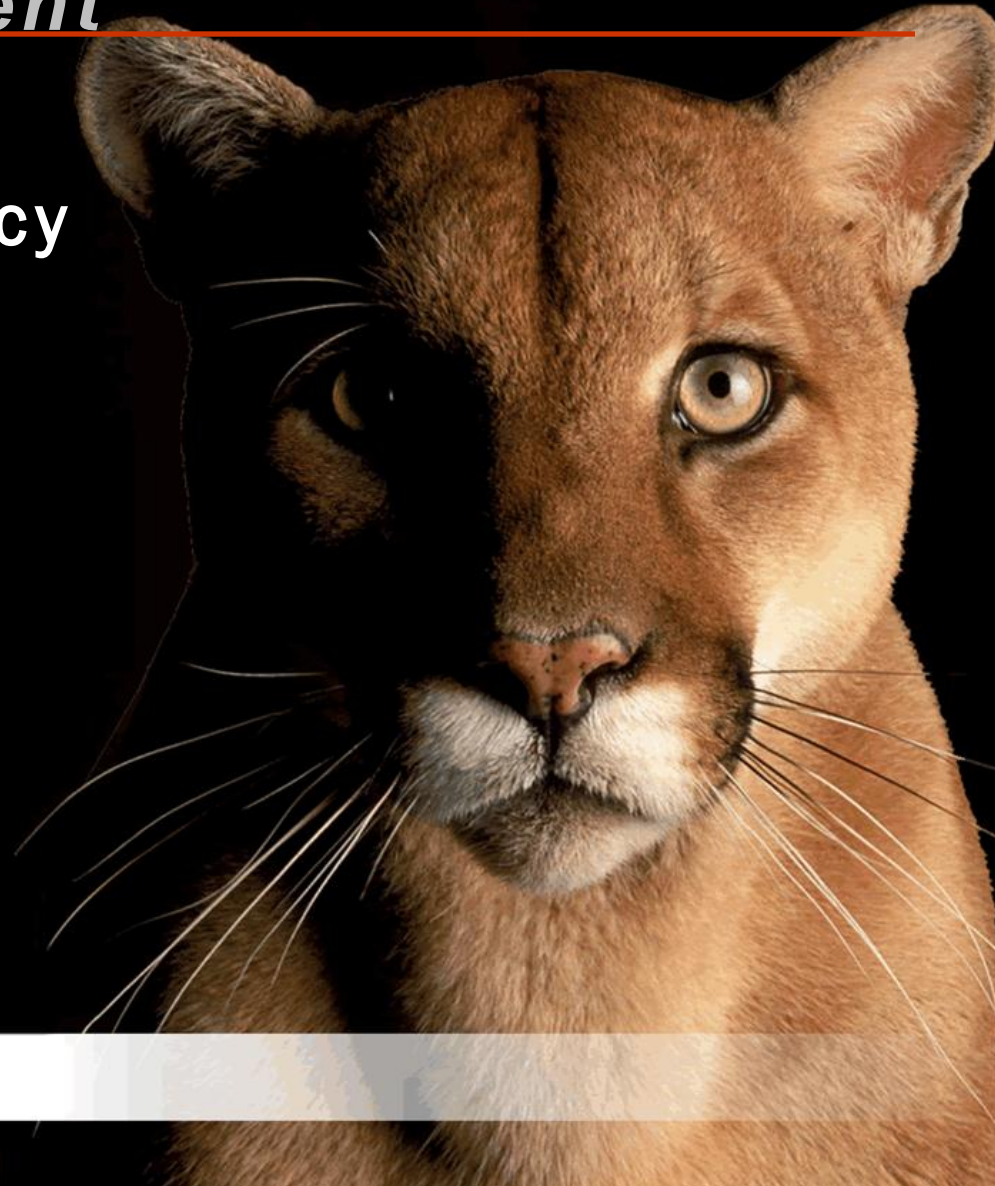


UNIVERSITY OF **HOUSTON**  
*Facilities Management*

Planned and Emergency  
Utility Outage Policy  
Presentation





# *Agenda*

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- **Purpose – What do we want to do?**
- **Summary of Planned Outage Procedure**
- **Summary of Project Related Planned Outage Procedure.**
  - Who takes action
  - University representatives
- **Project related planned outage.**
- **Emergency Restoration Procedure.**
- **Contact list**



