

Priority Projects - Utilities

Updated - Nov-2-2017

Proposed Projects -Asset Protection, New Construction, Repair

Priority #	Steam	Separate A/P Project Cost	A/P Blanket Cost	Desired Schedule	Notes and Risk/Reason
1	Design Farmhouse Road steam replacement from Pit #1 to the Elephant Walk.	\$ 75,000		FY18	Fuss & O'neil
2	Replace Steam line in the Farmhouse Road parking area from the Steam Pit (Farmhouse Rd Pit #1) near Merrow Hall to the steam pit at the southwest side of Roosevelt (Farmhouse Rd Pit #3. This will involve pit replacement.	\$ 750,000		FY19	Multiple failures occurring due to ground water impingement. Repairs are very costly due to depth of pipe. Project will raise pipe out of ground water level.
3	Design the replacement of steam and condensate piping from the Browning steam pit to Fayerweather Hall	\$ 25,000		FY18	Existing piping is in poor shape
4	Construction for the replacement of steam and condensate piping from the Browning steam pit to Fayerweather Hall	\$ 250,000		FY19	Existing piping is in poor shape
5	Design the replacement of section of steam line from Farmhouse Road Pit #3 to the Elephant Walk. This would be a continuation of the Farmhouse Road Steam Line replacement project.	\$ 50,000		FY19	Heat signature showing up on the ground. Indicates insulation failure and ground water impingement.
6	Replace section of steam line from Farmhouse Road Pit #3 to the Elephant Walk. This would be a continuation of the Farmhouse Road Steam Line replacement project.	\$ 500,000		FY19	Heat signature showing up on the ground. Indicates insulation failure and ground water impingement.
7	Design a new steam service and condensate return line to Aldrich, Burnside and Coddington.	\$ 50,000		FY19	Numerous repairs and continued pipe failure. Could be in conjunction with the building upgrades currently scheduled with HRL.
9	Design to replace Steam and condensate line from the Elephant walk steam pit located to the north west of the Memorial Union extending through the MU archway to the Pastore Steam Pit. Alternate route could be designed connecting the steam pit on the northwest side of multicultural to the steam pit North of Carlotti	\$ 100,000		FY19	Need to assess option to use a different route (Multi-Cultural to Carlotti) due to available connections and ease of pathway.
10	Construction to replace Steam and condensate line from the Elephant walk steam pit located to the north west of the Memorial Union extending through the MU archway to the Pastore Steam Pit. Alternate route could be designed connecting the steam pit on the northwest side of multicultural to the steam pit North of Carlotti	\$ 1,000,000		FY19	Could be changed to different route (Multi-Cultural to Carlotti)
11	Relocate steam and condensate piping where 35kV duct bank was installed parallel and directly above the steam piping	\$ 250,000		FY19	Reliability issue
12	Design the replacement of the Fogarty Steam and Condensate Line from the pastore steam pit to the mechanical room.	\$ 100,000		FY20	Anticipated need due to age. Noresco is looking at options as part of the Project 10 Audit. Currently no available room for possible gas boiler.
13	Construction to replace Fogarty Steam and Condensate Line.	\$ 1,000,000		FY20	Anticipated need due to age. Noresco is looking at options as part of the Project 10 Audit. Currently no available room for possible gas boiler.
14	Design the replacement of the Morrill Hall steam line from Greenway Steam Pit	\$ 40,000		FY20	Repeated repairs, line is aged. Might be able to design in conjunction with Fogarty steam line and consolidate routing.
15	Construction to Replace Morrill Hall steam line from Greenway Steam Pit	\$ 400,000		FY20	Repeated repairs, line is aged. Might be able to design in conjunction with Fogarty steam line and consolidate routing.
16	Design new Steam and Condensate piping fom Multi-Cultural to Research & Grant	\$ 30,000		FY20	Would Eliminate Pit in Elephant Walk. / Or look at installing a boiler system in lieu of serving with steam.
17	Construction of new Steam and Condensate piping fom Multi-Cultural to Research & Grant	\$ 300,000		FY20	Would Eliminate Pit in Elephant Walk. / Or look at installing a boiler system in lieu of serving with steam.
8	Construction for new steam service and condensate return line to Aldrich, Burnside and Coddington.	\$ 500,000		FY20	Numerous repairs and continued pipe failure. Could be in conjunction with the building upgrades currently scheduled with HRL.
18	West Alumni Ave Steam Pit next to old electric crib to the White Horn Brook Steam Pit. Replace steam and condensate piping	\$ 1,000,000		FY20	Should look at coordinating with the Brookside Steam Relocation project.
18	West Alumni Avenue Brookside Steam Pit to HRL Warehouse Steam Pit - Replace steam and condensate piping	\$ 1,000,000		FY20	This is supposed to be included with the Brookside Project - Should look at coordinating with upgrading the Aldrich/Burnside/Coddington steam service upgrades.
19	Replace steam line between Pastore Pit and Quinn Pit	\$ 250,000		FY21	Old
Total Estimate For Major Projects		\$ 7,670,000			

