TAB	DESCRIPTION	ACTION
1	**UNIVERSITY OF IDAHO** Utility Public Private Partnership Update	Information Item

UNIVERSITY OF IDAHO

SUBJECT

University of Idaho Utility Public Private Partnership Update

REFERENCE

April 2020	The Board of Regents (Board) reviewed the University of Idaho's potential Public-Private Partnership as an informational item.
November 2020	Board approved the Long-Term Lease and Concession Agreement for the University of Idaho Utility System between the University of Idaho and Sacyr Plenary Utility Partners Idaho LLC
October 2021	Board approved Capital Improvement (Chiller Replacement and Improvements) under the Long-Term Lease and Concession Agreement for the University of Idaho Utility System

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section V.I.3 Acquisition of Personal Property and Services

BACKGROUND/DISCUSSION

On November 2, 2020, the U of I's Board of Regents approved a 50-year public-private partnership (P3), to lease the University's utility system to Sacyr/Plenary (Concessionaire), and grant it the exclusive right to operating the utility system and provide utility services to the University of Idaho campus. On December 30, 2020, the University received an upfront payment of $225,000,000 in connection with the partnership. As discussed with the Board in November, numerous benefits accrue to U of I as a result of this transaction. The $225,000,000 upfront consideration has been invested in a separate single-purpose entity, aptly named the Strategic Initiatives Fund (SIF), that will distribute at least $6,000,000 annually (depending on market performance of SIF investment assets) from the corpus and earnings of the upfront consideration to fund the university's strategic initiatives to drive enrollment growth, provide scholarship opportunities to students, and grow the research enterprise as we march towards R1 status. Additionally, U of I benefits from having a world-class operator, McKinstry (Sub-Operator), that leverages its expertise and experience in energy infrastructure to operate and maintain the utility system. Finally, the Concessionaire is required to submit an annual Five Year Plan, proposing capital improvements that U of I can approve at its sole discretion that will be financed over 20 years.

During the lifetime of the contract, U of I pays an annual Utility Fee to the Concessionaire, consisting of:

(1) a Fixed Fee which is set at $7.6M and increases by 1.5% annually starting in 2026;
(2) an Operation and Maintenance (O&M) fee, which is based initially on the U of I's historic costs, with future increases based on a rolling 3-year average of costs, adjusted pursuant to changes in CPI;
(3) and a Capital Expenditure Fee to provide cost recovery and return on utility-related capital expenditures made by the Concessionaire ("CapEx").

After two years operating under the Concession Agreement, U of I seeks to update the Idaho State Board of Education on the Concession Agreement, utility system operations and capital improvements, financial outcomes, the SIF, and student outcomes from SIF investment in student success, marketing, and the pursuit of R1.

IMPACT

Operations and Capital Improvements

Since operational transition to the Concessionaire in January 2021, the Concessionaire and Sub-Operator have increased safety processes and procedures, implemented an annual operations plan (Attachment 1), and developed a routine maintenance schedule for our critical utility infrastructure. Additionally, through the annual Five Year Plans (Attachment 2 and Attachment 3) and emergent needs, U of I has approved and/or completed 13 capital improvements to the utility system to date.

These capital improvements include:
(1) Reclaimed Water Hypochlorite Generator Replacement
(2) South Kibbie Dome Transformer Replacement
(3) Utility Tunnel Improvements - 7th and Line Streets
(4) Utility Tunnel Improvements - Renfrew Hall
(5) SCCP Cooling Tower Improvements
(6) McClure Chiller Improvements
(7) Thermal Energy Storage Tank Sensor Upgrades
(8) Energy Plant Catwalk Ladder and Safety Upgrades
(9) Domestic Waterline Replacement - Campus Drive
(10) SCCP Chiller Replacement and Upgrade
(11) Water Treatment Improvements
(12) Wood Fuel Handling System Upgrades
(13) Kibbie Dome Electrical System Replacement

Finances

The Concession Agreement is supported by a financial model which estimates the annual net cash flow resulting from the costs to the University for the Utility Fee described above and the return on the strategic initiative investments in the form of additional tuition, fees, auxiliary revenues, and research grant indirect cost recovery (F&A). The financial model estimates a positive net cash flow over the 50-year agreement. Over the first two years of the agreement, the actual Utility

Fee has exceeded the estimate due to acceleration in the need for capital renewal of our aging utility system infrastructure and high inflation rates which have impacted operating, maintenance, and capital costs. The additional costs are funded by the Utility Subsidy Fund (described under Strategic Initiatives Fund section below), which was established specifically for this purpose.

Concession Agreement

The Concession Agreement describes a 50-year relationship between U of I and Sacyr/Plenary, attempting to account for every conceivable 'what if' in nearly 900 pages of contract language. Over the initial two years of the agreement, both partners have collaborated closely to develop shared understanding and adhere to the spirit of the agreement to fulfill its intended purpose. Through those dealings, the Concessionaire and U of I have determined that a number of changes to the agreement are necessary to account for unforeseen conditions, better align with day-to-day operations, and ensure the longevity of the agreement.

(1) Procurement of property insurance coverage is the sole responsibility of the Concessionaire. However, the hard insurance market, characterized by high premiums/deductibles and lack of available coverage, has made it impossible for the Concessionaire to attain some of the required property coverage. In the second pre-closing amendment, U of I (with the support of State Risk) has agreed to retain property coverage under the state's plan. U of I will seek to amend the concession agreement to memorialize the rights and responsibilities of each party should property continue to be covered under the state's plan, and outline a process of self-insurance for any utility system assets not covered under the state's plan or a commercially available plan;
(2) Some of the key performance indicators outlined in the Concession Agreement are not consistent with the actual operations of the utility system, disproportionately advantage or disadvantage one party over the other, or require additional clarity to implement and track. U of I will propose a series of changes to this section of the Concession Agreement to better align with actual operations and ensure ongoing and consistent utility service to the Moscow campus;
(3) Despite the best efforts of the drafting parties, some of the technical descriptions, roles and responsibilities, and language used to describe the utility system and the agreement between the parties are not accurate or require revision. U of I will propose an amendment that better aligns the agreement with the work on the ground.
(4) The Concession Agreement, as written, anticipates that all capital improvements to the utility system will be financed through the agreement, performed solely by the Concessionaire and its contractors, and funded through existing university resources. U of I will propose an amendment that allows U of I to use other state, federal, and private funding sources (and adhere to state competitive bidding process in those instances).

Strategic Initiatives Fund

Upon receipt of the upfront consideration, U of I established the Strategic Initiatives Fund, a single purpose 501(c)(3), to invest, manage, and distribute the net closing proceeds of the P3 transaction to U of I for investment in our core mission. Distributions from the fund will provide ongoing resources throughout the 50-year life of the concession to advance the university's three primary strategic initiatives:

1. Student success and increased enrollment through undergraduate scholarships and investment in online education.
2. Elevate the research enterprise through increased graduate student scholarships and stipends and strategic research support.
3. University marketing, communications and outreach promoting U of I brand in support of enrollment and revenue-generating activities

A portion of the net upfront proceeds was also set aside by the SIF to fund two other purposes: (1) A Utility Subsidy Fund for the purpose of paying the Utility Fee in the early years of the agreement before strategic initiative investments result in revenue growth; and (2) a Terminal CapEx fund to pay off the estimated balance of capital improvements at the end of the 50-year term.

Distributions to strategic initiatives are governed by the SIF board of directors, who have adopted a spending policy that reflects the fundamental objective of providing the maximum, yet equitable, value to current and future beneficiaries over the next 50 years, considering the effects of inflation. The annual spending amount is computed using a two-part spending formula to ensure all funds are spent down by the end of the 50-year term. $6 million was distributed in FY2022 and $7.357 million will be distributed in FY2023, with approximately 35% invested in student success, 50% invested in research, and 15% invested in marketing and related activities.

Outcomes

Investment in the university's strategic initiative through the SIF has yielded significant returns in the form of increased enrollment, increased revenues, and increased research activity.

In FY2022, enrollment grew by 4.7% or 512 additional students, yielding $2.6 million in additional tuition revenue. In FY2023, enrollment grew by 1.8% or 204 additional students, yielding $2 million in additional tuition revenue.

Official data on FY22 research expenditures is not yet available as of the date of this report. FY22 grant proposals submitted exceeded FY21 by 26% as measured in dollars. FY23 awards received have outpaced FY22 by 59% as of the end of the first quarter.

ATTACHMENTS

Attachment 1 – Annual Operations Plan
Attachment 2 – 2021 Five Year Plan

Attachment 3 – 2022 Five Year Plan

BOARD STAFF COMMENTS AND RECOMMENDATIONS

The Board has approved several projects related to the Concession Agreement. This presentation was requested by Board members at the December BAHR meeting to better understand the history and impact of the Agreement and to inform decisions about potential future public-private partnerships.

BOARD ACTION

This item is for informational purposes only.

Sub-Operator (MIEDI) Operations Plan for The University of Idaho Utility System

Revision Date: July 28, 2021
Year 1

INTRODUCTION

The purpose of the Operation Manual for the Operations and Maintenance Plan for the Utility and Energy Systems is to communicate and provide access to basic standardized information across all our programs. This manual is also prepared in accordance with the Long-Term Lease and Concession Agreement for The University of Idaho Utility System (CA), and the "Operations Plan" as defined therein. This Operations Plan follows the Performance Standards section of the agreement and is offered to satisfy the requirements and components of the Performance Standards and Prudent Industry Practices.

This manual includes baseline information required for all positions and best practices. Since this manual is addressed to all programs, it does not describe in detail site specific information. Site specific information shall be housed in appendices, computerized maintenance software, and other locations as required by the site.

This manual will evolve in accordance with changing industry best practices, Moscow Idaho Eco District I, LLC (MIEDI) program needs, and OEM recommendations.

Executive Summary

Moscow Idaho Eco District I, LLC a Washington State LLC is contracted as the Sub-Operator of the Utilities & Engineering Services (UES) functions as an integral part of the University of Idaho (U of I) by providing quality operations and maintenance functions in support of the buildings and outdoor spaces that enhance learning opportunities for current students, as well as support the recruitment of new students. The UES team supports the provision of critical utility and essential life support services to the campus. These services include maintaining and operating the District Energy Plant, Irrigation and Water Systems, Electrical System and Compressed Air Systems.

We are thoroughly engaged in the practice of implementing proactive solutions, which helps us address problems before they become critical. An important component of this philosophy is to employ journeyman level trades, professional people, and front-line staff, who are empowered to solve issues on site while supporting a variety of activities on campus. By empowering our staff with the ability to make decisions on the front line, we can respond to the requests of individual customers quickly, while serving the larger needs of the University effectively.

Our organization is fervent about safety, employee well-being, regulatory compliance, record keeping, transparency, and cooperation with campus and state level entities. We host a high expectation of quality work within our organization to ensure an exceptional educational environment, that is accessible, functional, and beautiful.

Our mission statement underscores our commitment to the U of I student success.

As we fulfill our vision, MIEDI continues to expand its role as a critical component of the U of I. Our commitment to the University and students extends beyond simply caring for the Utility systems serving campus buildings; instead, we serve as a vital part of recruitment through maintaining and operating the utility systems on campus that enhance and provide quality facilities.

The future of the U of I campus demands a partner that understands that a traditional service delivery model is not enough for a campus that is as visionary the U of I. Our operation is predicated by the following service delivery values:

Experiential Service Delivery*:* Going beyond the core utility management, and facilities operational services, we deliver multi-faceted service focused on customer experience.

World-class Leadership*:* Enabling our team with the best on-site leadership, their knowledge, expertise, and service delivery benefits from the continued direct access to support resources across all disciplines with training that continually improves and reinforces a culture of operational and service excellence.

Service Delivery Driven by our Asset Preservation Management Structure*:* Our program is a solid framework of technical processes ensuring that the state of good repair is applied to the facilities and equipment resulting in performance to its fullest lifecycle.

Energy and Sustainability*:* To pursue these goals, MIEDI and its energy services partner McKinstry Essention, have significantly invested in applied innovation programs at various locations successfully reducing the energy baseline, enhancing sustainability, and have engaged and served our clients through the development and deployment of industry-leading building performance solutions. Moving forward as partners the UES team will introduce programs to U of I that drive savings and enable sustainability roadmaps.

Continuous Innovation and Quality Assurance with Technology tools: Furthering our ability to deliver with the latest in equipment technology, our tools not only enable communication, but they allow our team to make critical decisions that improve facility performance and reduce unnecessary cost overruns.

Mission and Organization

McKinstry's path is to relentlessly pursues impact. **We will lead transformation in our industry and innovate the climate harm out of the built environment.**

Our Aspiration is to lead a transformation in our industry and innovate the waste and climate harm out of the built environment.

Addressing the Climate, Affordability & Equity Crises

McKinstry is united under Action for Impact to address the climate, affordability and equity crises. We are compelled to act by our vision, mission and values and stand ready to lead by example. We cannot succeed alone. Our industry must come together in purpose and in action to deliver transformative change.

CALLS TO ACTION

McKinstry is compelled to action by our vision, mission and values. We are excited by the challenge, ready to dig in and do the hard work, but we cannot tackle these crises alone. It will take commitment, ingenuity and innovative partnerships across our industry to collectively answer the call to #ActionForImpact.

ZERO-CARBON FUTURE

Our building stock is a leading contributor to the climate crisis. Change is afoot, but we must quicken our pace and think bolder to decarbonize. Action for Impact challenges us to accelerate a zero-carbon future by inventing new approaches and ways of thinking.

REENGINEERED SUPPLY CHAIN

Rising costs and waste in the built environment are culminating in an affordability crisis that is unnecessary and unacceptable. It also exacerbates the equity crisis. Action for Impact challenges us to reengineer the supply chain to lower costs, eliminate waste and drive better outcomes.

CONNECTED & INTELLIGENT BUILDINGS

To address the climate, affordability and equity crises head on, our industry must unlock new approaches to deliver connected and intelligent buildings. Action for Impact challenges us to transform buildings into connected and intelligent environments that adapt autonomously and share energy.

DIVERSITY, EQUITY & INCLUSION

Those with the least are poised to suffer the most from the climate, affordability and equity crises, further exacerbating racial, gender, economic and social inequities. Action for Impact challenges us to take

accountability for diversity, equity and inclusion and drive transformative change across our industry and our communities.

Utilities & Engineering Services Vision Statement

We will improve the campus experience for all that join us at U of I by delivering exceptional utility services to the campus facilities that are welcoming, accessible, and create a lasting impression. UES staff are empowered to engage with the campus community in a professional and honorable manner, perform at the pinnacle of their abilities, and mentor students for future success.

"We honor our commitment to student success by providing an exceptional learning environment and opportunities which promote excellence at U of I."

Core Values

The McKinstry Mindset –

Constantly focused on our people, our clients, and our integrated delivery.

McKinstry's success isn't a matter of fate or luck. It's the natural consequence of our commitment to innovation… how we support our employees… the unique way we deliver… the long-term relationships we forge with our clients… and our unwavering commitment to creating buildings that are good to their owners, occupants, and the environment.

CRAZY FOR COLLABORATION

McKinstry has helped create thousands of great buildings over the years. But it's what we've torn down that's made us successful. Long ago, we did away with the invisible walls that so often separate businesses from their clients, and replaced them with a total commitment to collaboration.

When we work with a client, we join their team… and they join ours. Their challenges become our challenges. And through questions and answers, give and take, and thorough discussions of what's possible, we arrive at solutions together. Solutions not just for the short term, but for the life of their building.

ANSWERS FOR EVERY CLIENT NEED

McKinstry's Cycle of Services creates a continuum of expertise and assistance that our clients can access at any point in the life of their building. And because each service is related to the others, the entire cycle is strengthened with every project, as new insights, knowledge, and data lead to increasingly positive outcomes.

Our staff is trained across multiple disciplines within our cycle of services. So no matter how the economy or our clients' needs may change, we're always ready with the appropriate expertise.

ONE-STOP SOLUTIONS

When we began in 1960, McKinstry was exclusively a mechanical contractor. But we knew that in order to help our clients achieve maximum success, we needed to give them not just what they expected of us, but what they needed most – well designed, easy-to-maintain buildings that work at peak levels of performance and economy.

To meet that goal, we moved away from specialization and toward expertise in all areas of design/build/operate/maintain (DBOM) – including engineering, construction, operations, maintenance, and management. This vertical integration is reflected in our Cycle of Services and makes McKinstry a one-stop resource for our clients at any point in the life of their building.

By excelling in every aspect of vertically integrated delivery, McKinstry is able to drive waste, cost, time, and redundancy out of the design/build process… and to then help every building run efficiently over its entire lifetime.

BETTER EMPLOYEES BY DESIGN

McKinstry believes that fulfilled employees are productive employees. So we strive to create a workplace that helps every worker achieve their goals for both professional and personal growth. Our compensation packages are unsurpassed in the industry. Our workstyle is respectful and collaborative, giving everyone the chance to contribute. And if an employee wants to make a course correction within their McKinstry career, we support and even encourage them with additional training through McKinstry University. It all adds up to a culture that attracts great people who build great lives here.

PUTTING IT ALL TOGETHER

In an industry where specialization is in increasing demand, our craftspeople and technologies are unsurpassed. And so is the innovative way we deliver what we create.

McKinstry configures entire assemblies in our fabrication complex. So instead of delivering individual parts to jobsites, we supply prefabricated ready-to-go solutions of the highest quality, creating significant cost/schedule savings.

Our fabrication facilities and logistics centers combine to create a buffer between design and construction that helps us provide the kind of just-in-time delivery preferred by builders. And with 50 years of fabrication cost/value feedback, our designers are constantly optimizing parts and components that are then integrated into our innovative design solutions.

SUSTAINABLE BY NATURE

These days, everybody is on the sustainability bandwagon. But McKinstry has been driving that initiative for six decades. No company anywhere is more focused on creating innovative products and systems that get the most for every energy dollar.

We start by understanding what all of our clients want – lower costs for both construction and everyday operation, less environmental impact and carbon emissions, and worry-free performance. Then we address those concerns with the following steps:

- Determine the client's unique business condition and goals.
- Benchmark current energy performance.
- Match the most appropriate technologies and costs to the client's situation.
- Design, price, and calculate the savings of our recommendations.
- Package available financing and rebates.
- Guarantee performance of our design, construction costs, and operational savings.

- Remain committed to measuring, verifying, and delivering continuous improvements in performance.

FOR THE LONG HAUL

The design and construction industries are built around contracts and transactions that come to an end. But at McKinstry, we believe that our initial engagement with clients is just the beginning of a long-term relationship.

Since our goal is to service every client for the life of their building, our efforts are always outcome focused. No quick fixes. No trading short-term savings for years of energy waste. Instead, we take responsibility for the long-term success of our clients, guaranteeing specific savings in writing and continually monitoring the building to make good on those guarantees.

The UES team understands the importance of coalescing around a nucleus of common values which guide decisions within the University of Idaho. By committing to these values as an organization, we are more apt to make consistent, ethical, and forward-thinking decisions.

1 Maintenance Management Program for Utility Systems

SUMMARY

The Maintenance Management Plan (MMP) assures the reliability and continuous operation of building systems associated with the University of Idaho Utility (U of I) system. This Maintenance Management Plan includes OEM recommendations, building environment experience, and industry best practices.

A comprehensive Maintenance Program, leveraging Next Gen principles and cutting-edge technology that include a combination of conditioned and time-based frequencies on mechanical, electrical, plumbing, water systems, fire and life safety (MEP/FLS) infrastructure within Utilities and Engineering Services (UES). Smart Building Operations will unlock data from the variety of equipment and systems allowing operators to trend and track performance resulting in continuous improvement in staffing plan, materials, pm schedules, and spare parts recommendations. The main purpose of the Preventative Maintenance Program is to:

- Protect and preserve assets
- Provide an organized, planned, and scheduled program
- Ensure safety and code compliance
- Support reliability of systems
- Minimize risk

Through the use of a maintenance program, the UES team will ensure that all preventive, predictive, and corrective maintenance measures are scheduled and performed on all systems.

The following pages outline the approach to a unified preventative, predictive and corrective maintenance program that meets the goals of the U of I Utility System Operations Plan.

The Utilities & Engineering Services (UES) management team at U of I is responsible for the Utility Facilities and the Utility system assets including the preservation of these assets and ensuring they are optimized for the maximum lifespan possible. Preventative maintenance is a key aspect of this process, a practice that is part of our proactive approach to solving issues in their infancy.

The execution of a successful preventative maintenance program, such as that used at the UES, results in many benefits. Some of those benefits include improved systems reliability, reduced impact to campus end-user groups, enhanced safety, energy conservation, extended product and equipment life, extension of building life, and improved student satisfaction as a result of higher quality learning environments.

At times, measures are necessary to repair or replace campus elements that have failed unexpectedly. Defined as corrective maintenance, this portion of the Facilities Management workload is minimized as a result of preventative measures and planned system replacement that help ensure a reduction in downtime and a virtually seamless user experience.

Best Practices

The MIEDI team will utilize Industry best practices and methods while conducting the preventative maintenance services on the MEP, FLS, and control systems of the utilty system. The PM program will be conducted by the onsite team as well as qualified vendor-partners. These best practices will be consistently evaluated for improvements and will be updated as appropriate.

The UES team will also augment the staffing by using vendor-partners who will share the same commitment to excellence and perform all maintenance activities in accordance with industry and OEM best practices and requirements in the PM Program.

Procedures

The UES management team will ensure that all maintenance and repair activities associated with the U of I utility system are performed with an approved procedure. These procedures will include in-depth detail, safety and regulatory guidelines, and Activity Hazard Analysis (AHA) information. These procedures document the exact steps to take when responding to emergency and routine situations with the critical systems.

Safety

A core belief of MIEDI is safety, providing a safe and clean work environment for our employees and customers. Every employee is required to meet the requirements for their site and encouraged to expand knowledge at every opportunity.

Inspections

Daily, monthly, quarterly, semi-annual, and annual inspections will be identified and performed to assist in trending the operational integrity of mechanical, electrical, and control system equipment. This will provide predictive analysis to assist in the prevention of failure from fatigued components. The operations team site staff will self-perform the vast majority of these inspections and will use subcontractors when needed for theirexpertise with the associated systems. The delivery of these select services will be contracted and approved by the UES Manager in coordination with the University Facilities management team. All service activities in the UES will use a specified and approved procedure.

Staffing

MIEDI's technical teams supporting this program are highly trained and experienced in supporting central plant eco-districts and other facilities. Subject Matter Experts (SMEs) are available to assist in site training, procedure development, troubleshooting, and emergency response, and in determining root cause analysis of a failure event. The support staff for the scheduled and corrective maintenance activities will include the site operations team and subcontractors.

Some of the services will be complete through vendor-partnerships. MIEDI typically elects to subcontract services that are proprietary to infrastructure, code compliant, or when the client prefers OEM support. This ensures that the client benefits from our strengths and those of our partners, increasing our collective effectiveness. We measure and hold our vendor-partners accountable to the same high standards of integrity, professionalism, business performance, and cost control/delivery quality as we do of ourselves.

Training and Drills

MIEDI's standard for training includes establishing a training curriculum for onsite staff to increase preparedness during scheduled and non-scheduled events.

CMMS

The UES management team will utilize a Computerized Maintenance Management System (CMMS) in conjunction with a call center to manage all maintenance and corrective work orders associated with the UES environment. MIEDI CMMS, InfoCentre, will generate all PM work orders with task lists as well as any repair or corrective work orders. Each piece of equipment will have a QR code affixed to it. Through the use of an InfoCentre-enabled tablet, QR codes placed on the equipment will provide access to nameplate information, any open work orders associated with that piece of equipment, and the warranty dates.

Spare Parts

The facility management team shall manage and maintain the critical spare parts in a safe and clean environment. An initial identification of critical spare parts per system will be generated per the UES management team in collaboration with the U of I facilities team. This list will be evaluated periodically and updated as appropriate to support the critical systems and risk associated with the failure of certain parts. A Critical SpareParts Log (CSPL) will be used to track the use and inventory of these parts and will be located in the UES Manager's office. When a part is removed from inventory for use, the part will be ordered and replaced in the spare parts inventory. The CSPL will be updated with the appropriate inventory count when the replacement part arrives. The CSPL will be maintained by the facility management team.

Staff

The support staff for the scheduled and corrective maintenance activities will include the UES team and subcontractors. Subcontractors will support activities as defined by a scope of work and contract.

Operational Tours

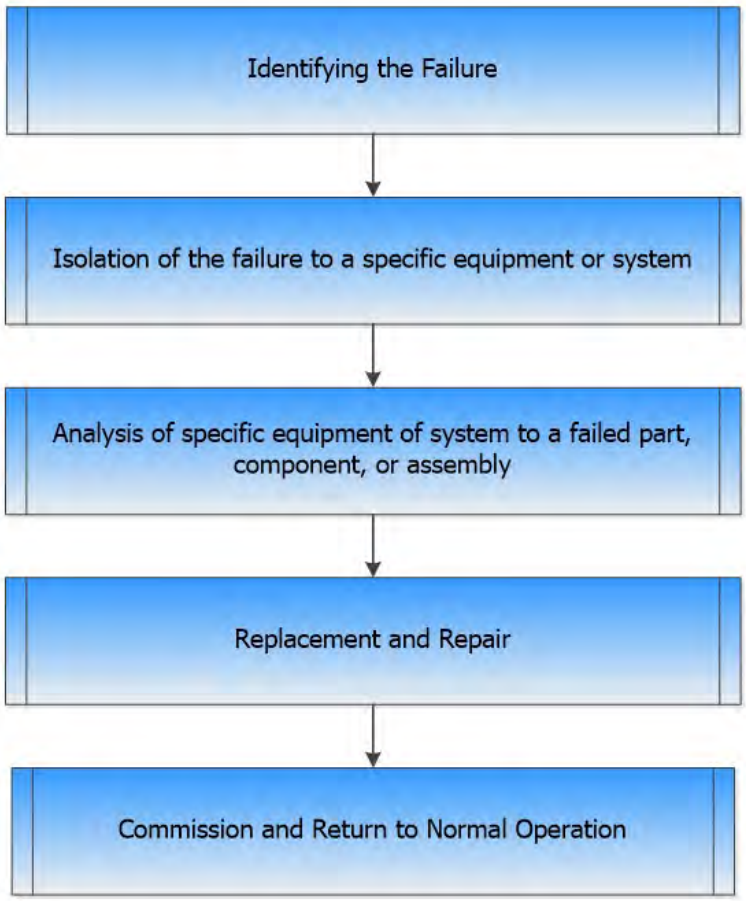
The UES management staff will perform daily operational tours during each shift. These tours are a documented checklist to proactively discover issues that may affect the site's critical support systems such as the electrical, HVAC, plumbing, fire, drainage, Utility Tunnels and water systems.

Repairs and Corrective Maintenance

Repairs and corrective maintenance will occur using the same processes and staff as for the scheduled maintenance defined in the PM Program. Although MIEDI makes every effort to ensure every system is reliable as possible by completing the required preventative maintenance, the systems still fail at times. Thus, repair and corrective maintenance is an important component of maintenance activity. The UES team will self-perform repairs and corrective maintenance services on the electrical, mechanical, and control systems, as required, maintaining uninterrupted utility services to critical loads. If a subcontractor is required to make a repair, the UES management will be notified and will provide approval before the UES team calls out the subcontractor and incurs costs.

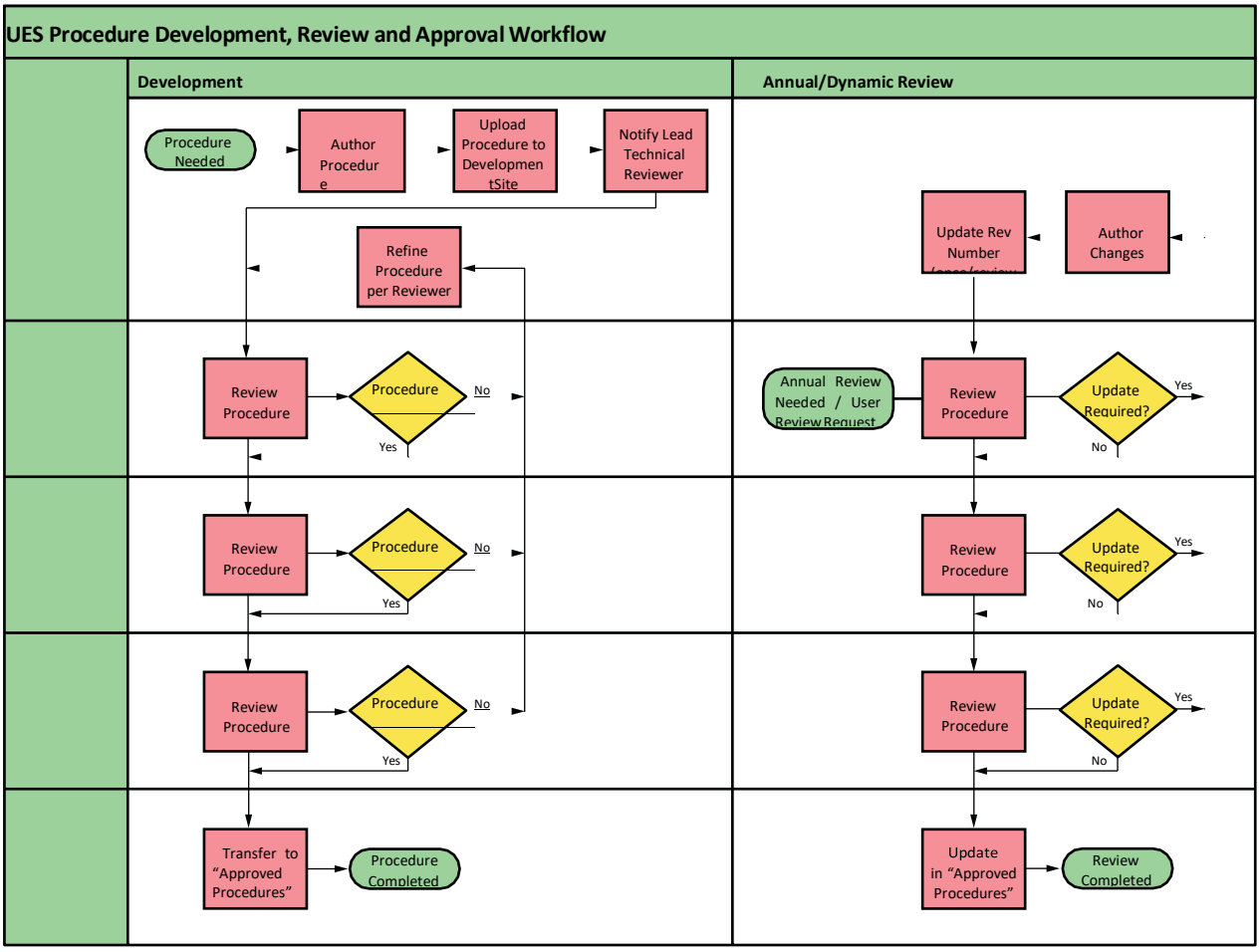
These services include work, for example, that is identified from on-site staff observation during daily rounds, through preventative maintenance inspections, call outs/reports to the facility's call center, and unforeseen work on equipment or systems because the critical infrastructure of the facility is impaired. Corrective maintenance activities will supersede all other categories of maintenance.

The process of response is composed of five major sequential steps, as shown below.



Procedure Development and Approval

The following flowchart outlines the process to create, approve, and make available for use any facility procedure that is used by UES. Included is the review and update policy that will be completed annually, or when a user suggests a need for changes.


UES Procedure Development, Review and Approval Workflow
Development
Annual/Dynamic Review
Procedure Needed
Author Procedur e
Upload Procedure to Developmen tSite
Notify Lead Technical Reviewer
Refine Procedure per Reviewer
Update Rev Number
Author Changes
Review Procedure
Procedure
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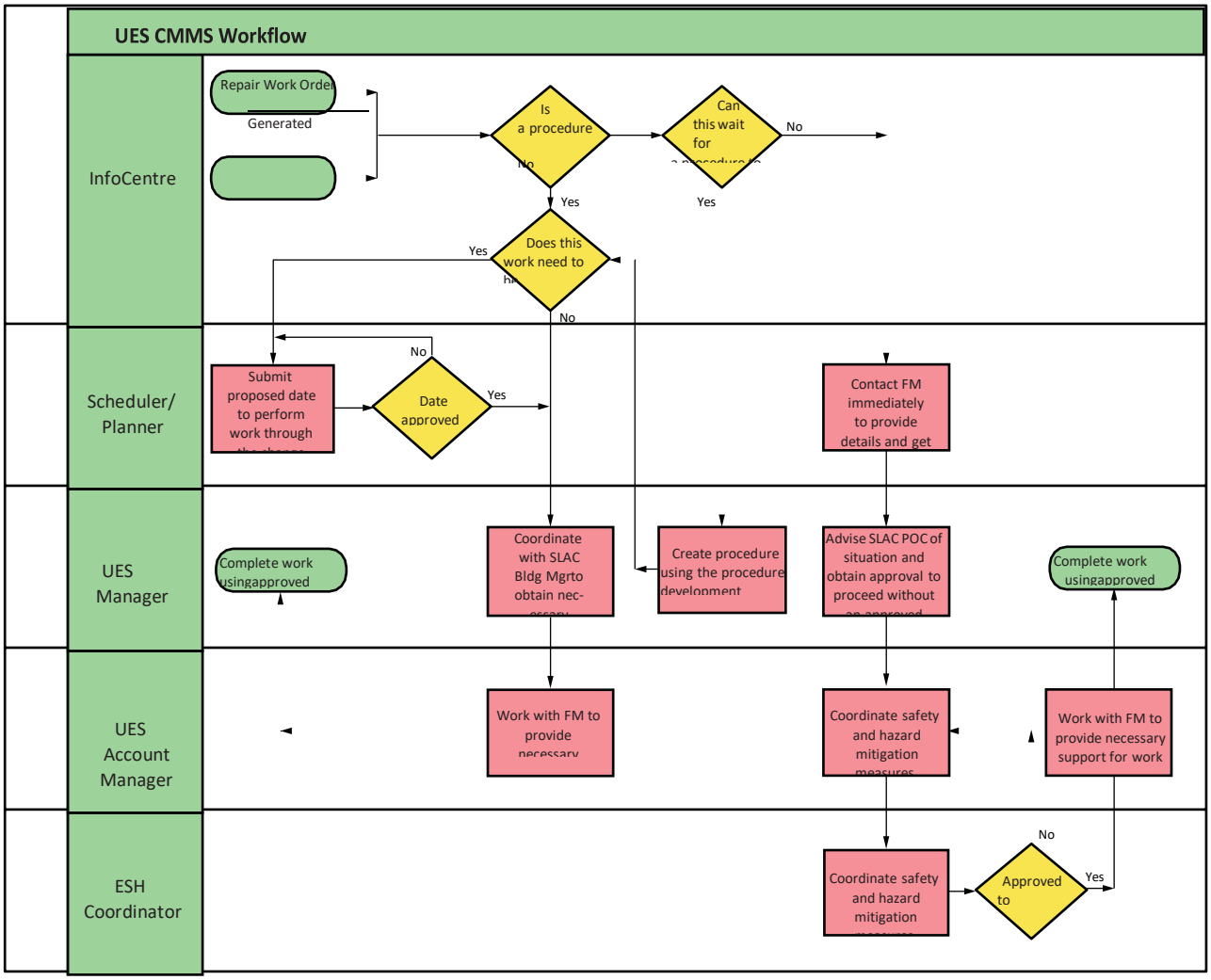
Review Completed


UES CMMS Workflow
InfoCentre
Scheduler/ Planner
UES Manager
UES Account Manager
ESH Coordinator
Repair Work Order
Generated
Is a procedure
No
Yes
Can this wait for
No
Yes
Does this work need to
Yes
No
Submit proposed date to perform work through
No
Date approved
Yes
Contact FM immediately to provide details and get
Complete work usingapproved
Coordinate with SLAC Bldg Mgrto obtain nec-
Create procedure using the procedure
Advise SLAC POC of situation and obtain approval to proceed without
Complete work usingapproved
Work with FM to provide
Coordinate safety and hazard mitigation
Work with FM to provide necessary support for work
Coordinate safety and hazard mitigation
Approved to
No
Yes

MAINTENANCE AND REPAIR PROCESS

When performing any form of maintenance or repair on the Utility Systems, an approval process must be followed to ensure all responsible groups are aware of the activity and its scope/risk. The flow- chart below outlines the workflow for activities used in performing PM and Corrective Maintenance activities.

A written procedure is normally required prior to performing any type of preventative or corrective maintenance activity. In cases where a written procedure is not available, and there isn't sufficient time to develop and approve a method of procedure, special coordination will be required with U of I Facility management and EHS personnel. This will ensure that all hazards associated with the maintenance activity are evaluated and mitigated to acceptable levels prior to work being performed. As each case will be different, those parties involved will need to determine appropriate timelines and methods for accomplishing the task.

Upon completion of a task that does not have a method of procedure, the UES team will immediately begin the process of procedure development based on the approved interim process and the lessons learned from the work performed. This procedure development process will follow the same steps outlined earlier.

RISK LEVEL CLASSIFICATIONS

All maintenance activities carry an inherent risk when performed on facility systems. These are characterized using one of three levels of risk defined below:

Level 1 – High Risk

This type of maintenance would present a high level of risk and would have a partial anticipated impact to UES operations. It generally involves pre-planned maintenance during normal business hours which would remove or take offline any redundant infrastructure support.

Level 2 – Medium Risk

This type of maintenance would present a medium risk and would have a zero anticipated impact to the pro- duction environment. It generally involves routine planned maintenance occurring outside of normal business which would remove or take offline any primary or redundant infrastructure support.

Level 3 – Low Risk

This type of maintenance would present a low level of risk and would have a zero anticipated impact to the production environment. It generally involves routine planned maintenance on a system component that can be taken offline without impact to the production environment.

Risk Mitigation

In all cases, risk shall be mitigated by observing the following requirements prior to the performance of any work:

- The method of procedure must be followed without deviation and be always available for those performing the work.
- Methods of procedure must be reviewed, updated and approved by UES Management prior to any work being performed.
- The UES Manager must be involved to coordinate necessary functions (e.g., lockout/tagout procedures) at least two weeks prior to the work being performed.
- The Change Management request must be fully approved prior to any work being performed.

PM PROGRAM EQUIPMENT TYPES AND FREQUENCY

The following information is intended to be a comprehensive guide but may not be all-inclusive. The all-inclusive list of equipment, tasking, and frequencies is available in the CMMS database and will be updated from time to time as appropriate for the facility.

Frequency Key

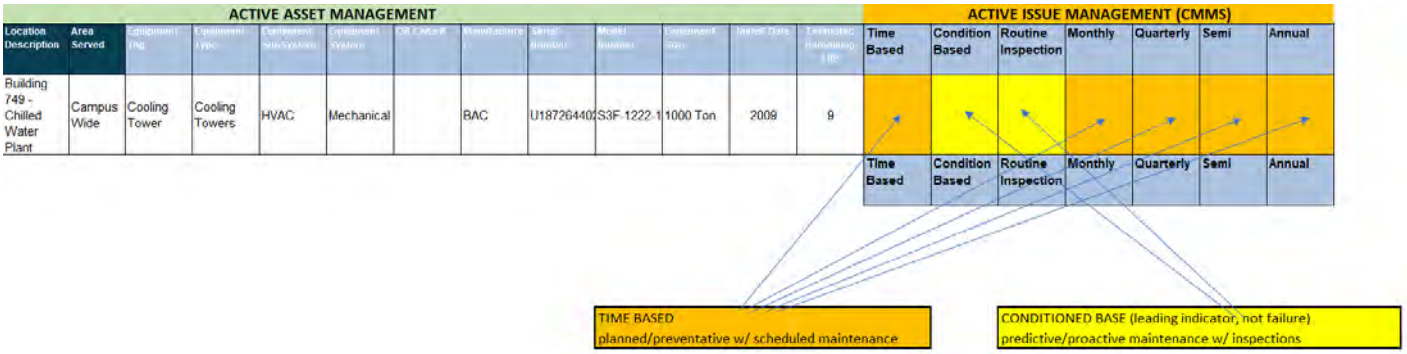
Preventative Maintenance (PM) Task Orders are based on the following frequency schedule. The scheduled dates and maintenance task plans for performing maintenance are available in the CMMS. W – Weekly M – Monthly Q – Quarterly SA – Semi-Annually A – Annually SST – Seasonal Start-Up SSH – Seasonal Shut Down

PM PROGRAM STRATEGY

Implementing and Stabilizing Coverage with the right sized staff, knowledge, and training to ensure we Operate and Maintain, and deployment of a CMMS tool are the focus.

During Year 1, the traditional operations and maintenance approach will be enhanced by the adoption of Time Base maintenance getting incorporated to ensure performance standards and key performance indicators can be achieved.

Below image represent a single utility system asset and the option of PM Frequency to select service type and upload into the CMMS tool.



Over the first year, Time Base Inspections and Maintenance Scope of Work (SOW) will be developed for each of the identified critical asset making up the utility systems. Example of a SOW:

Transformers

- *Daily/Weekly/Monthly*
  - Check for excessive heat, vibration, noise, and odors (electrical etc.)
  - General checks for cleanliness of environment and cabinet
  - Verify proper ventilation

- *Annual*
  - Complete Daily/Weekly/Monthly
  - Check main foundation and mounting pads
  - Check all fuses (if applicable)
  - Perform Thermal Imaging, correcting any discrepancies
  - Perform verification of all critical alarming to the BMS
  - Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

Distribution SWGR/Utility SWGR

- *Daily/Weekly/Monthly*
  - Check for excessive heat, vibration, noise, and odors (electrical etc.)
  - General checks for cleanliness of environment and cabinet
  - Verify proper ventilation

- *Annual*
  - Inspection of panel instrumentation verifying operational status
  - Clean the switchgear by vacuuming interior and wiping down exterior
  - Perform Thermal Imaging, correcting any discrepancies
  - Circuit Breaker Injection Testing
  - Perform verification of all critical alarming to the BMS
  - Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

- *5 Year*
  - *Inspect physical, electrical and mechanical condition including evidence of moisture or corona*
  - Inspect anchorage, alignment, grounding, and required area clearances
  - Inspect bolted electrical connections for high resistance, torque as required
  - Confirm correct operation and sequencing of electrical and mechanical interlock systems
  - Lubricate all moving current-carrying parts and on moving and sliding surfaces
  - Verify correct barrier and shutter installation and operation
  - Exercise all active components
  - Inspect mechanical indicating devices for correct operation
  - Verify that filters are in place and/or vents are clear
  - Perform visual and mechanical inspection of instrument transformers
  - Inspect control power transformers for physical damage, cracked insulation, broken leads, and tightness of connections, defective wiring, and overall general condition.
  - Verify that primary and secondary fuse ratings or circuit breakers match drawings.
  - Verify correct functionality of draw-out disconnecting and grounding contacts and interlocks
  - Resistance measurements
  - Insulation-resistance tests on each bus section, phase-to-phase, and phase-to-ground
  - Over potential test on each bus section and each phase-to-ground
  - Insulation-resistance tests on control wiring with respect to ground
  - Electrical tests on instrument transformers
  - Ground-resistance tests
  - Insulation-resistance test on control power transformers
  - Verify correct function of control transfer relays

Chiller Plant

- *Daily/Weekly/Monthly*
  - Check for excessive heat, vibration, noise, odors (electrical etc.), and leaks
  - General checks for cleanliness of environment, proper ventilation, and ambient temperature

- *Quarterly*
  - Complete daily/weekly/monthly inspections
  - Check Unit For Proper Operation
  - Check Oil Level And Add As Necessary
  - Check Oil Temperature
  - Check Dehydrator Or Purge System; Remove Water If Observed In Sight Glass
  - Run System Control Tests
  - Check Refrigerant Charge/Level Add As Necessary
  - Check Compressor For Excessive Noise Or Vibration
  - Check Sensor And Mechanical Safety Limits, Replace As Needed
  - Clean Area Around Equipment
  - Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

- *Annual*
  - Complete Quarterly inspections
  - Clean Dehydrator Float Valve
  - Perform Spectrochemical Analysis Of Compressor Oil, Replace Oil As Necessary
  - Replace Oil Filters And Add Oil As Needed
  - Inspect Cooler And Condenser Tubes For Leaks, Clean Screens As Necessary
  - Inspect Utility Vessel Vent Piping And Safety Relief Valve; Replace As Necessary
  - Inspect//Clean The Economizer(Vane) Gas Line Damper Valve And Actuator Arm
  - Run An Insulation Test On The Centrifugal Motor
  - Perform verification of all critical alarming to the BMS
  - Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

Cooling Tower

- *Daily/Weekly/Monthly*
  - Check for excessive heat, vibration, noise, odors (electrical etc.), and leaks
  - General checks for cleanliness of environment, proper ventilation, and ambient temperature
  - Verify BMS status information

- *Quarterly*
  - Complete daily/weekly/monthly inspections
  - Check Unit For Proper Operation
  - Remove Any Mineral And Algae Deposits
  - Flush Sump And Remove All Debris
  - Check Conditions And Mounting Of All Valves
  - Exercise All Valves
  - Check Spray Eliminators
  - Check Distributer Pans For Blockage
  - Verify fan blades are free of debris and move freely.
  - Check belt for condition and proper tension.
  - Verify that the bearings are in good condition. Lubricate as directed by OEM.
  - Check the pulleys and motor mounts for tightness and proper alignment
  - Inspect Motor
  - Inspect Disconnect Switch
  - Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

- *Annual*
  - Complete Quarterly inspections
  - Clean And Wash Down Outside Of Cooling Tower Cell
  - Wash Down Interior Walls And Surfaces Of Cooling Tower Cell
  - Change Oil In Gear Box (if applicable)
  - Run Cell Fan In Manual Mode Checking For Vibrations And Noises
  - Inspect All Pipe Hangers
  - Inspect All Flanges And Groove Type Connections For Leaks
  - Exercise All Valving In Condenser Piping (Use Caution -Do Not Shutdown Plant)
  - Inspect All Piping For Signs Of External Corrosion
  - Perform verification of all critical alarming to the BMS

Chilled Water Storage Tank

- *Daily/Weekly/Monthly*
  - Check for excessive vibration, noise, and leaks
  - General checks for cleanliness of environment, proper ventilation, and ambient temperature

- *Semi-Annual*
  - Complete daily/weekly/monthly inspections
  - Check Unit For Proper Operation
  - Verify temperature probe and float operations
  - Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

- *Annual*
  - Complete Semi-Annual inspections
  - Verify fill operations from city water and local well.
  - Perform verification of all critical alarming to the BMS
  - Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

Pumping Systems

- *Daily/Weekly/Monthly*
  - Check for excessive heat, vibration, noise, and odors (electrical etc.) and leaks.
  - General checks for cleanliness of environment, proper ventilation, and ambient temperature
  - Verify BMS status information

- *Quarterly*
  - Complete daily/weekly/monthly inspections
  - Check Unit For Proper Operation
  - Check For Leaks on Suction and Discharge Piping, Seals, Packing Glands, Etc.
  - Check Pump And Motor Operation For Vibration, Noise, Overheating Etc
  - Check Alignment Of Pump And Motor
  - Lubricate Pump And Motor
  - Check Operation Of Pressure Gauges And Run Pressure Testing
  - Clean Exterior Of Pump, Motor And Surrounding Area
  - Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

- *Annual*
  - Complete Quarterly inspections
  - Check Alignment Of Pump And Motor, Adjust As Necessary

- Perform verification of all critical alarming to the BMS
  Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

Variable Frequency Drives

- *Daily/Weekly/Monthly*
  - Check for excessive heat, vibration, noise, and odors (electrical etc.).
  - General checks for cleanliness of environment, proper ventilation, and ambient temperature
  - Verify BMS status information

- *Semi-Annual*
  - Complete daily/weekly/monthly inspections
  - Component Inspection
  - Perform a complete visual inspection of the equipment including wiring and major components.
  - Inspect all wiring for insulation breakdown or damage.
  - Inspect all terminal connections for tightness.
  - Electrical Inspection
  - Rectifier tests and DC bus capacitor tests when applicable.
  - Check all voltages and motor amperages.
  - Calibrate frequencies
  - Document all parameter readings.
  - Check DC link inductor.
  - Measure motor control card resistors.
  - General Maintenance
  - Change filter when applicable
  - Verify the operation of alarm circuits and specific restart capabilities.
  - Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

- *Annual*
  - Complete Semi-Annual inspections
  - Perform verification of all critical alarming to the BMS
  - Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

Air Compressor

- *Daily/Weekly/Monthly/Quarterly*
  - Check for excessive heat, vibration, noise, and odors (electrical etc.)
  - General checks for cleanliness of environment, proper ventilation, and ambient temperature
  - Check oil level
  - Drain condensation
  - Check filters
  - General checks for cleanliness of environment, proper ventilation, and ambient temperature

- *Annual*
  - Complete Daily/Weekly/Monthly/Quarterly inspections
  - Check filters/replace if needed
  - Inspect all connections and lines for damage or air leaks
  - Change compressor oil
  - Inspect/replace drive belt
  - Grease all points
  - Calibrate gauges
  - Perform functional test of high and low cutoff/cut on
  - Provide written report and list any recommendations including discrepancies and corrective actions scheduled/performed

CMMS

MIEDI InfoCentre solution combines people, process, and technology to utilize system/equipment data to deliver operations more effectively and efficiently by capturing and processing UES team service requests via a web app, phone, or email to our centralized call center. Benefits of the tool are:

Work Order Management

- Ensures all issues are seen and addressed
- Ensures a timely resolution for work orders
- Allows UES team to organize and focus their workload to priorities

Workflow and Operations

- Single point of ownership via CMMS Planner Scheduler
- Predicts, builds, and standardize procedures

Data Analytics and Reporting

- Ensures data is accurate, actionable, and available
- Analysis of the utility systems data
- Data driven operations and maintenance
- Measurable KPI reporting of service tickets

Coordinator Support

- CMMS Planner Scheduler and support team owns the processing and triaging of issues
- Streamlines the issue response and follow-up process
- Minimizes UES management and staff administrative time

Deployment of the tool commenced on operational go-live, February 1, 2020, and will incorporate the above-mentioned PM strategy, including Time Base annual inspections. Infused with Capital projects targeting new efficient systems/equipment, updated controls and monitoring, and N+1 design, will allow the transformation to a Conditioned Base PM approach over the next few years.

A blend of daily and monthly inspections, with an annual service tickets will be uploaded by asset across the utility system through the end of year.

VENDOR LIST

Approved subcontractors and vendors list are included in Appendix A.

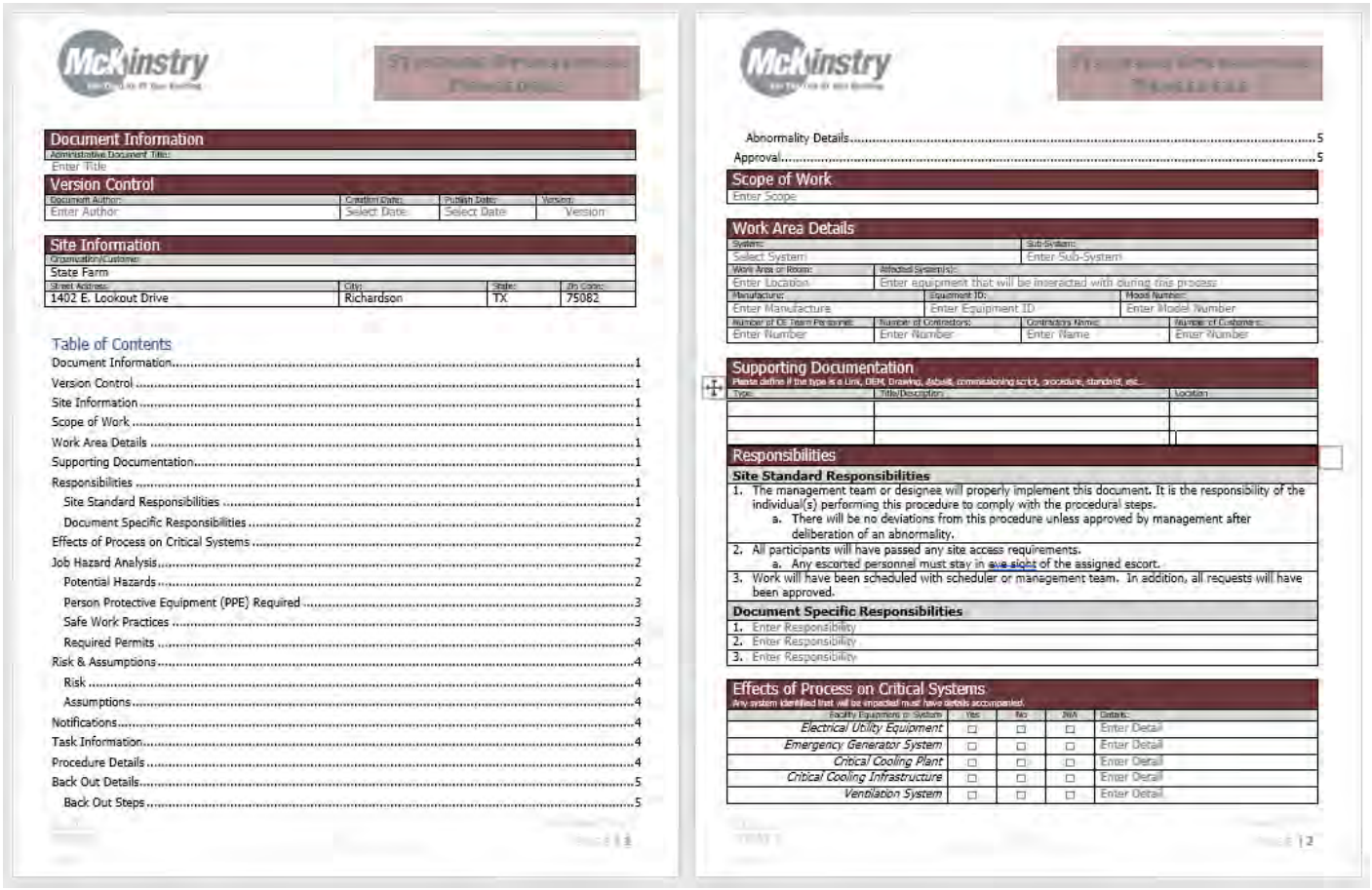
2 Procedures and Records for Asset Management

In conjunction with the deployment of our CMMS InfoCentre and those identified Time Base Inspections and Maintenance Scopes of Work being uploaded as service work order tickets; starting in the first year, the UES team will develop written procedures assigned to each service work order. Those procedure templates are shared over the next few pages.

MIEDI utilizes 4 different types of procedures to assist our operations and maintenance delivery.

1. SOP – Standard Operational Procedure
2. MOP – Method of Procedure
3. EOP – Emergency Operational Procedure
4. AP – Administrative Procedure document

SOP / MOP / EOP / AP



Mckinstry

Document Information

Administrative Document Title:

Enter Title

Version Control

Document Author:	Creation Date:	Publish Date:	Version:
Enter Author	Select Date	Select Date	Version

Site Information

Organization/Customer:

State Farm

Street Address:	City:	State:	Zip Code:
1402 E. Lookout Drive	Richardson	TX	75082

Table of Contents

Scope of Work

Enter Scope

Work Area Details

System:		Sub-System:
Select System		Enter Sub-System
Work Area or Room:	Affected System(s):	
Enter Location	Enter equipment that will be interacted with during this process	
Manufacturer:	Equipment ID:	Model Number:
Enter Manufacture	Enter Equipment ID	Enter Model Number
Number of OE Team Personnel:	Number of Contractors:	Contractors Name:	Number of Customers:
Enter Number	Enter Number	Enter Name	Enter Number

Supporting Documentation

Please define if the type is a Link, OEM, Drawing, default, commissioning script, procedure, standard, etc.

Type:	Title/Description:	Location

Responsibilities

Site Standard Responsibilities

1. The management team or designee will properly implement this document. It is the responsibility of the individual(s) performing this procedure to comply with the procedural steps.
   a. There will be no deviations from this procedure unless approved by management after deliberation of an abnormality.
2. All participants will have passed any site access requirements.
   a. Any escorted personnel must stay in eye sight of the assigned escort.
3. Work will have been scheduled with scheduler or management team. In addition, all requests will have been approved.

Document Specific Responsibilities

1. Enter Responsibility
2. Enter Responsibility
3. Enter Responsibility

Effects of Process on Critical Systems

Any system identified that will be impacted must have details accompanied.

Facility Equipment or System:	Yes	No	N/A	Details:
Electrical Utility Equipment	☐	☐	☐	Enter Detail
Emergency Generator System	☐	☐	☐	Enter Detail
Critical Cooling Plant	☐	☐	☐	Enter Detail
Critical Cooling Infrastructure	☐	☐	☐	Enter Detail
Ventilation System	☐	☐	☐	Enter Detail

Uninterruptible Power Supply System	☐	☐	☐	Enter Detail
Critical Power Distribution System	☐	☐	☐	Enter Detail
Emergency Power Off (EPO) System	☐	☐	☐	Enter Detail
Fire Detection System	☐	☐	☐	Enter Detail
Fire Suppression System	☐	☐	☐	Enter Detail
Monitoring System	☐	☐	☐	Enter Detail
Control System	☐	☐	☐	Enter Detail
Security System	☐	☐	☐	Enter Detail
House Power and Lighting System	☐	☐	☐	Enter Detail
Elevators	☐	☐	☐	Enter Detail
Other	☐			Enter Detail

Job Hazard Analysis

All personnel involved in the procedure have read and agree to adhere to the Data Center "Safety and Operational Procedures."

Potential Hazards

Check all that Apply

☐ Chemical (Toxic)	☐ Chemical (Flammable)	☐ Chemical (Corrosive)
☐ Explosion (Chemical Reaction)	☐ Explosion (Over Pressurization)	☐ Electrical (Shock/Short Circuit)
☐ Electrical (Fire)	☐ Electrical (Static/ESD)	☐ Electrical (Loss of Power)
☐ Ergonomics (Strain)	☐ Ergonomics (Human Error)	☐ Excavation (Collapse)
☐ Fall (Slip, Trip)	☐ Fire/Heat	☐ Mechanical Vibration (Chaffing/Fatigue)
☐ Mechanical Failure	☐ Mechanical	☐ Noise
☐ Radiation (Ionizing)	☐ Radiation (Non-Ionizing)	☐ Struck By (Mass Acceleration)
☐ Struck Against	☐ Temperature Extreme (Heat/Cold)	☐ Visibility
☐ Weather Phenomena (Snow/Rain/Wind/Ice)	☐ None	☐ Other: Specify

For definitions please reference: http://nj.gov/health/peosh/documents/hazlist.pdf

Person Protective Equipment (PPE) Required

Check all that Apply

☐ Safety Spectacles	☐ Goggles	☐ Welding Shield
☐ Laser Safety Goggles	☐ Face Shield	☐ Class A Hard Hat
☐ Class B Hard Hat	☐ Class C Hard Hat	☐ Leggings
☐ Metatarsal Guards	☐ Toe Guards	☐ Foot/Shin Guards
☐ Safety Shoes	☐ Electrically Conductive Shoes	☐ Electrical Hazard, Safety Toe Shoes

☐ Leather Gloves	☐ Aluminized Gloves	☐ Aramid Fiber Gloves
☐ Synthetic Gloves	☐ Fabric Gloves	☐ Coated Fabric Gloves
☐ Butyl Gloves	☐ Natural (Latex) Rubber Gloves	☐ Neoprene Gloves
☐ Nitrile Gloves	☐ Paper-like Fiber Suit	☐ Treated Wool/Cotton Body Protection
☐ Duck Body Protection	☐ Leather Body Protection	☐ Rubber, Rubberized Fabrics, Neoprene, Plastic Body Protection
☐ Single-use earplugs	☐ Pre-formed/Molded Earplugs	☐ Earmuffs
☐ Other: Specify		

For definitions please reference: https://www.osha.gov/Publications/osha3151.pdf

Safe Work Practices

(precautionary/controlling measures) to be followed. Provide a detailed discussion of the unique hazards in the work activities/location, including the safety measures/personal protective equipment (PPE) to be utilized to alleviate the hazard.

Criteria	Category
Select Criteria	**HAZCOM:** Will be completed whenever chemical, including cleaning agents, are being brought on site.
Select Criteria	**Electrical:** Will personnel be exposed to electrical and potential shock?
Select Criteria	**Fall Protection:** Will employees be exposed to fall hazard (working height> 4' above lower level) while performing leading edge or roof edge work (15 feet on roofs), and /or working from ladders?
Select Criteria	**Hot Work:** Will be completed for all work involving welding, cutting, soldering, or heating of metals.
Select Criteria	**Fire Extinguisher:** Will be completed whenever work task involves a fire watch accompanied with work being complete
Select Criteria	**UPS/Battery Safety:** Will be completed whenever work task involves working on batteries or in battery rooms. VRLA (Valve Regulated Lead Acid) batteries contain no liquid electrolyte. Do not short terminals.
Select Criteria	**Chemical Spill:** Will be completed whenever work task involves working with a chemical that could potential need containment. (I.E. Generator Glycol, Battery Acid, Cooling Tower Chemical, etc...)
Select Criteria	**Lock-Out/Tag-Out:** Will be completed in accordance to McKinstry Safety Policy.
Select Criteria	**Hand & Power Tools:** Please list the tools accompanied with this process.
	Enter Tools Needed
Select Criteria	**Others:** Please describe any safety work practice, not described above, that will be used while performing your work task. (Examples: confined space entry, scaffolding, aerial work platforms, etc.)
	Enter Text

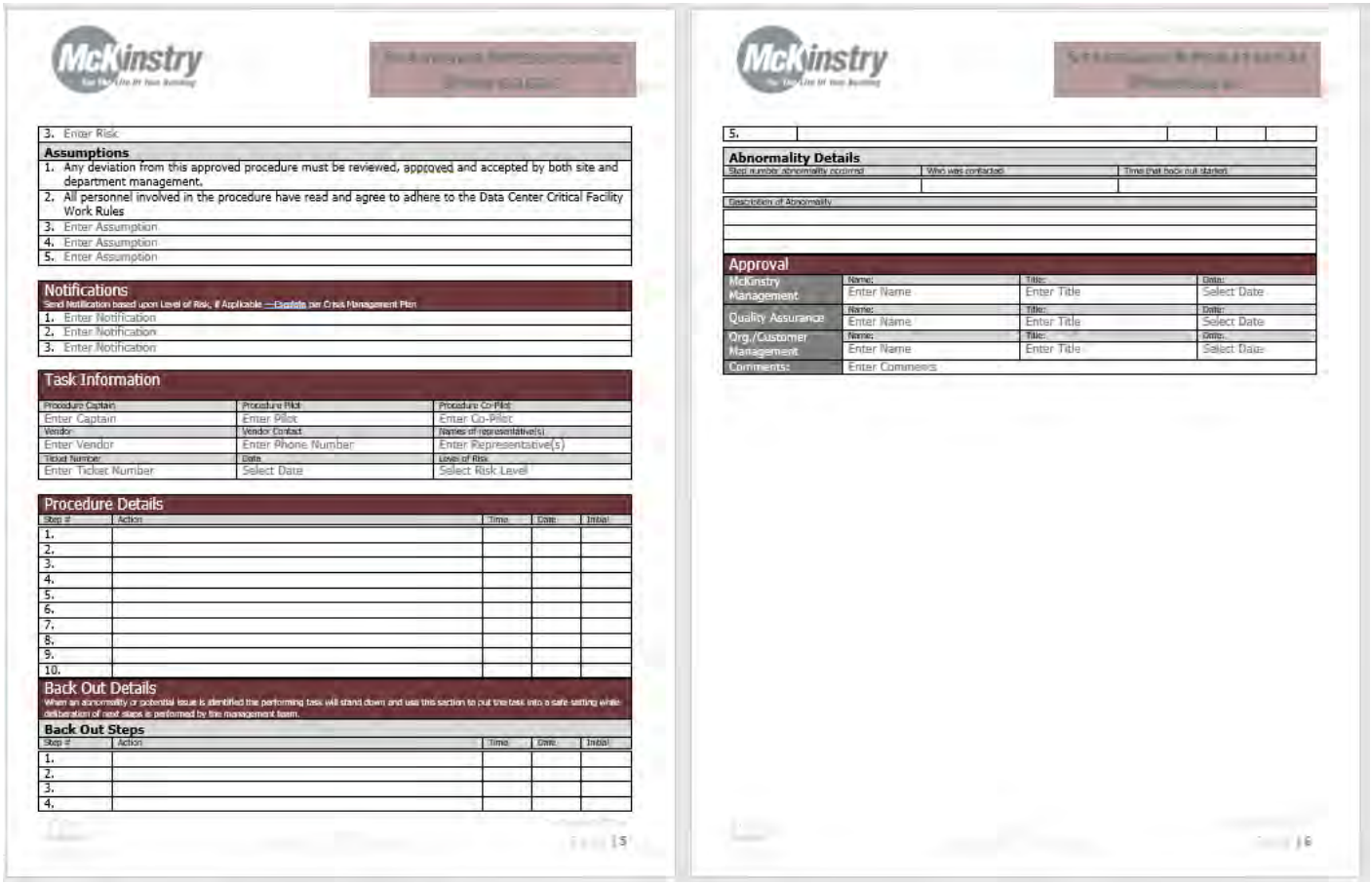
Required Permits

Check all that Apply

☐ Energized Work	☐ Hot Work	☐ Confined Space	☐ Red Tag

Risk & Assumptions

Risk
1. Enter Risk
2. Enter Risk



3.	Enter Risk

Assumptions

1.	Any deviation from this approved procedure must be reviewed, approved and accepted by both site and department management.
2.	All personnel involved in the procedure have read and agree to adhere to the Data Center Critical Facility Work Rules
3.	Enter Assumption
4.	Enter Assumption
5.	Enter Assumption

Notifications

Send Notification based upon Level of Risk, if Applicable —Explain per Crisis Management Plan

1.	Enter Notification
2.	Enter Notification
3.	Enter Notification

Task Information

Procedure Captain:	Procedure Pilot:	Procedure Co-Pilot:
Enter Captain	Enter Pilot	Enter Co-Pilot
Vendor:	Vendor Contact:	Names of representative(s):
Enter Vendor	Enter Phone Number	Enter Representative(s)
Ticket Number:	Date:	Level of Risk:
Enter Ticket Number	Select Date	Select Risk Level

Procedure Details

Step #	Action	Time:	Date:	Initial:
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Back Out Details

When an abnormality or potential issue is identified the performing task will stand down and use this section to put the task into a safe setting while deliberation of next steps is performed by the management team.

Back Out Steps

Step #	Action	Time:	Date:	Initial:
1.				
2.				
3.				
4.				

5.				

Abnormality Details

Step number abnormality occurred	Who was contacted:	Time that back out started:

Description of Abnormality

Approval

	Name:	Title:	Date:
McKinstry Management	Enter Name	Enter Title	Select Date
Quality Assurance	Enter Name	Enter Title	Select Date
Org./Customer Management	Enter Name	Enter Title	Select Date
Comments:	Enter Comments		

McKinstry

METHOD OF PROCEDURE

Document Information

Document Title:
Enter Title

Version Control

Document Author:	Creation Date:	Publish Date:	Version:
Enter Author	Select Date	Select Date	Version

Site Information

Organization/Customer:			
State Farm			
Street Address:	City:	State:	Zip Code:
1402 E. Lookout Drive	Richardson	TX	75082

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McKinstry

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Number of CE Team Personnel:	Number of Contractors:	Contractors Name:	Number of Customers:
Enter Number	Enter Number	State Farm	Enter Number

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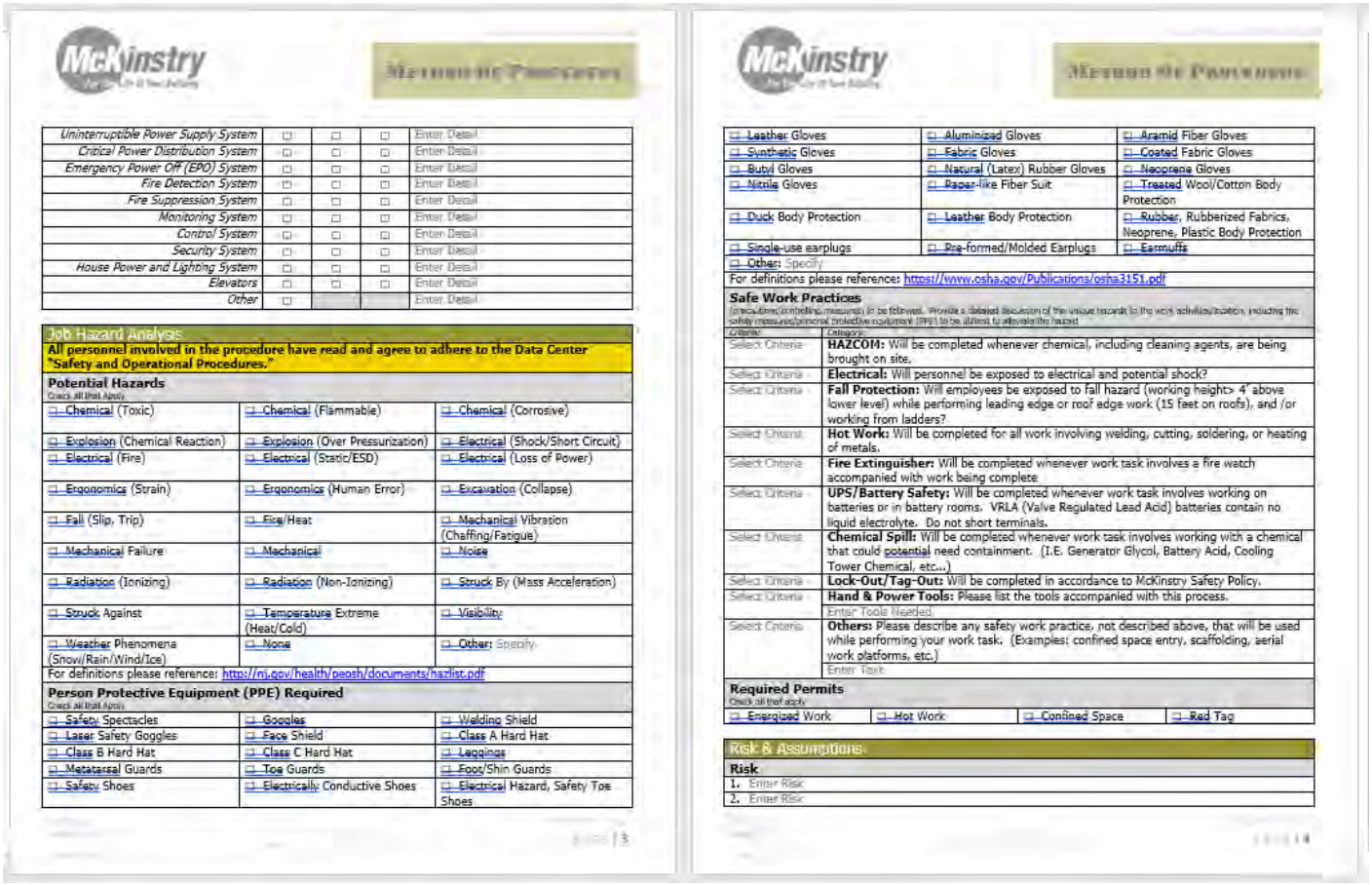

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☐ Fall (Slip, Trip)	☐ Fire/Heat	☐ Mechanical Vibration (Chaffing/Fatigue)
☐ Mechanical Failure	☐ Mechanical	☐ Noise
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☐ Struck Against	☐ Temperature Extreme (Heat/Cold)	☐ Visibility
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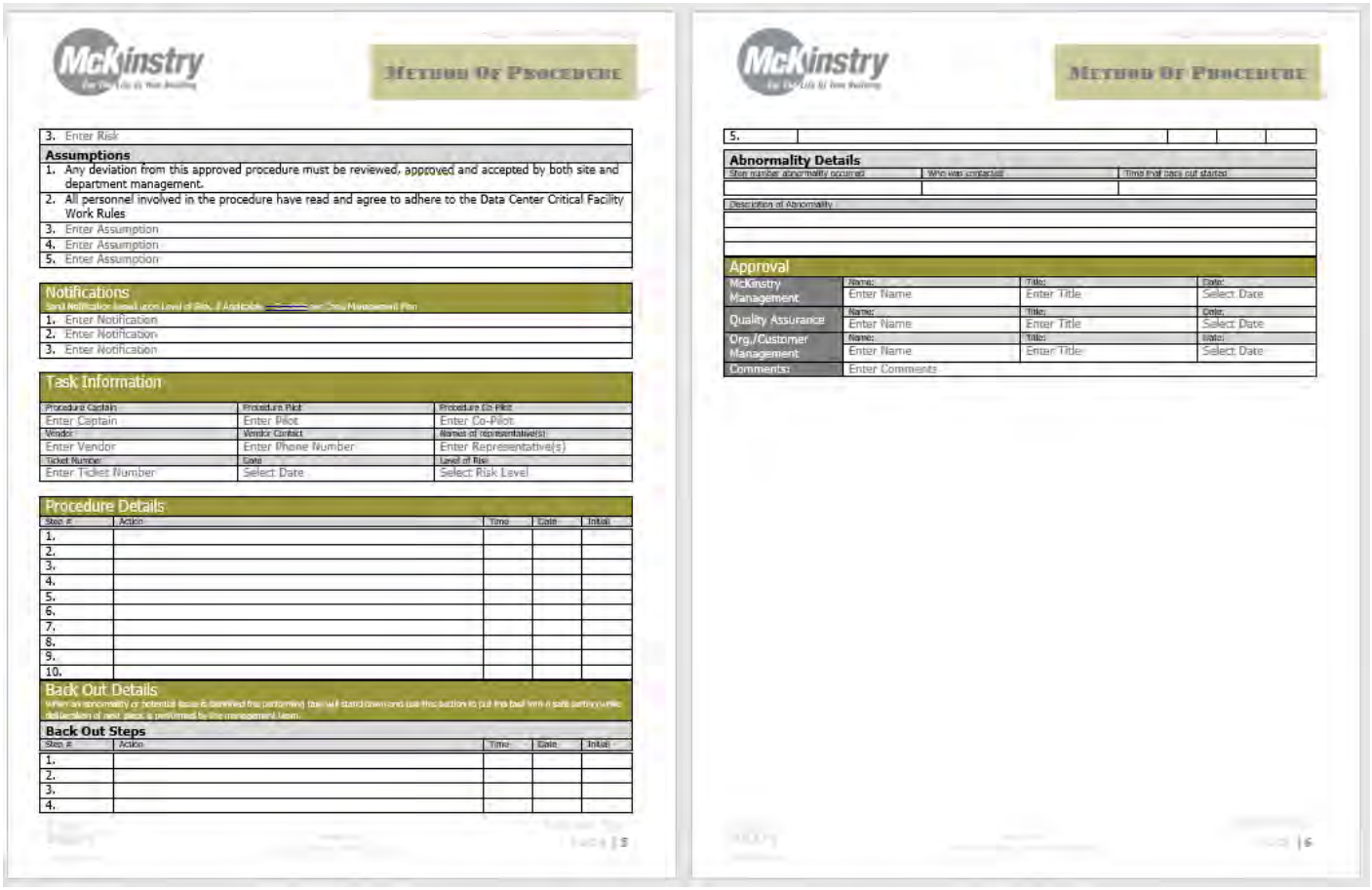
Required Permits

Check all that apply

☐ Energized Work	☐ Hot Work	☐ Confined Space	☐ Red Tag

Risk & Assumptions

Risk
1. Enter Risk
2. Enter Risk



McKinstry

Method Of Procedure

3.	Enter Risk

Assumptions

1.	Any deviation from this approved procedure must be reviewed, approved and accepted by both site and department management.
2.	All personnel involved in the procedure have read and agree to adhere to the Data Center Critical Facility Work Rules
3.	Enter Assumption
4.	Enter Assumption
5.	Enter Assumption

Notifications

Send Notification based upon Level of Risk, if Applicable per the Management Plan

1.	Enter Notification
2.	Enter Notification
3.	Enter Notification

Task Information

Procedure Captain	Procedure Pilot	Procedure Co-Pilot
Enter Captain	Enter Pilot	Enter Co-Pilot
Vendor	Vendor Contact	Names of representative(s)
Enter Vendor	Enter Phone Number	Enter Representative(s)
Ticket Number	Date	Level of Risk
Enter Ticket Number	Select Date	Select Risk Level

Procedure Details

Step #	Action	Time	Date	Initial
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Back Out Details

When an abnormality or potential issue is observed the performing tech will stand down and use this section to put the ball into a safe setting while discussion of next steps is performed by the management team.

Back Out Steps

Step #	Action	Time	Date	Initial
1.				
2.				
3.				
4.				

McKinstry

Method Of Procedure

5.				

Abnormality Details

Step number abnormality occurred	Who was contacted	Time that back out started

Description of Abnormality

Approval

	Name:	Title:	Date:
McKinstry Management	Enter Name	Enter Title	Select Date
Quality Assurance	Name: Enter Name	Title: Enter Title	Date: Select Date
Org./Customer Management	Name: Enter Name	Title: Enter Title	Date: Select Date
Comments:	Enter Comments		

McKinstry

EMERGENCY OPERATIONAL PROCEDURE

Document Information

Administrative Document Title:
Enter Title

Version Control

Document Author:	Creation Date:	Publish Date:	Version:
Enter Author	Select Date	Select Date	Version

Site Information

Organization/Customer:			
State Farm			
Street Address:	City:	State:	Zip Code:
1402 E. Lookout Drive	Richardson	TX	75082

Table of Contents

McKinstry

EMERGENCY OPERATIONAL PROCEDURE

Scope of Work

Enter Scope

Work Area Details

System:		Sub-System:	
Select System		Enter Sub-System	
Work Area or Room:	Affected System(s):		
Enter Location	Enter equipment that will be interacted with during this process		
Manufacture:	Equipment ID:	Model Number:	
Enter Manufacture	Enter Equipment ID	Enter Model Number	
Number of CE Team Personnel:	Number of Contractors:	Contractors Name:	Number of Customers:
Enter Number	Enter Number	Enter Name	Enter Number

Supporting Documentation

Please define if the type is a Um., OEM, Drawing, MMC, commissioning script, procedure, standard, etc.

Type	Title/Description	Location

Responsibilities

Site Standard Responsibilities

1. The management team or designee will properly implement this document. It is the responsibility of the individual(s) performing this procedure to comply with the procedural steps.
   a. There will be no deviations from this procedure unless approved by management after deliberation of an abnormality.
2. All participants will have passed any site access requirements.
   a. Any escorted personnel must stay in eye sight of the assigned escort.
3. Work will have been scheduled with scheduler or management team. In addition, all requests will have been approved.

Document Specific Responsibilities

1. Enter Responsibility
2. Enter Responsibility
3. Enter Responsibility

Effects of Process on Critical Systems

Any system identified that will be impacted must have details accompanied.

Facility Equipment or System	Yes	No	N/A	Details:
Electrical Utility Equipment	☐	☐	☐	Enter Detail
Emergency Generator System	☐	☐	☐	Enter Detail
Critical Cooling Plant	☐	☐	☐	Enter Detail
Critical Cooling Infrastructure	☐	☐	☐	Enter Detail
Ventilation System	☐	☐	☐	Enter Detail

McKinstry

Emergency Operational Procedure

Uninterruptible Power Supply System	☐	☐	☐	Enter Detail
Critical Power Distribution System	☐	☐	☐	Enter Detail
Emergency Power Off (EPO) System	☐	☐	☐	Enter Detail
Fire Detection System	☐	☐	☐	Enter Detail
Fire Suppression System	☐	☐	☐	Enter Detail
Monitoring System	☐	☐	☐	Enter Detail
Control System	☐	☐	☐	Enter Detail
Security System	☐	☐	☐	Enter Detail
House Power and Lighting System	☐	☐	☐	Enter Detail
Elevators	☐	☐	☐	Enter Detail
Other	☐	☐	☐	Enter Detail

Job Hazard Analysis

All personnel involved in the procedure have read and agree to adhere to the Data Center "Safety and Operational Procedures."

Potential Hazards

Check all that Apply

☐ Chemical (Toxic)	☐ Chemical (Flammable)	☐ Chemical (Corrosive)
☐ Explosion (Chemical Reaction)	☐ Explosion (Over Pressurization)	☐ Electrical (Shock/Short Circuit)
☐ Electrical (Fire)	☐ Electrical (Static/ESD)	☐ Electrical (Loss of Power)
☐ Ergonomics (Strain)	☐ Ergonomics (Human Error)	☐ Excavation (Collapse)
☐ Fall (Slip, Trip)	☐ Fire/Heat	☐ Mechanical Vibration (Chaffing/Fatigue)
☐ Mechanical Failure	☐ Mechanical	☐ Noise
☐ Radiation (Ionizing)	☐ Radiation (Non-Ionizing)	☐ Struck By (Mass Acceleration)
☐ Struck Against	☐ Temperature Extreme (Heat/Cold)	☐ Visibility
☐ Weather Phenomena (Snow/Rain/Wind/Ice)	☐ None	☐ Other: Specify.

For definitions please reference: http://nj.gov/health/peosh/documents/hazlist.pdf

Person Protective Equipment (PPE) Required

Check all that Apply

☐ Safety Spectacles	☐ Goggles	☐ Welding Shield
☐ Laser Safety Goggles	☐ Face Shield	☐ Class A Hard Hat
☐ Class B Hard Hat	☐ Class C Hard Hat	☐ Leggings
☐ Metatarsal Guards	☐ Toe Guards	☐ Foot/Shin Guards
☐ Safety Shoes	☐ Electrically Conductive Shoes	☐ Electrical Hazard, Safety Toe Shoes

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McKinstry

Emergency Operational Procedure

☐ Leather Gloves	☐ Aluminized Gloves	☐ Aramid Fiber Gloves
☐ Synthetic Gloves	☐ Fabric Gloves	☐ Coated Fabric Gloves
☐ Butyl Gloves	☐ Natural (Latex) Rubber Gloves	☐ Neoprene Gloves
☐ Nitrile Gloves	☐ Paper-like Fiber Suit	☐ Treated Wool/Cotton Body Protection
☐ Duck Body Protection	☐ Leather Body Protection	☐ Rubber, Rubberized Fabrics, Neoprene, Plastic Body Protection
☐ Single-use earplugs	☐ Pre-formed/Molded Earplugs	☐ Earmuffs
☐ Other: Specify		

For definitions please reference: https://www.osha.gov/Publications/osha3151.pdf

Safe Work Practices

(precautions/controlling measures) to be followed. Provide a detailed discussion of the unique hazards in the work activities/location, including the safety measures/personal protective equipment (PPE) to be utilized to alleviate the hazard.