## *Purpose – What do we want to do?*

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- Define roles and responsibilities in requesting, coordinating, scheduling and executing
  - Planned utility outages
  - Restoration procedures for emergency outages,



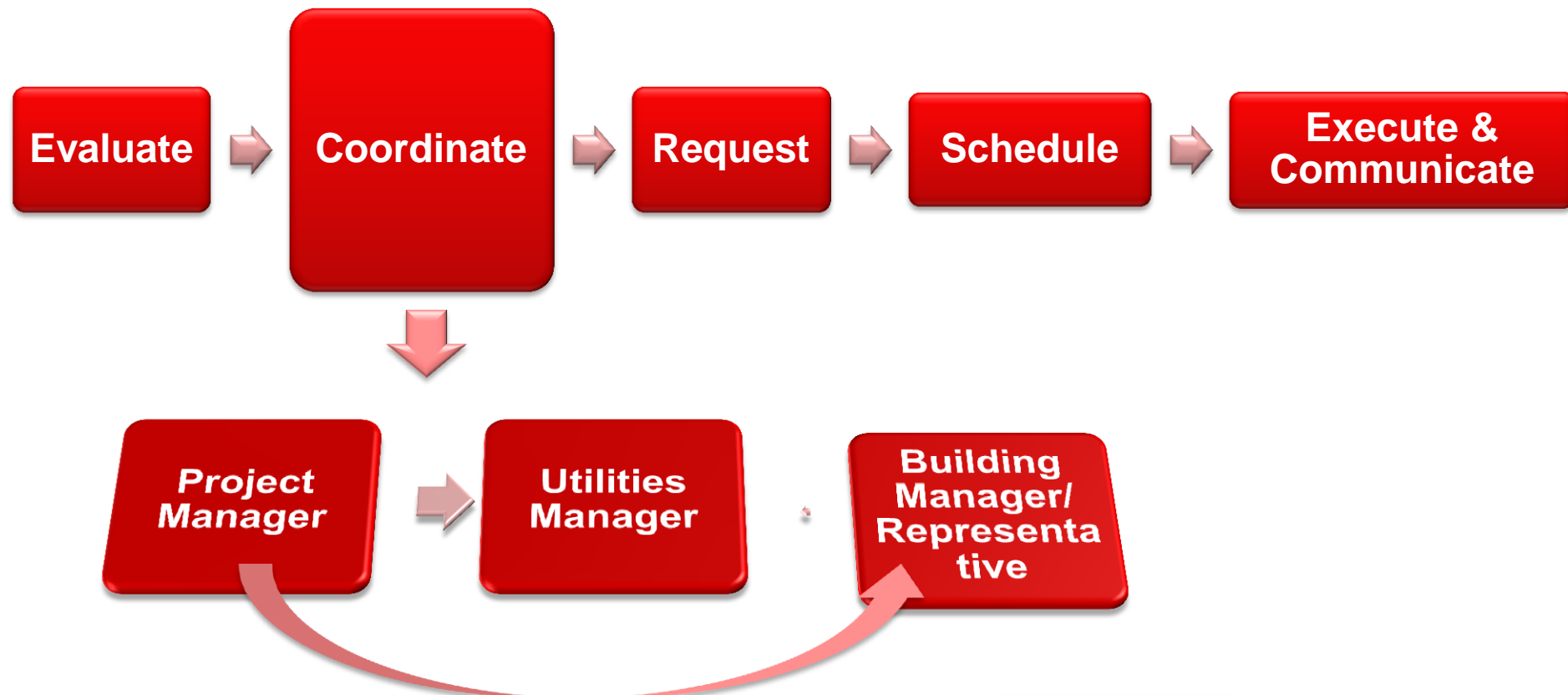
# Summary of Planned Outage Process





# *Project related Planned Outage Process*

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## *Who takes action*

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Process	Who takes Action
Evaluate Outage	University Personnel who deems the outage necessary should review the policy to ensure the outage is not identified as an exception
Coordinate Outage	University representative for the party performing the work and Utilities supervisor
Request Outage	University representative
Schedule Outage	University Representative and Utilities supervisor
Execute and communicate Outage	Utilities supervisor and Communications Coordinator (when applicable)