Priority Projects - Utilities

Updated - Nov-2-2017

Proposed Projects -Asset Protection, New Construction, Repair

Work to be Accomplished with the Utility Maintenance Contract					
	Rodman East Steam Pit - Replace hatch doors to upper part of steam pit. The old steel doors are in poor shape and a forklift nearly went through the the doors in 2014.		\$ 20,000	FY18	Safety Issue
	Multi-Cultural Steam Pit - Remove four butterfly valves on both steam and condensate lines that are no longer functional. Replace with spool pieces as steam and condensate can be isolated on the branches. Seal up pipe openings to limit ground water infiltration into the pit.		\$ 15,000	FY18	Remove source of leaks. Replace at time of nearby steam work. See Item No. 33
	Farmhouse Road Steam Pit No. 1 - Repair hatch door so the hold open function is working		\$ 2,500	FY18	Safety Issue for anyone working in the pit
	Burnside Hall Steam Pit - Remove existing rotted ladder rungs; plug up sleeves to reduce ground water infiltration		\$ 2,000	FY18	Safety and reliability
	Sherman Steam Pit - Remove rotted ladder rungs; seal pipe penetrations, remove 2 blowdown assemblies not required; replace valve on blowdown		\$ 4,000	FY18	Safety and reliability
	Uncover steam pit east of Memorial Union		\$ 10,000	FY18	Reliability Issue
	Ryan Center Steam Pits - Re-pipe pits and repair concrete south of the pit		\$ 40,000	FY18	Reliability & safety
	Quinn Steam Pit - Close up opening between main pit and entrance pit, fill in entrance pit, install new hatch and ladder in main part of pit		\$ 50,000	FY19	Work order issued to Atlantic
	In Rodman West Pit - Install gate valve to replace BF valve on steam line to Farmhouse Road and Library		\$ 20,000	FY19	Reliability, Needed for Farmhouse Road steam work
	Replace and rework upper campus steam main feeder from steam plant.. Insulation failure on jacket.		\$ 50,000	FY20	Reliability risk. Difficult to access due to location. Will repipe to provide easier access in future.
	Total Estimate For Utility Maintenance Blanket		\$ 213,500		In Addition to general maintenance and PM repairs