Criteria	Category
Select Criteria	**HAZCOM:** Will be completed whenever chemical, including cleaning agents, are being brought on site.
Select Criteria	**Electrical:** Will personnel be exposed to electrical and potential shock?
Select Criteria	**Fall Protection:** Will employees be exposed to fall hazard (working height> 4' above lower level) while performing leading edge or roof edge work (15 feet on roofs), and /or working from ladders?
Select Criteria	**Hot Work:** Will be completed for all work involving welding, cutting, soldering, or heating of metals.
Select Criteria	**Fire Extinguisher:** Will be completed whenever work task involves a fire watch accompanied with work being complete
Select Criteria	**UPS/Battery Safety:** Will be completed whenever work task involves working on batteries or in battery rooms. VRLA (Valve Regulated Lead Acid) batteries contain no liquid electrolyte. Do not short terminals.
Select Criteria	**Chemical Spill:** Will be completed whenever work task involves working with a chemical that could potential need containment. (I.E. Generator Glycol, Battery Acid, Cooling Tower Chemical, etc...)
Select Criteria	**Lock-Out/Tag-Out:** Will be completed in accordance to McKinstry Safety Policy.
Select Criteria	**Hand & Power Tools:** Please list the tools accompanied with this process.
	Enter Tools Needed
Select Criteria	**Others:** Please describe any safety work practice, not described above, that will be used while performing your work task. (Examples: confined space entry, scaffolding, aerial work platforms, etc.)
	Enter Text

Required Permits

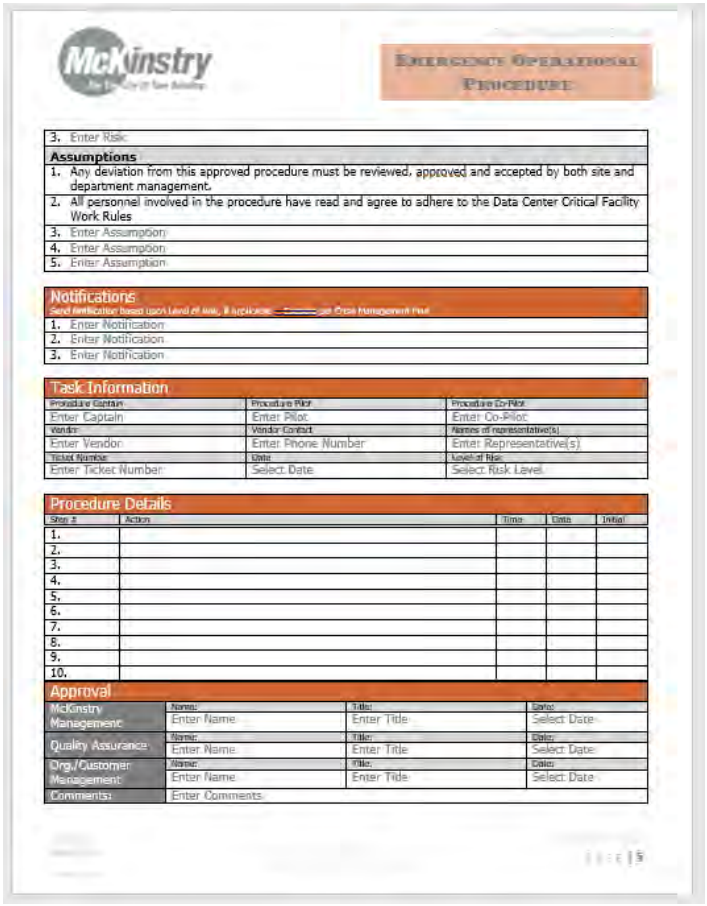
Check all that Apply

☐ Energized Work	☐ Hot Work	☐ Confined Space	☐ Red Tag

Risk & Assumptions

Risk
1. Enter Risk
2. Enter Risk

14



McKinstry

Emergency Operational Procedure

3. Enter Risk:
Assumptions
1. Any deviation from this approved procedure must be reviewed, approved and accepted by both site and department management.
2. All personnel involved in the procedure have read and agree to adhere to the Data Center Critical Facility Work Rules
3. Enter Assumption:
4. Enter Assumption:
5. Enter Assumption:

Notifications

Send Notification based upon Level of Risk, if applicable per Work Management Plan

1. Enter Notification:
2. Enter Notification:
3. Enter Notification:

Task Information

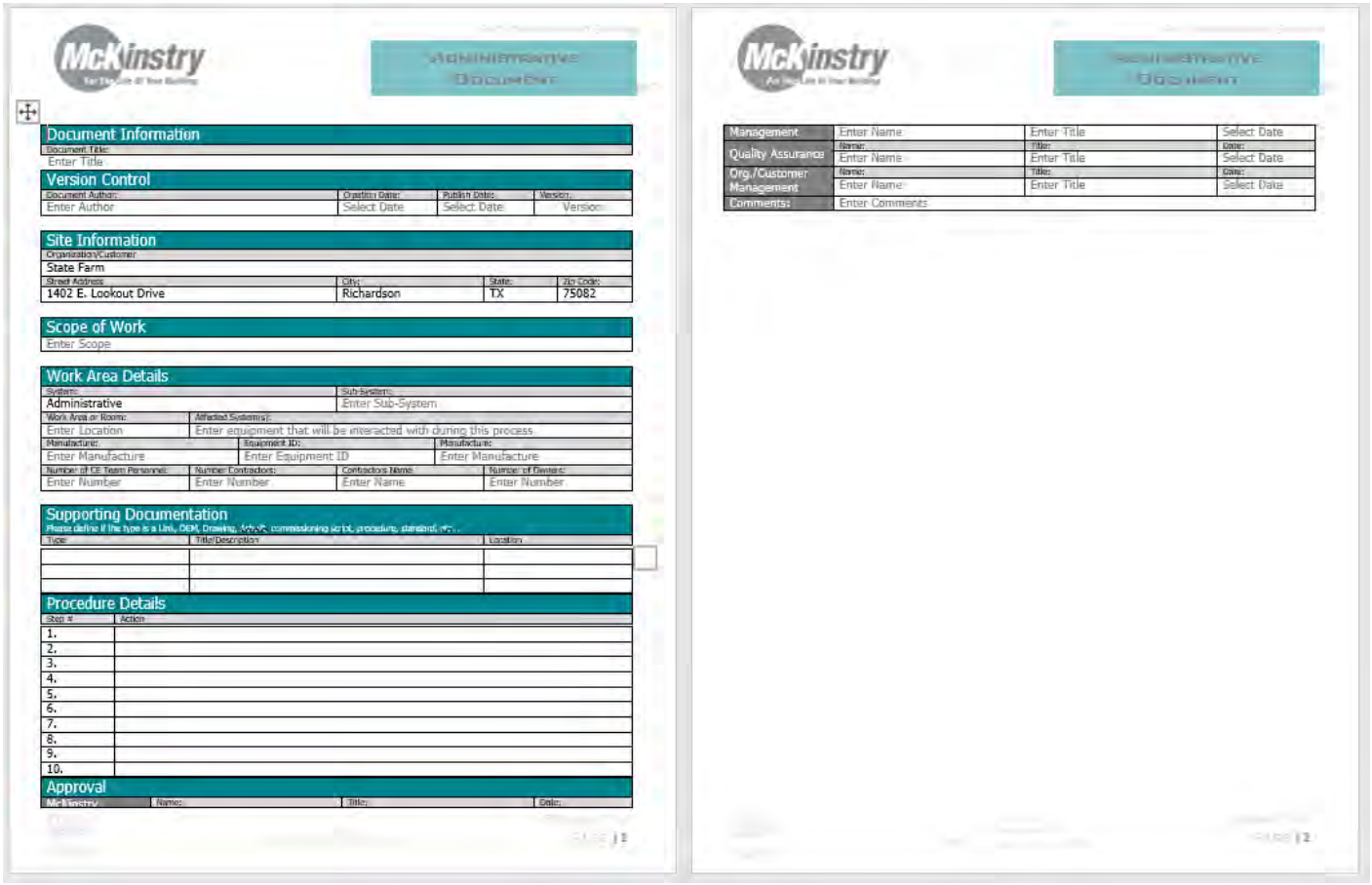
Procedure Captain:	Procedure Pilot:	Procedure Co-Pilot:
Enter Captain	Enter Pilot	Enter Co-Pilot
Vendor:	Vendor Contact:	Names of representative(s):
Enter Vendor	Enter Phone Number	Enter Representative(s)
Ticket Number:	Date:	Level of Risk:
Enter Ticket Number	Select Date	Select Risk Level

Procedure Details

Step #	Action	Time	Date	Initial
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Approval

	Name:	Title:	Date:
McKinstry Management	Enter Name	Enter Title	Select Date
Quality Assurance	Enter Name	Enter Title	Select Date
Org./Customer Management	Enter Name	Enter Title	Select Date
Comments:	Enter Comments		



McKinstry

Administrative Document

Document Information

Document Title:
Enter Title

Version Control

Document Author:	Creation Date:	Publish Date:	Version:
Enter Author	Select Date	Select Date	Version

Site Information

Organization/Customer:			
State Farm			
Street Address:	City:	State:	Zip Code:
1402 E. Lookout Drive	Richardson	TX	75082

Scope of Work

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Work Area Details

System:		Sub-System:	
Administrative		Enter Sub-System	
Work Area or Room:	Affected System(s):		
Enter Location	Enter equipment that will be interacted with during this process		
Manufacturer:	Equipment ID:	Manufacturer:	
Enter Manufacture	Enter Equipment ID	Enter Manufacture	
Number of CE Team Personnel:	Number Contractors:	Contractors Name:	Number of Owners:
Enter Number	Enter Number	Enter Name	Enter Number

Supporting Documentation

Please define if the type is a Link, OEM, Drawing, Advice, commissioning script, procedure, standard, etc...

Type:	Title/Description:	Location:

Procedure Details

Step #	Action
1.	
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Approval

McKinstry	Name:	Title:	Date:
Management	Enter Name	Enter Title	Select Date
Quality Assurance	Enter Name	Enter Title	Select Date
Org./Customer Management	Enter Name	Enter Title	Select Date
Comments:	Enter Comments		

3 Incident Response

Summary

A set of policies and procedures to help guide facility personnel responding to incidents of varying severity that, if not properly managed, could significantly impact the facility operations, their people, or their ability to function productively. Used both in preparation for and in response to major incidents and should be closely reviewed by major facility stakeholders and team members who would participate in the response to an incident. The plan is designed to provide guidance on how to react to a variety of crisis or disaster scenarios with the intent of providing a safe, timely, and sound resolution that minimizes business impact.

Definitions

- ***Incident*** - A situation of extreme difficulty, which is outside the scope of prepared responses.
- ***Disaster*** - An event that results in severe damage or injury.

Preparation and Prevention

This set of activities can help prevent a crisis, reduce the chance of a crisis happening, or reduce the damaging effects of a crisis.

Incident Response Plan - This is the detailed plan of action on what to do during an incident.
Plan Implementation Procedures - These are the procedures (EOPs, MOPs, SOPs, and APs) that are used to put the plan into effect.
Response Testing and Training - These procedures apply to the continued maintenance, testing and training requirements of the plan.

- Frequency of Testing – The Incident Response Plan will be tested no less than once every year. The objectives of the tests are as follows:
  - To determine the effectiveness of the Plan procedures
  - To determine the state of readiness and ability of designated personnel to perform their assigned responsibilities; and to validate and update the contact information for the Facility support personnel (as necessary).
  - To test and determine Communication Plan (Contingency Communications Equip.)
- Frequency of Training - Training will occur on a quarterly basis on the following topics:
  - Notification Procedures
  - Emergency Response

- Incident Reporting
- First Response

Drills:

- The UES team will perform drills every quarter to evaluate the training of the emergency procedures, team skills and communication, and the overall effectiveness of the facility team. The focus is to identify areas of improvement from training, documentation, actions required, and predictive failure points. These drills will be orchestrated and overseen by the UES facility management team (Drills POC) and may be implemented in the following manner:
  - **Table Top:**
    The UES Team will meet together with the drill POC and discuss failure scenarios.
    - During this exercise all team members will be encouraged and expected to participate.
    - This drill session could include:
      - White boarding the sequence of operations
      - Identifying the communication structure with escalations as identified by the overseeing drill POC
      - A written test of scenarios and equipment knowledge
    - Expected Results:
      - All members participate
      - The team can draw/explain the sequence of operation (SOO) with the understanding of why the equipment reacts the way it does
      - The team can explain how they should respond in the given scenario
  - **Mock Drill:**
    The drill POC will coordinate a failure scenario to simulate what an team member may see during an actual failure.
    - Once everything is staged and all required managers are in place a mock email will be sent out to trigger the teams response
    - The team will then respond as if it were an actual alarm/event and perform the following:
      - Investigate and Assess
      - Communicate and Escalate
      - Simulate any required or instructed actions
        - There will be no actual changing of state of any equipment during this exercise. The team will identify what actions are

required and discuss what they would do and expect to see as results

- Expected Results:
  - The team responds in a rapid, safe, and organized manner
  - Identification of abnormalities that are being simulated
    - The team understands the SOO of the equipment and why it is in that simulated state and if that simulated state is correct.
  - Communication is being correctly escalated
  - Process sequence is correct and there is confidence in the team to speak up:
    - If instructed to perform an action that is out of sequence
    - If the individual is not comfortable performing the action

- **Live Drill:**

  The drill POC will coordinate a failure scenario and identify the impact to the Facility. This exercise involves actually changing state of equipment and is hands on.

  - This scenario will be documented and shared with the client for approval prior to initiating the live drill and will be scheduled for a time where this activity could take place without any outage
    - This document will also include a back out plan
  - Upon approval, and with the participation of the client, notifications will be sent out to the appropriate teams and business units to notify them of any possible alarms and what they should expect to see. This notification will include a date and time frame.
  - Once confirmed that all participants are ready, the drill POC will get permission to initiate the live drill from the client.
    - The drill will then be initiated as identified in the Procedure and the UES team will be ready to react and evaluate.
  - Expected Results:
    - The team responds in a rapid, safe, and organized manner
    - The team is able to assess the abnormalities resulting from the live drill
      - The Facility system(s) react to the initiated event and the SOO of the effected equipment performs as expected.
      - Notifications, alarms, and BMS reflect the new state
    - Actions performed are in accordance with the approved processes
      - Equipment and systems should react as designed
        - The team should communicate if the expected results

differ from the actual results

- A meeting with the UES team and the University will occur to discuss lessons learned and overall success of the live drill.

We aim to get the whole team involved in these drills each quarter but scenarios may be too sensitive to capture the whole team. In order to balance the training the McKinstry UES Management will schedule the different types of drills to allow the best cross exposure. In addition, the McKinstry UES Management will share and discuss the drills during pass down and team meetings. The drill POC will also document the drill, the results, and any lessons learned for continuous improvement.

Detection and Incident Classification

How do you recognize a crisis when it occurs? Quite often a manageable situation will transform into an incident over time, possibly catching the observer off guard. It is important to be able to recognize the early warning signs and threshold qualities.

One of the defining characteristics of an incident is a loss of control. If a situation passes outside the boundaries of what can be reliably managed and becomes, or threatens to become, out of control an incident may ensue. Another characteristic of an incident would be a high level of severity. For example, even though there may be an incident response plan in place for an unplanned outage, the severity of the event may dictate that incident management take place immediately.

Incident Types:

- Unanticipated System Failure - Failure of known, but unanticipated origin. No standard response procedures exist.
- Undefined System Failure - Failure of unknown origin. Response not yet defined.
- Extended or Compound Failure - Emergency response procedures may exist for the failure and/or its components, but the extent, duration or complexity of the failure is outside the limits of established procedures.
- Severe Failure – A system failure or situation of extreme severity. A procedure exists.
- Unresponsive Failure - Known failure type that does not respond to established procedures in the prescribed time frame.

Disasters are easier to identify. When serious damage has occurred to property, personnel, or business continuity a disaster has occurred or is in progress.

Disaster Types:

- **Man-made**
  - Attack on facility or personnel
  - Equipment fire/explosion

  - Hazardous material release
  - Catastrophic Mechanical, Electrical, Data, or Plumbing (MEDP) failure
- **Natural**
  - Severe weather
  - Earthquake
  - Flood
  - Fire

In the event of an incident or disaster the ability to quickly identify and classify the event is the crucial first step in the process. This is necessary for an effective response and communication strategy.

Definitions of Incident (Event):

- **Class 1:** Life Safety
  This class overrides all other classes. A threat to human life is more important than a threat to business operations. This class covers fire, natural disasters, threat to human life, and security.
- **Class 2:** Critical
  Defined as an event that interrupts business functions, Utility System has been or will be lost.
- **Class 3:** Significant
  Defined as an event that interrupts business functions, or if "Normal" or "N" status is lost in any critical building system, Mechanical or Electrical. A Class 2 event can be determined by asking one of two questions: Have we lost "N" redundancy in a Utility System has it been compromised.
- **Class 4:** Advisory
  This class is intended to notify the team of an informational event. Examples would be: 30+mph wind warning, lightening warning. This class is mainly for notification of situations that could have a possibility of escalating to a higher class.

All Clear Email:

An "All Clear Email" is to notify a return to normal from a previous event notification.

Fault Event Response Diagram:

The following flowchart outlines the standard actions taken on each class of events.

McKinstry UES Team – University of Idaho

Incident

Class Event

U of I EHS | **U of I Risk** | **U of I Public Safety & Security** | **University Facilities** | **McK UES Team** — person calls (855) 936-3685, connect with McK CSR to report Event

or

Utility System Controls & Monitoring | **Weather Report Utility Advisory** — alarm/notice to Remote Operations Center to report Event

Sequence of Operations

1. Stabilize situation, if possible.
2. Determine the Event Class (1-4).
3. Determine the level of backup required for the incident.
4. Follow Event Response Procedure

U of I Risk
risk@uidaho.edu

U of I EHS
(208) 885-7208

U of I PS&S
(208) 885-7233

U of I Facilities
(208) 310-9039

SPUPI
(647) 278-1641

CLASS 1
LIFE / SAFETY / FIRE NATURAL DISASTER SECURITY BREACH

- Fatality
- Serious Injury
- Security Breach
- Building Evacuation

CLASS 1 — Yes → Call 911 → Escalation Process actioned Send Class 1 Email to Distribution List detailing event and include **MS Teams** call-in information

No

CLASS 2
CRITICAL
UTILITY SYSTEM HAS BEEN OR WILL BE LOST.

- Utility Loss
- Steam, Chilled Water Gas, Power, Water, Compressed Air Impact
- Property Damage

CLASS 2 — Yes → Escalation Process actioned Send Class 2 Email to Distribution List detailing event and include **MS Teams** call-in information

No

CLASS 3
SIGNIFICANT
AT N (Loss of N+1) or BACK-UP TO UTILITY SYSTEMS ARE COMPROMISED

- Utility Redundancy Loss
- Steam, Chilled Water Power, Water, Compressed Air System Redundancy Impact

CLASS 3 — Yes → Escalation Process actioned Send Class 3 Email to Distribution List detailing event. Implement Daily Status Meeting **Phone Bridge not required**

No

CLASS 4
ADVISORY
INCLEMENT WEATHER or ANY DISRUPTION/PROBLEM FROM UTILITY

- Weather notice
- Utility notice
- Utility Disturbance

CLASS 4 — Yes → Escalation Process actioned Send Class 4 Email to Distribution List detailing situation. Updates provided until all clear

Yes

Response and Mitigation

The proper response and mitigation actions will ensure the timely stabilization of the facility and business operations.

First Response:

If there is an immediate threat to human safety or the facility that can be safely mitigated, immediate action should be taken. If someone is, or is about to be, injured the need for action outweighs the need for deliberation - provided that the consequences of such actions do not endanger anyone. Similarly, if there is a containable fire and the safe means to extinguish it, such an action would take precedence over any other activity. These are just two possible examples where a first response would be justifiable and prudent if the responder is appropriately trained. Extreme caution should be used in any situation where the need for an immediate first response is determined. Only when the stakes are high, the consequences predictable, and appropriate training previously completed should such actions be considered.

Evaluation:

After, or in lieu of, any first response activities the primary task is to assess the situation. Basic information must be gathered about the scope and severity of the incident, as well as the state of what was affected. This data must be quickly established and continuously updated in order to ensure good decision making and accurate communications.

The following is a list of data points that should be part of the evaluation process:

- **Scope** - What are the event boundaries, in terms of the physical and functional extents?
  - Source of the incident and possible root causes:
    - Human error
    - Equipment failure
    - Natural disaster
    - Other
  - Area(s) affected.
    - Utility Buildings, MEDP areas, rooms, etc.
  - Business processes affected.
    - What properties are affected?
    - Severity - How severe is the damage or risk?
  - Human impact – were there any injuries?
  - Structural damage
  - Mechanical, Electrical, Data or Plumbing (MEDP) damage

  - Risk classification – Class 1, 2, 3, 4
- **Status** - What is the current state of the situation?
  - Safety of occupants
  - Damage assessment
  - Current system redundancy level
  - Systems currently on/off line
  - Applications currently on/off line
  - Emergency personnel on the scene
  - Available personnel – (are there sufficient resources available to respond?)
  - Estimated time to restore business operations
- **Stability** - Is the situation getting better or worse, or is it stable?
  - Conditions improving
  - Conditions deteriorating
  - Not able to determine

Notification:

When an event has occurred or is in progress, timely and accurate communications must take place to all stakeholders.

- **Initial Notification** - This may precede a full evaluation (as defined in the previous step), if that process will cause a significant delay in getting notification out about the incident. In many cases, a quick notice containing the event location, type and status is preferable to waiting for a full report.
  - Send a message per the Incident Notification Administrative Procedure for the facility
  - Notify all applicable parties on the site Escalation List. This can either be done directly by site personnel, or by calling Security and invoking an Emergency Escalation Plan.

- **Establishing a Phone Bridge** – As an event occurs; McKinstry will classify and evaluate the alarm while following the escalation process. Concurrently, the client will be following their escalation processes. McKinstry will be responsible for establishing a phone bridge within the first 30 minutes for all Class 1 and Class 2 events and distribute the login information per the Escalation Appendices below. McKinstry Facility management will determine if a phone bridge is required for any Class 3 events. If the client determines an internal phone Bridge is required, the client will establish that bridge and distribute the login information. At this time, all personnel on the McKinstry Phone Bridge will

migrate to the internal Phone Bridge.

- **Periodic Status Updates** – At set intervals, changes of state (including problem resolution), or when significant new information becomes available status updates shall be sent to all stakeholders via email or communicated via the Phone Bridge.

- **Abnormal Incident Report** – Within 24 hours of an event or as soon as possible, an Abnormal Incident Report (AIR) will be provided by McKinstry.

Response Logistics:

- Identify the members of the Emergency Response Team (ERT)
  - UES Team
  - Concessionaire Team
  - University EHS Team
  - University Public Safety and Security
  - Other

- Establish team roles
  - ERT Leader (final decision maker)
  - Communication manager
  - Event Documentation Manager
  - Safety Manager

- UES team role
  - On-call staff are expected to cover all assigned shifts, perform tasks in a highly productive, efficient and professional manner. The responsibilities include (but are not limited to) the following:
  - Responding to all emergency calls related to campus utility systems:
    - Domestic, Reclaimed, Waste and Stormwater Water systems, Electrical Systems – Water Tech on-call technician
    - Chilled Water, Compressed Air & Steam – Steam & Chilled Water on-call technician
  - Evaluating, investigating, and shut down systems if necessary, to mitigate adverse impacts of both planned and unforeseen shutdowns to all situations including weather events. Coordinate with a manager for shutdowns as necessary.

- Staff scheduling for on-call weeks will vary based on the business need and UES staff availability. The schedule for each week will be as follows:
  - Weekdays, 5pm – 8am
  - Weekends, 5pm Friday – 8am Monday

- The on-call staff must have access to a cell phone and be available during the shift to respond to the emergency/alarms or phone calls.

- Response Requirement:
  - On-call staff must answer the emergency call and if necessary be on site within 60 minutes.
  - Failure to respond within the required response times will not be a basis for disciplinary action but may affect future on-call scheduling.

- Trading Shifts: The on-call staff must coordinate with his or her lead/supervisor to trade on-call shifts.

- Drug and Alcohol Use: The on-call staff should refrain from the use of drugs and alcohol while on-call.

- Conduct event briefing containing:
  - The current situation assessment
  - A round-table discussion between all teams responding to the event to review the following:
    - Life safety
    - Team member availability
    - Business Operations Impact
    - Root cause
    - Problem resolution and strategies
    - Impact of implementing work without established procedures

- Establish objectives
  - Stabilize System
  - Isolate Problem(s)
  - Restore Redundancy
  - Return to Normal Operations

Deliberation:

Take the time to make good decisions. Hasty actions may worsen the situation.
Utilize the ERT and its extended members to establish action items.

Delegation:
Assign tasks to team members
Mitigation:
Perform agreed upon actions to mitigate and/or reverse the effects of the event
Iteration:
Repeat steps as needed

Recovery and Analysis

Post-Incident Analysis and Reporting

The following must be completed within 24 hours after an event occurs:

- Complete the first sections of the Abnormal Incident Report (AIR) prior to the Root Cause Analysis sections (RCA).

The following must take priority and be completed in a prompt and timely fashion:

- A Root Cause Analysis (RCA) must be performed, documented, and submitted on the same AIR form created for the event occurrence. The RCA should include the below examples:
  - Detailed Sequence of Events
  - Associated Work Order Tickets
  - Pictures
  - Any Procedures that were used
  - Any other information/detail relevant to the root cause of the event
- Lessons Learned Report must be completed for distribution of relevant knowledge about the event to stakeholders to prevent future occurrences.
  - After Action Plan with recommendations for improving future response to events. The Action Plan should include but not excluded to:
    - Item Number
    - Date/Time Assigned
    - Description
    - Point of Contact (POC) of Item
    - POC Number
    - Status
    - Due Date/Time
    - Resolved Date/Time
- Remedial Training as needed to implement After Action Plan findings.
- Formal incident report including the above details will be provided to the Concessionaire

- and University.
  The Formal Incident Format Guide should include but not excluded to:
  - **Incident –** Provide a summary of the event and current status of critical infrastructure.
  - **Incident Descriptions –** Provide a detailed account of the event and remedial actions taken.
  - **Root Cause** – Provide a suggested root cause to the event and provide justification for the root cause.
  - **Records of Events –** Captures significant activities during the course of the event.
  - **Action Item List –** List all actions required to prevent recurrence.
  - **Appendices** – Place any additional items used in the investigation into the appendices. Add as many as needed to support the root cause conclusions.
  - **Summary** – Provide a summary of your analysis and conclusions in this area. Also, detail out the actions required to prevent recurrence.
- Post-incident will be tracked as follows:
  - CMMS work order ticket will be created for each action item.
  - All reports will be posted in an accessible location for review.

Incident Command Center (ICC) Configuration

Recommendation for ICC configuration

Best practice is to have an Incident Command Center (ICC) available. An alternate, off-site option should be available (could be a hotel) if access to the primary facility is denied. The designated room must be available for quick conversion to an ICC although it may have alternate uses at other times. Equipment shall be stored nearby to ensure that it remains dedicated for use in an incident. A room or rooms shall be identified which can be made available for work groups to use.

The ERT should have access to a personal computer and a printer. This should be a printer that is directly connected and not networked. Basic office supplies and equipment should include: White boards with erasable pens and erasers, flip charts, bulletin boards, and push pins. Arrangements for meals and accommodations should be anticipated so that a team can be sustained for long periods if needed.

A recommended configuration includes:

- A dedicated PC with directly connected printer/scanner/copier
- Access to video teleconference room (VTC)
- Conference Call bridge access in both rooms with secured access to bridge

- At least four telephone lines, these can be cell phones
- Ability to record telephone conversations
- An internet connection
- Wireless router
- TV with access to national and international news media
- Projector for use with PCs.
- Two Way Radio Communications (VHF) Capability.

The following additional equipment for an ICC should be considered:

- Rolling containers for supplies
- Access to kitchenette area with vending machines /beverages /coffeemaker /microwave
- Emergency Food and Water Supplies
- Digital camera with extra memory and batteries
- 2 Battery powered Radios and additional batteries
- Electrical adapters (110v) and surge protectors
- Multiple Time Zone Clocks
- Sleeping area and supplies available for longer term events
- Shredder – if one is not available locally
- Satellite telephone
- Maps of asset areas.
- Building MEP drawings, schematics, etc.
- Any other item that would be of value to the Facility team

Good management of the ICC is vital to the successful running of an incident. The Information above should serve as an example checklist is not all inclusive. A balance should be achieved between having a dedicated, permanently equipped facility and having a room that requires fitting at the last moment (which is undesirable). It is likely the first bridge call and initial discussions are likely to take place from a convenient office and remote locations; the team is likely to move to the ICC if and when members physically meet together.

4 Plan for Replacement of the Utility Facilities and Utility System Assets

Introduction

Sacyr Plenary Utility Partners Idaho LLC is excited to submit this Initial Five-Year Plan, that delineates the Capital Improvements proposed to make in each Fiscal Year to the Utility System, including Capital Improvements to address conditions of the Utility System existing prior to the Closing Date.

The development of this plan has been a first opportunity to study the physical state of the Utility Systembeyond the occasional visits during the bid stage, and a way to leverage the experience from the former UES team with that of McKinstry Essention, LLC.

All projects listed in this document will be performed by Moscow ID Eco District I, LLC, a fully-owned subsidiary of McKinstry Essention, LLC, that serves as Contractor to the Operator within the Long-Term Lease and Concession Agreement for the University of Idaho Utility System. It is also worth noting that allthese projects have been classified as Capital Improvements based on a preliminary analysis, but such classification remains subject to change based upon guidance from accounting professionals and input from the University.

Capital Improvements – Approach, Scoring Criteria and Plan Assumptions

The ultimate objective of this plan, and every future update to it, is to provide guidance and a path forward that identifies the needs of the Utility System and proposes Capital Improvements and Material Changes inorder to offer safe, resilient, and efficient operations while backing other University of Idaho's goals, such as carbon neutrality, over time.

Sacyr Plenary Utility Partners Idaho LLC understands the University's expectations set forth in the Concession Agreement, particularly those associated with how operations and maintenance are to be provided, i.e. Performance Standards and Efficiency Metrics. As part of this exercise, all gaps that mayinhibit such expectations are brought to the University's attention.

Approach and Scoring Criteria

The former UES team has provided, over many years, an incredible service operating and maintaining University of Idaho's Utility System, reacting expertly when issues of reliance or capacity have arisen. However, several systems and assets have reached end-of-life status and are deteriorating andunderperforming at rates that pose significant safety risks.

During this period, a thorough analysis, including data points from all historical records available and furtheron-site investigation, has been conducted on the Utility System. As a result, numerous design flaws, capacity challenges, and missing equipment items that require prompt remediation have been identified.

Recognizing the large amount of Capital Improvements needed, and the existence of other constraints that could affect the Approval process, both the Operator and Moscow ID Eco District I, LLC have envisioned a mechanism to prioritize the proposed list of Capital Improvements, in such a way that the most critical are selected for immediate progression.

Each Capital Improvement has been categorized according to four Focus Areas, each of which has beenassigned a different weight. The four Focus Areas are:

- *Safety* of human beings and assets, taking precedence over all else.
- *Resiliency*, as the utility backbone to support a fully functioning Utility System.
- *Efficiency* from a labor, equipment, and materials standpoint. Crucial to cost optimization.
- *Carbon Neutrality and Energy Independence*, goals shared by all entities in this partnership.

In addition to these four Focus Areas, a Risk component also contributes to the final Score. This component accounts for a variety of tangibles and intangibles such as the age of the asset, or the perception of the brand image among others.

CAPITAL IMPROVEMENTS SCORING CRITERIA

SCORE		100%
FOUR FOCUS AREAS		**40%**
Area	Range	Weight
Safety	1-10	40%
Resiliency	1-10	30%
Operational Efficiency	1-10	20%
Carbon Neutrality	1-10	10%
RISK		**60%**
Area	Range	Weight
Age, redundancy, property protection, brand and image, system performance	1-10	100%

Figure 1. Scoring Criteria and assigned weights by category.

This ranking system has been used to provide general direction creating this Initial Five-Year Plan. For illustrative purposes, Capital Improvements allocated in the period consisting of the first partial Fiscal Yearand the first full Fiscal Year, scored 5.00 or higher, which guarantees an emphasis on systems and assets needing improvement to be safe. Safety in the Utility System for the operators and personnel but also for the University of Idaho's broader community is of utmost importance to Sacyr Plenary Utility Partners Idaho LLC and our partners.

Scores for all proposed Capital Improvements are provided in Appendix A. Scoring Matrix.

Plan Assumptions

The proposed Capital Improvements for the first five full Fiscal Years of the Term are presented following two different delivery models:

- *Engineering Studies.* These are pre-construction projects where there is absolute need for change, a vast majority of high priority items where safety and resiliency are the main drivers. However, in order to provide a conclusive and responsible solution to the current physical situation, further investigative work (e.g. forensics development, basic/detailed engineering) needs to be conducted. An EngineeringPackage will be provided as the main deliverable of this projects.

  The expectation is that, once completed, the outcomes of these studies each translate into a newly-scoped Capital Improvement, that may be proposed for subsequent Approval at any time

during theFiscal Year. In most cases, an Estimated Future Cost for such second-stage Capital Improvement (including further engineering -if applicable-, and construction scopes) has been made available to provide guidance regarding an anticipated order of magnitude.

- *Standard Capital Improvements*. These are fully scoped Capital Improvements where, through historical records or recent analysis, a detailed scope and a guaranteed maximum price for physicalchange has been obtained during the reporting period.

For Capital Improvements proposed for the first full Fiscal Year of the Term (and the first partial Fiscal Year) a detailed description including all metrics and items listed in Section 4.3.(c) has been provided inindividual project sheets within Appendix B. Project Sheets for Capital Improvements proposed for Approval. These proposed Capital Improvements are coded 2022/XX.

For the second through the fifth full Fiscal Year of the Term, a complete strategy map has been laid out. The list of Capital Improvements for those years and their associated cost is the result of a series of bestefforts conducted through the limited time available to draft this plan. As Sacyr Plenary Utility Partners Idaho LLC and its partners' intelligence and experience grows, both the list of Capital Improvements and their prioritization will evolve. In a similar manner, costs will vary. Such information will be updated and made available each Fiscal Year during the Term. Proposed Capital Improvements for these years are coded 2023/XX, 2024/XX, 2025/XX, and 2026/XX.

Lastly, it's worth noting how the workload allocated through the first two full Fiscal Years is significantly higher than that of the last three full Fiscal Years included in the Initial Five-Year Plan. This is a direct consequence from the drivers of the approach taken: primarily, following a bold route to identify and address most of the existing safety and resiliency issues over the course of the first and the second FiscalYears; and secondly, permeating an efficiency and sustainability vision through the following Fiscal Yearsin the most responsible manner possible.

Capital Improvements proposed for Approval

PROPOSED CAPITAL IMPROVEMENTS FISCAL YEAR 2022

CODE	SCORE	UTILITY SYSTEM	NAME	COST	Estimated Future Costs*
2022/01	8.80	Electric System	Electric Menard Law *Engineering Study*	$33,318	$640,000
2022/02	8.80	Electric System	Electric Vault Inspections *Engineering Study*	$564,916	*To be determined*
2022/03	8.20	Domestic Water	Domestic Fire Hydrant Replacements	$418,285	—
2022/04	8.16	Storm	Library and Memorial Gym Storm Sewer Repairs *Engineering Study*	$22,740	$1,500,000
2022/05	7.88	Domestic Water	Domestic Water Systems Emergency Generator	$2,480,744	—
2022/06	7.88	Sewer	Sewer Slip Line Memorial Gym to Library	$139,663	—
2022/07	7.64	Steam Plant	Replace 6" Jordan PRV *Engineering Study*	$27,215	$30,000
2022/08	7.52	Steam Plant	Hot Lime Softener PRV Station Upgrade *Engineering Study*	$29,451	$40,000
2022/09	7.44	Steam Plant	'D' Boiler Stop-Check and Main Header Valves *Engineering Study*	$26,809	$470,000
2022/10	7.36	Steam Plant	Steam Plant Security and Exterior Upgrades	$253,077	—
2022/11	7.36	Steam Plant	Catwalk and Ladder Upgrades *Engineering Study*	$23,781	*To be determined*
2022/12	7.28	Domestic Water	Domestic Replace line from Campus Dr. to Blake Av *Engineering Study*	$12,676	$460,000
2022/13	7.08	Steam Plant	Boiler Engineering Analysis and Repairs *Engineering Study*	$402,626	*To be determined*
2022/14	7.04	Chilled Water	McClure Chiller Repairs *Engineering Study*	$26,809	$40,000
2022/15	7.04	Chilled Water	SCCP Chiller Repair and Replacement *Engineering Study*	$32,943	$920,000
2022/16	7.04	Storm	Storm Investigation and Assessment *Engineering Study*	$696,629	*To be determined*
2022/17	7.04	Sewer	Sewer Investigation and Assessment *Engineering Study*	$658,055	*To be determined*
2022/18	6.92	Chilled Water	NCCP Cooling Tower Repairs and Investigation *Engineering Study*	$33,522	*To be determined*
2022/19	6.68	Domestic Water	Domestic Replace line on Central Mall *Engineering Study*	$15,471	$70,000
2022/20	6.56	All Systems	KPI Metering and Development *Engineering Study*	$186,886	*To be determined*
2022/21	6.48	Steam Plant	Utility Tunnel Development and Repairs *Engineering Study*	$82,942	$11,180,000
2022/22	6.48	Steam Plant	Utility Tunnel Repair at 7th St and JEB *Engineering Study*	$35,044	$410,000
2022/23	6.48	Steam Plant	Utility Tunnel Repair at Renfrew *Engineering Study*	$36,506	$1,200,000
2022/24	6.00	Chilled Water	SCCP Cooling Tower Controls and Makeup Water Upgrades *Engineering Study*	$16,477	$50,000
2022/25	5.52	Reclaimed	Reclaimed Sodium Hypochlorite Tank Replacement *Engineering Study*	$17,994	$50,000
2022/26	5.52	Reclaimed	Reclaimed Upgrade Hypochlorite Generator *Engineering Study*	$16,030	$460,000
2022/27	5.28	Domestic Water	Insulate and Connect Power to Sheep Farm Water Vault *Engineering Study*	$18,267	$50,000
2022/28	5.28	Storm	Storm Slip Line Campus Dr and Blake Ave	$42,597	—
2022/29	5.28	Sewer	Sewer Slip Line Campus Dr and Blake Ave	$147,507	—
2022/30	5.28	Chilled Water	TES Level Sensor Wiring Repairs *Engineering Study*	$18,075	$30,000
PROPOSED CAPITAL IMPROVEMENT COST				**$6,517,053**	**$17,600,000**

* Estimated Future Costs column stands for the anticipated total costs to develop a given Capital Improvement through construction and transition. It only applies for Capital Improvements initially identified as Engineering Study only.

Capital Improvements proposed for years 2023 through 2026

PROPOSED CAPITAL IMPROVEMENTS FISCAL YEAR 2023

CODE	SCORE	UTILITY SYSTEM	NAME	COST
2023/01	4.92	Domestic Water	Domestic Replace Backflow Assemblies in McClure Hall	$70,000
2023/02	4.92	Domestic Water	Domestic Replace Irrigation Backflow Assemblies at South Hill Apartments	$50,000
2023/03	4.84	Domestic Water	Domestic Water Systems Replace AC Mains, Phase 2	$2,960,000
2023/04	4.84	Domestic Water	Domestic Water Systems Replace AC Mains, Phase 3	$2,700,000
2023/05	4.80	Steam Plant	Wood Chip Loading Hydraulics and Ram Upgrade and Replacement	$240,000
2023/06	4.76	Steam Plant	West Campus Utility Expansion, Phase 2	$17,640,000
2023/07	4.72	Steam Plant	Steam Pipe Replacement Commons to University Ave	$690,000
2023/08	4.72	Steam Plant	Steam Pipe Upgrade Line St. to Wallace *Engineering Study*	$20,000
2023/09	4.68	Steam Plant	Hot Lime Softener #1 Replacement	$1,080,000
2023/10	4.68	Steam Plant	Replace Feedwater Pumps and VFDs	$730,000
2023/11	4.64	Domestic Water	Domestic Replace line from I-Tank to Walenta Dr (6" C.I. to 10" PVC)	$590,000
2023/12	4.64	Domestic Water	Domestic Replace line from Pine St to Line St (6" C.I. to 8" PVC)	$910,000
2023/13	4.64	Domestic Water	Domestic Replace line from Well #4 to Dairy (6" C.I. to 6" PVC) *Engineering Study*	$20,000
2023/14	4.64	Domestic Water	Domestic Replace Line on Paradise Creek St to 6th St	$2,270,000
2023/15	4.64	Domestic Water	Domestic Replace Line on University Ave from Pine St to Memorial Gym	$2,010,000
2023/16	4.64	Domestic Water	Domestic Replace Line St to Steam Plant (8" Universal 8" PVC)	$90,000
2023/17	4.64	Domestic Water	Domestic Replace Line to Ag Sci *Engineering Study*	$20,000
2023/18	4.64	Domestic Water	Domestic Replace Line to Food Science (6" universal to 6" PVC) *Engineering Study*	$20,000
2023/19	4.64	Domestic Water	Domestic Replace Lines on Blake Ave	$2,690,000
2023/20	4.64	Domestic Water	Domestic Replace lines to PEB and Swim Center (6" D.I to 6" PVC) *Engineering Stud*	$20,000
2023/21	4.64	Domestic Water	Domestic Replace lines to Phinney and Brink (4" to 6" PVC) *Engineering Study*	$20,000
2023/22	4.64	Domestic Water	Domestic Replace South line to Kibbie (3" Gal. to 4" PVC)	$350,000
2023/23	4.56	Steam Plant	Boiler Controls Upgrade and Centralized Operator Station	$1,080,000
2023/24	4.56	Steam Plant	Steam Plant Emergency Generator	$3,780,000
2023/25	4.56	Stormwater	New storm water line at Art and Architecture	$330,000
2023/26	4.56	Stormwater	Storm Catch Basin and Manhole Repair and Replacements *Engineering Study*	$20,000
2023/27	4.56	Stormwater	Storm Install Line from Wallace to Paradise Creek	$500,000
2023/28	4.56	Stormwater	Storm Repair Plugged Line on Nez Perce Dr	$90,000
2023/29	4.56	Stormwater	Storm Slip Line Rayburn Ave from 6th St to PEB	$950,000
2023/30	4.56	Stormwater	Storm Slip Line Stadium Drive	$700,000
2023/31	4.56	Sanitary Sewer	Sewer Manhole Replacements *Engineering Study*	$20,000
2023/32	4.56	Sanitary Sewer	Sewer Replace Line at West Farm	$950,000

2023/33	4.56	Sanitary Sewer	Sewer Replace Line Bruce Pitman Center *Engineering Study*	$20,000
2023/34	4.56	Sanitary Sewer	Sewer Slip Line Admin and Art and Arch	$460,000
2023/35	4.56	Sanitary Sewer	Sewer Slip Line Brink to IRIC	$130,000
2023/36	4.56	Sanitary Sewer	Sewer Slip Line Engineering Annex Service *Engineering Study*	$20,000
2023/37	4.56	Sanitary Sewer	Sewer Slip Line Holm Research to Wastewater Treatment Plant	$520,000
2023/38	4.56	Sanitary Sewer	Sewer Slip Line Kibbie Dome to Perimeter Dr *Engineering Study*	$20,000
2023/39	4.56	Sanitary Sewer	Sewer Slip Line Line St	$330,000
2023/40	4.56	Sanitary Sewer	Sewer Slip Line Perimeter Dr *Engineering Study*	$20,000
2023/41	4.56	Sanitary Sewer	Sewer Slip Line Rayburn Ave from 6th St to PEB	$950,000
2023/42	4.56	Sanitary Sewer	Sewer Slip Line Shoup and McConnell Service *Engineering Study*	$20,000
2023/43	4.56	Sanitary Sewer	Sewer Slip Line Tower to 6th St *Engineering Study*	$20,000
2023/44	4.56	Sanitary Sewer	Sewer Slip Line Wallace to Wicks Field *Engineering Study*	$20,000
2023/45	4.52	All Systems	Utility GIS Mapping *Engineering Study*	$90,000
2023/46	4.52	Electric System	Utility Metering Restoration and Repair	$6,480,000
2023/47	4.52	Steam Plant	Steam Plant Resiliency Development (N+1)	$110,000
2023/48	4.52	Electric System	Electric System Resiliency Development (N+1)	$110,000
2023/49	4.52	All Systems	CMMS Development and Deployment	$20,000
2023/50	4.52	Stormwater	Storm Water Capacity Development	$90,000
2023/51	4.52	Chilled Water	Chilled Water Plant Resiliency Development (N+1)	$100,000
2023/52	4.52	Domestic Water	Domestic Water Resiliency Development (N+1)	$90,000

PROPOSED CAPITAL IMPROVEMENT COST	**$53,230,000**

PROPOSED CAPITAL IMPROVEMENTS FISCAL YEAR 2024

CODE	SCORE	UTILITY SYSTEM	NAME	COST
2024/01	4.48	Steam Plant	Boiler Controls Upgrade and Centralized Operator Station	$1,080,000
2024/02	4.44	Steam Plant	Chip Storage Relocate Hydraulics for Tipper	$30,000
2024/03	4.4	Chilled Water	Chilled Water Loop Capacity and Condition Study	$90,000
2024/04	4.36	Domestic Water	Domestic Water Well Disinfection Pump Replacement	$40,000
2024/05	4.36	Renewable Energy	Shoup Bldg Roof 60KW PV Array	$180,000
2024/06	4.28	Steam Plant	Wood Handling Machinery and Electrical Upgrades	$1,130,000
2024/07	4.28	Chilled Water	SCCP Emergency Generator	$1,300,000
2024/08	4.12	Steam Plant	Energy Plant Roof and Parking Lot Storm and Sewer Repairs	$1,130,000
2024/09	4.12	Domestic Water	Domestic Water Well Pump Replacement	$2,160,000
2024/10	4.08	Steam Plant	Wood Boiler Grate Support Investigation *Engineering Study*	$440,000
2024/11	4.08	Steam Plant	Wood Boiler Replace Firebricks with Refractory	$90,000
2024/12	4.08	Steam Plant	Wood Boiler Side Ash Handling Equipment Repairs	$180,000
2024/13	4.04	Reclaimed Water	Reclaimed Water Turbidity Analyzer	$50,000

PROPOSED CAPITAL IMPROVEMENT COST	$7,900,000

PROPOSED CAPITAL IMPROVEMENTS FISCAL YEAR 2025

CODE	SCORE	UTILITY SYSTEM	NAME	COST
2025/01	3.84	Reclaimed Water	Reclaimed Motor Enclosure	$110,000
2025/02	3.84	Reclaimed Water	Reclaimed Replace Liners at Golf Course Ponds *Engineering Study*	$20,000
2025/03	3.84	Compressed Air	Air Compressors Replacement	$650,000
2025/04	3.84	Compressed Air	Desiccant Air Dryer Replacement	$70,000
2025/05	3.80	Domestic Water	Domestic Water Production Well Transformer and Electrical Upgrade	$870,000
2025/06	3.80	Domestic Water	Domestic Water Line Cap Line St	$90,000
2025/07	3.76	Steam Plant	Chip Storage Facility Security Gate	$110,000
2025/08	3.76	Reclaimed Water	Reclaimed Convert Walenta Dr from City	$130,000
2025/09	3.72	Domestic Water	Domestic Water System Recoat I-Tank Exterior	$910,000
2025/10	3.72	Domestic Water	Domestic Water System Recoat I-Tank Interior	$520,000
2025/11	3.72	Reclaimed Water	Reclaimed Install New Line to Golf Course *Engineering Study*	$20,000
2025/12	3.56	Electric System	Convert West Farm from 4160VA to 13.2kVA	$520,000
2025/13	3.56	Compressed Air	Compressed Air Resiliency Development (N+1)	$60,000
2025/14	3.56	Reclaimed Water	Reclaimed Water Plant Resiliency Development (N+1)	$90,000
2025/15	3.52	Renewable Energy	IRIC 10KW PV Expansion	$60,000

PROPOSED CAPITAL IMPROVEMENT COST	$4,230,000

PROPOSED CAPITAL IMPROVEMENTS FISCAL YEAR 2026

CODE	SCORE	UTILITY SYSTEM	NAME	COST
2026/01	3.44	Steam Plant	N Line Steam Turbine	$2,160,000
2026/02	3.32	Renewable	North Sheep Farm PV - 1 MW	$1,190,000
2026/03	3.28	Steam Plant	Repair South Wall of Wood Chip Storage Building	$2,160,000
2026/04	3.28	Electric System	Electric Admin South - replace and relocate Transformer	$270,000
2026/05	3.28	Electric System	Electric Alumni- replace and relocate Transformer	$270,000
2026/06	3.28	Electric System	Electric Art and Arch North- replace and relocate Transformer	$270,000
2026/07	3.28	Electric System	Electric Art and Arch South- replace and relocate Transformer	$270,000
2026/08	3.28	Electric System	Electric CNR-replace and relocate Transformer	$270,000
2026/09	3.28	Electric System	Electric Hartung Theatre- replace and relocate Transformer	$270,000
2026/10	3.28	Electric System	Electric Lionel Hampton-replace and relocate Transformer	$270,000
2026/11	3.28	Electric System	Electric Physical Education-replace and relocate Transformer	$270,000
2026/12	3.28	Electric System	Electric Swimming Center- replace and relocate Transformer	$270,000
2026/13	3.24	Electric System	Expand IRIC Solar Array and Connect to Campus Microgrid	$170,000
2026/14	3.24	Electric System	Microgrid Energy Storage *Engineering Study*	$90,000

2026/15	3.24	Electric System	Microgrid Expansion, Phase 1	$2,380,000

PROPOSED CAPITAL IMPROVEMENT COST	**$10,580,000**

5 Proposed Changes to the environmental permitting requirements for the upcoming 5 years

This section is under development.

6 Proposed Requirements related to regulatory changes affecting the Utility System.

This section is under development.

7 Annual short-term list of goals and expectations for the Utility System operations and 5-year list of strategic goals

Strategic Focus

Initiatives considered as *Strategic Focus* include projects where UES is involved, along with other entities. The Facilities department largely takes the lead, ensuring these projects are moving forward.

Capital Improvement

Each fiscal year, in collaboration with pertinent departments on campus, UES develops a list of capital improvement needs which are submitted to the U of I for funding consideration. This list of projects is compiled with strong consideration for the strategic initiatives of the UES system and through consultation with the institution's Strategic Plan and administrators. Projects that make the final cut for submission are those which fully support the Strategic Plan and academic endeavors of U of I, along with accessibility and life safety, and which promote student success by enhancing learning environments and their respective infrastructure. UES is expanding this list into a 5-year capital improvement plan for guiding upcoming campus projects.

One key metric for the UES team is the backlog of maintenance and repair needs. When the work needed to maintain the UES in prime operating condition exceeds the available resources, a backlog of incomplete repairs or maintenance had accrued prior to the transition to the P3 outsourcing to accrue, and the buildings and infrastructure no longer operated in the manner designed, often resulting in degraded working conditions and increased energy consumption.

This has negatively impacted the activities conducted in the space, whether in support of education, research, or administrative activities.

Expected growth of the University requires the need for an expanded and reliable utility infrastructure, to include significant improvements and/or replacement of the District Energy Plant. Beyond these major capital projects, the UES team looks to continue to enhance efficiencies across our many services through continuous incremental improvements.

Several key goals are outlined here:

I. Improve UES Maintenance and Operations. The first- and fifth-year goals for the energy systems are as follows:

a. **Steam and Condensate System**

i. Year 1: Address the backlogged maintenance and critical parts inventory that were deferred prior to the outsourcing of the UES system operations.

ii. Integrate the new absorption chiller to with the turbine installation scheduled for completion at the end of the fiscal year.

iii. 5-year: Fully implement the preventative maintenance program for all machines in the system. Completely build out the metering of steam and condensate for each of the end users on the system.

b. Chilled Water System

i. Year 1: Address the backlogged maintenance and critical parts inventory that were deferred prior to the outsourcing of the UES system operations.

ii. Determine the plan for the repair or replacement of the SMARDT chillers at the south campus chiller plant. This is essential in order to meet the chilling needs during the hottest months of the year.

iii. 5-year: Fully implement the preventative maintenance program for all machines in the system. Determine the way to meet N+1 for the chilled water system and add chilling capacity as necessary. Completely build out the metering of temperature and flows for each of the end users on the system.

c. Compressed Air System

i. Year 1: Implement the preventative maintenance program for all machines in the system.

ii. 5-year: Implement a plan for the replacement of the “high time” compressors. Completely build out the metering of compressed air for each of the end users on the system.

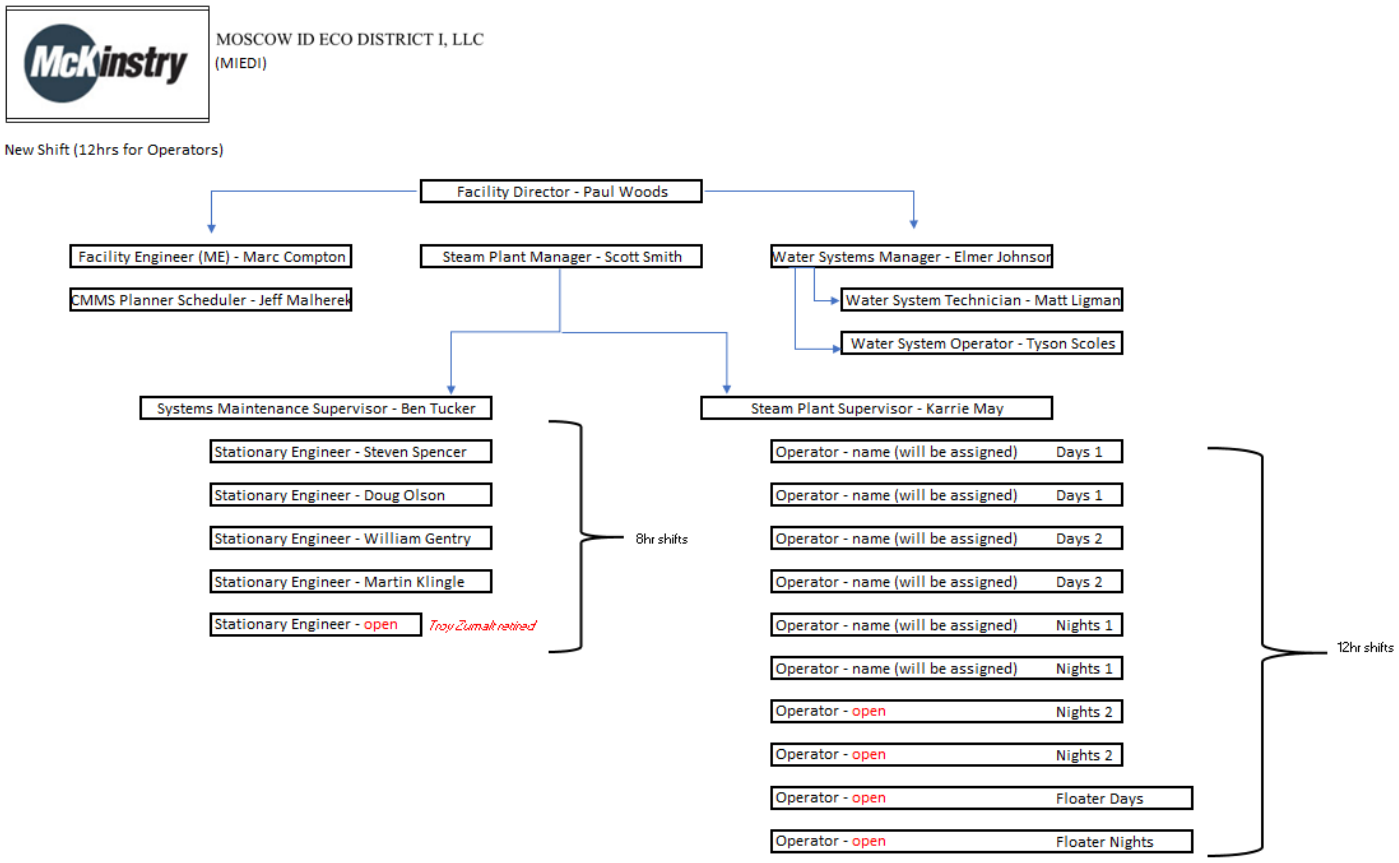
2. Continuously Address Life Safety Issues & Deferred Maintenance Projects: These critical life safety issues are in various states of progress, and more accrue all the time as technologies change and equipment wears out. Keeping campus safe for all our users is a #1 goal of Facilities.

3. Improve UES operational efficiencies.

4. Develop a comprehensive and integrated capital project plan which includes new construction, deferred maintenance, appropriate funding, and which is updated annually.

8 Staffing Plan / Organization Plan

Hybrid Model with Management and Maintenance on 8-hour, Operators on 12-hour



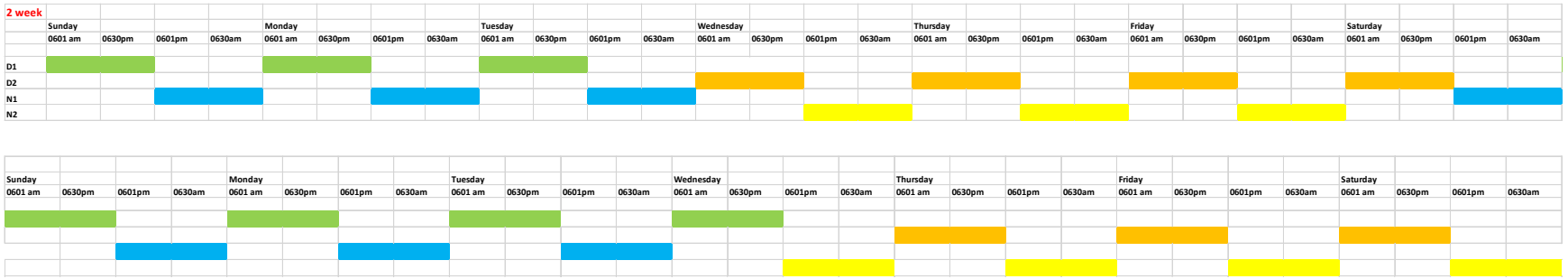
Shift Structure

- 8-hour will be the standard Monday through Friday, 8am to 5pm
- 12-hour will consist of 4 shifts (Operators only)
  - D1 (days 1) primary days Sunday, Monday, Tuesday
  - N1 (nights 1) primary nights Sunday, Monday, Tuesday
  - D2 (days 2) primary days Thursday, Friday, Saturday
  - N2 (nights 2) primary nights Wednesday, Thursday, Friday

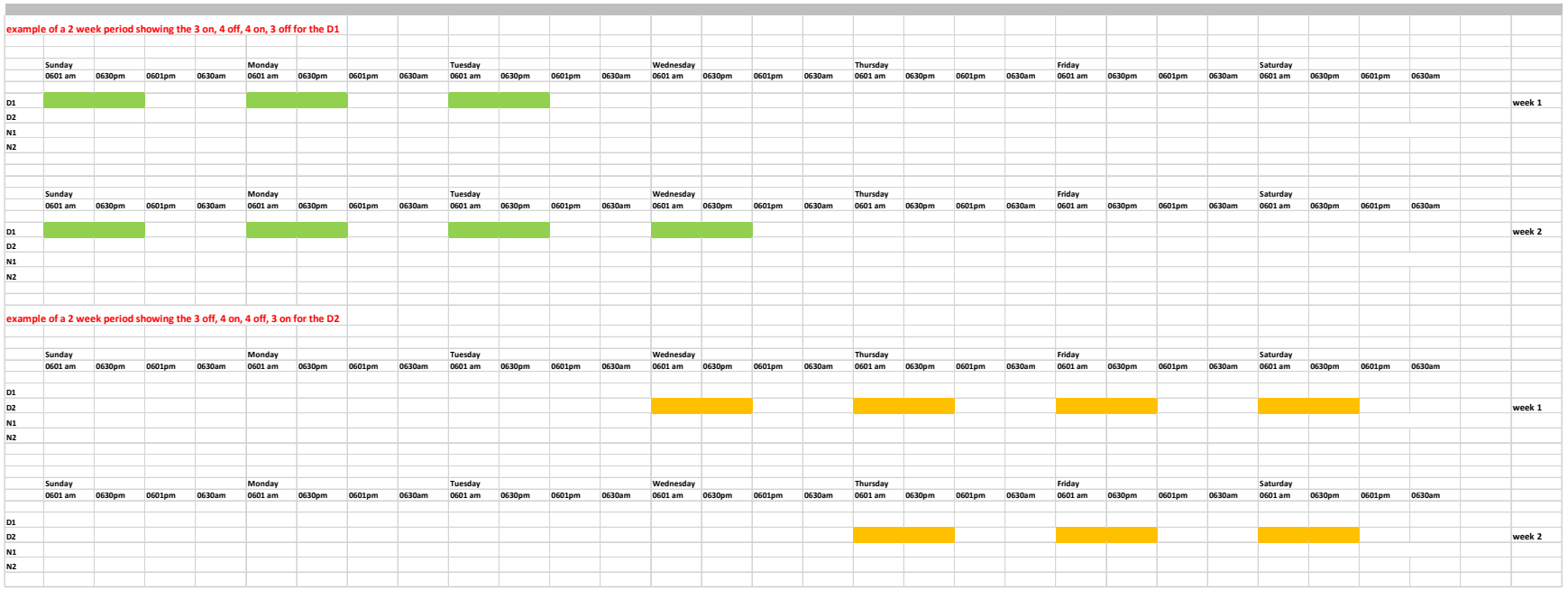
  With days swing day on Wednesdays

  With nights swing day on Saturday

- working a 3 day on, 4 day off, 4 day on, 3 day off, 2 week cycle



- D1 and D2



- N1 and N2


example of a 2 week period showing the 3 on, 3 off, 4 on, 4 off for the N1
Sunday Monday Tuesday Wednesday Thursday Friday Saturday
0601 am 0630pm 0601pm 0630am
D1
D2
N1
N2
week 1
week 2
example of a 2 week period showing the 3 off, 3 on, 4 off, 4 on for the N2

9 Work Rules

1. Safety is premium. Follow all aspects of the McKinstry Safety Policy.

   - Incident Reporting Hotline 866.772.3108

2. McKinstry pay period is Monday through Sunday.

3. Timecards submitted and approved by manager/supervisor by noon Mondays

   - Log onto Bluenet, select McKinstry Time
   - Or use Pacific Time App

4. A standard workday shall be on the basis of eight (8) hours per day for management team and maintenance team, with twelve (12) hours per day for the operators.

5. UES Employees Shift Start / Stop times

   a. Management 800am-500pm
   b. Engineering 800am-500pm
   c. Non District Energy Plant 800am-500pm
   d. District Energy Plant
      i. Grave Shift (3) 1200am-800am
      ii. Day Shift (1) 800am-400pm
      iii. Swing Shift (2) 400pm-1159pm

6. For shift tie in purposes, UES Team members will be required to participate in a brief pass down at the end of shift.

7. Overtime shall be paid for non-exempt employees for all hours worked over 40 per work week and over 8 hrs per day at 1.5 times the rate of pay.

8. Approvals for Vacation, PTO and Floating Holiday (all time off referred to as PTO at McKinstry) are per the standard McKinstry policy, submitted via electronic request, reviewed and approved by the appropriate manager, supervisor, or their designee. A minimum of 15 days' notice is preferred for requests greater than one (1) shift. As needed for emergency PTO requests, a verbal communication between manager and employee one a minimum of (1) hour prior to shift start is required.

9. **Holidays:**

At the Company we recognize major holidays and their importance to you and our customers. Because holidays do not always fall on the same day each year, the schedule of time off may vary. The Company offers a total of eight (8) paid holidays per year.

The Company recognizes eight (8) scheduled holidays throughout the year:

- New Year's Day
- Martin Luther King Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Day after Thanksgiving
- Christmas Day.

In addition, we offer one (1) floating holiday to be used at your discretion. Floating holidays may be scheduled by submitting an Out of Office Request to your manager for approval and planning.

A holiday under this benefit is defined as eight (8) hours. If a scheduled holiday falls within an employee's PTO period, the holiday is not considered a PTO day, but will be paid out as holiday pay. If an employee is scheduled to work on a holiday, they will receive 8 hours of holiday pay in addition to their 1.5 times the rate of regular shift pay. If an employee is not scheduled to work on a holiday, they will receive 8 hours of holiday pay.

Holiday pay will be based on the date of the shift start time.

Holidays are not an accrued benefit and unused holidays are not paid out at time of separation of employment, nor are they transferable into the next calendar year.

10. **PTO:**

We recognize the importance of Paid Time Off (PTO) in providing the opportunity for rest, recreation, and personal activities. The Company grants annual paid PTO to its full-time employees every January 1st for the New Year utilizing length of service as a guideline for the amount of vacation an employee receives. Employees hired after the first of the year will receive a pro-rated portion of vacation pay based on their hire date.

PTO may be taken at any time in the year with prior approval from your supervisor. To promote a healthy workforce, employees are encouraged to take all granted PTO during the year. Unused PTO is not paid out and generally does not carry over unless approved work-related circumstances exist.

No payments will be made in lieu of taking PTO except for accrued unused PTO at the time of termination. A day of PTO under this benefit is defined as eight (8) hours. Employees may use their PTO in allotments in as many hours as necessary to cover their shift or as small as 5 minutes to cover all or a portion of their shift.

Practical Application: If your offer letter stated ten (16) days of PTO, please note that equates to 128 hours which may be used in any increment to cover the length of your regular shift away from the data center for PTO.

11. Premium/shift differential pay is based on standard workday schedules and the date of start time of the shift.
    a. For the eight (8) hour workday, swing shift will be paid at your regular rate plus 5% shift differential, and night shift at your regular rate plus 5% shift differential.

12. When Daylight Savings and Standard Time Changes occur, during a shift, employees will be paid for actual hours worked.

13. On Call Policy

Staff who are on-call will be identified, selected, and added to the UES department on-call list based on their ability to provide technical, emergency, and critical support to the UES site. A minimum of one UES staff will be identified and scheduled on a weekly rotating schedule.

EXPECTATIONS AND PRACTICE:

- On-call staff are expected to response and cover all assigned shifts, perform task in a highly productive, efficient and professional manner.

- On-call weekly schedule
  - Weekdays: Monday thru Friday: 5pm to 8am, daily
  - Weekends: Saturday and Sunday: 12am to 1159pm, daily

- Response & Access: The on-call staff must have access to a phone and be available during the shift to respond to the emergency/alarms. Failure to respond within the required response times will not be a basis for disciplinary action but may affect future on-call scheduling.
  - Response Requirement: On-call staff must respond within 60 minutes.
  - Weekly Performance Bonus: A weekly performance bonus will be paid if the on-call person regularly responds to requests within 60 minutes.

- Trading Shifts: The on-call staff must coordinate with his or her lead/supervisor to trade on-call shifts.

- Drug and Alcohol Use: The on-call staff should refrain from the use of drugs and alcohol while on-call.

COMPENSATION:

- Staff participating in the on-call rotation will receive compensation for time worked and are eligible for a weekly performance bonus as follows:
  - Time Worked: The employee will be paid for shall receive a minimum of two hours of pay if called to work or shall receive pay for actual hours worked, whichever amount is greater.
  - Holiday Pay: Holiday pay plus time worked (New Year's Day, Martin Luther King Jr Day, Memorial Day, 4th of July, Labor Day, Thanksgiving & Day After, and Christmas)
  - Weekly Performance Bonus: $200 for each on-call week
    - Eligibility: The weekly p*erformance bonus will be paid if the on-call person regularly responds to requests within 60 minutes.*

- Time Worked policy only applies to only non-exempt employees

10 Staffing Job Descriptions

Position - Water System Operator

Job Duties/Responsibilities

Operate and maintain the Domestic Water Systems on campus to comply with strict Health and Safety codes in according to EPA, AWWA standards and Idaho DEQ requirements by:

- Drawing water samples from the UI domestic water system and submitting for testing according to codes to ensure proper monitoring and maintenance of disinfectant chemical levels.
- Operating and maintaining University wells, water storage tanks, pipes, and pump houses.
- Testing and repairing backflow devices
- Operating and maintaining chlorine disinfectant systems.
- Operating, maintaining, and repairing sanitary and storm sewer systems.
- Evaluating, investigating, and responding to water system problems and responding to emergency calls related to all campus water main leaks and systems.
- Troubleshooting and providing recommendations regarding utility maintenance procedures and shutdowns to mitigate potential adverse impacts of both planned and unforeseen shutdowns, as well as providing technical assistance and evaluation in emergency situations and unforeseen scenarios.
- Proactively seeking, identifying, and resolving potential problems and issues as they arise.
- In the absence of the Water Systems Manager, oversee day-to-day operations of the water distribution system, addressing water systems issues and locate requests.

Operate and maintain the Reclaimed Water Distribution System in compliance with strict EPA and Idaho DEQ requirements by:

- Drawing reclaimed water samples and submitting them for testing according to codes.Operate and maintain sodium hypochlorite generator disinfecting system.
- Operate and maintain variable speed pumps and program control systems. Operate and maintain University lagoons in accordance to DEQ standards. Proactively seeking, identifying, and resolving potential problems and issues.
- Provide technical assistance to improve and repair irrigation systems for U of I grounds irrigation systems, Arboretum and Botanical Garden, and Golf Course personnel.
- In the absence of the Water Systems Manager, oversee day-to-day operations of the reclaim water systems and lagoons.
- Train and assisted on call personal and other trades craftsmen on code compliance.

Operate and maintain the Sewer and Storm Distribution System in compliance with strict EPA, and Idaho DEQ requirements by:

- Sampling and recording data from storm systems.
- Operating and maintaining DOC system and SCADA Controls for water system.

- Operating, maintaining, and repairing sanitary and storm sewer systems.
- Evaluating, investigating, and responding to sewer system problems and responding to emergency calls related to all campus sewer and storm main leaks and systems.
- Troubleshooting and providing recommendations regarding utility maintenance procedures and shutdowns to mitigate potential adverse impacts of both planned Operate, maintain, and repair water collective system including manholes, catch basins, and pipes.

Contributes to the team environment and meet safety initiatives by:

- Following all Safety regulations and be trained in; Working in confined spaces, lockout tag-out procedures, fall protection, wearing personal protective gear as needed and other safety related rules.
- Ensuring compliance with all safety policies, procedures, and work practices established by the McKinstry.
- Developing, approving, and/or implementing safety procedures and programs as needed.

Position – Stormwater/Water System Operator

Job Duties/Responsibilities

Operate and maintain the University's storm watersystem in compliance with strict EPA and Idaho DEQ requirements by:

- Planning, supervising, and coordinating the activities and operation of the University's storm water services division, including implementation and administration of the University's NPDES permits storm water management program.
- Assisting with administration of the University storm water utility, administration and plan review of the design work and inspection of all storm water facilities
- Developing and implementing of public education programs regarding water quality and pollution prevention.
- Developing and managing of water quality and drainage enforcement policies and procedures.
- Investigate and resolving of water quality and drainage complaints and inspecting storm water.
- Performing field inspection of storm water facilities and systems as well as construction sites.
- Conducting storm water permit application reviews, checking plans, and performing on-site inspections of new storm water systems.

Operate and maintain the University of Idaho Water Systems by:

- Responsible for all Geographic Information System (GIS) work as it relates to all utilities systems (Domestic, Reclaimed, Sanitary and Storm water).
- Management such as collecting, maintaining, and storing geospatial data and metadata, and preparing maps for University and department use.

Operate and maintain the University's domestic water distribution system in compliance with strict EPA and Idaho DEQ requirements by:

- Sampling and recording data from domestic water systems.
- Operating and maintaining DOC system and SCADA Controls for water systems
- Operating, maintaining, and repairing domestic water system.
- Evaluating, investigating, and responding to all University water systems problems and responding to emergency calls related to all campus domestic water leaks and equipment break downs during and after normal working hours.
- Troubleshooting and providing recommendations regarding utility maintenance procedures and shutdowns to mitigate potential adverse impacts of both planned and emergent maintenance and repairs.
- Operating, maintaining, and repairing water collective system including manholes, catch basins, and pipes.
- Drawing domestic water samples and submitting them for testing according to codes.
- Operating and maintaining the University disinfecting system.
- Proactively seeking, identifying, and resolving potential problems and issues.

Operate and maintain the University's reclaimed water distribution system in compliance with strict EPA and Idaho DEQ requirements by:

- Sampling and recording data from reclaimed water system.
- Evaluating, investigating, and responding to all University water systems problems and responding to emergency calls related to all campus reclaimed water leaks and equipment break downs during and after normal working hours.
- Operating, maintaining, and repairing all sections and components of the reclaimed water systems.
- Drawing reclaimed water samples and submitting them for testing according to EPA and DEQ regulations.
- Operating and maintaining sodium hypochlorite generator disinfecting systems.
- Proactively seeking, identifying, and resolving potential problems and issues.
- Sampling and recording data from reclaimed water systems.

Operate and maintain the University's sanitary sewer distribution system in compliance with strict EPA, and Idaho DEQ requirements by:

- Operating, maintaining, and repairing University sewer water collection system including manholes, catch basins, and pipes.
- Evaluating, investigating, and responding to sewer system problems and responding to emergency calls related to all campus sewer and storm main leaks and systems.
- Troubleshooting and providing recommendations regarding utility maintenance procedures and shutdowns to mitigate potential adverse impacts of both planned and unplanned maintenance and repair.

Contributes to the team environment and meet safety initiatives by:

- Following all Safety regulations and be trained in; Working in confined spaces, lockout tag-out procedures, fall protection, wearing personal protective gear as needed and other safety related rules.
- Ensuring compliance with all safety policies, procedures, and work practices established by the McKinstry.
- Developing, approving, and/or implementing safety procedures and programs as needed.

Position – Water Systems Manager

Job Duties/Responsibilities

Summary – Provides a wide variety of services related to the planning, design, maintenance, repair, and overall management of the team supporting the University of Idaho's water systems infrastructure – Domestic, Reclaim, Storm, Sewer, and Sanitary.
Operate and maintain the University's water system infrastructure in compliance with strict EPA and Idaho DEQ requirements by:

- Providing overall management and oversight
- Evaluating and investigating systems to identify and quantify issues negatively affecting distribution of water, recycled water, and sewer systems.
- Serves a technical specialist on water utility systems
- Supports and assist University Architectural & Engineering Services and other Facility Trades Groups.
- Manage and implement cross-connection program
- Project leads all water permit to local, county, state, and federal compliance

Ensure staff is capable to ensure safe, reliable operations by:

- Guide, train, and empower staff to operate and maintain a central heating plant and distribution system through proper hiring, training and developing training programs, setting priorities, mentoring, and motivating.
- Discipline where appropriate following standard policies.

Coordinate with various regulators to ensure UI meets all laws and rules related to

- Obtaining permits from Idaho DEQ and providing required records and reports to these agencies.
- Stay informed on changes to DEQ and EPA regulations, and stay current and compliant on changes to other regulating agencies and boiler inspector requests.
- Work with McKinstry insurance company, EHS, and Risk Management to stay compliant with boiler code/regulations, OSHA safety regulations, and minimize injuries.

Ensures team safety, efficiency, and effectiveness by:

- Participating in required career path, plant specific and EHS safety training pertinent to tasks of the manager position.
- Maintaining current Lockout/Tagout and Confined Space Entry Training.
- Knowing personal protective equipment appropriate for all working conditions and using it as needed.
- Maintaining a First Aid/CPR certification.
- Conducting regular safety meetings and overseeing completion of required safety courses in along with compliance of other safety protocols.

Position – Steam Plant Operator 1

Job Duties/Responsibilities

Provide safe, reliable, and efficient Steam Plant operations by:

- Monitoring and operating high pressure wood fired and gas boilers and all associated plant equipment.
- Applying proper problem-solving methodology and effect necessary repairs to maintain a continuoussupply of steam and compressed air for any situations that arise.
- Abilty to troubleshoot and diagnose problems related to high pressure boiler operations under the supervision of Steam Plant Operator 2 and/or Steam Plant Supervisors.
- Monitoring and recording critical temperatures, pressures, water testing results and boiler status. Knowledge of importance and function related to Steam Plant processes.
- Providing leadership to new personnel, IH, and Apprentice Steam Plant Operators by having proficient knowledge of all plant operations, safety procedures, water testing and treatment procedures, and plant processes.
- Switching to back up systems as necessary which include but are not limited to high pressure gas boilers, air compressors, rerouting of steam distribution, and switching feedwater and fuel feed to the boiler.
- Under minimal supervision performs maintenance tasks on boiler, wood handling, and ash handling equipment.
- Knowledge of and ability to troubleshoot feedwater, condensate, and softened water systems.
- Performing Lockout/Tagout and working in confined spaces as needed.

Ensures wood-fired boiler has an adequate fuel supply and proper ash removal and disposal by:

- Troubleshooting and inspecting wood handling equipment and ash handling equipment.
- Drying wood samples accurately for fuel vendor compensation, weighing and unloading fuel deliveries.
- Moving fuel at wood storage facility with safe operations of a 950 CAT or Hough front end loader.
- Cleaning around the wood handling system by safely operating a 226B CAT skid steer at the steam plant.
- Ability to quickly diagnose problems in fuel or ash handling systems.
- Performing scheduled soot blows and operating ash removal systems.
- Properly operating with the knowledge of specific units and manual operations of belts, conveyors, augers, motors, and all electrical breaker locations for resets.
- Ability to safely clear away plugs and fix break downs if possible, without assistance.

Ensures that the high-pressure wood and gas fired boilers have an operational water supply by:

- Routinely testing, treating, analyzing, and troubleshooting the performance of hot process water softeners, charcoal filtering, and sodium zeolite softening systems
- Adjusting and maintain the chemical mixing tanks, injection pumps, and related equipment that are necessary to insure the delivery of high-quality feedwater
- Performing mud drum blow downs and adjusting the continuous blow down for maximum boiler longevity and efficiency
- Performing tests on boiler water, feedwater, condensate, zeolite inlet an outlet, and filter inlet water
- Recording analyzing results for proper adjustment, treatment, or repairs necessary
- Performing scheduled backwashes on sodium zeolite softeners and charcoal filters tanks in conformance to standard operating procedures (SOPs)
- Regenerating sodium zeolite softeners as necessary and in conformance to SOPs
- Completing adjustments and repairs in associated equipment such as valves, pipelines, and pumps

Contributes to the team environment and meet safety initiatives by:

- Following all Safety regulations and be trained in; Working in confined spaces, lockout tag-out procedures, fall protection, wearing personal protective gear as needed and other safety related rules.
- Ensuring compliance with all safety policies, procedures, and work practices established by the McKinstry.
- Developing, approving, and/or implementing safety procedures and programs as needed.
- Carry out daily housekeeping functions such as painting, mopping, sweeping, waxing, and organizing.

Position – Steam Plant Operator 2

Job Duties/Responsibilities

Provide safe, reliable, and efficient Steam Plant operations by:

- Operating, troubleshooting, and maintenance of high-pressure wood and gas boilers and associated wood and ash handling equipment.
- Making decisions on changing, shutting down, or adding boilers to meet campus demands.
- Rerouting steam, feed water, condensate, and compressed air systems to provide continuous service to campus and isolate appropriate systems as needed.
- Assisting in writingand updating standard operating procedures (SOP's) for plant procedures, safety procedures, and efficient operations.

- Apply proper problem-solving methodology, with little supervision, during breakdowns and emergency situations and make repairs necessary to provide continuous service of steam and compressed air to campus.
- Ability to troubleshoot and diagnose problems related to high pressure boiler, softened water system, wood, and ash handling systems under the supervision of Stationary Engineer 2 and/or Energy Plant Supervisors
- Adjusting, maintaining, and troubleshooting boiler water chemistry, condensate water chemistry, softened water chemistry, and make-up water systems.
- Training and implementation of proper Lockout/Tagout and confined space procedures, specific to the Energy Plant equipment with minimal supervision.
- Monitoring and recording critical temperatures, pressures, water testing results and boiler status. Knowledge of importance and function related to Energy Plant processes.
- Monitoring, recording, and assisting in maintenance of chilled watersystems as needed.
- Switching to back up systems as necessary which include but are not limited to high pressure gas boilers, air compressors, rerouting of steam distribution, and switching feedwater and fuel feed to the boiler.
- Under minimal supervision performs maintenance tasks on boiler, wood handling, and ash handling equipment
- Providing leadership, supervision, and training to IH personnel, Apprentice Stationary Engineers, and Stationary Engineer 1's by having extensive knowledge of all plant operations, safety procedures, water testing and treatment procedures, and plant processes to ensure consistent and continuous supply of compressed air, steam, and chilled water to campus buildings.
- Proficient in specialized additional skills including but not limited to; class A COL , welding certification, reading and writing of technical drawings of all steam plant systems, instructing First Aid/CPR for Facilities Management, pipe and steam fitting, and maintenance of boilers,pumps, gearboxes and associated equipment.

Ensure the wood fired boiler has a continuous, adequate fuel supply and proper ash removal and disposal by:

- Maintaining, troubleshooting, and repairing wood supply and ash handling systems.
- Weighing and unloading fuel deliveries, inspecting material content in loads for contaminants, and drying wood samples accurately for fuel vendor compensation.
- Properly and safely operating belts, conveyors, augers, bucket elevators, and motors with the knowledge of the specific equipment, manual overrides, and all electrical breaker locations for resets.

- Loading and unloading fuel delivery truck at wood storage facility. Moving fuel at wood storage facility, plant, or transporting overage to storage facility with safe operations of a 950 CAT or Hough front end loader.
- Cleaning around the wood handling system and truck dump tipper by safely operating a 226B CAT skid steer at the steam plant.
- Ability to quickly diagnose problems in fuel or ash handling systems.
- Performing scheduled soot blows and operating ash removal systems.
- Ability to use Lockout/Tagout appropriately and safely clear away plugs and fix breakdowns if possible, without assistance.

Ensure high pressure wood and gas fired boilers have operational water supply by:

- Routinely testing, treating, analyzing, and troubleshooting of the performance of the hot process softeners, feedwater, boiler water, charcoal and sodium zeolite softening systems, and condensate water by conducting required chemical testing.
- Recording and analyzing results for proper adjustment, treatment, or repairs necessary.
- Recording and interpreting data and generating reports with computer database system.
- Advanced water treatment skills to include troubleshooting all feed water, condensate, hot lime softening system, chemical injection, calibrating and monitoring of Nalco panels for chilled water systems, troubleshooting booster pumps, and recirculating pumps as well as associated valves and steam traps.
- Adjusting and maintaining the chemical mixing tanks, inJect1on pumps and related equipment that are necessary to insure the delivery of high-quality feedwater.
- Performing scheduled backwashes on charcoal filters, sodium zeolite softeners, and condensate polishers in accordance with SOPs.
- Regenerating sodium zeolite softeners as necessary and 1n conformance to SOP's to ensure optimal performance.
- Mixing and disposing of chemicals in compliance with SOS and hazardous chemical handling standards.
- Fully understanding chemical properties and reactions for each process that takes place in the water treatment systems
- Completing adjustments and repairs in associated equipment such as valves, pipelines, and pumps.
- Performing mud drum blow downs and adjusting the continuous blow down for maximum boiler longevity, and efficiency.
- Instructing and training of the water system knowledge to IH personnel, Apprentice Stationary Engineer's, and Stationary Engineer l's.
- Proficient operation of the various Energy Plant distribution systems and extensive knowledge of all pipes lines lay outs and directional flows.

- Writing and updating SOP's for water testing, backwashing, regeneration procedures.

Contributes to the team environment and meet safety initiatives by:

- Following all Safety regulations and be trained in; Working in confined spaces, lockout tag-out procedures, fall protection, wearing personal protective gear as needed and other safety related rules.
- Ensuring compliance with all safety policies, procedures, and work practices established by the McKinstry.
- Developing, approving, and/or implementing safety procedures and programs as needed.
- Carry out daily housekeeping functions such as painting, mopping, sweeping, waxing, and organizing.
- Performing in a variety of conditions including dust, humidity, extreme temperature fluctuations inside and outside and all-weather conditions.
- Participating in required career path, plant specific and EHS safety training pertinent to tasks of the Stationary Engineer position.
- Maintaining and current Lockout/Tagout and Confined Space Entry Training.
- Knowing personal protective equipment appropriate for all working conditions and using it as needed.
- Maintaining a First Aid/CPR certification.
- Assisting the Steam Plant Supervisor in the oversight and training of new personnel, Temporary Help personnel, Stationary Engineer Apprentice, and Stationary Engineer l's.
- Assisting management in shift scheduling and personnel contacting for coverage.

Position – Steam Distribution Coordinator

Job Duties/Responsibilities

Coordinates operation and maintenance of high- and low-pressure steam and compressed air systems campus wide by:

- Troubleshooting, repairing, and maintaining equipment which includes but is not limited to high pressure wood and gas fired boilers, PRV stations, heat exchangers, steam traps, valves, gauges, pumps, augers, belts, motors, and gearboxes.
- Rebuilding or replacing pressure reducing valves, condensate receivers/pumps, and actuated steamcontrol valves for all campus heating systems.
- Repairing, replacing, engineering all steam pipeline and condensate lines to ASME code.
- Maintaining and operating feed water and condensate pumps.

- Maintaining and repairing compressed air systems campus wide (screw compressors, coalescing filters, refrigerant air dryers, and desiccant air dryers).
- Proficiently using all hand held and power tools including but not limited to; pipe threaders, grinders, drill press, band saws, wire wheels, cutting torch, welders, torque wrench, reciprocating saw, pipe wrench, digital multimeter, common hand tools, and air monitoring equipment.
- Providing essential services to campus in all situations as needs arise 24/7/365.

Fabricates, installs, and repairs all plant and campus mechanical systems by:

- Interpreting technical drawings and blueprints, schematic diagrams and electrical drawings and communicating the meanings those who work on these systems.
- Using a proficient skill level of arc welding, TIG welding, wire feed welding, and oxyacetylene weldingtechniques.
- Complying with ASME standards for steam fitting, pipe fitting associated work on high- and low-pressure steam distribution systems both at the Steam Plant and on campus.
- Proper installation and use of high temperature insulating materials.
- Proper installation and use of high temperature refractory materials.
- Installing, maintaining, and troubleshooting high pressure hydraulic systems.
- Maintaining, repairing, and troubleshooting of all conveyor belts, augers, walking floors, bucket elevators, gearboxes, on wood and ash handling systems.

Maintaining complex hot process water softening and chemical treatment equipment by:

- Troubleshooting, repairing, and maintaining equipment associated with hot process lime softener, sodium zeolite softeners, charcoal filters, and condensate polishing systems.
- Troubleshooting, repairing, and maintaining equipment associated high pressure boiler water chemical treatment.
- Rebuilding,maintaining, and replacing chemical injection pumps, booster pumps, and recirculationpumps.

Maintaining boiler controller and automated equipment integrity by:

- Installing, maintaining, troubleshooting, and calibrating PLC, DLC, HMI, VFD, video displays, and pneumatic control systems.
- Maintaining and troubleshooting high and low voltage control systems.
- Maintaining opacity air monitoring equipment to comply with DEQ standards.
- Assisting in the maintenance, repair and troubleshooting of low-pressure package boilers located around campus.

Maintains essential supplies for steam plant and campus steam systems and contributes to a safe and effective working environment by:

- Routinely and as needed ordering inventory of emergency and non-emergency repair and maintenance parts for steam plant and campus steam systems.
- Assisting in the direction, coordination, and training of other plant personnel.
- Proper use of Lockout/Tagout principles, confined space procedures, air quality monitoring, EHS safety training, and all necessary personal protective equipment when necessary.
- Maintaining First Aid/CPR certification.
- Safely and proficiently operating heavy equipment including forklifts, 950 CAT and Hough front end loaders, CAT 226B skid steer, ash disposal truck and Kenworth semi-truck.
- Following all Safety regulations and be trained in; Working in confined spaces, lockout tag-out procedures, fall protection, wearing personal protective gear as needed and other safety related rules.
- Ensuring compliance with all safety policies, procedures, and work practices established by the McKinstry.
- Developing, approving, and/or implementing safety procedures and programs as needed.

Position – Steam Distribution Coordinator – Mech 2

Job Duties/Responsibilities

Coordinates operation and maintenance of high- and low-pressure steam and compressed air systems campus wide by:

- Troubleshooting, repairing, and maintaining equipment which includes but is not limited to high pressure wood and gas fired boilers, PRV stations, heat exchangers, steam traps, valves, gauges, pumps, augers, belts, motors, and gearboxes.
- Rebuilding or replacing pressure reducing valves, condensate receivers/pumps, and actuated steamcontrol valves for all campus heating systems.
- Repairing, replacing, engineering all steam pipeline and condensate lines to ASME code.
- Maintaining and operating feed water and condensate pumps.
- Maintaining and repairing compressed air systems campus wide (screw compressors, coalescing filters, refrigerant air dryers, and desiccant air dryers).
- Proficiently using all handheld and power tools including but not limited to; pipe threaders, grinders, drill press, band saws, wire wheels, cutting torch, welders, torque wrench, reciprocating saw, pipe wrench, digital multimeter, common hand tools, and air monitoring equipment.
- Providing essential services to campus in all situations as needs arise 24/7/365.

Fabricates, installs, and repairs all plant and campus mechanical systems by:

- Interpreting technical drawings and blueprints, schematic diagrams and electrical drawings and communicating the meanings those who work on these systems.

- Using a proficient skill level of arc welding, TIG welding, wire feed welding, and oxyacetylene weldingtechniques.
- Complying with ASME standards for steam fitting, pipe fitting associated work on high- and low-pressure steam distribution systems both at the Steam Plant and on campus.
- Proper installation and use of high temperature insulating materials.
- Proper installation and use of high temperature refractory materials.
- Installing, maintaining, and troubleshooting high pressure hydraulic systems.
- Maintaining, repairing, and troubleshooting of all conveyor belts, augers, walking floors, bucket elevators, gearboxes, on wood and ash handling systems.

Maintaining complex hot process water softening and chemical treatment equipment by:

- Troubleshooting, repairing, and maintaining equipment associated with hot process lime softener, sodium zeolite softeners, charcoal filters, and condensate polishing systems.
- Troubleshooting, repairing, and maintaining equipment associated high pressure boiler water chemical treatment.
- Rebuilding,maintaining, and replacing chemical injection pumps, booster pumps, and recirculationpumps.

Maintaining boiler controller and automated equipment integrity by:

- Installing, maintaining, troubleshooting, and calibrating PLC, DLC, HMI, VFD, video displays, and pneumatic control systems.
- Maintaining and troubleshooting high and low voltage control systems.
- Maintaining opacity air monitoring equipment to comply with DEQ standards.
- Assisting in the maintenance, repair and troubleshooting of low-pressure package boilers located around campus.