# *University representatives*

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- Facilities Management Department
  - Facilities Operations & Maintenance including Technical Services, Zone Maintenance and Central Plants and Mechanical Supervisors and other Utilities Administrators
- Facilities Planning and Construction
  - Project Managers and Construction Administrators
- Building Coordinators and Administrators

# *Evaluate*

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## *-UH Rep/ PM*

- **Outage of water, heat, electricity or HVAC that will affect building systems.**
  - Planned – Planned major repair work
  - Emergency - Immediate repairs to safeguard property and health.
- **Exception to the policy**
  - Outage to a point of service device that will result in loss of service to only specific equipment and where the party affected by the operation of the device is informed of the outage, duration and effects.



# Coordinate

*Uh rep/PM with Utility services and Building*

University representative - complete the outage request form and contact appropriate Utilities Supervisor to discuss the outage,

- ❑ Impacts
- ❑ Preferred Scheduling
- ❑ Outage Duration
- ❑ Contingency plans to minimize disruption and protect the building system.
- ❑ Contact information for the designated person and their availability during outage.

***Work may not proceed without the approval of the Utilities Supervisor for the outage and its associated details.***



# Request

*Uh rep/PM*

- Prepare the appropriate notifications and submit to the Utilities Supervisor for final approval and publication.
  - Use the standard template form (Attachment- 4 of policy).

**Outage Request Form:**

Outage Type (Please check all that apply):

- |                                   |                                 |  |   |   |
|-----------------------------------|---------------------------------|--|---|---|
| <input type="checkbox"/> Electric | <input type="checkbox"/> Gas    | <input type="checkbox"/> Steam         | <input type="checkbox"/> Condensate     | <input type="checkbox"/> Domestic Water     |
| <input type="checkbox"/> DI water | <input type="checkbox"/> Vacuum | <input type="checkbox"/> Chilled Water | <input type="checkbox"/> Compressed Air | <input type="checkbox"/> Domestic Hot water |

- ☐ Outage starts:      Date: \_\_\_\_\_ Time: \_\_\_\_\_  
☐ Outage ends:      Date: \_\_\_\_\_ Time: \_\_\_\_\_

- ☐ Building(s) by name and number and/or area(s) affected.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- ☐ Contact information for the designated person and their availability during outage

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- ☐ Outage approval - Utilities supervisor signature \_\_\_\_\_ Date: \_\_\_\_\_

## *Schedule*

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*Uh rep/PM*

- Coordinate with the building manager /coordinator or department representatives in an attempt to minimize impacts.
- Provide 120 hour (five business days) notice to facility users and key service providers using the Utilities Department Scheduled Outage Notification Procedure
- Ensure through notification acknowledgement from the affected parties, that the building coordinator, business manager or representatives to be affected by a scheduled outage have been contacted directly and are aware of the impending outage.

## *Execute and Communicate*

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- Outage notifications shall be issued 120 hours (5 business days) prior to the scheduled outage to all persons identified by the Utilities Outage Notification Procedure and the building managers and representatives of the buildings to be affected.
- When outages have widespread impact an additional correspondence will be sent to the campus community by the Communications Coordinator.

This does not apply to cases of emergency or imminent failure

## *Execute and Communicate*

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- Outage notifications will be distributed through various outlets depending on the level of impact. UHPD and campus IT will be copied on all outages. Sample outlets and means of communication will include:
  - UH Building Contact or Representative
  - Faculty/Staff Listserv
  - Department Business Administrators Listserv
  - Student Listserv
  - Administration & Finance Website
  - Plant Operations Website
  - PIER System (as applicable)

## Planned & Emergency Outage Notification form

- Plant Operations Website found [here](#).