Priority Projects - Utilities

Updated - Nov-2-2017

Proposed Projects -Asset Protection, New Construction, Repair

Storm Water					
1	Design project to create a holding pond and reconstruct pipe crossing Butterfield road from the brook feeding Roger Williams pond along Hope Commons.	\$ 100,000		FY18	In Capital Projects
2	Investigate and develop a plan for Hopkins Hall Groundwater control (Capital Projects?)	\$ 50,000		FY19	Once the Electrical system project is completed it would be in the best interest of health and safety if this groundwater issue was mitigated.
3	Construction of holding pond and redesign of crossing of the campus stream into Roger Williams Pond. Capitol Projects has in design.	\$ 1,000,000		FY19	Pipe restrictions create storm water overflow, erosion and building/Landscape damage (Repeat of Item No. 1)
4	Repipe west side of quad feeding into the Hammerschlag Mall	\$ 250,000		FY19	Pipe restrictions create storm water overflow, erosion and building/Landscape damage ; Entire Quad under review by Capital Planning
5	Replace Stormwater line down Elephant Walk due to size restrictions. Increase diameter.	\$ 150,000		FY20	Pipe restrictions create storm water overflow, erosion and building/Landscape damage
Total Estimate for Major Projects		\$ 1,550,000			
Work to be Accomplished with the Utility Maintenance Contract					
	Connect roof leader piping into closed drainage system at Merrow Hall		\$ 25,000	FY18	Pipe restrictions create storm water overflow, erosion and building/Landscape damage (Include with Item No.1)
	Connect roof leader piping into closed drainage system at Tucker Hall Hall		\$ 25,000	FY18	Pipe restrictions create storm water overflow, erosion and building/Landscape damage (Include with Item No.1)
	Connect roof leader piping into closed drainage system at Peck Hall		\$ 25,000	FY18	Pipe restrictions create storm water overflow, erosion and building/Landscape damage (Include with Item No.1)
	Connect roof leader piping into closed drainage system at Hutchinson Hall		\$ 25,000	FY18	Pipe restrictions create storm water overflow, erosion and building/Landscape damage (Include with Item No.1)
	Connect roof leader piping into closed drainage system at Roosevelt Hall		\$ 50,000	FY18	Pipe restrictions create storm water overflow, erosion and building/Landscape damage; L&G Dept installed small holding pond on east side of building; This could aggravate basement issues!
	Gateway Apartments Drainage		\$ 50,000	FY19	Pipe restrictions create storm water overflow, erosion and building/Landscape damage; In addition storm flow from the north road flows down to Buildings 4 & 6
	Fraternity Circle Drainage		\$ 50,000	FY19	Pipe restrictions create storm water overflow, erosion and building/Landscape damage, To be included in the Fraternity Circle Improvements
	Stormwater system survey		\$ 50,000	FY18/19/20	Survey as funds allow.
	Hydrology study for whitehorn and peckham				Place holder
	Lower College Road Drainage				Under design by Capital Projects
	Green Hall				Flooding issues
Total Estimate for Utility Maintenance Blanket			\$ 300,000		

Priority Projects - Utilities

Updated - Nov-2-2017

Proposed Projects -Asset Protection, New Construction, Repair

	Water				
1	Specifications for the redevelopment and enhancements to Well #3.	\$ 25,000		FY17/18	Complete
2	Redevelop, rescreen and reline Well #3 to ensure continued capacity and availability. Build new well house and repipe main through Well #4 for better treatment control.	\$ 750,000		FY17/18	In Progress
3	Update and increase the size of the water line in Fraternity circle. Loop new line around Fraternity Circle connecting at intersection of Weldin Hall and Chi Phi. Add Fire Hydrant to the west side.	\$ 750,000		FY18	Fire safety and additional capacity for new sprinkler systems being installed in the Fraternities and Sororities
4	Design to Recondition Water Tank -Repair and Repaint Remediate Lead in the soil. (Needs Design Specifications)	\$ 200,000		FY18/19	Long term solution to keep tank viable for next 15 - 20 years. Priority, but funding and the spot repairs push this to later years.
5	Construction to Recondition Water Tank -Repair and Repaint Remediate Lead in the soil. (Needs Design Specifications)	\$ 2,000,000		FY19/20	Long term solution to keep tank viable for next 15 - 20 years. Priority, but funding and the spot repairs push this to later years.
Total Estimate For Major Projects		\$ 3,725,000			
Work to be Accomplished with the Utility Maintenance Contract					
	Replace service to East Farm Building 14 for the aquaculture systems	\$ 30,000		FY18	Reliability
	Replace galvanized water services to east farm buildings.	\$ 40,000		FY18	Deteriorated
	Cut and cap abandoned 2" CU water service to U Club	\$ 8,000		FY18	Improve water quality and minimize leaks.
	Replace service valve to Athletic Field Maint Bld	\$ 2,500		FY18	Allow shut off to building
	Well 4 Redevelopment	\$ 25,000		FY19	
	Feed Aldrich Domestic from Fire Line	\$ 10,000		FY19	Improve water quality and minimize leaks.
	Modify backflows devices in location without drains, multiple projects.	\$ 100,000		FY19	Prevent flooding of buildings
	Replace 6" CI main from Library to Roosevelt. Abandon old service	\$ 50,000		FY19	Improve flow and water quality
	Replace turburclated 6" CI main between 10" and 6" that feeds Steam Plant	\$ 20,000		FY20	Improve flow to steam plant
Total Estimate For Utility Maintenance Contract		\$ 285,500			