Maintains essential supplies for steam plant and campus steam systems and contributes to a safe and effective working environment by:

- Routinely and as needed ordering inventory of emergency and non-emergency repair and maintenance parts for steam plant and campus steam systems.
- Assisting in the direction, coordination, and training of other plant personnel.
- Proper use of Lockout/Tagout principles, confined space procedures, air quality monitoring, EHS safety training, and all necessary personal protective equipment when necessary.
- Maintaining First Aid/CPR certification.
- Safely and proficiently operating heavy equipment including forklifts, 950 CAT and Hough front end loaders, CAT 226B skid steer, ash disposal truck and Kenworth semi-truck.

- Following all Safety regulations and be trained in; Working in confined spaces, lockout tag-out procedures, fall protection, wearing personal protective gear as needed and other safety related rules.
- Ensuring compliance with all safety policies, procedures, and work practices established by the McKinstry.
- Developing, approving, and/or implementing safety procedures and programs as needed.

Position – Stationary Engineer, Apprentice

Job Duties/Responsibilities

The Stationary Engineer, Apprentice position is the entry level position in the career path of Stationary Engineers. After successful completion of on the job training and technical instruction, this position could move to the next level, Stationary Engineer, Operator 1. This training is a formal, recorded process that must meet the required criteria for the advancement to Operator 1 status.

Job Duties/Responsibilities are the same as the Stationary Engineer, Operator 1.

Position – Stationary Engineer, Operator 1

Job Duties/Responsibilities

Provides a continuous, consistent, and safe supply of steam, compressed air, and chilled water supply to campus by:

- Operating, troubleshooting, and light maintenance of high-pressure wood and gas fired boilers and associated wood and ash handling equipment.
- Making decisions on changing, shutting down, or adding boilers to meet campus demands with minimal supervision.
- Assisting with rerouting steam, feed water, condensate, and compressed air systems to provide continuous service to campus and isolate appropriate systems as needed.
- Applying proper problem-solving methodology under direct supervision, during breakdowns and emergency situations and making repairs necessary to provide continuous service of steam and compressed air to campus.
- Troubleshooting and diagnosing problems related to high pressure boiler, softened water system, wood, and ash handling systems under the supervision of Stationary Engineer Operator 1's, 2's and/or District Energy Plant Managers.

- Adjusting, maintaining, and troubleshooting boiler water chemistry, condensate water chemistry, softened water chemistry, and make-up water systems.
- Performing maintenance tasks on boiler, wood handling and ash handling equipment under appropriate supervision from Stationary Engineer Operator 2's, District Energy Plant Manager, District Energy Plant Supervisor and/or District Energy Plant Systems Supervisor.
- Monitoring, recording and understanding critical temperatures, pressures, water testing results and boiler operational status. Knowledge of importance and function related to Energy Plant processes.
- Monitoring, recording, and assisting in maintenance of chilled water systems as needed.
- Switching to back up systems under direct supervision of Stationary Engineer Operator 1's, Stationary Engineer 2's and/or District Energy Plant Managers including but not limited to high pressure gas boilers, air compressors, rerouting of steam distribution, and switching feedwater and fuel feed to the boiler.
- Implementing proper Lockout/Tagout and confined space procedures, specific to the Energy Plant equipment, as directed, with minimal supervision.
- Providing leadership and supervision of temporary help personnel by having adept knowledge of all plant operations, safety procedures, water testing and treatment procedures, and plant processes to ensure consistent and continuous supply of compressed air, steam, and chilled water to campus buildings.
- Working in confined spaces, at heights, extreme temperatures, and dirty conditions.

Ensures wood-fired boiler has an adequate fuel supply and proper ash removal and disposal by:

- Monitoring, maintaining, troubleshooting, and repairing wood handling equipment, fuel flow, meteringbin, silo storage, and ash handling equipment under minimal supervision.
- Weighing and unloading fuel deliveries, inspecting material content in loads for contaminants, and drying wood samples accurately for fuel vendor compensation.
- Properly and safely operating belts, conveyors, augers, bucket elevators, and motors with knowledge of the specific equipment, manual overrides, and all electrical breaker locations for resets.
- Quickly diagnosing problems in fuel or ash handling systems.
- Troubleshooting and safely clearing plugs and breakdowns of wood and ash handling systems using proper Lockout/Tagout protocol without assistance.
- Loading and unloading fuel delivery truck at wood storage facility. Moving fuel at wood storage facility, plant, or transporting overage to storage facility with safe operations of a 950 CAT or Hough front end loader.
- Cleaning areas of accumulated dust, overage, and spillage around the wood handling system with operation of 226 B CAT skid steer.

- Performing scheduled soot blows and operating ash removal systems.

Ensure that the high-pressure wood and gas fired boilers and chilled water systems have an operational water supply by:

- Routinely testing, treating, analyzing, and troubleshooting the performance of hot process water softeners, feedwater, boiler water, charcoal filtering and sodium zeolite softening systems, and condensate water by conducting required chemical testing.
- Recording and analyzing results for proper adjustment, treatment, or repairs necessary.
- Recording and interpreting data and generating reports with a computer database system.
- Troubleshooting all feed water, condensate, hot lime softening system, chemical injection, booster pumps, and re-circulation pumps as well as associated valves and steam traps under minimal supervision.
- Adjusting and maintaining the chemical mixing tanks, injection pumps and related equipment that are necessary to insure the delivery of high-quality feedwater.
- Performing scheduled backwashes on charcoal filters, sodium zeolite softeners, and condensate polishers in accordance with SOPs.
- Regenerating sodium zeolite softeners as necessary, while conforming to SOP's to ensure optimal performance.
- Mixing and disposing of chemicals in compliance with SOS and hazardous chemical handling standards.
- Understanding chemical properties and reactions for each process that takes place in the water treatment systems.
- Making adjustments and repairs in associated equipment such as valves, pipelines, and pumps under minimal supervision.
- Performing mud drum blow downs and adjusting the continuous blow down for maximum boiler longevity and efficiency.
- Instructing and assisting with training of the water system knowledge to temporary personnel.
- Proficiently operating the various Energy Plant distribution systems and general knowledge of all pipes lines lay outs and directional flows.

Enhance a safe and effective working environment by:

- Participating in required career path, plant specific and EHS safety training pertinent to tasks of the Stationary Engineer position.
- Maintaining current Lockout/Tagout and Confined Space Entry Training.
- Knowing personal protective equipment appropriate for all working conditions and using it as needed.
- Maintaining a First Aid/CPR certification.

- Assisting the District Energy Plant Operations Supervisor in the oversight and training of temporary help personnel.
- Assisting the District Energy Plant Operations Supervisor in shift scheduling and personnelcontacting for coverage.
- Carrying out daily housekeeping functions such as snow removal, painting, mopping, sweeping, waxing,cleaning, and organizing.
- Performing in a variety of conditions including dust, humidity, extreme temperature fluctuations insideand outside and all-weather conditions.
- Following all Safety regulations and be trained in; Working in confined spaces, lockout tag-out procedures, fall protection, wearing personal protective gear as needed and other safety related rules.
- Ensuring compliance with all safety policies, procedures, and work practices established by the McKinstry.
- Developing, approving, and/or implementing safety procedures and programs as needed.

Position – Stationary Engineer, Operator 2

Job Duties/Responsibilities

This position has the same Job Duties/Responsibilities as Stationary Engineer, Operator 1 with the additional responsibility to provide leadership to the Stationary Engineer Operator 1's and Stationary Engineers, Apprentice Roles.

Position – Facilities (Steam Plant) Supervisor

Job Duties/Responsibilities

Summary - Under the direction of the Steam Plant Manager, is responsible for: all high pressure boiler operations and air compressor operations and campus steam distribution and related steam and compressed air equipment campus wide; schedules and coordinates operations to provide the campus with safe reliable and efficient steam service 24/7 365 days a year; and maintains records and prepares reports in compliance with emissions permits for the DEQ and EPA, ensuring tunnel safety and controlling tunnel access for U of I employees and contracted vendors. These responsibilities include but are not limited to: supervising 10 full time staff, ensuring safe efficient and effective power plant operations while meeting the goals and objectives of Facilities Management; maintaining, correcting and enhancing the efficiency of campus steam systems; supervising and performing work on campus steam

systems to ensure functional reliability, safety and operational readiness; supervising and performing work on power plant equipment and campus steam equipment to ensure their proper operation; supervising and performing work on water purification equipment to ensure proper operation and optimum performance; supervise and performing work on building automation control equipment for campus steam HVAC and steam absorption chilling systems; directs the snow removal call out and emergency call out and life safety dispatch for after hours, week end, and holiday emergency calls of all types; conducts scheduled training for all power plant staff as part of the career path program at the steam plant; and contributing to the U of I team effort by helping with any campus needs that arise

Ensures safe, reliable, and efficient Steam Plant operations while meeting the goals and objectives of Facilities by:

- Supervising the operation and maintenance of all-natural gas and wood fired high pressure boilers, aircompressors, water purification equipment, and associated mechanical equipment for the University.
- Scheduling and managing three shifts of steam plant operators and coordinating their work functionsand activities.
- Scheduling and facilitating the educational segments of the career path development program at thesteam plant.

Ensures safe, reliable, and efficient Steam distribution and equipment use on campus while meeting the goals and objectives of Facilities by:

- Supervising the operation and maintenance of the campus steam distribution and condensate systems and steam utility equipment for the University campus.
- Scheduling the maintenance staff and coordinating maintenance and repair activities.
- Maintaining inventory of essential equipment and parts to make any repair or replacement at any time.
- Scheduling and facilitating the career path educational segments for the maintenance staff at the steam plant.
- Controlling all access and overseeing activities in the campus tunnel system by University employees from other departments and contracted workers.

Ensures the work done to the boilers and the steam distribution system complies with ASME codes by:

- Working with Steam Plant, Facilities Trades staff and contracted project workers to communicate thestandards and requirements to satisfy the ASME and building safety codes.
- Monitor code compliance for work performed on the steam systems by any workers.

Assists the Steam Plant Manager by:

- Monitoring and reporting emissions information in accordance with regulatory requirements to the Department of Environmental Quality.
- Maintaining inventories of necessary operational supplies and consumables for the steam plant.

- Collection, keeping and reporting of pertinent production and efficiency data and hourly log information.
- Assist in purchasing wood fuel including coordinating deliveries, pricing, quality control, inventory control, safety procedures, and fire prevention.

Manages operations of the Steam Plant for safety, efficiency, and effectiveness by:

- Participating in required career path, plant specific and EHS safety training pertinent to tasks of the supervisor position.
- Maintaining current Lockout/Tagout and Confined Space Entry Training.
- Knowing personal protective equipment appropriate for all working conditions and using it as needed.
- Maintaining a First Aid/CPR certification.
- Conducting regular safety meetings and overseeing completion of required safety courses in along with compliance of other safety protocols.

Position – Chilled Water Systems Supervisor

Job Duties/Responsibilities

Summary - Under direction of the Steam Plant Manager, supervises 5 employees and safely manages, monitors, operates, records, repairs, maintains, and troubleshoots all equipment used to produce and distribute chilled water campus wide including steam and condensate repairs. Manager provides stewardship, oversight and operates the system to assure reliable chilled water is produced - meeting daily and seasonal demands, while improving energy efficiency, maintaining environmental compliance and to reduce costs and provide for public safety.
Installs, analyzes, repairs and performs preventive maintenance of chilled water system equipment, steam, condensate and controls by:

- Troubleshooting and maintaining electrical and solid-state controls circuits and mechanical control devices for chilled water production, steam, condensate, and water treatment.
- Analyzing, cleaning, repairing and performing preventive maintenance on chillers and cooling towerssystems.
- Making repairs and adjustments to associated equipment such as compressors, pumps, control systems.
- Monitoring and performing water treatment on chillers, cooling towers, steam, condensate, campus loop, and related equipment.
- Specifying and ordering parts. Responding to emergency calls.
- Work with the Steam Plant Manager to develop and refine operating priorities, SOPs, and emergency procedures for chiller water system operations,steam, and condensate.

- Monitor record and analyze costs and efficiency for the chilled water system, steam, and condensate to guide operations and set charge out rates, including steam and condensate.
- Supervises up to 5 Full Time Staff, temporary workers and contractors on chiller system projects, steam, condensate, and compressed air.

Ensures correct chilled water supply to campus by:

- Monitoring chilled water flows and delta Tin buildings and notifying HVAC of problems.
- Assisting HVAC in repairing equipment and/or working to design upgrades to cure existing problems caused by poorly designed or dysfunctional equipment.
- Organizing maintenance, operations and troubleshooting of steam and condensate systems throughout campus.
- Conduct in-house training to expand steam plant personnel's knowledge of Boilers, Chiller equipment, steam, condensate, and DOC control systems.

Manages operations of the Chilled Water System for safety, efficiency, and effectiveness by:

- Participating in required career path, plant specific and EHS safety training pertinent to tasks of the supervisor position.
- Maintaining current Lockout/Tagout and Confined Space Entry Training.
- Knowing personal protective equipment appropriate for all working conditions and using it as needed.
- Maintaining a First Aid/CPR certification.
- Conducting regular safety meetings and overseeing completion of required safety courses in along with compliance of other safety protocols.
- Training and supervising selected steam plant staff in chilled water systems to provide backup staff and develop a team attitude.
- Developing, and implementing safety procedures and programs as needed specific to chilled water operations, steam, and condensate.
- Cross train with steam plant personnel in steam and boiler operations for backup and team development.

Position – Steam Plant Manager

Job Duties/Responsibilities

Summary - Responsible for management of the complex central heating plant and steam distribution system for core campus. This plant is critical to life safety for staff and students, and to protect all buildings and research equipment from freezing. Responsible to ensure the plant operates reliably

24/7/365 during holidays, campus shutdowns, and during any emergency situations that may cause evacuation of all other campus personnel. Includes wood and gas fuel procurement. Directing staffing, training, setting standard operating procedures, and discipline for 15 plant personnel. Sets priorities, recommend capital improvement projects to keep plant up to date, and directs maintenance.
Guarantee reliable steam and chilled water for the entire UI campus on a 24/7/365 schedule by:

- Ensuring staffing always
- Directing maintenance to minimize downtime
- Providing adequate backup equipment
- Developing SOPs for foreseeable situations

Ensure staff is capable to ensure safe, reliable operations by:

- Guide, train, and empower staff to operate and maintain a central heating plant and distribution system through proper hiring, training and developing training programs, setting priorities, mentoring, and motivating.
- Discipline where appropriate following standard policies.

Contract with suppliers to provide reliable clean safe fuel for heating by:

- Ensure adequate fuel supplies for the heating plant by analyzing current markets and supplies for natural gas and wood fuel, weighing costs against risk, and contracting for suppliers to match deliveries with seasonal needs.
- Generate fuel specifications to match boiler needs without increasing costs unnecessarily.

Provide project management as needed by:

- Coordinating with AES and DPW to find funds.
- Draft the project specifications, hire Engineering firms to refine designs, and hire/ supervise the contractor.
- Supervise projects using hourly staff, other shops personnel, and contractors to accomplish work in
- the most cost-effective manner.

Coordinate with various regulators to ensure UI meets all laws and rules related to

- Obtaining air permits from Idaho DEQ and providing required records and reports to these agencies.
- Stay informed on changes to DEQ and EPA regulations, and stay current and compliant on changes to other regulating agencies and boiler inspector requests.
- Work with McKinstry insurance company, EHS, and Risk Management to stay compliant with boiler code/regulations, OSHA safety regulations, and minimize injuries.

Ensures team safety, efficiency, and effectiveness by:

- Participating in required career path, plant specific and EHS safety training pertinent to tasks of the manager position.
- Maintaining current Lockout/Tagout and Confined Space Entry Training.
- Knowing personal protective equipment appropriate for all working conditions and using it as needed.
- Maintaining a First Aid/CPR certification.
- Conducting regular safety meetings and overseeing completion of required safety courses in along with compliance of other safety protocols.

Position – Facility Systems Engineer

Job Duties/Responsibilities

Summary - Responsibilities include providing support and technical assistance to the McKinstry UES team, to include those other University of Idaho departments and units to campus mechanical, utility systems and infrastructure supported by a DistrictEnergy Plant, Electrical Distribution System and Water Systems. Other responsibilities include forecasting and planning efforts as necessary to assure adequate support of projected campus utility's needs, loads and requirements; providing technical review of capital projects; providing recommendations regarding maintenance procedures, shutdowns,equipment and system repair and replacement ; providing system investigation, fault finding, review, and recommendations; providing project management of campus and building scale infrastructure andbuilding systems capital projects ; and providing in-house design and evaluation expertise on mechanical systems and infrastructure and building systems as required. A key element is to develop economic and lifecycle cost analysis in the conservation of energy and economy of mechanical systems across campus.
Contributes to and supports the successful design, installation oversight, and ongoing operations and maintenance of building level mechanical systems, infrastructure and associated DOC and Pneumatic controls systems by:

- Providing management, oversight, and planning for campus mechanical system design, installation, and ongoing operations and maintenance.
- Providing engineering and technical analysis of troublesome mechanical systems and provide recommendations on system selection, system repair, procurement strategies and delivery strategies. Providing design sketches , drawings, specifications, and details to repair or upgrade mechanical and infrastructure systems within University buildings' providing primary support to the Director of Utilities & Engineering, District Energy Plant, Water Systems, and secondary support to AES, Trades, LES and Auxiliary Services as required.
- Assisting in the development and maintenance of the master utility and energy plan.Assisting in the evaluation and analysis of energy budgets.

- Preparing cost estimates and providing engineering cost analysis.Preparing various daily, monthly, and annual reports as required.

Contributes to the successful daily operation, maintenance, and management of the University's utilities infrastructure and distribution systems by:

- Evaluating and investigating systems to identify and quantify issues negatively affecting system operation and distribution of utilities and utility services.
- Troubleshooting and providing day-to-day oversight of operations.
- Monitoring parameters, loads, and other forces which have the potential of adversely affecting deliveryand distribution.
- Providing technical assistance, performing engineering calculations, providing recommendations regarding maintenance procedures, shutdowns, and equipment replacement.
- Assisting in the planning and management of utility shutdowns.
- Providing recommendations and assistance to mitigate potential adverse impacts of both planned and unforeseen utility shutdowns.
- Providing technical assistance, evaluation, and engineering expertise in the event of emergency and unforeseen situations and scenarios.
- Providing engineering support and assistance to the Director, Facilities Maintenance and Operations and their staff at both the campus-wide and building scale for utility and mechanical engineering issues.
- Responding to reported problems and issues.
- Pro-actively seeking, identifying, and resolving potential problems and issues.

Contributes to the successful implementation of the University's Capital Improvement Strategy by:

- Serving as a technical and engineering specialist within Utilities & Engineering for infrastructure, utility,and mechanical engineering issues.
- Supports the development of capital planning and strategies for district energy, water systems, electrical systems, mechanical, utility and infrastructure systems development, extension, expansion and renewal, providing critical technical analysis and evaluation on proposed capital strategies for the procurement,generation, and distribution of utilities.
- Provides project review and evaluation of both campus-wide and building scale engineering issues and projects.
- Serves as a technical resource and advisor to those involved in fashioning the institutional capital improvement strategy.
- Providing project management and coordination services as needed and required; prepares estimates. Developing design standards and criteria; prepares engineering technical programs; assists the construction manager in monitoring and supervising construction efforts to ensure

program design and quality criteria and parameters are maintained and provided throughout the construction process.

- Reviewing materials, submittals, change requests, etc. to ensure system and operational integrity. Prepare technical specifications as required.

Ensuring compliance with all safety policies, procedures, and work practices established by the University by:

- Participating in required career path, plant specific and EHS safety training pertinent to tasks of the manager position.
- Maintaining current Lockout/Tagout and Confined Space Entry Training.
- Knowing personal protective equipment appropriate for all working conditions and using it as needed.
- Maintaining a First Aid/CPR certification.
- Ensuring Code compliance and professional ethics within the State of Idaho embodied in building safety, occupational health and safety, water systems safety and industrial safety programs.
- Ensuring compliance with all safety policies, procedures, and work practices established by the University and district energy, electrical, water system and natural gas utilities.
- Avoiding any activity that creates or constitutes a serious hazard to themselves or others while workingfor the University.
- Immediately bringing any concern to their supervisor, or others designated by departmental/divisional procedures, if any employee believes that performing an assigned work task or activity may pose a serious risk to life or health.
- Ensuring that employees reporting to them are adequately trained, equipped, monitored, evaluated,and guided as appropriate to comply with established safety policies, standards, and procedures.
- Developing, approving, and/or implementing safety procedures and programs as needed, and annual
- Performance evaluations will reflect performance in promoting safe work practices.

11 Pre-employment Process

BACKGROUND CHECKS

All offers of employment at McKinstry are contingent upon results of a background check. Background checks will be conducted on final candidates. Additional background checks may be necessary during employment as required by project-specific contracts.

Background checks will include:

- **Social Security Verification:** validates the applicant's Social Security number, date of birth and former addresses.
- **Prior Employment Verification:** confirms applicant's prior employment.
- **Personal and Professional References:** calls may be placed to individuals listed as references by the applicant.
- **Educational Verification:** if warranted, we confirm an applicant's educational institution, including the years attended and the degree/diploma received.
- **Criminal History:** includes review of criminal convictions and probation. The following factors will be considered for applicants with a criminal history:
    - The nature of the crime and its relationship to the position.
    - The time since the conviction.
    - The number (if more than one) of convictions.
    - Whether hiring, transferring or promoting the applicant would pose an unreasonable or safety risk to the business, its employees or its customers and vendors.

The following additional background searches will be required if applicable to the position:

- **Motor Vehicle Records: provides a report on an individual's driving history in the state requested. This search typically is run when driving is an essential requirement of the position.**

Procedure

- Final candidates must complete an online background check for review by Human Resources.
- Human Resources will order the background check upon receipt of a signed Offer Letter using a third-party employment screening service. A designated HR representative will review all results.
- The HR representative will notify the Human Resources Business Partner regarding the results of the screening. In instances where red flags or incomplete information is obtained, the appropriate HR staff will assess the potential risks and liabilities related to the job's requirements and determine whether the individual should be hired. If a decision not to hire or promote a candidate is made based on the results of a background check, there may be certain additional Fair Credit Reporting Act (FCRA) requirements that will be handled by Human Resources in conjunction with the employment screening service (if applicable).
- Background check information will be maintained in a file separate from employees' personnel files for a minimum of five years.

McKinstry reserves the right to modify these background check guidelines at any time without notice.

DRUG SCREENING

Procedure

All candidates who have received a written offer of employment will be required to undergo testing for commonly abused substances in accordance with these guidelines.

Substances Covered by Drug and Alcohol Testing

Candidates will be tested for use of the following:

- Marijuana
- Cocaine
- Opiates
- Amphetamines (amphetamine and methamphetamine)
- Phencyclidine (PCP)
- Barbiturates
- Benzodiazepines
- Methadone
- Propoxyphene
- Chemical derivatives of these substances.

Testing Methods and Procedure

Upon receipt of a notice to complete a drug screen, candidates must complete required drug testing within 30 days. All testing will be conducted by a licensed independent medical laboratory, which will follow testing standards in accordance with state law. Testing will be conducted on a urine sample provided by the candidate to the testing laboratory under procedures established by the laboratory to ensure privacy of the employee, while protecting against tampering/alteration of the test results.

McKinstry will pay for the cost of the testing. The testing lab will retain samples in accordance with state law, so that a candidate may request a retest of the sample at his or her own expense if he or she disagrees with the initial test result.

Positive Test

If a candidate tests positive on an initial screening test, the test will be confirmed by the lab. On receipt of a second positive confirmation test, Human Resources will review the test results and determine if the employment offer will be formally withdrawn.

Right to Review Records

McKinstry will provide a copy of test results upon written request to candidates who test positive.

Confidentiality

All records concerning test results will be kept in confidential files that are maintained separately from McKinstry personnel files.

McKinstry reserves the right to modify these drug screening guidelines at any time without notice.

12 Training and employment development plan

Safety Training –

New Hire Safety Orientation is required to be completed prior to startign work on a jobsite for all project personnel. Within the first 30 days of employment, staff personnel are required to complete a general awareness training that will provide them with the knowledge to comply with the McKinstry Safety Program. In addition, all new employees are required to go through specific safety trainings for their job family. Training is available through the e-learning on McKinstry University or through courses taught in person. Employees are required to take safety training identified for their role.

- First Aid/CPR/AED
- OSHA 10
- Fire Response
- Site Specific

Employee Development –

McKinstry is committed to providiing opportunities and support to employees as they build a career with the company and has established proframs to foster frowth and dvelopment. Although McKinstry is committed to providing both the opportunities and the tools, employees are ultimately responsible for managing their careers.

Employee Orientation – Ensuring new hires experience a smooth transition personally and professionally into the company is very important to McKinstry. New Hires participate in comprehensive Activation and Initiation sessions to further their knowledge of McKinstry's mission, vision, and values, and are provided with an introduction to the company's systems and tools.

McKinstry University –

McKinstry University, or McKU, provides access to numerous training and development programs with topics ranging from safety to leadership, from technical to soft skills.
McKinstry University courses are broken down into five "Colleges": Business, Leadership, McKinstry Tools, Professional Development, and Technical Training. These courses provide pathway for employees to improve performance in their current role and an opportunity for personal and professional development that supports overall career growth.

13 Diversity, Equity, and Inclusion (DEI)

Our focus on diversity and inclusion at McKinstry is longstanding, and McKinstry is deeply committed to advancing equity and inclusion in our company and in the industry overall. Addressing the equity crisis is a top-line aspiration – one of only three – in our guiding 2025 plan. As part of this effort, we have developed a comprehensive five-year plan focused around advancing racial equity, strengthening inclusive jobsite culture, upskilling our people, building personal ownership, driving equity outcomes in local communities, and demonstrating durability and commitment. In December, we became a leading signatory to the Washington Employers for Racial Equity commitment to advance racial equity across Washington and beyond.

To complement and build upon our existing efforts, we have organized our efforts into three focus areas:

Inclusive culture: We will foster a culture of inclusion and belonging at McKinstry that represents the mosaic of diversity in the communities where we live and work. Our culture of inclusion will ensure that our people are treated fairly and respectfully, have equal access to opportunities and resources, are empowered to bring their full authentic selves to work each day and experience a sense of belonging within the McKinstry family. We will demonstrate authenticity and durability of this commitment to our people. This includes employee engagement, talent development and acquisition, internal culture building, goal setting and accountability and values alignment.

Industry influence: We will influence our industry, including within the trades, to diversify jobsites and the skilled labor pipeline. We will leverage our relationships with associations, clients and partners to drive meaningful and durable actions and demand that jobsites provide safe, inviting, respectful and equitable work environments for all. Our enhanced partnerships with disadvantaged businesses will help nurture an increase in diverse organizations to lead and thrive in our industry. This includes industry and trade association partnerships, union collaboration, procurement and supply chain, brand building and client engagement.

Community impact: We will make a substantial impact in our communities by more strategically aligning our community engagement and philanthropy to drive equity. We will leverage our time, talent and resources to evaluate and advance equity work within our existing community priorities of education, the environment and nurturing children. We will leverage equity as a critical lens to evaluate how and where we engage. This includes philanthropy, community service, educational outreach and community partnerships.

We must do more to achieve our dream of a fair, just and equitable society for all. As a company, we will do our part and contribute to a legacy of which we can all be proud.

14 Rates of Pay

UNIVERSITY OF IDAHO - UTILITY SYSTEM - UNCAPPED O&M

MOSCOW ID ECO DISTRICT I, LLC
McKinstry UES Team

POSITIONS	Hourly Billable Rate	Overtime Billable Rate
Facilities Director	$ 122.75	$ 184.13
Project Engineer	$ 90.46	$ 135.68
Energy Plant Manager	$ 102.60	$ 153.90
Energy Plant Supervisor	$ 81.65	$ 122.47
Energy Plant Boilermaker	$ 71.98	$ 107.98
Energy Plant Operator	$ 56.52	$ 84.78
Operator Apprentice	$ 45.22	$ 67.83
Water Systems Manager	$ 102.60	$ 153.90
Water Systems Operator	$ 56.52	$ 84.78

SUBCONTRACTORS / MATERIALS	The subcontractors will be marked up at a rate of 10% to account for the administration and management of those contracts.

NOTES:

* Rates include labor burden for items such as: FICA, FUTA, SUTA, workers comp, medical, pension, life insurance & PTO
* Rates are adjusted at the start of each year to reflect raises and cost of living.
* Rates do not include travel, subsistence, or other travel expenses.

UNIVERSITY OF IDAHO - UTILITY SYSTEM - UNCAPPED O&M

McKINSTRY CO
General Support Positions

POSITIONS	Hourly Billable Rate	Hourly Billable Rate
Purchasing Manager	$ 119.93	$ 179.89
Senior Purchasing Agent	$ 95.93	$ 143.89
Purchasing Agent	$ 68.08	$ 102.11
Safety Program Director	$ 137.46	$ 206.19
Safety Program Manager	$ 115.54	$ 173.31
Senior Admin Support	$ 109.53	$ 164.29
Admin Support	$ 92.81	$ 139.21
Senior Project Accountant / Financial Analyst	$ 136.04	$ 204.06
Project Accountant / Financial Analyst	$ 88.55	$ 132.82

McKINSTRY ESSENTION
Engineering & Design

POSITIONS	Hourly Billable Rate	Hourly Billable Rate
Director of Engineering	$ 218.98	$ 328.47
Engineering Manager	$ 175.78	$ 263.67
Senior Engineer	$ 175.78	$ 263.67
Lead Engineer	$ 138.07	$ 207.10
Project Engineer III	$ 117.20	$ 175.80
Project Engineer II	$ 98.37	$ 147.55
Project Engineer I	$ 83.55	$ 125.33
Building Performance Analyst III	$ 117.20	$ 175.80
Building Performance Analyst II	$ 98.37	$ 147.55
Building Performance Analyst I	$ 83.55	$ 125.33

15 Business Continuity Plans

Overview.

The Business Continuity Policy provides the leadership guidance for why we plan to take specific actions during times of business duress created by natural, political, or individual actions beyond the scope of normal business operations. The enterprise will maintain several business continuity "toolkits" to address the anticipated business duress event while using a common organizational structure for ease of execution. Each toolkit approach will outline the direct actions to be taken immediately by McKinstry employees located closest to the situation and those supporting actions to be taken by McKinstry leadership. Since no plan could possibly include all potential scenarios, the immediate direct actions are general in nature to ensure the wellbeing of McKinstry employees and their own personal safety. The supporting actions are grouped by expected duration and time since the causal event into three distinct phases: Initial, Intermediate and Recurring. Approximate timelines for each phase are provided however the decision-making task force will be the best judge to recognize when the team (and organization) is ready to transition to the next phase of business continuity execution. In the end, eventually the business continuity execution will intersect with the recurring business planning cycle that will assure any adjustments to business operations are incorporated as part of the annual planning cycle.

Purpose.

The purpose of the Business Continuity Policy is to provide guidance to those who are affected by a crisis event in which the need for a structured plan to return to normal operations is necessary.

Scope.

The scope of the Business Continuity Policy is to identify the task force members and their roles in an immediate crisis as well as their roles in returning the business to normal operations.

References.

NFPA 1600, Standard on Continuity, Emergency, and Crisis Management 2019

ENT Business Continuity Procedure

ENT Emergency Preparedness for Employees

ENT Emergency Preparedness for Managers

Definitions.

Contingency Plan of Action (CPoA) – is the action plan to be carried out when McKinstry leadership directs the organization to operate under a predetermined contingency plan. Each level of business leadership will have a coordinated CPoA in place and will communicate organizational status to senior leadership as outlined in the plan.

Crisis Event – is an event that places McKinstry in a position to react outside of normal operational considerations.

Crisis Management – is the series of immediate activities taken by McKinstry personnel in response to a crisis event, and the follow-on short-term activities taken by the organization to minimize the event's impact on the business, our resources, or assets. Normally, these activities occur within 24 hours of a crisis event.

Business Recovery – is the series of intermediate and recurring activities taken by the organization to assess and sustain essential business functions until normal operations can be restored. The timeframe for these activities is highly dependent on the severity and duration of the crisis event, and the impact to the organization or industry.

Business Renewal – is the series of annual planning activities that occur to account or adjust McKinstry's annual goals or objectives in response to the crisis event.

Risk Assessment – in the context of the crisis event each essential functional area will be assessed for the risk (probability and business impact) that area has on the operational health of McKinstry. In many cases there will be several overlapping concerns for a single functional area, in which case the worst or most probable concern should be used for risk assignment and reporting.

Severity Level – is the organizational risk-assessment rollup expressed on a severity scale from 1 to 5, where 1 represents normal operations and level 5 represents a highly-disrupted business environment. Use of severity levels are intended to convey the operational environment for communications, planning, execution, and training.

Responsibilities.

Task Force Leader – is the operational leader for the level of business leadership represented by the task force. The TF leader is responsible for initiating the task force, conducting the meetings, and communicating TF status, findings, and actions to senior leadership. The TF leader is responsible for ensuring the TF members are prepared, to include being trained and proficient with their responsibilities.

Facility Representative – is the TF member responsible for information regarding facility status, to include utility and structural status following a catastrophic physical event.

Operations Representative – is the TF member(s) responsible for determining the near and long-term impacts of the critical event on normal operations, information regarding their area of operations, and the employees performing them.

Safety Representative – is the TF member responsible for information regarding the overall work environment safety, medical response events or investigations into those type of events.

HR Representative – is the TF member responsible for information regarding the broader situation, actions of other organizations, and the impact on our employees.
Legal Representative – is the TF member responsible for consuming the local, state, and federal response guidance and distilling into actionable intelligence for the development of response plans.
Finance & Accounting Representative – is the TF member responsible for information regarding the broader financial picture, to include impacts on the financial markets affecting McKinstry businesses, customers, vendors, and subcontractors.
Information Technology Representative – is the TF member responsible for information regarding the health and security of McKinstry's communications infrastructure and critical software platform performance.
Communications Representative – is the TF member responsible for capturing TF meeting minutes, drafting TF communications for approval, and coordinating timing of communications release with other internal and external teams.
Supply Chain Representative – is the TF member responsible for information regarding the health of the overall supply chain, to include any short- or long-term forecasted supply chain disruptions of critical personal protective equipment, transportation of goods, or job site tools and equipment.
Additional Subject Matter Experts – are specialized TF members added to the TF to raise the general awareness of the other TF members on a subject or aspect of the crisis event. Their participation will be at the pleasure of the Task Force Leader and will be assigned specific responsibilities to best serve the TF.

Immediate Actions Policy

The immediate actions for any disruption to normal operations should follow the direction of first responders to the scene, and in their absence the senior McKinstry employee present. All employees should exercise good judgment to ensure their own personal safety while assessing their surroundings and the evolving situation around them.
The Business Operations leader will use the decision tree to activate the Business Continuity Plan. Once the Business Continuity Plan has been activated the phone tree/automated text will go out to notify all task force members to review the roles & responsibilities outline and prepare for the initial meeting of the task force.
Each task force member will be prepared to report out on their priority items. The meeting cadence will be set based on the urgency of the event and will be set by the Business Operations leader (Task Force Leader). At the end of each meeting the team will continue to work on their priority items and any other tasks assigned during the meeting. After the priority items have been resolved, the Task Force team will transition from immediate actions to business continuity.

Business Continuity Policy

Business Continuity planning will take place after the initial crisis event is under control. This strategic planning will be focused on transitioning the business back to normal functions. The Task Force will focus its efforts on incorporating the impacts of the crisis event into strategic planning for the future of the business. The Task Force will meet at a cadence that supports situational awareness, employee welfare, and tactical decision making to ensure business continuity. Operational leaders will determine the timing for transition from business recovery to business renewal and the associated strategic planning.

Revision History.

The Business Continuity Policy is a controlled document and will be updated in the future. Table 1 contains the list of changes for this document and the current revision.

Table 1. Revision History for this document

Number	Date	Incorporated Changes	Point of Contact
1.0	April 2021	Initial Release	Ron Johnson

See Section 20 for University Continuity Management Plan

16 Committee Charters

Overall list of Committees that will assist in the transformation of the University Campus Operations and general approach.

Committees

- Business Continuity Plan (BCP)
- Energy Advisory Council (EAC)
- Capital Plan
- Sustainability
- Idaho Rural Water Association (IRWA)
- Critical Incident Management Team (CIMT)
- Interagency Cooperation and Coordination

Approach

- Purpose – why are we getting together
- Goals and Objectives – what are we looking to achieve
- Committee Description – high level reason on what team members are meeting for
- Organization and Members – who needs to be on the committee, and how often do they meet, who is chairperson
- Measure of Success – how to we meet outcomes, could be subjective

Business Continuity Plan Committee Charter

Date: July 20, 2021

PURPOSE

The Business Continuity Plan (BCP) Committee drives alignment between the University of Idaho, Concessionaire and McKinstry Idaho Eco District 1(MIED1) for the continuation of UES operations during emergency events:

This plan provides the management structure, key responsibilities, emergency assignments, and general procedures to follow during and immediately after an emergency.

The BCP committee will develop a plan to address the immediate requirements for a major disaster or emergency in which normal operations are interrupted and special measures must be taken to:

- Protect and preserve human life, health and well-being
- Minimize damage to the natural environment
- Minimize loss, damage or disruption to the University's facilities, resources and operations
- Manage immediate communications and information regarding emergency response operations and campus safety
- Provide essential services and operations
- Provide and analyze information to support decision-making and action plans

GOALS AND OBJECTIVES

The key goal of the BCP Committee is to develop and implement a plan supporting continuous UES operations:

- Organization
  Link and coordinate processes, actions and the exchange of critical information into an efficient and real-time overall response so that stakeholders are informed of the emergency response process and have access to information about what is occurring at the University.

- Communications and Information
  Management serve as the central point of communications both for receipt and as transmission of urgent information and messages.

- Decision–Making
  Determine, through a clear decision-making process, the level response and the extent of emergency control and coordination that should be activated when incidents occur and conduct a business impact analysis.

- Response Operations
  Utilize the resources of McKinstry (MIED1) and the University of Idaho to implement a comprehensive and efficient emergency management response team.

- Recovery Operations
  Transition response operations to normal management and operational processes, as able. Provide documentation and information

- Training/Awareness
  Provide training of the BCP to key MIED1 operations personnel and awareness of the BCP to leadership and other employees

COMMITTEE DESCRIPTION

The University of Idaho/ McKinstry (MIED1) Business Continuity Plan Committee develops and oversees a series of goals and objectives that brings the three partners in the utility P3 Concession into alignment in plan that will ensure University of Idaho continuity of business and operations.

Intent:

- Develop goals and objectives that creates a comprehensive business continuity management plan.
- Priority of effort is the Moscow campus
- Priority of work serves to focus efforts in policy and infrastructure through communication, technology, emergency response, O&M and capital expenditures

ORGANIZATION AND MEMBERS

Membership on the committee will be determined by the committee executive, the UI P3 Liaison.

Structure of meetings:

- In-person at Facilities Service Center (if remote, leverage technology via video conference call)
- Meets semi-annually to review objectives and identify new goals.

The Committee shall consist of at least these attendees:

- Concessionaire's Representatives
    - Managing Director
    - TBD
- McKinstry Utility and Engineering Service Representative
    - Operations Director
    - Energy Plant Manager
    - Water Systems Manager
- University of Idaho Representatives
    - Director of Facilities Operations
    - P3 Liaison
    - Director of Public Safety & Security
    - Director EHS

Committee members will exhibit the following attributes:

- Commitment to success
- Strong business acumen
- Ability to lead change through demonstration and teaching
- Boldness and willingness to gather input on difficult topics
- Strong ability to communicate and articulate positions
- Helpfulness – desires to develop and lead others in improvement opportunities
- Creative – able to bring creative solutions to challenging issues
- Knowledge of the barriers and solutions
- Currently has impact and influence in the organization

MEASURES OF SUCCESS

The committee will measure the success of the initiative thru:

A plan in place that is tested and proven

APPENDIX

Energy Advisory Committee Charter

Date: July 20, 2021

PURPOSE

The Energy Advisory Committee drives energy and climate policy and provides oversight of integrated energy efficiency measures to attain carbon neutrality. The Committee also seeks to derive resiliency and preservation of natural resources through managed change and integration of climate policies serving campus infrastructure.

The committee advises University leadership on the potential to integrate and leverage resources:

- **Concession Agreement**. Provide input to prioritization of projects supporting campus public utilities, dovetailing the 5-year Capital Expense Plan with the University's ongoing 6-year Capital Investment Plan
- **Other Fund Sources**. Synchronize financial capital through grants, agreements, and appropriated funds instruments.
- **Natural Resources**. Influence best management practices in forestry and agriculture culminating in energy recovery and environmental restoration.
- **Educational Opportunities**. Engage faculty, staff, and students across all of its schools and programs in educational and research opportunities that will help influence the plan's execution and its continued evolution.
- **Higher Education and Research**. Influence broader higher education objectives serving businesses with a tailored curriculum and research

opportunities emphasizing the ever-changing energy and natural resource market.

- **Funding of Higher Education**. Engage in enterprise business opportunities ranging from yields in power generation to agricultural and forest activities to reduce the cost of higher education.

GOALS AND OBJECTIVES

The key goal of the Energy Advisory Committee is to develop and implement a Comprehensive Energy Plan supporting the Campus Long Range Development Plan, applying the following core principles:

- The University of Idaho develops and pursues energy policy, not for its own sake, but as a tool to advance economic, environmental, and social objectives.
- Our energy future is largely a product of infrastructure, both public and private.
- Recognition of the profound threat of climate change and establishment of a 10-year commitment that will put the University of Idaho on a path toward a complete shift to renewable energy to power and heat campus
- Transition to 100% renewable energy sources, not derived from fossil fuels.
- Commitment to energy conservation with specific milestones to reduce energy consumption.
- Energy system innovation provides an opportunity for Idaho to foster entrepreneurship, while also keeping more of our energy spending in-state.
- The University of Idaho and State of Idaho are well-positioned to thrive in the transition to distributed energy resources, linked and coordinated through enhanced communications.

COMMITTEE DESCRIPTION

The University of Idaho Energy Advisory Committee develops and oversees a series of goals and objectives promoting sustainable infrastructure, energy, and water conservation measures on campus supported by stewardship of physical and natural resources. The Committee develops a comprehensive energy and climate management plan supporting carbon neutrality. A signatory of two climate agreements, Talloires and the Presidents' Climate Commitment, the University of Idaho adopted a Climate Action Plan, including a goal to achieve carbon neutrality by 2030.

Critical to the success of the plan is the collaboration between Committee members in mitigating climate change through exploration of renewable technologies and in implementation of best management practices.

Intent:

- Develop goals and objectives of a comprehensive management plan serving attainable, cost effective improvements to campus infrastructure leveraging renewable technologies through the utility's concession agreement.
- Priority of effort is the Moscow campus and immediate community, leading by example to influence the broader Palouse and State of Idaho to "do what's right."
- Priority of work serves to focus efforts in policy and infrastructure through O&M, capital expenditures, and social engineering.

ORGANIZATION AND MEMBERS

Membership on the committee will be determined by the committee executive, the UI P3 Liaison.

Structure of meetings:

- In-person at Facilities Service Center (if remote, leverage technology via video conference call)
- Meets quarterly to review objectives and identify new goals.

The Committee shall consist of at least these attendees:

- Concessionaire's Representatives
    - Managing Director
    - TBD
- McKinstry Utility and Engineering Service Representative
    - Operations Director
- University of Idaho Representatives
    - Director of Facilities Operations
    - Utilities Engineer & P3 Liaison
    - Sustainability Center Director
    - AUSI Sustainability Representative (Student)
    - Faculty Member/Researcher (Climate/Energy Expertise)
- Avista Utilities Account Representative

The number of representatives should be limited to assure efficient and agile committee function. Some stakeholders might take part over focused and limited durations, depending on the topics under consideration.

Committee members will exhibit the following attributes:

- Commitment to success
- Strong business acumen
- Ability to lead change through demonstration and teaching
- Boldness and willingness to gather input on difficult topics
- Strong ability to communicate and articulate positions
- Helpfulness – desires to develop and lead others in improvement opportunities
- Creative – able to bring creative solutions to challenging issues
- Knowledge of the barriers and solutions
- Currently has impact and influence in the organization

MEASURES OF SUCCESS

The committee will measure the success of the initiative thru:

The initial Committee members will develop and adopt clear metrics to assess the success of the initiative.

APPENDIX

Operations, Maintenance, and Capital Improvements Concession Agreement Reference

Section 3.28. EAC. The Parties acknowledge the importance of documenting and discussing best practices and Prudent Industry Practices for Comparable Utility Systems to determine whether the Parties should consider modifying the Performance Standards, Key Performance Indicators or the components of the Utility Fee or should consider providing incentives to the Concessionaire to meet certain operational targets. In connection therewith, the University shall form an EAC to liaise with the Concessionaire so that the University and the Concessionaire have an open dialogue with respect to such matters. The EAC shall meet, which meetings may be held telephonically, as reasonably necessary to address issues that arise during the Term, as determined by the University.

University Capital Plan Committee Charter

Date: July 20, 2021

PURPOSE

The purpose of the Capital Plan Committee is to provide ongoing strategic direction for Capital Improvements with respect to the University of Idaho Utility System. The Committee establishes a formal process for McKinstry and the concessionaire to improve efficiency, repeatability, quality, and effective acceptance for annual Capital Improvements submitted to the university.

GOALS AND OBJECTIVES

The goals and objectives of the Capital Plan Committee are:

- Produce an annual Five-Year Capital Improvement plan for the university's review.
- Develop Capital Improvement projects to be included in Five-Year plans.
- Assess the long-term utility system goals of the university and P3 partners to ensure Five-Year plans align.
- Develop a fast track, emergency Capital Improvement process to address critical utility system failures.

COMMITTEE DESCRIPTION

The Capital Planning Committee is responsible for developing Five-Year Capital Improvement plans to be submitted to the university. They review previous plans, gather input from stakeholders, and implement strategies to improve the capital planning process.

ORGANIZATION AND STAFFING

Membership on the committee will be determined by the committee executive, the McKinstry Director for Project Development.

Structure of meetings:

- In-person at Facilities Services (if remote, leverage technology via video conference call).
- Meets monthly and when utility system failures require an additional Capital Improvement project
    - From January to June the Committee will review the previously submitted Five-Year Plan to assess potential improvements and advising and coordinating with the university.
    - From July to December the Committee will develop the next year's Five-Year Plan.
- The Committee will meet with university Representatives semiannually.

The Committee shall consist of at least these attendees:

- Concessionaire's Representatives
    - Managing Director
    - Concessionaire Project Team
- McKinstry UES Representatives
    - Director for Project Development
    - Operations Director

  - District Energy Plant Manager
  - Project Engineer
- University of Idaho Representatives (semiannually)
  - P3 Liaison
  - Director of Architecture and Engineering Services

The number of representatives should be limited to assure efficient and agile committee function. Some stakeholders might take part over focused and limited durations, depending on the topics under consideration.

Committee members will exhibit the following attributes:

- Commitment to success
- Strong business acumen
- Ability to lead change through demonstration and teaching
- Boldness and willingness to gather input on difficult topics
- Strong ability to communicate and articulate positions
- Helpfulness – desires to develop and lead others in improvement opportunities
- Creative – able to bring creative solutions to challenging issues
- Knowledge of the barriers and solutions
- Currently has impact and influence in the organization

MEASURES OF SUCCESS

The committee will measure the success of the initiative thru:

- Annual submission and acceptance of the Five-Year plan to the university
- Prioritize safety, resiliency, efficiency, and carbon reduction all Five-Year plans
- Accelerated development of Capital Improvements after critical utility failures
- Incorporate feedback from stakeholders into future plans

Sustainability Committee Charter

Date: July 20, 2021

PURPOSE

The Sustainability Committee assists the University of Idaho and P3 partners in developing data driven policies to meet the university's carbon neutrality goals. The Committee oversees the collection and reporting of sustainability metrics, maintains U of I relationships with 3rd party sustainability groups, and leverages the campus departments, colleges, and student body to promote the conservation of natural resources.

GOALS AND OBJECTIVES

The goals and objectives of the Sustainability Committee are:

- Develop and pursue university policies to advance long-term, sustainable environmental, economic, and social goals.
- Measure and track carbon emissions on campus. Produce an annual greenhouse gas inventory to track progress towards carbon neutrality.
- Participate in AASHE's Sustainability Tracking, Assessment, and Rating System (STARS) program to provide a framework for evaluating the success of sustainability measures on campus compared to similar institutions of higher education.
- Produce a Climate Action Plan which outlines the steps needed to meet the university's carbon neutrality goal of 2030.

COMMITTEE DESCRIPTION

The Sustainability Committee coordinates with the various university stakeholders to measure, track, and drive efforts in reducing carbon emissions and preserving natural resources on campus. The Committee is responsible for producing greenhouse gas inventories and developing a Climate Action Plan which assist the U of I administration and P3 partners in making well informed policy decisions.

ORGANIZATION AND MEMBERS

Membership on the committee will be determined by the committee chair, who will also serve as a member of the Energy Advisory Council.

Structure of meetings:

- In-person at Facilities Service Center (if remote, leverage technology via video conference call)
- Meets quarterly to review objectives and identify new goals.

The Committee shall consist of at least these attendees:

- McKinstry Utility and Engineering Services Representative
    - Operations Director
    - Project Engineer
- University of Idaho Representatives
    - P3 Liaison
    - Director of Facilities Operations
    - Sustainability Center Director
    - ASUI Sustainability Representative (Student)
    - Faculty Member/Researcher (Climate/Energy Expertise)

The number of representatives should be limited to assure efficient and agile committee function. Some stakeholders might take part over focused and limited durations, depending on the topics under consideration.
Committee members will exhibit the following attributes:

- Commitment to success
- Strong business acumen
- Ability to lead change through demonstration and teaching
- Boldness and willingness to gather input on difficult topics
- Strong ability to communicate and articulate positions
- Helpfulness – desires to develop and lead others in improvement opportunities
- Creative – able to bring creative solutions to challenging issues
- Knowledge of the barriers and solutions
- Currently has impact and influence in the organization

MEASURES OF SUCCESS

The committee will measure the success of the initiative thru:

- Submit a STARS report by the April 2022 deadline
- Produce a campus Greenhouse Gas Inventory annually
- Produce a Climate Action Plan for the university within the first two years

Idaho Rural Water Association (IRWA) Committee Charter

Date: July 20, 2021

PURPOSE

The Idaho Rural Water Association (IRWA) Committee assists the University of Idaho in maintaining membership with the Idaho Rural Water Association. The Committee oversees compliance, training, and communication with the IRWA to promote the safe and efficient operation of the university's domestic waters and wastewater systems.

GOALS AND OBJECTIVES

The goals and objectives of the IRWA Committee are:

- Maintain membership with the Idaho Rural Water Association. Participate and support fellow IRWA members where possible as representatives for the U of I.
- Maintain membership with American Water Works Association (AWWA) as required by IRWA.
- Maintain compliance with AWWA, State, and Federal rules and regulations to ensure safe operation of campus water systems.
- Identify necessary training for operators to maintain licenses.

COMMITTEE DESCRIPTION

The IRWA offers training for water systems operators to receive credits that are used to maintain required licenses. The Committee coordinates with the IRWA to ensure operators have access to training programs and are up to date.

ORGANIZATION AND STAFFING

Structure of meetings:

- In-person at Facilities Service Center (if remote, leverage technology via video conference call)
- Meets semi-annually to review objectives and identify new goals.

The Committee shall consist of at least these attendees:

- McKinstry Utility and Engineering Services Representative
    - Operations Director
    - Water Systems Manager
- University of Idaho Representatives
    - P3 Liaison
    - Director of Facilities Operations

The number of representatives should be limited to assure efficient and agile committee function. Some stakeholders might take part over focused and limited durations, depending on the topics under consideration.

Committee members will exhibit the following attributes:

- Commitment to success
- Ability to lead change through demonstration and teaching
- Boldness and willingness to gather input on difficult topics
- Strong ability to communicate and articulate positions
- Helpfulness – desires to develop and lead others in improvement opportunities
- Creative – able to bring creative solutions to challenging issues

- Knowledge of the barriers and solutions
- Currently has impact and influence in the organization

MEASURES OF SUCCESS

The committee will measure the success of the initiative thru:

- Continued membership with the IRWA and AWWA
- Annual review of training requirements for water systems operators
- Successful coordination with IRWA to train operators

Critical Incident Management Committee Charter

Date: July 20. 2021

PURPOSE

The purpose of the Critical Incident Management Steering Committee is to provide ongoing strategic direction for the initiative. The role of the Committee is to:

- Provide direction and cooperation between the University of Idaho's established Critical Incident Management Team (CIMT), and Moscow Idaho Eco Direct I (MIED I) during an emergency or natural and man-made disaster. The plan introduces procedural guidelines necessary to address emergency response operations regarding utility services provided by MIED I.

- Create an Emergency Response environment that will continually streamline information flow, clarify task responsibility, identifies improvement opportunities, solidifies committee description, invites membership participation and establishes measurements of success.

GOALS AND OBJECTIVES

The goals and objectives of the Critical Incident Management Executive Steering Committee are:

- Provide a more rapid response to critical incidents Impacting Utility services provided by MIED I
- Conduct continuous internal planning to minimize the risk of personal injury, property damage and loss of Quality of Life standards from critical incidents involving utility service provided by MIED I
- Cooperate with public bodies and agencies charged with disaster control
- Take necessary and prudent steps to assure continuity of utility operations and restoration of normal support as quickly as possible following an emergency or a disaster.
- Develop and implement relative response protocols and expected standards.
- Create procedures that result in clear lines of communication
- Develop incident check list used during events

Recommend committee members and their Areas of Responsibility

Improve management of public information

COMMITTEE DESCRIPTION

Include personal who;

- Have authority to direct and streamline communications
- Make time sensitive decision during critical incidents
- Have at their disposal resources to implement improvements to Critical Incident Reponses processes.

Initial meetings will be utilized to:

- Determine committee membership
- Conclude relevance of committee
- Identify obvious / hidden obstacle, ask why.
- Document meetings
- Set strategies and after-action plans. Measure and report success.
- Nominate chairperson
- Determine routine & reoccurrence of meetings
    - Requirement for event exercises (practice)

ORGANIZATION AND STAFFING

Stakeholders;

- Paul Woods
- Marc Compton
- Scott Smith
- Brian Johnson
- Todd Perry
- Samir Abd El-Fatah
-

Recommend including

- Moscow Police Representative
- Moscow EMT Representative
- Moscow Fire Chief or Representative
- Idaho State Emergency Manager
- Dean of School, University of Idaho

Membership on committee will be determined by chairperson
Committee shall report to the Chairperson
Secretary / record keeper is a non-voting member
Membership determined by position not Name

Committee members will exhibit the following attributes:

- Strong business acumen
- Ability to lead change through demonstration and teaching
- Commitment to excellence
- Boldness and willingness to gather input on difficult topics
- High EQ – ability to understand employee experiences
- Strong ability to communicate and articulate positions

- Helpfulness – desires to develop and lead others in improvement opportunities
- Creative – able to bring creative solutions to challenging issues
- Knowledge of the barriers and solutions
- Interest in the topic and its relevance to the business sustainability
- Currently has impact and influence in the organization

MEASURES OF SUCCESS

The committee will measure the success of the initiative through:

- Conduct Quarterly critical incident exercises identifying areas of improvement and/or relevance

- Organize out of scheduled exercises when requested by Chairperson

Interagency Cooperation and Coordination Committee Charter

Date: July 20, 2021

PURPOSE

The purpose of the Interagency Cooperation and Coordination Committee is to provide ongoing strategic direction and collaboration between McKinstry, SPUPI leadership, U of I Facilities, and U of I AES Departments. The role of the Committee is to:

- Communicate with University of Idaho and SPUPI leadership
- Manage process of requests for service from either party in support of an Institutional Need
- Facilitate vision & strategy setting for common goals
- Monitor execution of strategy to meet goals
- Communicate with University and McKinstry leadership regarding projects and McKinstry activities that have potential impact to University personnel and property
- Oversee communication to all relevant audiences
- Create a dialogue between committee members and beyond to generate and execute on solutions.

GOALS AND OBJECTIVES

The goals and objectives of the Interagency Cooperation and Coordination

Committee:

- Increased awareness of activities between McKinstry and University personnel
- University Facility Team cooperation
- Accommodate planned and unplanned inspections by Idaho Department of Building Safety, Department of Environmental Quality (DEQ), Idaho State Fire Marshall and University Environmental Health and Safety (EHS)
- Success stories, challenges, and barriers
- Improved turnover and advancement metrics
- Collaboration and cooperation between entities

COMMITTEE DESCRIPTION

The Sub-Operator will work collaboratively with Concessionaire, University of Idaho departments, offices, or other external entities for efficient, safe, and effective Utility System Operations.

Intent:

- Raise our awareness of the barriers and challenges to advancement
- Set strategies and action plans
- Measure and report results
- Expand on successful solutions, institutionalize

Execution:

- Providing safe access to Utility Facilities
- Disconnection of utility service, if necessary, in emergency situations
- Relaying pertinent information regarding utility services to SPUPI and University Personnel
- Attending University Facility operational meetings
- Providing a representative in the Critical Incident Management Team (CIMT) in the event of a large-scale or critical situation that involves any aspect of the Utility Facilities
- Actions deemed necessary to ensure public safety
- Service or support requests outside the established ‘Lines of Demarcation’
- Coordination of construction projects
- Supporting responses to public relations or media

ORGANIZATION AND STAFFING

- Membership on the committee will be determined by Karrie May
- The committee shall consist of at least 6 members to include Energy Plant Supervisors, Operations Director, CMMS Planner, Facilities Directors, and AES.
- The committee shall report to Karrie May or Ben Tucker
- Committee members will exhibit the following attributes:
    - Strong business acumen and communication skills
    - Ability to lead change through demonstration and teaching
    - Commitment to excellence and collaboration
    - Boldness and willingness to gather input on difficult topics
    - Helpfulness – desires to develop and lead others in improvement opportunities
    - Creative – able to bring creative solutions to challenging issues
    - Knowledge of barriers and solutions
    - Interest in topics relevant to business sustainability
    - Positive impact and influence in the organization

MEASURES OF SUCCESS

The committee will measure the success of the initiative thru:

- Increased collaborative efforts
- Transparent and cooperative communication
- Success initiating and completing projects
- Success in overcoming barriers and challenges

17 Safety and Health Policy

Summary

It is the priority of MIEDI to provide a safe and healthful working environment for all our employees, client employees, partner-vendors, and visitors in our area of operation.

In our approach to safety, we consider compliance with State and Federal regulations as our base line and strive to exceed this base by using best practices and continual review.

We believe we have a responsibility for the safety of employees, vendor-partners, customers, and site visitors to maintain a workplace free from injury and accidental damage and which creates a minimal environmental impact.

We expect all employees to participate in our safety efforts. These efforts help make MIEDI one of the best places to work.

Employees are expected to follow the safe work practices they learn about in new employee orientation and ongoing training; be watchful for the identification and reporting of hazards; and to participate in employee programs improving and promoting safety.

In turn, MIEDI is committed to providing the financial and personnel resources to safety, holding our front-line management accountable, providing training and equipment for safe job performance, and responding to employee suggestions and identification of hazards.

Achieving voluntary compliance with State and Federal regulations relating to employee health and safety can only be met through cooperation of all employees and vendor-partners on our programs. This cooperation is imperative if we are to have an effective Facility Safety Plan. This Safety Plan is available to all facility personnel. It is the responsibility of each employee to read, understand, implement, and always maintain the Safety Plan.

Purpose

This Safety Plan has been developed to serve as a guide in achieving the following:

a) The standardized coordination of safety practices with our clients and vendor-partners, who will be following established industry practices, State/Federal requirements, and OSHA standards.
b) Establish clear lines of communication, responsibility, and accountability for safety at all the facilities that we manage.
c) Elimination of personal injury and property damage, thus reducing our losses as well as those to clients, vendor-partners, and their employees.

Safety Rules

This Safety Plan includes policies for the safe operation of equipment, handling of materials, and conduct of employees. The procedures, duties, and responsibilities outlined in this program will be in effect throughout the duration of MIEDI programs at the campus.

Acts or conduct, including but not limited to the following, are prohibited, and can result in disciplinary action up to and including termination. These rules apply to the facility and its property, adjacent owner's property, and parking areas.

- Fighting, horseplay, or creating a disturbance
- The presence of alcoholic beverages, marijuana, illegal drugs, narcotics or controlled substances by employees while on duty and/or at locations under the employer's control, is prohibited and is cause for disciplinary action up to and including termination.
- Possession of firearms or other deadly weapons
- Falsification of records/reports involving claims of injury or damage
- Unauthorized building of fires
- Violation of published safety rules, misuse of safety or fire prevention equipment
- Failure to report any accidents or injury immediately to your immediate supervisor
- Running on any site is strictly prohibited except in extreme emergencies
- Wear uniform clothing suitable for the weather and your work. Torn, loose clothing, cuffs, sleeves, etc. are hazardous and could cause accidents.

- Hardhats must be worn in all required areas where indicated
- Proper eye protection must be worn when you are exposed to flying objects, dust, harmful rays, chemicals, flying particles, etc. No exceptions. All eyewear, including prescription eyewear must be ANSI Z87 rated and have side shields.
- Proper footwear must be worn on all work sites. Sturdy work boots. The wearing of sport shoes, tennis type shoes, sandals, dress shoes, and similar footwear is strictly prohibited.
- Always use gloves, aprons or other protective clothing when handling rough materials, chemicals and hot or cold objects.
- When spray painting, finish spraying, burning, exposed to large quantities of dust or to other toxic hazards, always wear a respirator. Check with the Critical Facility Manager for respirator training and fit testing.
- No work shall be performed in proximity to electrical conductors closer than ten (10) feet unless the conductors have been effectively guarded.
- Compressed gas cylinders shall be chained or secured in the upright position at all times. Cylinders shall be placed in cylinder carts whenever they are being transported to different locations on the client site.
- Always store materials in a safe manner. Tie down or support piles as necessary to prevent falling, rolling or shifting.

- Shavings, dust, scraps, oil or grease should not be allowed to accumulate. Good housekeeping is a part of the job.
- Refuse piles must be removed as soon as possible. Refuse is a safety and fire hazard.
- Immediately remove all loose materials from stairs, walkways, ramps, platforms, etc.
- Do not block aisles, traffic lanes, fire exits, gangways or stairs
- Avoid shortcuts – use ramps, stairs walkways, and ladders
- Standard guardrails must be erected around all floor openings and excavations must be barricaded
- Get help with heavy or bulky materials to avoid injury to yourself or damage to material
- Keep all tools and materials away from the edges of scaffolding, platforms, shaft openings, etc.
- Know the correct use of hand and power tools. Use the right tool for the job
- All electric power tools (unless double insulated), extension cords, and equipment shall be properly insulated and grounded. Damaged cords shall be replaced. All extension cords must have GFCI.
- Know the location and use of fire extinguishing equipment and the procedure for sounding a fire alarm

- Flammable liquids shall be used only in small amounts at the job location and in approved safety cans
- Proper guards or shields must be installed on all power tools before use. Do not use any tools without the guards in their proper working condition.
- Do not operate any power tool or equipment unless you are trained in its operation and authorized by your supervisor
- Use tools only for their designed purpose

Do not remove, deface or destroy any warning, danger sign or barricade. Do not interfere with any form of accident prevention device that is being used by other workers. Correct signage will be used to indicate the hazard or work area.

Safety Responsibilities

It is the desire of MIEDI to protect employees from accidental injury and damage to health while working for our organization. This matter must receive top priority attention from all levels.

Safety is the functional responsibility of each individual who has the right to demand safe operations. It is everyone's obligation to teach each other to work safely and to understand the rules and procedures of this manual. The facility Supervisors and each level of our organization are accountable for safe performance.

Duties and responsibilities of all personnel under MIEDI 's Safety Plan are as follows:

All Employees

- Be familiar with and comply with proper safety and health practices
- Use the required safety devices and proper personal protective safety equipment, as instructed, at all appropriate times
- Notify supervisor immediately of unsafe conditions and acts. All employees are empowered to correct unsafe conditions as necessary and to stop all unsafe acts.
- Report all accidents and near misses to supervisor immediately
- Abide by the rules and regulations of the MIEDI Safety Policies
- Abide by applicable State regulations and United States CFR 29 1926.20, employee's responsibilities
- The MIEDI Facility Manager and the Safety Manager are to be promptly notified when an OSHA/State Inspector visits the site

Facility Director

- Develop technical guidance and interim programs to identify and remove physical hazards from sites
- Formulate, recommend, and administer approved changes to the Facility Safety Plan
- Prepare and distribute to management, regular reports on the status of safety at the facility
- Advise all levels of management on matters pertaining to safety, to include establishing a “chain of command” and a network to communicate safety matters within the organization
- Maintain an adequate accident report system, personally investigating serious accidents and taking corrective action to eliminate accident causes
- Cooperate with program management personnel in the safety training of employees
- Maintain working relationship with MIEDI Safety Manager’s
- Insure there is full compliance with applicable Federal, State, and local regulations, and client requirements
- Recommend programs and activities that will develop and maintain incentives for the motivation of employees working safety
- Recommend disciplinary procedures for repeat violators of safety rules
- Review all accident reports with site lead and the injured employee

Operators, Maintenance and Water Technicians

- Is familiar with and enforces safety regulations applicable to company operations within area of responsibility
- Correct and coordinate safety activities within his/her area of responsibility, to include motivation of employees for safe work practices
- Assure that safety devices and proper individual protective equipment are used by persons under his/her supervision
- Instruct all employees within area of responsibility in job safety and health requirements and insist on compliance
- Assure that injuries are treated promptly and reported properly
- Assist in the investigation of all accidents, obtain all pertinent data, and file a complete report with the Safety Manager and site FM. Recommend corrective action
- Assure that no unsafe conditions exist in area of responsibility and report to the Facility Manager or the Safety Manager on any corrective actions needed which are beyond his/her control
- Hold daily safety briefings with employees to:
    - Discuss how to safely perform current assignments for the day
    - Discuss topics provided by Safety Manager
    - Encourage open discussion and safety suggestions from employees
- See that prompt first aid is administered to an injured employee
- Conduct safety inspections of work area, direct corrective action for unsafe conditions noted, and inform the Safety Manager of inspection results
- Maintain a valid First Aid Card
- Assure that all vendor-partners are abiding by the safety practices of the facility when on site

Apprentices, CMMS Planner Scheduler

- Is familiar with safety regulations related to his/her area of responsibility
- Direct and coordinate safety activities within area of responsibility
- Require all employees under his/her supervision to utilize the proper individual protective equipment and job safety device
- Assure that safety equipment is available and that storage locations are clearly designated
- Conduct safety inspections of work area, direct corrective action for unsafe conditions noted, and inform the Safety Manager, FM, AFM, or LFE of inspection results
- Assure that front line Supervisors are aware of and comply with requirements for safe practices and conditions to be maintained at the facility
- Review all accidents with front line supervisors. Submit full report to the Safety Manager, FM, AFM, or LFE and assure that corrective action is taken immediately to alleviate the cause.
- Require all vendor-partners and vendor-partner personnel to comply with applicable safety regulations
- Provide information and recommendations (feedback) to Safety Manager, FM, AFM, or LFE concerning safety matters

Subcontractors (vendor-partners)

Each vendor-partner is responsible for the safety of their own personnel, and will:

- Provide and execute all work so as to comply with Federal, State, and local codes as well as MIEDI Facility Safety Plan. Where conflict occurs, the most stringent shall apply.
- The vendor-partner uses the required safety devices and proper personal protective safety equipment, as instructed, at all appropriate times.
- Provide and enforce the use at all times of the personal protective equipment specified by State regulations, OSHA requirements and the Facility Safety Plan.
- Comply with procedures and practices in addition to those outlined above, which the Facility Manager may, at his/her discretion, institute to ensure safety. The AFM, LCFE, and FE may also be assigned as the designee by the FM.
- Provide supervisory investigation reports on all accidents.
- Attend site meetings addressing safety.
- Schedule daily safety briefings for all employees and maintain records of these briefings.
    - It may be possible for the vendor-partner to attend the MIEDI safety briefings.
- Take immediate action to correct unsafe practices or conditions when discovered.
- Maintain a file of Safety Data Sheets (SDS) for all hazardous materials that are brought onsite, conduct the necessary training, and provide personal protective equipment as required.
- Report to the MIEDI Facility Manager any observed unsafe conditions, or practices, of violations of job security which are not within vendor-partner's jurisdiction.
- Tools and equipment will be inspected by each vendor-partner as required by the Facility Safety Plan.
- Provide a copy of vendor's written Safety Program to the MIEDI Facility Manager
- Conduct a thorough safety indoctrination of all new hires and maintain records of same

Personal Protective Equipment

The following guidelines will be used for Personal Protective Equipment (PPE) selection and use.

PPE – 29 CFR 1910.132

Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices and protective shields and barriers, will be provided, used, and maintained in a sanitary and reliable condition. This protective equipment must be used wherever there is a reasonable possibility of worker exposure to hazards associated with processes or environment, biological, chemical and radiological agents, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

PPE must meet the following minimum requirements:

- Adequately protect against the particular hazards for which they were designed
- Be reasonably comfortable when worn under designed conditions
- Fit properly without interfering with the movements or vision of the wearer
- Be durable
- Be capable of being cleaned and/or disinfected
- Be kept clean and in good repair

Provide special protective equipment and clothing whenever these conditions capable of causing injury or impairment are present:

- Hazards of process or environment
- Biological, chemical or radiological hazards
- Mechanical irritants
- Welding, cutting or working molten metal

All PPE equipment and clothing are to be maintained in a sanitary and reliable condition.

Supervisors must provide a type of protection suitable for the work to be performed and employees must use the protection. To properly evaluate the workplace, the supervisor must perform a job hazard assessment (JHA) and select the types of PPE which will protect the employee.

Eye and Face Protection - 29 CFR 1910.133

Employees working in agricultural and laboratory research and maintenance environments, including but not limited to laboratories, greenhouses, fields, and shops will wear eye protection at **all times**.

The supervisor will ensure employees use appropriate eye or face protection when exposed to eye or face hazards from flying particles and projectiles; biologicals, chemicals, pesticides, and radiological agents; acid or caustic liquids; and hazardous dusts, gases, mists or vapors.

Eye and face protective equipment is required by OSHA where there is a reasonable probability of preventing injury. Suitable safety glasses, goggles or face shields are required where a hazard exists that could cause injury to unprotected eyes. Examples of conditions where suitable eye protection must be provided include:

- Biological, chemical or radiological hazards
- Machines
- Flying objects
- Welding, cutting or working molten metal
- Operating construction equipment such as a drill, saw, lathe, grinding wheel
- Extreme light, glare, UV or laser exposure

Suitable eye protection must comply with American National Standards Institute (ANSI) Z87.1-1989. Eye and face PPE must be distinctly marked to facilitate and document compliance.

Respiratory Protection – 29 CFR 1910.134

Respirators will be provided when required to protect the health of the employee. The supervisor will provide respirators which are applicable and suitable for the purpose intended. The supervisor will be responsible for enforcing and maintaining a respiratory protection program which will include the requirements outlined in 29 CFR 1910.134(c), ***Respiratory Protection Program.***

Respiratory protection requires constant vigilance to protect workers. Employee participation in the ***Respiratory Protection Program*** is required for both cartridge masks and dust masks. Program requirements include but are not limited to:

- Performance of hazard assessments
- Determination of airborne contaminant levels. Employee exposures to contaminates may not exceed the OSHA Permissible Exposure Levels (PEL) nor the Threshold Limit Values (TLVs) of the American Conference of Governmental Industrial Hygienists (ACGIH) [whichever limit is more stringent].
- Implementation of a written ***Respiratory Protection Program*** including training on the selection, fitting, use, maintenance, cleaning, disposal, recordkeeping, and supervision.
- Whenever respirators are used in areas with atmospheres immediately harmful to life, at least one other person with backup equipment and rescue capability must be provided.
- Performance of a physical examination to ensure employee is fit to wear respiratory protection.

Selection and use criteria for respirators, cartridges, and dust masks must meet the standards in 42 CFR 84, *Respiratory Protection*, published by the Public Health under National Institute for Occupational Safety & Health (NIOSH). Selection of respiratory PPE will be based upon hazard assessments and manufacturers' performance recommendations.

Head Protection – 29 CFR 1910.135

The supervisor will ensure that each employee wears a protective helmet or hard hat when working in any area where falling debris, low objects, or electrical conductors may create a hazard. Selection and use criteria for suitable helmets and hard hats must comply with ANSI Z89.1-1986 headwear standards.

Foot Protection – 29 CFR 1910.136

The supervisor will ensure that each employee wears foot protection when working in areas where a hazard exists that could cause injury to feet or toes due to falling or rolling objects, objects piercing the sole, and exposure to electricity. Selection and use criteria for suitable foot PPE must be based upon a hazard assessment and must comply with ANSI Z41.1-1991 foot and toe protection standards.

Electrical Protection — 29 CFR 1910.137 and Subpart S

The supervisor will ensure that each employee working in areas where an electrical hazard exists are provided and use PPE such as insulating blankets, matting, covers, line hose, gloves and sleeves made of rubber, and insulated tools. Selection and use criteria for electrical PPE must be based upon a hazard assessment and must comply with the guidelines found in OSHA 29 CFR 1910.137(a)(1).

Hand Protection — 29 CFR 1910.138

The supervisor will ensure that each employee wears hand protection when working in areas where a hazard exists that could cause injury to hands and fingers due to skin absorption of hazardous substances, severe cuts, lacerations, abrasions, punctures or burns, and temperature extremes.

Hand protection must meet the following minimum requirements:

- Adequately protect against the particular hazards for which they were designed
- Be reasonably comfortable when worn under designed conditions
- Fit properly without interfering with the movements of the wearer
- Be durable
- Be capable of being cleaned and/or disinfected and/or disposed of upon completion of intended use
- Be kept clean and in good repair

Selection and use criteria for suitable hand protection will be based upon a hazard assessment and must comply with the PPE manufacturers' performance recommendations.

Noise (Hearing Conservation Program) — 29 CFR 1910.95

The supervisor will ensure that each employee working in areas where the sound level is at, or exceeds 85 dBA, measured on the A scale of a standard sound level meter at the slow response. When employees are subjected to sound at or exceeding 85 dBA, feasible administrative or engineering controls will be utilized. If such controls fail to reduce sound level below 85 dBA, personal protective equipment will be provided and used to reduce sound levels. The supervisor will be responsible for enforcing and maintaining a hearing conservation program which will include the requirements outlined in 29 CFR 1910.95(c), Hearing Conservation Program.

Noise is a constant hazard in many daily working environments and operations. In responding to the need to protect workers, supervisors will protect their employees by:

Implementing a written Hearing Conservation Program including training for:

- Monitoring of work environments
- Notification of employee exposure levels
- Establishing the need for hearing protection
- Providing workers with baseline and subsequent annual audiograms
- Training of employees in hearing conservation and PPE selection, fitting, use, maintenance, cleaning, disposal, recordkeeping and supervision
- Record keeping of employee exposures
- Monitoring noise levels using approved meters
- Hearing protection based upon dBA

Selection and use criteria for suitable hearing protection will be based upon a hazard assessment and must comply with the PPE manufacturers' performance recommendations.

Fall Protection — 29 CFR 1926.501 – 503

The supervisor will ensure personal fall protection is provided for employees working on roofs, in trees, on ladders, man lifts, powered working platforms, cages, and other lifting devices where personnel are elevated 6 feet or more above ground level surfaces. Safety belts*, harnesses, and lines are required when there is a danger of falling. A second person to tend the lifeline is required whenever entry into a bin, tank, or other potentially dangerous area is made.

Selection and use criteria for suitable personal fall arrest systems must meet the requirements of 29 CFR 1910.28, Appendix C.

*Note: MIEDI does not allow the use of safety belts on any sites by MIEDI employees or contractors.

Fire Prevention and Response

The MIEDI Facility Manager is responsible for implementation and enforcement of the fire response program. This program is aimed at protecting life and property while minimizing losses. Fire protection activities are emphasized at all times. Procedures have been created for response should a fire occur in the facility.

Employees are not allowed to attempt to put out a fire unless they have had proper training that includes the use of fire extinguishers. Always evacuate when instructed. Do not attempt to re-enter the building until the “All Clear” is given.

Housekeeping

- Avoid accumulation of flammable rubbish and waste materials.
- Remove trash from inside buildings and away from buildings daily or whenever an accumulation of material may constitute a fire hazard. Do not, under any circumstances, use wood sawdust or shavings as an absorbent for spilled flammable liquids or petroleum lubricants.
- Burning of rubbish is prohibited.

Refueling of Equipment

- Refuel all gasoline powered equipment outside and clear of structures, with engines shut off.
- Locate gasoline equipment, such as pressure washers, so exhausts are well away from combustible material.

Heating Devices

- Use of open flame devices, sources of heat, and spark producing equipment is prohibited in areas containing flammable materials.
- Remove all empty propane, acetylene, oxygen, and butane gas cylinders from buildings, marked as empty (MT), and store and secure in an upright position in an approved area.

Welding

- The Facility Manager, AFM, LFE, or Program Manager coordinates and approves all welding operations through use of a Hot Work Permit.
- No welding or open flame devices may operate within 50 feet of any spray painting or any substance that produces flammable vapors.
- Cover all combustible materials that cannot be moved a safe distance from welding operations with approved non-combustible blankets or non-combustible rigid barriers for protection from sparks.
- Minimum of a 20 pound, B or C rated fire extinguisher must be present within 10 feet from the source being welded.
- Follow MIEDI's Hot Work Permit system requirements as outlined in the MIEDI Safety Policies.

Flammable Liquids

- Segregate all flammable liquids, chemical fuels, resins, lubricants, and solvents by labels and store in an approved location. DO NOT store non compatible materials in the same storage area.
- Keep flammable liquid containers covered at all times when not in use.
- Do not store flammable liquids in the work area, except in a quantity needed to accomplish the job.
- Dispose of flammable paint or solvent rags and any materials subject to spontaneous combustion in covered metal containers. Containers are to be emptied at the end of each day.
- Store all flammable liquids in safety cans or approved containers.

Electrical Equipment

- The use of frayed and worn extension cords is not permitted.
- The overloading of extension cords and electrical receptacles is not permitted.
- Protect temporary wiring from damage and creating a trip hazard.

Spray Painting, Flammable Resins, and Chemicals

- No spray painting or application of chemicals that give off flammable vapors is permitted within 50 feet of a possible ignition source.
- Use approved exhaust fans and blowers in areas where conditions hinder the dissipation of hazardous vapors.

Access and Egress

- Maintain access to the site at all times, day or night for fire apparatus or ambulance. Keep all storage areas clean and organized.
- Maintain exit routes for personnel at all times.

Combustible Building Materials

- Store combustible materials separate from buildings.
- Segregate storage of various materials by type with approved separation provided for non-compatible materials.

Smoking

- Smoking is not permitted inside buildings.
- Smoking is permitted only in designated areas outside of building. Smoking is not permitted where hazardous or flammable conditions exist.

First Aid & Injury Management

MIEDI and facility Security provides basic first aid and arranges for emergency transportation for employees with on-the-job injuries or illnesses.

First Aid Training, Kits and Signs

- All MIEDI employees on site must be trained in first aid/CPR/AED.
- First Aid/CPR/AED certification is good for 2 years.
- First aid kits will be kept in accordance with the requirements of the General Safety and Health Standards and located in all departments. These units will be properly maintained and stocked.
- Signs listing emergency numbers, procedures, etc., will be strategically located, such as near the first aid kit, beside the telephone, etc.

Transportation of Injured or Ill Employees

Non-Emergency

MIEDI will transport employees with non-emergency injuries to and from the medical facility.

Emergency

Call 911 and they will arrange for transportation to a medical facility as appropriate.

Injury Management

An employee who has sustained an on-the-job injury or illness may return to work if a release from the attending physician has been obtained (use "Release For Work Authorization" Form).

An employee who is restricted to specific tasks due to casts, braces, or other medical devices, such as crutches, may return to work following the case being reviewed by:

- The MIEDI Safety Manager
- The MIEDI Facility Manager
- The employee's physician

Workers compensation cases will be reviewed by the McKinstry workers compensation claims counsel.

Note: Employees will be returned to work as soon as is medically possible.

Treatment at a Non-Referred Medical Facility

Any employee who obtains outside medical treatment for an alleged on the job injury or illness must report to the MIEDI FM or AFM the injury or illness and the name of the attending physician no later than the first weekday following treatment. Failure to report this information may result in the denial of workers compensation benefits.

Medical Records Keeping

The MIEDI Facility Manger and/or Safety Manager is responsible for ensuring that the appropriate safety related reports concerning occupational injuries and illnesses are filled out, filed, and maintained.

Reports and OSHA

The following reports and records must be filled out, filed, and maintained:

- **Supervisor's Incident Report (SIR)** is to be completed for all injuries sustained by facility personnel requiring a physician's attention. A copy of the completed report is sent to the MIEDI Safety Manager.
- **OSHA 300 Log** will be maintained by the Safety Manager and not by site management.
- **MIEDI Safety Manager must report to OSHA**
    - Within 8 hours all work-related fatalities.
    - Within 24 Hours
        - Inpatient hospitalization
        - Amputations
        - Losses of an eye
- **How to report an incident**
    - Refer to Section 21 in this Manual

Accident Reporting and Investigation

Each occupational injury or illness that results in treatment by a physician must be thoroughly investigated and monitored. In addition, certain first aid cases as well as non-injury and near miss incidents with a potential for serious injury must also be investigated.

The purpose of accident investigation is to identify contributing causes so future incidents of a similar nature can be prevented. These contributing factors also have a bearing on legal liability issues. Investigations should be directed toward fact finding, not fault finding.

The investigation should begin as soon as possible after the necessary notifications (i.e. OSHA, MIEDI Safety Manager) have been accomplished. All accident investigation reports are submitted to the Facility Manager or site management and forwarded to the MIEDI Safety Manager.

Concluding the investigation

At the conclusion of a major accident investigation, a meeting is held to assure that the causes of the accident have been determined and that proper corrective actions have been initiated.

Personnel who must attend this meeting include:

- The MIEDI Facility Manager
- The vendor-partner's Safety Representative (as required for any incidents involving vendor-partner's)
- The MIEDI Safety Manager

If all the facts involved in an accident are known, it should not be difficult to determine what actions are necessary to prevent injury to other employees with similar duties or exposure to similar conditions.

Chemical Hazard Communication Program

State and Federal chemical hazard communication (HAZCOM) standards require that we provide information to our employees concerning hazardous chemicals used in the workplace to which employees may be exposed. This program addresses container labeling, Safety Data Sheets (SDS) employee training, and other information on chemicals found in this workplace. The goal of our program is to reduce the possibility of illnesses and injuries caused by exposure to chemicals. We intend to do that by providing employees with as much information as needed concerning the hazards of chemicals they come into contact with, and to present that information in a usable, readily accessible form.

All chemicals, this includes any samples, must be approved by McKinstry facility management prior to being brought on site. Approval forms may be found on the facilities SharePoint website. You can contact the Safety Manager for assistance in locating and filling out the request.

Each facility has its own HAZCOM program because of the different activities and chemicals used. For some facilities, special HAZCOM training is required before an employee may enter the facility.

The Safety Manager is responsible for reviewing the Hazard Communication Program, including the chemical inventory, at least annually, to ensure that it is up to date.

HAZARD COMMUNICATIONS

Container Labeling

Chemical manufacturers, importers, and distributors must properly label shipments of hazardous chemicals with the identity of the chemical, clearly noted hazard warnings, and the name and address of the manufacturer or other responsible party.

Facility personnel will verify that chemical containers are properly labeled at the time they are received from the manufacturer or distributor. All containers will be labeled, tagged or marked with the identity of the chemical contained therein, and will show hazard warnings appropriate for employee protection. The hazard warning must be legible, and prominently displayed. Should employees discover any unlabeled containers at the facility, they shall immediately notify their supervisor or a MIEDI Safety Manager.

Containers into which chemicals will be transferred, and which can be expected to be used by several employees or over a period longer than one shift, will be labeled to show contents and an appropriate hazard warning using the HMIS (Hazardous Material Identification System) labels. Labels that become torn, corroded, or defaced such that content and hazard information cannot be determined will be replaced. For replacement purposes, we will use pre-printed HMIS labels that provide all required information.

The higher the number for hazard rating on the HMIS label, the greater the hazard.

If and when the chemical supplier informs us of new or significant hazards, labels for these portable containers will be changed accordingly.

SDS

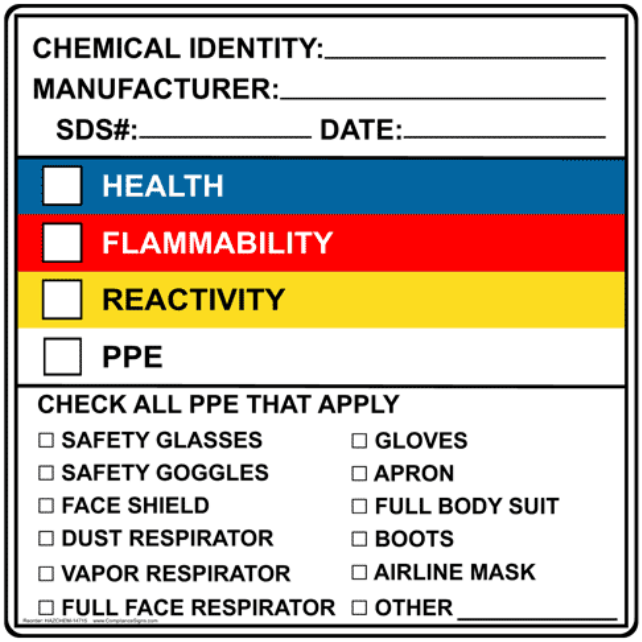
Chemical manufacturers and importers are required to develop a Safety Data Sheet (SDS) for each hazardous chemical they produce or import. The SDS contains information on the chemicals, such as physical properties, health and safety data, and first aid information.

SDS's for each chemical in use at the facility will be kept on a current basis at the location of use, the facilities office, and on the facility SharePoint site.

Employees have the right to review all SDS's on file for hazardous chemicals used at the facility.

It is our policy not to accept any chemicals, even on a trial basis, without an accompanying SDS. SDS's will be expected to either accompany the actual shipment of the chemical or be emailed in a timely fashion to the individual responsible for ensuring that SDS's are obtained for all potentially hazardous chemicals used at the facility. In the event an SDS is not received with the first shipment of a chemical, the responsible person at the facility will contact that supplier, in writing, via email to request the appropriate SDS.

Revised or updated SDS's received from our suppliers will replace the existing SDS covering that chemical and the revised SDS will be brought to the attention of our facility employees.



Safety Training

All employees will be trained in this safety program including requirements of the HAZCOM standard, the location of the hazardous chemical inventory, where to find and how to read SDS, the HMIS labeling system, and the hazards of chemicals they are likely to be exposed to. This will include how they can protect themselves.

Employees will receive training on this program at new employee orientation, upon assignment from their supervisor about specific hazards in their work area, and whenever there is a new chemical or use of a chemical.

