10,822,593	12,279,853	12,674,603	13,411,303	13,477,783	12,254,528	12,976,473	13,172,723	11,757,783
Other Non-operating								(512,000)	(2,001,500)			
University Overhead Charges	524,700	623,700	689,606	700,839	798,154	814,117	830,399	847,007	863,947	881,226	898,851	916,828
Capital Improvement Spending/Funding	11,490,176	10,241,945	9,973,189	9,335,094	9,463,468	9,274,770	9,378,444	9,431,764	9,762,535	9,917,252	9,908,139	10,007,220
Net Inc/Dec in Voluntary Reserves	(2,275,289)	(1,320,155)	930,426	(933,185)	114,557	239,276	(610,831)	(251,015)	2,085,539	(786,542)	(1,005,372)	274,067
Voluntary Reserve Balances 7/1/xx	18,728,793	16,453,504	15,133,349	16,063,775	15,130,590	15,245,147	15,484,423	14,873,492	14,622,477	16,708,016	15,921,473	14,916,101
Voluntary Reserve Balances 6/30/xx	\$ 16,453,504	\$ 15,133,349	\$ 16,063,775	\$ 15,130,590	\$ 15,245,147	\$ 15,484,423	\$ 14,873,492	\$ 14,622,477	\$ 16,708,016	\$ 15,921,473	\$ 14,916,101	\$ 15,190,168
Debt Service Coverage Ratios:												
Net Revenues as a % of Current Year Debt Service	240%	211%	220%	184%	181%	172%	171%	187%	177%	174%	195%	