UNIVERSITY of <b>HOUSTON</b> Plant Operations			
Planned Outage Notification			
NOTIFICATION MESSAGE:			
Outage Schedule / Building			
Outage Start Date:		Outage End Date:	
Start Time:		End Time:	
Building(s) Affected:		Building No:	
Building(s) Affected:		Building No:	
Building(s) Affected:		Building No:	
Building(s) Affected:		Building No:	
Type of Outage			
<input type="checkbox"/> Electric	<input type="checkbox"/> Gas	<input type="checkbox"/> Domestic Cold Water	
<input type="checkbox"/> DI Water	<input type="checkbox"/> Condensate	<input type="checkbox"/> Domestic Hot Water	
<input type="checkbox"/> Steam	<input type="checkbox"/> Compressed Air	<input type="checkbox"/> Chilled Water	
<input type="checkbox"/> Vacuum	<input type="checkbox"/> Air Handling Unit	<input type="checkbox"/> OTHER	
Impact:			
Responsible Party			
Primary Contact:			
Secondary Contact:			
Onsite Contractor Contact			
Primary Contact:		Position:	
Telephone:		Email:	
Secondary Contact:		Position:	
Telephone:		Email:	
Outage Approved by:		Approval Date:	
Outage Notice Issued by:		Issue Date:	
Form Updated: 03-13-2011			



# *Emergency Outage*

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- Emergency outages are the type of repairs that must be accomplished immediately to safeguard property and health.
- RESPONSIBLE PARTY handling an emergency outage shall call
  - the Facilities Service Center (FSC) at 3-4948 if outage occurs during normal working hours and
  - the Central Plant operator (3-5791) if outage occurs during non-working hours.
- The Central Plant operator or the FSC representative will contact the appropriate people at that time.



# *Restoration of Service*

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- Services would be restored in the general priority below:
  1. Building Life Safety
  2. Research Buildings
  3. Residential Life and Hilton Hotel
  4. Auxiliary Areas
  5. Classrooms and Offices
- After restoration of services, technicians representing each technical area
  - will survey the affected buildings/areas
  - ensure all systems in their respective areas are operational
  - equipment set in their normal operating positions.





# *Fire alarm*

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## *Fire alarm technicians*

- All fire alarm panels are on battery backup.
  - outage is less than 48 hours and there are no fire alarm events, all the systems will continue to stay online.
  - extended outage scenario, fire alarm batteries will start recharging after power is Restored.
- After Power Restoration - Fire alarm technicians will
  - log on to their True Site workstation
  - confirm working of the campus fire alarm system.
  - Buildings with a failed fire alarm be addressed



# ***HVAC and Controls***

***Lead mechanical technician,  
Controls technician***

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- Lead mechanical technician will
  - Confirm all equipment and systems that were locked down and tagged out during the outage are ready for start up. (chillers, boilers, air-handlers, pumps, exhaust fans, fume hoods, and domestic water system, etc)
  - Bring these systems on-line to pre-event operating Conditions.
  
- Controls technician will
  - Start the equipment and building checkups via controls workstation interface (onsite or remotely).
  - For buildings without direct digital control (DDC) systems, the controls technician will physically visit each area of the building and confirm the operations of heating, ventilation and cooling systems.



# *Elevators*

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## *Elev. Technicians*

- Prior to the outage all building elevators would be brought to the lower level and locked in place to prevent entrapments
- Technicians in elevator shop will confirm operations of elevators in affected buildings, after the outage event.



# *Electrical – High voltage*

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## *Electricians*

- High voltage (12.47kV and greater) system outages prior to de-energizing feeders, electricians will
  - take the amperage readings on primary and secondary campus feeders
  - de-energize the electrical feeders involved in the outage and rack out breakers and ground when necessary
- After work is completed, steps above will be followed in a reverse order prior to re-energizing the feeders and feeder readings compared to pre-event readings to confirm all systems are back in operation.
- Critical systems like domestic pumps, chillers, pumps, air handlers will be physical checked.



# *Electrical — Building voltage systems*

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## *Electricians*

- **Prior to any repairs electricians will**
  - de-energize the building 480V main switch
  - lock out and tag out
  
- **Post outage event, the electricians will**
  - confirm the electrical systems are ready to be put back in.
  - remove the locks and tag.
  - re-energize the system.
  
- Critical building systems will be physically checked by the electricians in the affected buildings.