All employees will be trained how to access the on-line MIEDI SDS program in case they should need information about a chemical being used on site.

Training and information will be provided for all employees prior to exposure to hazardous chemicals and when new chemicals are introduced to the work area. This will cover:

The existence and requirements of the OSHA Standard

Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.)

The physical and health hazards of the chemicals in the work area (this may discuss classes of chemicals, not necessarily each and every individual chemical)

Training documentation will be maintained by the Facility Manager or facility designee.

Subcontractors (vendor-partners)

Vendor-partners, which will include temporary employment service employees performing work at the facility, will have access to our Chemical Hazard Communication Program, and will be advised of the presence of hazardous chemicals to which their employees may be exposed.

All outside vendor-partners are required to follow the Chemical Hazard Communication Program for all work at the facility without exception.

Asbestos and Lead Management

All MIEDI employees and vendor-partners will participate in, and enforce the facility safety program, which will include employee training and special task controls. All potentially exposed personnel will be trained in this program and all such training will be documented.

Asbestos

- Intact and undisturbed asbestos materials do not pose a health risk. When asbestos containing material is properly managed, release of asbestos fibers into the air is prevented or minimized. Do not disturb any material that could possibly contain asbestos (insulation, floor coverings, ceiling tile, etc.) unless you are properly trained and qualified.
- If the insulation or other material is not marked or identified, you must treat it as if it contains asbestos until it is determined by a qualified person that it is asbestos free.
- Once a material has been identified as containing asbestos, it should be labeled immediately.
- Positive identification of asbestos requires laboratory analysis.
- If you suspect that a material could possibly contain asbestos, stay away until it has been properly tested by qualified personnel.

Lead Paint

- Never grind, cut, or weld on any structure that could possibly contain lead paint.
- Paint must be tested by a qualified person, prior to beginning work, to determine the existence of lead. If it is shown to contain lead, it must be properly abated by trained and qualified personnel.

Indoor Air Quality

Indoor Air Quality (IAQ) refers to the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants.

Managing indoor air quality problems, particularly transient odors, can be a significant challenge. Experience has shown that effective response to these concerns is based on a working partnership between the building occupants, who best understand the problem, and on-site staff with knowledge of mechanical systems specific to the facility. Information from all of these groups is necessary to identify and prioritize potential solutions.

Response Roles

Primary Responders

- Facilities technicians from the facility operations group who respond to building service calls
- A Certified Industrial Hygienist for health and safety evaluation of IAQ situations and to arrange for cleanup of hazardous materials spills.

The role of primary responders is to:

- Evaluate whether there is an emergency situation at the facility using an appropriate meter or tools. This testing equipment, combined with the facility engineer's knowledge and awareness of the setting and any symptoms they notice in the setting, will provide the best evaluation. An "emergency" is a situation in which there is an imminent threat to human health or property. Such a situation is managed, as described above, by calling for an emergency response.
- If the situation is not an emergency, the responder's role is to determine if any quick fixes are available to resolve the issue.
- "Quick fixes" are situations in which there is a clear source of an odor which can be quickly resolved. This resolution involves either stopping the source that is creating the odor, or contacting the person managing the source of the odor to determine how long the odor is likely to continue.
- In either case, the primary responder's responsibility is to explain what they know of the situation to the occupants so the occupants can make an informed decision as to whether to continue occupancy. If a "quick fix" is not available, and the situation is not an emergency, it will be referred to a secondary responder for follow-up within 48 hours.
- Written documentation is required for all complaints and investigations. Document the incident and follow-up with the Safety Manager and/or the Facility Manager.

Secondary Responders

- Secondary Responders provide longer term investigation of IAQ concerns. Secondary responders include:
- MIEDI site operations staff with building resources and expertise
- Safety Manager or Facility Manager to manage the investigation

Air Sampling

When the source of the odor is clear, direct reading equipment may be available at the facility that can be used to determine the airborne concentrations of certain specific chemicals. Otherwise, air sampling to determine the source of the odor or the concentration of the chemicals involved is limited in usefulness and is likely to take a week or more to produce results. On-site review of such situations by a qualified industrial hygienist is necessary to make the most effective use of any sampling done.

Air Quality Standards

MIEDI is committed to keeping chemical exposures as low as reasonably achievable. Keeping specific exposures within OSHA/State Permitted Exposure Limits (PEL) will be considered the minimum requirement for building performance. Supervisors of workers with concerns about exposures below OSHA PELs will decide how to accommodate these individuals in consultation with Risk Management staff.

Ladder Safety

Guidelines are as follows:

- No aluminum ladders are allowed at the facility.
- Inspect ladders prior to use. All defective ladders must be tagged and removed from service immediately. All ladders must be inspected by a competent person monthly and tagged with the appropriate monthly inspection tag.
- Extension ladders must have nonskid feet and be set on a solid, level surface.
- Extension ladders must be set at a proper angle of 4:1.
- Step ladders must be set on a solid, level surface, fully opened with spreaders locked in place. Do not use step ladders in a folded position.
- Secure ladders as needed to prevent the ladder from shifting. This applies to A-frame and extension ladders.
- Do not use the top two steps or rungs of a step ladder.
- All ladders must be secured by tying off or other acceptable means.
- Ladders shall be extended 36 inches above a landing.
- Do not carry tools, materials, etc., while climbing ladders. Both hands must remain free to assist in climbing.
- Always face ladder while climbing ladder and/or working from ladder.
- Job-built ladders shall not be allowed on site.

Electrical Safety Program

Electrical work shall be conducted, and electrical circuits, equipment, and components shall be installed and maintained, in accordance with the following requirements:

- 29 CFR 1910, subpart S (OSHA electrical standards for general industry).
- State electrical standards for construction.
- State Electrical Construction Code.
- State Electrical Work Safety Rules.
- National Fire Protection Association, current National Electrical Code (NEC)
- Current NFPA-70E codes and standards.

When deemed appropriate, MIEDI Safety Manager, after careful evaluation, may grant exemption in writing from special requirements or this procedure for specific electrical work on an individual basis. Justification for granting such exemptions shall be documented on the Energized Electrical Work Permit or on an attachment thereto.

Each employee shall receive electrical safety training based on his or her exposure. Only qualified persons are allowed to work on or near exposed electrical parts.

Live parts to which an employee may be exposed shall be de-energized and locked and/or tagged before work is performed on or near them. However, in certain situations, de-energizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations. In these situations, written justification for conducting work on energized electrical parts and a detailed description of the safety-related work practices to be used to protect employees shall be completed.

- Live parts that operate at less than 50 volts to ground need not be de-energized if there will be no increased exposure to electrical burns or to explosion due to electric arcs.

Examples of increased or additional hazards include the following:

- Interruption of life support equipment.
- Deactivation of emergency alarm systems.
- Shutdown of hazardous location ventilation equipment.
- Removal of illumination for an area.
- Shut down of critical communication devices.

Examples of work that may be performed on or near energized circuit parts due to equipment design or operational limitations include the following:

- Testing/troubleshooting of electric circuits that can only be performed with the circuit energized.
- Work on circuits that form an integral part of a critical continuous process that would otherwise need to be completely shut down in order to permit work on one circuit or piece of equipment.

When exposed live parts are not de-energized (for reasons of increased hazards or infeasibility), appropriate safety measures shall be documented on the "Energized Electrical Work Permit" and fully implemented to protect employees who may be exposed to the electrical hazards involved.

- Safety-related work practices shall be designed to protect employees against direct contact of energized circuit parts with any part of the body or indirect contact through some other conductive object.
- Work practices used shall be suitable for the conditions under which the work is to be performed, and for the voltage level of the exposed electric conductors or circuit parts.
- Employees working in areas where there are potential electrical hazards shall be provided with, and shall use, the appropriate electrical protective equipment for the work to be performed.

If work will be performed within 20 ft. of overhead utility or electric lines, local electrical utilities should be notified.

Workers shall take special care when handling material in the vicinity of exposed electrical circuits to prevent contact with electrical parts.

Signs, barricades and/or attendants shall be used to isolate the work area and warn others of the exposed energized electrical circuits.

Exposed non-current-carrying metal parts of fixed equipment shall be grounded except when specifically excluded by 29 CFR 1910, Subpart S.

Exposed non-current-carrying metal parts of cord-and-plug connected equipment shall be grounded. Portable power tools shall be either grounded or of a double insulated type. Double insulated tools must bear a permanent label identifying them as such.

Extension cords shall be grounded, designed for hard or extra-hard usage, and maintained in good repair. Damaged electrical cords will be cut up and disposed of.

Ground Fault Circuit Interrupter (GFCI) devices are required on all 15 and 20 amperes 120 volt temporary wiring. Extension cords are considered temporary wiring.

Cords shall be protected against damage from traffic, pinch points, and sharp corners. Examples include doorways, roadways, roof edges, etc.

Assured Grounding Program

- Employees shall be instructed that each cord set and any equipment connected by cord and plug, except cord sets and receptacles that are fixed and not exposed to damage, shall be visually inspected by the user before each use for damage and defects, such as deformed or missing pins, insulation damage and indication of possible internal damage. Equipment found to be damaged or defective may not be used until repaired.
- All 120-volt, single phase, 15- and 20-ampere receptacles, 120-volt flexible cord sets, and 120-volt equipment connected by cord and plug that are not a part of the permanent wiring of the building or structures shall be tested to assure that electrical continuity is maintained through all required equipment grounding conductors and their connectors. These tests shall be conducted as follows:
- All equipment grounding conductors shall be tested for continuity.
- Receptacles of cord sets shall be tested for correct attachment of the equipment grounding conductor. The equipment grounding conductor shall be connected to its proper terminal.
- A test log will be maintained on all equipment tested.
- All required tests shall be performed:
- Before the first use
- Before equipment is returned to service following any repairs
- Before equipment is used after any incident that can be reasonably suspected to have caused damage (e.g., when a cord set is run over)
- At intervals not to exceed once per month, except cord sets and receptacles that are fixed and not exposed to damage, which shall be tested at intervals not exceeding three months
- All receptacles, attachment caps and plugs, and receptacle of cord sets shall be tested in the following manner:
- While in service with receptacle circuit tester
- When not in service with a continuity tester
-

  NOTE: All equipment connected by cord and plug shall be tested for ground wire continuity with a volt-ohm meter or a continuity tester.
- Tests shall be documented by means of color coding. The following color coding system is suggested to verify that testing is current and that all receptacles, portable cords, and tools have been inspected and tested as required:

Color Code System	
Jan/Jun	Green
Feb/Aug	Brown
Mar/Sep	Gray
Apr/Oct	Yellow
May/Nov	Blue
Jul/Dec	Red

- All receptacles, cords, and tools shall be marked with the tape used to designate the period for which the inspections and tests were conducted. The tape will be placed on the receptacle cover of any electrical equipment installed as a permanent fixture in a temporary electrical system. The tape will be placed within 4 inches of the male end of any electrical cord set or electrical tool cord.

Energized Electrical Work (250 Volts or more)

Prior to work commencing on or near energized electrical parts of 50 volts or more (nominal voltage between any two conductors), the following activities shall be completed:

- All measures are taken to de-energize all electrical sources(s) and ensure that there is no feasible alternative of completing the work in the vicinity of energized parts.
- An Energized Electrical Work Permit is completed and approved by facility manager. Standardized permits which are developed and implemented for routine tasks are reviewed periodically and are kept on file in the respective departments.
- Employee representatives actively participate in establishing protective measures and completing the permit.
- On all energized circuits or equipment carrying 440 volts or over, as a safety measure, two (2) or more electrical trained competent persons must work together, one (1) standing by wearing rubber protective gloves (does not apply to testing and troubleshooting).
- The permit is reviewed with the worker(s) involved in the work activities.
- The completed permit is available with other pre-job safety planning documents.

PPE

Workers who perform work on or near energized parts must use appropriate Personal Protective Equipment. The use of this equipment is evaluated during pre-job safety planning phases of each job and identified on the energized electrical work permit.

- Rubber protective equipment (gloves, sleeves, blankets and mats) is to be used. If an operation on a piece of equipment will be so intricate that it is more hazardous to wear gloves, then this work may be done without gloves.
- Rubber protective equipment (gloves, mats, etc.) is maintained in a safe, reliable condition, stored and used according to the manufacturers recommendation and is not used for other than its intended purpose.
- Equipment to be used is inspected before each use to verify the item is in satisfactory condition and has been tested as required.
- Rubber gloves are inspected for holes and air tested before use.
- Workers performing work on any energized electrical equipment shall wear the appropriate arc-rated clothing based on the calculated incident energy for that equipment.
- Shock protection (rubber insulating gloves with leather protectors) shall also be required based on the Shock Hazard Analysis conducted for the voltage that is being worked on.

- Only voltage rated insulated tools or insulating protective barriers that are approved by a nationally recognized testing organization shall be used.

Electrical Test Equipment

- Only qualified personnel may use electrical test equipment.
- Electrical test equipment must be visually inspected immediately before use and is not to be used if defective. Defective test equipment is identified by tagging it out of service.
- Electrical test equipment is used only for intended applications.
- When verifying that circuits are de-energized, electrical test equipment is checked on a known energized source for proper operation immediately before and after use.
- When performing zero energy checks, assure that stored electrical or mechanical energy cannot re-energize the circuit.

Lockout/Tagout (LOTO)

All energy sources shall be isolated before employees place themselves in a position to be exposed to hazardous movement of machinery, the hazardous release of a material, or the release of energy.

All employees shall be instructed in the safety significance of the lockout and tagout procedures on each project. MIEDI/client procedures need to be reviewed prior to commencing work. MIEDI employees will be trained to follow these procedures. MIEDI Facility Manager and/or the Safety Manager are responsible for this review and determination.

All equipment shall be locked and tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy-isolating device bearing a lock and or tag. To do so shall result in severe disciplinary action up to and including immediate termination.

MIEDI facility supervision shall survey the specific work site to locate and identify all energy sources to be certain which switch, valve or other energy isolating devices apply to the equipment to be locked and tagged out. More than one energy source (electrical, mechanical and/or others) may be involved. Questionable energy source problems must be resolved before job authorization is obtained and lockout/tagout commences.

-Locks

Each facility will have lock and tag cabinets/boxes at locations in proximity to the lock and tag operations. Each control lock cabinet/box contains numbered locks and tags. Control locks are individually keyed so that the key of one lock does not open any other lock. Control locks are to be used for control of McKinstry work areas. Control lock cabinets/boxes are always to be locked. The lock and tag administrator will control the access to control lock cabinets/boxes.

MIEDI will furnish each employee with necessary lockout locks and tags unless specified differently by owner/client. Each individual's personal lockset will be keyed differently. All locks are to have only one key, and will be issued to the employee with the lock set.

-Logbook

A master log of all locks issued to employees will be kept by facility supervision. The log will show which locks (by number) are issued to which employee (by name and lead).

MIEDI supervision will use a Lock and Tag Logbook to provide a summary of information about lockouts and tagouts. Logbooks shall contain the following information as a minimum: Unique sequential number, equipment of component affected, date installed, reason for installation, person authorizing installation, date removed, person authorizing removal. Logs can be found at LOTO stations in every facility.

-Lock Out Procedure

- Notify all affected or potentially affected employees that a lockout / tagout is required to perform work and the reason, therefore.
- Notify the Facility Control/Operations Center before disconnecting power to any equipment on site. Any disconnecting of power on equipment (air handlers, pumps, chillers, cooling towers, fume hoods, supply fans, Data Center cooling and power equipment, fire panels) may send an alarm to the Control/Operations Center. Provide the Control/Operations Center with the name of the equipment, where it is located, and how long you expect the equipment to be locked out.
- If the equipment is operating, shut it down using an approved procedure.
- Operate the switch, valve, or other energy-isolating device so that each energy source (electrical, mechanical, hydraulic, etc.), is isolated from the equipment. Stored energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas steam or water pressure, etc.) shall be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.
- Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees.
- Lockout devices, where used, shall be affixed in a manner so they will hold the energy isolating devices in a “safe” or “off” position.
- Tagout devices, where used, shall be affixed in such a manner, as they will clearly indicate that the operation or movement of energy isolating devices from the “safe” or “off” position is prohibited.
- Where tagout devices are used with energy isolating devices designed with the capability of being locked, the tag attachment shall be fastened at the same point at which the lock would have been attached.
- Where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

- After ensuring that no personnel are exposed, and as a check verifying isolation of the energy sources, operate the hand switch or other normal operating controls to make certain the equipment will not operate. CAUTION: Return operating controls to neutral or “Off” position after the test.

- In the event equipment needs to be secured from being energized “protect equipment only”, use equipment control locks. The lock and tag administrator will be responsible to place the control lock and multiple lockout device on the system. Each project will have one designated

staff person responsible for placement and removal of control locks. A tag must be placed with the control lock identifying the problem, and the contact person. Control locks will be provided by MIEDI and marked designating MIEDI as owner of the lock.

- On completion of work, or shift, ensure all tools and equipment are clear. Remove all personal locks and tags and have the next shift install their lock. The control lock and lockout device is to remain on the system until such time as no more work is to be performed on the system.
- When the equipment is ready to be re-energized, notify the Control/Operations Center that work is complete on the equipment. This lets the Control/Operations Center know that any alarms or troubles that come into the system are now real and not maintenance or repair work related.
- In the preceding steps, if more than one individual is required to lockout/tagout equipment, each shall place his/her own personal lock and tag on the energy isolating device(s). In complicated lockout/tagout situations where multiple energy sources need to be locked out by multiple employees, an approved lock box may be used.

-Removing an Abandoned Lock

Before an employee's lock is removed, MIEDI's lock removal procedure will be implemented. This procedure should follow these guidelines:

- Identify the owner of the lock by checking the master list.
- Contact the employee assigned to the lock regardless of whether the employee is at work or at home. The employee is to remove the lock.
- If the employee cannot be located:
- MIEDI Facility Manager and employee's supervisor must be present. If a dedicated Safety Manager is on site, he/she must also be present.
- All three supervisors will walk the entire system to ensure that all work is complete, all clean-up is performed and that the system is safe to remove the lock. Only the employee's supervisor has the authority to remove the lock.
- The employee's supervisor is responsible to ensure that the employee whose lock was removed is notified before returning to work that their lock was removed.

-Lock Box Procedures

If multiple sources of energy are involved, or if more than one individual or department is working under the protection of a group lockout, a lock box will be used. The supervisor initiating the lockout will complete the requirements of an approved procedure specific to the piece of equipment locked out, noting the equipment is locked out and any exceptions to lockout points for that system or piece of equipment. The completed approved procedure will be attached to the lock box.

After placing keys for each piece of equipment locked out in the lock box, the supervisor initiating the lockout will place a multiple lockout device on the box and lock it with a MIEDI control lock. Each employee working in the area affected by the lock box shall attach his or her personal lock to the multiple lockout device. Personal locks are to be removed at the end of each shift and replaced with locks from the next shift.

Welding and Cutting

- Only trained, competent employees that are thoroughly knowledgeable in the elimination of hazards will be allowed to perform welding and/or cutting operations.
- Proper PPE must be worn at all times during the performance of welding and/or cutting operations. Soft-cap welding may be allowed in special circumstances only with the approval of the safety manager.
- Long sleeve shirt must be worn.
- Proper eye protection against radiant energy shall be used.
- A hot work permit must be obtained and completed prior to beginning any welding or cutting. Permits are only good for that day. A new permit is required daily for all hot work.
- Inside buildings, cylinders shall be stored in a well-protected, well-ventilated, dry location at least 20 feet from highly combustible materials, such as oil or excelsior. Cylinders should be stored in designated places away from elevators, stairs or gangways. Designated storage places shall be located where cylinders will not be knocked over or damaged by passing or falling objects or subject to tampering.
- The handling, storage, and utilization of all compressed gases in cylinders, portable tanks, rail tank cars, or motor vehicle cargo tanks shall be in accordance with Compressed Gas Association Pamphlet P-1-1965.
- A 10-pound ABC fire extinguisher shall be located within 25 feet of storage and use areas.
- “No smoking” signs must be located in the area.
- Cylinders shall not be stored within 40 feet of an occupied dwelling (e.g., office trailer).
- Proper ventilation shall be utilized.

Hot Work Permits

MIEDI facility team members and vendor-partner management teams will rigidly enforce this hot work permit rule. All employees will be trained in the program and will be expected to abide by it.

- This rule will be strictly enforced throughout the facility.
- Fire alarm systems will be placed in BYPASS to eliminate any potential of accidental building evacuation during the hot work.
- The Control/Operations Center must be notified before placing any fire alarm system into BYPASS and must be notified when placing the fire system back into NORMAL operation.
- If fire systems (alarm systems, sprinklers, fire pumps, and halon) must be disabled, a Red Tag permit must also be filled out and the Control/Operations Center notified.
- In all areas where hot work is to be carried out, a hot work permit must be completed and signed by the facility LFE, AFM, or FM.
- The permit must identify the type of work to be performed, the location of the work, a list of all hazards, the location of fire suppression equipment, and the date of the work.
- Appropriate fire suppression equipment must be readily available (within 20 feet of hot work).
- Hot work areas will be clear of all flammable and combustible materials. Where materials cannot be removed, they must be protected with fire-resistant material.
- An employee, wearing an orange vest for identification, must be designated to act as fire watch. The fire watch must remain in the work area at all times the hot work is being performed.
- Fire watch shall be present for one hour after completion of the work and 30-minute checks shall be completed for three hours after the initial one hour fire watch is completed.
- Employees involved in hot work and fire watches must be trained in the use of fire protection equipment.
- The Facility Manager or his/her designee must approve hot work inside any confined space. Confined space permit and hot work permit must be completed and signed.

Golf Cart/Utility Vehicle Policy

MIEDI and its clients provide Golf Cart/Utility Vehicles to employees so they may fulfill their job-related duties. Golf Cart/Utility Vehicles are used to transport equipment and people, patrol the facility grounds, and for facility maintenance activities. This policy establishes consistent standards regarding:

- Vehicle Operating Standards
- Department & Driver Responsibilities

- Operator Requirements & Standards
- Golf Cart/Utility Vehicle Condition and Standard Safety Features
- Accident Reporting Procedures
- Compliance with these standards will ensure the safe operation of these vehicles for the facility including Golf Cart/Utility Vehicle drivers, vehicle operators, cyclists, and pedestrians.

- Golf Cart/Utility Vehicles owned by MIEDI and its clients may only be used for official business by MIEDI employees who are associated with the facility. Golf Cart/Utility Vehicles may not be used for personal business such as unauthorized home-to-office travel, which will be considered vehicle misuse.

- Knowledge of and compliance with applicable state laws, rules, regulations, and policies are the responsibility of the driver and noncompliance may result in suspension of user privileges.

- All accidents involving a Golf Cart/Utility Vehicle will be reported immediately to the Facility Manager/Assistant Facility Manager to which the Golf Cart/Utility Vehicle is registered and to the applicable State/Municipal Department of Public Safety/Police as required by law.

Vehicle Operating Standards

- Golf Cart/Utility Vehicle operation is governed under State Revised Statutes and operators are subject to the rules of the road including stopping, turning, and safe operation. Golf Cart/Utility Vehicle operators observed in violation of these rules can be cited by the police.
- Drivers must have a valid State driver's license with a satisfactory driving record.
- Golf Cart/Utility Vehicles are to be operated at speeds no greater than 15 MPH or as safety concerns demand. Operators should always consider the terrain, weather conditions, and existing pedestrian and vehicular traffic, which may affect the ability to operate the Golf Cart/Utility Vehicle safely.
- Golf Cart/Utility Vehicle operators will stop at all "blind intersections" and then proceed with caution.
- Golf Cart/Utility Vehicles will be operated only within the confines of the facility.
- Golf Cart/Utility Vehicles are not to be driven on any landscaped area unless it is the only available way to gain access to the specific area where work is being performed. If the Golf Cart/Utility Vehicle must be on a landscaped area in order to allow a pedestrian(s) the proper right-of-way, it should be brought to a full stop, then immediately returned to the designated driving surface as soon as the area is clear.
- Golf Cart/Utility Vehicles will be operated in such a manner that they do not impede or interfere with normal pedestrian or vehicular traffic flow on sidewalks, ramps or roadways. In that respect, Golf Cart/Utility Vehicles will be operated on service drives and roadways whenever possible, rather than on sidewalks designed primarily for pedestrian use.
- Golf Cart/Utility Vehicles will be operated with the utmost courtesy, care, and consideration for the safety of pedestrians.
- Pedestrians will be given the right-of-way at all times.
- Golf Cart/Utility Vehicles will not be parked:
- in fire lanes
- in DMV disabled parking
- in reserved parking
- within 20 feet of the main entrance/exit of any building in any manner that would impede the normal flow of pedestrian traffic

Supervisor Responsibilities

- Supervisors will assure that each employee in their department, who operates a Golf Cart/Utility Vehicle, is properly advised of this policy.
- Supervisors are responsible for obtaining a signed copy of the Golf Cart/Utility Vehicle Safety Guidelines Acknowledgement form from each employee in their facility that operates a Golf Cart/Utility Vehicle, attesting to the employee's knowledge and understanding of, and agreement to abide by, the Golf Cart/Utility Vehicle policy. This signed Acknowledgement must be completed and placed in the employees personnel file prior to the employee driving a Golf Cart/Utility Vehicle.
- Supervisors should provide a minimal amount of hands on training prior to an employee driving a Golf Cart/Utility Vehicle.
- Supervisors will implement procedures for the control of Golf Cart/Utility Vehicles overseen by them. Such procedures may include the use of a "sign-out log" for keys

Employee/Operator Requirements & Standards

- No one under the age of eighteen (18) will operate a Golf Cart/Utility Vehicle.
- Golf Cart/Utility Vehicle operators are responsible for the security of ignition keys during the time that a Golf Cart/Utility Vehicle is assigned to them. Any time a Golf Cart/Utility Vehicle is unattended, the ignition will be turned off, and the key will be removed from the ignition and kept in the possession of the authorized operator.
- Golf Cart/Utility Vehicle operators are not permitted to drive while wearing devices that impede hearing, e.g., stereo headsets, earplugs, etc.
- All passengers must be in seats designed for such use. No passengers are allowed to be transported in the truck beds or on the sides of Golf Cart/Utility Vehicles with the exception of the transport of an injured person secured on a backboard.
- Cell phone usage while driving a Golf Cart/Utility Vehicle is prohibited.
- MIEDI employees will not operate Golf Cart/Utility Vehicles registered to clients unless the supervisor for the client to which the Golf Cart/Utility Vehicle is registered has granted prior approval.

Golf Cart/Utility Vehicle Condition and Standard Safety Features

- Golf Cart/Utility Vehicles owned or operated by MIEDI employees will be equipped and maintained with working headlights and taillights (two red lights, one each located on the opposite sides at the rear of the Golf Cart/Utility Vehicle that stay on during night operations).
- Golf Cart/Utility Vehicle's physical condition should appear to be new condition (no dents, dings, cracked fenders, etc.)
- Golf Cart/Utility Vehicles purchased without headlights and/or taillights are to be used only during daytime operations.
- Electric turn signals are required for nighttime operation; hand signals suffice for daytime operation.
- Golf Cart/Utility Vehicles will be equipped with a working horn or bell and a "Slow Moving Vehicle" sign, if needed.
- Golf Cart/Utility Vehicles will not be modified in any manner that affects the recommended mode of operation, speed, or safety of the Golf Cart/Utility Vehicle.

Golf Cart/Utility Vehicle Maintenance Responsibility

- Each Golf Cart/Utility Vehicle operator is responsible for providing timely notification of safety and maintenance concerns to the MIEDI supervisor of the facility to which the Golf Cart/Utility Vehicle is used.
- Supervisors will be responsible for seeing to the timely repair of such concerns and, if the Golf Cart/Utility Vehicle cannot be operated safely without said repairs taking place, the Golf Cart/Utility Vehicle will be taken "out of service" until the repairs are completed.

Gasoline/Diesel Powered Equipment

Many facilities have gasoline/diesel powered equipment and thus introduce the hazard of potential fire and dangerous fumes. All generators and equipment that must be used inside the confines of an enclosed building, and are gas or diesel fuel powered, shall have an exhaust system to exhaust fumes to the outside of the building. All personnel and vendor-partners at the facility shall abide by the following procedures and requirements.

Fire

OSHA and fire departments have regulations regarding quantity and methods of handling gasoline/diesel. The following rules will minimize the danger from fire:

- Review OSHA and local fire department requirements and comply with these standards.
- Storage of gasoline/diesel containers must comply with OSHA rules.
- Fuel transfer operations must be conducted outside of the facility.
- When drums are used for storage, drum-pumps which are designed specifically for flammable liquids must be used. Use safety bungs for the vent opening. The use of a gravity feed or bottom draw drum-pump is prohibited.
- Use only approved metal safety cans for filling engine tanks. (Automatic safety latch closer, funnel, and flash arrestor). (No plastic cans)
- Shut down engine and allow it to cool before refueling.
- Have a 20-pound ABC dry chemical type extinguisher available wherever flammable liquids are handled.
- No smoking near gasoline or any other flammable liquids.
- All drums shall be properly labeled as per OSHA 1926.59 Hazard Communication.

Fumes

Gas engines exhaust carbon dioxide and carbon monoxide. Dioxide is heavier than air, monoxide slightly lighter. A mixture of the gases usually is heavier than air although heat may cause it to rise. Both are without color, taste, or smell. Light concentrations cause headache and nausea. Death is swift in heavy concentrations. A few minutes may be too long, don't discount this hazard. If anyone exhibits symptoms, do not attempt rescue without proper personal protection equipment.

Do not run gas engines in pits, manholes, or confined spaces without positive ventilation. Always pipe gas engine exhausts to outside air when engine is located in enclosed space. Start blower before engine. If engine stops, be sure space is well ventilated before sending anyone in to restart. If in doubt, check for fumes with CO Tester.

Danger spots are deep excavations, pits, manholes, hoist engineer's shanties, pipe or crawl spaces under basement floors, and where gas heaters are used.

Hand and Power Tools

General Requirements

- All hand and power tools and similar equipment shall be maintained in a safe condition. All hand and power tools for the facility shall receive a safety inspection prior to each use.
- Belts, gears, shafts, pulleys, sprockets, spindles, drums, flywheels, chains, or other reciprocating, rotating, or moving parts of such equipment shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard.
- Switches:
- All hand-held powered sanders, grinders with wheels 20-inch or less, routers, planers, trimmers, nibblers, shears, scroll saws, and jigsaws with blade shanks one-fourth of an inch wide or less may be equipped with only a positive "on-off" control.
- All hand-held powered drills, tappers, fasteners, drivers, grinders with wheels greater than 2 inches in diameter, disc sanders, belt sanders, reciprocating saws, and other similar operating power tools shall be equipped with a momentary contact "on-off" control and may have a lock-on control if turnoff can be accomplished by a single motion of the same finger or fingers that turn it on.
- All other hand-held powered tools such as circular saws, chain saws, and percussion tools without positive accessory holding means shall be equipped with a constant pressure switch that will shut off the power when the pressure is released.

Machine Guarding

Parts of machines whose operation exposes an employee to injury shall be guarded. Hand tools for placing and removing material shall be such as to preclude the operator from placing a hand in a danger zone.

Fan Blade Guarding

A guard with openings no larger than ½ inch shall protect fans with blade periphery less than 7 feet above the floor.

Hand Tools

Impact tools, such as drift pins, wedges and chisels, shall be kept free of mushroom heads.

Power Operated Hand Tools

- All electric power operated tools shall either be of the approved double-insulated type or properly grounded and have cords free from defects.
- Use of hoses or electric cords to hoist or lower tools is not permitted.
- Pneumatic power tools shall be secured to hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.
- Safety clips shall be securely installed on pneumatic impact tools to prevent attachments from being accidentally expelled.
- Compressed air shall not be used for cleaning purposes except where reduced to less than 30 psi, and then only with effective chip guarding and personal protective equipment.
- All hoses exceeding ½ inch inside diameter shall have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.
- All fuel powered tools shall be stopped while being refueled, serviced or maintained.
- Only employees who have been trained in the operation of a particular power actuated tools shall be allowed to operate the tool.

Abrasive Wheels and Tools

- All abrasive wheels shall be provided with safety guards.
- All abrasive wheels shall be inspected, and ring tested before mounting to ensure they are free from cracks or defects.
- All abrasive wheels shall be matched with RPM's to the motor power source.
- All employees using abrasive wheels shall be protected by appropriate eye protection equipment.

Jack-Lever and Ratchet (Screw and Hydraulic)

- All jacks shall have a positive stop to prevent over travel.
- The manufacturer's rated capacity shall be legibly marked on all jacks and shall not be exceeded.

Jacks

- The base of a jack shall be on a firm foundation or be blocked. After the load is raised, it must be blocked or otherwise secured.
- Jacks must be properly maintained and thoroughly inspected dependent upon service conditions, but once each 6 months as a minimum.

Powder Actuated Tools

- Employees must be trained, competent, and certified in each powder-actuated tool that they use.
- Warning signs must be posted while powder actuated tools are in use. Hearing protection is required to be used by the operator.

Tools Emitting Laser Light Beams

- Employees must be trained, competent and certified to use tools emitting laser light beams.
- Warning signs must be posted while using tools emitting laser light beams.

Most survey and construction equipment is optical or Class I laser in nature. On occasion, it may be necessary to use laser equipment with higher power such as Class II or Class IIIa lasers. All lasers are required to be marked as to classification. This policy applies to all laser use. Prior to any laser use the supervisor will evaluate the need for personnel protective equipment, and training.

Categories of Lasers

Class I lasers are the most common and are generally exempt from most control measures. Class I laser output may be viewed directly when it is used in accordance with the manufactures guidelines and as the manufacturer intended. No warning signs, personal protective equipment or special precautions are required.

Class II lasers emit visible low powered radiation as a continuous-wave or pulsed. Class II lasers are used in barcode scanners, laser pointers, some survey, leveling and construction equipment, gun sights and others. These lasers have a low potential for harm due to the expected aversion response. There is some risk of harm if stared at or, if for some reason, the aversion response is impaired. Class II lasers potential for harm rises if viewed through magnifying devices such as field glasses, theodolites, and scopes. When using a Class II laser follow the following precautions:

- Read and familiarize yourself with the manufacturer's instructions and safety recommendations
- Position lasers so that the potential for eye exposures is minimized
- When possible, terminate beam at end of its useful path
- Whenever practical, position beam at a height other than eye level
- Block unnecessary beam reflections and remove shiny objects that my cause unexpected reflections
- Never look directly into the beam or direct it at anyone's face
- The laser should be rigidly placed to prevent accidental altering of beam

Class III and Class IIIa lasers are considered moderate hazard devices. They can emit visible or invisible radiation. Their beams are not normally hazardous when viewed momentarily with the naked eye, but when viewed through binoculars, theodolites or other such devices can be harmful to the eye. The following safety precautions should be followed:

- All the recommendations for Class II apply
- When used outdoors or in an open area in a facility, establish a hazard zone with tape and caution signs or ropes to warn of hazard

- Evaluate the need to post warning signs indicating that Class III laser work is being performed.
- Protective eye wear shall be worn by all employees, visitors, and others in the zone where the lasers are being used.

Confined Space Program

MIEDI employees and vendor-partners will comply with MIEDI's confined space permitting and entry program. All employees entering confined space must be trained by McKinstry Safety Team prior to entry.

Purpose

To comply with State and Federal regulations and to ensure that information is available about the dangers related to working in spaces having limited means of egress which may present problems due to: accumulation of toxic or flammable contaminants, oxygen deficient or excess atmospheres, or mechanical, electrical, corrosive or temperature hazards, the following CONFINED SPACE PROGRAM has been established. All affected employees of MIEDI will participate in the confined space program. This written program will be kept at the facility and will be available to all employees and to other parties in accordance with applicable laws and regulations.

Definition

A confined or enclosed space means any space having a limited means of egress, which is subject to the accumulation of toxic or flammable contaminants or has the potential for an oxygen deficient atmosphere. Confined or enclosed spaces may include, but are not limited to, storage tanks, process vessels, bins, boilers, ventilation or exhaust ducts, sewers, underground utility vaults, tunnels, and open top spaces more than four feet in depth such as pits, tubs, vaults, caissons and vessels.

Before entering any confined space, the space must be tested for percent of oxygen, percent carbon monoxide, percent hydrogen sulfide, and percent explosive gasses. The measurement will be performed with an instrument capable of checking percent concentrations. Only trained individuals can use these instruments.

Explanation of Instructions

The atmosphere must contain an oxygen concentration above 19.5% and less than 23.5%, flammable gas concentration below 10% of the lower explosive limits. OSHA permits work at concentrations of 19.5% or greater, but less than 23.5%. The further below the limit, the greater the risk of developing mental impairment, unconsciousness, and death. Generally, a person's senses are not sensitive enough to warn of an oxygen deficiency; therefore, an instrument capable of determining oxygen concentrations is used to ensure that breathable air is present in the confined space.

Normal atmosphere contains zero concentrations of flammable gas. Work is permitted at concentrations of 10% of the lower limit of explosive concentration - known as the lower explosive limit (LEL). Rarely is work performed when there is any concentration of explosive gas. Some explosive gases have an odor added to them. Propane is odorized and at flammable concentrations the odor is highly noxious. An instrument is a better indicator of concentration than a person's nose, so an instrument is required to measure the percent of LEL before entering into a confined space.

The MIEDI Facility Manager, or designee, is to confirm that the proper steps have been taken and that safeguards have been tailored for the unique hazards present in each operation involving the confined space.

The entry supervisor is responsible for the direct work of his or her teammates. This includes working in a safe manner. The entry supervisor must realize the limitations of the instruction to cover all confined space entries and should accordingly review each entry situation, noting peculiarities that are not covered and take whatever steps are necessary to provide a safe work area.

(*Staff and contract employees are subject to these instructions*)

Methods of Compliance

Evaluation: Conditions within the confined space will be tested to determine if acceptable entry conditions exist before entry is authorized. Pre-entry testing is required. Whenever an employee is within a confined space, continuous monitoring will be required at all times. If there are any questions regarding the confined space, they should be directed to the MIEDI Safety Manager.

- All equipment must be calibrated and operated according to the equipment manufacturer's instructions. The operator of any test equipment will be trained to know the equipment's limitations as well as how to properly calibrate and operate the equipment. The entry supervisor

will conduct evaluation of the atmosphere within the confined space. Each authorized entrant shall be provided the opportunity to observe all monitoring and testing.

- The evaluation shall be made immediately prior to entry
- Each entry will include the following testing, which must be conducted in the order listed:
    - Test for % oxygen
    - Test flammable gases and vapors (% LEL)
    - Test for toxic gases and vapors

Confined Space Management Procedures:

Once it has been determined that a confined space exists, the Entry Supervisor shall pre-plan before allowing entry to the confined space. The plan will specify the management procedures to be followed depending upon the site and task conditions. These may include provisions for the following:

- The task to be conducted within the confined space
- Personnel involved and responsibilities
- Possible hazards within the space include information on atmospheric hazards, hazardous energies, and the possibility of engulfment and the risks of falling. Review the Confined Space Assessment form for specific information on the space to be entered.
- Requirements for making the space safe include, isolation, ventilation, atmospheric monitoring, guarding, and fall protection
- Equipment needed to enter may include personal protective equipment (PPE) suited to the hazards (encapsulation suits, respirators, gloves, etc.) personal monitors, ventilation equipment, rescue equipment, radios, spark-proof tools, and lights.
- Communications between the entrant and the observer.
- Emergency Operating Procedure (EOP) to be available at site of confined space to be followed if needed.

Work Practice Controls for Confined Space Entry:

Below are the basic steps to be followed in confined space entry. The specific requirements for each confined space entry will depend upon the facility and task conditions. The facility-specific confined space plan will specify the methods for all phases of the project and will specify who is responsible to:

- Train employees

- Initiate the confined space entry permit and ensure that the appropriate items listed below are noted on the permit
- Isolate external hazards associated with the confined space
- Conduct the required atmospheric testing and proceed only if conditions are safe
- Ensure that the initial cleaning and vapor freeing (ventilation) has been done
- Ensure that the proper isolation has been accomplished.
- Ensure that continuous ventilation is in place and the appropriate air monitoring equipment is on hand and working correctly.
- Assemble all required tools and equipment (emergency lighting, fire extinguisher).
- Assure availability of a safety harness, lifeline and retrieval system if the possibility of a highly toxic, flammable or oxygen deficient atmosphere exists or can develop. No employee will enter the space if this possibility is anything other than very rare.
- Place an attendant outside the confined space with the capability of maintaining communication with the entrant.
- Wear all required personal protective equipment
- Grant entry approval
- Contact the facility Control Center and notify them of a confined space entry in progress, the number, and location of the confined space, and who will be entering the space.
- Enter the confined space.
- Oversee that all work within the confined space is conducted in an alert, cautious manner, always looking for signs of danger
- Evacuate the space if there is any indication of ill effects such as dizziness, irritation or excessive odor. If there is anything that does not appear right, the space must be evacuated immediately.
- Contact the facility Control Center when work is complete, and the confined space entry is terminated.

Isolation:

Conditions or actions outside of the confined space can create hazards with the space, creating a need for isolating the confined space as a way of protecting the entrants from these remotely caused hazards. For example:

- Lockout and tagout of electrical energy
- Lockout and tagout of mechanical energy
- Blocking the source of liquids and gases (fuel, water, chemicals, steam, etc.)

- Barriers to keep people and items from accidentally entering the space

Lockout/Tagout procedures will be strictly followed. Many times, entry into a confined space will require the lockout/tagout of one or more energy sources. If required, lockout/tagout procedures will be included as part of the facility-specific confined space plan and MOP for the work to be accomplished. A single valve cannot be used to block out liquids and gases. This type of blockage requires a blank flange (blind flange), double block and bleed, parting flanges or some other fail-safe method of blocking the materials. Whenever possible, the isolation methods will be visually observed, tested and noted on the permit and MOP.

Ventilation:

- Prior to entry, mechanical ventilation will be used to purge the confined space of any hazardous atmosphere and testing shall be conducted following the purging.
- The time required to purge the space will depend on the volume of the confined space and the capacity of the blower.
- Continuous ventilation shall be used to maintain safe conditions whenever an employee is in a confined space (e.g., <10% of LEL,>19.5% oxygen and below all PEL's).
- Care must be taken with the placement of ventilation equipment to avoid problems and maximize its effectiveness.
- Equipment should be set up such that it blows air into the space instead of exhausting air from the chamber.
- The number of bends in the ducting needs to be kept to a minimum.
- The air should enter the space in the vicinity of where the workers will be in the space.
- The air discharge must be well into the space (not right at the opening) and not close to the ceiling.
- The source of the ventilation air needs to be evaluated to ensure it does not include contaminants such as engine exhaust.
- Each confined space will be different and the optimum location for the ventilation discharge will be determined in pre-planning and MOP authoring.

Use the following calculation for determining the minimum required CFM:

# of Air Changes per Hour (ACH) required x cubic feet of the space (LxWxH) / 60 minutes = minimum CFM delivery rate

Example:

4 ACH x 512 (8L x 8W x 8H) standard utility vault / 60 minutes = 34.13 CFM (minimum blower delivery requirements)

NOTE: Must take into account the number of bends in the duct as that will result in air flow loss. Most new blowers have the data printed right on the blower. Also need to take into consideration space configuration and air contaminants/hazardous materials.

Permit:

Prior to entry into the space, a Confined Space Entry Permit will be completed for each confined space entry. The permit must be signed by the entrant(s) and entry supervisor. If the confined space conditions remain the same, the permit may be valid for up to eight hours. No permit will be issued for more than one work shift or eight hours, whichever is shorter. The completed permit must be made available to authorized entrants via posting at the entry portal or other effective means. The MIEDI Confined Space Entry Permit, must be used.

Attendant:

- A confined space entry attendant (observer) is required for each entry. The attendant must have confined space training and experience and shall:

- Monitor and protect the confined space entrant(s) (this is the primary duty of the attendant).
- Have sufficient knowledge of the hazards of the specific confined space being entered. This includes knowing the potential hazards, the signs and symptoms of hazard exposure, and the appropriate emergency procedures to be followed.
- Communicate with the entrant(s) as necessary to monitor their status and alert the entrant(s) of the need to evacuate the space.
- Summon rescue and other emergency services as soon as the attendant determines that the entrant(s) may need assistance.
- Remain outside the confined space and perform no other duties that might interfere with the attendant's primary duty and focus. The attendant will remain in place until relieved by another qualified person or until the entrant(s) exit the confined space.

Rescue:

Pre-entry planning must include the development and implementation of procedures for summoning rescue and emergency services. This must be addressed in the MOP.

Record Keeping:

Upon completion of all work in the confined space, the Facility Manager, Facility Control Center, or other designee must be notified. The space is then sealed and posted with confined space signage. All permits and documentation must be kept on file for a minimum of one year.

Battery Safety

Policy

MIEDI has developed this safety program to ensure employees are protected when working in battery rooms, or with batteries.

Responsibilities

- Management shall provide the funding necessary to support this policy.
- The Facility Safety Manager, Facility Manager, Lead, or other designee will manage this program.
- Leads shall ensure the safe work practices identified below are implemented by their employees.
- Employees are required to know and use these procedures.

Background

Lead-acid batteries are physically large batteries that contain lead plates in a solution of acid to create electricity. They are a common power source for many applications, mostly cars, boats, standby power generators, and UPSs. Nationally, 2300 people are injured each year using lead acid batteries. Acid burns to the face and eyes comprise about 50% of these injuries as these batteries can easily explode. The remaining injuries were mostly due to lifting or dropping batteries as they are quite heavy.

(NOTE) A battery cannot be turned off. There is always potential across the posts of a battery, regardless of any controls.

(NOTE) Batteries can cause thermal burns when current passes through your body and chemical burns if you are exposed to the acid.

Definitions

Cell - The basic electrochemical unit consisting of an anode and a cathode. The nominal voltage of a lead acid cell is 2.0 volts and a nickel cadmium cell is 1.2-volts. The starting battery in your car or truck is a six-cell battery and your flashlight may require two D cells.

Jar - The container which holds a cell or group of cells. Typical jars will have one, two, three, four or six cells.

Battery - Two or more cells connected together electrically. The cells may be connected in series, parallel or both to provide the required operating voltage and current. A typical UPS system will have one or more 240-cell batteries. The nominal voltage of this battery is 480 VDC.

Flooded Cell - A cell design characterized by an excess of free electrolyte. The products of electrolysis (gasses) and evaporation can freely exit the cell through a vent. Flooded cells typically have clear jars and the electrolyte is a liquid similar in appearance to water.

Valve-regulated, Sealed Lead Acid Cell (VRLA) - A cell that is sealed and fitted with a vent, which opens to release excess pressure as required.

Standard Precautions

- Always store or recharge batteries in a well-ventilated area away from sparks or open flames
- Damaged lead acid batteries shall be kept in properly labeled acid-resistant secondary containment structures.
- Use only chargers that are designed for the battery being charged.
- Always keep lead acid battery vent caps securely in place.
- Do not store lead acid batteries in hot locations or in direct sunlight.
- Use nonmetallic containers and funnels.
- If acid gets into your eyes, flush immediately with water for 15 minutes, and then promptly seek medical attention.
- If acid gets on your skin, rinse the affected area immediately with large amounts of water. Seek medical attention if the chemical burns appears to be a second degree or greater.
- Never over charge a lead acid battery and *only* replenish fluid with distilled water.
- Emergency wash stations shall be located near lead-acid battery storage and charging areas.
- Prevent open flames, sparks or electric arcs in charging areas.
- Lead-acid storage and charging areas should be posted with "Flammable - No Smoking" signs.
- Neutralize spilled or splashed sulfuric acid solution with a baking soda solution, and rinse the spill area with clean water.

- Procedures – New Batteries
- Never perform work in a battery room or on a battery alone.
- Follow the facility check-in/checkout procedures for working in battery rooms.
- Before working on any battery or in a battery room, identify the location of safety showers and eye wash stations.
- Locate neutralizing agents (baking soda) and a spill containment kit and review its use.
- Ensure you have an open exit route at all times. Do not allow yourself to be trapped with no escape route.
- Wash your hands after working on a battery. Avoid wiping your eyes, nose or mouth with your hands while working on a battery.
- Do not smoke or have open flame in or near a battery room or around jars. Most jars that you may work around vent hydrogen gas.
- Verify the operation of the exhaust fan(s) in the battery room. These fans are designed to prevent the buildup of hydrogen gas, which is an explosion hazard.

- Wear the PPE required for the task at hand. This may include gloves, aprons, and face shields. *Safety glasses are always required*.
- Use insulated tools. Cells have high fault currents. A single 2-volt cell may supply over 5000 amps when the positive and negative posts are shorted together. The generated heat is more than enough to melt metal and cause burns.
- Use insulated blankets or other materials to shield the battery connections should you have to perform work over the battery.
- Method of Procedure (MOP) – Servicing Batteries
- Keep metal tools and jewelry away from the battery.
- Inspect for defective cables, loose connections, corroded cable connectors or battery terminals, cracked cases or covers, loose hold-down clamps, and deformed or loosed terminal posts.
- Replace worn or unserviceable parts.
- Check the state of charge of non-sealed and sealed batteries with an accurate digital voltmeter while electrically powered equipment is turned off (MOP must be used). Also check the electrolyte levels and specific gravity in each cell of non-sealed batteries (MOP must be used).
- When checking the electrolyte liquid levels of the batteries, use a rated flashlight that is intrinsically safe. In the event one is not available, use a plastic/nonmetallic flashlight, turn on the flashlight prior to getting near the battery when checking cell levels and turn off the flash light when you are away from the batteries.
- Follow the battery manufacturer's recommendations about when to recharge or replace batteries.
- Tighten cable clamp nuts with the proper size wrench. Avoid subjecting battery terminals to excessive twisting forces.
- Use a cable puller to remove a cable clamp from the battery terminal.
- Remove corrosion on the terminal posts, hold-down tray and hold-down parts.
- Use a tapered brush to clean battery terminals and the cable clamps.
- Wash and clean the battery, battery terminals, and case or tray with water. The corrosive acid can be neutralized by brushing on some baking soda (sodium bicarbonate) solution. If the solution does not bubble, the acid is probably neutralized. Rinse the battery with water to remove the baking soda solution.
- To prevent shocks, never touch or come in contact with both terminals at the same time. If baking soda solution is applied with a cloth, remember that these solutions can conduct electricity.
- When battery cables are removed, ensure that they are clearly marked "positive" and "negative" so that they are reconnected with the correct polarity.

- Use a battery carrier to lift a battery, or place hands at opposite corners. Remember, batteries can weigh 30 to 60 pounds, so practice safe lifting and carrying procedures to prevent back injuries.
- Use self-leveling filler that automatically fills the battery to a predetermined level. Never fill battery cells above the level indicator.
- Do not squeeze the syringe so hard that the water splashes acid from the cell opening.
- Insulated tools shall be used when working on battery connections and shock protection (rubber insulating gloves with leather protectors) shall be worn when using insulated tools.
- (ALL WORK ON BATTERIES REQUIRES AN APPROVED MOP)

Safety Inspections

MIEDI has a policy and procedure for conducting inspections of the safety conditions at the facility. The purpose of such inspections is to improve safety conditions and practices.

(NOTE) Any Safety concerns/issues identified during daily rounds shall be documented and addressed.

(NOTE) Annual safety audits shall be conducted per the established schedule by the facility Safety POC.

Safety inspections generally uncover conditions that can cause injuries and/or fires. The following are suggestions that should be used in making an inspection in the facility.

- Conduct annual safety inspections of the facility, using the Safety Audit Form.

- Where unsafe conditions are found:
- Initiate action to correct the condition.
- Place warning signs and guarding to keep employees away from unsafe areas. In addition, warn employees verbally.
- Notify the Facility Safety Manager, Facility Manager, or Lead if you cannot correct the hazard.

- When an employee is noted performing unsafe practices:
- Tell him/her of the unsafe act.

- Explain why the act is unsafe.
- Describe and show the correct, safe action.
- Re-check employee's performance at a later time to assure that safe practices are being followed.
- Make all corrections in a firm, but friendly manner. Let the employee know that you are interested in them and their safety.

Incident Reporting

All incidents shall be reported to your immediate supervisor.

All incidents shall be reported as soon as practicable to the MIEDI Incident Reporting Hotline:

1-866-772-3108

Occupational Safety and Health Act:

It is MIEDI's policy to achieve compliance with the Safety and Health Act (OSHA) of 1970 (29 CFR 1926, 1910).

Facility personnel are to become familiar with the requirements of this act, and work diligently to meet the stated objective.

As additions, deletions, or other changes relating to this legislation are made, the facility MIEDI's employees will be advised of such changes by the Safety Manager, or facility POC, and institute action as necessary.

Occupational Safety and Health Standards:

Pursuant to authority provided under the Occupational Safety and Health Act, MINIMUM health and safety standards have been developed (29 CFR Part 1926.1910).

The above-referenced Standards have been adopted by MIEDI and every effort to achieve compliance will be made. If and when conditions or practices in violation of these standards are discovered, corrective action will be initiated as soon as possible.

Occupational Safety & Health Compliance Inspections can occur when:

OSHA/State has been notified that a specific work-related incident has taken place.

Periodically OSHA and/or State safety officers may visit workplaces for the purpose of ensuring that employers are complying with the above-referenced health and safety standards. Inspections are intended to serve the overall remedial purpose of the Act, which is to make the employer's workplace as safe as reasonably possible. Based on the results of the inspection, the Facility Manager, Owner and/or MIEDI could be subjected to monetary penalties for violation of the OSHA Standards. Inspections are basically in three categories:

Fatalities and/or serious accidents - This type of inspection occurs after the employer notifies OSHA/State to report a death, probable death of any employee, or the inpatient hospitalization of 2 or more employees within 8 hours of occurrence.

General - These inspections are scheduled by OSHA/State. They are random and unannounced. Usually the inspection involves the entire facility.

Complaints - This type of inspection occurs as a result of the inspection agency receiving a complaint concerning an alleged unsafe or unhealthy condition. These complaints are generally registered by an employee or a representative of the employees. While in most instances the inspector limits his/her inspection to complaint particulars, they may choose to conduct an inspection of the entire facility.

The MIEDI Facility Manager and the Safety Manager are to be promptly notified when an OSHA/State Inspector visits the site.

OSHA or State Compliance Officers

The OSHA or State compliance officers may inspect work sites at any reasonable hour, interview employees, and collect environmental samples. Requests to review documents and/or to take photographs must have prior approval by Owner, MIEDI and/or Facility Manager.

OSHA and State compliance officers shall, at all times, be treated in a courteous and businesslike manner.

State Operated Compliance Programs

Certain states are now operating under approved State Plans for occupational safety and health rather than the Federal OSHA program. These states may have adopted the existing Federal OSHA standards and procedures or may have developed their own.

Where MIEDI is subject to State Occupational Safety and Health plans, our safety policy and program will be based on State requirements. It is the responsibility of the facility Safety POC to verify which OSHA/ State regulations (federal/state) apply to MIEDI facility operations.

OSHA 300 - Performance Tracking

It is the responsibility of the facility to notify the MIEDI Safety Manager which shall include the incident into the OSHA 300 log. OSHA requires that all recordable injuries be entered on the log within 7 days of knowledge of the injury.

Definitions for the OSHA Log

Recordable Injury or Illness:
Recordable occupation injuries or illnesses are any occupational injuries or illnesses, which result in:

- Death
- Loss of consciousness
- Days away from work
- Restricted work activity or job transfer
- Medical treatment beyond first aid
- A significant work-related injury or illness diagnosed by a licensed healthcare professional
- A broken bone
- Medical removal from the job

Restricted work activity occurs when an employee, as a result of a job-related injury or illness, is physically or mentally unable to perform all or any part of his or her normal assignment during all or any part of the workday or shift.

Lost workdays are the number of days (consecutive or not) after, but not including the day of injury or illness during which the employee would have worked but could not do so: that is, could not perform all or any part of his or her normal work assignment during all or any part of the workday or shift, because

of occupational injury or illness. The number of recordable lost workdays is limited to 180 even if more days are actually missed.

Posting:

The OSHA 300 Summary must be completed and posted on the employee safety bulletin boards from February 1st to April 30th of each year.

Recordkeeping:

The log and summary must be maintained for 5 years following the year to which they pertain. These records are to be made available for review by any employee, former employees, their representatives, both personal and union and compliance officers from OSHA or State.

Data Analysis:

The OSHA log will be frequently reviewed to identify trends and areas where incidents are occurring to allow application of the appropriate corrective actions.

Training

Face to Face training:

All training will be coordinated between the facility team and the MIEDI Safety team. These requests will be scheduled on availability of both the participants and trainer(s). The following are the identified categories and the MIEDI Safety team will identify which modules are required based on the site and conversations with the facility management.

OSHA 10:

All newly hired facility personnel shall be required to take OSHA 10 – General Industry course.

First Aid/CPR/AED:

All newly hired facility personnel must attend and qualify an approved First Aid/CPR/AED training and certification course(s).

Refresher training shall be completed every 2 years via online LMS.

Fire:

- All newly hired facility personnel must receive training on fire responses which includes, but not limited to:

- Escalation of identified fire.
- Fire extinguisher use.
- Fire evacuation with pre-approved meet up locations.
- This training will be refreshed annually.
- Natural Disaster:
- All newly hired facility personnel must receive training on natural disasters which includes, but not limited to:
- Tornado Warning
- Earthquake
- Hurricane
- This training will be refreshed annually.

Human Threat:

All newly hired facility personnel must receive training on human threat responses which includes, but not limited to:

- Bomb threats directed at the facility
- Armed assailant at the facility
- This training will be refreshed annually

Site Equipment:

- All newly hired facility personnel must receive training based on the equipment the MIEDI team will use on site. This list of equipment consists of, but not limited to:

- Fork Lift Operation/Safety Check
- Man Lift Operation/Safety Check
- Enclosed Spaces Entry/Permit
- Hot Work Use/Permit
- This training will be refreshed and performed with all MIEDI team as new equipment is introduced to the site.

- Module Based Training
- Learning Management System (LMS)
- There are online modules for each Facility team member to take on the LMS system provided by MIEDI. Each module is assigned to a week and shall be completed before the end of the shift week for all 52 weeks of the year. Required training shall be completed prior to or returning from PTO.
- Monthly Safety Topic
- There are 12 monthly safety topics prepared by and provided by the MIEDI Corporate Safety team. Each member of the Facility team is required to read and sign the provided documentation. This documentation needs to be provided, by the Facility Safety POC, digitally to the Safety team at the end of each month.

18 Proposed plan for expenditures to extend the useful life of the Utility System.

Under Development:

19 Reserved

20 University Continuity Plan

Introduction Comprehensive Emergency Management Plan.

The Facilities Emergency Management Plan (FEMP) supports risk management toward incident response defining employee and supervisory responsibilities. This plan is a nested annex within the University of Idaho Comprehensive Emergency Management Plan (UI CEMP) and serves to define Facilities roles and responsibilities at the local level. The plan is an effort to develop expectations toward a measured and graduated incident response withthe protection, safety, and health of UI students, faculty, and staff. The Plan defines theresponsibilities of the incident commander and emergent responders keeping personnel out of "harm's way". Everyone in a UI facility - students, faculty, staff, and visitors - must take appropriate and deliberate action when an emergency or incident strikes a building, a portion of the campus, or the entire University of Idaho community. Careful planning, with an emphasis on safety, can help the University handle crises and emergencies with suitable responses, and may save lives.

The UI CEMP outlines the mitigation (prevention), preparedness, response, and recovery actions of UI personnel and resources for all-hazards that could negativelyimpact the UI. The UI CEMP incorporates the use of the National Incident Management System (NIMS) to facilitate interagency coordination between City of Moscow, Latah County, and State of Idaho responding agencies and is consistent with the Latah County Basic Plan, Idaho Bureau ofHomeland Security Emergency Operations Plan, and National Response Framework (NRF). UI collaborates with local, state and federal emergency response agencies in the development, implementation and maintenance of the UI CEMP. UI personnel and equipment will be utilized in accordance with the guidelines set forth in the UICEMP to accomplish the following priorities in order of importance:

- Priority 1: Protect Human Life (Life Safety)
- Priority 2: Support Health, Safety, and Basic Care ServicesPriority 3: Secure Critical Infrastructure and Facilities Priority 4: Maintenance of Critical UI Services
- Priority 5: Assessment of Damages
- Priority 6: Restore Normal Operations

Supervisors are responsible for ensuring all employees are familiar with and will follow this emergency plan. Where appropriate,unit members will be assigned emergency preparedness and response duties to assist in the implementation of our emergency response plan.

Follow these important steps when there is an incident or emergency:

- Confirm and evaluate conditions.
- Report the incident immediately.
- Follow instructions from emergency staff precisely.
- Follow this emergency response plan.
- Issue clear and consistent emergency notifications. Use all available communicationtools.
- If there is no power and/or telephone systems are not functioning, emergency communications will be profoundly restricted and the University of Idaho will use messengers, radios and cellular phones.

Emergency Response Role During a declared college state of emergency

The Vice President for Facilities or a Facilities designee serves as the Logistics Section Chief or Operations Section Chief on the University Response Team.

1.Faculty & Staff

A. General Emergency Management Responsibilities

Faculty and staff are seen as leaders on campus and must be prepared to direct students, visitors, and colleagues to safe locations in the event of an emergency. Faculty and staff are responsible for being familiar with applicable emergency plans, procedures and evacuation routes for their assigned work locations at http://www.uidaho.edu/apm/35/22 . This information is accessible through the Unit Plans orcan be requested through the Safety and Loss Committee. Faculty and staff are also responsible for maintaining their contact information for VANDAL ALERT to maximize the Facilities Emergency Management Plan 9 Approved July 16, 2013

The FEMP is an adjunct to the *University of Idaho Emergency Management Plan,*as are the other unit plans. Together they provide the overall emergency plan for the entire campus.The *University of Idaho Emergency Management Plan* establishes an emergency leadership and organizational structure. A copy of this plan can be found http://www.uidaho.edu/safety/.

The primary goals of the *University of Idaho Emergency Management Plan* are:

- To protect lives, intellectual property and facilities.
- To prevent or minimize the impact of emergencies and to maximize the effectivenessof the campus community in responding to inevitable occurrences.
- To provide for the continuity of campus operations in pursuit of the University of Idaho's mission of teaching, research and extension.

B. **Emergency Occurrence after Hours.** There is a significant chance an emergency may occur outside regular University of Idaho office hours. While the structure of this plan remains precisely the same, its implementation may vary depending upon available resources and manpower until the proper officials can be notified. First Responders are incident commanders until appropriately relieved. These individuals should seek to follow, asnearly as possible, the guidelines of the plan while simultaneously making an effort to notify University of Idaho administrators of the situation so as to obtain verification or advice on their actions.

C. **Submittal and Review.** Each unit must submit an initial copy of theircompleted EMP to the Risk Management Office. Thereafter, the plan should be reviewed annually.If the plan is changed, an updated copy of the EMP must be sent to the Risk Management Office by October 1.

2.Building/Location Description.

The main structure at Facilities is a concrete tilt-up single story building with second story mezzanine storage supporting a complex of thirteen (13) additional buildings. The Facilities Complex is located at 875Perimeter Drive, MS 2281 Moscow ID 83844-2281; more particularly described as follows:

The Complex is made up of nine (15) buildings or spaces

(1) **Main Complex** (875 Perimeter Dr.)- One Main Floor and Storage Mezzanine, which has 3 main stairwells and numerous shop stairwells to it, has Fire Alarm; Fire Detection; and Fire Suppression systems (See Attached Map).
(2) **Facilities Storage Building** (877 Perimeter Dr.)- Has Fire Alarm; Fire Detection; and Fire Suppression systems. Has two main stairwells to access mezzanine area. Also hasSand Storage and Emergency Response Equipment Storage in the west end of this buildingand PTS traffic control equipment in the east end storage area. (See Attached Map).
(3) **LES Pesticide Storage Shed** - Has fire detection; alarm; and suppression system (Halon).
(4) **LES Greenhouse** (871 Perimeter Dr.)- No fire systems in this building.
(5) **UI Garage & Fuel Depot** (901 Perimeter Dr.)- Has Fire Alarm; Detection
(6) **UI Garage Storage Building** (901 Perimeter Dr.)- No fire systems in this building.
(7) **Recycling/Surplus/Solid Waste Building** (903 Perimeter Dr.)- Has Fire Alarm
(8) **Campus Storage Building** - No fire systems in this building.
(9) **Campus Storage Fenced Yard & Storage Units** - Large open storage area - no firesystems in this area.
(10) (Two other storage buildings are within this complex, but belong to Auxiliary and Housing Units. No personnel are stationed here at this time.)
(11) **Shoup Hall** (1028 W. 6th St.)– Has fire detection and suppression
(12) **Central Energy Plant** (550 S. Line St.) – Has no fire detection; fire suppression is by extinguisher only.
(13) **South Campus Chiller Plant** (1285 Nez Perce Dr.)
(14) Transformer Storage
(15) **Woodchip Storage** (881 Perimeter Dr.)

3.Reporting an Emergency

A. Step 1

B. Call **9-911**. In most cases, such as a fire, hazardous materials release, Terrorist/criminal activity, or earthquake, the appropriate number to call is **9-911**. If it is a utility failure or utility problem, call Facilities at **208-885-6246**.

C. Step 2. Notify The following positions *{The on-call roster published weekly containscurrent numbers of all individuals filling positions, numbers provided below are for the cell phones of essential managers}.*

- A.V.P. Facilities: **208-883-4949**
- Director AES: **208-882-6791**
- Director LES: **208-835-3753**
- Director TRADES: **509-330-2038**
- Director Building Services: **509-790-2463**
- Director UES: **208-949-6657**
- Director Administrative Services: **509-336-0464**

D.Step 3 Notify adjacent offices.

- Notify Facilities: **208-885-6246**
- Notify Environmental Health and Safety: **208-885-6524**
- Notify Risk Management: **208-885-7177**

4.Emergency Procedures

❖ Building Evacuation Procedures.

Evacuation is required under a variety of circumstances for example, when the fire alarm sounds, when an evacuation announcement is made, or a University official orders you to evacuate.

(1) The designated evacuation point is:

In case of an emergency evacuation of any Facilities Complex Building – Employees should go to the nearest exit and report to their assigned Evacuation Point. *(During daytime hours, very few Facilities employees* will *likely be in the complex except/or Administrative staff, as all Trades* & *Services staff* will *likely be on campus performingtheir work related tasks.)*

- **Evacuation Point #1** - For anyone exiting the UI Garage; UI Surplus or South Side of Facilities is the Transformer Area between the UI Garage & the Main Complex
- **Evacuation Point #2** - For anyone exiting the Facilities Storage Building or the WestEnd of the Facilities Complex is the Campus Storage Yard by the Trolley Power Pole
- **Evacuation Point #3** - Anyone Exiting the North side of Facilities or the Greenhouseis the North end of the Northeast Gravel Parking Lot closest to Perimeter Drive.

(2) The Evacuation Coordinators are:

Evacuation Coordinators are the Foreman of each shop or trade group. Their backup is their managing director. Managing directors must provide oversight particularly in the absence of lower supervisory levels, i.e. Director UES and Business Management assume responsibility for evacuation of their employees at work stations in the main Building of Facilities. See Attached Org Chart.

(3) Responsibilities of the Evacuation Coordinator are:

a) Call **9-911** from a safe location to verify the fire alarm/evacuation signal has been received.
b) Ensure people have evacuated the building, to the extent it is safe to do so.
c) Maintain a roster of staff as an appendix to this plan and bring the roster to the evacuation point.

d) Account for faculty and staff at the evacuation point. If staff have radios make sure theyhave them during evacuations.
e) Be the contact point for reporting unsafe situations in the building or missing persons, and report these to the emergency responders.
f) Maintain a list of faculty and staff home phone numbers, cell phones, and/or pagers for contacting employees during and after emergencies.

(4). When the building alarm sounds or an evacuation signal is given:

a) Remain calm.
b) Exit the room and:

- Quickly shutdown any hazardous operations or processes and render them safe,if it is possible to do so. If an unsafe situation exists that will not allow a shutdown before evacuating, report this to the Evacuation Coordinator.
- Take jackets and cell phones or other clothing needed for protection from the weather.
- Close windows and doors, leave doors unlocked if possible.
- If you are away from your room when the alarm sounds you should exit the building immediately and not return to the room. If an unsafe situation exists inyour room, report this to the Evacuation Coordinator.

c) Notify others in the area of the alarm if they did not hear it.
d) Instructors must ensure all students evacuate.
e) Exit the building via the nearest safe exit route. Walk; do not run. Never open doors that feel hot to the touch or attempt to travel through smoke-filled or hazardous areas. Use a different exit.
f) Do not use elevators to exit.
g) Report to the designated evacuation point and Evacuation Coordinator.
h) Wait at evacuation point for directions.
i) Do not reenter the building until emergency staff gives the "all clear" signal.
j) If you become trapped due to smoke, heat, flames, or some other hazard:

k) Leave the room door closed. Seal door cracks and ventilation grills with cloth or wet towelsor clothing, if possible.
l) Use the telephone to call **9-911** and let them know your location.
m) Hang an article of clothing, large enough for emergency responders to see, in or out the window if possible.

n) If smoke enters the room and there is a window that opens, open the window to let it out. Close the window if outside smoke enters. Tie a piece of clothing around your nose and mouth to filter out smoke if needed. Stay close to the floor where the air is cleaner.

(5). Evacuation of persons with disabilities:

Persons with disabilities, including those with mobility, hearing, and visual impairments may need assistance during an evacuation. Units and instructors need to be aware of employees and students who may have disabilities and ensure they receive assistance during evacuation, if needed. Elevators are not to be used during an evacuation.

1.1 Persons with hearing impairments:

a. Gain the person's attention by gesturing and turning the lights on and off.
b. If needed, write a note indicating an evacuation is necessary and providedirections.

1.1 Persons with visual impairments:

c. Announce that an evacuation is necessary**.**
d. Offer your arm for guidance.
e. Tell the person where you are going, and obstacles you encounter.
f. When you reach the outside evacuation point, ask if further help is needed.

1.1 Persons with mobility impairments:

- **Procedure A:**
  - If there is NO evidence of fire, smoke or other emergency in the area of occupancy or nearest Area of Evacuation Assistance (AEA), evacuatepersons to the nearest AEA.
  - Upon arrival of the fire department, fire department personnel will determine the cause of the emergency and check all AEA locations.
  - If there is an actual emergency, people with mobility impairments will be evacuated by fire department personnel.

- **Procedure B:**

- If there is evidence of fire, smoke or other emergency in the area of occupancy, evacuate all people from the area.
- Evacuation will be either from the building or to another AEA not affectedby the emergency situation.

Training Opportunity Before an Emergency Happens *- All Staff should be required to watch the video that is available from the main office showinghow to evacuate a person who is using a wheelchair.*

Campus Evacuation/Closure Procedures

a. See University of Idaho Emergency Management Plan at http://www.uidaho.edu/public-safety-and-security/emergency-management/emergencymanagementplan

❖ Medical Emergency Procedures

(1) Call **9-911** or have someone call for you.

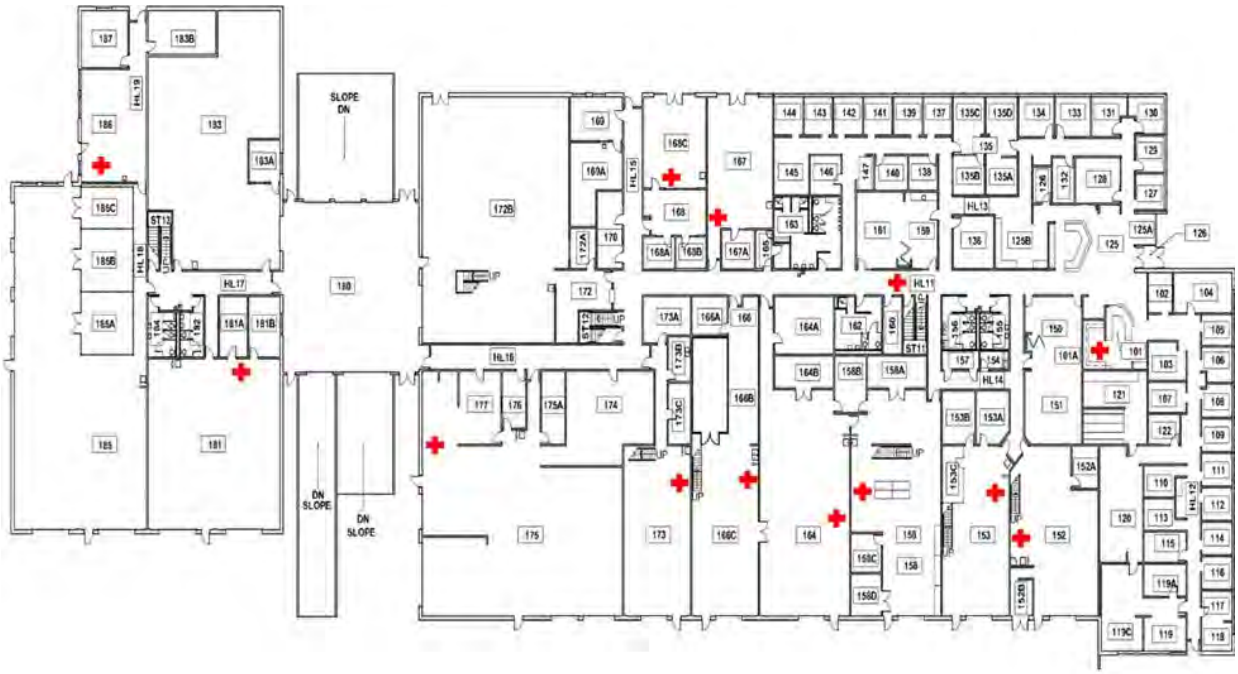
(2) If it is possible and safe to do so:

- Protect victim from further injury by removing any persistent threat to the victim. Do not move the victim unnecessarily. Do not delay in obtaining trained medical assistance.
- Provide first aid until help arrives if you have appropriate training and equipment.
- Send someone outside to escort emergency responders to the appropriate location.

(4) Location of first aid kits): *[Put in location of first aid kit(s).]*

a. District Energy Plant: (Displaying 2nd Floor)

b. Facilities Services: (Displaying 1st Floor)


SLOPE DN
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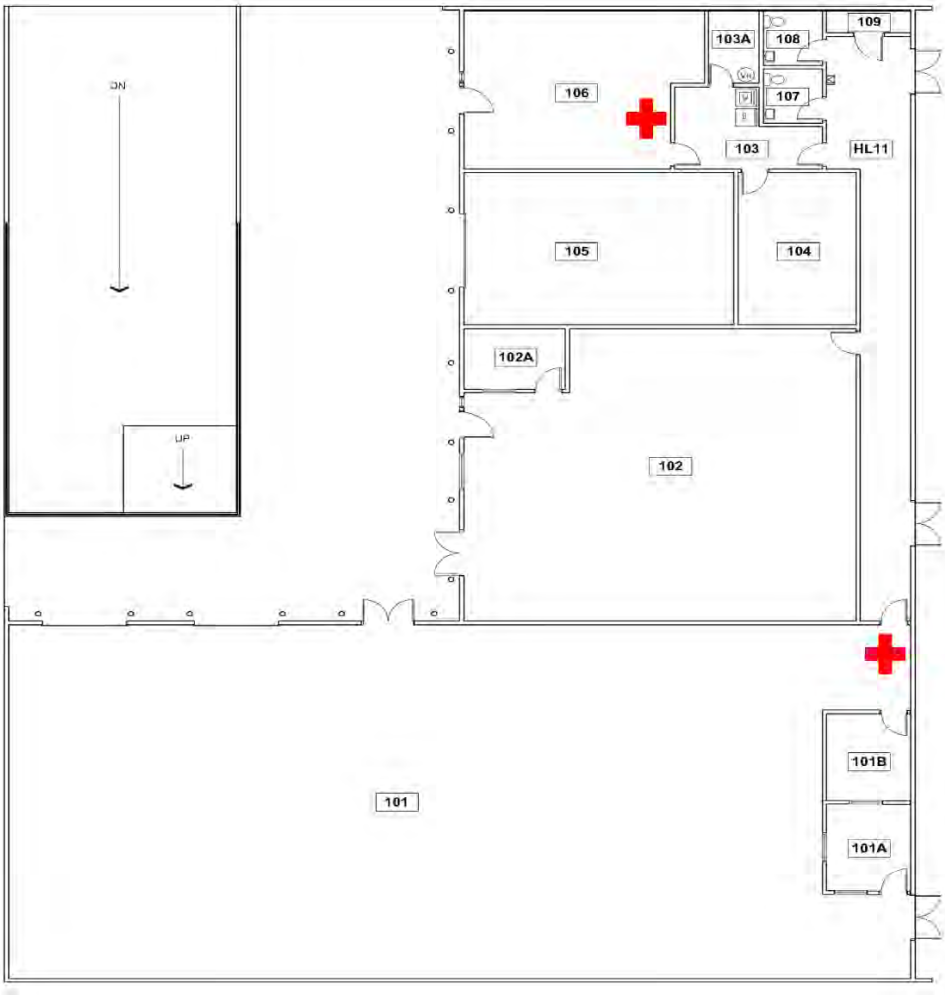
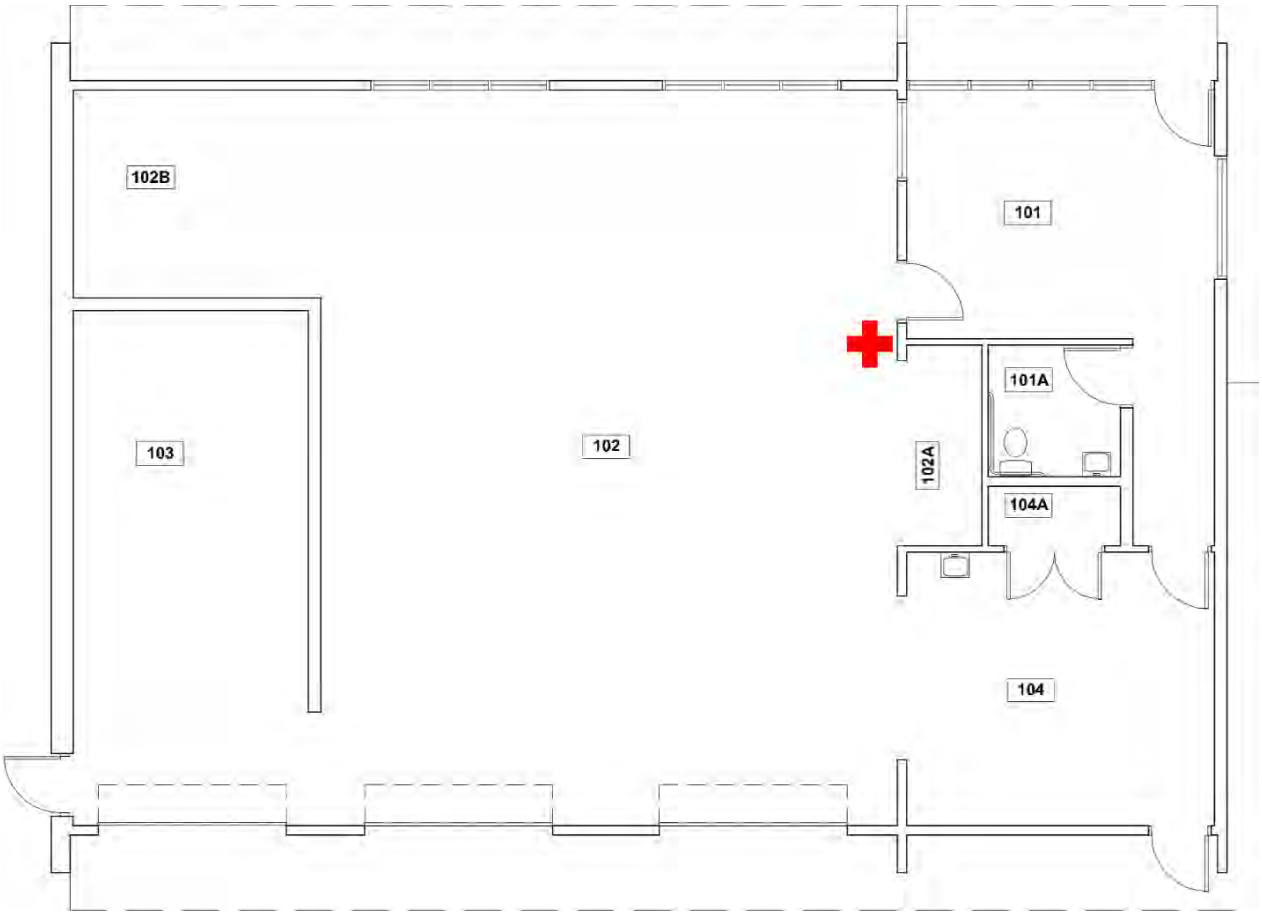
c. Recycling/Surplus:



d. Facilities Garage:



Each shop has a first aid kit and, there are also first aid kits located in eachFacilities Fleet Vehicle.

❖ Fire or Explosion Emergency Procedures.

(1) Alert people in the immediate area of the fire/explosion and evacuate the area.

(2) If you have been trained and it is safe to do so, you may attempt to extinguish a fire with a portable fire extinguisher. If you have not been trained to use a fire extinguisher you must evacuate the area.

(3) Confine the fire by closing doors as you leave the area.

(4) If the automatic fire alarm has not been activated, activate the building fire alarm system by pulling the handle on a manual pull station.

(5) Evacuate the building following the procedures listed above. The Evacuation Coordinator mustcall **9-911** to verify the fire alarm/evacuation signal has been received.

E. Hazardous Materials Emergency Procedures.

A release of hazardous materials could involve chemical, biological, or radioactive materials. Theability of an employee or student to respond to a hazardous materials release will depend on many factors, including the amount of material spilled or involved in an incident, the physical, biological and chemical characteristics of the material, the material's health and hazard characteristics, the location of the spill, the level of response training obtained, and the types of personal protective and spill response equipment available. Employees will familiarize themselves with the information and procedures found in the *UI Hazardous Materials Emergency Response Plan* and the *UI Hazardous Materials Management* &*Disposal Policy* & *Procedures Manual.*

If a hazardous materials release occurs that cannot be handled by an employee, then:

(1) Alert people in the immediate area of the spill and evacuate the area.
(2) If an explosion hazard is present, take care not to create sparks by turning on or off electricalequipment. Activate the electrical shutoff if the location is equipped with one.
(3) Confine the hazard by closing doors as you leave the area.
(4) Use eyewash or safety showers as needed to rinse contamination off people.
(5) Evacuate any nearby rooms that may be affected. If the hazard will affect the entire building evacuate the entire building. If there is a chance of explosion from the hazardous material release do not activate the building fire alarm.
(6) Evacuate the building manually by alerting others by voice. Take care not to tum electrical equipment on or off or otherwise cause sparks. If there is no chance of explosion, activate thebuilding fire alarm system by pulling the handle on a manual pull station.
(7) Evacuate the building following the procedures listed above. The Evacuation

Coordinator must call **9-911** to verify the fire alarm/evacuation signal has been received. Be prepared to provide as much information as possible on the hazardous materials released.

(8) At the designated evacuation point, notify emergency responders of the location, nature and size of the spill.

(9) Isolate contaminated persons. Avoid cross-contamination or chemical exposure from contaminated persons.

❖ Power Outage Procedures

Assess the extent of the problem in the unit's area and:

(1) Report the outage to UI Facilities Services at:
208-885-6246 during normal work hours **208-885-6271** after normal work hours

(2) Assist other building occupants to move to safe locations.
(3) Loss of power to fume hoods may require the evacuation of the building. If it is safe to do so, close the sash of the fume hood if power is lost.
(4) Evaluate the unit's work areas for hazards created by power outage. If it is safe to do so, secure hazardous materials and shut down hazardous processes, take actions to preserve human and animal safety and health, and take actions to preserve research.
(5) Tum off and/or unplug non-essential electrical equipment, computer equipment and appliances. Keep refrigerators and freezers closed throughout the outage to help keep them cold.
(6) Areas not served by emergency lighting will maintain flashlights in an accessible location.
(7) If the building or campus must be evacuated, follow evacuation procedures list above.

❖ Procedures for Responding To Criminal Activity orViolence.

(1) Attempt to remove yourself from any danger.
(2) Notify Moscow Police by calling **9-911**. Try to call from a safe location if possible.
(3) If possible, provide the police with the following information:
- Location of crime
- Nature of crime and specifics (number of people involved, any weapons, etc.)
- Any injuries
- Description of suspect(s) (height, weight, sex, race, clothing, hair color, etc.)
- Direction of travel of suspects
- Description of any vehicles involved in the crime
- DO NOT pursue or attempt to detain suspects.

❖ Active Shooter Response

(1) Identify potential escape routes
(2) Have a plan in mind
(3) Determine if it is best to evacuate or hide
(4) Call **9-911** if it is safe to do so
(5) Attempt to evacuate if escape route is accessible
(6) Leave belongings behind
(7) Help others escape if possible
(8) Do not attempt to move the wounded
(9) Evacuate regardless if others agree to follow
(10) Warn others not to enter area where active shooter may be
(11) Follow instructions of any law enforcement officers
(12) If evacuation is not an option, find a place to hide
- Cover is protection from gunfire
- Concealment protects from sight

(13) Be prepared to defend yourself against shooter if necessary
(14) When calling **9-911**, notify responders of:
- Shooter location
- Number of shooters
- Number of potential victims

(15) When law enforcement arrives:
- Keep hands visible
- Avoid sudden movements
- Avoid pointing
- Avoid screaming or yelling
- Remain calm

❖ Bomb Threat Procedures

(1) Obtain and review the ***Bomb Threat Checklist*** (available from the Facilities reception area.).

(2) If you receive a bomb threat:

- Check the exact time.
- Listen carefully to the caller's voice.
- Write down the caller's exact words.
- Use the ***Bomb Threat Checklist.***

(3) Ask questions, particularly about:

- Location of device,
- Time of detonation, and type of device.
- Listen for background noises.
- Note the time the caller hangs up.
- Hang up the phone. Immediately, before the next call comes in:
- Pick up the phone and dial ***57** (This will start a trace the call. There may be a costfor this service, it is okay to accept the cost.),
- Listen and write down what the recorded message says,
- Hang up again, pick up the phone and dial ***69** (This will give the phone numberof the last call received, if available.), and
- Listen and write down what the recorded message says.

(4) Call the Moscow Police Department (**9-911**) and report:

a. Your name.
b. Location and telephone number you are calling from.
c. The situation.
d. Location of the device, if known.
e. Time it is set to detonate**,** if known; ***{DO NOT APPROACH A PACKAGE TO IDENTIFY A TIMER}.***

- Type of device, if known.
- Exact time you received the call.
- The information you received after you dialed ***57** and ***69**.
- Any other information on the ***Bomb Threat Checklist.***

(5) Inform your supervisor.

❖ Terrorist Events

(1) **Recognizing a Potential Terrorist Event.** It is difficult to know with certainty in what form a terrorist event will take place. It could be an obvious event involving an explosion and release of hazardous materials, or it could involve a covert method, such as mailing letters or packages containing hazardous materials. The following are guidelines for generic suspicious activities that should be reported to the Moscow Police Department at **208-882-COPS** or **208-882-2677** or, if life-threatening, at **9-911**:

a. Anonymous tips, phone calls or notes indicating threatening events.
b. People watching officials or offices.
c. Unidentified or unattended packages left in or near offices.
d. Requests for plans, blueprints, or specifications for buildings by people who have no reason forthis information.
e. People in places where they do not belong.
l. Packages or heavy mail which have a peculiar odor or appearance.
g. Confrontations with angry, aggressive or threatening persons.
h. Extremely threatening or violent behavior by co-workers who indicate they may resort to revenge or more violence.

(2) **Securing and Accounting for Hazardous Materials.** The use of hazardous materials at the University requires safeguards and increased security. However remote the possibility, we should prevent the unintentional removal of biological agents, radioactive materials, and hazardous chemicals. By using common sense and the following steps, we can reduce the potential for problems:

a. Do not leave laboratories, or other areas where hazardous materials are present, open andunattended. If you leave the area, make sure the door is locked.
b. When not in use, return hazardous materials to their proper storage area. Storage areas inunattended spaces should be locked.
c. Maintain an inventory of hazardous materials and routinely check these materials.
d. Do not allow unauthorized personnel into your work space. Question people who enter yourwork space and who are unfamiliar to you.
e. If you notice any hazardous materials missing or believe they have been stolen, please contact the Moscow Police Department at **208-882-2677** and the Environmental Health and Safety Office at **208-885-6524**.

(3) Guidelines for Screening Suspicious Packages and Letters - Concerns for Biological or Chemical Threats NOTE: Although any threatened use of a biological or chemicalagent must be treated as though it is real, experience has demonstrated that these are likely to be a hoax. If the suspected biological agent is reported as anthrax, be assured that it is NOT generally contagious (i.e., spread from person to person) and that treatment is available and effective if administered before the onset of symptoms.

Common features of suspect packages or letters are:

- There may be liquid leaking from package.
- They tend to have hand-applied postage.
- They have excessive postage.
- They are addressed to a position, not a person.
- There may be no return address.
- They are often hand written or have a poorly typed address.
- They tend not to be in business format envelopes.
- There may be misspelling of common words.

They may have restrictive markings such as "Confidential", "Personal", etc:

- They may have excessive weight and/or the feel of a powdery or foreign substance.
- There may be foreign post marks and/or writing.
- The source of the letter/package is not recognized by recipient/addressee.

If you believe you have received a suspect package or letter, you should:

a. NOT open the letter or package.
b. Contact Moscow Police at **208-882-2677**.
c. Remain **at the site until police arrive with instructions. If possible:**

1.1 DO NOT TAMPER, PHYSICALLY EXAMINE OR MOVE THEPACKAGE.

- **CORDON OFF THE AREA and prevent unsuspecting passerby fromentering the area.**

1.1 EVACUATE the building, facility, parking area in an orderly and calmmanner.

If you inadvertently open a suspect package/letter or if it is leaking liquid or an unknown substance, you should:

a. Immediately set the item down gently at the location where it was opened.
b. Contact Moscow Police at **9-911**
c. All potentially exposed persons should leave the area and wash exposed skin with soap andwater.
d. Return to an area within the building adjacent to the initial exposure and wait for police (Forexample, a hallway outside the original room).
e. Do not allow others into the area. If anyone enters the area, they should stay in the area untilinstructed to leave by Moscow Police.
f. Remember that this is NOT a medical emergency yet, but it is a potential contaminationproblem.
g. This is also a potential crime scene - preserve evidence and pay attention to what you haveseen or done.

You should NOT do the following:

a. Pass the letter or package to others to look at
b. Disturb any contents in the letter or package. Handling the letter/package may only spread the substance contained inside and increase the chances of it getting into the air.
c. Ignore the threat, it must be treated as real until properly evaluated.
d. Leave the building until instructed to do so.

4. **Guidelines for Screening Suspicious Packages and Letters: Concerns for Explosive Devices.**
Asuspicious package or letter may have any of the features listed above for suspicious packages and letters that may contain biological or chemical materials, including the following:

- They may have bumps, wires, or pieces of metal exposed.
- They may be heavy.
- They may have an excessive amount of securing material, such as tape, string,etc.

If you suspect that a package or letter contains an explosive device, you should:

a. Not move or open the package or letter.
b. Not let other people inspect or handle the package or letter.
c. Immediately evacuate the immediate and surrounding area.
d. Call **9-911** from a safe location.

❖ Natural Emergencies

(1) During any Natural Disaster Emergency, it must be determined what course of action is best taken:

a. Evacuation

i. Personnel should evacuate building when building is not safe for operation, such as during a fire.

b. Sheltering

i. Personnel should take shelter in safest part of building when other parts of building may not be structurally sound or safe, such as during a tornado.

c. Shelter-in-place

i. Personnel should take shelter in immediate area within building, butaway from windows or openings to building, such as a chemical spill.

d. Lockdown

i. Personnel should not leave the confines of the building for any reason unless notified otherwise.

❖ Telecommunications failure

(1) Brief necessary staff

(2) Execute communications assessment to include:

- Inventory of assets, in use, in maintenance, on loan, and back-up
- Infrastructure maintenance, performance, system saturation, usage, traffic
- Current disaster recovery plan
- Current emergency support personnel
- Current service level agreements and response time from vendors
- Current priority of all forms of services
- Communications and systems repairs
- Current network resiliency, redundant paths, and primary/secondary/fail over systems
- Most current vendor, service provider, state, federal contacts

(3) After establishing what is in inventory and available, determine level of support system can provide. Establish the following three-tiered priority list for understanding impact of losing an asset:

- Mission Critical- Catastrophic breakdown in response ability, that could resultin major loss of life, property, and system trust breakdown. Requires immediateattention
- Important- Sever decrease in the ability to respond to emergency needs. Potential for excessive loss of life or property only critical responses could be met.
- Minor- Full capabilities could be apparent to the public w/modifications to thesystem and its architecture or software

(4) Perform a communications line assessment to determine operational status of organization to outside world

- Activate backup systems to compensate for failed communication systems
- Complete repairs on communications system and contact vendors to assist withrepairs
- Conduct situational awareness surveys/analysis to provide reports to the emergency management team
- Develop risk modeling based on First Responder infrastructure and response based on the top disasters in which your area is prone. Should include best caseto worst case scenarios
- Identify weaknesses in system, address costs and results of fixing these issues

❖ **Domestic Water contaminant**

Any water contaminant requires that an alternate water source be provided. Once a water contaminant is confirmed in the domestic water supply, the following steps must be taken:

a) Evaluate all information about contamination incident
b) Revise public health response measures as necessary
c) Consult with appropriate officials to develop remediation and recovery plan
d) Characterize contaminated area
e) Evaluate options for treating and rehabilitation
f) Develop disposal strategy for decontamination of residuals
g) Develop sampling analysis strategy to confirm remediation
h) Develop communication and public health relations plan
i) Implement remediation and recovery plan
j) Return to normal operations.

RISK MANAGEMENT ASSESSMENT.

Each unit within Facilities conducts the following risk management assessment annually and updates base upon Critical Needs, Activities and Essential personnel required to maintain University emergency management and responses to an incident. Personnel, Equipment and Assets identified within the risk management matrix are priorities for the University to focus energy and effort during an emergency response and reflect reportable property, activities and services to be sustained and protected during anemergency. Each unit lists their critical assets, activities and services within their appendix. Units are to identify essential personnel responsible for returning to the UI Campus for the purpose of completing essential tasks and responsibilities necessary to respond to an incident.

A. Critical Assets, Activities, and Services.

The following are identified as critical requirements for this unit during a building or campus emergency,which are necessary to protect property, research and other activities, and provide services to the University community. The unit should identify critical equipment, activities, or services that should be maintained during an emergency (e.g., - computer servers, ultra-cold freezers, equipment requiring liquidnitrogen, vacuum systems, heating and cooling, utilities, animal care, etc.) and if there are provisions already in place to protect the operation of this equipment (e.g., - emergency power, shut-down procedure, etc.). If there is not a provision in place to protect this equipment, state what would be needed. Please only list what is absolutely critical due to costs, irreplaceable value, essential service, etc. Please note that provisions to protect the item may not be available due to cost or practical issues.

Also list personnel who would be needed to maintain critical activities and services (e.g., caring of animals,providing utility services, maintaining valuable equipment, etc.)]

(1) Critical Assets. ***{Define Critical Assets by functional area}.***

a. LES.

- **ARB** – 1 staff with skills operating trucks, tractors, chain saws, skid steers,mowers, etc. Labor available for multiple emergency type tasks like fillingsand bags, plowing snow, barricading roads, etc.
- **BEX** – 4 staff- skilled heavy equipment operators; concrete, masonry, roofrepair skills as well. Familiar with storm sewer drainage system.
- **CMS** – Mail & Package Delivery – staff knowledgeable concerning Federalguidelines for mail & packages. Capable of driving vehicles. Could be usedas general labor if needed in an emergency.
- **GLS** – 2 staff- skilled mechanics for the repair of vehicles and equipment both large and small.

- **LND** – 12 staff with skills operating numerous trucks, tractors, skid steers,mowers, and other small equipment. Labor available for multipleemergency type tasks like filling sand bags, plowing snow, barricading roads, etc.
- **RSSW** – 7 staff – knowledge/skills in proper disposal of waste of all types,as well as rules/regulations for disposing of state property - Can operate large trucks and forklifts.

b. UES. Critical utility services provide essential life support services to the campus.Services identified below provide information regarding the responder and back- up service in the event of an outage during the most likely event and not the most dangerous event. See Appendix C-1, UES for specific contingency responses.

- **Central Energy Plant**. Contact the Director, Manager and Supervisors ofUES. Most likely event is a failure in the electrical system with the most next likely event a failure in boiler.

- **Water Systems**. Contact the Director, and Water Systems Manager of UESMost likely event is an equipment failure.

- **Electrical System**. Contact the Director of UES or Director of TRADES.Notify AVISTA Power and request support. Customer Service Number (

- **Back-up Power Generation**. Notify the Director of UES and the Directorof Trades. Initiate responses as required.

c. AES. Provides building damage assessments, Architectural and Engineering planning services throughout all phases.

d. TRADES. Provides building emergency repair and construction services throughout all phases.

e. Building Services: 62 staff available which are skilled at utilizing custodial equipment including wet/dry vacuums, flood pumps, and fans. Also labor isavailable for emergency type tasks like filling sand bags, shoveling snow, barricading roads, etc.

f. Business Management Services. Provides human resource management services, purchasing and acquisition services throughout all phases.

g. Sustainability.

(2) Activities. ***{Define Critical Activities base upon phase of incident}***

a. Response. Facilities provides services for backup power generation, water systems,snow removal, facility damage assessments, emergency repair, emergency construction services, general engineering and construction management during a response.

b. Recovery. Facilities supports recovery with restoration of facilities and utilities services to the campus population.

c. Mitigation. Facilities maintains a long range campus masterplan supporting holistic programs support the built environment.

d. Planning. Facilities maintains a long range campus masterplan supporting holistic programs support the built environment. Establishes mutual aid agreements with intra-state and agencies supporting public works and emergency response.

(3) Services.

a. Response. Restoration of utility services, emergency repairs, establish trafficability through key arterials for emergency responders.

b. Recovery. Damage assessment and repair, construction management, professional services acquisition, vendor contracts and near term alteration and repair of facilities. Claims filing.

c. Mitigation. Planning services focused upon personnel and physical asset protection through all hazards.

d. Planning. Planning services are a continuation and include the established of mutual aid agreements, contracts and other agreements supporting response and recovery.

B. Essential Personnel.

Part B lists personnel needed to oversee activities or provide services during an emergency. The unit administrator will contact personnel as needed during unit or campus emergencies.
Since we are Facilities, all equipment and personnel are of a critical nature, depending on the type of maintenance, repair, or emergency we are responding to. In the case of a destructive emergencyhappening to our own building complex, there will be serious ramifications for campus as a whole if any shops

equipment or materials are damaged or destroyed. This may be seasonally dependent as well. Currently our main complex is already protected with backup generators and systems to allow the complex to continue operations of a limited capacity. The Facilities Emergency Response SUB-Plan (SUB- ERP) already outlines the various categories of emergencies and how our personnel will respond to themfor campus or our own complex.

Depending on how you view the criticality of the equipment Facilities owns for keeping campus operational, the list for critical equipment operation could be considered to be very long, or we can consider that all equipment can be replaced, and if we have the tools and materials still available to us from the fleet vehicles, we can manage for a few days. The two main critical items then becomes

A place to set up the information transfer equipment & personnel (i.e. front desk communications and computer system setup for FAMIS; Banner; and Email)

Reclamation/storage/salvage operations for AES archived information concerning a1l campus buildingsand infrastructure systems. We are currently 98% backed up for information on ITS Services which have a redundancy system. Within a few months, it will be 100%. Everything else at Facilities is just a matter of replacing equipment and finding suitable structure to safely house Facilities staff and equipment.

21. APPENDICES

APPENDIX A – Vendor List

Vendor Name	Phone Number	Address
ATS inland	509-892-1000	9507 E. Sprague Ave Spokane, wa. 99206
NALCO	509-444-1411	421 W Riverside Ave Spokane, wa. 99201
Rogers machinery	509-922-0556	16615 East Euclid Avenue Spokane, wa. 99216
Bruneel Point S Tires	208-882-3553	123 W. 7th St Moscow, Id. 83843
Idaho Truck Sales	208-743-2547	2934 N. and South Hyw. Lewiston, Id. 83501
Western States	(208) 746-3301	16772 Hatwai Byp Ste A, Lewiston, ID 83501
Johnson controls	(425) 398-6900	22745 29th Dr SE Ste 100, Bothell, WA 98021
Bay Valve	(206) 267-3900	4385 S 133rd St, Seattle, WA 98168
Proctor sales	(425) 774-1441	20715 50th Ave W, Lynnwood, WA 98036
Source Electric	(208) 875-1680	1003 Onaway Rd, Potlatch, ID 83855
Atlas sand and rock	1-509-332-7004	6762 SR 270 pullman wa, 99163
Applied Industrial	(208) 746-2386	2010 3rd Ave N, Lewiston, ID 83501
Bitterroot Bolt and Chain	(208) 743-2595	2522 4th Ave N, Lewiston, ID 83501
Busch Distributors	(208) 882-3021	7603 State Route 270, Pullman, WA 99163
CDA metals	(208) 292-0300	80 E Wilbur Ave Ste 1, Dalton Gardens, ID 83815
Ferguson Enterprises	208) 743-1508	2016 1st Ave, Lewiston, ID 83501
Grainger	(800) 472-4643	5706 E Broadway Ave, Spokane Valley, WA 99212
Hahn Rental and Supply	208) 883-4246	222 N Main St, Moscow, ID 83843
Helbling Machine	(208) 882-8778	510 W 3rd St, Moscow, ID 83843
McCoy Plumbing	(208) 882-2332	626 S Main St, Moscow, ID 83843
McMaster-Carr	(404) 346-7000	6100 Fulton Industrial Blvd SW, Atlanta, GA 30336
Moscow Building Supply	(208) 882-4716	760 N Main St, Moscow, ID 83843
Moscow Glass and Awning	208) 883-1850	1018 S, Jefferson Moscow, ID 83843
Moscow RV	208.882.0450	1303 S Logan St. Moscow, ID 83843
Napa Auto	(208) 882-5596	414 Troy Rd, Moscow, ID 83843
Norco	208) 882-3571	223 W 3rd St, Moscow, ID 83843
Oxarc Inc.	509) 535-7794	3417 E Springfield Ave, Spokane, WA 99202
Paramount Supply	(509) 536-3993	3808 N. Sullivan Rd. N12, Spokane, WA 99216
Refrigeration Supply	(208) 882-3716	2007 S Main St, Moscow, ID 83843
REXUSA/ Platt	(509) 872-3031	5951 Airport Rd, Pullman, WA 99163
Sherwin Williams	(208) 882-6544	610 W Pullman Rd, Moscow, ID 83843
Spence Hardware	(208) 883-8131	915 White Ave, Moscow, ID 83843
St. John Hardware	(208) 882-7501	202 W A St, Moscow, ID 83843
Stoneway Electric	(509) 872-0100	7202 State Route 270, Pullman, WA 99163
Tri-State Dist.	(208) 882-4555	1104 W Pullman Rd, Moscow, ID 83843
Wear Tek Foundry	(509) 747-4139	8021 W Highway 2, Spokane, WA 99224
Field Instruments and Controls.	(509) 466-8226	9629 N Colfax Rd, Spokane, WA 99218
University Mechanical	(206) 364-9900	11611 49th Pl W, Mukilteo, WA 98275
Diamond Power/Babcock and Wilson	+1 801 844 0111	2830 South 1030 West Salt Lake City. UT, 84119
Superior Fluid Power	(509) 482-7949	9516 E Montgomery Ave Ste 19, Spokane Valley, WA 99206
Keith Walking Floor	(541) 475-3802	401 NW Adler St, Madras, OR 97741
Drive Line Service	(208) 743-3281	2706 7th Ave N, Lewiston, ID 83501
VGH Computer Services	(208) 883-8372	2002 W Pullman Rd, Moscow, ID 83843
Guy Nielson Co.	800-255-8793.	474 Taft Avenue Pocatello, Idaho 83201
Diamond Water Systems	(413) 536-8186	863 Montgomery St, Chicopee, MA 01013

INITIAL FIVE-YEAR PLAN
THE UNIVERSITY OF IDAHO UTILITY SYSTEM

REVISED SUBMISSION FOR SECTION III
CAPITAL IMPROVEMENTS PROPOSED FOR APPROVAL

To: University of Idaho
Vice President for Finance & Administration
Email: vpfinance@uidaho.edu

With a copy to:

Office of the General Counsel
Email: counsel@uidaho.edu

Date: March 30, 2021

Revised Submission Date: June 29, 2021

TABLE OF CONTENTS

I. Introduction and Revised Assumptions

This document is provided following the University's response to Sacyr Plenary Utility Partners Idaho LLC's Initial Five-Year Plan on April 29, 2021, and the direction jointly discussed on the same date and the following weeks.

Sacyr Plenary Utility Partners Idaho LLC is excited to submit a revised list of Capital Improvements proposed for Approval that allows for further visibility into the capital expenditures required to develop these projects and, as a result facilitates an informed Approval. This is achieved by adding an indicative estimate for (A) the total costs for construction and installation, including all hard and soft costs, any financing costs, and any applicable sales or use tax, and (B) forecasted annual operations and maintenance costs, both associated with each proposed Capital Improvement. Such approach is further described in Concession Agreement Section 4.3.(c).

All proposed Capital Improvements have been scoped according to these principles, and a distinction between *Engineering Studies* and *Standard Capital Improvements*—as defined in March 30, 2021's submission—is no longer made across the revised Project Sheets in Appendix A. However, a significant number of the proposed Capital Improvements do require additional work to provide further information regarding, among other things, the scope, design, or cost. This circumstance, when applicable, is highlighted in the section "Approach" of each Project Sheet, where the cost of such additional work for each of the Capital Improvements has already been addressed to help expedite the Approval process.

Lastly, I would also like to draw your attention to the fact that, following the written confirmation via email on April 27, 2021 regarding the preferred billing cycle of Capital Improvements, total costs have already been adjusted for all proposed Capital Improvements to reflect semiannual billing cycles.

II. Revised Capital Improvements proposed for Approval

PROPOSED CAPITAL IMPROVEMENTS FISCAL YEAR 2022

CODE	SCORE	UTILITY SYSTEM	NAME	COST
2022/01	8.80	Electric System	Electrical Improvements at Menard Law	$1,518,606
2022/02	8.80	Electric System	Electric Vault Improvements	$2,610,510
2022/03	8.20	Domestic Water	Replacement and Installation of New Fire Hydrants	$413,872
2022/04	8.16	Storm	Library and Memorial Gym Storm Sewer Improvements	$3,587,071
2022/05	7.88	Domestic Water	Domestic Water Systems Emergency Generator	$2,454,571
2022/06	7.88	Sewer	Sewer Slip Line Memorial Gym to Library	$138,189
2022/07	7.64	Steam Plant	Replacement and upgrade of 6" Jordan PRV	$76,089
2022/08	7.52	Steam Plant	Hot Lime Softener PRV Stations Upgrade	$190,536
2022/09	7.44	Steam Plant	Boilers System Valves Upgrade	$2,939,705
2022/10	7.36	Steam Plant	Steam Plant Security and Exterior Upgrades	$250,406
2022/11	7.36	Steam Plant	Catwalk and Ladder Upgrades	$760,894
2022/12	7.28	Domestic Water	Domestic Waterline Replacement Campus Dr. to Blake Ave.	$1,099,075
2022/13	7.08	Steam Plant	Steam Plant Renovation and Upgrades	$511,727
2022/14	7.04	Chilled Water	McClure Chiller Improvements	$179,552
2022/15	7.04	Chilled Water	SCCP Chiller Replacement and Improvements	$2,392,997
2022/16	7.04	Storm	Storm Water System Improvements	$2,176,806
2022/17	7.04	Sewer	Sanitary Sewer System Improvements	$2,176,806
2022/18	6.92	Chilled Water	NCCP Cooling Tower Improvements	$1,741,097
2022/19	6.68	Domestic Water	Domestic Water Improvements for Central Mall	$598,866
2022/20	6.56	All Systems	KPI Metering Improvements	$1,304,424
2022/21	6.48	Steam Plant	Utility Tunnel General Improvements	$2,829,428
2022/22	6.48	Steam Plant	Utility Tunnel Improvements at 7th Street and Janssen Engineering Building	$381,029
2022/23	6.48	Steam Plant	Utility Tunnel Improvements at Renfrew Hall	$571,412
2022/24	6.00	Chilled Water	SCCP Cooling Tower Improvements	$119,824
2022/27	5.28	Domestic Water	Sheep Farm Water Vault Improvements	$119,951
2022/28	5.28	Storm	Storm Sewer Slip Line Campus Dr. and Blake Ave.	$42,147
2022/29	5.28	Sewer	Sanitary Sewer Slip Line Campus Dr. and Blake Ave.	$145,950
2022/30	5.28	Chilled Water	Thermal Energy Storage Tank Sensor Upgrades	$81,664
PROPOSED CAPITAL IMPROVEMENT COST				$31,413,204

APPENDIX A. Revised Project Sheets for Capital Improvements proposed for Approval

PROJECT NAME: Electrical Improvements at Menard Law

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Electrical

Statement of Work: This project proposes the replacement of the existing 3,500 kVA@13.4 kV transformer located in the basement of the building. This is a well-known problem in the system, where the transformer is far beyond its expected life and ground water issues are present. It is assumed for this project that the existing electric meter in the Menard Law Building (meter ref.: ELM071-0-014) is fully operational.

The proposal includes the replacement of the existing transformer with a new pad-mount dry transformer located outside the building. The need for a larger transformer capacity is not anticipated. Works will include trenching, vault or pad, enclosure, subject to final location and design, and may result in disruption of service during the cutover. Transformer's protection switches are assumed to be replaced.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
10	10	—	—	7	10	8.80

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $32,751.

Additional notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,518,606.

(B) Forecasted annual operations and maintenance costs: $7,500 (Capped O&M Costs).

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it would

improve safety of maintenance personnel due to location and accessibility of equipment both for regular maintenance and emergency access. Street vaults/hand hole have water build up due to ground water leakage. Many have water up to stress cone termination points. Need to be pumped out and assessed for repair or mitigation. Past emergency repair is not in a safe and properly supported condition for 13.2KV service line.

(E) Proposed schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Positive, by reducing energy losses due to the new transformer higher efficiency rate.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,512,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: A preliminary estimation is that is around 1% of the annual consumption might be saved (around 11,000 kWh).

PROJECT NAME: Electric Vault Improvements

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency.

UTILITY SYSTEM AFFECTED: Electrical

Statement of Work: This project begins with the undertaking of a complete survey of the electrical vaults and switch gear on campus. Many vaults have old equipment that is in a poor condition and are not serviceable. Improvements will include major repairs and full replacements of any damaged vaults, according to the outcome of further analysis. It will also address ground water issues, with the installation of sump pumps and water level sensors (in all vaults with alarms) as needed. These activities may result in temporary service disruption in several buildings. There are 85 known underground vaults on campus and it seems likely that additional vaults may be identified.

The preliminary scope of this Capital Improvement includes the full replacement of 30 of the 85 existing vaults, which will be selected considering its condition and criticality, and are assumed to be critical vaults that need immediate replacement.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
10	10	—	—	7	10	8.80

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $555,304.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $2,610,510.

(B) Forecasted annual operations and maintenance costs: $12,000 (Capped O&M Costs).

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives.

(E) Proposed schedule: EPC extends through June 2023 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $2,592,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: Replacement and Installation of New Fire Hydrants

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Domestic Water

Statement of Work: Replace 21 fire hydrants on campus. Project includes engineering, procurement, excavation, connection to water supply loop, and installation and commissioning of new hydrants with thrust blocks and isolation valves as needed. The project also includes painting the new hydrants to match the University of Idaho brand standards. Install 2 new additional hydrants at Menard Law and Graduate Art Studio for increased fire protection and to facilitate system flushing. Water Piping loop alteration and civil works included.

The proposed hydrants specifications are:

- American Flow Manufacturer and model 5 ¼" Waterous Pacer
- ANSI/AWWA C502 Standard compliant

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
10	10	—	—	7	9	8.20

Approach: Development and engineering prior to construction commencement. Works to be scheduled and organized to reduce risks and potential disruption while part of the water supply system is non-operational,

The hydrants to be replaced are the following:

B15-01 B15-02 B15-03 B15-04 B17-04 B18-01 B18-04

C17-06 C18-02 C19-01 C19-02

D17-05 D17-07 D17-08 D18-02 D18-04 D20-01

E19-01 E19-05 E19-06 E20-06

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is

presented for this Capital Improvement:

(A) Total Costs: $413,872.

(B) Forecasted annual operations and maintenance costs: $824 (Capped O&M Cost).

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, (i) age of these hydrants making repairs difficult and expensive, (ii) reliability of functioning hydrants is decreasing, and (iii) additional risk to property if the hydrants fail when its operation is required.

(E) Proposed schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Engineering												
Construction												

(F) Impact on Sustainability: Reduced water leakage.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $410,741

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Anticipated reduction on domestic water consumption due to reduced water leakage.

PROJECT NAME: Library and Memorial Gym Storm Sewer Improvements

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Storm Sewer

Statement of Work: The Library and Memorial Gym storm sewer has had a number of infiltrations and performance issues over the last years. The improvements proposed in the selected section (University Avenue and Academic Mall to Memorial Gym) will range from major repair and restoration of the storm water system to the replacement of some sections of the existing piping.

Highly damaged existing 6", 8", and 12" clay tile lines will be replaced with identical or higher nominal caliber piping. At least, seven manholes will be reconditioned due to visible failures and damage. Additional work, including a survey of the system will be needed to assess the full scope of the works undertaken.

The Capital Improvement includes excavation, demolition, bedding, backfill, and surface restoration.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
6	10	—	—	5.4	10	8.16

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $22,353.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $3,587,071.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, (i) in 2019 investigations showed that the line in the project are failing and a concern with a collapse may be imminent with emergency repairs done in 2019, (ii) there is evidence in the Library basement that the Sanitary Sewer is infiltrating the storm water, and (iii) there is also evidence of storm water overflow infiltrating the Memorial Gym.

(E) Proposed schedule: EPC extends through June 2022 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Positive, due to a reduction in leaked water infiltration.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $3,564,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: Domestic Water Systems Emergency Generator

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Domestic Water, Sewer, Reclaimed Water

Statement of work: The domestic water wells are not backed up with emergency power as recommended by IDAPA 58.07.08; Small Community Water System. Without backup power the system can only provide a maximum of 14 days of domestic water if the storage tanks are full before the incident. This is inadequate life support for firefighting or dining, housing, and medical treatment of the 9,500 students on campus during an extended.

Installation of a new generator with capacity to support either Well #3 or #4 including transfer switches, panels, circuits, modifications, and controls necessary to a complete and functional system. Project includes engineering, procurement, installation, wiring, connection, and commissioning of a new 600kW emergency generator.

Emergency Generator specifications:

- Manufactures and model: Caterpillar C18 ACERT In-Line 6, 4 cycle diesel. Stand-alone, encapsulated with noise attenuation (technical data annexed at the end of the Project Summary sheet).
- Nominal capacity: 600kW.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
8	10	—	—	6.2	9	7.88

Approach: Development and engineering prior to construction commencement and subsequent transition.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $2,454,571.

(B) Forecasted annual operations and maintenance costs: $2,004 (Capped O&M Cost).

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives.

(E) Proposed schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Engineering												
Construction												
Transition												

(F) Impact on Sustainability: This solution has a positive impact on sustainability in that the domestic water system supplies the entire campus, including the steam plant and the chiller plants for make-up water. The generator system provides the University the opportunity to mitigate the need to rely on the City of Moscow's municipal water system in a power outage scenario, reducing the replacement costs of water, and insuring the major steam plant has a constant flow of water. This water supply is critical to the steam plant's make-up water needs, ensuring the optimum operating conditions for steam production which reduces inefficient steam plant operation.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $2,436,004.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Expected annual diesel fuel cost will approximately be $8,556, in addition to fuel delivery fees estimated at $150 per delivery. Total cost estimated at $8,706.

Cat® C18 DIESEL GENERATOR SETS

ATTACHMENT 2

Standby & Prime: 60Hz

Image shown might not reflect actual configuration

Engine Model	Cat® C18 ACERT™ In-line 6, 4-cycle diesel
Bore x Stroke	145mm x 183mm (5.7in x 7.2in)
Displacement	18.1 L (1106 in³)
Compression Ratio	14.5:1
Aspiration	Turbocharged Air-to-Air Aftercooled
Fuel Injection System	MEUI
Governor	Electronic ADEM™ A4

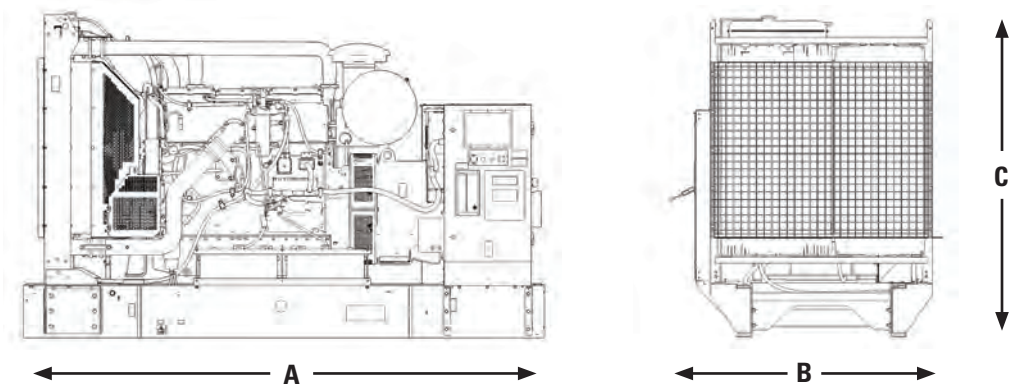
Model	Standby	Prime	Emission Strategy
C18	**600 ekW, 750 kVA**	**545 ekW, 681 kVA**	**TIER II Non-Road**

PACKAGE PERFORMANCE

Performance	Standby	Prime
Frequency	60 Hz	
Genset Power Rating	750 kVA	681 kVA
Genset power rating with fan @ 0.8 power factor	600 ekW	545 ekW
Emissions	TIER II Non-Road	
Performance Number	DM8518-04	DM8522-05
Fuel Consumption		
100% load with fan, L/hr (gal/hr)	161.6 (42.7)	151.1 (39.9)
75% load with fan, L/hr (gal/hr)	129.6 (34.2)	123.6 (32.6)
50% load with fan, L/hr (gal/hr)	91.7 (24.2)	89.2 (23.6)
25% load with fan, L/hr (gal/hr)	46.8 (12.4)	48.7 (12.9)
Cooling System[1]		
Radiator air flow restriction (system), kPa (in. Water)	0.12 (0.48)	0.12 (0.48)
Radiator air flow, m³/min (cfm)	803 (28357)	803 (28357)
Engine coolant capacity, L (gal)	20.8 (5.5)	20.8 (5.5)
Radiator coolant capacity, L (gal)	61 (16)	61 (16)
Total coolant capacity, L (gal)	82 (22)	82 (22)
Inlet Air		
Combustion air inlet flow rate, m³/min (cfm)	47.8 (1687.8)	46.7 (1649.0)
Max. Allowable Combustion Air Inlet Temp, °C (°F)	49 (120)	49 (120)
Exhaust System		
Exhaust stack gas temperature, °C (°F)	534.6 (994.3)	518.2 (964.8)
Exhaust gas flow rate, m³/min (cfm)	135.5 (4784.4)	129.6 (4576.4)
Exhaust system backpressure (maximum allowable) kPa (in. water)	10.0 (40.0)	10.0 (40.0)
Heat Rejection		
Heat rejection to jacket water, kW (Btu/min)	189 (10747)	175 (9953)
Heat rejection to exhaust (total) kW (Btu/min)	634 (36053)	596 (33895)
Heat rejection to aftercooler, kW (Btu/min)	153 (8700)	142 (8076)
Heat rejection to atmosphere from engine, kW (Btu/min)	86 (4902)	83 (4726)

Emissions (Nominal)[2]	Standby		Prime	
NOx, mg/Nm³ (g/hp-hr)	2798.7 (5.8)		2462.2 (5.1)	
CO, mg/Nm³ (g/hp-hr)	225.2 (0.5)		195.1 (0.4)	
HC, mg/Nm³ (g/hp-hr)	3.8 (0.01)		5.0 (0.01)	
PM, mg/Nm³ (g/hp-hr)	13.3 (0.03)		13.1 (0.03)	
Alternator[3]				
Voltages	480V	600V	480V	600V
Motor starting capability @ 30% Voltage Dip	1633 skVA	2023 skVA	1633 skVA	2023 skVA
Current	902 amps	722 amps	819 amps	656 amps
Frame Size	LC7024F	LC7024H	LC7024F	LC7024H
Excitation	AR	AR	AR	AR
Temperature Rise	150 ° C	130 ° C	125 ° C	105 ° C

WEIGHTS & DIMENSIONS



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
3477 (137)	**1628 (64)**	**2102 (83)**	**4431 (9769)**

APPLICABLE CODES AND STANDARDS:

AS1359, CSA C22.2 No100-04, UL142, UL489, UL869, UL2200, NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG1-22, NEMA MG1-33, 2006/95/EC, 2006/42/EC, 2004/108/EC.
Note: Codes may not be available in all model configurations. Please consult your local Cat Dealer representative for availability.

STANDBY: Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

PRIME: Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year

RATINGS: Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

DEFINITIONS AND CONDITIONS

[1] For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.

[2] Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77° F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 BTU/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

[3] UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics. Generator temperature rise is based on a 40° C ambient per NEMA MG1-32.

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Picture shown may not reflect actual configuration

C13/C15/C18
Weather Protective Enclosures

U.S. Sourced
Diesel Generator Set
350-750 kW 60 Hz

Features

Robust/Highly Corrosion Resistant Construction
- Factory installed on skid base
- Environmentally friendly, polyester powder baked paint
- 14 gauge steel
- Interior zinc plated fasteners
- Exterior stainless steel fasteners
- Internally mounted exhaust silencing system
- Designed and tested to comply with UL 2200 Listed generator set package
- Compression door latches providing solid door seal

Excellent Access
- Large cable entry area for installation ease
- Accommodates side mounted single or multiple breakers
- Three doors on both sides
- Vertically hinged allow 180° opening rotation and retention with door stays
- Lube oil and coolant drains piped to the exterior of the enclosure base
- Radiator fill cover

Security and Safety
- Lockable access doors which give full access to control panel and breaker
- Cooling fan and battery charging alternator fully guarded
- Fuel fill, oil fill and battery can only be reached via lockable access
- Externally mounted emergency stop button
- Designed for spreader bar lifting to ensure safety
- Stub-up area is rodent proof

Transportability
These enclosures are of extremely rugged construction to withstand outdoor exposure and rough handling common on many construction sites.

Options
- Caterpillar Yellow or white paint
- UL Listed integral fuel tank with 680, 400, and 300 gallon capacities
- UL Listed sub-base fuel tank with 660, 1000, 1900, and 2200 gallon capacities.
- Seismic certification per applicable building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, IBC 2012, CBC 2007, CBC 2010
- IBC Certification for 150 mph wind loading
- Anchoring details are site specific and are dependent on many factors such as generator set size, weight, and concrete strength. IBC Certification requires that the anchoring system used is reviewed and approved by a professional engineer
- AC/DC lighting package

Weather Protective Enclosure Sound Levels

Model	Standby eKW	Cooling Air Flow Rate		Ambient Capability*		Sound Pressure Levels (dBA) at 7m (23 ft)
		m^3/s	cfm	˚C	˚F	100% Load
C13	350	8.5	18010	54	129	87
	400	8.5	18010	53	127	88
C15	350	10.2	21542	60	151	86
	400	10.2	21542	58	136	86
	450	10.2	21542	53	127	87
	500	12.7	26910	55	131	87
C18	550	9.1	17234	52	126	86
	600	9.1	17234	50	122	87
	650	12.7	26909	46	114	87
	700	12.7	26909	46	114	87
	750	12.7	26909	46	114	87

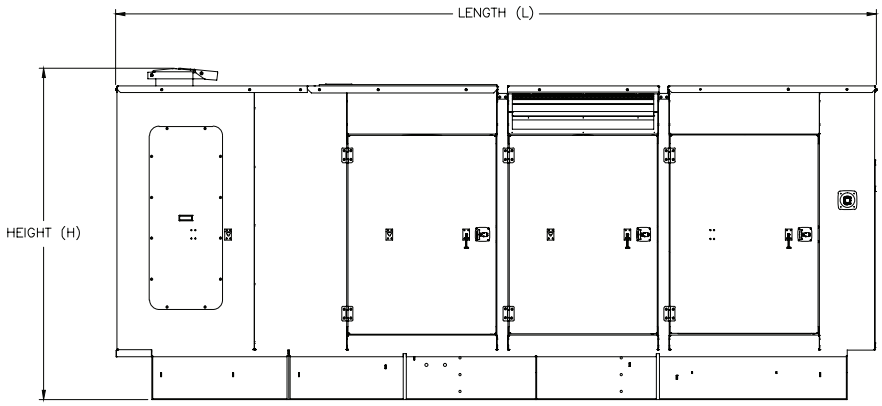
*Cooling system performance at sea level. Consult your Cat® dealer for site specific ambient and altitude capabilities.

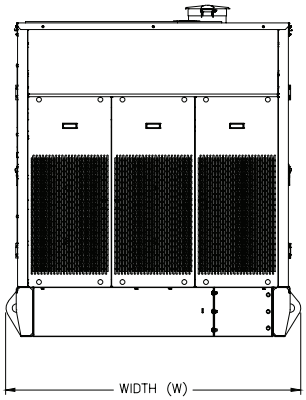
Note: Sound level measurements are subject to instrumentation, installation and manufacturing variability, as well as ambient site conditions.

Component Weights to Calculate Package Weight

Model	Standby eKW	Narrow Skid Base		Wide Skid Base		Weather Protective Enclosure	
		kg	lb	kg	lb	kg	lb
C13	350	253	578	579	1276	1166	2570
	400						
C15	350	273	602	563	1241	1166	2570
	400						
	450						
	500						
C18	550	301	664	563	1241	1222	2693
	600						
	650	286	630	637	1404	1273	2806
	700						
	750						

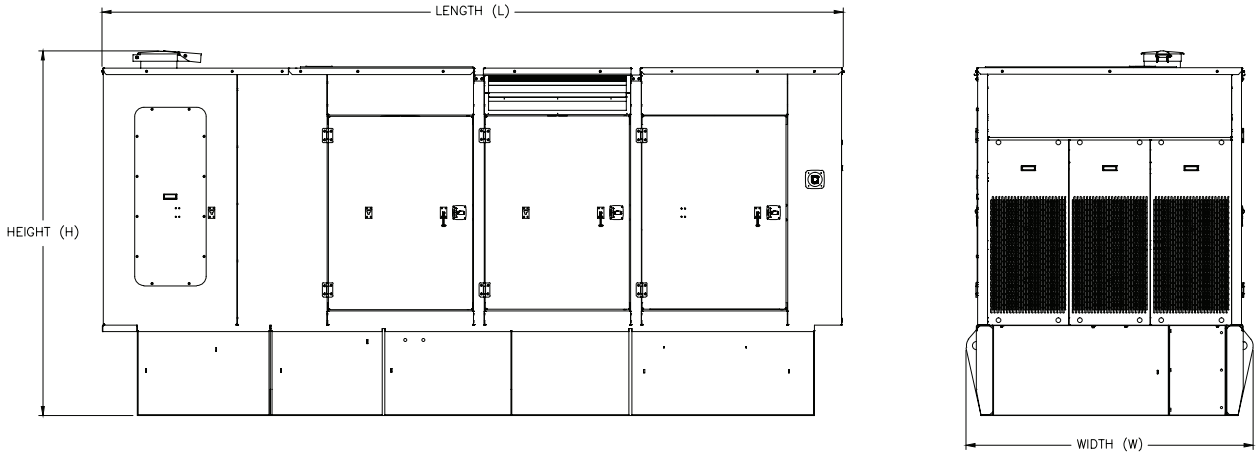
Weather Protective Enclosure Dimensions on Skid Base





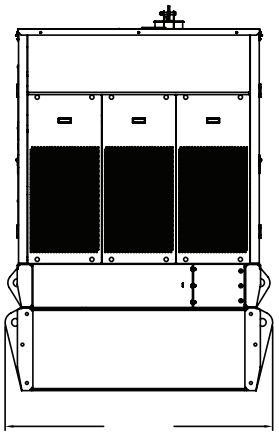
Model	Standby eKW	Length "L"		Width "W"		Height "H"	
		mm	in	mm	in	mm	in
C13	350	4948	194.8	2014	79.3	2320	91.3
	400						
C15	350	4948	194.8	2014	79.3	2320	91.3
	400						
	450						
	500						
C18	550	5183	204.0	2014	79.3	2320	91.3
	600						
	650	5230	205.9	2315	91.1	2553	88.7
	700						
	750						

Weather Protective Enclosure Dimensions on a UL Listed Integral Fuel Tank Base



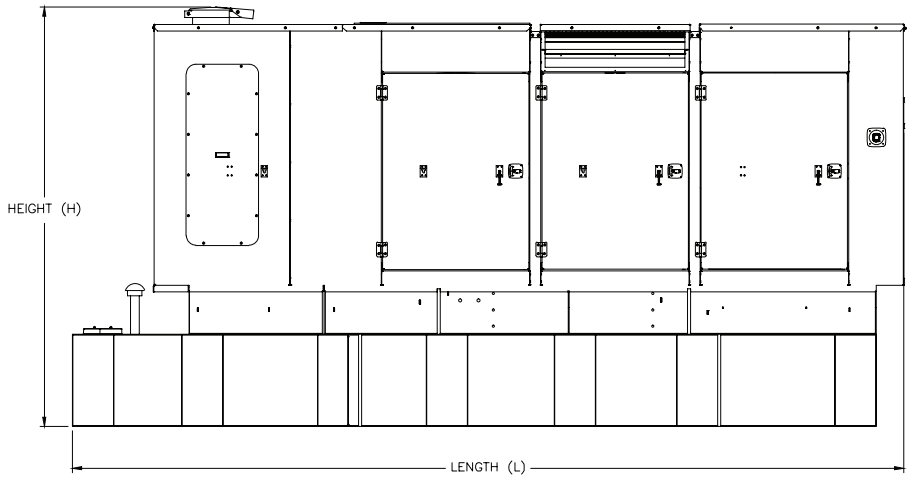
Model	Standby eKW	Length "L"		Width "W"		Height "H"	
		mm	in	mm	in	mm	in
C13	350	5461	215.0	2014	79.3	2743	108.0
	400						
C15	350	4948	194.8	2014	79.3	2619	103.0
	400						
	450						
	500						
C18	550	5183	204.2	2014	79.3	2561	101.0
	600						
	650	6977	274.7	2315	91.9	2675	105.3
	700						
	750						

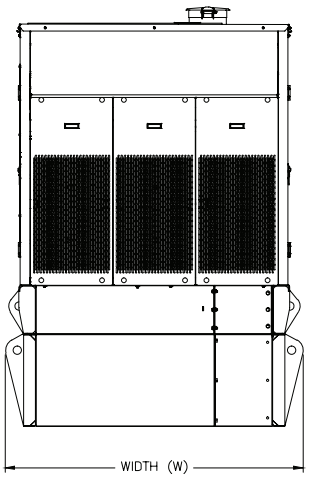
Weather Protective Enclosure Dimensions on a UL Listed 660 Gallon Sub-Base Fuel Tank Base



Model	Standby eKW	Length "L"		Width "W"		Height "H"	
		mm	in	mm	in	mm	in
C13	350	4948	194.8	2056	80.9	2955	116.3
	400						
C15	350	4948	194.8	2056	80.9	2955	116.3
	400						
	450						
	500						
C18	550	5184	204.1	2056	80.9	2897	114.1
	600						

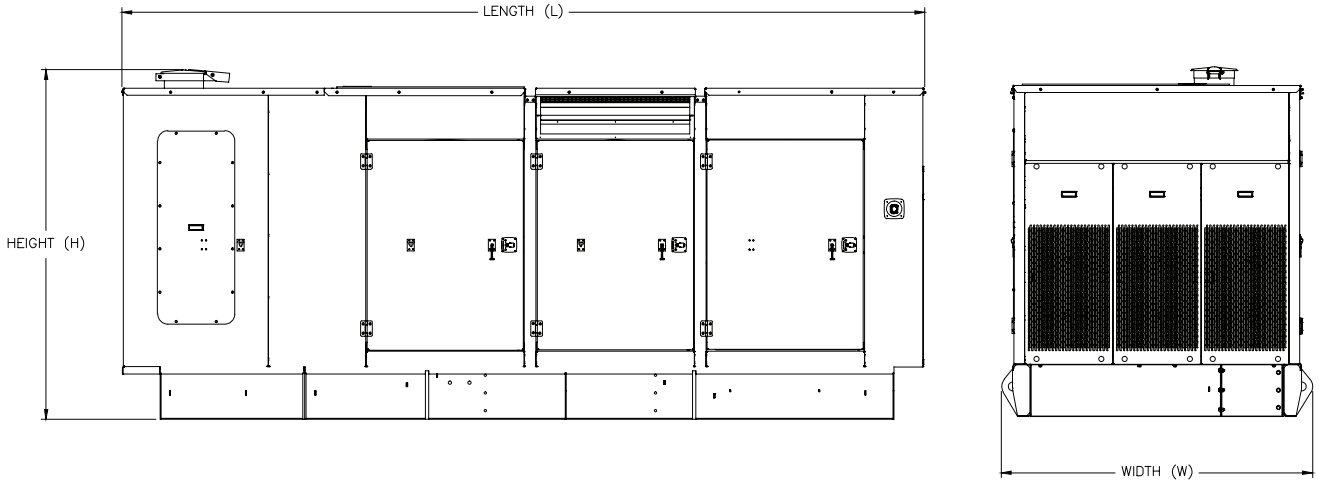
Weather Protective Enclosure Dimensions on a UL Listed 1000 Gallon Sub-Base Fuel Tank Base





Model	Standby eKW	Length "L"		Width "W"		Height "H"	
		mm	in	mm	in	mm	in
C13	350	5751	226.4	2056	80.9	2955	116.3
	400						
C15	350	5751	226.4	2056	80.9	2955	116.3
	400						
	450						
	500						
C18	550	5747	226.3	2056	80.9	2897	114.1
	600						

Weather Protective Enclosure Dimensions on a UL Listed 1900 and 2200 Gallon Sub-Base Fuel Tank Base



Model	Standby eKW	Length "L"		Width "W"		Height "H"	
		mm	in	mm	in	mm	in
C13	350	6382	251.2	2056	80.9	3209	126.3
	400						
C15	350	6382	251.2	2056	80.9	3209	126.3
	400						
	450						
	500						
C18	550	7271	286.2	2056	80.9	3151	124.1
	600						

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PROJECT NAME: Sewer Slip Line Memorial Gym to Library

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Sanitary Sewer

Statement of Work: Develop and slip line the existing sanitary sewer line from the Memorial Gym to the Library. Project estimates repairs of lengths of 60' of 10", 60' of 8", and 100' of 6".

During Fiscal Year 2019 investigations revealed that the storm water and sanitary sewer lines in the project area are in a state of disrepair with evidence of high probability of failure in the short term. Additional evidence was discovered in the basement of the library with infiltrated sanitary sewer effluent. Emergency storm system repairs were completed in 2019 however more work is needed to prevent further failures. At this time the slip line approach is the least cost solution until a major replacement is undertaken. Work will include excavation, demolition, bedding, backfill, surface restoration, connection hardware and sealing within manholes. Please refer to a sketch at the end of this summary.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
8	10	—	—	6.2	9	7.88

Approach: Development and engineering prior to construction commencement and subsequent transition. Work to be scheduled and organized to reduce risks and potential disruption while part of the system is non-operational.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $138,189.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, (i) the

clay lines are beyond the life expectancy with the risk of collapse, (ii) slip lining would be the least invasive solution if the existing clay tiles are not so damaged or blocked with broken tiles, (iii) if there are failures of the existing system, another design solution will need to be developed, and (iv) the location is in a sensitive part of Campus, with students and activities. Construction will be organized to minimize the impact to campus operations.

(E) Proposed schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Engineering												
Construction												

(F) Impact on Sustainability: Reduced sewage leaks.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $137,144

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

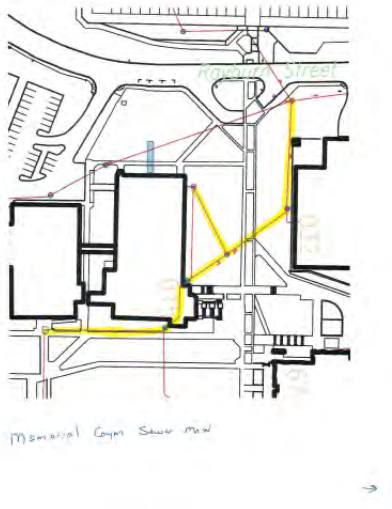


Figure 1. Sewer Slip Line Library to Memorial Gym

PROJECT NAME: Replacement and upgrade of 6” Jordan PRV

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Steam Plant, Electrical Turbines

Statement of Work: There is known performance issues of the existing pressure regulation valve (PRV) design and function for the steam system. This project will replace the piloted 6" Jordan PRV with two smaller parallel (likely 2”, subject to final scope) electronic PRVs. These new PRVs will be integrated into the controls of the micro-turbines for the purpose of bypassing steam flow around the turbines and on to campus for flows that are not in the ranges of the various turbine combinations. These PRVs would also work with the 8" PRV for those times when the turbines are bypassed.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
8	9	6	—	7.1	8	7.64

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $26,752.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $76,089.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: N/A

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, this system will be considered as impactful to the reliable operation of the new turbine project at the steam plant. Impacts to the turbine project must be considered.

(E) Proposed schedule: EPC extends through June 2022 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $75,600.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: Hot Lime Softener PRV Stations Upgrade

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency, Operational Efficiency

UTILITY SYSTEM AFFECTED: Steam Plant and Loops

Statement of Work: In the process of softening water, steam is used. Current PRVs that decrease pressure of steam have failed and may not be sized properly for efficient operations. The scope of this Capital Improvement includes the replacement and upgrade (subject to the outcome of the additional work) of the hot lime softener PRV stations. Additional ancillary elements may have to be replaced.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
8	8	6	—	6.8	8	7.52

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $28,949.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: Study: $190,536.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives.

(E) Proposed schedule: EPC extends through September 2022 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $189,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: Boilers System Valves Upgrade

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency, Operational Efficiency

UTILITY SYSTEM AFFECTED: Steam Plant, Steam loops

Statement of Work: Internal inspection of the Steam Drum has not occurred in the past 7 years because of the stop-check and main header valves are leaking steam and causing the steam drum to be inaccessible for even a short period of time. This puts the entire boiler system at risk as there is no safe way to evaluate the condition of the piping in the steam drum of every boiler. Insurance liability could also be affected as access to the steam drum for internal inspections is an operational requirement.

Proper steam isolation is essential for safety during maintenance of the steam loop, maintenance of the valves, and internal inspection of the boilers. To tackle this problem, 19 valves will be replaced with high quality steam valves, with the main header valves for each boiler being installed a in a double block and bleed arrangement following code requirements. The valves on the main steam loop will be 8" and 10" high quality domestic high pressure steam isolation valves. An additional 10" isolation valve to isolate 'A' boiler is also considered as part of the scope. There may be additional piping, or ancillary components that are also part of the project scope.

During the temporary shutdown of the steam plant, additional testing and evaluations are anticipated to occur, including (i) Eddy current tests on all four boilers to determine water tube integrity and thickness, (ii) inspection of the air pre-heater tubes on 'A' Boiler to determine useful life.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
8	8	5	—	6.6	8	7.44

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $297,000.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $2,939,705

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, this system needs to be developed and scope defined to configure appropriate amount of engineering and equivalent/replacement parts analysis. Due to the age of the steam plant, future parts compatibility needs to be confirmed.

(E) Proposed Schedule: EPC extends through September 2022 (included). Plant shutdown tentatively scheduled for July 2022.

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $2,916,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: Steam Plant Security and Exterior Upgrades

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Steam Plant, Steam system

Statement of Work: The exterior of the Energy Plant has been neglected for several years and is in a general state of disrepair. Most doors at the Energy Plant are not locked or monitored, creating a security and safety issue.

Install "card-key" access and new doors at all exterior entrances of the Energy Plant. Replace the exterior door to the motor control center shed for the wood boiler. Install other systems/equipment as necessary to fully secure building doors and provide safety to operators and utility assets.

Proposed new equipment:

- 8 newly installed exterior doors
- Control Access System with 8 points of control
- 8 Access card locks
- Supply of 100 PROX III proximity fobs
- (1) new Overhead Door Co, roll up door and hardware (see attached PDF files)

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
10	8	—	—	6.4	8	7.36

Approach: Development and engineering prior to construction commencement and subsequent transition.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $250,406.

(B) Forecasted annual operations and maintenance costs: $1,260 (Capped O&M Costs).

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives.

(E) Proposed schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Engineering												
Construction												
Transition												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $248,512

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

Manufacturer, Part/Number	Description	Quantity
DSX 1048 Package, NVMC	8 Door Controller NV Master	1
WinStart WinDSX	Operating Software, Docs	1
MultiClass 920P	HID Proximity Reader, 4”	8
Prox Key III	Key Fob	100
DSX LAN	Network Interface	1

Figure 1. Card Key Door Control System Information

	Item	Qty
1	**610.RD 5'4" x 6'7" Opening**	1
	Mounting:	Right: Steel, Face Mount E Guide; Left: Steel, Face Mount E Guide; Lintel - Steel, Header - Steel
	Curtain:	Windload - 20 PSF, C187, Steel, Gray, Primed, 22 gauge, Interior Mtd Above Lintel, Alternate Endlock
	Operation:	Front Of Hood, Right Hand
	Operator:	RSX - Standard Duty, 1/2 HP, 115/208/230V 1Phase 60Hz, Jackshaft Release, No Entrapment (Constant Contact), Brake, Receiver,Built-In,Std
	Bottom Bar:	Extruded 'T', Aluminum, Mill Finish, Astragal
	Guide:	Steel, Powder Coat-Black, Bellmouth Entry
	Hood:	Round, Steel, Gray, Primed, Drive Side
	Bracket:	Steel, Powder Coat-Black
	Misc:	ReadyPak

Figure 2. 610 Rolling Steel Door Brochure and Specifications

ATTACHMENT 2

610/620 ROLLING SERVICE DOORS

HEAVY-DUTY ROLLING SERVICE DOOR

STRENGTH.
VERSATILITY.
GOOD LOOKS.

BAHR

OVERHEAD DOOR®

INDUSTRY LEADING
COMMERCIAL & INDUSTRIAL SOLUTIONS

Cover image: *Model 610, perforation on top 2/3, bottom 1/3 solid, custom finish*

Image above: *Stormtite™, Model 620, finish in Brown*

* FBC – Florida Building Code; TDI – Texas Department of Insurance; DADE – Miami-Dade Building Code Compliance Office
** When purchased together

Standard features at a glance

Max standard width	30'4" (9246 mm)
Max standard height	28'4" (8636 mm)
Curtain	22 ga. galvanized steel up to 15'4" (4674 mm) wide 20 ga. galvanized steel over 18'4" to 25'4" (5588 -7722 mm) wide 18 ga. galvanized steel over 25'4" to 30'4" (7722-9245 mm) wide
Slat profile	Curved, type C-187 or C-275 (Model 610); Flat, type F-265 (Model 620)
Finish	Gray, Tan, Brown or White
Hood	24 ga. galvanized steel
Wind load	20 psf
Standard mounting	Face-of-wall
Operation	Manual push-up up to 84 ft² (7804 mm²) or 12' x 7' (3658 mm x 2134 mm) Chain hoist over 84 ft² (7804 mm²) or 12' x 7' (3658 mm x 2134 mm)
Standard spring	20,000 cycle
Weatherseals	Bottom bar astragal Guide weatherseals and hood baffle (Model 620)
Guides	Three structural steel angles; PowderGuard® weathered finish with black powder coat
Bottom bar	Extruded aluminum w/weatherseal to 15'4" (4674 mm) Back-to-back steel angles w/weatherseal > 15'4" (>4674 mm)
Lock	Interior slide bolt on push-up Padlockable chain keeper on chain hoist
Warranty	24-month limited; 3 years/20,000 cycles limited on Overhead Door door and operator system**

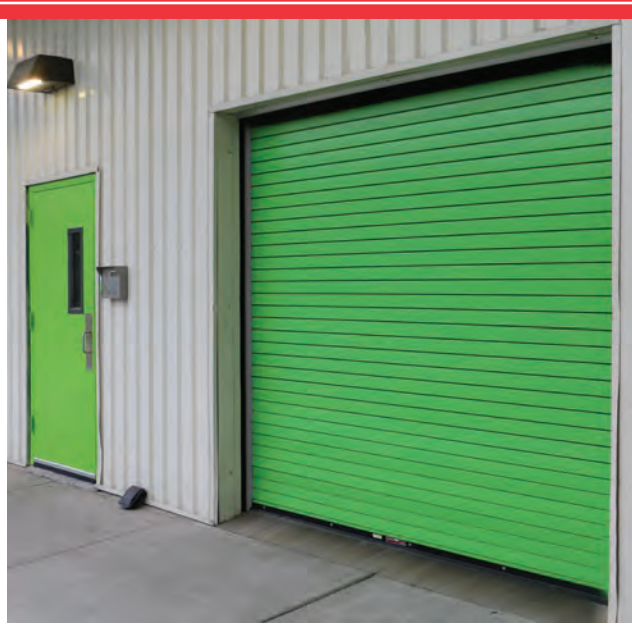
Options

- Electric operator (RHX®, RSX®, RMX®) or crank operation
- Bottom sensing edge, sloping bottom bar
- Galvanized steel bottom bar angles and guides
- Between-jamb mounting
- Stainless steel or aluminum slats
- High-usage package
- High-wind load option (FBC, TDI, DADE)*
- Cylinder lock
- Exhaust ports
- Flat slat profile option F-265 and C-600 heavy-duty 6" curved slat (Model 610)
- Perforated 18-gauge steel slats with 1/16" (2 mm) diameter holes on 1/16" (2 mm) centers
- Fenestrated slats with uniformly spaced openings of 5/8" x 3" (16 mm x 76 mm) or 1" x 10" (25.4 mm x 254 mm) on F265 slat only
- PowderGuard® Premium powder coat paint finish in 197 standard colors, or color-matched to specification
- PowderGuard® Zinc and PowderGuard® Weathered finishes
- Special application doors:
  - Oversized doors to 1500 ft². (139.4 m²)
  - Combination doors with grilles and/or with full or partial standard, perforated or fenestrated slats
  - Spark-resistant doors, craneway doors, pass doors

Door that is are strong, durable, handsome and versatile

Model 610 – the best selling door of our line. Stormtite™ Model 620 is an ideal choice for keeping climate-controlled air in and the elements out. Available to fit openings up to 30'4"x 28'4" (9246 mm x 8636 mm), these doors are fabricated of 18- to 24-gauge galvanized steel (depending upon door width), and can withstand wind loads up to 20 psf. Interlocking slats with endlocks ensure a tight fit while minimizing lateral movement.

Design versatility is afforded by a wide array of options, including a selection of slat profiles; curtain materials, finishes and colors; electric operation, and special features for unique applications. Each of our rolling service doors is configured for precise fitting of components, simpler installation, lower maintenance costs and trouble-free operation for life. The result is a door tough enough to perform exceptionally well in demanding industrial environments – and attractive enough to meet exacting aesthetic requirements.

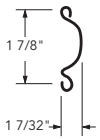


Model 620, custom finish

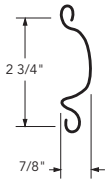
Slat profiles

Model 610

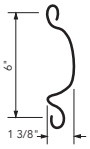
C-187 Slat



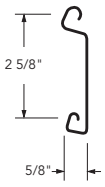
C-275 Slat



C-600 Slat

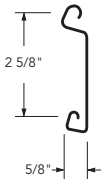


F-265 Slat, FE-265 Slat



Model 620

F-265 Slat, FE-265 Slat



Finish options

	Finish details
Standard polyester base coat	Two-coat system with polyester based top coat.
PowderGuard® Premium powder coat	Weather resistant polyester powder coat available in 197 colors; custom color match and EZ Clean treatment options available.
PowderGuard® Zinc finish	Zinc enriched powder coat provides excellent corrosion protection that outperforms both hot dipped and cold galvanized steel. Color selection from 197 powder coat colors; custom color match also available.
PowderGuard® Weathered finish	Industrial textured powder coat provides a thicker, more scratch resistant coat for added product protection.

Colors

Gray Tan Brown White

Actual colors may vary from brochure due to fluctuations in the printing process. Always request a color sample from your Overhead Door Distributor for accurate color matching.

Model 610, perforated steel slat, PowderGuard® Weathered finish in Iron

Architect's Corner

A resource for architects, containing comprehensive technical and resource materials to support your project, including drawings and specifications for commercial doors.

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The original, innovative choice for unequalled quality and service.

Overhead Door pioneered the upward-acting door industry, inventing the first upward-acting door in 1921 and the first electric door operator in 1926. Today, we continue to be the industry leader through the strength of our product innovation, superior craftsmanship and outstanding customer support, underscoring a legacy of quality, expertise and integrity. That's why design and construction professionals specify Overhead Door products more often than any other brand. Our family of over 400 Overhead Door Distributors across the U.S. and Canada not only share our name and logo, but also our commitment to excellence.

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1-800-929-DOOR • sales@overheaddoor.com
www.overheaddoor.com

PROJECT NAME: Catwalk and Ladder Upgrades

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Steam Plant, Steam System

Statement of Work: All existing catwalks and ladders will be upgraded throughout the steam plant to allow proper and safe maintenance of the system, ensuring compliance of safety codes. This Capital Improvement estimates that 35% will need to be fully replaced.

These are some examples of the current physical condition and some of the upgrades to be performed:

- Woodchip Silo platform is pieced together and does not meet safety code.
- Woodchip ships ladders need to be secured and allow access to UES employees only.
- Ladder to platform does not have proper fall protection.
- Ladder system on boiler exhaust needs to be removed.
- Install steps on each side of the AHU pipes with platforms and handrails.
- Install cages on all multi-level ladders.
- Install ladders with higher handrails.
- Install handrails at all points of unprotected steep steps.
- Mid-rail and top-rail around boilers are not compliant, entire area needs to have code approved platform.

Additionally, proper access to the boiler's economizers will be added. The additional work will fully identify which structures are in critical condition and in need of replacement as well as the most appropriate solution for these items.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
10	3	—	—	4.9	9	7.36

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $23,377.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $760,894.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives.

(E) Proposed schedule: EPC extends through June 2022 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $756,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: Domestic Waterline Replacement Campus Dr. to Blake Ave.

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Domestic Water

Statement of Work: This Capital Improvement covers the replacement of the domestic waterline from Campus Dr. to Blake Ave. This is some of the oldest waterline on campus and is at the end of its life. The length is approximately 550 feet. Work will include excavation, demolition, bedding, backfill, surface and landscape restoration, valves, ties, taps, tees, and thrust blocks. Additionally, controls will be updated.

The project also includes the required elements for future connections and system growth, and the necessary chlorination sampling and testing, to guarantee the safety of the system after being brought on-line.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
8	10	—	—	6.2	8	7.28

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $12,460.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $1,099,075.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, (i) the existing 6" line is constructed of universal pipe which is well beyond its life expectancy, (ii) failure of this line would

create unexpected outages, fire risk, and potential flooding if failure, and (iii) this is a sensitive area of campus with the Camperdown Tree line.

(E) Proposed schedule: EPC extends through September 2022 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Positive, due to the reduction in water leaks.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,090,800.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: Steam Plant Renovation and Upgrades

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Steam Plant

Statement of Work: The steam plant system is near the end of its useful life and needs to be accessed in order to deliver the campus steam needs reliably and responsibly.

To extend the useful life of the asset, several renovations are needed, including the bearings, conveyors, and hydraulic rams in the truck dump system. Similarly, a replacement of the carrier absorber tank, and a complete overhaul of the silo sweep will be performed, including the auger motor, the gearbox, and other ancillary items, will be included as part of this Capital Improvement.

These systems are critical to the safe operation of the steam plant and are structural to meet the meet the safety and fire regulations.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
8	8	6	4	7.2	7	7.08

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $28,954.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $511,727.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, no

destructive testing is anticipated, however due to the age of equipment the disassembly and reassembly may cause unanticipated damage to failing equipment.

(E) Proposed schedule: EPC extends through September 2022 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $507,600.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: McClure Chiller Improvements

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency, Operational Efficiency

UTILITY SYSTEM AFFECTED: Chilled Water

Statement of Work: The existing McClure chiller (350-ton Carrier model) has been in service since 1995 and has not been serviced since 2013. The unit is in need of a major overhaul, and additional work needs to be conducted to define next steps. This is the only chiller capable of running in the winter (no redundancy) and should it fail all critical cooling loads are at risk.

As part of the overhaul the following elements will be replaced, bearings, coils, damaged expansion valves, control elements, refrigerant R-134A (including removal and disposal), and any other component that might be needed to extend the chiller's useful life. Installation of a new electrical meter is also included.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
5	8	6	—	5.6	8	7.04

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $26,752.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $179,552.

(B) Forecasted annual operations and maintenance costs: $3,000 (Capped O&M Costs).

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, this

assumes no other causes or problems with the system, and normal wear and tear is the reason for replacement.

(E) Proposed schedule: EPC extends through September 2022 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Positive, electrical consumption is expected to be reduced.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $178,200.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: A reduction of 5-10% in the consumption of electricity is expected.

PROJECT NAME: SCCP Chiller Replacement and Improvements

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Resiliency

UTILITY SYSTEM AFFECTED: Chilled Water

Statement of Work: The goal of this project is to ensure that the provision of chilled water meets the campus needs at all times. One of the existing 500-ton SmardT chillers will be dismantled and substituted with a new electrically-driven chiller of equal or greater capacity at the SCCP. The new chiller will use an environmentally friendly refrigerant.

This Capital Improvement includes the demolition, waste management of the old chiller, and the transportation, installation, and commissioning of the new chiller. The installation of new electrical meters is included for each of the chillers. Other ancillary systems may be replaced for this work.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
5	8	6	—	5.6	8	7.04

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $32,383.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $2,392,997.

(B) Forecasted annual operations and maintenance costs: $5,000 (Capped O&M Costs).

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives.

(E) Proposed schedule: EPC extends through November 2022 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Positive, due to the better electrical efficiency of the new equipment versus the replaced one. Additionally, the new refrigerant will be more environmentally friendly than the existing one.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $2,376,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: A reduction of 5-10% in the consumption of electricity is expected.

PROJECT NAME: Storm Water System Improvements

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Storm Sewer

Statement of Work: Due to capacity constraints, much of the storm sewer system is unable to function properly during certain storm events, causing surface flooding and deterioration to manholes and catch basins. As part of the additional work, 2,000 feet of the most critical part of the storm water system that have known problems and perform improvements is going to be surveyed including checked with camera. Prior to the assessment, the system will be jet-cleaned.

As part of this Capital Improvement, 50% of the total length of the assessed system (the section identified to be in the worst condition) will be replaced, including major repairs or full replacements of failing storm catch basins and manholes across campus. Works will also include the excavation, demolition, bedding, backfill, surface restoration, and any other items needed for a complete and functional system. Other adjacent piping systems could be impacted.

The final solution and scope will vary depending on the results of the additional work and based on the conditions found, with works ranging from a complete replacement to slip-lining.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
8	8	—	—	5.6	8	7.04

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $376,179.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $2,176,806.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, there is also evidence of storm water overflow infiltrating the Memorial Gym.

(E) Proposed schedule: EPC extends through September 2023 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Positive, due to the decrease in leaks and infiltrations.

(G) Anticipated tax credits or other benefits: No tax credits or other befits have been identified.

(H) Fee or charge payable to the Operator: $2,160,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: Sanitary Sewer System Improvements

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Sanitary Sewer

Statement of Work: Improvements to the sanitary sewer system are needed to increase the system's reliability and functionality. The sanitary sewer system has many sections that are far beyond their useful life. To address this situation, 2,000 feet of the most critical sections of the sanitary sewer system which have had poor performance and caused problems in past years will be investigated. As part of the additional work, these pipes will be jet-cleaned, and assessed via video camera, including the catch basins, the manholes' integrity, and the creation of a pipe material catalog with a condition report.

As part of the Capital Improvement, 50% of the total length of the surveyed system (that identified to be in worst conditions) will be replaced. Works will also include excavation, demolition, bedding, backfill, surface restoration, and any other items needed for a complete and functional system. Other adjacent piping systems could be impacted.

The final solution and scope will vary depending on the results of the additional work and based on the conditions found, with works ranging from a complete replacement to slip-lining.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
8	8	—	—	5.6	8	7.04

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $376,179.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $2,176,806.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See Previous Narratives. It assumes broken pipe pieces and debris. Tree roots and human solid waste blockages have been found historically in this system on campus. High likelihood of COVID-19 contamination risk.

(E) Proposed schedule: EPC extends through September 2023 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Reduction in sewage water leaks and infiltration. Reduction in sewage system clogs.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $2,160,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: NCCP Cooling Tower Improvements

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Resiliency

UTILITY SYSTEM AFFECTED: North Campus Chiller Plant

Statement of Work: This Capital Improvement is needed to ensure a reliable and steady chilled water supply to serve all campus' needs. Arup's Condition Assessment Report already indicates that the NCCP cooling towers #1 and #3 are far passed its expected useful life and are in a terminal condition. The proposed additional work includes a thorough analysis to identify any major repairs and improvements in the plant's cooling towers.

Subject to the analysis and the outcome of the additional work, it is anticipated that the scope include a full replacement of the cooling tower in worst condition and other major repairs in the remaining towers. A common header is also considered for all towers with an indoor basin, to allow for enhanced performance in cold weather. Secondary pumps will also be rebuilt or resized for the new flows. Other ancillary systems will be impacted with this work. New metering devices for both electricity and water for each tower affected are considered as part of the scope.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
4	7	6	—	5.3	8	6.92

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $32,952.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $1,741,097.

(B) Forecasted annual operations and maintenance costs: $10,000 (Capped O&M Costs).

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, had been detected flow and temperature issues. Equipment at end of life. Tower design is outdated, causing poor performance and low efficiency. Secondary pumps are poorly designed for current needs and pump curves do not meet current flow needs. These issues reduce NCCP's ability to meet peak cooling demands, risking critical cooling loads such as IT servers and research.

(E) Proposed Schedule: EPC extends through August 2022 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Positive. A reduction in water and electricity consumption is expected due to enhanced CT System efficiency. More environmentally friendly chemicals will be used.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,728,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: A reduction of 10% in water and electricity consumption is expected due to enhanced CT System efficiency. This cannot be quantified due to the lack of metering devices.

PROJECT NAME: Domestic Water Improvements for Central Mall

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Domestic Water

Statement of Work: This Capital Improvement will address known failures and poor performance due to the aged systems involved.

Subject to the additional work, a complete replacement of the domestic water line of approximately 600 feet, running from the SE side of the Renfrew Hall to SE of the Agricultural Science Bldg. The new pipe will be 6" PVC instead of the existing 4" galvanized line. Works will include excavation, demolition, bedding, backfill, surface and landscape restoration, valves, ties, taps, tees, and thrust blocks. The required elements that would allow for future connections and system growth, as well as the necessary chlorination sampling, and testing to ensure the safety of the system are also included. In addition, system controls might need to be updated. Other systems might be impacted.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
8	10	—	—	6.2	7	6.68

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $15,207.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $598,866.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, (i) the

existing 4" galvanized pipeline has deteriorated beyond repair, (ii) collapses and failures have occurred in 2017, and (iii) this new line will improve the reliability and functionality of the water loop in this area.

(E) Proposed schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Positive, due to the reduction in water leaks.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $594,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: KPI Metering Improvements

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Resiliency

UTILITY SYSTEM AFFECTED: All Utility Systems

Statement of Work: This Capital Improvement seeks to obtain accurate information and allow the Concessionaire to submit KPI reports as required. It is currently not possible to provide complete information due to extensive damages in the existing network of meters. The meters referenced in the table below do not exist.

Utility System	Meter Site	Meter Site Type	UOM	Used for App G Reporting (Y/N)
UIDW	UI-DW-WELL1	PROD	CU FT	Yes
UIDW	UI-DW-WELL2	PROD	CU FT	Yes
UIIRRIGATION	UI-IRRIGATION-PUMP1	PROD	CU FT	Yes
UIIRRIGATION	UI-IRRIGATION-PUMP2	PROD	CU FT	Yes
UIELEC	SEL735-EAST-FEED	CONSUMP	KWH	Yes
UIELEC	SEL735-WEST-FEED	CONSUMP	KWH	Yes
Reclaimed		CONSUMP	GPM	Yes
UIELEC	ELM080-0-011	CONSUMP	KWH	Yes
UIELEC	ELM081-0-011	CONSUMP	KWH	Yes
UISTEAM	CNM065-0-NCCP	CONSUMP	LBS	Yes
UISTEAM	UI-BOILER1	PROD	LBS	Yes
UISTEAM	UI-BOILER2	PROD	LBS	Yes
UISTEAM	UI-BOILER3	PROD	LBS	Yes
UISTEAM	UI-BOILER4	PROD	LBS	Yes
UIDW	DWF018-0-011	CONSUMP	CU FT	Yes
UIDW	DWF026-0-NCCP	CONSUMP	CU FT	Yes
UICW	CWP002-0-NCCP	PROD	TON	Yes
UICW	CWP003-0-NCCP	PROD	TON	Yes
AELEC	E1024304-070	CONSUMP	KWH	Yes
AELEC	E1024306-089	CONSUMP	KWH	Yes
UIELEC	ELM112-0-144	CONSUMP	KWH	Yes
UIDW	DWF071-S3-749	CONSUMP	CU FT	Yes
UICW	748-SCCP-CH1 Tonnage	PROD	TON	Yes
UICW	748-SCCP-CH2 Tonnage	PROD	TON	Yes
UICW	SCCP CH3 CT3, CH-3 Tonnage Calc'd	PROD	TON	Yes

The scope of this Capital Improvement focuses only on the meters that are necessary to prepare KPI reports in the systems identified below.

Utility System	Type	Location in Schedule 2	Intent of Monitoring Point	KPI? (Y/N)	Cap Ex required?
UICW	Temperature	Part III, Section 1a	Chilled Water supply temperature	Yes	Yes
Steam	Pressure	Part IV, Section 1b	Steam distribution pressure	Yes	Yes
Electric	Electric	Part V, Section 3d	Electronic Power metering	Yes	Yes
UIDW	Pressure	Part VI, Section 2b/Section 7d	Max Pressure at services	Yes	Yes
UIDW	Flow	Part VI, Section 5b	Water system losses	Yes	Yes
Utility SCADA	consumption	Part VIII, Section 3e	All meters connected to Utility Network	Yes	Yes
Reclaimed	Flow	Part XI, Section 1d	Reclaimed water system losses	Yes	Yes
Reclaimed	Pressure	Part XI, Section 2b	Pressure at all services	Yes	Yes

The meters will be checked, substituted with new units, and newly installed (for those missing). The scope currently assumes meter replacements for at least 50% of the meters inspected. The selection and installation will be done considering their future integration in a control system. All associated mechanical and civil works are also included.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
2	5	2	2	2.9	9	6.56

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $183,600.

Additional notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $1,304,424.

(B) Forecasted annual operations and maintenance costs: $30,000 (Capped O&M Cost).

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, the study will consider (i) existing metering/monitoring documentation found/made available at the time of this proposal, (ii) controls and monitoring hardware/software systems, and (iii) historical operational and reporting documentation.

(E) Proposed Schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: There are expected sustainability improvements as systems are monitored and optimized.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,296,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: There are expected energy savings as monitoring systems inform operational optimization. These amount cannot be quantified due to the lack of precise metering.

PROJECT NAME: Utility Tunnel General Improvements

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Chilled Water, Compressed Air, Steam Loop

Statement of Work: Tunnel sections in the Utility System are up to 108 years old and some have partially collapsed showing extensive signs of failure, providing unsafe conditions for personnel access and circulation of pedestrians and vehicles over the tunnel structures.

As part of the additional work associated to this Capital Improvement, a complete visual structural investigation of 2,500 ft of tunnel will be conducted, including core sampling of concrete walls and an engineering analysis of the utility tunnel network. Subject to the results, the project will include the major repair of a maximum length of 1,250 ft, covering the sections that are identified to be in the worst condition. The scope of this Capital Improvement will exclude any repairing in piping, cables, or any system inside those sections.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
9	7	—	—	5.7	7	6.48

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $81,530.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $2,829,428.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives.

(E) Proposed schedule: EPC extends through September 2024 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $2,808,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

PROJECT NAME: Utility Tunnel Improvements at 7th Street and Janssen Engineering Building

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Steam, Water, Chilled Water, Compressed Air

Statement of Work: The tunnel section at 7th Street and Janssen Engineering Building (JEB) is a known location of structural failure. The length of this section is 40 ft in length. The tunnel lid and walls are crumbling and collapsing with ground water intrusions. A collapse would put at risk all the utilities that pass through this section of tunnel (steam, chilled water, compressed air). The tunnel also acts as the sidewalk for pedestrians and runs under the road at the intersection, posing a life safety risk. This section is approximately 72 years old.

The scope of the Capital Improvement includes a major repair of this tunnel section. Any repairing in piping, cables or any system inside this section is not excluded. The additional work will provide further definition and characteristics of the activities to be included in this major repair.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
9	7	—	—	5.7	7	6.48

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $34,448.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $381,029.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. Destructive testing is not anticipated to develop this project, however potential damage resulting from inspections is not contemplated in this proposal.

(E) Proposed schedule: EPC extends through September 2022 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $378,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

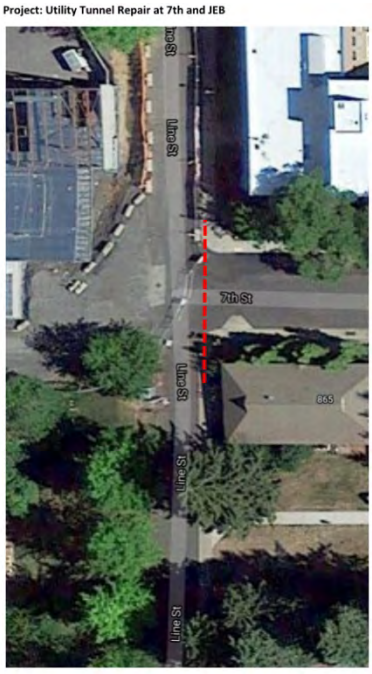

Figure 1. Intersection 7th and JEB

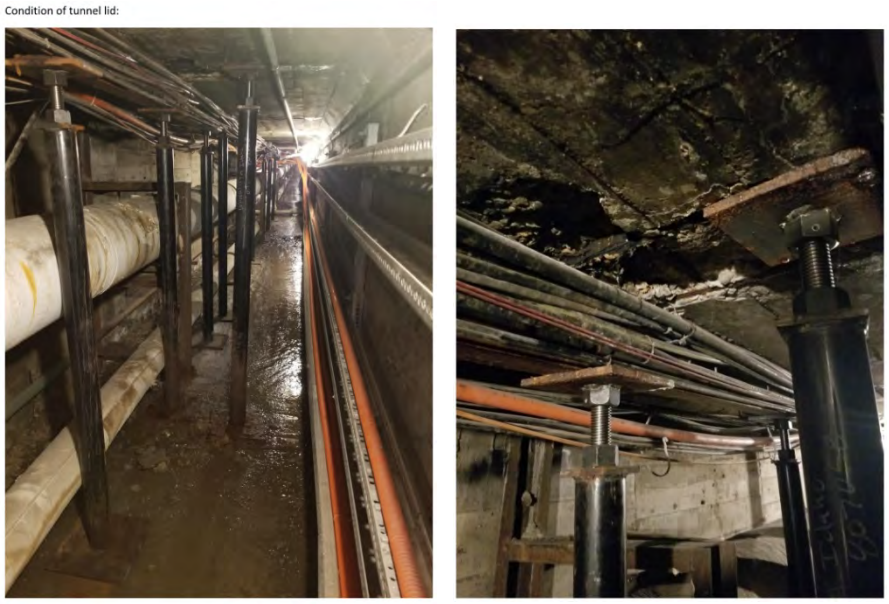

Figure 2. Condition of Tunnel Lid

PROJECT NAME: Utility Tunnel Improvements at Renfrew Hall

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Electrical distribution, Steam, Water, Compressed Air, Telecom

Statement of Work: The tunnel section at Renfrew Hall, including the Central Mall tunnel that runs North and South, is a known location of structural failure. The length of this section is 60 feet in length. This section of tunnel is used for foot traffic as well as vehicular traffic including fire engine access to the Central Mall. The tunnel lid and walls are crumbling and collapsing with ground water intrusions. A collapse would put at risk all the utilities that pass through this section of tunnel (high voltage electrical distribution, steam, chilled water, compressed air). This section is approximately 59 years old.

The scope of the Capital Improvement includes a major repair of this tunnel section. Any repairing in piping, cables or any system inside this section is not excluded. The additional work will provide further definition and characteristics of the activities to be included in this major repair.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
9	7	—	—	5.7	7	6.48

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $35,885.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $571,412.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. Destructive testing is not anticipated, however potential damage resulting from inspections is not contemplated in this proposal.

(E) Proposed schedule: EPC extends through September 2023 (included).

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $567,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

Project: Utility Tunnel Repair at Renfrew

PROJECT NAME: SCCP Cooling Tower Improvements

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency, Operational Efficiency

UTILITY SYSTEM AFFECTED: South Campus Chiller Plant, South Campus Chilled Water Loop

Statement of Work: This Capital Improvement is needed to improve underperforming conditions in the cooling system. The cooling tower makeup water does not keep up with evaporation rate. Similarly, the tower level control is poorly designed and prone to failure. On shutdown, the tower basin is prone to overflow and causes cavitation of the condenser pump during operations. All these circumstances reduce the plant's ability to meet peak cooling loads.

As part of the additional work suggested for this Capital Improvement, an analysis of the plant's deficiencies will be conducted to define the scope and cost of the changes and improvements needed to extend the life of the asset and improve the cooling towers performance. The cavitation and overflow issues will also be investigated.

Subject to the outcome of such analysis, the installation of an actuated ball valve and probe level control on the 900-ton BAC cooling tower that supports the York chiller is proposed as this project's scope to correct the water flow issue.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas
5	5	5	—	4.5

Risk
7

Score
6.00

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $16,442.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $119,824.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. Makeup water supply does not keep up with peak demands.

(E) Proposed schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Minor reduction in power consumption due to the improve in efficiency.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $118,800.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Minor reduction in power consumption due to the improve in efficiency.

PROJECT NAME: Sheep Farm Water Vault Improvements

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Domestic Water

Statement of Work: This Capital Improvement will provide electrical service and insulation to the existing structure to protect the water system components during the winter months. The project includes the installation of approximately 400 ft of 100-amp service from Pump House #3 to the Sheep Farm water vault.

In addition, the scope of work covers the installation of R-21 or better insulation on all walls and ceilings with the addition of a vapor barrier to protect the existing water meters, as well as a backflow prevention valve.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
6	6	—	—	4.2	6	5.28

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $17,956.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $119,951.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. The existing equipment is subject to freezing and not performing.

(E) Proposed schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $118,800.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Minor impact in electrical consumption.

PROJECT NAME: Storm Sewer Slip Line Campus Dr. and Blake Ave.

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Sanitary Sewer

Statement of Work: Slip line the existing storm sewer lines along Campus Drive to the Niccolls Building and in front of the Lionel Hampton School of Music to Blake Avenue. This system is known to be some of the oldest on campus and is well beyond its expected service life are in a state of disrepair with evidence of high probability of failure in the short term. This slip lining is expected to be 75' in length. At this time, the slip line approach is the least cost solution until a major replacement is undertaken. Scope of work includes excavation, demolition, bedding, backfill, surface restoration, connection hardware and sealing within manholes. Please note a sketch of this the system at the end of the summary.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
6	6	—	—	4.2	6	5.28

Approach: Development and engineering prior to construction commencement and subsequent transition.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $42,147.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, (i) the clay lines are beyond the life expectancy with the risk of collapse, (ii) slip lining would be the least invasive solution if the existing clay tiles are not so damaged or blocked with broken tiles, (iii) after investigation of the existing piping, slip lining the existing system may not be a solution and another engineering design would be needed, and (iv) the location is in a sensitive part of Campus with the Camperdown trees.