# *Plumbing*

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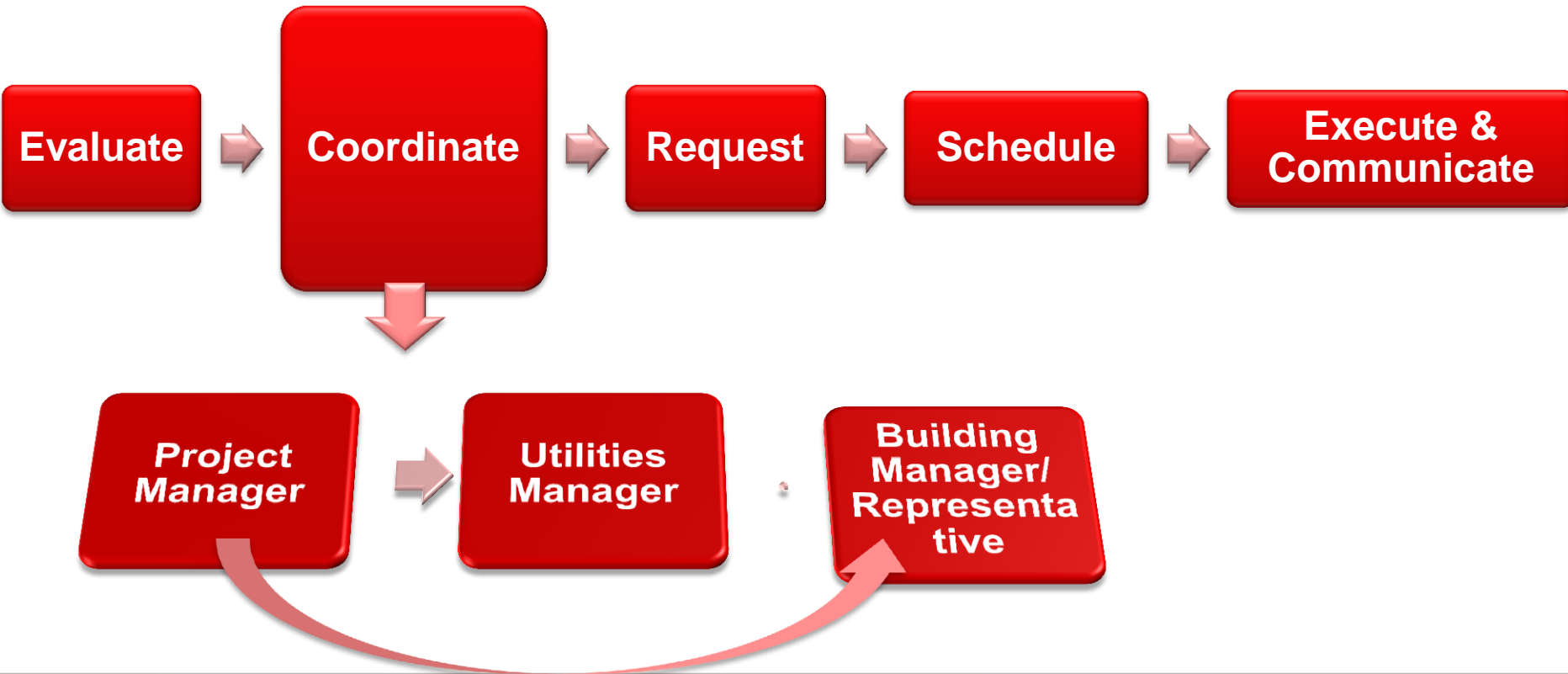
## *Plumbers*

- After the services are restored, Facilities Management plumbers will walk the affected buildings to confirm all the fixtures and systems are operational and set back to the normal operating conditions



*KEY POINT-Project related Planned Outage Process*

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## Contact list

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Function	Contact
Lighting, electrical power, emergency generator and elevators	Manager - <b>Avinash Rahrurkar (3-2749)</b> Supervisor – <b>Karl Keilbach (3-5606) (ELEC.)</b> Supervisor – <b>Mike Aguilar (3-5605) (ELEV)</b>
Fire Alarms	Supervisor – <b>Art Hajecate (3-5762)</b>
Energy Management Controls, Heating Ventilation and Air Conditioning and mechanical systems	Manager – <b>Michael Burriello (3-4562)</b> Supervisor – <b>Jesse Gonzalez (3-5798)</b>
Central Plant Operations including chilled water, steam, and utility infrastructure	Supervisor – <b>Paul Robinson (3-5680)</b> Project Manager/Advisor – <b>Jack Gill (3-5457)</b>
All other questions or areas not identified above	Director – Facilities Ops & Maintenance <b>Sameer Kapileshwari (3-5797)</b>