(E) Proposed schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Engineering												
Construction												
Transition												

(F) Impact on Sustainability: Reduction of sewage leaks. Reduction of retained sewage water and thus, reducing the presence of bugs and rodents.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $41,828

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

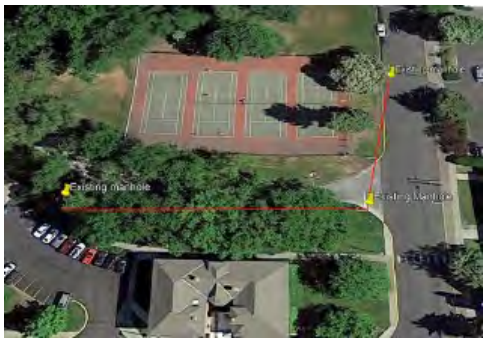

Figure 1. Campus Drive to Blake

Figure 2. Campus Drive by Niccolls

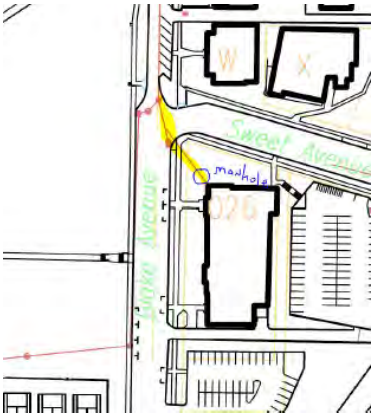

Figure 3. Intersection Blake and Sweet

PROJECT NAME: Sanitary Sewer Slip Line Campus Dr. and Blake Ave.

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency

UTILITY SYSTEM AFFECTED: Sanitary Sewer

Statement of Work: Develop and slip line the existing sanitary sewer line from Campus Drive to Blake Avenue. This section of the sewer system is known to be some of the oldest on campus and well beyond its expected service life. During Fiscal Year 2019 investigations revealed that the storm water and sanitary sewer lines in the project area are in a state of disrepair with evidence of high probability of failure in the short term. At this time, the slip line approach is the least cost solution until a major replacement is undertaken. The expected slip lining is 410' of 6" and 720' of 12"". Works will include excavation, demolition, bedding, backfill, surface restoration, connection hardware and sealing within manholes. Please refer to the sketch at the end of this summary.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
6	6	—	—	4.2	6	5.28

Approach: Development and engineering prior to construction commencement.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $145,950.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, (i) the clay lines are beyond the life expectancy with the risk of collapse, (ii) slip lining would be the least invasive solution if the existing clay tiles are not so damaged or blocked with broken tiles, (iii) after investigation of the existing piping, slip lining the existing system may not be a solution and another engineering design would be needed, and (iv) the location is in a sensitive part of Campus with the Camperdown trees.

(E) Proposed schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Reduction of sewage leaks. Reduction of retained sewage water and thus, reducing the presence of bugs and rodents.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $144,846.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in supply costs or consumption costs: Negligible change.

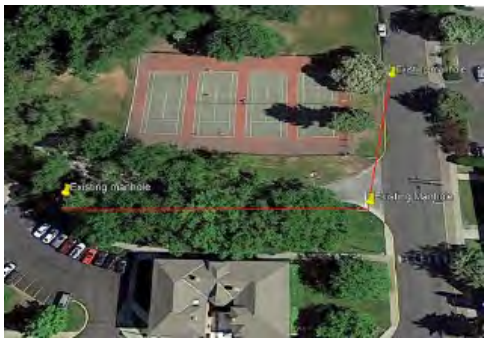

Figure 1. Campus Drive to Blake

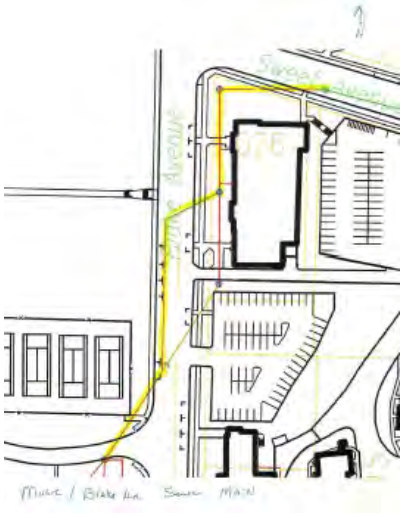

Figure 2. Intersection Blake and Sweet

PROJECT NAME: Thermal Energy Storage Tank Sensor Upgrades

DATE SUBMITTED: 06/29/2021

PROJECT JUSTIFICATION CATEGORIES: Safety, Resiliency, Efficiency

UTILITY SYSTEM AFFECTED: Chilled Water

Statement of Work: The level sensors on the Thermal Energy Storage (TES) tank are not reliable and some have failed. As a result, no accurate information is provided to the control system. Similarly, operational problems have been identified in the temperature probes, which are needed to properly manage the level of the thermal tank and optimize its performance.

This project will procure and replace the level and temperature measurement systems.

Why: Project has been prioritized according to the scoring criteria presented in the submission.

Safety	Resiliency	Operational Efficiency	Carbon Neutrality	Four Focus Areas	Risk	Score
6	7	6	—	5.7	5	5.28

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $18,036.

Additional Notes: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Costs: $81,664.

(B) Forecasted annual operations and maintenance costs: $7,500 (Capped O&M Cost).

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives.

(E) Proposed schedule:

	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22
Additional Work												
EPC												

(F) Impact on Sustainability: Negligible impact.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $81,000.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible change.

Sacyr Plenary
Utility Partners Idaho

FIVE-YEAR PLAN
THE UNIVERSITY OF IDAHO UTILITY SYSTEM

This Five-Year Plan consists of a budget and plan prepared by the Concessionaire in accordance with Section 7.2 for the operation of the Utility System and performance of its obligations under the Long-term Lease and Concession Agreement for the University of Idaho Utility System, in respect of the period consisting of Fiscal Years 2023 through 2027.

To: University of Idaho
Vice President for Finance & Administration
Email: vpfinance@uidaho.edu

With a copy to:

Office of the General Counsel
Email: counsel@uidaho.edu

Date: February 1, 2022

TABLE OF CONTENTS

I. Introduction

Sacyr Plenary Utility Partners Idaho LLC is excited to submit this Five-Year Plan, that delineates the Capital Improvements proposed to make in each Fiscal Year to the Utility System, including Capital Improvements to address conditions of the Utility System existing prior to the Closing Date.

Throughout this first year of the Term, the Concessionaire has been able to further understand the conditions, limitations, and operational status of the Utility System. The most visible result of such steep learning has been the discovery of latent issues with the Utility System that were in critical condition prior to the start of the Term and will continue to be in critical condition until applicable Capital Improvements are completed. As a result, the core focus of this Five-Year Plan is the stabilization of the Utility System, prioritizing safety and reliability in accordance with the Performance Standards and Key Performance Indicators, over other potential objectives.

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All projects listed in this document are proposed to be performed by Moscow ID Eco District I, LLC, a fully-owned subsidiary of McKinstry Essention, LLC, that serves as Contractor to the Operator within the Long-Term Lease and Concession Agreement for the University of Idaho Utility System.

II. Planning Process

The planning process for Fiscal Year 2023 was built upon a subset of the four founding principles: *safety*, *reliability* leading to resilience, *operational efficiency*, and *carbon neutrality*. In order of priority, those principles are:

- Provide for the s*afety* of the general public, campus community, and operations personnel.
- Operate, maintain, and plan for *reliability* and resilience of the Utility System.
- Improve *operational efficiency*.
- Develop and implement a plan for energy independence and *carbon neutrality*.

While comprehensive stewardship of the Utility System resources requires that all four of these principles be represented in the planning process, early experiences with the Utility System have revealed a critical need to focus the near-term planning efforts on two of them: safety and resilience. Many components of these systems are at the end of their useful life, historically deficient of proper maintenance, or in a partial state of failure leaving the likelihood of a critical system failure unacceptably high and calling for a critical need to upgrade. Achieving a safe environment and resilience in the existing systems is critical before any substantive gains in operational efficiency or carbon neutrality can happen.

Above all, it is imperative that the safety of the general public, the campus community, and the operations personnel be prioritized. Following closely behind, the focus on safety is that of building resilience, starting with reliability. System failures have revealed substantial reliability issues and the Concessionaire's team has systematically identified vulnerabilities in the Utility System.

As a result, the planning process for Fiscal Year 2023 is solely focused on safety and resilience for the *stabilization* of the Utility System, so more progressive long-range planning can commence in the future. Besides the direct safety and business interruption risks, the vulnerabilities identified are direct threats to meeting the Performance Standards and Key Performance Indicators in the Concession Agreement. The Capital Improvements proposed within this Five-Year Plan are specifically identified to manage these risks and constitute a crucial first step in advancing the quality of the Utility System.

A planning process focused on safety and resilience required evaluating the risks associated with the existing systems and their mitigation. This methodical approach characterized the Utility System's subsystems to evaluate deficiencies and vulnerabilities. In the case of complex systems, such as the Energy Plant, the components of the subsystems were also identified. For each system, subject matter experts were engaged in planning sessions to discuss the condition, needs, and potential vulnerabilities associated throughout the Utility System, and within them, 44 subsystems and approximately 180 component sets. Once each system's deficiencies and opportunities were identified, project scopes were developed that centered on addressing these safety and resiliency issues. These projects were structured to maximize complementary work to reduce the number of service disruptions or otherwise gain implementation efficiency. While it will be continuously improved over the next several planning cycles, this effort established the concept of *system planning* for each Utility System.

Vulnerability Assessment

The potential for each Capital Improvement to mitigate risks was established by using a simple vulnerability assessment matrix. This approach evaluated (i) the *impact* of the risk/vulnerability based on the safety and reliability principles, and (ii) the *likelihood* of a failure. It is worth noting that all the Capital Improvements identified herein are presented because they mitigate either a significant safety or resiliency risk, or in several cases, both.

Capital Improvements were assigned an impact rating of low, medium, or high from both a safety and a reliability standpoint. The safety sub-rating estimates the impact of a failure, due to the vulnerability, on the health and life safety of the general public, campus community, and operations staff. The reliability sub-rating estimates the impact of a failure, due to the vulnerability, on business interruption impacts, costs of emergency repair/temporary operations, and cascading property damage resulting from failure (floods, fire, freeze up, building shutdown, etc.). Each risk was also assigned a likelihood rating of low, medium, or high, according to the probability that a failure may occur.

Using a simple matrix, Capital Improvements were assigned a *phase designator*, from Phase 1 to Phase 5. This designation provides guidance about the importance of a Capital Improvement. A later phase designation should not be construed as diminishing the necessity of the project but rather is a reflection of the reality that all projects cannot be done simultaneously.

Likelihood				
	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Figure 1. Vulnerability Matrix

Projects with the highest impact and likelihood were ranked as Phase 1 projects, a designation that identifies the risk associated with inaction as unacceptably high. These projects must be implemented to mitigate critical safety and/or reliability risks.

These planning efforts have revealed a significant volume of critical (i.e., Phase 1) work and a similar volume of important (i.e., Phase 2) work that is imperative to address in the near term. Utility failures carrying unacceptable safety and reliability concerns are very likely to occur without immediate action.

Projects with a lessor phase designation (i.e., Phase 3-5) also have important roles in risk mitigation. While the impact and likelihood of failures due to inaction are projected to be less severe, there are still risks and a plan for immediate implementation is needed.

It is necessary to understand that this vulnerability assessment is a tool for the University and the Concessionaire to compare projects and help inform what projects need to be prioritized. Unknown and unforeseen issues within systems exist and may cause failures that cannot be predicted. These designators are the best indicator available to measure the criticality of a project.

Annualization of Capital Improvements

Capital Improvements presented within this submittal have been developed and selected through an exhaustive capital planning process, and urgent and immediate approval and completion of these Capital Improvements is necessary to allow the Concessionaire to operate and maintain the Utility System in full compliance with the Performance Standards and Key Performance Indicators.

While we understand the financial constraints of the University, it is our duty to notify the University that these Capital Improvements are essential for the safe and reliable operations and maintenance of the Utility System, and therefore should be approved and undertaken urgently and immediately.

Nevertheless, in order to facilitate the University's review and comply with the Concession Agreement's requirements for the composition of the Five-Year Plan, we have created a timeline for these investments following the level of criticality of such undertakings. Impact and likelihood may be less severe as the project's phase designation number increases but all of them are critical to aspects of the Utility System, pose significant safety and reliability risks, are essential for continuing compliance with the Performance Standards and Key Performance Indicators, and an accelerated approval of their implementation is needed.

III. Supply Use Trends

Supplies expected to be used to operate the Utility System are wood chip fuel, natural gas, and electricity. There is no change from previous years, nor any change expected in the foreseeable future.

The FY2023 Supply use per month and yearly trends are shown below. The estimate for Fiscal Year 2023 is emphasized in red for each plot. The estimated usage of Supplies throughout the year is dependent on campus activities, especially whether students are on campus or not, and weather. Supply use also grows with the increased campus population and building square footage.

Wood Fuels

Wood fuel use peaks in the winter with heating loads but is not at its lowest during peak cooling season. This is because steam fired absorption chillers are used in the summer to produce Chilled Water with wood chips. Wood fuel use is instead at its lowest in the shoulder spring/fall months, when the overall HVAC needs of campus are at their lowest. This is partially the reason why planned wood boiler maintenance shutdowns are scheduled in the spring and summer. In a typical year over 90% of the steam produced at the Energy Plant is from the wood boiler. Wood fuel is measured and purchased in bone dry tons (BDTs) instead of units of energy (e.g., MMBTUs) because the energy content for wood varies significantly depending on species and moisture content.

Natural Gas

Unlike wood fuel, natural gas use at the Energy Plant does not follow a consistent pattern year over year. While it is difficult to predict, there are some common trends. Natural gas is typically used at the Energy Plant to meet peak steam loads when the wood boiler can't keep up with demand and during wood boiler shutdowns. Peak steam loads are in the winter, so there is some natural gas use when temperature drop below freezing. In the summer, there is typically little to no natural gas use.

Scheduled wood boiler shutdowns are not on specific dates, but instead based on the level of maintenance needed and campus loads. To minimize Supply Costs shutdowns are scheduled in the shoulder spring/fall months when loads are at the lowest. Thus, natural gas use is at its highest in the spring and fall. Unscheduled shutdowns occur throughout the year and are likely the driving cause for variability in natural gas use.

Electricity

Electricity use on the East Feed is typically stable throughout the year, with a minor increase late summer during the cooling season and students returning to campus. Electricity purchased from Avista on the East Feed is expected to drop when the turbines and PV array are online, which has been accounted for in the estimate for Fiscal Year 2023. Electricity use on the West Feed is also stable but increases during the

summer season because of the South Campus Chiller Plant. The two electric feeds will likely need to be rebalanced after power generation begins.

Month	Wood (BDT)	Natural Gas (therms)	Electricity (East kWh)	Electricity (West kWh)
July	1,521	-	1,448,197	1,851,351
August	941	17,388	1,297,871	2,111,728
September	801	75,703	1,098,707	2,042,657
October	1,837	51,274	1,248,718	2,332,855
November	2,179	-	1,242,452	2,107,154
December	2,217	12,793	1,199,327	2,090,510
January	2,046	6,464	1,254,451	2,194,548
February	2,376	22,847	1,230,975	2,168,839
March	1,998	8,525	1,344,655	2,136,763
April	1,692	25,641	1,429,055	1,819,024
May	1,662	44,164	1,247,976	1,874,541
June	1,948	-	1,267,437	1,733,364
TOTAL	21,216	264,800	15,309,820	24,463,334

Figure 2. Supply usage estimate for Fiscal Year 2023

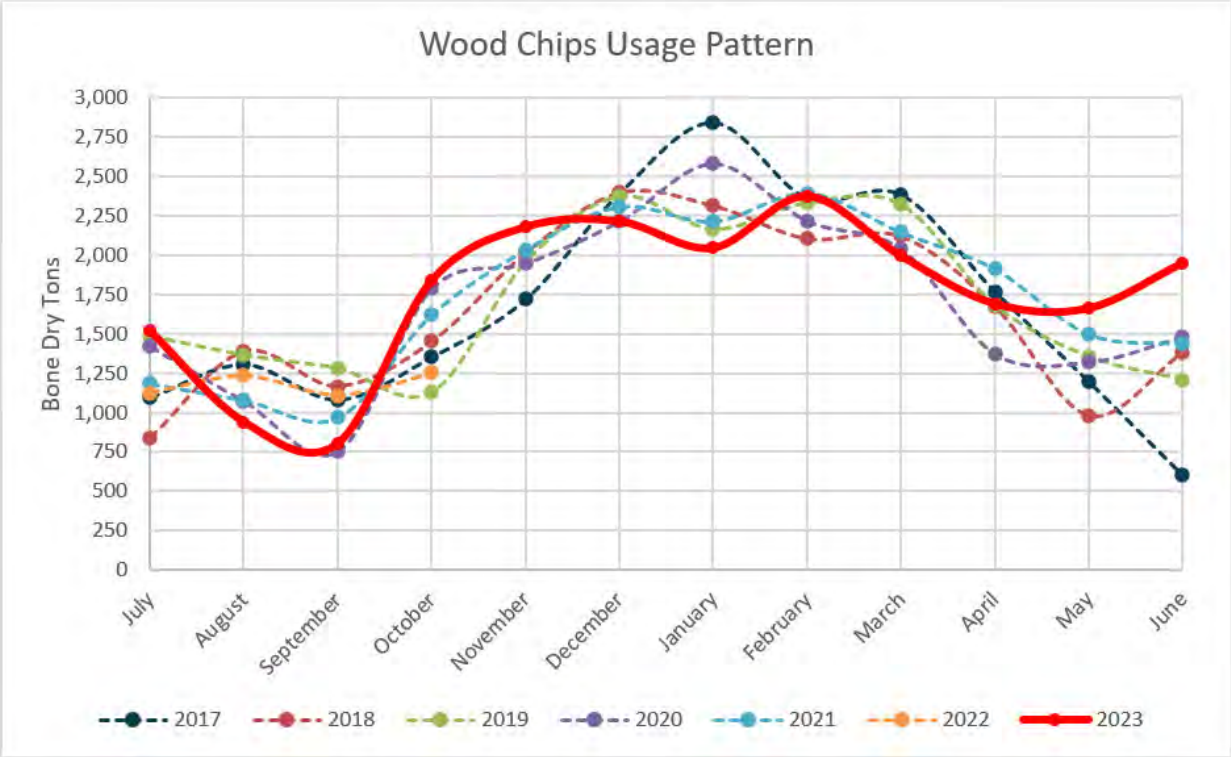

Figure 3. Wood chip usage over recent years

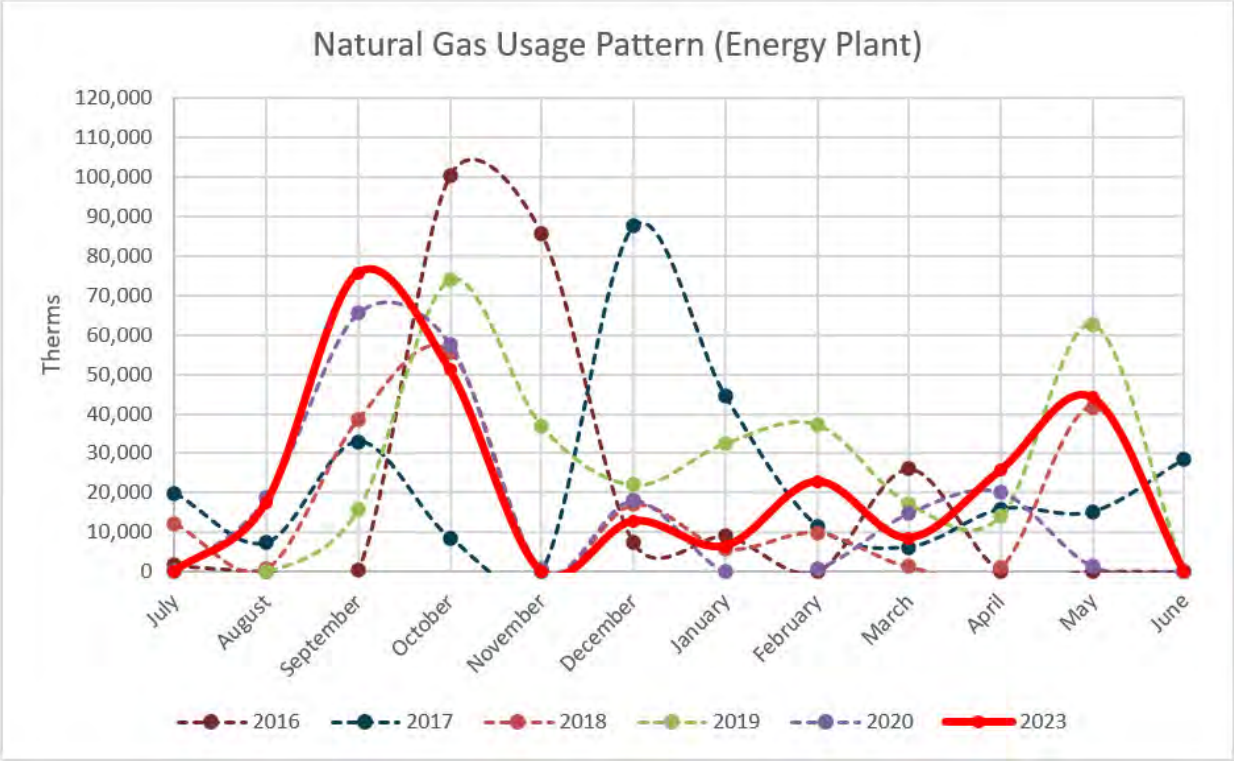

Figure 4. Natural gas usage over recent years

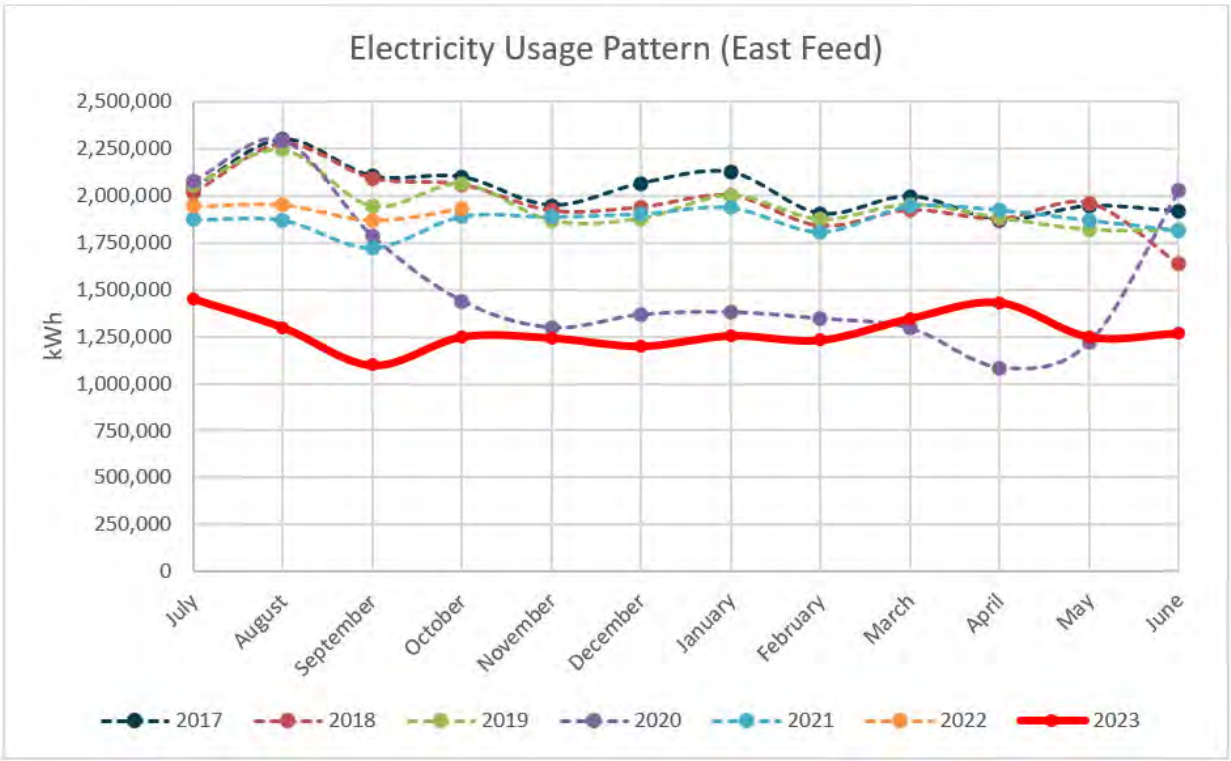

Figure 5. East Electric Feed usage over recent years

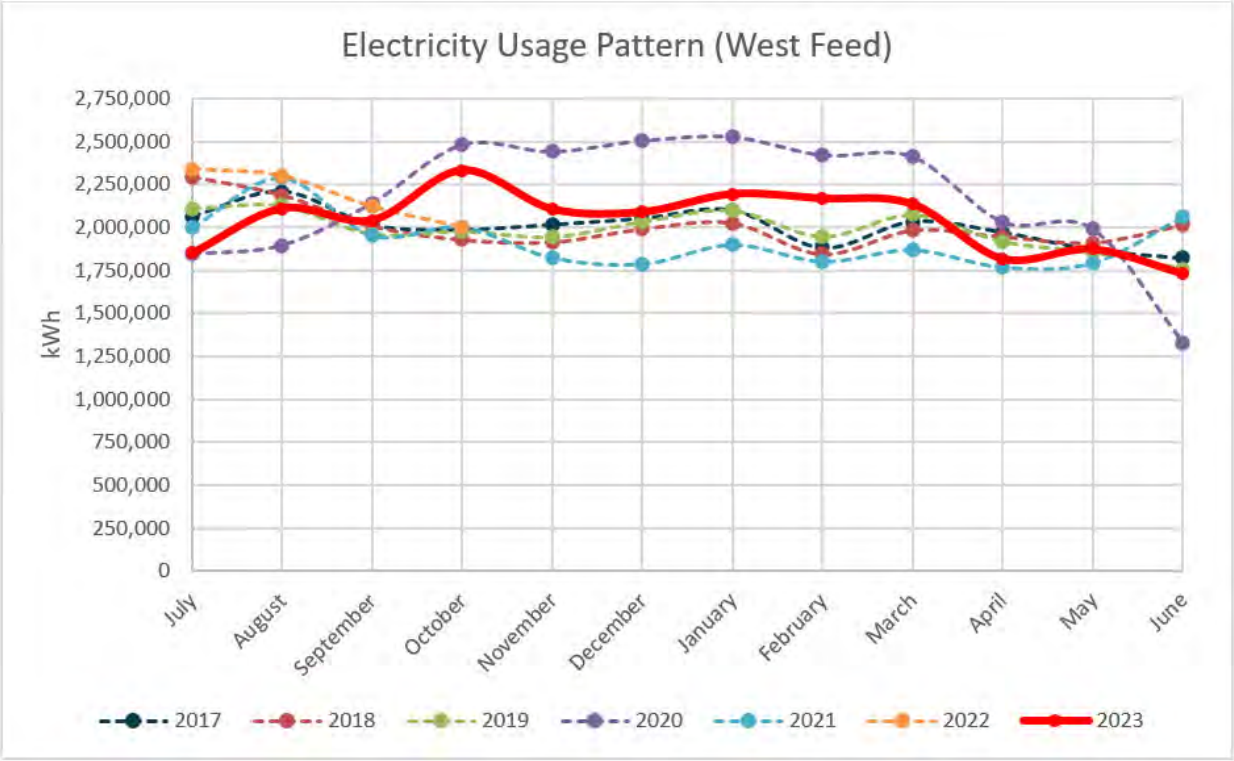

Figure 6. West Electric Feed usage over recent years

IV. Capital Improvements by Utility System

UTILITY SYSTEM: STEAM (INFO /1)

INFO	CODE	YEAR	PHASE	NAME	ADDITIONAL WORK	INDICATIVE COST
23/1	001	1	1	Steam Plant Catwalk, Ladder, and Safety Upgrades	$58,104	$809,205
23/1	002	1	1	Ash Handling System Upgrades	$238,788	$2,938,940
23/1	003	1	1	Energy Plant Steam Piping Upgrades	$57,996	$3,024,915
23/1	004	1	1	Gas Boilers Capital Renewal	$215,892	$5,404,580
23/1	005	1	1	Utility Tunnel Repair on 6th Street	$128,952	$12,299,630
23/1	006	1	1	Water Treatment Improvements Project 1	$90,180	$1,309,980
23/1	007	1	1	Wood Fuel Handling System Upgrades	$177,336	$2,162,888
23/1	008	1	1	Feedwater System Improvements	$89,748	$1,696,493
23/1	009	2	2	Boiler Controls Modernization	$438,048	$4,024,783
23/1	010	2	2	Wood Boiler Capital Renewal Project 1	$256,284	$2,321,361
23/1	011	3	2	950 CAT Loader Major Rebuild and Hough Replacement	$1,620	$771,686
23/1	012	3	2	Distribution Steam and Condensate Upgrades	$90,180	$5,750,062
23/1	013	4	3	Energy Plant Emergency Generator Upgrades	$80,892	$681,164
23/1	014	4	4	Energy Plant Building Envelope Improvements	$155,412	$3,767,158
23/1	015	5	3	Utility Tunnel Upgrades	$73,548	$1,986,061
23/1	016	5	4	Condensate Return System Upgrades	$77,976	$1,630,428
23/1	017	5	4	Wood Boiler Capital Renewal Project 2	$314,280	$2,908,404
23/1	018	5	4	Wood Fuel Storage Conveyance System Improvements	$129,276	$957,408
23/1	019	5	4	Wood Fuel Storage Facility Improvements	$104,112	$628,055
23/1	020	5	5	Water Treatment Improvements Project 2	$78,300	$1,837,414
PROPOSED CAPITAL IMPROVEMENT COST					**$2,856,924**	**$56,910,614**

UTILITY SYSTEM: CHILLED WATER (INFO /2)

INFO	CODE	YEAR	PHASE	NAME	ADDITIONAL WORK	INDICATIVE COST
23/2	021	3	2	Chilled Water Distribution Upgrades Project 1	$244,080	$916,853
23/2	022	5	4	North Campus Chiller Plant Upgrades	$114,264	$5,742,498
23/2	023	5	5	South Campus Chiller Plant Emergency Generator	$70,848	$611,887
PROPOSED CAPITAL IMPROVEMENT COST					**$429,192**	**$7,271,238**

UTILITY SYSTEM: ELECTRICITY (INFO /3)

INFO	CODE	YEAR	PHASE	NAME	ADDITIONAL WORK	INDICATIVE COST
23/3	024	1	1	Electrical Transformer and Primary Component Capital Equipment Reserve	$84,564	$1,287,884
23/3	025	1	1	Electrical Vault Inspections and Upgrades	$589,248	$4,909,371
23/3	026	1	1	Menard Law Building Electrical Service Replacement	$79,056	$776,752
23/3	027	1	1	Kibbie Dome Building Electrical Service Replacement	$79,056	$1,922,799
23/3	028	2	2	Administration South Building Electrical Service Replacement	$79,056	$731,057
23/3	029	2	2	Art & Architecture North Building Electrical Service Replacement	$79,056	$713,537
23/3	030	2	2	College of Natural Resources Building Electrical Service Replacement	$79,056	$833,566
23/3	031	2	2	Hartung Theatre Electrical Service Replacement	$79,056	$724,201
23/3	032	2	2	Theophilus Tower Electrical Service Replacement	$79,056	$776,761
23/3	033	2	2	Physical Education Building Electrical Service Replacement	$79,056	$734,757
23/3	034	2	2	Swimming Center Building Electrical Service Replacement	$79,056	$734,757
23/3	035	2	2	West Farm Primary Distribution Improvements	$145,044	$8,605,057
23/3	036	5	5	Primary Electric Switch Upgrades	$128,088	$2,352,113
PROPOSED CAPITAL IMPROVEMENT COST					**$1,658,448**	**$25,102,612**

UTILITY SYSTEM: DOMESTIC WATER (INFO /4)

INFO	CODE	YEAR	PHASE	NAME	ADDITIONAL WORK	INDICATIVE COST
23/4	037	1	1	Domestic Fire Hydrant Major Repairs	$56,916	$751,501
23/4	038	1	1	Domestic Water Line Replacement on Central Mall	$34,128	$455,191
23/4	039	1	1	Sheep Farm Water Vault Improvements	$27,108	$371,400
23/4	040	1	1	Building Backflow Aseemblies Replacement at South Hill Apartments	$96,660	$1,389,709
23/4	041	1	1	Domestic Water Emergency Generator	$99,252	$5,087,011
23/4	042	1	2	Building Backflow Aseemblies Replacement at McClure Hall	$13,284	$92,940
23/4	043	2	2	Domestic Water Line Replacement on University Avenue from Ash Street to Memorial Gym	$100,764	$1,295,945
23/4	044	2	2	Domestic Water Line Replacement from Line Street to Energy Plant	$16,524	$197,944
23/4	045	2	2	Domestic Water Line Replacement to Agricultural Science Building	$20,088	$255,728
23/4	046	2	2	Domestic Water Line Replacement to Food Science Building	$22,356	$279,538
23/4	047	3	2	Domestic Water Lines Replacement on Blake Avenue	$199,908	$2,571,727
PROPOSED CAPITAL IMPROVEMENT COST					**$686,988**	**$12,748,634**

UTILITY SYSTEM: SANITARY SEWER (INFO /6)

INFO	CODE	YEAR	PHASE	NAME	ADDITIONAL WORK	INDICATIVE COST
23/6	048	1	1	Library and Memorial Gym Sanitary Sewer Major Repairs	$25,380	$340,713
23/6	049	1	1	Sanitary Sewer Slipline on Campus Drive and Blake Avenue	$18,036	$211,020
23/6	050	1	1	Sanitary Sewer Manhole Replacements	$47,304	$596,761
23/6	051	1	1	Sanitary Sewer Slipline on Line Street	$46,548	$575,490
23/6	052	2	2	Sanitary Sewer Line Replacement at the West Farm	$17,712	$226,873
23/6	053	2	2	Sanitary Sewer Line Replacement at the Bruce M. Pitman Center	$20,844	$186,083
23/6	054	2	2	Sanitary Sewer Line Replacement at the Administration Building and Art & Architecture	$38,772	$497,308
23/6	055	2	2	Sanitary Sewer Slipline from the Brink and Phinney Halls to the Integrated Research and Innovation Center (IRIC)	$19,440	$174,347
PROPOSED CAPITAL IMPROVEMENT COST					**$234,036**	**$2,808,596**

UTILITY SYSTEM: STORMWATER (INFO /7)

INFO	CODE	YEAR	PHASE	NAME	ADDITIONAL WORK	INDICATIVE COST
23/7	056	1	1	Library and Memorial Gym Stormwater Major Repairs	$92,556	$1,292,568
23/7	057	1	1	Storm Slipline on Campus Drive and Blake Avenue	$18,468	$236,595
23/7	058	1	1	New Stormwater Line at Art & Architecture	$16,848	$133,316
23/7	059	2	1	Stormwater Catch Basin and Manhole Upgrades	$141,156	$1,852,453
23/7	060	3	1	Stormwater Line Installation from Wallace to Paradise Creek	$31,320	$301,212
23/7	061	3	2	Nez Perce Stormwater and Sanitary Sewer Major Repairs	$25,704	$252,026
PROPOSED CAPITAL IMPROVEMENT COST					**$326,052**	**$4,068,169**

V. Capital Improvements by Year

PROPOSED CAPITAL IMPROVEMENTS FISCAL YEAR 2023

INFO	CODE	PHASE	NAME	ADDITIONAL WORK	INDICATIVE COST
23/1	001	1	Steam Plant Catwalk, Ladder, and Safety Upgrades	$58,104	$809,205
23/1	002	1	Ash Handling System Upgrades	$238,788	$2,938,940
23/1	003	1	Energy Plant Steam Piping Upgrades	$57,996	$3,024,915
23/1	004	1	Gas Boilers Capital Renewal	$215,892	$5,404,580
23/1	005	1	Utility Tunnel Repair on 6th Street	$128,952	$12,299,630
23/1	006	1	Water Treatment Improvements Project 1	$90,180	$1,309,980
23/1	007	1	Wood Fuel Handling System Upgrades	$177,336	$2,162,888
23/1	008	1	Feedwater System Improvements	$89,748	$1,696,493
23/3	024	1	Electrical Transformer and Primary Component Capital Equipment Reserve	$84,564	$1,287,884
23/3	025	1	Electrical Vault Inspections and Upgrades	$589,248	$4,909,371
23/3	026	1	Menard Law Building Electrical Service Replacement	$79,056	$776,752
23/3	027	1	Kibbie Dome Building Electrical Service Replacement	$79,056	$1,922,799
23/4	037	1	Domestic Fire Hydrant Major Repairs	$56,916	$751,501
23/4	038	1	Domestic Water Line Replacement on Central Mall	$34,128	$455,191
23/4	039	1	Sheep Farm Water Vault Improvements	$27,108	$371,400
23/4	040	1	Building Backflow Aseemblies Replacement at South Hill Apartments	$96,660	$1,389,709
23/4	041	1	Domestic Water Emergency Generator	$99,252	$5,087,011
23/4	042	2	Building Backflow Aseemblies Replacement at McClure Hall	$13,284	$92,940
23/6	048	1	Library and Memorial Gym Sanitary Sewer Major Repairs	$25,380	$340,713
23/6	049	1	Sanitary Sewer Slipline on Campus Drive and Blake Avenue	$18,036	$211,020
23/6	050	1	Sanitary Sewer Manhole Replacements	$47,304	$596,761
23/6	051	1	Sanitary Sewer Slipline on Line Street	$46,548	$575,490
23/7	056	1	Library and Memorial Gym Stormwater Major Repairs	$92,556	$1,292,568
23/7	057	1	Storm Slipline on Campus Drive and Blake Avenue	$18,468	$236,595
23/7	058	1	New Stormwater Line at Art & Architecture	$16,848	$133,316
PROPOSED CAPITAL IMPROVEMENT COST				**$2,481,408**	**$50,077,653**

PROPOSED CAPITAL IMPROVEMENTS FISCAL YEAR 2024

INFO	CODE	PHASE	NAME	ADDITIONAL WORK	INDICATIVE COST
23/1	009	2	Boiler Controls Modernization	$438,048	$4,024,783
23/1	010	2	Wood Boiler Capital Renewal Project 1	$256,284	$2,321,361
23/3	028	2	Administration South Building Electrical Service Replacement	$79,056	$731,057
23/3	029	2	Art & Architecture North Building Electrical Service Replacement	$79,056	$713,537
23/3	030	2	College of Natural Resources Building Electrical Service Replacement	$79,056	$833,566
23/3	031	2	Hartung Theatre Electrical Service Replacement	$79,056	$724,201
23/3	032	2	Theophilus Tower Electrical Service Replacement	$79,056	$776,761
23/3	033	2	Physical Education Building Electrical Service Replacement	$79,056	$734,757
23/3	034	2	Swimming Center Building Electrical Service Replacement	$79,056	$734,757
23/3	035	2	West Farm Primary Distribution Improvements	$145,044	$8,605,057
23/4	043	2	Domestic Water Line Replacement on University Avenue from Ash Street to Memorial Gym	$100,764	$1,295,945
23/4	044	2	Domestic Water Line Replacement from Line Street to Energy Plant	$16,524	$197,944
23/4	045	2	Domestic Water Line Replacement to Agricultural Science Building	$20,088	$255,728
23/4	046	2	Domestic Water Line Replacement to Food Science Building	$22,356	$279,538
23/6	052	2	Sanitary Sewer Line Replacement at the West Farm	$17,712	$226,873
23/6	053	2	Sanitary Sewer Line Replacement at the Bruce M. Pitman Center	$20,844	$186,083
23/6	054	2	Sanitary Sewer Line Replacement at the Administration Building and Art & Architecture	$38,772	$497,308
23/6	055	2	Sanitary Sewer Slipline from the Brink and Phinney Halls to the Integrated Research and Innovation Center (IRIC)	$19,440	$174,347
23/7	059	1	Stormwater Catch Basin and Manhole Upgrades	$141,156	$1,852,453
PROPOSED CAPITAL IMPROVEMENT COST				**$1,790,424**	**$25,166,055**

PROPOSED CAPITAL IMPROVEMENTS FISCAL YEAR 2025

INFO	CODE	PHASE	NAME	ADDITIONAL WORK	INDICATIVE COST
23/1	011	2	950 CAT Loader Major Rebuild and Hough Replacement	$1,620	$771,686
23/1	012	2	Distribution Steam and Condensate Upgrades	$90,180	$5,750,062
23/2	021	2	Chilled Water Distribution Upgrades Project 1	$244,080	$916,853
23/4	047	2	Domestic Water Lines Replacement on Blake Avenue	$199,908	$2,571,727
23/7	060	1	Stormwater Line Installation from Wallace to Paradise Creek	$31,320	$301,212
23/7	061	2	Nez Perce Stormwater and Sanitary Sewer Major Repairs	$25,704	$252,026
PROPOSED CAPITAL IMPROVEMENT COST				**$592,812**	**$10,563,565**

PROPOSED CAPITAL IMPROVEMENTS FISCAL YEAR 2026

INFO	CODE	PHASE	NAME	ADDITIONAL WORK	INDICATIVE COST
23/1	013	3	Energy Plant Emergency Generator Upgrades	$80,892	$681,164
23/1	014	4	Energy Plant Building Envelope Improvements	$155,412	$3,767,158
PROPOSED CAPITAL IMPROVEMENT COST				**$236,304**	**$4,448,321**

PROPOSED CAPITAL IMPROVEMENTS FISCAL YEAR 2027

INFO	CODE	PHASE	NAME	ADDITIONAL WORK	INDICATIVE COST
23/1	015	3	Utility Tunnel Upgrades	$73,548	$1,986,061
23/1	016	4	Condensate Return System Upgrades	$77,976	$1,630,428
23/1	017	4	Wood Boiler Capital Renewal Project 2	$314,280	$2,908,404
23/1	018	4	Wood Fuel Storage Conveyance System Improvements	$129,276	$957,408
23/1	019	4	Wood Fuel Storage Facility Improvements	$104,112	$628,055
23/1	020	5	Water Treatment Improvements Project 2	$78,300	$1,837,414
23/2	022	4	North Campus Chiller Plant Upgrades	$114,264	$5,742,498
23/2	023	5	South Campus Chiller Plant Emergency Generator	$70,848	$611,887
23/3	036	5	Primary Electric Switch Upgrades	$128,088	$2,352,113
PROPOSED CAPITAL IMPROVEMENT COST				**$1,090,692**	**$18,654,268**

APPENDIX A. Project Sheets for Capital Improvements

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-001

PROJECT CODE: 23/1-001

PROJECT NAME: Energy Plant Catwalk, Ladder, and Safety Upgrades

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (unacceptable fall risks exist that could result in severe injury). The impact associated with resiliency is high (a fall injury can result in interruption of critical steam plant services and reputational damage).

The likelihood of these events is high (unacceptable, unsafe fall conditions exist).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: Ladder and catwalk systems are critical for the safe and efficient operation of the District Energy Plant. They provide timely and safe access to major systems with the Plant including the wood silo, wood handling equipment, boilers, and the hot lime softeners. Unsafe catwalks slow down response time during emergencies, increasing the risk of severe damage to equipment and personal injury or death to operators with a maximum fall risk of 72 ft. This project provides a full engineering assessment to either upgrade existing or replace ladder and catwalk systems to be compliance with safety codes.

Objectives: The main objectives of this Capital Improvement are:

- Mitigate severe safety issues by eliminating fall risks.
- Increase resiliency by eliminating risks to the Steam Plant operations staff.

Scope of Work: The scope of work of this Capital Improvement is:

- Demolition of structurally unsafe catwalks and ladders.
- Assessment and construction of new catwalks or modification of existing areas including the following:
  - Replace the woodchip silo platform.
  - Secure ship ladders to restrict access.
  - Install fall protection and handrails on all ladders or replace with compliant ladder systems.
  - Install cages on all multi-level ladders.
  - Remove boiler exhaust ladder system.
  - Install safe steam pipe crossings with platforms and rails.
  - Install handrails at multiple points of unprotected steep steps.
  - Install safe platform and railing around boilers.
  - Add boiler economizer access ladders and platforms.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey

covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

Additional work will occur within the Steam Plant perimeter. Any outage periods of the wood fuel boiler will be coordinated with the University.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $58,104.

Additional Information:

Figure 1. Unsafe ladder systems to service boiler exhaust stack and roof.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-001

Figure 2. Severe safety concerns at the woodchip silo.

Figure 3. Severe fall hazard behind window.

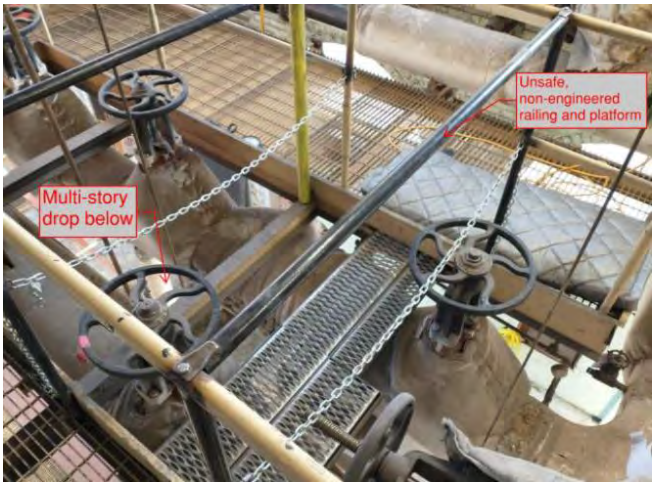

Figure 4. Other examples of unsafe conditions to access critical elements.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $809,205.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) there are no structural deficiencies at the woodchip silo that would prevent the construction of a safe catwalk system, and (ii) there are no space constraints that would prevent installation of ladder cages or handrails. Only minor interruption to plant operations during construction.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-001

(E) Proposed schedule: EPC (Commiss.) occurs in July 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Promotes safe and efficient Steam Plant operations.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $803,412.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-002

PROJECT CODE: 23/1-002

PROJECT NAME: Ash Handling System Upgrades

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (unsafe rotating equipment conditions exist, severe fire risk). The impact associated with resiliency is high (failure likely to disable the wood fuel boiler).

The likelihood of these events is high (equipment is heavily damaged).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The ash handling system removes wood ash from the boiler after combustion and is critical for operation. It consists of a series of ash hoppers, augers, and mechanical systems used to move the ash from the boiler to a truck outside to be hauled away. The wood boiler provides significant economic and environmental benefits to the University, however, at 35 years old, many of the subsystems are in critical need of upgrade. This project replaces the existing ash handling system and separates fine and large ash. Most of the system is original equipment and well beyond its expected life. The entire ash handling system is heavily damaged from years of use with major components warped from the heat, leaking, and breaking down frequently, creating severe fire risks. Sealing the system will significantly reduce the amount of ash that builds up in the plant, increasing the expected life of exposed mechanical systems. Fine ash has a higher economic value when separated from large ash, providing a potential revenue stream to the University. A complete redesign and replacement of the system and an economic feasibility study for separating fine ash is required.

Objectives: The main objectives of this Capital Improvement are:

- Upgrade the ash handling system for the wood boiler to increase uptime.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address safety concerns associated with the physical conditions of current assets.
- Address long term health concerns from ash exposure.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Demolition of the ash handling system including:
  - Ash conveyors and subsystems (x9).
  - Elevating conveyor and subsystems.
- Install new ash handling system including:
  - Fine and large ash conveyors.
  - Elevating conveyor.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-002

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

The Concessionaire will coordinate with the University for the wood boiler shutdown from spring to fall to minimize the gas use during the construction stage. In addition, the Concessionaire will engage with the relevant University departments to identify potential impacts or benefits from the current ash waste.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $238,788 and will also include a feasibility study for fine ash separation.

Additional Information:

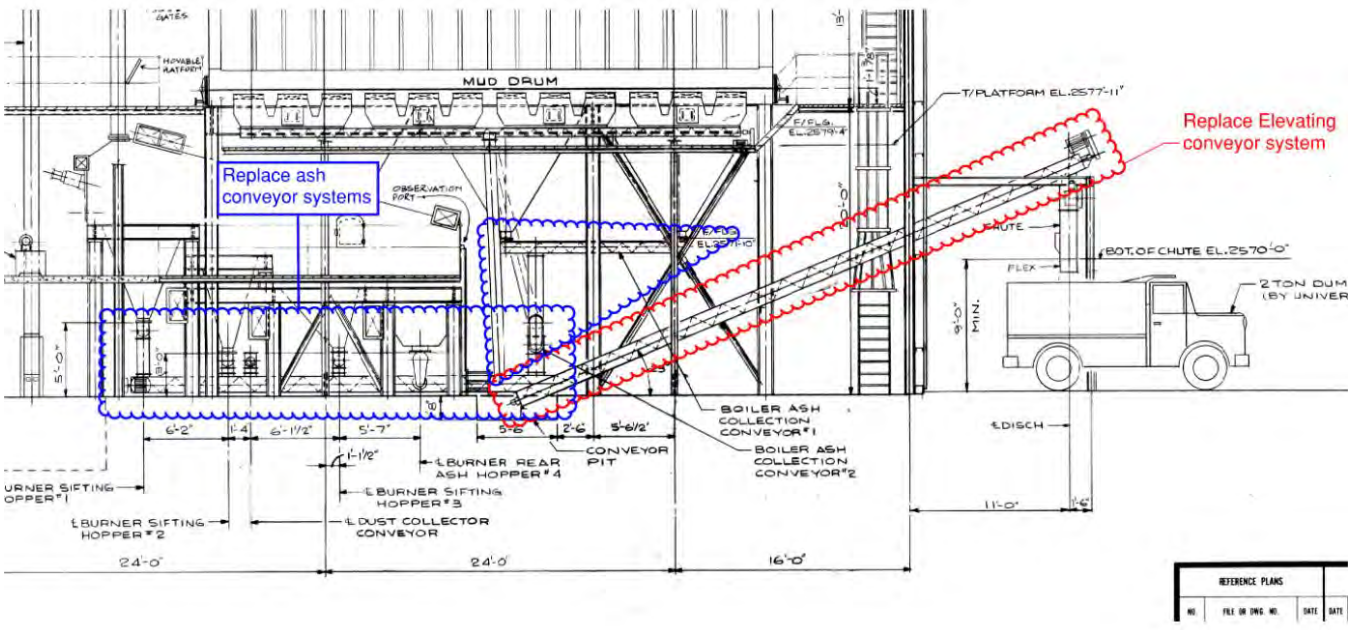

Figure 1. Schematic design of ash handling system.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-002

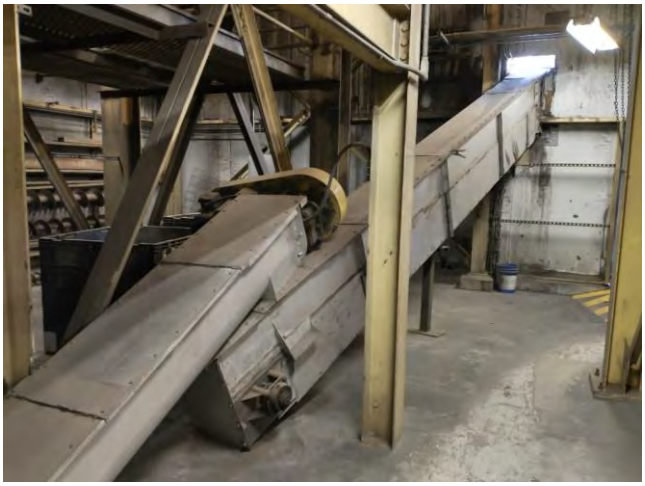

Figure 2. Elevating conveyance system.

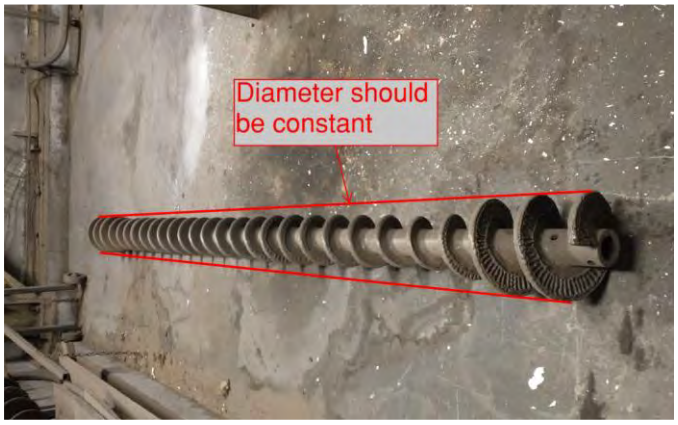

Figure 3. Heavily worn ash augers, significantly reducing performance.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $2,938,940.

(B) Forecasted annual operations and maintenance costs: +$5,800. Fine ash conveyor is a new piece of equipment not presently in the O&M program at the University of Idaho. The new system will have specific O&M requirements to maintain expected life.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) construction can be coordinated with the University and completed within one summer to minimize wood boiler downtime, (ii) sufficient space for parallel fine and large ash conveyance systems, and (iii) 1% electrical efficiency improvement in conveyance system offset by additional fine ash system.

(E) Proposed schedule: EPC (Const.) extends through September 2023. EPC (Commiss.) occurs in Sept. 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: An improved ash handling system will increase the reliability of the wood fueled boiler, reducing the natural gas consumption. The collection of fine ash can be used for land applications.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-002

(H) Fee or charge payable to the Operator: $2,916,540.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$500, wood fuel, natural gas, and electricity. Decreased wood boiler downtime, improved conveyance efficiency.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-003

PROJECT CODE: 23/1-003

PROJECT NAME: Energy Plant Steam Piping Upgrades

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues). The impact associated with resiliency is high (extended outage and campus steam shutdown).

The likelihood of these events is high (multiple valves have failed).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The steam piping in the Energy Plant is critical for transporting steam produced by the boilers to the tunnel network and reducing pressure to safe levels. Isolation valves in the system are used to provide safe access to critical equipment for service. This project replaces the isolation valves and a pressure reducing valve (PRV) in the main steam header, all of which are beyond their serviceable life and/or not designed for operating pressures. The newest valves were replaced in a 2002 State of Idaho DPW project and are already failing, exposing operators to severe burns from high pressure steam leaks. The 8" PRV is not rated for the higher pressures required by the new turbines and cannot be operated in parallel without severe life safety risks. Without the 8" PRV the only redundancy to the turbines is the 6" PRV, which is not sized to meet peak campus loads. This also creates a single point of failure if the turbines are offline, risking a complete steam shutdown to campus if the valve fails.

Objectives: The main objectives of this Capital Improvement are:

- Upgrade plant level steam piping to plant operating pressures.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address health concerns that should be physically mitigated rather than dependent on procedures.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Reconfigure D Boiler 6" piping to connect to main steam header.
- Replace all high pressure isolation valves (x19).
- Replace 8" PRV with two 4" electric PRVs.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and

the provision of fencing to prevent unauthorized access to construction areas.

The Concessionaire will coordinate with the University for the replacement of valves that may require steam shutdown.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $57,996.

Additional Information:

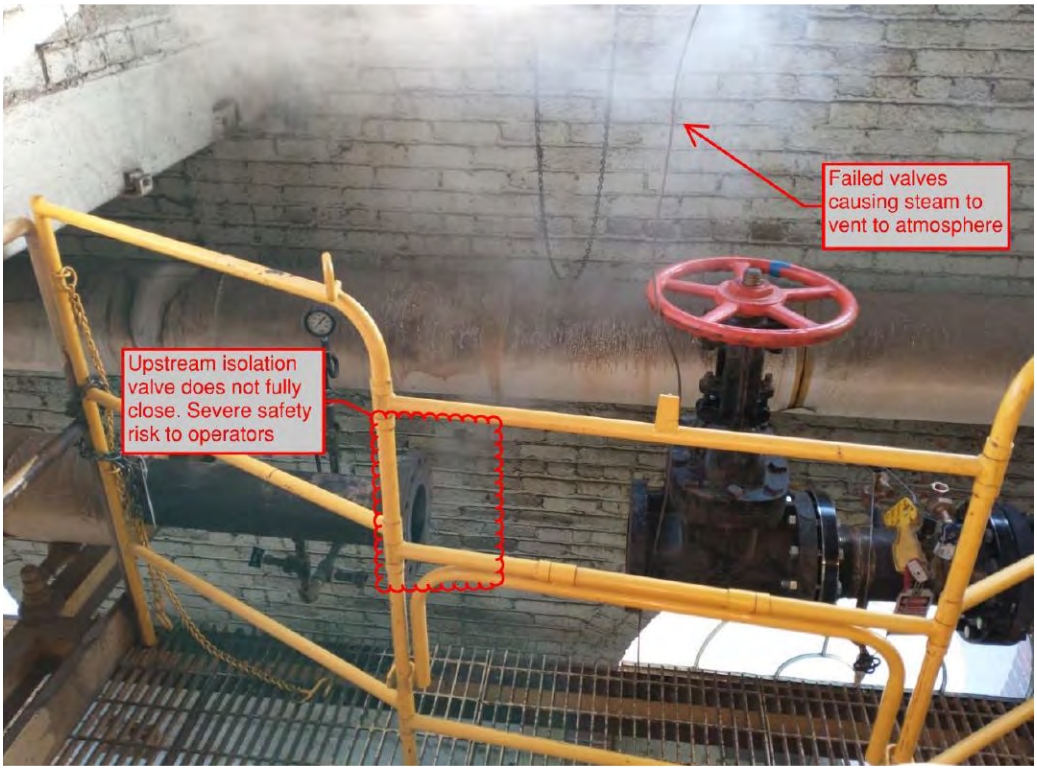

Figure 1. Failed isolation valve preventing safe work on critical systems.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $3,024,915.

(B) Forecasted annual operations and maintenance costs: +$0. No O&M Costs change anticipated.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) no steam shutdown will be required when connecting D boiler to the main steam header, (ii)

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-003

workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) occurs from August 2023 to September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Minimal reduction in fuel, water, and chemical consumption by reducing steam losses during service.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $3,001,860.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible. Minimal savings from reduced losses during service work.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-004

PROJECT CODE: 23/1-004

PROJECT NAME: Gas boilers Capital Renewal

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The natural gas boilers provide redundancy to the wood boiler and meet peak heating loads on campus. They are critical to the successful operation of the Energy Plant and necessary to achieve performance standards and resiliency desires. However, their ages range from 45-81 years old, and the subsystems are in need of replacement and upgrade. This project upgrades the subsystems critical to the successful operation of the boilers. Several single points of failure, or long repair time, issues exist within these systems. Many of these systems are original equipment and are well beyond this serviceable life, posing safety risks from natural gas leaks and boiler tube ruptures. Upgrading these systems will improve efficiency and extend the useful life of the boilers. Complete gas boiler system replacements will be needed without these upgrades.

Objectives: The main objectives of this Capital Improvement are:

- Upgrade gas boilers to extend useful life and improve performance.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address safety concerns associated with the physical conditions of current assets.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Replace degraded and ruptured boiler tubes.
- Replace gas burners for all three boilers.
- Replace gas trains for all three boilers.
- Replace all critical valves for all three boilers.
- Replace FD fans, VFDs, and motors for all three boilers.
- Install cascading blowdown systems for Boilers C and D only.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-004

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas.

The Concessionaire will coordinate with the University the staggering of boiler work to maintain steam plant resiliency to prevent need for steam shutdown.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $215,892 and will also include (i) Eddy current testing on the boiler tubes, and (ii) non-destructive testing for corrosion and wall thickness degradation on all four exhaust stacks.

Additional Information:

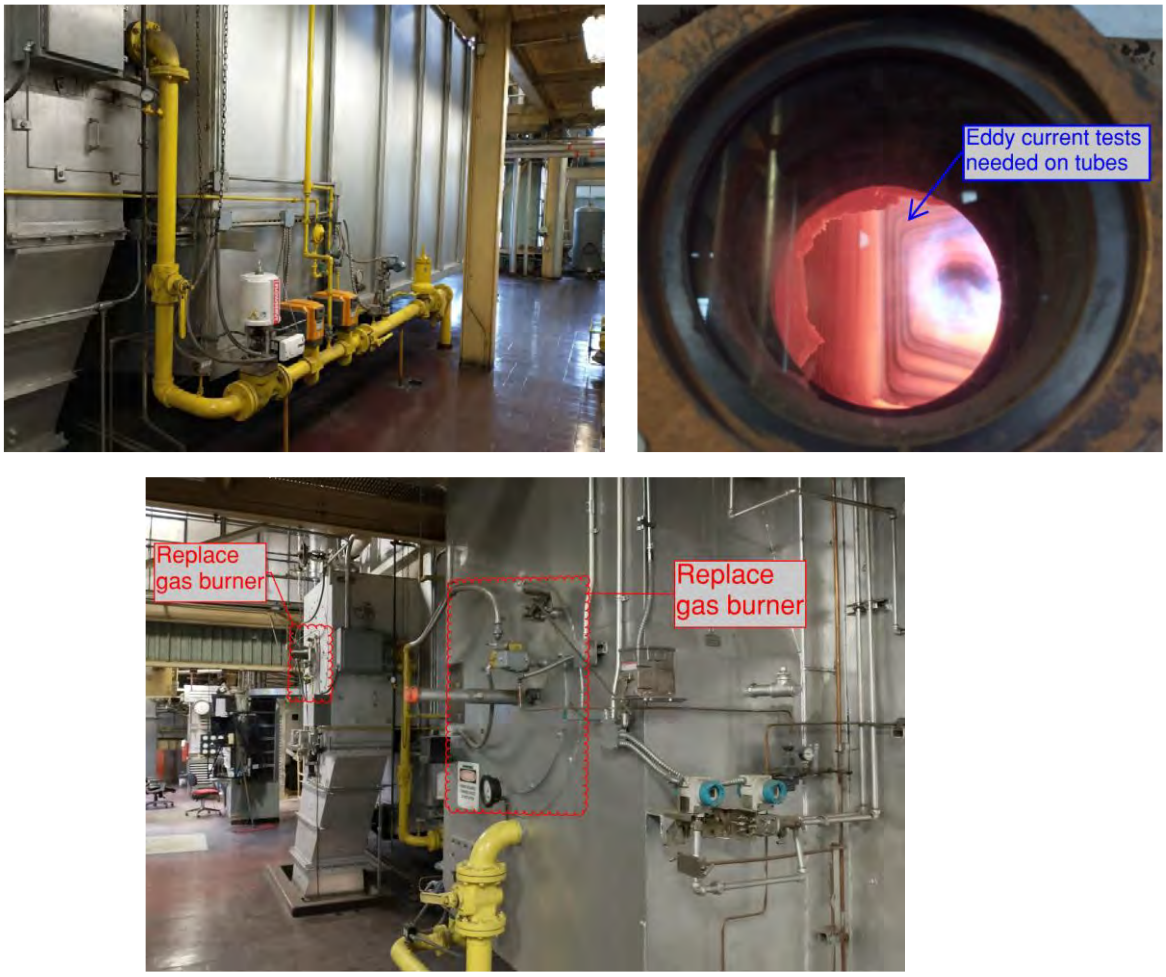

Figure 1. Detailed views of the natural gas boilers.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-004

(A) Total Cost: $5,404,580.

(B) Forecasted annual operations and maintenance costs: +$3,100. O&M increase for expanded complexity of controls, gas trains and additional cascading blowdowns.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) only 20% of boiler tubes will need to be replaced after Eddy current testing, (ii) exhaust stack replacement is not needed, (iii) natural gas reductions from 2% burner efficiency increase at current prices based on FY21 data, (iv) stage construction to maintain N+1 redundancy to the wood boiler to prevent risk of steam shutdown to campus, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) occurs in September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved efficiency and performance of the boilers reduces natural gas consumption.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $5,363,388.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$1,200, natural gas. Due to improved efficiency of gas burners.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-005

PROJECT CODE: 23/1-005

PROJECT NAME: Utility Tunnel Repair on 6th Street

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The utility tunnel network is critical for distributing many utilities across campus including steam, chilled water, high voltage power, natural gas, and IT/telecom. This project replaces the tunnel lid on 6th St from Line St to the Wallace Complex. Tunnel lids are critical for protecting utilities from ambient conditions and also serve as the sidewalks of much of campus. The lid on 6th St has been in service for up to 70 years and needs repair to prevent collapse. Some sections on 6th St are supported with non-engineered, temporary screw jacks that may not be adequate. The risk of collapse poses a severe safety risk to the general public and potential shutdown of all Energy Plant utilities. This was identified in the FY19 project to replace the tunnel lid at 6th and Line, but project funding could not support the additional scope. This project can be coordinated with the Capital Improvement *23/1-010 Distribution Steam and Condensate Upgrades* for reduced overall costs and impact to campus.

Objectives: The main objectives of this Capital Improvement are:

- Extend the useful service life of the existing tunnel.
- Mitigate severe resiliency issues associated with aging systems.
- Address safety concerns associated with tunnel collapse.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Saw cut removal of tunnel lid.
- Replace the lid of the 6th St utility tunnel (approx. 1200 ft).
- Provide protection for live utility services during construction.
- Bedding and backfill.
- Surface restoration.
- Identify and remove abandoned utilities.

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended that University of Idaho ITS department identify and remove abandoned and damaged IT and telecommunications lines in construction areas while accessible.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey

covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

The Concessionaire will coordinate with the University to schedule construction during the summer season to reduce impact to campus operations.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $128,952 and will also include core drilling and laboratory analysis for tunnel walls and lid to determine integrity.

Additional Information:

Figure 1. 6th Street Tunnel lid to be replaced.

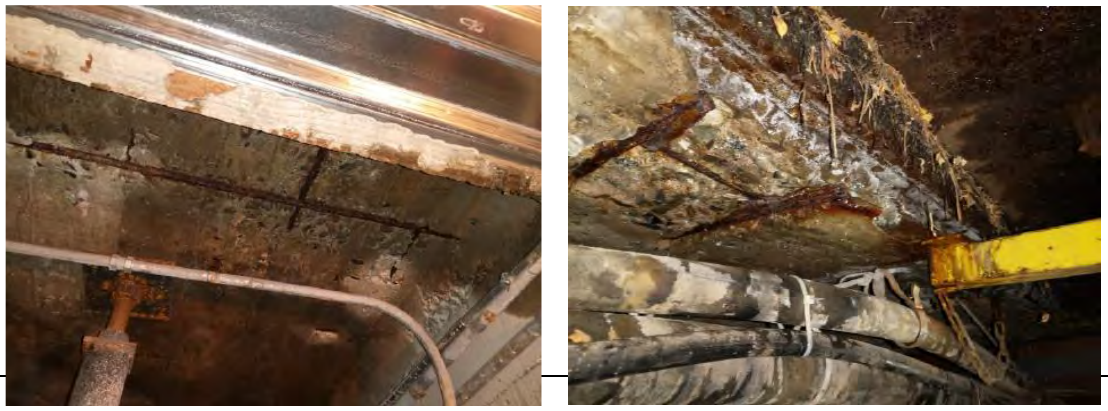

Figure 2. Aging sections of the tunnel.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-005

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $12,299,630.

(B) Forecasted annual operations and maintenance costs: $0. Like for like repairs and/or replacements.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) core sampling and structural investigation may reveal that only sections of the tunnel need to be replaced, which may significantly reduce project cost, (ii) tunnel walls and floor will be in good condition and not require repair or impact construction, (iii) underground construction conditions will be reasonable free of obstruction, conflict, hazardous materials that could impede completion, (iv) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur and are not included in this scope, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2023. EPC (Commiss.) occurs in October 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: None.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $12,207,024.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-006

PROJECT CODE: 23/1-006

PROJECT NAME: Water Treatment Improvements Project 1

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is medium. The impact associated with resiliency is high (extended steam outage to campus).

The likelihood of these events is high (PRV stations are failing).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The Hot Lime Softening (HLS) tanks and associated feedwater and condensate chemistry subsystems are critical for protecting the boilers and steam distribution systems from scaling, which reduces efficiency and risks significant damage. These systems experience frequent fouling due to the type of fluids used, which reduces efficiency. HLS tank #2 is almost 20 years old and in need of reconditioning to extend its useful life. This project rebuilds the PRV stations for each HLS tank, reconditions HLS #2, and upgrades the water treatment system. Most of these systems are beyond or approaching their end of serviceable life. The PRV station for HLS #1 has failed with no parts commercially available. The PRV station for HLS #2 is in critical need of replacement before it fails with no redundancy. Failure of PRV station #2 will result in a complete steam shutdown to campus until replacement as boilers cannot be operated without water treatment. This is an example where N+1 redundancy does not exist.

Objectives: The main objectives of this Capital Improvement are:

- Recondition Hot Lime Softener #2 to extend its useful life.
- Mitigate resiliency issues associated with systems beyond their serviceable life.
- Address safety concerns associated with the physical conditions of current assets.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Rebuild PRV stations for both HLS tanks.
- Recondition HLS #2 and replace valves with stainless steel valves.
- Replace all critical valves for the zeolite and charcoal systems.
- Replace booster pumps and backwash pumps.
- Replace slurry tank motor.
- Replace saltwater tank, pumps, valves, and piping.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-006

responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $90,180 and will also include non-destructive testing on de-aerators and hot lime softeners to determine integrity and remaining serviceable life.

Additional Information:

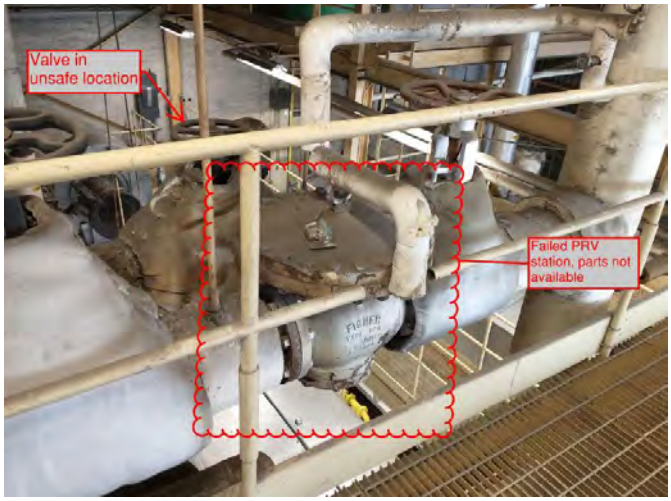

Figure 1. Failed PRV Station #1.

Figure 2. Hot Lime Softener #2.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,309,980.

(B) Forecasted annual operations and maintenance costs: $0. Like for like repairs and/or replacements.

(C) Proposed modification to the Recovery Period: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-006

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) HLS tank and de-aerator are structurally sound and do not need to be replaced, dependent on non-destructive testing, and (ii) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) occurs in September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement from reduced pumping requirements to move fluids in the system. Fewer losses and less electric load.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,299,996.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible, associated with a minor improvement from reduced pumping requirements.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-007

PROJECT CODE: 23/1-007

PROJECT NAME: Wood Fuel Handling System Upgrades

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (unsafe rotating equipment and fire risk conditions exist). The impact associated with resiliency is high (failure likely to disable the wood fuel boiler).

The likelihood of these events is high (conditions are critical to address, failure is imminent).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The wood handling system at the Energy Plant transports fuel from delivery trucks to the throat of the wood boiler. The wood boiler provides significant economic and environmental benefits to the University, however, at 35 years old, many of the subsystems are in critical need of upgrade. This project upgrades the fuel handing subsystems including hydraulics, augers, and conveyance systems. Several single points of failure, or long repair time, issues exist within these systems. These systems are original equipment and damaged from years of use, posing severe safety risks to operators, fuel supplier delivery drivers, and vehicle and pedestrian traffic. Emergency repairs were needed in 2021 and will be needed again in the very near future, indicating that significant failures are imminent. Without a functional fuel handling system, the wood boiler will be shut down, significantly increasing Supply costs to the University until addressed. Shutdown of the wood boiler risks N+1 performance standards for the Steam System as the Energy Plant would be completely dependent on natural gas availability, posing a significant risk to campus.

Objectives: The main objectives of this Capital Improvement are:

- Recondition the wood fuel handling system to extend its useful and serviceable life.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address safety concerns associated with the physical conditions of current assets.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Replace glycol heating unit for deliver ramp.
- Upgrade the walking floor with new components including:
  - Hydraulics, slats, nylon surfaces, bearings, seals.
- Upgrade exterior fuel conveyance system with new components including:
  - Unclassified belt and cover.
  - Classifier drive and cover.
  - Classified belt and magnet.
- Upgrade silo fuel conveyance system with new components including:
  - Elevated screw.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-007

- Silo exit auger.
- Damaged silo bucket elevator and buckets.
- Install speed control to silo bucket elevator.
- Damaged metering bin bucket elevator and buckets.
- Install speed control to metering bin bucket elevator.

- Upgrade metering bin including:
  - Demolition of existing metering bin.
  - Reengineer for improved fuel flow to throat.
  - Replace drives.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

Additional work will occur within the Steam Plant perimeter. Any outage periods of the wood fuel boiler will be coordinated with the University.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $177,336.

Additional Information:

Figure 1. Tipper hydraulics in poor condition surrounded by combustible materials.

Figure 2. Hydraulic system beyond serviceable life.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-007

Figure 3. Aged wood conveyance system in poor condition.

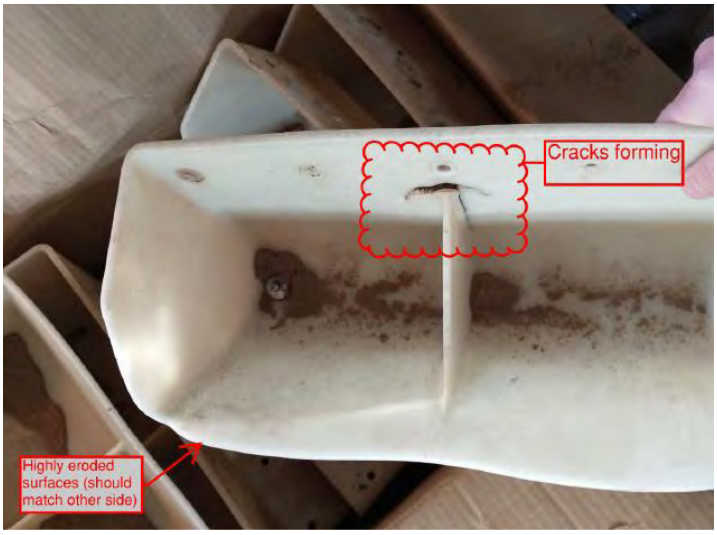

Figure 4. Elevator buckets are heavily worn.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $2,162,888.

(B) Forecasted annual operations and maintenance costs: $0. Like for like replacements. The new system will have specific O&M requirements to maintain expected life. Downtime from breakdowns and jams should be reduced from improved performance.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) construction will be phased during two summer seasons to ensure the wood boiler is available during winter heating season and to reduce logistics impact to fuel suppliers, (ii) a partial replacement of damaged buckets only (15 buckets per elevator), (iii) a 1% electrical efficiency improvement in the conveyance system will be derived, and (iv) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-007

(E) Proposed schedule: EPC (Const.) extends through June 2024. EPC (Commiss.) occurs from June 2024 to July 2024.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved fuel handling will increase the reliability of the wood boiler, reducing natural gas consumption.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $2,146,932.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$1,000, wood fuel, natural gas, and electricity. The decrease is associated to reduced wood boiler downtime, and improved conveyance efficiency.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-008

PROJECT CODE: 23/1-008

PROJECT NAME: Feedwater System Improvements

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (unsafe piping exists). The impact associated with resiliency is high (failure likely to disable the wood fuel boiler, pumps failing risk complete Energy Plant shutdown).

The likelihood of these events is low.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The feedwater system is critical to boiler operations and is in need of replacement. This project addresses issues in the system to improve performance, resiliency, and safety. Most of these systems are original equipment and are well beyond this serviceable life and becoming unrepairable. The feedwater piping to D Boiler is of an unknown age and likely not up to code. The current pipe layout in the Energy Plant is a result of efforts to minimize cost and maximize uptime during construction over the years. As a result, piping often does not follow an optimum path and has excessive bends, which increases losses in the system.

Objectives: The main objectives of this Capital Improvement are:

- Improve performance of the feedwater system.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address safety concerns presented by condition of existing assets.
- Improve O&M practices for safe and reliable operation.

Scope of Work: The scope of work of this Capital Improvement is:

- Upgrade feedwater pumps and VFDs (x4).
- Optimize feedwater pipe layout in the Energy Plant.
- Replace distribution valves (x15 4" valves, x2 6" valves).
- Replace D Boiler piping (approx. 175ft).

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-008

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $89,748 and will also include (i) a flow analysis to identify losses and potential improvements in the system, and (ii) non-destructive testing of the 2,500 gal feedwater tank to determine remaining useful life.

Additional Information:

Figure 1. Aged feedwater pump.

Figure 2. 64-year-old feedwater pump showing heavy leakage.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,696,493.

(B) Forecasted annual operations and maintenance costs: $0. No change in O&M Cost is expected.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) a 2% increase in the feedwater pump efficiency, and (ii) the 2,500 gal feedwater tank is still serviceable and does not need to be replaced.

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) occurs in September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-008

EPC (Commiss.)												

(F) Impact on Sustainability: Minor improvement from reduced losses in pipe network.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,683,720.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$600, wood fuel, natural gas. The decrease is associated with reduced losses in the pipe network and increased pump efficiency.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-009

PROJECT CODE: 23/1-009

PROJECT NAME: Boiler Controls Modernization

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical, life safety, and health issues). The impact associated with resiliency is high (potential for boiler shutdowns).

The likelihood of these events is medium (controls are failing).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The control systems for each boiler are over 30 years old and no longer made or supported by the manufacturer. Currently there are no commercially available parts for these systems. The controls for the wood boiler fail regularly, which puts the boiler out of compliance with the University's Air Quality Permit with Idaho DEQ. Gas boiler controls are located at each boiler instead of centralized, significantly increasing response time to problems and reducing the Energy Plant's ability to monitor equipment. The Chilled Water system is also located far away from the operator station. This project addresses these problems by upgrading and centralizing the boiler control systems into one location to improve plant safety and operational efficiency. As critical components of the Steam and Chilled Water Systems, when these controls fail the respective utility system also fails. With spare parts no longer available there is risk of permanent boiler shutdowns until the controls are replaced. Shutdown of boilers risks N+1 performance standards for the Steam System, posing a significant risk to campus.

Objectives: The main objectives of this Capital Improvement are:

- Centralize Energy Plant controls to increase response time before severe damage occurs.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address safety concerns associated with the physical conditions of current assets.
- Address long term health concerns from wood dust, ash, and noise exposure that should be physically mitigated rather than dependent on procedures.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Demolition of the existing supervisors' office.
- Construction of a 2-story, 30ft x 12ft centralized control room with office space and conference room on second story.
- Installation, wiring, and programming of SCADA system to include the following systems:
  - Wood boiler (x1).
  - Natural gas boilers (x3).
  - Feedwater pumps (x4).
  - Condensate pumps (x4).
  - Steam turbines (x3).
  - Absorption chillers (x2).

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-009

  - Cooling towers (x3).
  - Emergency generator (x1).
- Install a standalone server for data collection and storage.
- Catwalk modification for access to second story.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $438,048 and will also include architectural and engineering design drawings and specifications to construct a control room and office space.

Additional Information:

Figure 1. Obsolete operator station, manned 24/7 and exposed to environmental hazards.

Figure 2. Demo supervisors' office.

Figure 3. Examples of obsolete gas boiler control and operator station.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-009

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $4,024,783.

(B) Forecasted annual operations and maintenance costs: $9,900. Decrease from fewer repairs to keep controls operational. Increase from more complex and expanded control system. Additional controls and server maintenance needs. The new system will have specific O&M requirements to maintain expected life.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) commercially available control systems will be compatible with existing boilers, (ii) sufficient space will exist for the necessary centralized control room and supervisors' office, (iii) staged demolition and construction of controls at each boiler so N+1 redundancy is maintained in the event of a failure, (iv) 0.5% reduction in fuel costs due to improved control of boiler operations based on FY21 data, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through August 2024. EPC (Commiss.) occurs from August 2024 to September 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Negligible.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $3,994,056.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$5,000, wood, natural gas, and electricity. The decrease is associated to minor electrical load increase, improved boiler control.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-010

PROJECT CODE: 23/1-010

PROJECT NAME: Wood Boiler Capital Renewal Project 1

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues). The impact associated with resiliency is high (extended outage and wood boiler shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The wood fuel boiler provides significant economic and environmental benefits to the University, however, at 35 years old, many of the subsystems are in critical need of replacement. This project upgrades the boiler subsystems including the woodchip grate system, internal components, and fans. Each of the subsystems addressed is critical to the operation of the wood fuel boiler. Several single points of failure, or long repair time, issues exist within these systems. Most of these systems are original equipment, well beyond serviceable life, and damaged from years of use. Improvements will increase efficiency, extend the useful life of the boiler, reduce Supply Costs to the University by decreasing boiler downtime, and increase the resiliency of this system, a critical aspect to achieve performance standards and associated resiliency goals of the University. The alternative to these upgrades would be either complete replacement of the boiler and associated fuel and ash handling systems, switch to natural gas fuel at significantly higher Supply costs, or transition away from central steam heating to campus.

Objectives: The main objectives of this Capital Improvement are:

- Recondition the wood boiler to extend its useful service life.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address safety concerns associated with the physical conditions of current assets.
- Mitigate single point of failure risks by keeping N+1 critical spares on hand.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Recondition throat.
- Replace failing grate supports, linkages, and hydraulic ram systems.
- Recondition firebox and replace all spray on refractory.
- Replace ash hopper firebricks with refractory.
- Eddy current test boiler tubes and retube as needed.
- Rebuild steam drum diverter, mud drum diffusers, and water column.
- Replace soot blower lances (x8), gear trains, and soot blower valves.
- Replace ID fan, FD fan, under-fire fan, over-fire fan, VFDs, motors, and dampers.
- Replace all critical valves.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-010

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

The Concessionaire will coordinate with the University the timing during the lowest steam use to reduce natural gas costs during shutdown. Wood boiler shutdown can be done without an impact to steam customers.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $256,284 and will also include Eddy current testing on the boiler tubes.

Additional Information:

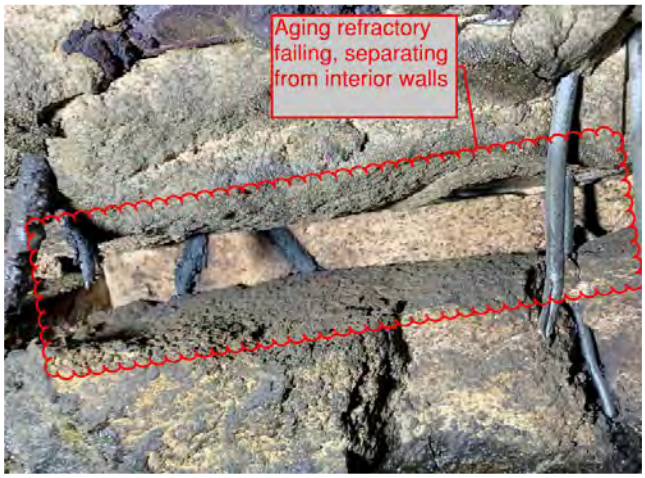

Figure 1. Refractory in need of replacement.

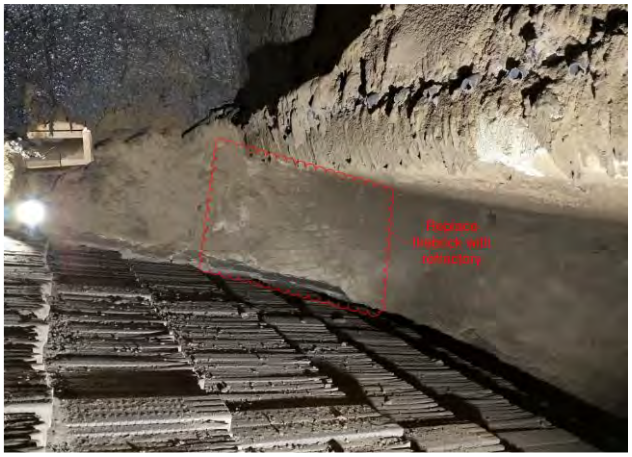

Figure 2. Exposed firebrick in boiler.

Figure 3. Condition of boiler tubes unknown.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-010

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $2,321,361.

(B) Forecasted annual operations and maintenance costs: $0. Downtime from breakdowns and labor costs should be reduced from improved performance, but it will compensate the increased O&M costs due to Higher complexity of equipment.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) 20% of boiler tubes will need to be replaced, (ii) Supply savings achieved through 1% decrease in wood boiler downtime and improved operations based on FY21 data, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs in October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved wood boiler efficiency reduces natural gas use during peak loads.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $2,303,856.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$10,000, wood fuel, natural gas, electricity. The decrease is associated with decreased wood boiler downtime, improved efficiency of the boiler and subsystems.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-011

PROJECT CODE: 23/1-011

PROJECT NAME: 950 CAT Loader Major Rebuild and Hough Replacement

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is medium (fire risk near wood fuel storage). The impact associated with resiliency is high (extended wood boiler outage and increased Supply Costs).

The likelihood of these events is medium (loader is failing and beyond recommended runtime).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The 950 CAT loader is critical for successful operation of the wood chip storage facility. It is used to deliver wood chips from piles to the chip trailer to be used at the Energy Plant. This project rebuilds the engine and mechanical systems of the loader. The loader has passed the recommended runtime hours by the manufacturer and requires a certified rebuild before severe damage occurs. Several failures have occurred in 2021 including fouling fuel injectors and an engine fire, indicating that more significant damage may occur soon if not addressed. Loss of the loader reduces the Energy Plant's ability to meet campus loads with wood fuel, potentially increasing Supply Costs to the University. The backup Hough loader should be replaced as it is well beyond its life expectancy and not reliable. The existing 950 CAT will provide N+1 redundancy to the new loader.

Objectives: The main objectives of this Capital Improvement are:

- Restore N+1 redundancy for the wood chip storage facility.
- Mitigate severe resiliency issues associated with aging systems.

Scope of Work: The scope of work of this Capital Improvement is:

- Certified inspection and rebuild of the existing 950 CAT loader to act as a backup
- Purchase a new loader of similar size to act as the primary loader
- Remove the Hough loader from service
- Administer procurement in accordance with CA Contract Part IV-Performance Standards: Steam and Condensate section 9) Fuel Operations and Storage.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this

proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $1,620, and will also include (i) a certified inspection of the 950 CAT to determine scope of rebuild, and (ii) the administration of procurement of the new loader.

Additional Information:

Figure 2. Smoke due to failing injectors on CAT (Aug. 2021).

Figure 1. CAT engine fire near combustible wood fuels (Oct. 2021).

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $771,686.

(B) Forecasted annual operations and maintenance costs: $1000. Upgraded loader will have additional O&M requirements due to increased complexity.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) the cost for loader rental during the rebuild is not included in the indicative price, (ii) the new loader would be purchased and on site before the rebuild commences.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-011

(E) Proposed schedule: EPC (Overhaul) occurs from July 2025 to October 2025.

	07/24	08/24	09/24	10/24	11/24	12/24	01/25	02/25	03/25	04/25	05/25	06/25
Additional Work												
EPC (Proc.)												
EPC (Arriv. site)												
EPC (Overhaul)												

(F) Impact on Sustainability: Minor efficiency and emissions improvement.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $765,936.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-012

PROJECT CODE: 23/1-012

PROJECT NAME: Distribution Steam and Condensate Upgrades

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues associated with steam pipe rupture). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The steam and condensate piping in the tunnel network is critical for distributing heat to campus buildings safely. This project upsizes major sections of the system and upgrades valves and expansion joints. Most of these systems are beyond or approaching their end of serviceable life. The lines by ISUB are over 95 years old, threaded, and beginning to rust, posing a high safety risk to operators and pedestrians if the pipe ruptures. Rupture poses an extreme safety risk to pedestrians and operators from exposure to high pressure, high temperature steam, reduced steam service from pressure loss to all buildings, decreased condensate return rate, and severe damage to all utilities in the tunnel until the pipe can be isolated. Years of water damage is eroding the outside of the pipe, increasing the likelihood of failure and shutdown to campus buildings. The lines on 6th Street are at least 59 years old and too small to meet current or future steam loads. The 6th Street line will need to be upgraded before additional buildings such as Kibbie or Hartung are connected to the network. Additional isolation valves will improve resiliency and add the ability to redirect steam to buildings in the event of a failure. Eventually all steam and condensate piping on campus will need to be replaced, along with their associated valves, supports, and insulation, as much of the system is beyond its expected life. This project addresses the most vulnerable and high risk sections.

Objectives: The main objectives of this Capital Improvement are:

- Upgrade major steam lines to support campus growth.
- Mitigate severe resiliency issues associated with aging systems.
- Address safety concerns associated with the physical conditions of current assets.

Scope of Work: The scope of work of this Capital Improvement is:

- Replace 8” steam and 4” condensate lines from Idaho Ave. to University Ave. (approx. 325 ft).
- Upgrade 6” steam/5” condensate lines on 6th Street from Central Mall to Wallace Complex to 10” and 6” (approx. 670’).
- Upgrade the 5” condensate line on 6th Street from Line Street to Central Mall to 6” (approx. 425 ft).
- Replace aged expansion joints.
- Replace condensate receivers and pumps (x2).
- Install additional condensate sampling points.
- Install double block and bleed isolation valves at key points.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-012

- Identify and remove abandoned utilities.

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended that University of Idaho ITS department identify and remove abandoned and damaged IT and telecommunications lines in construction areas while accessible.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

The Concessionaire will coordinate with the University the construction of steam and condensate pipe during the summer season to reduce impact to campus.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $90,180 and will also include (i) a tunnel inspection to obtain exact quantities of valves, sampling points, expansion joints, and abandoned utilities, (ii) the development of a steam and condensate system flow model to ensure the pipe sizing is adequate, and (iii) the drafting of a constructability plan for steam and condensate shutdown of areas.

Additional Information:

Figure 1. 95-year-old threaded pipe poses a safety hazard.

Figure 2. 95-year-old threaded pipe is rusting through.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-012

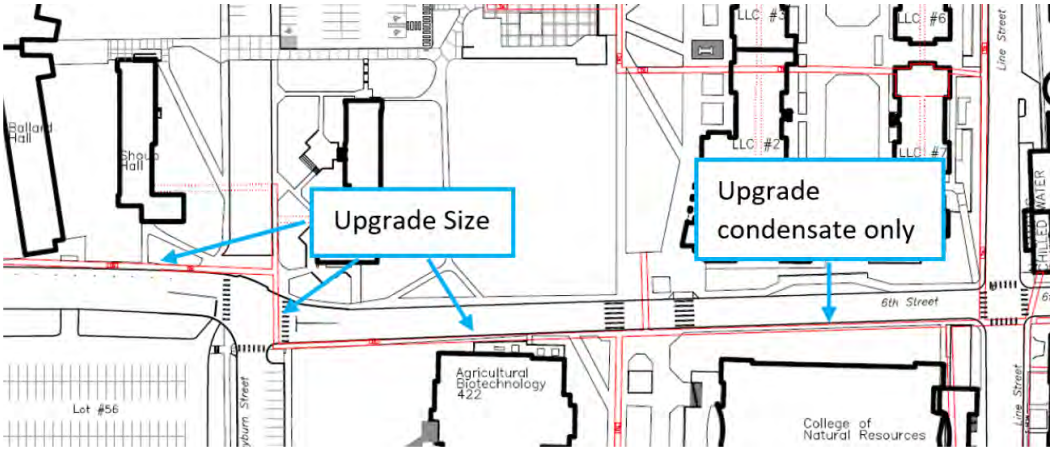

Figure 3. 6th Street lines upgrades.

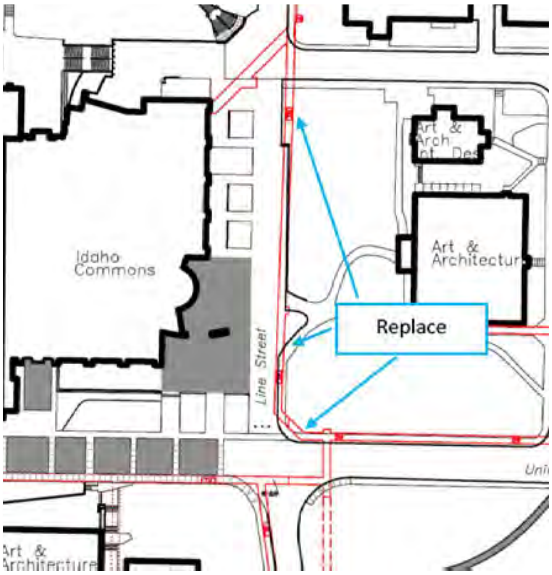

Figure 4. Lines to be replaced by ISUB.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $5,750,062.

(B) Forecasted annual operations and maintenance costs: $7,800. Additional isolation valves and equipment required maintenance.

(C) Proposed modification to the Recovery Period: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-012

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) 30 expansion joints (10%) will be replaced, (ii) 5 condensate sampling points will be added, (iii) 10 additional isolation valves will be added, (iii) the additional work may identify additional needs to be presented in a future Capital Improvement, (iv) the necessary pipe sizing may change depending on the flow study, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2025. EPC (Commiss.) occurs in October 2025.

	07/24	08/24	09/24	10/24	11/24	12/24	01/25	02/25	03/25	04/25	05/25	06/25
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Negligible.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $5,705,100.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-013

PROJECT CODE: 23/1-013

PROJECT NAME: Energy Plant Emergency Generator Upgrades

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is medium (loss of heat in winter). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is low.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The emergency back-up generator is critical for providing power to the Energy Plant during total electrical outages. This project upgrades the system by replacing the aging generator and electrical components and connecting them to the microgrid. Most of these systems are 26 years old and beyond their serviceable life. Though the turbines are expected to provide power during an Avista outage, the generator is still necessary to provide "black start" functionality if there is an outage while the turbines are offline. Each of the subsystems addressed is critical for the successful operation of the Energy Plant during such an outage. Without power there would be a complete steam and compressed air loss to campus buildings. Modernizing the generator and connecting to the Energy Plant microgrid will provide for automatic start-up and synchronization with the turbines, reducing potential interruptions to plant operations or campus when power from the utility is lost or restored.

Objectives: The main objectives of this Capital Improvement are:

- Upgrade the generator to provide black start capability.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address safety concerns associated with the physical conditions of current assets.

Scope of Work: The scope of work of this Capital Improvement is:

- Remove the existing generator, ATS, and emergency panel 'X'.
- Install new 208V, 3-phase, 300 kW diesel generator with 24-hour belly tank on the exterior of the building.
- Install new ATS and emergency panel to support electric loads of the natural gas boilers.
- Upgrade the emergency electrical system and connect to microgrid controls.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-013

accommodations will be implemented as needed.

The Concessionaire will coordinate with the University the construction schedule during summer hours to reduce impact to the Energy Plant parking lot.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $80,892 and will also include a power study for proposed emergency circuits.

Additional Information:

Figure 1. Aged generator at the Energy Plant.

Figure 2. Existing fuel tank.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $681,164.

(B) Forecasted annual operations and maintenance costs: $0. No change in O&M Costs expected.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) suitable space is available outside the building, and (ii) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through August 2026. EPC (Commiss.) occurs in September 2026.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-013

	07/25	08/25	09/25	10/25	11/25	12/25	01/26	02/26	03/26	04/26	05/26	06/26
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Minor impact from larger diesel generator fuel consumption.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $675,972.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-014

PROJECT CODE: 23/1-014

PROJECT NAME: Energy Plant Building Envelope Improvements

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is medium (physical and life safety issues). The impact associated with resiliency is medium (plant security issues).

The likelihood of these events is medium.

Likelihood				
	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The exterior envelope of the Energy Plant has been in disrepair for some time, with the last major improvement 35 years ago with the addition of the wood boiler. Many portions of the building are original from 1926. Upgrades are needed for the plant to continue operation for the next 50 years. This project addresses the many significant safety issues for both plant operators, and vehicle and pedestrian traffic outside. Security additions at doors and windows are needed to prevent unauthorized access. Providing a setback from the building is necessary for protection from falling objects and glass. Many of these issues can be addressed while also improving the general appearance of the building.

Objectives: The main objectives of this Capital Improvement are:

- Improve the general condition of the Energy Plant to extend useful life.
- Increase security and prevent unauthorized access.
- Address safety and security concerns presented by degraded condition of existing assets.
- Address long term health concerns from ash exposure.

Scope of Work: The scope of work of this Capital Improvement is:

- Install card access locks on all exterior doors.
- Replace windows with safety glass. Recondition all window operating mechanisms.
- Replace failed roof exhaust fans.
- Replace roof.
- Connect roof drains to stormwater collection system instead of sewer.
- Recondition brickwork and repaint sheet metal exterior.
- Plant a tree row on east side of building to reduce safety risks in parking lot.
- Upgrade exterior lighting and Bay 3 to LED lights.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-014

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

The Concessionaire will coordinate with the University the partial closing of Lot 14 and adjacent sidewalks during construction, as well as a potential reconfiguration of the parking lot.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $155,412 and will also include the preliminary architectural and engineering design documents to include windows, landscape tree planting, and exterior façade re-finishing.

Additional Information:

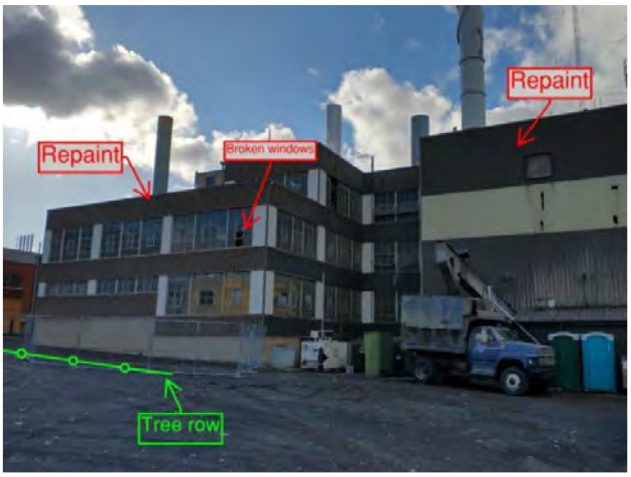

Figure 1. East side of building.

Figure 2. Failed exhaust fan and broken windows.

Figure 3. Brickwork at Energy Plant.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-014

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $3,767,158.

(B) Forecasted annual operations and maintenance costs: $0. No change in O&M Cost is expected.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) 40% of brickwork will be repointed, (ii) trees will be planted away from utilities and their ownership turned over to the University after construction, (iii) construction work will be staged over 2 years to reduce impact to campus activities, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through June 2027. EPC (Commiss.) occurs from June 2027 to July 2024.

	07/25	08/25	09/25	10/25	11/25	12/25	01/26	02/26	03/26	04/26	05/26	06/26
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement as a result of a new tree row that will act as a carbon sink improving local air quality.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $3,739,392.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible. Any LED savings will be offset by additional loads.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-015

PROJECT CODE: 23/1-015

PROJECT NAME: Utility Tunnel Upgrades

UTILITY SYSTEM: Steam, Chilled Water, Electricity

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues). The impact associated with resiliency is high (extended utility outages and building shutdowns).

The likelihood of these events is low.

Likelihood				
	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The utility tunnel network is critical for distributing many utilities across campus including steam, chilled water, high voltage power, natural gas, and IT/telecom. This project upgrades the systems within the tunnels that remove water and keep workers and pedestrians safe. These systems are critical for preventing flooding damage to utilities and the tunnel walls as well as reducing the risk of severe life safety hazards such as electrocution or natural gas leaks. Many of these components are not suited for the environment or are at the end of life and are in need of upgrades. The existing sump pumps are not rated for high temperature water and fail often. Much of the racking used to support pipes is heavily damaged from rust and corrosion over time, posing a safety and resiliency risk. Lighting systems are inadequate, causing unsafe conditions. This project removes, replaces, and repairs systems to extend the tunnels' life.

Objectives: The main objectives of this Capital Improvement are:

- Extend the useful life of the tunnel system by implementing effective water management to reduce water intrusion damage.
- Mitigate resiliency issues by replacing damaged/inadequate utility racking and removing abandoned systems.
- Address safety concerns presented by the physical condition of existing tunnel systems.
- Prevent unplanned outages by replacing degraded iron pipe with copper.

Scope of Work: The scope of work of this Capital Improvement is:

- Conduct thorough assessment to provide water management, racking, lighting, and piping improvements throughout the tunnel system.
- Replace sump pumps with high temperature pumps and standardize (x10).
- Convert lights to LED and install central system to shut off lights remotely.
- Replace damaged utility racking.
- Identify and remove abandoned utilities in construction areas.
- Upgrade corroded iron compressed air pipes to Type K copper.

Beyond the Concessionaire's Line of Demarcation associated to this Capital Improvement, it is recommended that University of Idaho ITS department identify and remove abandoned and damaged IT and telecommunications lines in construction areas while accessible.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey

covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

The Concessionaire will coordinate with the University and building occupants any potential utility shutdowns.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $73,548.

Additional Information:

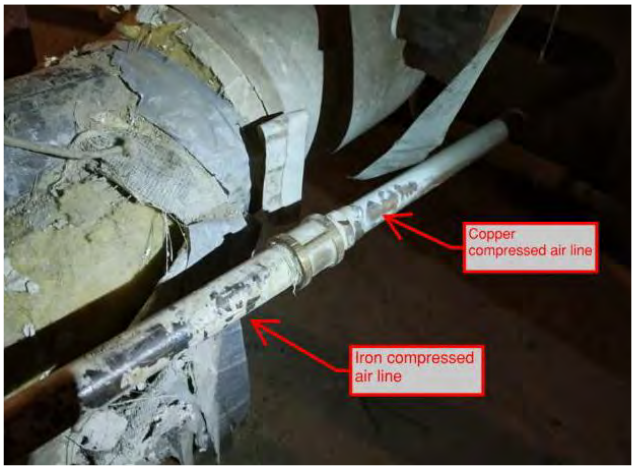

Figure 1. Iron compressed air lines.

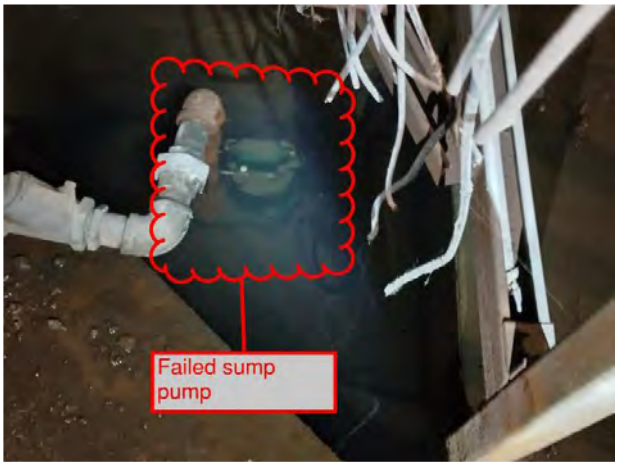

Figure 2. Failing sump pump.

Figure 3. Fluorescent lights still in use.

Figure 4. Flooding due to failed sump pump near high voltage power.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-015

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,986,061.

(B) Forecasted annual operations and maintenance costs: $0. No change in O&M Cost is expected.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) 25% of lighting needs to be converted to LED, (ii) 5% of utility racking requires replacement, (iii) 300' of iron pipe requires replacement, (iv) utility racking will be able to be repaired or replaced without shutting down utility service, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2027. EPC (Commiss.) occurs in October 2027.

	07/26	08/26	09/26	10/26	11/26	12/26	01/27	02/27	03/27	04/27	05/27	06/27
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement from reduced electric loads.

(G) Anticipated tax credits or other benefits: Possible rebate from Avista being assessed.

(H) Fee or charge payable to the Operator: $1,971,108.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible. The reduction from lighting energy savings will be offset by operational sump pumps.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-016

PROJECT CODE: 23/1-016

PROJECT NAME: Condensate Return System Upgrades

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is low (unsafe working conditions). The impact associated with resiliency is medium (potential risk to building envelope).

The likelihood of these events is low.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The condensate return system is critical to boiler operations and is in need of upgrades provided by this project. This project addresses issues in the system to improve performance, resiliency, and safety. These systems are beyond expected life and should be replaced before failure. The main hot well tank is 95 years old, underground, and in unknown condition. Loss of these tanks risks a steam system shutdown and structural damage to the building envelope of the Energy Plant.

Objectives: The main objectives of this Capital Improvement are:

- Upgrade condensate return system to improve performance.
- Mitigate resiliency issues associated with systems approaching end of life.
- Address safety concerns that should be physically mitigated rather than dependent on procedures.
- Improve O&M practices for safe and reliable operation.

Scope of Work: The scope of work of this Capital Improvement is:

- Replace condensate pumps at the hot well tanks and install VFDs (x4).
- Install exhaust fans in the hot well room.
- Recondition the hot well tanks and reline (x2).
- Replace critical valving in hot well room.
- Install flash tank to capture high pressure steam losses.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-016

proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $77,976 and will also include a structural assessment of the hot well tanks.

Additional Information:

Figure 1. Aged condensate pumps in hot well room.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,630,428.

(B) Forecasted annual operations and maintenance costs: +$1,500. The increase is required for the additional flash tank and exhaust fans.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) hot well tanks will still have useful life left if relined, (ii) no major structural repairs or replacement is needed, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through July 2027. EPC (Commiss.) occurs in August 2027.

	07/26	08/26	09/26	10/26	11/26	12/26	01/27	02/27	03/27	04/27	05/27	06/27
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-016

(F) Impact on Sustainability: Improvement from more efficient pumps. Reduced flash steam losses.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,618,164.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$100, electricity. The reduction derives from VFDs and reduced steam losses.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-017

PROJECT CODE: 23/1-017

PROJECT NAME: Wood Boiler Capital Renewal Project 2

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is medium (long-term health concerns for operators). The impact associated with resiliency is medium (extended outage and building shutdown).

The likelihood of these events is low.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The wood fuel boiler provides significant economic and environmental benefits to the University, however, at 35 years old, many of the subsystems are in critical need of upgrade. This project upgrades the boiler subsystems associated with improving performance and managing emissions. Each of the subsystems addressed is critical to the successful operation of the wood fuel boiler and is in serious need of upgrades. Several single points of failure, or long repair time, issues exist within these systems. Most of these systems are original equipment and are well beyond this serviceable life. Upgrading these systems is critical to plant reliability, will improve efficiency, extend the useful life of the boiler, and reduce Supply Costs to the University.

Objectives: The main objectives of this Capital Improvement are:

- Recondition the wood boiler to extend its useful service life.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address health concerns presented by the condition of existing systems.
- Allow O&M practices for safe and reliable operation.

Scope of Work: The scope of work of this Capital Improvement is:

- Replace economizer.
- Refurbish air pre-heater and improve access.
- Repaint and insulate the boiler skin.
- Replace emissions land.
- Emissions management improvements.
- Upgrade damper controls for over and under fire fan flow.
- Efficiency and balancing study to optimize operation.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-017

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

The Concessionaire will coordinate with the University the construction schedule during the lowest steam use to reduce natural gas costs during shutdown, and the use of Lot 14 for use as a laydown area. The wood boiler shutdown can be done without an impact to steam customers.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $314,280 and will also include (i) an engineering assessment on emissions control method modernization, (ii) an engineering assessment on insulating boiler skin, (iii) a non-destructive testing of the exhaust stack to determine useful life, and (iv) Eddy current testing on air preheater tubes.

Additional Information:

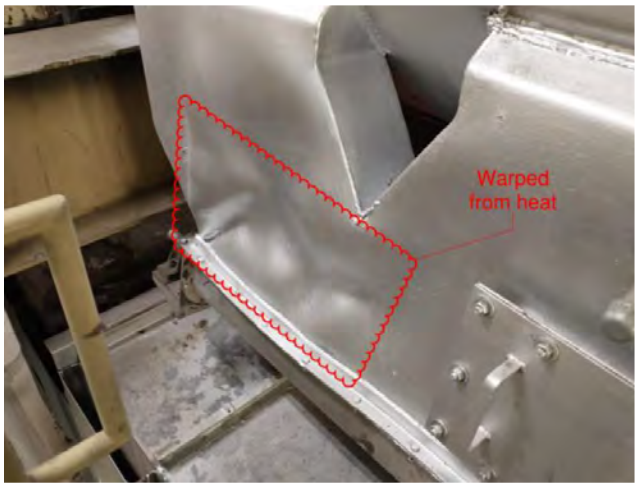

Figure 1. Exterior walls of boiler warping from age and heat.

Figure 2. Non-insulated exterior walls.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $2,908,404.

(B) Forecasted annual operations and maintenance costs: $0. No change in O&M Cost is expected.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) 20% of air preheater tubes will need to be replaced, (ii) exhaust stack will still have useful life

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-017

and will not need to be replaced, (iii) construction will be staged across two summer seasons to ensure the wood boiler is operational during the heating season to reduce Supply Costs, and (iv) wood fuel requirements will be reduced by 2%.

(E) Proposed schedule: EPC (Const.) extends through June 2028. EPC (Commiss.) occurs from June 2028 to July 2028.

	07/26	08/26	09/26	10/26	11/26	12/26	01/27	02/27	03/27	04/27	05/27	06/27
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement in wood boiler efficiency will reduce the use of natural gas during peak loads.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $2,886,948.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$20,000, wood fuel, natural gas. The decrease is associated with the improved efficiency of the boiler and its subsystems.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-018

PROJECT CODE: 23/1-018

PROJECT NAME: Wood Fuel Storage Conveyance System Improvements

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is medium (some mitigation required). The impact associated with resiliency is medium (further degradation will become more impactful).

The likelihood of these events is low.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The Fuel Storage conveyance system has been in service since 2010 and requires upgrades. The mechanical measurement, unloading, and conveyance systems all require improvements in order to provide reliability of operation and allow for an adequate O&M practice. Periodic material jams and inadequate lighting present a safety concern to the operations staff. Unacceptable safety concerns are being managed by implementing protocols in the interim, but they need to be addressed promptly.

Objectives: The main objectives of this Capital Improvement are:

- Improve wood handling performance at the Wood Chip Storage Facility.
- Mitigate a severe safety and resiliency issue.
- Upgrade conveyance to increase reliability.
- Mechanical and lighting upgrades to improve safety.
- Implement required O&M practices for a safe and reliable operation.

Scope of Work: The scope of work of this Capital Improvement is:

- Replace load scale and upgrade electronics.
- Replace tipper pins and upgrade hydraulics.
- Improve tipper chute to eliminate jamming.
- Replace conveyance belt and source spare material.
- Install yard lighting and motion sensors to improve safety and security.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-018

accommodations will be implemented as needed.

The Concessionaire will coordinate with the University a construction plan for this Capital Improvement.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $129,276 and will also include a schematic design of the scale, the tipper, the conveyance equipment, as well as the lighting improvements.

Additional Information:

Figure 1. Tipper hydraulics surrounded by flammable material.

Figure 2. Wood chip conveyance system.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $957,408.

(B) Forecasted annual operations and maintenance costs: $0. No change in O&M Cost is expected.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) transformer will have sufficient power for new loads, (ii) construction will be scheduled during the spring season to reduce impact to operations, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-018

(E) Proposed schedule: EPC (Commiss.) extends through July 2027.

	07/26	08/26	09/26	10/26	11/26	12/26	01/27	02/27	03/27	04/27	05/27	06/27
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement derived from a more efficient wood fuel conveyance, thus mitigating unplanned outages and the associated increase in the use of natural gas fuel.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $950,616.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible electricity. The savings derived from the use of LED will likely be offset by the additional loads.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-019

PROJECT CODE: 23/1-019

PROJECT NAME: Wood Fuel Storage Facility Improvements

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is medium (some mitigation required). The impact associated with resiliency is low (further degradation will become more impactful).

The likelihood of these events is low.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The Fuel Storage Facility has been in service since 2010 and is critical to the supply of high-quality fuel to the Steam Plant and therefore, the reliability of steam plant operation. The lack of stormwater collection on the south side of the building has resulted in groundwater seeping into the wood fuel and eroding the area underneath the hardscape. These voids pose a risk to the structural integrity of the facility and need to be repaired. The wet wood fuel negatively impacts the Energy Plant's efficiency and is a risk to the wood boiler as rocks, mud, and potentially broken pavement may make their way into the fuel supply. The Storage Facility access is unrestricted, and instances of unauthorized access occur on occasion. This is a public safety and security concern as property damage or personal injury could occur.

Objectives: The main objectives of this Capital Improvement are:

- Increase Steam Plant resilience and efficiency by maintaining high fuel quality.
- Remove stormwater from the area to protect fuel quality and building foundation.
- Improve safety and security of the Storage Facility by installing access control.
- Replace the horizontal surfaces (apron and roadways) to maintain high quality fuel free of debris.

Scope of Work: The scope of work of this Capital Improvement is:

- Repair portion of damaged hardscape to include concrete demolition and restoration.
- Install stormwater collection system for the roof and south side of building.
- Excavation, backfill, and bedding for stormwater system.
- Install a gate and card access at the Storage Facility entrance.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the provision of perimeter fencing to prevent unauthorized access to construction areas.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-019

The Concessionaire will coordinate with the University a construction plan for this Capital Improvement.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $104,112 and will also include a geotechnical evaluation of hardscape to identify location and magnitude of voids (2 bore holes, 2 test pits).

Additional Information:

Figure 1. Wood Chip Storage Facility location behind Facilities Services.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $628,055.

(B) Forecasted annual operations and maintenance costs: $500. Additional O&M associated with maintenance of the gate and the management of the stormwater system.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) pumped ground water removal systems will not be required, (ii) a 40'x40' patch of the worst concrete section -may vary on results of geotechnical evaluation-, (iii) efforts will be made to mitigate impact on surrounding vegetation but impacts may occur and are not included in this scope, (iv) a 0.1% reduction in wood fuel requirements from reduced moisture content, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-019

(E) Proposed schedule: EPC (Const.) extends through August 2027. EPC (Commiss.) occurs in September 2027.

	07/26	08/26	09/26	10/26	11/26	12/26	01/27	02/27	03/27	04/27	05/27	06/27
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Positive impact as a result of a higher efficiency operations at the Steam Plant derived from improved fuel quality (reduced moisture and debris).

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $623,268.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$1,000, wood chips. The savings derive from a more efficient operation with reduced-moisture fuel.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-020

PROJECT CODE: 23/1-020

PROJECT NAME: Water Treatment Improvements Project 2

UTILITY SYSTEM: Steam

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is low. The impact associated with resiliency is low.

The likelihood of these events is low.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The Hot Lime Softening (HLS) tanks and the associated feedwater and condensate chemistry subsystems are critical for protecting the boilers and the steam distribution systems from scaling that reduces efficiency and risks significant damage (such as damaged/destroyed boiler internals, steam and condensate main degradation, and steam trap failure). These systems experience frequent fouling due to the type of fluids used, which reduces efficiency. HLS tank #1 is 58 years old and needs to be replaced. Most of this system is well beyond its serviceable life. HLS #1 is non-functional and well beyond its serviceable life. Replacement is critical for the future reliability of the Steam Plant.

Objectives: The main objectives of this Capital Improvement are:

- Right size the Energy Plant water treatment system.
- Mitigate resiliency issues associated with systems beyond their serviceable life.
- Improve O&M practices for a safe and reliable operation.

Scope of Work: The scope of work of this Capital Improvement is:

- Remove and replace HLS #1.
- Optimize flow path between the HLS tanks to provide redundancy and improve efficiency.
- Replace scaled piping between the HLS tanks.
- Replace distribution valves between HLS tanks.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

The Concessionaire will coordinate with the University to locate a laydown area in Lot 14.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-020

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $78,300 and will also include an engineering assessment on water technology options.

Additional Information:

Figure 1. Aged Hot Lime Softener #1.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,837,414.

(B) Forecasted annual operations and maintenance costs: $0. No change in O&M Cost is expected.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/1-020

(E) Proposed schedule: EPC (Const.) extends through September 2027. EPC (Commiss.) occurs in October 2027.

	07/26	08/26	09/26	10/26	11/26	12/26	01/27	02/27	03/27	04/27	05/27	06/27
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Minimal improvement from reduced water consumption.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,823,580.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible (<1%), wood fuel, natural gas. Less steam vented from a smaller HLS tank.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/2-021

PROJECT CODE: 23/2-021

PROJECT NAME: Chilled Water Distribution Upgrades Project 1

UTILITY SYSTEM: Chilled Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is low (flooding risk). The impact associated with resiliency is medium (extended outage and building shutdown).

The likelihood of these events is high (multiple joints have failed in the past).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: Chilled Water is distributed through miles of direct buried piping to campus buildings for cooling needs. Since the South Campus Chilled Plant was constructed the operating pressure of the distribution network has increased due to the height of the Thermal Energy Storage Tank. While this improves overall performance, the increased pressure has put additional stress on pre-existing pipes that were not designed for it. Design deficiencies include pipe and fitting selection not suitable for pressure levels and inadequate thrust blocks to restrict pipe movement. Multiple joints in the system have failed because of this in recent years, causing unplanned outages and flooding until repaired. This project aspires to provide repairs to the highest risk joints in the existing system before failure risks unplanned outages. Upgrades are needed across to the system to improve resiliency and prevent loss of service to critical cooling loads such as research and servers. A chilled water model is needed to identify the highest pressures in the system and most likely points of failure, further safety and resiliency risks, and support campus growth. Remediation of the inadequate piping systems will likely require multiple projects. This project's Additional Work will determine the construction plan and extent of projects required.

Objectives: The main objectives of this Capital Improvement are:

- Address design deficiencies in the CHW distribution network
- Mitigate resiliency issues associated with inadequate piping construction details
- Address safety concerns associated with the physical conditions of current assets

Scope of Work: The scope of work of this Capital Improvement is:

- Replace glued joints with flanged joints
- Provide excavation, demolition, bedding, backfill, surface restoration, etc.
- Model the Chilled Water system to identify deficiencies, restrictions, and support future growth

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which

CAPITAL IMPROVEMENT PROJECT SHEET – 23/2-021

originated prior to Closing.

A construction safety plan will be developed including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

The Concessionaire will coordinate with the University chilled water shutdown to buildings as needed and potential road and walkway closures.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $244,080 and will also include (i) development of a chilled water system flow model, and (ii) development of a construction plan to repair at risk joints.

Additional Information:

Figure 1. Joint that failed at NCCP in January 2021 and flanged joint installed after failure.

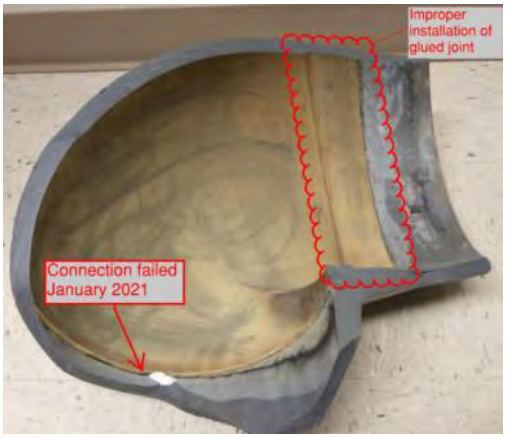

Figure 2. Failed joint not installed correctly

CAPITAL IMPROVEMENT PROJECT SHEET – 23/2-021

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $916,853.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) as-builts of previous chilled water line construction projects will be available, (ii) the replacement of ten 12" joints in the hardscape and softscape areas would be performed, (iii) the Additional Work and flow study may identify additional needs to be presented in a future Capital Improvement project, (iv) necessary pipe sizing may change depending on flow study, and (vv) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2025. EPC (Commiss.) occurs in October 2025.

	07/24	08/24	09/24	10/24	11/24	12/24	01/25	02/25	03/25	04/25	05/25	06/25
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Supports future connections to the chilled water system, which reduces carbon footprint.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $909,684.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/2-022

PROJECT CODE: 23/2-022

PROJECT NAME: North Campus Chiller Plant Upgrades

UTILITY SYSTEM: Chilled Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is low. The impact associated with resiliency is medium (extended outages).

The likelihood of these events is low.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The North Campus Chiller Plant (NCCP) is critical for supplying chilled water to campus buildings and increases wood boiler performance in the summer. This project upgrades the condenser water loop and cooling towers that serve the absorption chillers. Most of these systems are well beyond their serviceable life and in need of replacement. The cooling towers are heavily scaled, which reduces performance and useful life. Re-engineering the condenser water loop and replacing cooling towers will improve performance, resiliency, and provide for redundancy to the McClure Chiller Plant during cold weather. Neither the cooling towers or pumps were sized for their matching chillers, which reduces performance and the NCCPs ability to support critical cooling loads. Loss of NCCP if the cooling towers go down will impact campus operations by potentially triggering chilled water load shedding and increased Supply Costs to the University as electric chillers are brought online and steam turbine output is reduced.

Objectives: The main objectives of this Capital Improvement are:

- Improve performance and operating efficiency of the NCCP.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Redesign condenser loop with a common header for all chillers and cooling towers.
- Install and indoor basin to allow for cold weather operation.
- Replace primary and secondary pumps and VFDs (x5).
- Replace cooling towers (x3).
- Upgrade controls and monitoring.

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be developed during the development stage including the protection of live utilities, and

CAPITAL IMPROVEMENT PROJECT SHEET – 23/2-022

the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be implemented as needed.

The Concessionaire will coordinate with the University the Line Street closure for crane operations. The construction is scheduled during the fall season to avoid chiller shutdown during the peak cooling season.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $114,264 and will also include eddy current testing on both absorbers.

Additional Information:

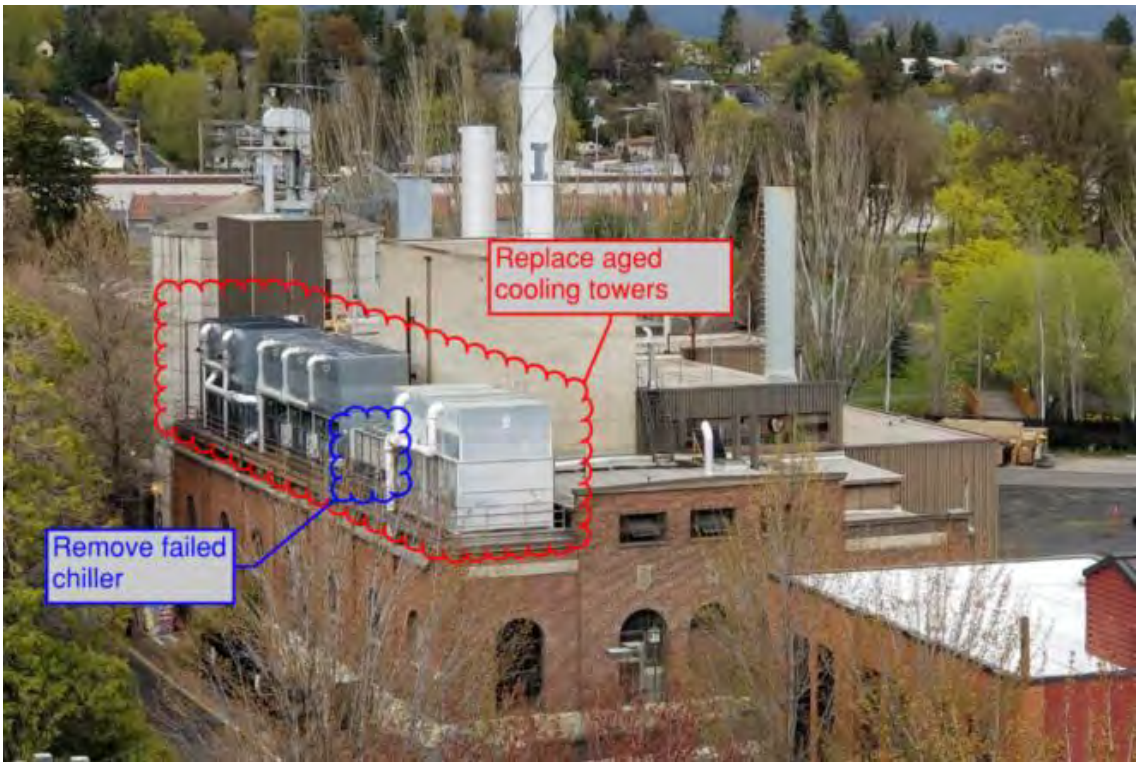

Figure 1. Cooling towers at NCCP

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $5,742,498.

(B) Forecasted annual operations and maintenance costs: $0.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that workable solutions for all required coordination with University activity will be achievable.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/2-022

Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Dev.) extends through July 2027. EPC (Const.) occurs from August 2027 to November 2027. EPC (Commiss.) occurs in November 2027.

	07/26	08/26	09/26	10/26	11/26	12/26	01/27	02/27	03/27	04/27	05/27	06/27
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved from the reduced water consumption and noise in vicinity.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $5,700,672.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$1,000, electricity. Improved efficiency from right sizing pumps and towers.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/2-023

PROJECT CODE: 23/2-023

PROJECT NAME: South Campus Chiller Plant Emergency Generator

UTILITY SYSTEM: Chilled Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is low. The impact associated with resiliency is low (extended outage and building shutdown).

The likelihood of these events is low.

Likelihood				
	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The South Campus Chiller Plant (SCCP) is not backed up with emergency power. Without power chilled water cannot be distributed to campus buildings with year-round critical cooling loads during outages. This project installs a generator sized to support the TES tank and associated pumping needed to distribute chilled water to campus, but not run chillers or cooling towers to produce chilled water. Cooling loads on campus would be met as long as the TES tank is charged. These subsystems are critical to the successful operation of the chilled water system. Installing a generator improves resiliency and mitigates risk to critical campus cooling loads such as research and servers. This is a first step towards supplying chilled water to campus during a power outage to achieve performance standards. Future Capital Improvement projects will be proposed to operate chillers and cooling towers during outages.

Objectives: The main objectives of this Capital Improvement are:

- Provide chilled water to critical campus cooling loads during power outages.
- Mitigate resiliency issues associated with a lack of backup power.

Scope of Work: The scope of work of this Capital Improvement is:

- Install a 480V, 3 phase, 3kW diesel generator with 24-hour belly tank on exterior of building.
- Install ATS, emergency panel, circuits, and controls to support CHW circulation pumps, TES tank sensors, and controllers.
- Connect Water Systems SCADA panel to emergency circuit.
- Construct enclosure and fencing around generator.

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A construction safety plan will be developed including the protection of live utilities, and the provision of fencing to prevent unauthorized access to construction areas. Temporary traffic and/or pedestrian accommodations will be

implemented as needed.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $70,848 and will also include an electrical load assessment to right size the new generator.

Additional Information:

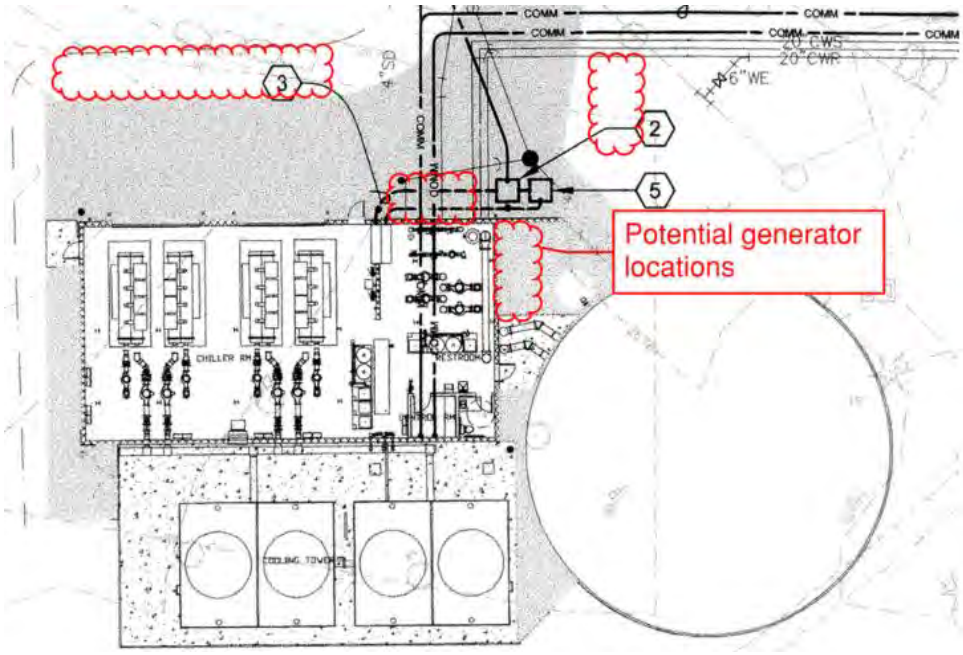

Figure 1. Potential exterior locations for the generator.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $611,887.

(B) Forecasted annual operations and maintenance costs: +$4,700. The increase is associated with labor and fuel cost for regular service checks.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) the size of the generator is dependent on the outcome of the project 23/2-021, (ii) the generator does not need to be sized to support chilled water production to reduce cost and footprint, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/2-023

(E) Proposed schedule: EPC (Const.) extends through July 2027. EPC (Commiss.) occurs in August 2027.

	07/26	08/26	09/26	10/26	11/26	12/26	01/27	02/27	03/27	04/27	05/27	06/27
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: There will be a minor impact from the fuel consumption of the diesel generator.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $607,284.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: Negligible.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-024

PROJECT CODE: 23/3-024

PROJECT NAME: Electrical Transformer and Primary Component Capital Equipment Reserve

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue). The impact associated with resiliency is high (extended outage and building shutdown)

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: Campus wide, the building electrical services, including conductors, connectors, transformers, and switches are aged; have no record of being tested nor maintained; and are a significant risk to the reliability of the campus electrical system. Recent failures indicate that substantial upgrade work is needed to bring the electrical distribution system up to required operating condition. This upgrade work is likely to take many years and additional failures are imminent. This project establishes mechanisms to respond to electrical distribution outages while permanent solutions are being planned and implemented. These capital assets are also required to do planned replacements of primary electrical system components. Lead time for primary electrical components can be very long. Without this work, extended outages could interrupt University business, cause property damage, and render unsafe occupancy conditions.

Objectives: The main objectives of this Capital Improvement are:

- Improve the safety/reliability of Primary Electrical Distribution system by preparing immediate response to outages.
- Maintain Performance Standard Part V.6, 7 and 8 and mitigate negative impact to Availability KPIs.
- Provide reserve transformers for emergency replacement service.
- Achieve a reserve supply of strategic primary electrical assets such as transformers, elbows, and bushings.
- Established baseline condition of primary electrical components.
- Procure emergency generation for quick dispatch to address electrical outages due to failures.

Scope of Work: The scope of work of this Capital Improvement is:

- Perform an assessment of the transformers to determine number, size, and characteristics to stock.
- Evaluate existing transformer stock. Retain, refurbish, or dispose of existing as determined.
- Purchase, receive, and stock capital equipment reserve including strategic transformer sizes.
- Purchase portable generator for response to emergency power outages.
- Coordinate capital equipment reserve with transformer replacements to maintain a rolling stock.

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-024

covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

Equipment will be stored safely and prepared for safe deployment as part of the Safety Plan.

The Concessionaire will coordinate with the University access to all transformers and vaults required for the Additional Work.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $84,564 and will also include (i) evaluation of primary components, developing reserve stock requirements and specification of primary components, (ii) the testing of existing reserve transformers to determine viability, and (iii) an oil and thermography testing of all transformers, primary switches, and vaults.

Additional Information:

Figure 1. Portable generator in place while transformer is being removed/replaced.

Figure 2. The replacement of transformer can take months.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-024

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,287,884.

(B) Forecasted annual operations and maintenance costs: +$500, as O&M Costs for the new generator.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) a strategic reserve of primary electric components will allow much more predictable response to electrical failures, (ii) the primary electric components for permanent repair will have a long lead time, and (iii) a strategic reserve may serve as rotating stock if sizing is correct for a permanent solution.

(E) Proposed schedule: EPC (Const.) extends through October 2023. EPC (Commiss.) occurs in November 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved through the increased electrical efficiency of the equipment and the mitigation of potential damages.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,278,504.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None. The equipment will be static in reserve during normal operations.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-025

PROJECT CODE: 23/3-025

PROJECT NAME: Electrical Vault Inspections and Upgrades

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The primary electrical system is largely distributed in an underground system including multiple vaults where cables are pulled, terminated, or spliced. These vaults are susceptible to excessive water intrusion. In many cases primary distribution splices are submerged in water that are not suitably rated for this application. This condition causes severe safety issues for personnel and campus community as well as severe resiliency issues. This project remediates water intrusion issues and unsound conditions. Before work is done on the vaults, it's imperative that the condition, capacity, and needs of the campus electrical distribution be well understood. A study to gain this information is necessary as Additional Work.

Objectives: The main objectives of this Capital Improvement are:

- Mitigate a severe safety and resiliency issue.
- Maintain Performance Standard Part V.6, 7 and 8 and mitigate negative impact to Availability KPIs.
- Modernize electrical distribution components (vaults) to allow primary electrical system to be adequately maintained per industry and performance standards.
- Implement required monitoring, water control, and O&M practices for a safe and reliable operation.
- Perform a comprehensive campus-wide electrical distribution study to inform future steps toward a safe and resilient electrical system necessary in order to provide operations per performance standards and University expectations.

Scope of Work: The scope of work of this Capital Improvement is:

- Perform assessment of the Campus Electrical Distribution System.
- Investigate 85 electrical vaults, primary switches, conductors.
- Assess condition of underground primary distribution assets.
- Develop a remediation plan for water intrusion and unsound conditions.
- Install sump pumps and water monitoring systems.
- Establish baseline thermography and, where applicable, oil testing.

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-025

completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be prepared around public sidewalk and street traffic (safety will need to be aware of and planned or public walk area). The equipment removal will occur through grated access at sidewalk level. Arc Flash PPE required.

The Concessionaire will coordinate with the University any required periodic restrictions of access to immediate work areas. Planned interruptions to building electrical services may be required.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $589,248 and will also include (i) a Campus Electrical Distribution System Study, (ii) a condition assessment of the underground primary distribution assets, and (iii) developing scope, schedule, budget for water management and primary component remediation.

Additional Information:

Figure 1. An electric vault that is completely submerged. Condition of equipment is unknown.

Figure 2. Electrical conduits submerged in vaults.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-025

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $4,909,371.

(B) Forecasted annual operations and maintenance costs: +$800. The installation of water management systems will increase the O&M requirements.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) the scope of this project is highly dependent upon the findings of the Additional Work, and (ii) 10 of the underground vaults require water management, 10% require major repair, 50% require normal repair, and 40% only require minor repair (this estimate is a rough order of magnitude only).

(E) Proposed schedule: EPC (Const.) extends through October 2023. EPC (Commiss.) occurs in November 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved through the increased electrical efficiency of the equipment and the mitigation of potential damages.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $4,870,044.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: +$500, electricity. Additional electrical costs associated with the operation of the sump pumps.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-026

PROJECT CODE: 23/3-026

PROJECT NAME: Menard Law Building Electrical Service Replacement

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high (previous components failures).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: Transformers are over 30 years old and have no record of being tested. The November 2019 failure and emergency repair of the oil filled, 13.2kV disconnect switch in Menard Law indicates that failure is imminent on this equipment of same age. That failure was the direct cause of the TLC basement flood that shut the building down for 3 weeks. The emergency repair of components resulted in spliced high voltage cable, eliminated building disconnect, and unsafe conditions. This condition presents a clearly dangerous condition for personnel and building occupants while leaving property at significant risk of damage. The main switch gear is beyond life and needs to be upgraded at the same time to remain safe and resilient. Main switch gear work is beyond the contractual demarcation point and is University responsibility.

Objectives: The main objectives of this Capital Improvement are:

- Mitigate a severe safety and resiliency issue.
- Modernize electrical service to building up to point of demarcation.
- Achieve a safe arc flash condition at the primary equipment.
- Implement required O&M for a safe and reliable operation.

Scope of Work: The scope of work of this Capital Improvement is:

- Provide new exterior pad-mounted transformers to replace pot style transformers currently installed on the interior of the building. Thermograph and oil test. Establish baseline records.
- Provide new SEL-735 or equivalent electrical meter and integrate with all existing building meters.
  - Backfill and restore surface to match existing.
- Provide new secondary feeders from new transformer to existing building electrical service.
- Connect steam condensate, chilled water, and domestic water meters to SEL-735. Replace as necessary.
- Vault work:
  - Repair damaged items in electrical vaults accessed for transformer replacements.
  - Repair any areas of water infiltration in electrical vault, provide water management system.
  - Thermograph vault components, establish baseline records.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-026

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended (i) the replacement and evaluation of the building's main distribution panel and its distribution system, and (ii) the performance of an arc flash analysis and any resulting corrective measures/placarding.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be prepared around public sidewalk and street traffic (safety will need to be aware of and planned or public walk area). The equipment removal will occur through grated access at sidewalk level. Arc Flash PPE required.

The Concessionaire will coordinate with the University for the College of Law building shutdown. Other buildings may be impacted as well.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $79,056 and will also include (i) a 30-day power study to evaluate load size for transformer sizing, and (ii) the documentation of vault damage and the development of a plan to remediate vault water issues, structural concerns, etc.

Additional Information:

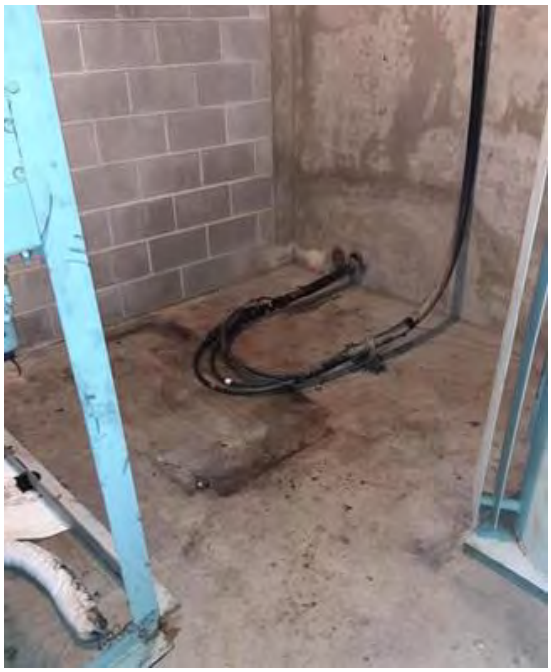

Figure 1. Unsafe conductor splice laying on the floor after emergency repairs in 2019.

Figure 2. Conditions in transformer room dangerous enough to require Arc flash PPE before entering.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-026

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $776,752.

(B) Forecasted annual operations and maintenance costs: +$200. The upgraded electric meter and new vault sump will require additional O&M.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) original transformers and switchgear were sized to serve electric boilers and chillers that have since been removed, (ii) new transformer is expected to be smaller and more efficient, (iii) work not included: no VFI switches nor appurtenances, no SEL 751, no switch operators, no microgrid infrastructure, no temporary generator, (iv) underground construction conditions will be reasonably free of obstruction, conflict, hazardous materials that could impede completion, (v) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur and their remediation is not included in this scope, and (vi) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2023. EPC (Commiss.) occurs in October 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved through the increased electrical efficiency of the equipment and the mitigation of potential damages.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $770,904.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$650, electricity. It is assumed a 1% improvement in electrical efficiency based on historic metering.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-027

PROJECT CODE: 23/3-027

PROJECT NAME: Kibbie Dome Building Electrical Service Replacement

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue). The impact associated with resiliency is high (extended outage and building shutdown)

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These transformers are 47 years old and have no record of being tested. Recent failure and replacement of one of the transformers in October 2021 indicates imminent and unpredictable failure of others. Multiple safety and reliability concerns were identified during the emergency replacement. These conditions present a clear dangerous condition for personnel and building occupants while leaving property at significant risk of damage. There is significant risk to campus events scheduled including football games and graduation ceremonies. The main switch gear is beyond life and will require replacement at the same time. If the University upgrades the field lighting to LED at the same time, there is significant energy savings and reduced project cost/O&M by eliminating the need for a 480V transformer.

Objectives: The main objectives of this Capital Improvement are:

- Upgrade electrical system of the Kibbie Dome to reduce risks to scheduled events.
- Mitigate a significant safety and resiliency issue.
- Modernize electrical distribution and metering.
- Achieve a safe arc flash condition.
- Implement required O&M for a safe and reliable operation.

Scope of Work: The scope of work of this Capital Improvement is:

- Replace 1200 kVA pad mount transformer serving north Kibbie Dome Concourse and field lighting (13.2kV to 480V).
- Replace 225 kVA pad mount transformer serving north Kibbie Dome Concourse (13.2kV to 208V).
- Replace 1500 kVA pad mount transformer serving south Kibbie Dome Concourse and field lighting (13.2kV to 480V).
- Replace primary feeders to sectionalizer. Trenching, backfilling, patching included.
- Replace secondary feeders to Main Building Service for all three service points. Trenching, backfilling, patching inc.
- Install protective bollards in front of transformers.
- Install SEL-735 electric meters (x4).
- Install ethernet cabling for meters.
- Install sumps pumps in electric vaults serving transformers (x2) and make repairs as needed.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-027

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended (i) the upgrading of stadium lights to LED to reduce transformer size and Supply Costs, (ii) replacing switchgear for each transformer and right size for energy savings and improved reliability (x4), and (iii) replacing 400A disconnect switch for road show power.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be prepared around public sidewalk and street traffic (safety will need to be aware of and planned or public walk area). The equipment removal will occur through grated access at sidewalk level. Arc Flash PPE required.

The Concessionaire will coordinate with the University an event schedule for shutdowns and the scheduling of the 480V-XFMR replacement after LEDs are installed.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $79,056 and will also include (i) electric load evaluations to right size new transformers and, (ii) the inspection of the electric vaults serving each transformer.

Additional Information:

Figure 1. Example of oil leaking from transformer.

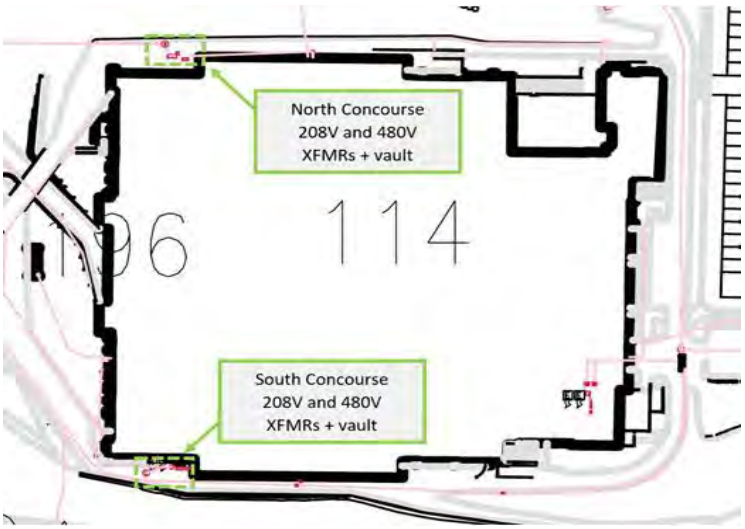

Figure 2. Electrical map of Kibbie Dome for reference.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-027

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,922,799.

(B) Forecasted annual operations and maintenance costs: +$400. The upgraded electric meters and new vault sumps will require additional O&M.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) new transformers expected to be smaller and more efficient, (ii) work not included: no VFI switches nor appurtenances, no SEL 751s, no switch operators, no microgrid infrastructure, no temporary generator, (iii) underground construction conditions will be reasonably free of obstruction but conflict, hazardous materials could impede completion, (iv) efforts will be made to mitigate impact on surrounding vegetation but impacts may occur and their remediation is not included in this scope, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) occurs in September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved through the increased electrical efficiency of the equipment and the mitigation of potential damages.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,908,144.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$530, electricity. It is assumed a 1% improvement in electrical efficiency based on historic Kibbie Dome metering.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-028

PROJECT CODE: 23/3-028

PROJECT NAME: Administration South Building Electrical Service Replacement

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue). The impact associated with resiliency is high (extended outage and building shutdown)

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These transformers are over 30 years old and have no record of being tested. Multiple recent high voltage electrical failures on campus indicate that aged transformers on campus will begin failing more frequently, severely disrupting campus operations. These transformers are located within the building, also posing a significant risk to the building envelope if they fail. Main switch gear is beyond life and is strongly recommended for upgrade at the same time.

Objectives: The main objectives of this Capital Improvement are:

- Mitigate a significant safety and resiliency issue.
- Modernize electrical service to building up to point of demarcation.
- Achieve a safe arc flash condition at the primary equipment.
- Implement required O&M for a safe and reliable operation.
- Maintain Performance Standard Part V.3, 4, 6 and 8 and minimize KPI Events.

Scope of Work: The scope of work of this Capital Improvement is:

- Provide new exterior pad-mounted transformers to replace pot style transformers currently installed on the interior of the building. Thermograph and oil test. Establish baseline records.
- Provide new SEL-735 or equivalent electrical meter and integrate with all existing building meters.
- Provide new (13.2kV) concrete encased feeders from existing vault sectionalized to new transformer:
  - Backfill and restore surface to match existing.
- Provide new secondary feeders from new transformer to existing building electrical service.
- Connect steam condensate, chilled water, and domestic water meters to SEL-735. Replace as necessary.
- Vault work:
  - Repair damaged items in electrical vaults accessed for transformer replacements.
  - Repair any areas of water infiltration in electrical vault, provide water management system.
  - Thermograph vault components, establish baseline records.

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended (i) the replacement and evaluation of the building's main distribution panel and its distribution system, and (ii) the performance of an arc flash analysis and any resulting corrective measures/placarding.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-028

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be prepared around public sidewalk and street traffic (safety will need to be aware of and planned or public walk area). The equipment removal will occur through grated access at sidewalk level. Arc Flash PPE required.

The Concessionaire will coordinate with the University for the electrical shutdown of the building. Other buildings may be impacted as well.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $79,056 and will also include (i) conducting a 30-day power study to evaluate load size for transformer sizing and, (ii) the documentation of any vault damage and the development of a plan to remediate vault water issues, structural concerns, etc.

Additional Information:

Figure 1. Aged transformer and electrical equipment in Admin south basement.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-028

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $731,057.

(B) Forecasted annual operations and maintenance costs: +$200. The upgraded electric meter and new vault sump will require additional O&M.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) new transformer is likely to be smaller and more efficient, (ii) work not included: no VFI switches nor appurtenances, no SEL 751, no switch operators, no microgrid infrastructure, no temporary generator, (iii) underground construction conditions will be reasonably free of obstruction, conflict, hazardous materials that could impede completion, (iv) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur and their remediation is not included in this scope, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs in October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved through the increased electrical efficiency of the equipment and the mitigation of potential damages.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $725,544.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$400, electricity.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-029

PROJECT CODE: 23/3-029

PROJECT NAME: Art & Architecture North Building Electrical Service Replacement

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These transformers are over 30 years old and have no record of being tested. Multiple recent high voltage electrical failures on campus indicate that aged transformers on campus will begin failing more frequently, severely disrupting campus operations. These transformers are located within the building, also posing a significant risk to the building envelope if they fail. Main switch gear is beyond life and is strongly recommended for upgrade at the same time.

Objectives: The main objectives of this Capital Improvement are:

- Mitigate a significant safety and resiliency issue.
- Modernize electrical service to building up to point of demarcation.
- Achieve a safe arc flash condition at the primary equipment.
- Implement required O&M for a safe and reliable operation.
- Maintain Performance Standard Part V.3, 4, 6 and 8 and minimize KPI Events.

Scope of Work: The scope of work of this Capital Improvement is:

- Provide new exterior pad-mounted transformers to replace pot style transformers currently installed on the interior of the building. Thermograph and oil test. Establish baseline records.
- Provide new SEL-735 or equivalent electrical meter and integrate with all existing building meters.
- Provide new (13.2kV) concrete encased feeders from existing vault sectionalized to new transformer
  - Backfill and restore surface to match existing.
- Provide new secondary feeders from new transformer to existing building electrical service.
- Connect steam condensate, chilled water, and domestic water meters to SEL-735. Replace as necessary.
- Vault work:
  - Repair damaged items in electrical vaults accessed for transformer replacements.
  - Repair any areas of water infiltration in electrical vault, provide water management system.
  - Thermograph vault components, establish baseline records.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-029

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended (i) the replacement and evaluation of the building's main distribution panel and its distribution system, and (ii) the performance of arc flash analysis and resulting corrective measures/placarding.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be prepared around public sidewalk and street traffic (safety will need to be aware of and planned or public walk area). The equipment removal will occur through grated access at sidewalk level. Arc Flash PPE required.

The Concessionaire will coordinate with the University for the electrical shutdown of the building. Other buildings may be impacted as well.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $79,056 and will also include (i) conducting a 30-day power study to evaluate load size for transformer sizing and, (ii) the documentation of any vault damage and the development of a plan to remediate vault water issues, structural concerns, etc.

Additional Information:

Figure 1. Poor, unsafe access to Art & Architecture north transformer room.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-029

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $713,537.

(B) Forecasted annual operations and maintenance costs: +$200. The upgraded electric meter and new vault sump will require additional O&M.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) the new transformer will likely be smaller and more efficient, (ii) work not included: no VFI switches nor appurtenances, no SEL 751, no switch operators, no microgrid infrastructure, no temporary generator, (iii) underground construction conditions will be reasonably free of obstruction, conflict, hazardous materials that could impede completion, (iv) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur and their remediation is not included in this scope, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs in October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved through the increased electrical efficiency of the equipment and the mitigation of potential damages.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $708,156.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$50, electricity.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-030

PROJECT CODE: 23/3-030

PROJECT NAME: College of Natural Resources Building Electrical Service Replacement

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These transformers are over 30 years old and have no record of being tested. Multiple recent high voltage electrical failures on campus indicate that aged transformers on campus will begin failing more frequently, severely disrupting campus operations. These transformers are located within the building, also posing a significant risk to the building envelope if they fail. Main switch gear is beyond life and needs to be upgraded at the same time to remain safe and resilient.

Objectives: The main objectives of this Capital Improvement are:

- Mitigate a significant safety and resiliency issue.
- Modernize electrical service to building up to point of demarcation.
- Achieve a safe arc flash condition at the primary equipment.
- Implement required O&M for a safe and reliable operation.
- Maintain Performance Standard Part V.3, 4, 6 and 8 and minimize KPI Events.

Scope of Work: The scope of work of this Capital Improvement is:

- Provide new exterior pad-mounted transformers to replace pot style transformers currently installed on the interior of the building. Thermograph and oil test. Establish baseline records.
- Provide new SEL-735 or equivalent electrical meter and integrate with all existing building meters.
- Provide new (13.2kV) concrete encased feeders from existing vault sectionalized to new transformer
  - Backfill and restore surface to match existing.
- Provide new secondary feeders from new transformer to existing building electrical service.
- Connect steam condensate, chilled water, and domestic water meters to SEL-735. Replace as necessary.
- Vault work:
  - Repair damaged items in electrical vaults accessed for transformer replacements.
  - Repair any areas of water infiltration in electrical vault, provide water management system.
  - Thermograph vault components, establish baseline records.

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended (i) the replacement and evaluation of the building's main distribution panel and its distribution system, and (ii) the performance of arc flash analysis and resulting corrective measures/placarding.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-030

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be prepared around public sidewalk and street traffic (safety will need to be aware of and planned or public walk area). The equipment removal will occur through grated access at sidewalk level. Arc Flash PPE required.

The Concessionaire will coordinate with the University for the electrical shutdown of the building. Other buildings may be impacted as well.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $79,056 and will also include (i) conducting a 30-day power study to evaluate load size for transformer sizing and, (ii) the documentation of any vault damage and the development of a plan to remediate vault water issues, structural concerns, etc.

Additional Information:

Figure 1. Aged transformers and electrical equipment in CNR basement.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-030

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $833,566.

(B) Forecasted annual operations and maintenance costs: +$200. The upgraded electric meter and new vault sump will require additional O&M.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) the new transformer will likely be smaller and more efficient, (ii) work not included: no VFI switches nor appurtenances, no SEL 751, no switch operators, no microgrid infrastructure, no temporary generator, (iii) underground construction conditions will be reasonably free of obstruction, conflict, hazardous materials that could impede completion, (iv) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur and their remediation is not included in this scope, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs in October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved through the increased electrical efficiency of the equipment and the mitigation of potential damages.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $827,280.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$1,200, electricity. It is assumed a 1% improvement in electrical efficiency based on historic meter data.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-031

PROJECT CODE: 23/3-031

PROJECT NAME: Hartung Theatre Electrical Service Replacement

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue). The impact associated with resiliency is high (extended outage and building shutdown)

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These transformers are over 30 years old and have no record of being tested. Multiple recent high voltage electrical failures on campus indicate that aged transformers on campus will begin failing more frequently, severely disrupting campus operations. These transformers are located within the building, also posing a significant risk to the building envelope if they fail. Main switch gear is beyond life and needs to be upgraded at the same time to remain safe and resilient.

Objectives: The main objectives of this Capital Improvement are:

- Mitigate a significant safety and resiliency issue.
- Modernize electrical service to building up to point of demarcation.
- Achieve a safe arc flash condition at the primary equipment.
- Implement required O&M for a safe and reliable operation.
- Maintain Performance Standard Part V.3, 4, 6 and 8 and minimize KPI Events.

Scope of Work: The scope of work of this Capital Improvement is:

- Provide new exterior pad-mounted transformers to replace pot style transformers currently installed on the interior of the building. Thermograph and oil test. Establish baseline records.
- Provide new SEL-735 or equivalent electrical meter and integrate with all existing building meters.
- Provide new (13.2kV) concrete encased feeders from existing vault sectionalized to new transformer
  - Backfill and restore surface to match existing.
- Provide new secondary feeders from new transformer to existing building electrical service.
- Connect steam condensate, chilled water, and domestic water meters to SEL-735. Replace as necessary.
- Vault work:
  - Repair damaged items in electrical vaults accessed for transformer replacements.
  - Repair any areas of water infiltration in electrical vault, provide water management system.
  - Thermograph vault components, establish baseline records.

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended (i) the evaluation of the building's main distribution panel and its distribution system, and (ii) the performance of arc flash analysis and resulting corrective measures/placarding.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-031

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be prepared around public sidewalk and street traffic (safety will need to be aware of and planned or public walk area). The equipment removal will occur through grated access at sidewalk level. Arc Flash PPE required.

The Concessionaire will coordinate with the University for the electrical shutdown of the building. Other buildings may be impacted as well.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $79,056 and will also include (i) conducting a 30-day power study to evaluate load size for transformer sizing and, (ii) the documentation of any vault damage and the development of a plan to remediate vault water issues, structural concerns, etc.

Additional Information:

Figure 1. Existing pot transformers in Hartung.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-031

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $724,201.

(B) Forecasted annual operations and maintenance costs: +$200. The upgraded electric meter and new vault sump will require additional O&M.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) the new transformer will likely be smaller and more efficient, (ii) work not included: no VFI switches nor appurtenances, no SEL 751, no switch operators, no microgrid infrastructure, no temporary generator, (iii) underground construction conditions will be reasonably free of obstruction, conflict, hazardous materials that could impede completion, (iv) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur and their remediation is not included in this scope, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs in October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved through the increased electrical efficiency of the equipment and the mitigation of potential damages.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $718,740.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$400, electricity.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-032

PROJECT CODE: 23/3-032

PROJECT NAME: Theophilus Tower Electrical Service Replacement

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These transformers are over 30 years old and have no record of being tested. Multiple recent high voltage electrical failures on campus indicate that aged transformers on campus will begin failing more frequently, severely disrupting campus operations. These transformers are located within the building, also posing a significant risk to the building envelope if they fail. Main switch gear is beyond life and needs to be upgraded at the same time to remain safe and resilient.

Objectives: The main objectives of this Capital Improvement are:

- Mitigate a significant safety and resiliency issue.
- Modernize electrical service to building up to point of demarcation.
- Achieve a safe arc flash condition at the primary equipment.
- Implement required O&M for a safe and reliable operation.
- Maintain Performance Standard Part V.3, 4, 6 and 8 and minimize KPI Events.

Scope of Work: The scope of work of this Capital Improvement is:

- Provide new exterior pad-mounted transformers to replace pot style transformers currently installed on the interior of the building. Thermograph and oil test. Establish baseline records.
- Provide new SEL-735 or equivalent electrical meter and integrate with all existing building meters.
- Provide new (13.2kV) concrete encased feeders from existing vault sectionalized to new transformer
  - Backfill and restore surface to match existing.
- Provide new secondary feeders from new transformer to existing building electrical service.
- Connect steam condensate, chilled water, and domestic water meters to SEL-735. Replace as necessary.
- Vault work:
  - Repair damaged items in electrical vaults accessed for transformer replacements.
  - Repair any areas of water infiltration in electrical vault, provide water management system.
  - Thermograph vault components, establish baseline records.

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended (i) the replacement and evaluation of the building's main distribution panel and its distribution system, and (ii) the performance of arc flash analysis and resulting corrective measures/placarding.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-032

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be prepared around public sidewalk and street traffic (safety will need to be aware of and planned or public walk area). The equipment removal will occur through grated access at sidewalk level. Arc Flash PPE required.

The Concessionaire will coordinate with the University for the electrical shutdown of the building. Other buildings may be impacted as well.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $79,056 and will also include (i) conducting a 30-day power study to evaluate load size for transformer sizing and, (ii) the documentation of any vault damage and the development of a plan to remediate vault water issues, structural concerns, etc.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $776,761.

(B) Forecasted annual operations and maintenance costs: +$200. The upgraded electric meter and new vault sump will require additional O&M.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) the new transformer will likely be smaller and more efficient, (ii) work not included: no VFI switches nor appurtenances, no SEL 751, no switch operators, no microgrid infrastructure, no temporary generator, (iii) underground construction conditions will be reasonably free of obstruction, conflict, hazardous materials that could impede completion, (iv) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur and their remediation is not included in this scope, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs in October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-032

(F) Impact on Sustainability: Improved through the increased electrical efficiency of the equipment and the mitigation of potential damages.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $770,904.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$300, electricity.It is assume a 1% improvement in electrical efficiency based on historic meter data.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-033

PROJECT CODE: 23/3-033

PROJECT NAME: Physical Education Building Electrical Service Replacement

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These transformers are over 30 years old and have no record of being tested. Multiple recent high voltage electrical failures on campus indicate that aged transformers on campus will begin failing more frequently, severely disrupting campus operations. These transformers are located within the building, also posing a significant risk to the building envelope if they fail. Main switch gear is beyond life and needs to be upgraded at the same time to remain safe and resilient.

Objectives: The main objectives of this Capital Improvement are:

- Mitigate a significant safety and resiliency issue.
- Modernize electrical service to building up to point of demarcation.
- Achieve a safe arc flash condition at the primary equipment.
- Implement required O&M for a safe and reliable operation.
- Maintain Performance Standard Part V.3, 4, 6 and 8 and minimize KPI Events.

Scope of Work: The scope of work of this Capital Improvement is:

- Provide new exterior pad-mounted transformers to replace pot style transformers currently installed on the interior of the building. Thermograph and oil test. Establish baseline records.
- Provide new SEL-735 or equivalent electrical meter and integrate with all existing building meters.
- Provide new (13.2kV) concrete encased feeders from existing vault sectionalized to new transformer
  - Backfill and restore surface to match existing.
- Provide new secondary feeders from new transformer to existing building electrical service.
- Connect steam condensate, chilled water, and domestic water meters to SEL-735. Replace as necessary.
- Vault work:
  - Repair damaged items in electrical vaults accessed for transformer replacements.
  - Repair any areas of water infiltration in electrical vault, provide water management system.
  - Thermograph vault components, establish baseline records.

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended (i) the replacement and evaluation of the building's main distribution panel and its distribution system, and (ii) the performance of arc flash analysis and resulting corrective measures/placarding.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-033

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be prepared around public sidewalk and street traffic (safety will need to be aware of and planned or public walk area). The equipment removal will occur through grated access at sidewalk level. Arc Flash PPE required.

The Concessionaire will coordinate with the University for the electrical shutdown of the building. Other buildings may be impacted as well.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $79,056 and will also include (i) conducting a 30-day power study to evaluate load size for transformer sizing and, (ii) the documentation of any vault damage and the development of a plan to remediate vault water issues, structural concerns, etc.

Additional Information:

Figure 1. Aging transformers in PEB basement.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-033

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $734,757.

(B) Forecasted annual operations and maintenance costs: +$200. The upgraded electric meter and new vault sump will require additional O&M.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) the new transformer will likely be smaller and more efficient, (ii) work not included: no VFI switches nor appurtenances, no SEL 751, no switch operators, no microgrid infrastructure, no temporary generator, (iii) underground construction conditions will be reasonably free of obstruction, conflict, hazardous materials that could impede completion, (iv) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur and their remediation is not included in this scope, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs in October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved through the increased electrical efficiency of the equipment and the mitigation of potential damages.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $729,216.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$200, electricity. It is assumed a 1% improvement in electrical efficiency based on historic meter data.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-034

PROJECT CODE: 23/3-034

PROJECT NAME: Swimming Center Building Electrical Service Replacement

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These transformers are over 30 years old and have no record of being tested. Multiple recent high voltage electrical failures on campus indicate that aged transformers on campus will begin failing more frequently, severely disrupting campus operations. These transformers are located within the building and next to the pool, also posing a severe life safety risk and significant risk to the building envelope if they fail. Main switch gear is beyond life and needs to be upgraded at the same time to remain safe and resilient.

Objectives: The main objectives of this Capital Improvement are:

- Mitigate a significant safety and resiliency issue.
- Modernize electrical service to building up to point of demarcation.
- Achieve a safe arc flash condition at the primary equipment.
- Implement required O&M for a safe and reliable operation.
- Maintain Performance Standard Part V.3, 4, 6 and 8 and minimize KPI Events.

Scope of Work: The scope of work of this Capital Improvement is:

- Provide new exterior pad-mounted transformers to replace pot style transformers currently installed on the interior of the building. Thermograph and oil test. Establish baseline records.
- Provide new SEL-735 or equivalent electrical meter and integrate with all existing building meters.
- Provide new (13.2kV) concrete encased feeders from existing vault sectionalized to new transformer
  - Backfill and restore surface to match existing.
- Provide new secondary feeders from new transformer to existing building electrical service.
- Connect steam condensate, chilled water, and domestic water meters to SEL-735. Replace as necessary.
- Vault work:
  - Repair damaged items in electrical vaults accessed for transformer replacements.
  - Repair any areas of water infiltration in electrical vault, provide water management system.
  - Thermograph vault components, establish baseline records.

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended (i) the replacement and evaluation of the building's main distribution panel and its distribution system, and (ii) the performance of arc flash analysis and resulting corrective measures/placarding.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-034

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan will be prepared around public sidewalk and street traffic (safety will need to be aware of and planned or public walk area). The equipment removal will occur through grated access at sidewalk level. Arc Flash PPE required.

The Concessionaire will coordinate with the University for the electrical shutdown of the building. Other buildings may be impacted as well.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $79,056 and will also include (i) conducting a 30-day power study to evaluate load size for transformer sizing and, (ii) the documentation of any vault damage and the development of a plan to remediate vault water issues, structural concerns, etc.

Additional Information:

Figure 1. Unsafe, aging transformers and electrical equipment below the swimming pool.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-034

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $734,757.

(B) Forecasted annual operations and maintenance costs: +$200. The upgraded electric meter and new vault sump will require additional O&M.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) the new transformer will likely be smaller and more efficient, (ii) work not included: no VFI switches nor appurtenances, no SEL 751, no switch operators, no microgrid infrastructure, no temporary generator, (iii) underground construction conditions will be reasonably free of obstruction, conflict, hazardous materials that could impede completion, (iv) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur and their remediation is not included in this scope, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs in October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved through the increased electrical efficiency of the equipment and the mitigation of potential damages.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $729,216.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$250, electricity. It is assumed a 1% improvement in electrical efficiency based on historic meter data.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-035

PROJECT CODE: 23/3-035

PROJECT NAME: West Farm Primary Distribution Improvements

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is medium (degraded overhead, electrical safety concerns). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: Electric loads at the West Farm are met with an overhead 4160V electrical distribution system. This system is well beyond its useful life and failures are common, with two occurring in FY21. Currently the West Farm received power from only one overhead line, creating a single point of failure that can impact multiple buildings. This project removes the overhead system, moves it underground, and connects it to the campus loop. Aged pole mounted transformers would be replaced with pad mount transformers, increasing resiliency, and increasing response time. This upgrade will improve efficiency, safety, and eliminate single points of failure to reduce disruptions to West Farm operations. This project is required to eliminate unplanned outages and meet Performance Standards and Availability KPIs.

Objectives: The main objectives of this Capital Improvement are:

- Improves the safety and reliability of the Primary Electrical Distribution system at the West Farm.
- Eliminate aging overhead primary distribution infrastructure.
- Maintain Performance Standard Part V.6, 7 and 8 and mitigate negative impact to Availability KPIs.
- Established baseline condition of primary electrical components.

Scope of Work: The scope of work of this Capital Improvement is:

- Remove overhead existing 4160V distribution including poles, transformers, conductors.
- Install new pad mount transformers, vaults, sectionalizing cabinets, duct banks, conduits, and wires for connection to the existing 13.2kV campus primary.
- Install underground 13.2kV campus primary encased in concrete at point of utility service.
- Provide secondary feeders from pad-mounted transformers to existing building electrical services and reconnect.
- Provide new SEL 735 meters on all building electrical services. Commission meters and establish data management.

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-035

originated prior to Closing.

A detailed safety plan covering open pit and electrical work will be developed.

The Concessionaire will coordinate with the University the access to all the transformers and vaults required for the Additional Work, as well as for any building service interruptions.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $145,044 and will also include (i) power studies on each building to right size transformers, and (ii) oil and thermography testing of all transformers, primary switches, and vaults.

Additional Information:

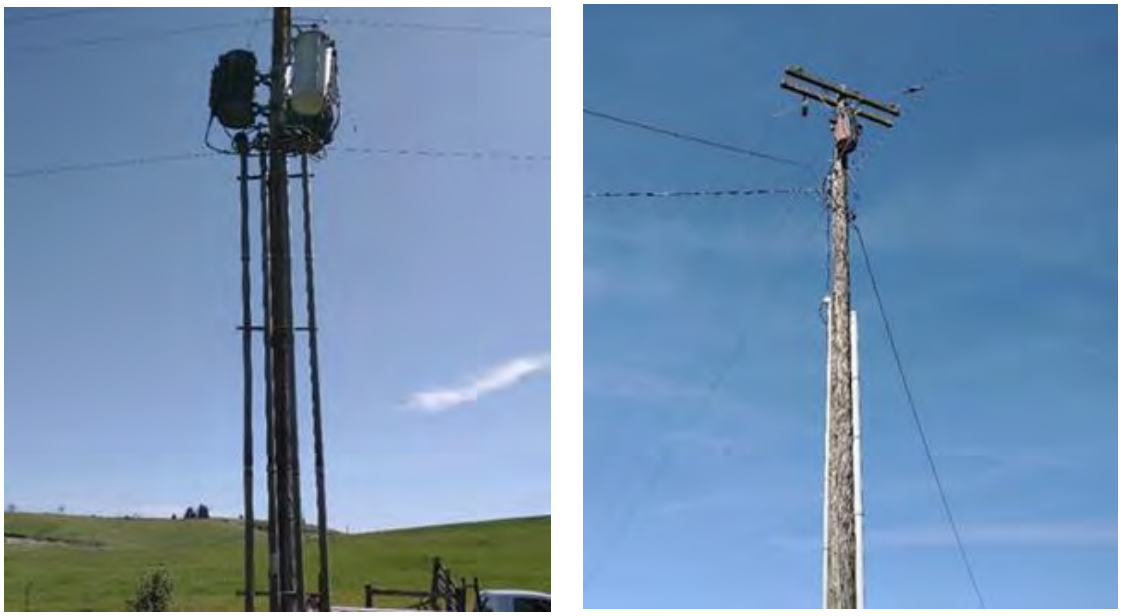

Figure 1. Aging poles, cross bars and mount transformers that pose failure risks.

Figure 2. Pole leaning, risking line slap and downed lines.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-035

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $8,605,057.

(B) Forecasted annual operations and maintenance costs: +$7,200. Higher voltage distribution, upgraded meters, and new equipment will require additional O&M. Thermography/oil testing required every three years for large transformers.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction but conflict, hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through July 2024. EPC (Commiss.) occurs in August 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved due to increased efficiency of distribution conductors and transformers.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $8,540,208.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: -$500, electricity. The reduction is associated with a minor efficiency increase.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-036

PROJECT CODE: 23/3-036

PROJECT NAME: Primary Electric Switch Upgrades

UTILITY SYSTEM: Electric

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is low. The impact associated with resiliency is medium.

The likelihood of these events is low.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: Campus is served by two Avista 13.2KV services with pole mounted fuse disconnects. This type of utility service is antiquated and substandard for a campus of this complexity. The 24/7 nature of a campus with residents, research, and critical systems demands a modernized primary electrical service. Failure at the either of the two points of service will result in widespread electrical outages for campus that requires a manual process to address. Additionally, future microgrid and generation projects at the University will require that the point of service switching is upgraded. This project modernizes the electrical service from Avista at both the East and West point of service. This modernization will move the campus toward a more durable utility situation and will help mitigate the risks associated with widespread outages. Further work on this Phase 5 project will include potential cost share with Avista, ownership issues, etc.

Objectives: The main objectives of this Capital Improvement are:

- This project improves the safety and reliability of the Primary Electrical Distribution system and is necessary to maintain Performance Standard Part V.6 and 8 by replacing antiquate manual switching and reducing the amount of overhead electrical service.
- Upgrade the Primary Switching at two points of service from Avista to make these critical switching locations modern and capable of handling microgrid interconnection issues such as back feed protection.
- Coordinate requirements, construction, cost, and ownership with Avista.
- Re-establish primary electric metering and data management after implementation.
- Upgrade the primary electrical conductors at the points of service to the first sectionalizer.

Scope of Work: The scope of work of this Capital Improvement is:

- Provide new 13.2 kV, pad-mounted, motor operated switches with SEL-751 relays at East and West Avista points of service.
- Reinstall and commission SEL metering at East and West Avista points of service.
- Install new primary conductors to refeed campus with underground primary encased in concrete duct bank.
- Coordinate with Avista to install point of service equipment that meets interconnectivity requirements.

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-036

completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit and electrical work will be developed.

The Concessionaire will coordinate with the University any campus service interruptions.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $128,088 and will also include (i) any interconnectivity requirements of primary switches, (ii) any switch requirements to establish modernized utility service to facilitate future microgrid control, and (iii) coordination with Avista on scope, ownership, operation, and cost of this project.

Additional Information:

Figure 1. West campus utility feed, mechanical switching, and overhead distribution (left), and East campus utility feed (right).

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $2,352,113.

(B) Forecasted annual operations and maintenance costs: + $1,800. Upgraded switches and new relays will require additional O&M. Increased associated with primary switch inspection, and annual thermography testing.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/3-036

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) coordination with Avista will result in costs incurred to develop this project, (ii) Avista will require upgraded switching/controls for on-campus generation interconnection, (iii) Avista will participate in scoping and cooperate on ownership/cost issues, (iv) underground construction conditions will be reasonably free of obstruction, conflict, hazardous materials could impede completion, (v) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur and their remediation is not included in this scope, and (vi) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through July 2027. EPC (Commiss.) occurs in August 2027.

	07/26	08/26	09/26	10/26	11/26	12/26	01/27	02/27	03/27	04/27	05/27	06/27
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: This Capital Improvement enables future microgrid and generation projects.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $2,334,420.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None. Switch upgrades alone will not impact system's efficiency.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-037

PROJECT CODE: 23/4-037

PROJECT NAME: Domestic Fire Hydrant Major Repairs

UTILITY SYSTEM: Domestic Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issue, lack of emergency response capability due to failures). The impact associated with resiliency is high (an inadequate fire suppression will impact the campus operations)

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The fire hydrants on campus provide critical fire protection to campus buildings and occupants. This project replaces known failed and aging hydrants. These hydrants are aged and beyond their life expectancy. Replacement parts are becoming commercially unavailable for older hydrants and some have failed, posing a severe fire risk to campus. Two new hydrants will be installed with the project to improve fire protection near Menard Law and the Graduate Art Studio. Flow data doesn't exist for some hydrants due to failure. Base records need to be established.

Objectives: The main objectives of this Capital Improvement are:

- Improve fire protection on campus.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address safety concerns associated with the physical conditions of current assets.
- Change assets in order to achieve required the O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Replace 21 fire hydrants.
- Install 2 new fire hydrants.
- Provide assembly and installation of new hydrants including asphalt repair, excavation, and thrust blocks as necessary.
- Manage outages/utility interruptions required to perform work. Coordinate fire service outages.
- Provide removal and disposal of old hydrants.
- Flow test, document flows. Establish electronic records management. Adequate fire flow confirmed.
- Site sediment control, temporary traffic conditions provided/coordinated.

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-037

originated prior to Closing.

Custom safety plans for each of the 23 construction sites, including fencing of open pit areas, traffic control, and temporary walkway conditions will be developed.

The Concessionaire will coordinate with the University that all construction sites allow for campus activities and accommodate for vehicular and pedestrian traffic. Coordination will also cover all water line shutdown requirements, and liaison with public safety entities for temporary outages of water systems.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $56,916 and will also include (i) the resolution of any utility conflicts, and (ii) identification of any utility outage plan needs.

Additional Information:

Figure 2. Failed hydrant on campus near a brush fire in July 2021.

Figure 1. Fire crews putting out fine in July 2021.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $751,501.

(B) Forecasted annual operations and maintenance costs: +$1,000. New hydrants will require annual O&M and rebuilding, ten year paint annualized.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-037

assumed that (i) existing conditions will vary for landscape and hardscape replacement, (ii) water service lines to hydrants will not require replacement or upsizing and, (iii) no known underground coordination issues exist, however, detailed utility location will be required. Coordination with the University for water line and building outages will be necessary.

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) extends through August 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Multiple fire hydrants are not currently functional, presenting a direct threat to emergency response. Adequate emergency response for property and life protection is a fundamental requirement of campus sustainability.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $745,848.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-038

PROJECT CODE: 23/4-038

PROJECT NAME: Domestic Water Line Replacement on Central Mall

UTILITY SYSTEM: Domestic Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (health risks to building occupants due to dead end line). The impact associated with resiliency is high (future failure will impact core campus).

The likelihood of these events is high (line has collapsed).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: At over 70 years old, this line collapsed in 2017, creating a dead-end line in the domestic water system that creates a health risk to building occupants. The line is intended to create a loop in the distribution system near Renfrew Hall and Agricultural Science Building, improving flow and water quality on campus. This project replaces the existing line and upgrades the size to keep up with campus growth.

Objectives: The main objectives of this Capital Improvement are:

- Replace the collapsed domestic water line under the Central Mall.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address health concerns associated with the physical conditions of current assets.
- Change assets in order to achieve the required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Existing 4" piping modifications, abandonment.
- Install new 6" DR18 C900 PVC Water Line and all appurtenances.
- Bedding and Backfill.
- Construction supervision.
- Disinfection and place system in service according to Public Water System requirements.

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-base paint, which originated prior to Closing.

A detailed safety plan covering open pit work in a core area of the campus and water quality will be developed. Temporary traffic and/or pedestrian accommodations will be implemented as needed. Similarly, a safe return to service and the disinfection process will be documented.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-038

The Concessionaire will coordinate with the University for any building shutdowns and disruptions due to open pit work to allow for campus activities.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $34,128.

Additional Information:

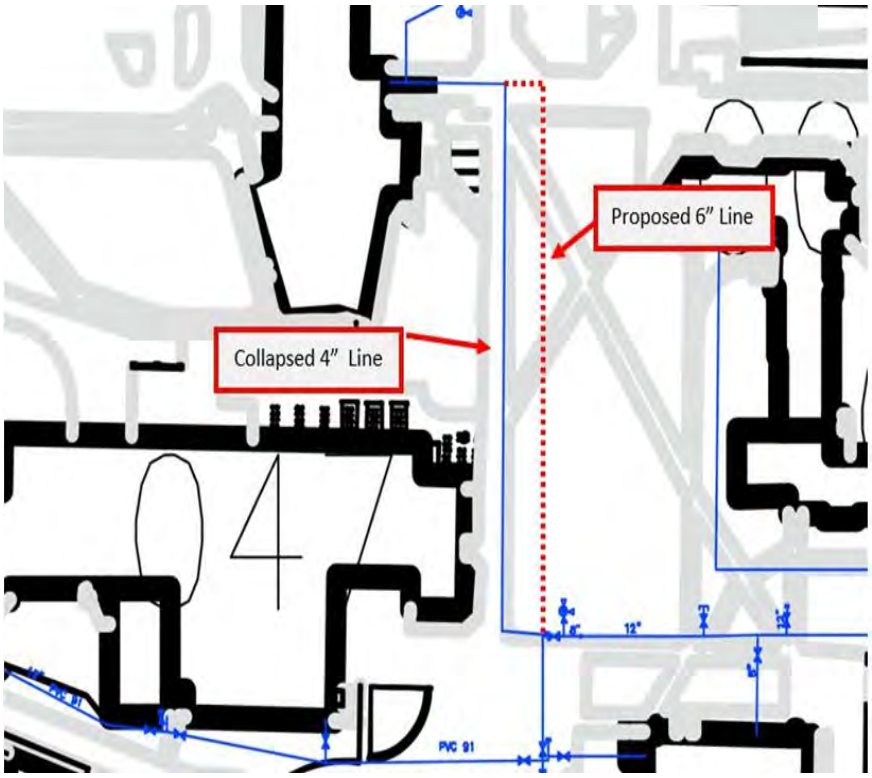

Figure 1. Map of Domestic Water System in area with proposed work.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $455,191.

(B) Forecasted annual operations and maintenance costs: +$0. No O&M Cost anticipated.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict, hazardous materials could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope, and (iii) workable

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-038

solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2023. EPC (Commiss.) occurs from September 2023 to October 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement of the health safety and the reliability/functionality of the domestic water system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $451,764.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-039

PROJECT CODE: 23/4-039

PROJECT NAME: Sheep Farm Water Vault Improvements

UTILITY SYSTEM: Domestic Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (safety risk to the operators). The impact associated with resiliency is high (potential loss of service to Sheep Farm).

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The Domestic Water service to the Sheep Farm and Soil Stewards north of campus comes in at a vault near Well #3. The vault is unfinished and has a shed constructed over it. The vault floods seasonally, submerging the backflow prevention valves, meter, and other equipment needed to supply the Sheep Farm with water. Though only 10 years old, equipment is already in poor condition and pipes are leaking. This project runs power to the vault from Well #3, relocates equipment out of the vault, and improves the overall condition of the shed to extend its useful life. Installing insulation and heat will help minimize the mold growing on the interior walls of the shed.

Objectives: The main objectives of this Capital Improvement are:

- Reconfigure vault to extend the useful life of equipment.
- Mitigate an unsafe condition for operators and resiliency of service to Sheep Farm due to difficulty of access.
- Change assets in order to achieve the required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Natural surface demolition and excavation.
- Run power to vault.
- Relocate water flow meter and backflow prevention station, replumb.
- Install finishes to shed including flooring, insulation, lighting, and electric heat.
- Bedding and backfill.
- Construction supervision.
- Disinfection and place system in service according to Public Water System requirements.

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based point, which originated prior to Closing.

A detailed safety plan covering open pit work, an excavated site, and water service rerouting will be developed.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-039

Documentation including the disinfection and backflow prevention testing, and an official notice of return to service will be provided.

The Concessionaire will coordinate with the University with regard to the Sheep Farm and Soil Stewards for shutdown. Temporary water provisions will be provided.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $27,108.

Additional Information:

Figure 1. Interior vault at shed.

Figure 2. Leaking water line in vault.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $371,400.

(B) Forecasted annual operations and maintenance costs: +$200. Increase associated with annual maintenance for new structure and heater.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding vegetation but impacts may occur, and their remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-039

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) occurs from August 2023 to September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: This Capital Improvement will increase the electrical use due to additional heating. Metered water use, and an effective backflow prevention will protect the campus community.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $368,604.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: +$200, electricity. Increase is associated with the use of the seasonal electric heater.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-040

PROJECT CODE: 23/4-040

PROJECT NAME: Building Backflow Assemblies Replacement at South Hill Apartments

UTILITY SYSTEM: Domestic Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues in confined spaces). The impact associated with resiliency is high (extended outage and building shutdown)

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The backflow assemblies serving each apartment building are located in crawlspaces with very limited access. In nine locations the assemblies are far from the access point and create severe safety risks for workers. Due to the safety hazard these assemblies can't be tested as required by regulations and risks loss of water service to the occupants until the buildings are compliant. Access is needed to each assembly from outside the building instead of the crawlspace. The meters for each building are aged and no longer functional. They need to be replaced and located with the assemblies for accurate billing.

Objectives: The main objectives of this Capital Improvement are:

- Eliminate unsafe work conditions by moving backflow assemblies out of crawlspaces.
- Increase occupant safety by making presently inaccessible backflow assemblies maintainable.
- Bring South Hill Apartments up to code.
- Restore metering for auxiliaries billing.

Scope of Work: The scope of work of this Capital Improvement is:

- Inspect and replace all backflow assemblies as needed.
- Move 9 backflow assemblies to accessible locations.
- Install 30 new backflow preventer assemblies and domestic water flow meters for each building.
- Construct 18 new enclosures outside the buildings for each assembly.

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan for work in confined spaces will be developed.

The Concessionaire will coordinate with the University and with the building's occupants for any shutdowns.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-040

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $96,660.

Additional Information:

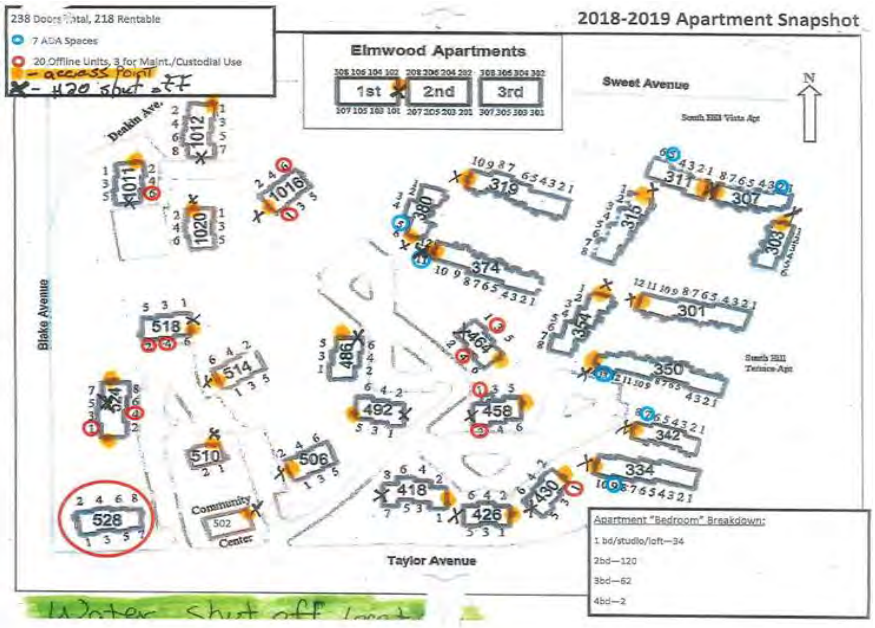

Figure 1. Map of apartment complex with access locations and backflow assemblies marked.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,389,709.

(B) Forecasted annual operations and maintenance costs: +$0. No change in O&M Cost is anticipated.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) new backflow preventer assemblies and metering in serviceable configuration, and (ii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-040

(E) Proposed schedule: EPC (Const.) extends through May 2024. EPC (Commiss.) extends through May 2024.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: This Capital Improvement will enhance the public health safety of the domestic water system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,379,484.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-041

PROJECT CODE: 23/4-041

PROJECT NAME: Domestic Water Emergency Generator

UTILITY SYSTEM: Domestic Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues). The impact associated with resiliency is high (extended outage and campus shutdown, inadequate fire suppression and production capability during power outages).

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The domestic water wells are not backed up with emergency power as recommended by IDAPA 58.07.08. Without backup power the domestic water system cannot provide a predictable supply. Fire suppression capabilities would be critically reduced or completely non-functional. Loss of water pressure would result in public health concerns and greatly disrupt campus operations due to the lack of domestic water supply to the campus community. Lack of water main pressure can also leave the domestic water system susceptible to contamination by reverse flow from unprotected/failed backflow prevention and/or leaks in the system. This project installs a new generator with capacity to support Wells #3 and #4.

Objectives: The main objectives of this Capital Improvement are:

- Provide domestic water during power outages.
- Mitigate severe resiliency issues.
- Address severe safety concerns that should be physically mitigated rather than dependent on procedures.

Scope of Work: The scope of work of this Capital Improvement is:

- Install a 480V, 3-phase, 600kW diesel generator at Well #3.
- Install transfer switches, load bank, panels, circuits, and controls.
- Install 500 kVA step up transformer (480V:2.4kV).
- Install automatic transfer switches at Well #3 and #4.
- Construct enclosure and fencing around generator.
- Trench and run cable from new generator to Well #4 (approx. 1,325 ft).
- Provide excavation, demolition, bedding, backfill, surface restoration, etc. for a complete and functional system.

There is no recommended related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-041

A detailed safety plan including appropriate fencing and traffic control management will be developed.

The Concessionaire will coordinate with the University for potential disruptions at the Manis Entomological Laboratory and the Soil Stewards Farm. Similarly, the Concessionaire will coordinate the work with Avista for electrical shutdown.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $99,252 and will also include a feasibility study for alternative 480V electrical conversion at Wells.

Additional Information:

SINGLE GENSET LOCATED AT WELLHOUSE #3 TO SERVE BOTH DEEP WATER AQUIFER WELLS

Figure 1. Electrical site plan.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $5,087,011.

(B) Forecasted annual operations and maintenance costs: +$4,600. Increase associated with the operations and maintenance of the new generator, ATS switches, transformers, and the required annual testing/certification.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict and

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-041

hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding vegetation but impacts may occur, and their remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2023. EPC (Commiss.) occurs from September 2023 to October 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Minor impact from the fuel consumption of the diesel generator.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $5,049,108.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-042

PROJECT CODE: 23/4-042

PROJECT NAME: Building Backflow Assemblies Replacement at McClure Hall

UTILITY SYSTEM: Domestic Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is medium (life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The backflow assemblies serving McClure Hall are not up to code as they lack redundant valves. This project replaces both potable and non-potable assemblies with dual-valve systems. These assemblies are aged and beginning to fail. Currently water service must be shut off to service the valves, disrupting the building's occupants. Without redundant backflow devices the building will lose domestic water service if they fail, posing a life safety risk.

Objectives: The main objectives of this Capital Improvement are:

- Replace McClure Hall backflow assemblies to improve resiliency.
- Eliminate single points of failure.
- Bring McClure Hall up to code.
- Change assets in order to achieve the required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Demo and remove existing 4" backflow preventer for potable system.
- Install new 4" dual-valve backflow preventer.
- Demo and remove existing 3" backflow preventer for non-potable system.
- Install new 3" dual-valve backflow preventer.
- Replace two flow meters.

Beyond the Concessionaire's Line of Demarcation associated with this Capital Improvement, it is recommended the removal of any unnecessary bypasses to reduce O&M Costs on the University's side.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan including standard domestic water protocols will be developed.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-042

The Concessionaire will coordinate with the University and the building's occupants for shutdowns.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $13,284.

Additional Information:

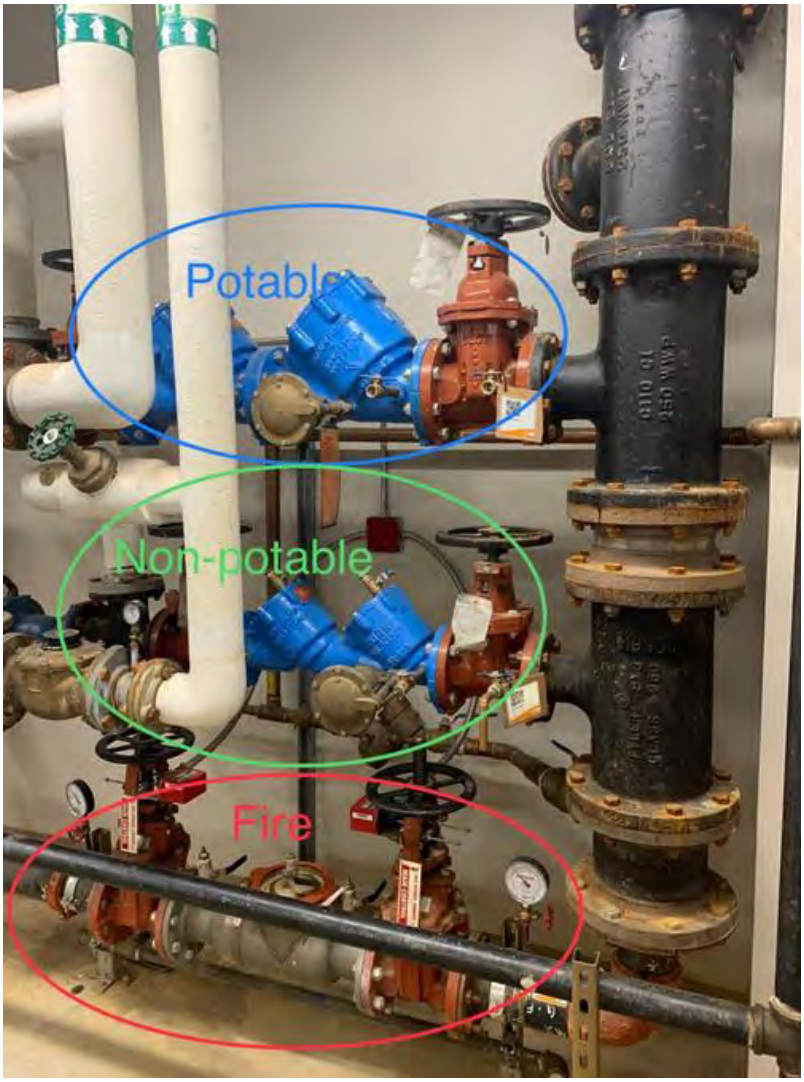

Figure 1. Backflow assemblies in McClure Hall are not up to code.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-042

(A) Total Cost: $92,940.

(B) Forecasted annual operations and maintenance costs: +$300. Increase for required additional BFP valve O&M and upgraded meter reading, calibration, and O&M.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) isolation valves are in operable condition, (ii) sufficient clearance for needed additional pipework, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) occurs from August 2023 to September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement of the health safety and the reliability/functionality of the domestic water system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $92,232.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-043

PROJECT CODE: 23/4-043

PROJECT NAME: Domestic Water Line Replacement on University Avenue from Ash Street to Memorial Gym

UTILITY SYSTEM: Domestic Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues, risk to firefighting capability). The impact associated with resiliency is high (a future failure will impact core campus).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: This domestic water line serves multiple campus buildings and allows for sections of the distribution system to be isolated as needed. This project replaces the line and upsizes it to provide for campus growth. At almost 100 years old, the line is well beyond its life expectancy and has failed multiple times in the past. Loss of this line creates fire and flooding risks as well as loss of services to connected customers.

Objectives: The main objectives of this Capital Improvement are:

- Replace the aged domestic water line on University Avenue from Ash Street to Memorial Gym.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Provide for future needs of campus.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Existing 6" piping modifications, abandonment.
- Install new 8" DR18 C900 PVC Water Line and all appurtenances.
- Bedding and backfill.
- Construction supervision.
- Disinfection and place system in service according to Public Water System requirements.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work in a core area of the campus and water quality will be developed. Temporary traffic and/or pedestrian accommodations will be implemented as needed. Similarly, a safe return to service and the disinfection process will be documented.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-043

The Concessionaire will coordinate with the University for any building shutdowns and disruptions due to open pit work to allow for campus activities.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $100,764.

Additional Information:

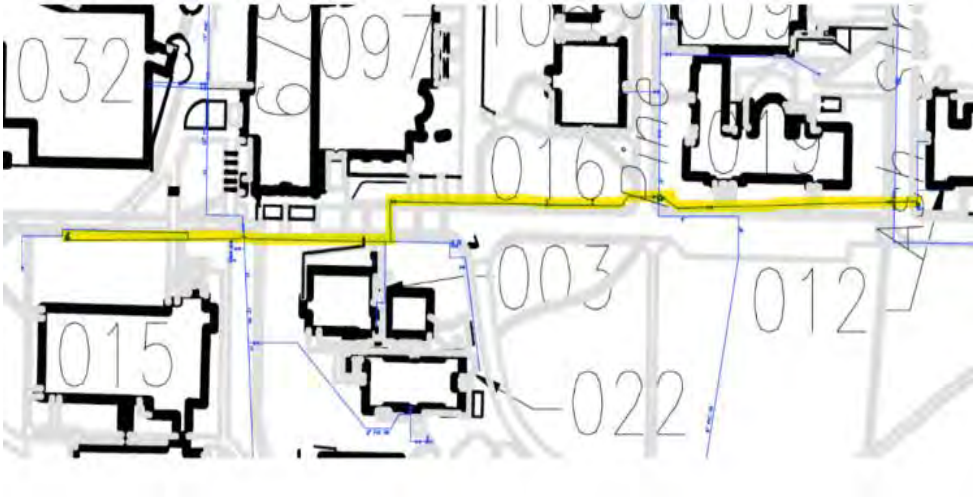

Figure 1. Map of domestic water system in area.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,295,945.

(B) Forecasted annual operations and maintenance costs: +$0. No changes in O&M Costs are anticipated.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope and, (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-043

(E) Proposed schedule: EPC (Const.) extends through October 2024. EPC (Commiss.) occurs from September 2024 to October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement of the health safety and the reliability/functionality of the domestic water system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,286,172.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-044

PROJECT CODE: 23/4-044

PROJECT NAME: Domestic Water Line Replacement from Line Street to Energy Plant

UTILITY SYSTEM: Domestic Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues, there is a health risk to building occupants due to dead-end line). The impact associated with resiliency is high (extended steam, chilled water, and turbine shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The Energy Plant provides steam, chilled water, and compressed air to core campus buildings. This project replaces the domestic water line serving the building. The domestic water line is aged, possibly original to the building in 1926, and well beyond its expected life. Collapse of this line risks a loss of domestic water service to the building with a complete shutdown of utilities to campus. Additionally, two water lines in the area are dead ends that pose a health safety issue due to stagnant water.

Objectives: The main objectives of this Capital Improvement are:

- Improve Energy Plant resiliency by replacing domestic water service line.
- Improve system water quality by capping dead-end lines.
- Address health concerns associated with the physical conditions of current assets.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Existing 8" piping modifications, removal.
- Install new 8" DR18 C900 PVC Water Line and all appurtenances.
- Cap dead end line at the Energy Plant service connection.
- Cap dead end line on the south side of 6th and Line St.
- Bedding and Backfill.
- Construction supervision.
- Disinfection and place system in service according to Public Water System requirements.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-044

A detailed safety plan covering open pit work in a core area of the campus and water quality will be developed. Temporary traffic and/or pedestrian accommodations will be implemented as needed. Similarly, a safe return to service and the disinfection process will be documented.

The Concessionaire will coordinate with the University and the City of Moscow for the intersection closing and a potential shutdown of the Energy Plant.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $16,524.

Additional Information:

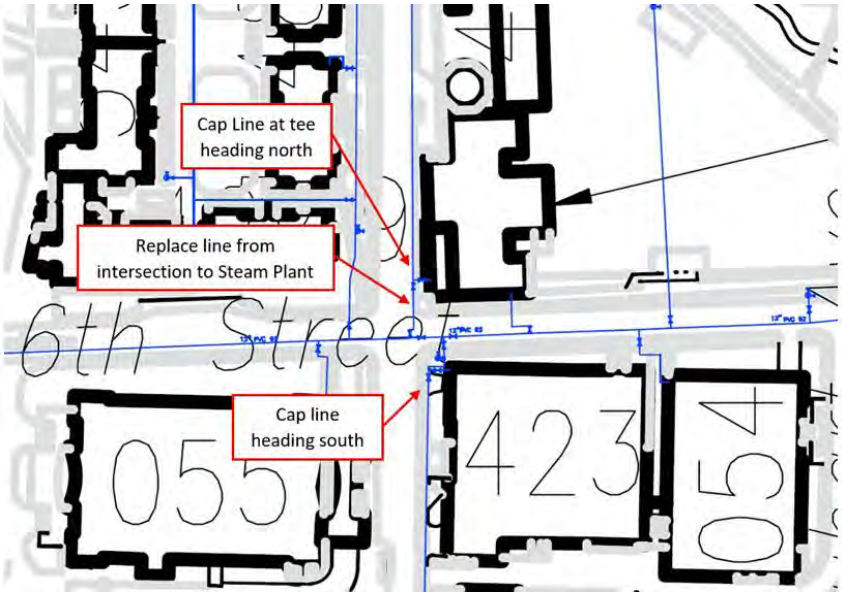

Figure 1. Map of domestic water system in area.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $197,944.

(B) Forecasted annual operations and maintenance costs: +$0. No changes in O&M Costs are anticipated.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur and their remediation is not included in this scope and, (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-044

University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through August 2024. EPC (Commiss.) occurs in August 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement of the health safety and the reliability/functionality of the domestic water system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $196,452.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-045

PROJECT CODE: 23/4-045

PROJECT NAME: Domestic Water Line Replacement to Agricultural Science Building

UTILITY SYSTEM: Domestic Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (physical and life safety issues). The impact associated with resiliency is high (future failure will impact building occupants and research).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: This domestic water line serves the Agriculture Science Building. This project removes the old line and installs a new one. At 49 years old, this line is beyond its expected useful life. The line has failed multiple times in the past and leaks. Failure would result in a loss of service to the building, creating a fire and flooding risk and potentially impacting research.

Objectives: The main objectives of this Capital Improvement are:

- Replace domestic water line to building.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address safety concerns associated with the physical conditions of current assets.
- Change assets in order to achieve the required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Existing 4" piping modifications, removal.
- Install new 4" DR18 C900 PVC Water Line and all appurtenances.
- Bedding and backfill.
- Construction supervision.
- Disinfection and place system in service according to Public Water System requirements.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work in a core area of the campus and water quality will be developed. Temporary traffic and/or pedestrian accommodations will be implemented as needed. Similarly, a safe return to service and the disinfection process will be documented.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-045

The Concessionaire will coordinate with the University for any building shutdowns and disruptions due to open pit work to allow for campus activities.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $20,088.

Additional Information:

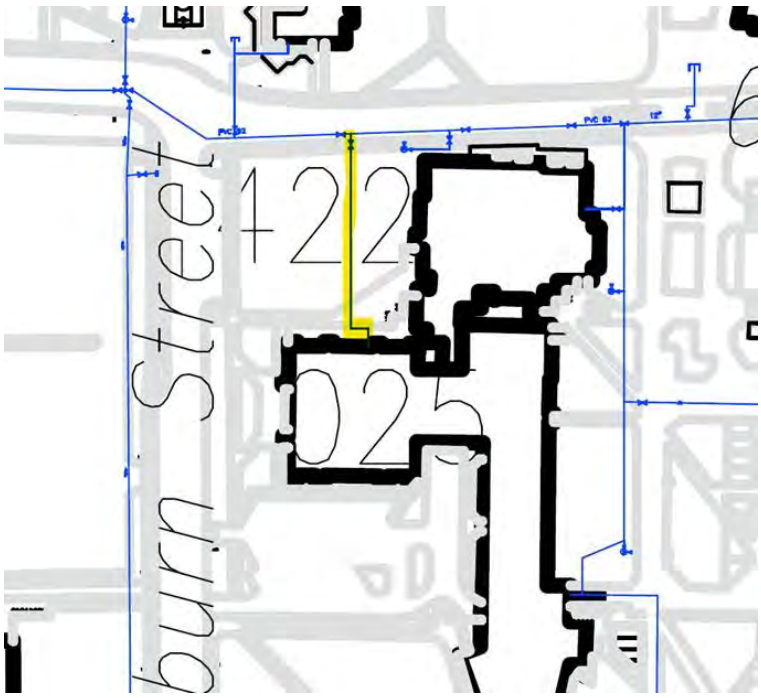

Figure 1. Map of Domestic Water System in area with proposed work.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $255,728.

(B) Forecasted annual operations and maintenance costs: +$0. No changes in O&M Cost are anticipated.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope and, (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-045

University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs from September 2024 to October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement of the health safety and the reliability/functionality of the domestic water system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $253,800.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-046

PROJECT CODE: 23/4-046

PROJECT NAME: Domestic Water Line Replacement to Food Science Building

UTILITY SYSTEM: Domestic Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The domestic water service line to the Food Science Building supplies the facility with potable water for occupants, fire suppression, and research applications. At 78 years old, this line is well beyond its serviceable life and in need of replacement. This project replaces the line and optimizes flow to the building by removing unnecessary pipe, valves, and fittings.

Objectives: The main objectives of this Capital Improvement are:

- Replace water line to the Food Science Building.
- Mitigate resiliency issues associated with systems well beyond their serviceable life.
- Improve O&M practices for a safe and reliable operation.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Existing 6" piping modifications, removal (approx. 125').
- Install new 6" DR18 C900 PVC Water Line and all appurtenances (approx. 125').
- Remove dead-end pipe and valves.
- Install new three-way valve.
- Bedding and Backfill.
- Construction supervision.
- Disinfection and place system in service according to Public Water System requirements.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work in a core area of the campus and water quality will be developed.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-046

Temporary traffic and/or pedestrian accommodations will be implemented as needed. Similarly, a safe return to service and the disinfection process will be documented.

The Concessionaire will coordinate with the University for any building shutdowns and disruptions due to open pit work to allow for campus activities.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $22,356.

Additional Information:

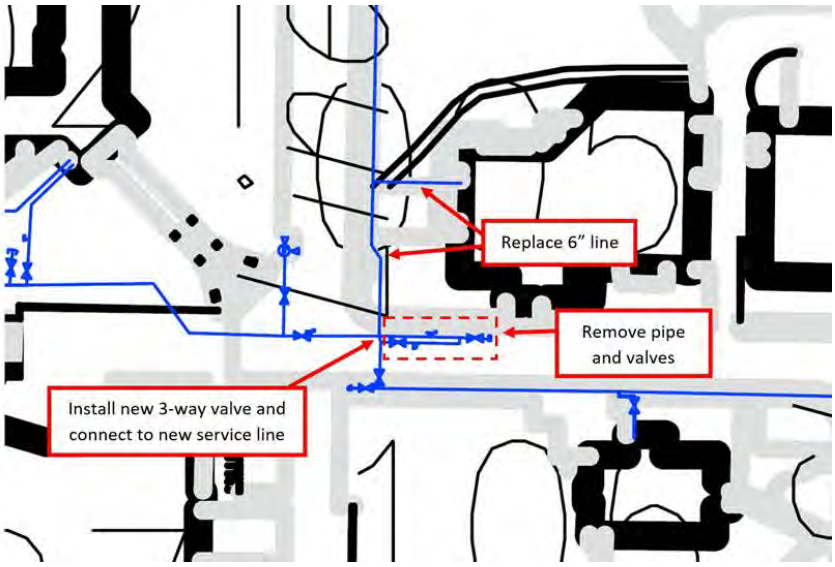

Figure 1. Map of domestic water system in area.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $279,538.

(B) Forecasted annual operations and maintenance costs: +$200. Additional three-way valve will require O&M.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope, (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-046

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs from September 2024 to October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement of the health safety and the reliability/functionality of the domestic water system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $277,452.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-047

PROJECT CODE: 23/4-047

PROJECT NAME: Domestic Water Lines Replacement on Blake Avenue

UTILITY SYSTEM: Domestic Water

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (health risks to building occupants). The impact associated with resiliency is high (a failure will impact building occupants).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These domestic water lines serve as a redundant method to supply water to campus from the I-Tank and serves both the Greek Houses along Nez Perce and the South Hill Apartments. At over 70 years old, these lines are well beyond their expected useful life. This project replaced the existing lines and upgrades the size to keep up with campus growth. Failure of these lines risks the ability for the I-Tank to supply campus with water and loss of service to connected buildings.

Objectives: The main objectives of this Capital Improvement are:

- Replace the lines serving the Greek Houses and the South Hill Apartments.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Change assets in order to achieve the required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Existing 4" piping modifications, removal to Walenta Drive (approx. 1600').
- Existing 6" piping modifications, removal to South Hill Apartments (approx. 750').
- Install new 6" DR18 C900 PVC Water Line and all appurtenances.
- Bedding and backfill.
- Construction supervision.
- Disinfection and place system in service according to Public Water System requirements.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work in a core area of the campus and water quality will be developed. Temporary traffic and/or pedestrian accommodations will be implemented as needed. Similarly, a safe return to

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-047

service and the disinfection process will be documented.

The Concessionaire will coordinate with the University for any building shutdowns and disruptions due to open pit work to allow for campus activities.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $199,908.

Additional Information:

Figure 1. Map of Domestic Water System in area with proposed work.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $2,571,727.

(B) Forecasted annual operations and maintenance costs: +$0. No changes in O&M Costs are anticipated.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/4-047

(E) Proposed schedule: EPC (Const.) occurs from July 2025 to October 2025. EPC (Commiss.) occurs from September 2025 to October 2025.

	07/24	08/24	09/24	10/24	11/24	12/24	01/25	02/25	03/25	04/25	05/25	06/25
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement of the health safety and the reliability/functionality of the domestic water system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $2,552,364.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-048

PROJECT CODE: 23/6-048

PROJECT NAME: Library and Memorial Gym Sanitary Sewer Major Repairs

UTILITY SYSTEM: Sanitary Sewer

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues due to leaking sewage). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high (inspection shows that failure is imminent).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The sanitary sewer lines serving the area between the Library and Memorial Gym are critical to removing waste from multiple buildings. Investigations conducted during Fiscal Year 2019 showed these lines were in extremely poor condition with collapse imminent. Multiple broken sections of pipe are present with heavy grease buildup. This project slip lines and installs new lines to prevent further damage to nearby buildings and disruption to University's operations. Emergency repairs were needed in FY19 after a section of these sewer lines collapsed, but the upstream lines, in equally poor condition, were not repaired.

Objectives: The main objectives of this Capital Improvement are:

- Repair highly damaged pipe before collapse disrupts campus operations.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address safety/public health concerns due to leaking sewage in core campus areas.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Slip line existing 10'' AC pipe at Library (depth=21', length=60').
- Slip line existing 8'' AC pipe at Library (depth=21', length=60').
- Slip line existing 6'' AC pipe serving Mem Gym (length=100').
- Manhole replacement.
- Bedding and backfill.
- Construction supervision.
- CCTV inspect and jet lines.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-048

responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work, bypass sewage pumping, and vehicular and pedestrian traffic management will be developed.

The Concessionaire will coordinate with the University for any building shutdowns and for required vehicular and pedestrian traffic modifications.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $25,380 and it will also include CCTV inspection and jetting.

Additional Information:

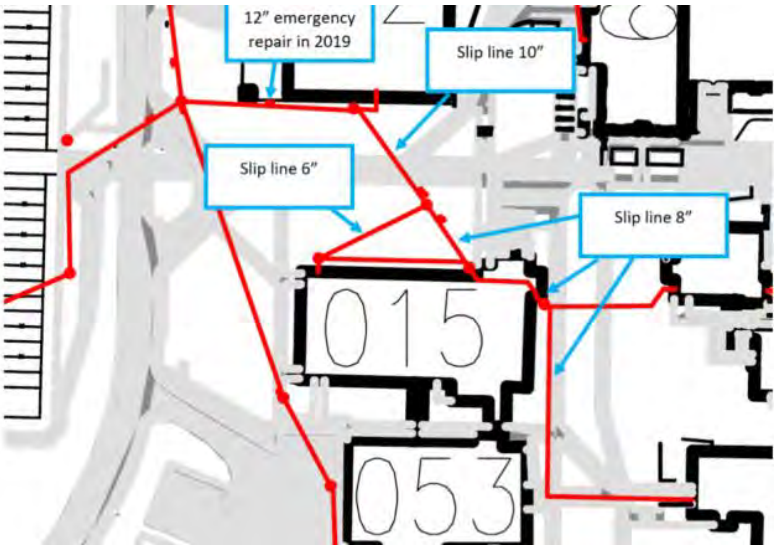

Figure 2. Map of sanitary sewer system in by Memorial Gym and Library.

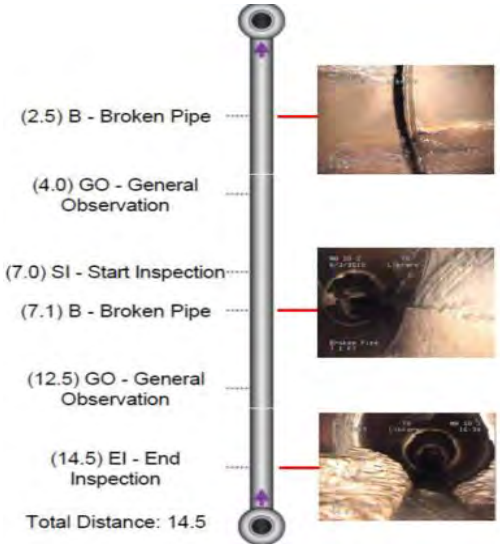

Figure 1. Condition of 10" sewer line after inspection.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $340,713.

(B) Forecasted annual operations and maintenance costs: +$0. No changes in O&M Costs are expected.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) pipes are not damaged to a point that complete replacement is required, (ii) bypass pumping is

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-048

required to keep campus core functions operable, (iii) traffic control and possibly reroute will be required, (iv) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (v) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope, and (vi) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2023. EPC (Commiss.) occurs from September 2023 to October 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Establishing a reliable sanitary sewer service is critical to public health and to achieving functional campus' operations.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $338,148.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-049

PROJECT CODE: 23/6-049

PROJECT NAME: Sanitary Sewer Slipline on Campus Drive and Blake Avenue

UTILITY SYSTEM: Sanitary Sewer

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These sanitary sewer lines serve the Ridenbaugh Hall, the Niccolls Home Economics Building, the Graduate Art Studio, and the Lionel Hampton School of Music. The pipes are 91 years old and well beyond life expectancy. This project will slipline the existing pipes before they collapse. A collapse of the Campus Drive line would risk vehicle access to the Administration building and the historic Camperdown trees in the area.

Objectives: The main objectives of this Capital Improvement are:

- Recondition existing sanitary sewer lines on Campus Drive and Blake Ave.
- Inspect nearby lines to identify future needs.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Change assets in order to achieve the required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Slipline the 6'' lines from Campus Drive to Blake Avenue (approx. 270').
- Slipline the 12'' lines from Blake Avenue and Sweet Avenue (approx. 690').
- Bedding and backfill.
- Construction supervision.
- CCTV inspect and jet other connecting lines.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work, bypass sewage pumping, and vehicular and pedestrian traffic management will be developed.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-049

The Concessionaire will coordinate with the University for any building service interruptions and for required vehicular and pedestrian traffic modifications.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $18,036 and it will also include CCTV inspection and jetting.

Additional Information:

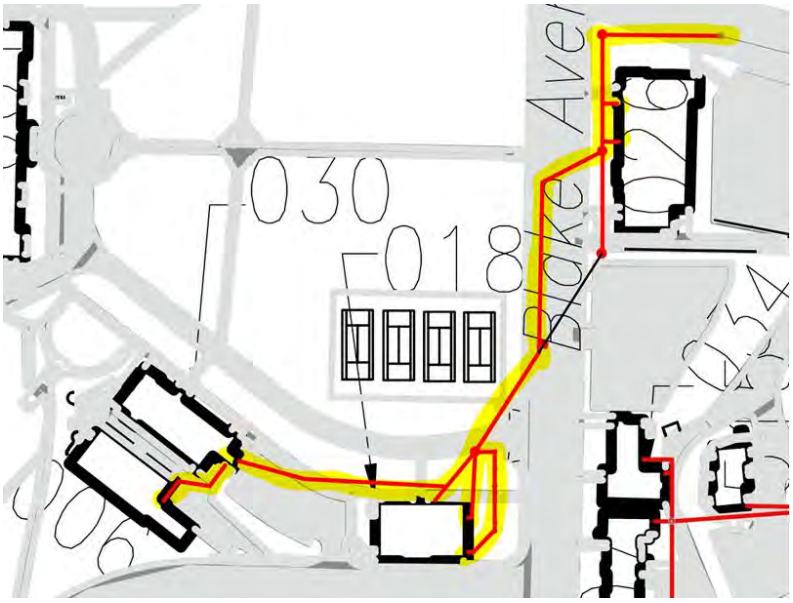

Figure 1. Map of sanitary sewer system in area with relevant work.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $211,020.

(B) Forecasted annual operations and maintenance costs: +$0. No changes in O&M Costs are expected.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) bypass pumping is required, (ii) a pre/post CCTV inspection will be required, (iii) traffic control will be required, (iv) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (v) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope, and (vi) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-049

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) occurs from August 2023 to September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Establishing a reliable sanitary sewer service is critical to public health and to achieving functional campus' operations.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $209,412.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-050

PROJECT CODE: 23/6-050

PROJECT NAME: Sanitary Sewer Manhole Replacements

UTILITY SYSTEM: Sanitary Sewer

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (safety risks to building occupants, vehicles, pedestrians, and operational personnel). The impact associated with resiliency is high.

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: Manholes across campus are used to access sanitary sewer lines for inspection and service. When manholes are in too poor condition or not present it severely limits the ability of clearing plugged lines, potentially requiring excavation. This project repairs and replaces aging sewer manholes that are beginning to fail. Problems include collapsing walls, sinking asphalt, plugged lines, and damage to pipes.

Objectives: The main objectives of this Capital Improvement are:

- Replace failing sewer manholes.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Change assets in order to achieve the required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Repair and install liners at 11 manholes.
- Remove and replace 2 manholes.
- Bedding and backfill.
- CCTV inspection and jetting.
- Construction supervision.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work, and vehicular and pedestrian traffic will be developed.

The Concessionaire will coordinate with the University for any building shutdowns, traffic re-routes, etc. to allow for campus activities.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-050

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $47,304.

Additional Information:

Figure 1. Poor condition brick manhole by ISUB (left) and by Morrill Hall (right).

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $596,761.

(B) Forecasted annual operations and maintenance costs: +$0. No changes in O&M Costs are expected.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) bypass pumping is required to keep campus core functions operable, (ii) traffic control and possibly reroute will be required, (iii) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (iv) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope, and (v) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-050

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) occurs from July 2023 to August 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Establishing a reliable sanitary sewer service is critical to public health and to achieving functional campus' operations.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $592,272.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-051

PROJECT CODE: 23/6-051

PROJECT NAME: Sanitary Sewer Slipline on Line Street

UTILITY SYSTEM: Sanitary Sewer

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high (heavily damaged and collapse is imminent).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These sanitary sewer lines serve the Food Science Building, the Mines Building, the Native American Student Center, and the Janssen Engineering Building (JEB). The pipes are constructed of clay tile and almost 70 years old and are well beyond their life expectancy. A recent sliplining project on a connecting line showed that these lines are in poor condition and need to be repaired soon before they collapse. These lines plug on occasion and require jetting to restore service. The line in the alley between JEB and the Gauss-Johnson Engineering Building (GJ) has a belly in it where it goes under the utility tunnel, which plugs regularly (most recently in September and October 2021). An inspection conducted in October 2021 showed sections of the pipe breaking off, indicating that collapse is imminent. This project sliplines existing pipes and replaces the JEB service line going under the tunnel.

Objectives: The main objectives of this Capital Improvement are:

- Recondition existing sanitary sewer line on Line Street between Idaho Avenue and 6th Street.
- Recondition existing sanitary sewer lines serving the Food Science Building, the Mines Building and the Native American Student Center.
- Remove belly in line between JEB and GJ.
- Install new manholes for improved access.
- Inspect nearby lines to identify future needs.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Slipline the 6'' line on Line Street (approx. 700').
- Slipline the 6'' lines between the Food Science Building, the Mines Building, and the Native American Student Center (approx. 350')
- Install new 6'' DR18 C900 PVC pipe and all appurtenances.
- Bedding and backfill.
- Construction supervision.
- CCTV inspect and jet other connecting lines.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-051

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work, and vehicular and pedestrian traffic will be developed.

The Concessionaire will coordinate with the University for any building shutdowns, traffic re-routes, etc. to allow for campus activities.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $46,548 and it will also include CCTV inspection and jetting.

Additional Information:

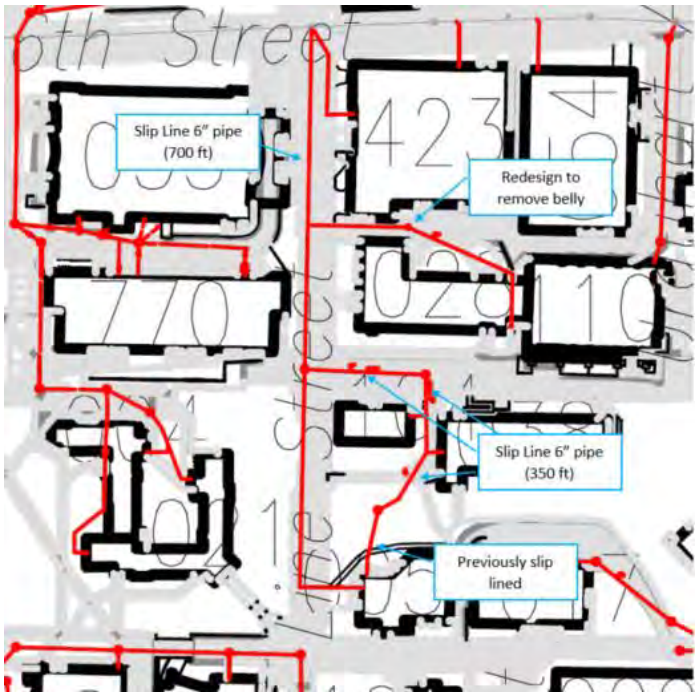

Figure 2. Sanitary Sewer map of area.

Figure 1. Broken section of pipe in Janssen Engineering service line.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $575,490.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-051

(B) Forecasted annual operations and maintenance costs: +$500. New manholes will require regular inspects and cleaning.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) bypass pumping is required to keep campus core functions operable, (ii) pre/post CCTV inspection is required, (iii) traffic control and possibly reroute will be required, (iv) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (v) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope, and (vi) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2023. EPC (Commiss.) occurs from August 2023 to September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Establishing a reliable sanitary sewer service is critical to public health and to achieving functional campus' operations.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $571,104.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-052

PROJECT CODE: 23/6-052

PROJECT NAME: Sanitary Sewer Line Replacement at the West Farm

UTILITY SYSTEM: Sanitary Sewer

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These lines provide sanitary sewer service to the Meats Lab, Beef Residence, Farm Ops, and other buildings on the West Farm. These pipes are 60 years old and well beyond life expectancy. This project slip lines the existing pipes before they risk collapse. An additional manhole is needed to allow for access for maintenance.

Objectives: The main objectives of this Capital Improvement are:

- Recondition existing sanitary sewer lines serving the West Farm.
- Inspect nearby lines to identify future needs.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Change assets in order to achieve the required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Slipline the 4" lines (approx. 950').
- Repair one manhole at intersection of Farm Road and 6th Street.
- Install one new manhole at Farm Storage Building #1.
- Construction supervision.
- Bedding and backfill.
- Asphalt and natural surface restoration.
- CCTV inspect and jet other connecting lines.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work in a core campus area, and vehicular and pedestrian traffic (including temporary accommodations) will be developed. Similarly, a safe return to service will be documented.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-052

The Concessionaire will coordinate with the University and the buildings' occupants for the sanitary sewer shutdown.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $17,712 and it will also include CCTV inspection and jetting.

Additional Information:

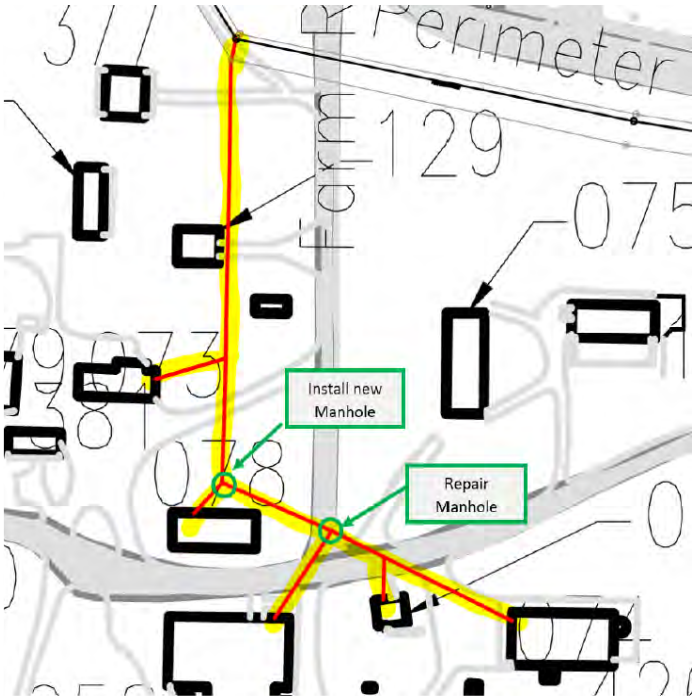

Figure 2. Sanitary Sewer system in affected area.

Figure 1. Bricks falling out at a damaged manhole.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $226,873.

(B) Forecasted annual operations and maintenance costs: +$200. New manhole will require regular cleaning and inspection.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-052

trees and vegetation but impacts may occur, and their remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs from September 2024 to October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement of the health safety and the reliability/functionality of the sanitary sewer system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $225,180.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-053

PROJECT CODE: 23/6-053

PROJECT NAME: Sanitary Sewer Line Replacement at the Bruce M. Pitman Center

UTILITY SYSTEM: Sanitary Sewer

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: Sanitary sewer service from the Bruce M. Pitman Center comes from 4 points, feeding into a common line running parallel to the City of Moscow sewer line. This project abandons the existing parallel line and connects the Bruce M. Pitman Center directly to the City of Moscow line. These pipes are 73 years old and well beyond life expectancy. They are also back graded and frequently plug due to poor design, causing sewer backups into the building.

Objectives: The main objectives of this Capital Improvement are:

- Connect sanitary sewer service from the Bruce M. Pitman Center directly to the City of Moscow lines.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Change assets in order to achieve the required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Install 6" DR18 C900 PVC pipe (approx. 80').
- Install service tap and cleanouts (x4).
- Construction supervision.
- Bedding and backfill.
- Asphalt and natural surface restoration.
- Provide bypass pumping during construction.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work in a core campus area, and vehicular and pedestrian traffic (including temporary accommodations) will be developed. Similarly, a safe return to service will be documented.

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The Concessionaire will coordinate with the University for any building shutdowns and disruptions due to open pit work to allow for campus activities.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $20,844.

Additional Information:

Figure 1. Sanitary sewer system in affected area.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $186,083.

(B) Forecasted annual operations and maintenance costs: +$0. No changes in O&M costs are anticipated.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict and

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-053

hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs from September 2024 to October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement of the health safety and the reliability/functionality of the sanitary sewer system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $184,680.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-054

PROJECT CODE: 23/6-054

PROJECT NAME: Sanitary Sewer Line Replacement at the Administration Building and Art & Architecture

UTILITY SYSTEM: Sanitary Sewer

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: At over 100 years old, the sanitary sewer lines that service the Administration building, Art and Architecture, and Interior Design are well beyond life expectancy. This project slip lines the pipes before collapse. The project also installs a new line serving Interior Design and A&A to reduce hydraulic loading on the existing pipes.

Objectives: The main objectives of this Capital Improvement are:

- Recondition sanitary sewer lines serving the Administration Building and Art and Architecture.
- Install a new sanitary sewer line serving Interior Design.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Change assets in order to achieve the required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Slip line 8" pipe (approx. 300').
- Slip line 6" pipe (approx. 460').
- Install new 6" pipe (approx. 260').
- Construction supervision.
- Bedding and backfill.
- Asphalt and natural surface restoration.
- Provide bypass pumping during construction.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work in a core campus area, and vehicular and pedestrian traffic (including

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-054

temporary accommodations) will be developed. Similarly, a safe return to service will be documented.

The Concessionaire will coordinate with the University for any building shutdowns and disruptions due to open pit work to allow for campus activities.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $38,772.

Additional Information:

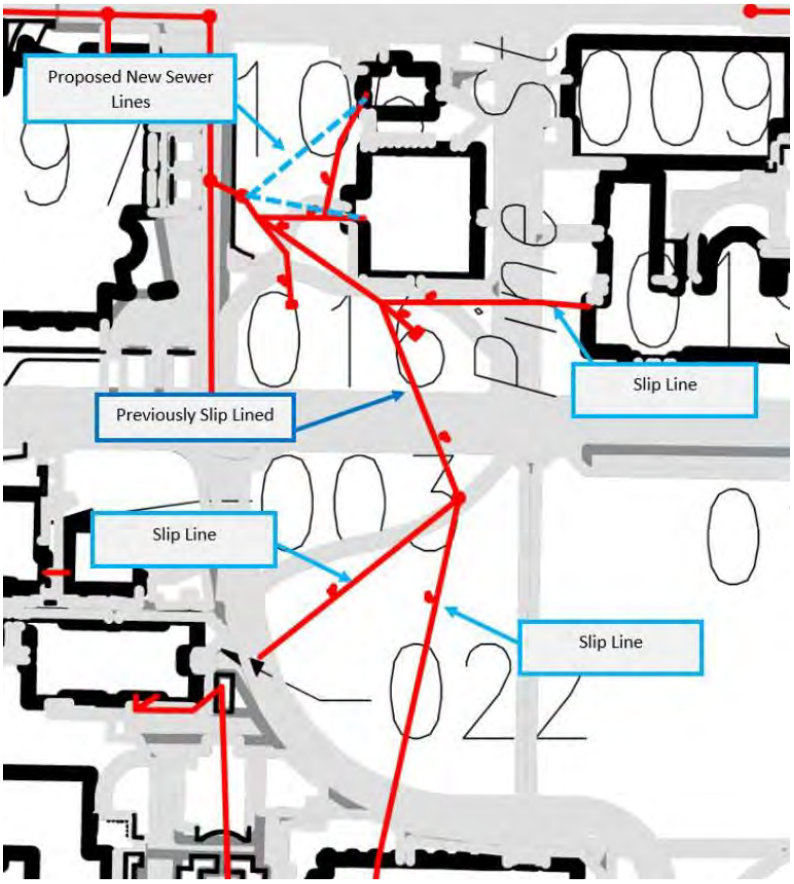

Figure 1. Sanitary sewer system in the affected area.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $497,308.

(B) Forecasted annual operations and maintenance costs: +$300. Additional pipe will require cleaning, jetting, and inspection.

(C) Proposed modification to the Recovery Period: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-054

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through August 2024. EPC (Commiss.) occurs in August 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement of the health safety and the reliability/functionality of the sanitary sewer system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $493,560.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-055

PROJECT CODE: 23/6-055

PROJECT NAME: Sanitary Sewer Slipline from the Brink and Phinney Halls to the Integrated Research and Innovation Center (IRIC)

UTILITY SYSTEM: Sanitary Sewer

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is medium.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: This line provides sanitary sewer service to the Brink and Phinney Halls but is well beyond its expected life. This project slip lines the existing pipes before they collapse and disrupt the buildings' occupants. Due to the poor condition of this line, it plugs regularly and requires frequent jetting. An additional manhole is needed to improve the access and the efficiency of the jetting operations.

Objectives: The main objectives of this Capital Improvement are:

- Recondition the existing sanitary sewer line from the SW corner of the Brink and Phinney Halls to the Integrated Research and Innovation Center.
- Install a new manhole for improved access.
- Inspect nearby lines to identify future needs.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Slip line the 6" line (approx. 190').
- Install double manhole and cleanout.
- Bedding and backfill.
- Construction supervision.
- CCTV inspect and jet other connecting lines.

There is no related work beyond the Line of Demarcation associated to this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work in a core campus area, and vehicular and pedestrian traffic (including temporary accommodations) will be developed. Similarly, a safe return to service will be documented.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-055

The Concessionaire will coordinate with the University for any building shutdowns and disruptions due to open pit work to allow for campus activities.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $19,440 and will also include a CCTV inspection and jetting.

Additional Information:

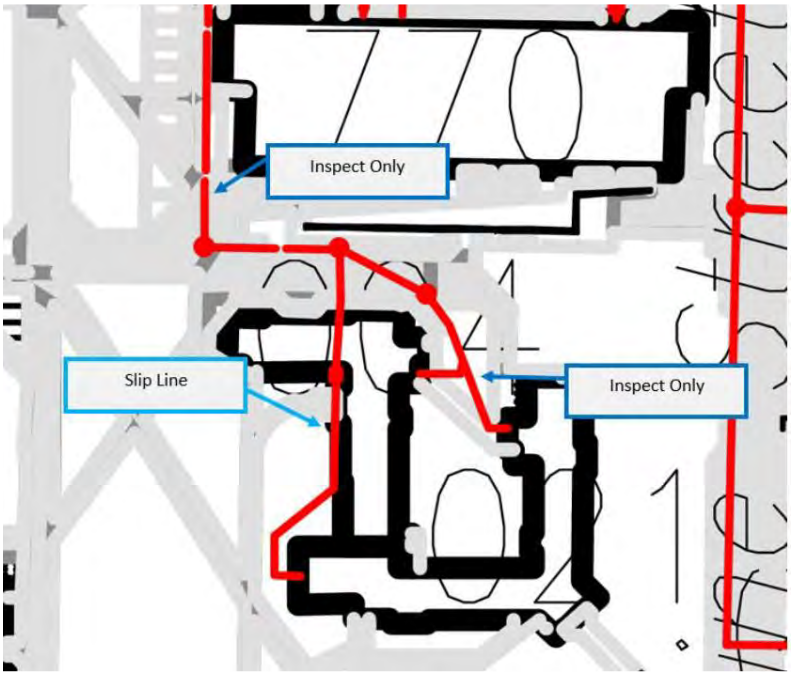

Figure 1. Sanitary sewer system in affected area.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $174,347.

(B) Forecasted annual operations and maintenance costs: +$300. Additional double manhole will require regular cleaning and inspections.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonably free of obstruction, conflict and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impacts may occur, and their remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with

CAPITAL IMPROVEMENT PROJECT SHEET – 23/6-055

University for other work that may impact this project will occur.

(E) Proposed schedule: EPC (Const.) extends through August 2024. EPC (Commiss.) occurs from August 2024 to September 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improvement of the health safety and the reliability/functionality of the sanitary sewer system.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $173,016.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-056

PROJECT CODE: 23/7-056

PROJECT NAME: Library and Memorial Gym Stormwater Major Repairs

UTILITY SYSTEM: Stormwater

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high (lines are heavily damaged and collapse is imminent).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The 93 year old stormwater lines serving the area between the Library and Memorial Gym are critical to removing water during rain events. FY19 investigations showed these lines were in extremely poor condition with collapse imminent. This project slip lines and installs new lines to prevent further flooding damage to nearby buildings. These pipes have dozens of infiltrations, cracks, and broken sections and are well beyond serviceable life. The parallel sewer line that is in similar condition collapsed in FY19, emphasizing the urgent need to make these repairs before collapse.

Objectives: The main objectives of this Capital Improvement are:

- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Address safety concerns associated with the physical conditions of current assets.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Slip line existing 12" AC pipe at Library (depth=21ft, length=170ft).
- Burst existing 10" pipe and replace with on-hand 10" PVC pipe (depth=21ft, length=130ft).
- Cap and abandon in place the existing pipe east of Memorial Gym.
- Install new 4" PVC pipe east of Mem Gym at shallow depth (200 ft).
- Install new 10" PVC pipe south of Mem Gym (175ft).
- Bedding and backfill.
- Install new manholes.
- CCTV inspect and jet lines.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-056

A detailed safety plan covering open pit work and vehicular and pedestrian traffic will be developed. Similarly, a safe return to service will be documented.

The Concessionaire will coordinate with the University for any building shutdowns, traffic rerouting, etc.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $92,556 and will also include jetting and a CCTV inspection.

Additional Information:

Figure 1. Stormwater system at Memorial Gym and Library.

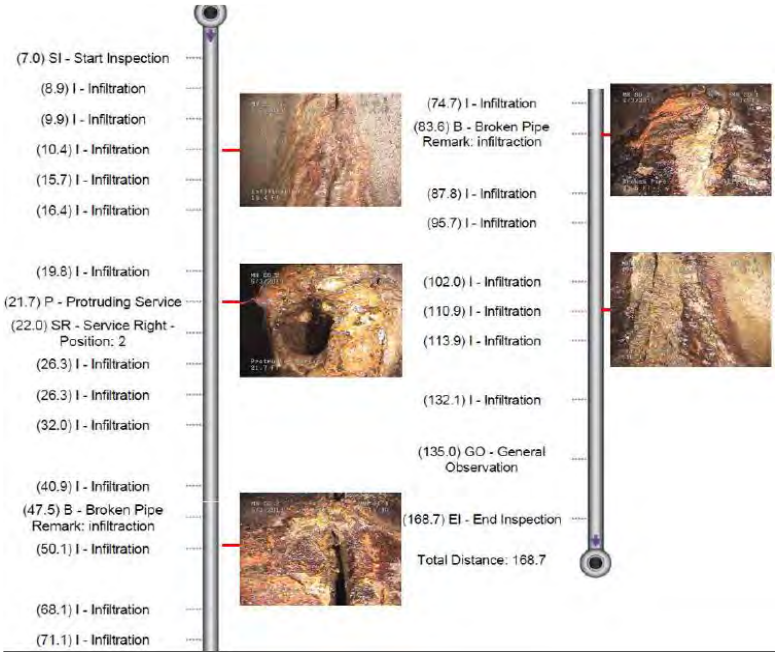

Figure 2. Condition of 12" stormwater pipe after inspection.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-056

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,292,568.

(B) Forecasted annual operations and maintenance costs: $300. Additional pipe will require regular cleaning, jetting, and inspection.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) pipes are not damaged to a point that complete replacement is required, (ii) bypass pumping, traffic and pedestrian control and/or rerouting, and manhole repair by liner will be required, (iii) increased project complexity due to depth of pipes, (iv) underground construction conditions will be reasonable free of obstruction, conflict, and hazardous materials that could impede completion, (v) efforts will be made to mitigate impact on surrounding trees and vegetation but impact may occur and remediation is not included in this scope, and (vi) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2023. EPC (Commiss.) occurs from August 2023 to September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Achieving adequate stormwater control will help protect campus buildings and keep stormwater quality and control in compliance.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,282,716.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-057

PROJECT CODE: 23/7-057

PROJECT NAME: Storm Slipline on Campus Drive and Blake Avenue.

UTILITY SYSTEM: Stormwater

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (severe physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These stormwater lines are 100 years old and well beyond life expectancy. This project slip lines the existing pipes before they collapse. Collapse of the Campus Dr line risks vehicle access to the Administration building and the historic Camperdown trees in the area. The brick manhole by Lionel Hampton is collapsing and poses a safety risk to vehicle and pedestrian traffic.

Objectives: The main objectives of this Capital Improvement are:

- Recondition existing stormwater lines on Campus Drive and Blake Avenue.
- Inspect nearby lines to identify future needs.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Slip line the 6" line from Campus Dr to Blake Ave (approx. 400').
- Slip line the 6" line from Lionel Hampton to intersection of Blake Avenue and Sweet Avenue (approx. 100').
- Replace one manhole at Lionel Hampton.
- Bedding and backfill.
- Construction supervision.
- CCTV inspect and jet other connecting lines.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

A detailed safety plan covering open pit work and vehicular and pedestrian traffic will be developed. Similarly, a safe return to service will be documented.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-057

The Concessionaire will coordinate with the University for any temporary stormwater provisions.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $18,468 and will also include jetting and a CCTV inspection.

Additional Information:

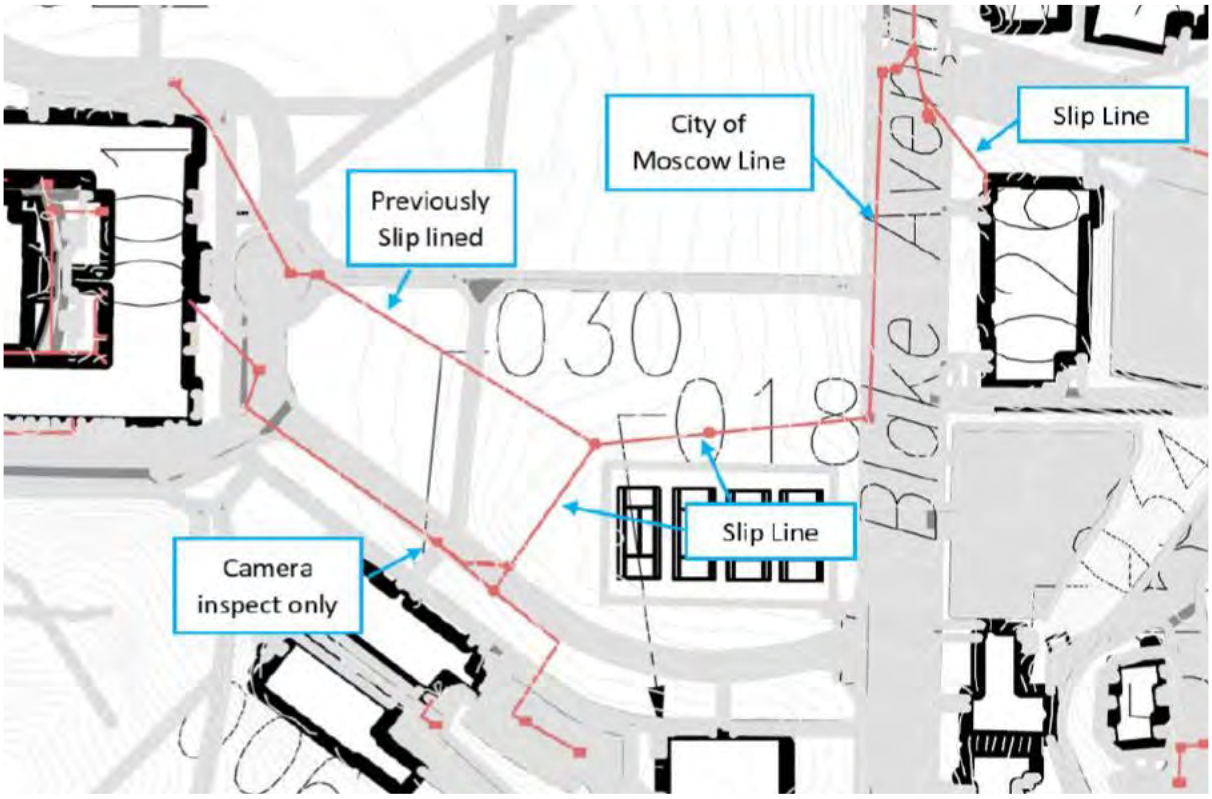

Figure 1. Stormwater system in the affected area.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $236,595.

(B) Forecasted annual operations and maintenance costs: $0. No changes in O&M Costs are anticipated.

(C) Proposed modification to the Recovery Period: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-057

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) bypass pumping will be required, (ii) a complete manhole replacement at Lionel Hampton, (iii) open pit safety protocols, and vehicular and pedestrian traffic control and accommodations will be required, (iv) underground construction conditions will be reasonable free of obstruction, conflict, and hazardous materials that could impede completion, (v) efforts will be made to mitigate impact on surrounding trees and vegetation but impact may occur and remediation is not included in this scope, and (vi) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) occurs from August 2023 to September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved stormwater systems will help maintain stormwater quantity and quality control. Improvement of stormwater systems is required for safety and resiliency of the core campus.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $234,792.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-058

PROJECT CODE: 23/7-058

PROJECT NAME: New Stormwater Line at Art & Architecture

UTILITY SYSTEM: Stormwater

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high (flooding occurs regularly).

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: The existing stormwater line serving Art & Architecture was cut off when Commons was constructed. This has caused flooding issues in the basement of Art & Architecture and creates standing water issues near pedestrian walkways, which freeze in cold weather and pose a pedestrian safety risk. This project restores stormwater service to this area by installing a new line from Art & Architecture to Line Street.

Objectives: The main objectives of this Capital Improvement are:

- Correct flooding issues near Art & Architecture by installing a new stormwater line.
- Inspect nearby lines to identify future needs.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Install new 6" SDR 35 PVC pipe (approx. 120').
- Connect new line to existing storm system.
- Install one new catch basin.
- Bedding and backfill.
- Construction supervision.
- CCTV inspect and jet other connecting lines.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

A detailed safety plan covering open pit work and vehicular and pedestrian traffic will be developed. Similarly, a safe return to service will be documented.

The Concessionaire will coordinate with the University to avoid disruptions to events on campus.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-058

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $16,848 and will also include jetting and a CCTV inspection.

Additional Information:

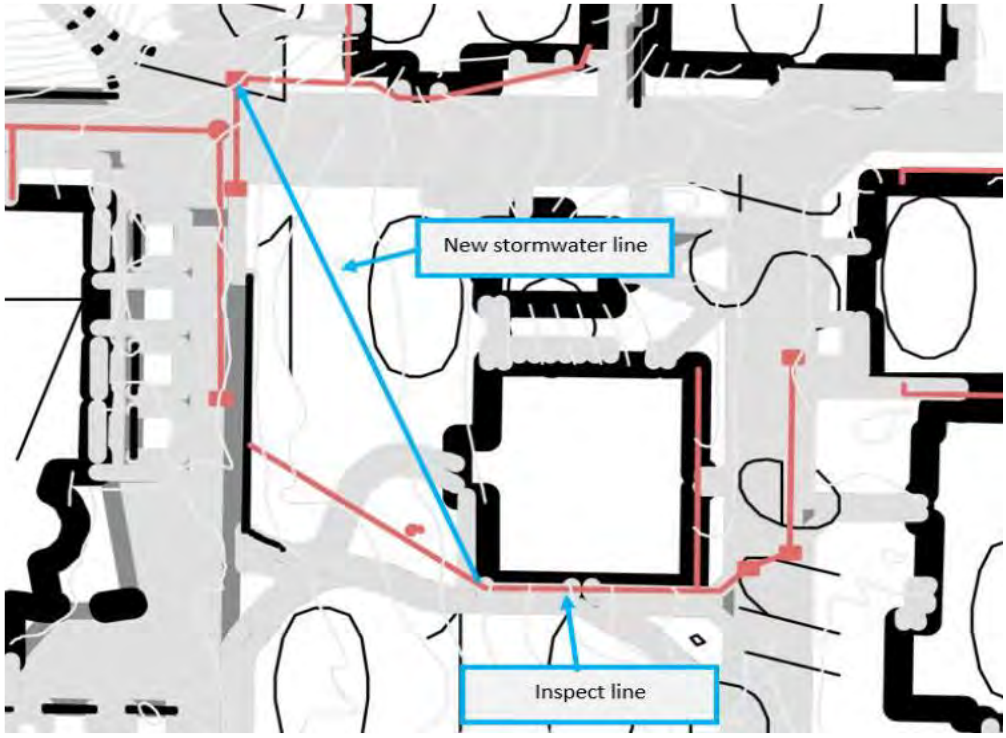

Figure 1. Stormwater system in the affected area.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $133,316.

(B) Forecasted annual operations and maintenance costs: $200. Additional pipe will require regular cleaning, jetting, and inspection.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonable free of obstruction, conflict, and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-058

trees and vegetation but impact may occur and remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through August 2023. EPC (Commiss.) occurs from August 2023 to September 2023.

	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: Improved stormwater systems will help maintain stormwater quantity and quality control. Improvement of stormwater systems is required for safety and resiliency of the core campus.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $132,300.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-059

PROJECT CODE: 23/7-059

PROJECT NAME: Stormwater Catch Basin and Manhole Upgrades

UTILITY SYSTEM: Stormwater

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (safety risks to building occupants, vehicles, and pedestrians). The impact associated with resiliency is high (flooding occurs regularly).

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: Catch basins collect stormwater runoff and direct it to the creek to prevent flooding. Manholes across campus are used to access stormwater lines for inspection and service. When these fail it severely limits the ability of clearing plugged lines, potentially requiring excavation. This project includes major repairs and replacements for aging catch basins and manholes that are beginning to fail. Problems include collapsing walls, sinking asphalt, plugged lines, and damage to pipes and pose safety risks to vehicle, cyclist, and pedestrian traffic on campus.

Objectives: The main objectives of this Capital Improvement are:

- Replace failing stormwater catch basins and manholes.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Change assets in order to achieve required O&M practices in a safe manner.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Upgrade and install liners at 30 catch basins.
- Remove and replace 14 catch basins.
- Upgrade and install liners at 3 manholes.
- Remove and replace 1 manhole.
- Asphalt and natural surface restoration.
- CCTV inspection and jetting.
- Construction supervision.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Materials, including asbestos, which originated prior to Closing.

A detailed safety plan covering open pit work and vehicular and pedestrian traffic will be developed. Similarly, a safe return to service will be documented.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-059

The Concessionaire will coordinate with the University for building shutdowns and to avoid disruptions associated with open pit work.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $141,156 and will also include jetting and a CCTV inspection.

Additional Information:

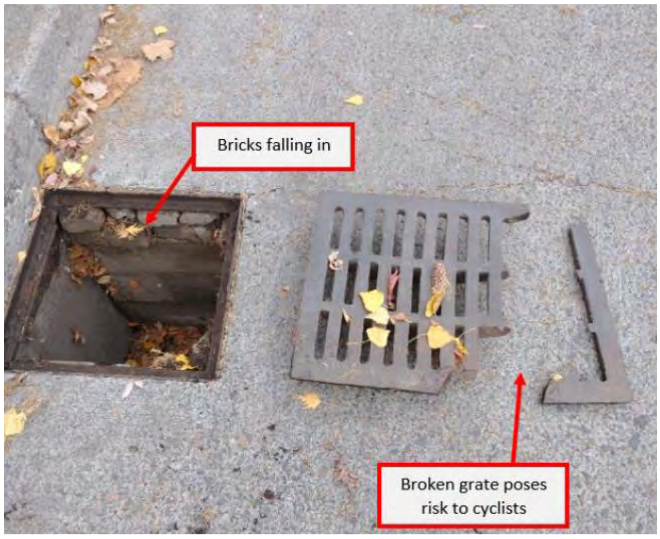

Figure 1. Catch basin on Campus Drive.

Figure 2. Catch basin on Rayburn.

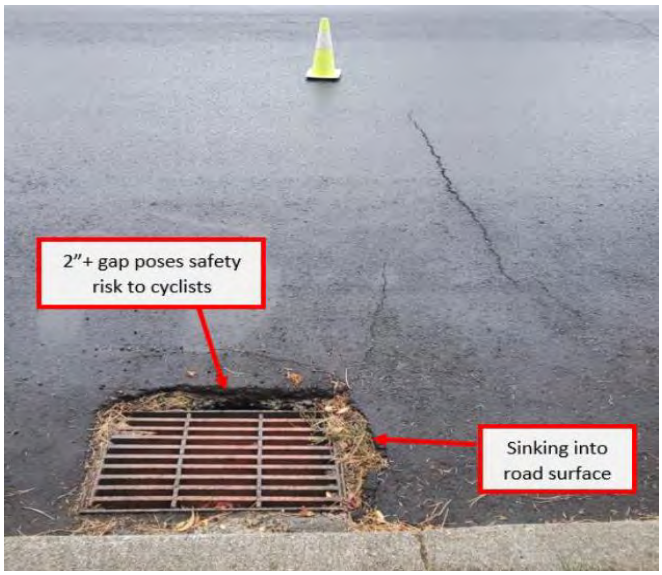

Figure 3. Catch basin on Perimeter Drive.

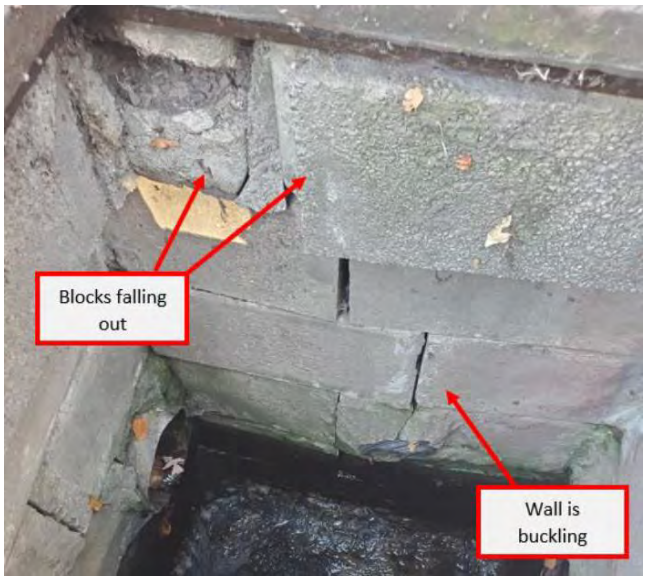

Figure 4. Catch basin at South Hill Apartments.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-059

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $1,852,453.

(B) Forecasted annual operations and maintenance costs: +$0. No changes in O&M Costs anticipated.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonable free of obstruction, conflict, and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impact may occur, and remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2024. EPC (Commiss.) occurs from September 2024 to October 2024.

	07/23	08/23	09/23	10/23	11/23	12/23	01/24	02/24	03/24	04/24	05/24	06/24
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: This Capital Improvement will improve campus' safety and stormwater system's resilience. Stormwater quality will be improved.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $1,838,484.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-060

PROJECT CODE: 23/7-060

PROJECT NAME: Stormwater Line Installation from Wallace to Paradise Creek

UTILITY SYSTEM: Stormwater

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: This stormwater system removes stormwater from areas of campus including JW Martin, ICCU Arena, and Wallace. However, the current system is not designed to handle the current loads, causing flooding in the area regularly. This project installs a new line from the northwest corner of Gooding to Paradise Creek. The new line will reduce the hydraulic loading on the existing system by improving flow, extending the useful life of the connected lines.

Objectives: The main objectives of this Capital Improvement are:

- Increase stormwater capacity to reduce flooding and reduce stress on existing system.
- Inspect nearby lines to identify future needs.
- Mitigate severe resiliency issues associated with systems well beyond their serviceable life.
- Change assets in order to achieve the required O&M practices in a safe manner, improve reliability and stormwater quality.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Install new 24" HDPE pipe (approx. 290').
- Install new 24" outfall valve at Paradise Creek.
- Bedding and backfill.
- Construction supervision.
- CCTV inspect and jet other connecting lines.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work and vehicular and pedestrian traffic (including temporary

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-060

accommodations) will be developed. Similarly, a safe return to service will be documented.

The Concessionaire will coordinate with the University for a possible shutdown of Paradise Creek Street.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $31,320.

Additional Information:

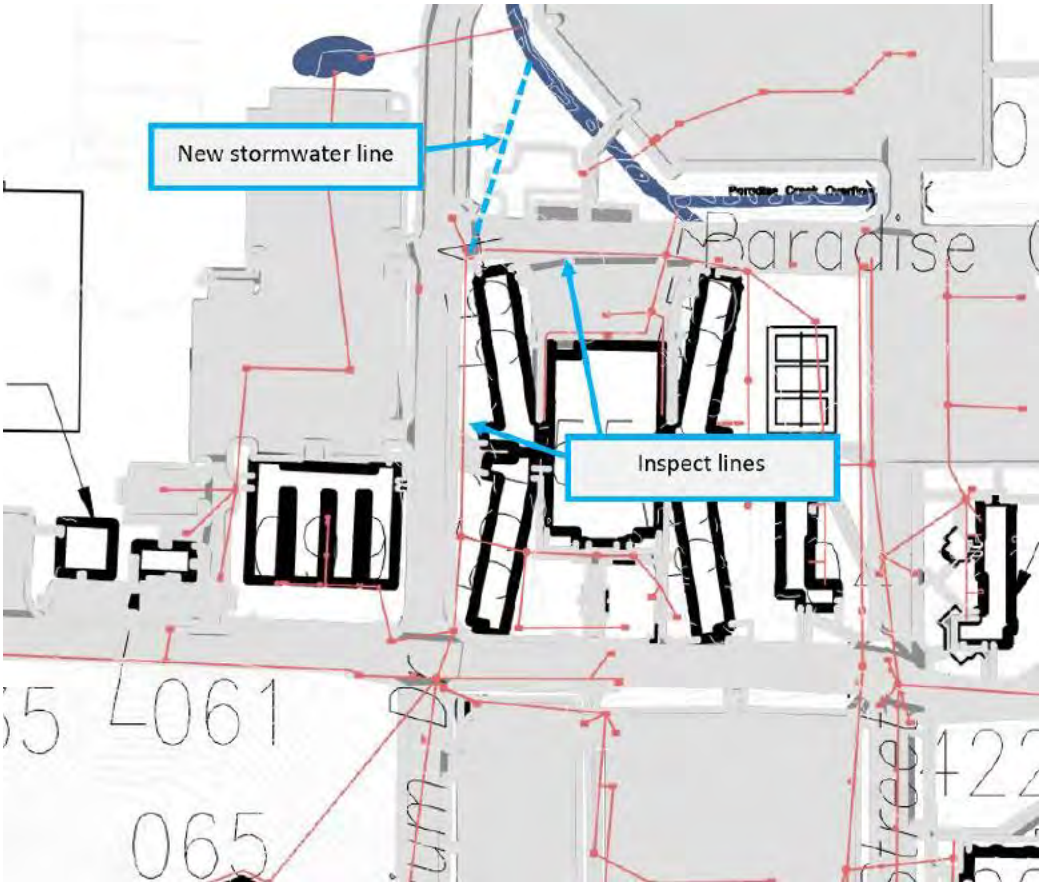

Figure 1. Stormwater system in the affected area.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

(A) Total Cost: $301,212.

(B) Forecasted annual operations and maintenance costs: +$800. New pipe will require regular cleaning, jetting, and inspection. Outfall testing as required by MS4 stormwater permit.

(C) Proposed modification to the Recovery Period: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-060

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonable free of obstruction, conflict, and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impact may occur, and remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2025. EPC (Commiss.) occurs from September 2025 to October 2025.

	07/24	08/24	09/24	10/24	11/24	12/24	01/25	02/25	03/25	04/25	05/25	06/25
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: This Capital Improvement will improve campus' safety and stormwater system's resilience. Stormwater quality will be improved.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $298,944.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-061

PROJECT CODE: 23/7-061

PROJECT NAME: Nez Perce Stormwater and Sanitary Sewer Major Repairs

UTILITY SYSTEM: Stormwater and Sanitary Sewer

DATE SUBMITTED: December 31st, 2021

SAFETY AND RESILIENCY ASSESSMENT:

The impact associated with safety is high (physical and life safety issues). The impact associated with resiliency is high (extended outage and building shutdown).

The likelihood of these events is high.

Likelihood	High	3	2	1
	Med	4	3	2
	Low	5	4	3
PHASE ASSIGNED		Low	Med	High
		Impact		

Background: These sanitary sewer and stormwater lines are aged and need to be inspected and potentially slip lined. The sanitary sewer line on Nez Perce is in poor condition with many root penetrations. It most recently plugged in September 2021. The stormwater lines in the area have been plugged since the eruption of Mount St. Helens in 1980. These issues leave Nez Perce at risk for flooding and cause slippery conditions for pedestrians in poor weather. Their eventual collapse will risk loss of service to connected buildings and potential building flooding damage.

Objectives: The main objectives of this Capital Improvement are:

- Recondition existing sanitary sewer line on Nez Perce serving the President's house and the Golf Course.
- Inspect nearby sanitary sewer and stormwater lines to identify future needs.
- Change assets in order to achieve the required O&M practices in a safe manner and maintain reliable and effective service for both stormwater and sanitary sewers.

Scope of Work: The scope of work of this Capital Improvement is:

- Asphalt and natural surface demolition.
- Slip line the 6" sanitary sewer line on Nez Perce (approx. 1,600').
- Bedding and backfill.
- CCTV inspect and jet parallel stormwater on Nez Perce (approx. 3,400').
- CCTV inspect and jet other connecting lines.
- Construction supervision.

There is no recommended related work beyond the Line of Demarcation associated with this Capital Improvement.

Safety and Logistics: To the extent required by applicable law, the University will provide (i) an asbestos survey covering any area to be disturbed by a demolition or renovation work; or (ii) proof that the original work was completed using asbestos-free materials. In accordance with the Concession Agreement, the University will be responsible for abatement of any Hazardous Substances, including asbestos and lead-based paint, which originated prior to Closing.

A detailed safety plan covering open pit work in a core campus area, and vehicular and pedestrian traffic (including

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-061

temporary accommodations) will be developed. Similarly, a safe return to service will be documented.

The Concessionaire will coordinate with the University and building occupants for any shutdowns, as well as for the potential need for parking space closures along Nez Perce.

Approach: As established in section 4.3(c), the Concessionaire requests that the University respond to this proposed Capital Improvement only pursuant to section 4.3(c)(ii), requiring that the Concessionaire perform additional work, to provide more information regarding the scope, design, and cost of the proposed Capital Improvement. The anticipated cost of such additional work is $25,704 and will also include a CCTV inspection of lines within the scope.

Additional Information:

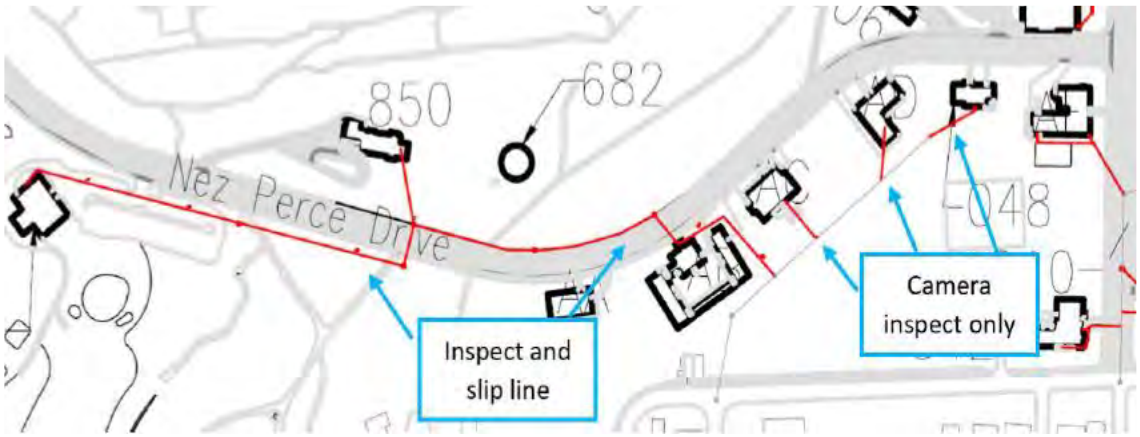

Figure 1. Sanitary sewer lines in affected area.

Figure 2. Stormwater lines in affected area.

Pursuant to the Long-term Lease and Concession Agreement, Section 4.3.(c) (2), the following information is presented for this Capital Improvement:

CAPITAL IMPROVEMENT PROJECT SHEET – 23/7-061

(A) Total Cost: $252,026.

(B) Forecasted annual operations and maintenance costs: +$0. No changes in O&M Costs anticipated.

(C) Proposed modification to the Recovery Period: None.

(D) Explanation of all relevant assumptions, variables, and data sources: See previous narratives. In addition, it is assumed that (i) underground construction conditions will be reasonable free of obstruction, conflict, and hazardous materials that could impede completion, (ii) efforts will be made to mitigate impact on surrounding trees and vegetation but impact may occur, and remediation is not included in this scope, and (iii) workable solutions for all required coordination with University activity will be achievable. Coordination with the University for other work that may impact this Capital Improvement will occur.

(E) Proposed schedule: EPC (Const.) extends through September 2025. EPC (Commiss.) occurs from September 2025 to October 2025.

	07/24	08/24	09/24	10/24	11/24	12/24	01/25	02/25	03/25	04/25	05/25	06/25
Additional Work												
EPC (Dev.)												
EPC (Const.)												
EPC (Commiss.)												

(F) Impact on Sustainability: This Capital Improvement will improve campus' safety and stormwater system's resilience. Stormwater quality will be improved. Sanitary sewer operation is critical to public health and to prevent environmental contamination.

(G) Anticipated tax credits or other benefits: No tax credits or other benefits have been identified.

(H) Fee or charge payable to the Operator: $250,128.

(I) Proposed changes to the limits on the professional liability insurance coverage: All engineering and consulting firms engaged for Capital Improvements proposed for Approval will have a limit of $1,000,000 limit or greater on the professional liability insurance coverage. The premium associated to such policy is usually prorated by the firm over their annual contracts.

(J) Potential change in Supply Costs or consumption of Supplies: None.