Priority Projects - Utilities

Updated - Nov-2-2017

Proposed Projects -Asset Protection, New Construction, Repair

	Electric				
1	Replace Medium voltage switch servicing the athletics complex. Deteriorated condition due to road salt.	\$ 85,000		FY18	Using leftover substation \$'s
2	Add spare breaker to substation 1 & 2	\$ 26,000		FY18	Using leftover substation \$'s
3	Upgrade bypass switch to substation#3	\$ 50,000		FY18	Using leftover substation \$'s
4	Modify cable for new switch arrangement to substation#3	\$ 50,000		FY18	Using leftover substation \$'s
5	Replace and update sub-meters at all buildings behind the electrical master meter.	\$ 750,000		FY17/18/19	Reliability of Information for billing purposes and energy conservation initiatives. (Possible use of Rebate Account Money)
6	Replace ductbank from Multicultural switch to Memorial Union Switch.	\$ 100,000		FY19	Deteriorated condition needs updating for reliability
7	Replace transformer at Library along with outside gear	\$ 150,000		FY20	Deteriorated condition needs updating for reliability
8	Design Phase 3 of Generator Resiliency project	\$ 150,000		FY19	Resiliency effort, Outage functionality
9	Implement Phase 3 Generator Resiliency project	\$ 1,500,000		FY20	Resiliency effort, Outage functionality
10	Provide new electric services, transformers, switches and generators to Fayerweather/Gorham, Dorr, Ellery, Hopkins, Burnside, Cossington and Aldrich	\$ 8,000,000		FY19/20	Place Holder (Possible HRL Bond Money)
11	Feed Peckham Farm and Grad Village from a new separate National Grid feed from 138. Eliminates Keaney lot poles and overhead wires.	\$ 500,000		FY20	Simplifies service to these areas reduces maintenance. Service and Transformer updates are necessary anyway. Allows for separate billing for HRL. Increases reliability and reduces outages due to feeder maintenance.
Total Estimate For Major Projects		\$ 11,150,000			
Work to be Accomplished with the Utility Maintenance Contract					
	Update Sub 3 tie in to Peckham/Grad Village - Repairs needed.	\$ 50,000		FY18	In progress
	Replace Treansformer at CPRC due to age.	\$ 30,000		FY18	Possible oil beginning to weep through housing.
	Replace Transformer at White Hall due to age.	\$ 30,000		FY18	Deteriorated condition needs replacement for better reliability.
	Improve electric reliability for the Swan Edwards Ranger and Green Hall Area. Install feeder protection and switching capability	\$ 50,000		FY19	Resiliency improvements
	Install feeder protection and switch at the Mallon Center for feeder 1-1 and 1-3 resiliency and feeder selection options.	\$ 50,000		FY19	
	Update feeder from Morrill Hall to Fogarty Hall	\$ 50,000		FY19	Deteriorated condition needs replacement for better reliability.
	Update Campus Avenue Overhead lines feeding International House and Dispatch.	\$ 30,000		FY19	Old Triplex is in poor shape, possible failure causing outage in the old science sector affecting animals and Presidents House.
	Replace medium voltage switch at Library. Provide feeder protection and redundancy for feeder 1-1 and 2-1.	\$ 50,000		FY19	Resiliency improvements
	Provide Feeder redundancy for feeder 1-2 by installing switch at Roosevelt Hall and connecting to the Library feeders.	\$ 50,000		FY19	Resiliency improvements
Total Estimate For Utility Maintenance Blanket		\$ -	\$ 390,000		

	Natural Gas				
1	National grid to take ownership of the Greenhouse Master meter on Upper College Road and the Master meter at Briar Lane along with the distribution piping.	\$ 50,000		Paid For in FY15 Completion in FY18	Safety/Risk Risk and liability are far greater than any other utility. Under review by Ngrid. Awaiting pipe integrity test results.
2	Implement National Grid take over of the gas service to the enire Kingston Campus. Would involve some installation of new gas services and lines currently serving buildings.	\$ 500,000		FY19	Safety/Risk Risk and liability are far greater than any other utility.
3	Implement National Grid take over of the gas service to the East Farm and the Narragansett Bay Campus. Would involve some installation of new gas services and lines currently serving buildings.	\$ 100,000		FY19	Safety/Risk Risk and liability are far greater than any other utility.
	Total Estimate For Major Projects	\$ 650,000			
Work to be Accomplished with the Utility Maintenance Contract					
	Replace and service Regulators Kingston and Bay Campus		\$ 40,000	FY18	Deteriorated conditions safety/Functionality
	Replace malfunctioning submeters		\$ 20,000	FY18	Ongoing
	PUC survey Compliance review repairs		\$ 10,000	FY18	
	Leak Detection/System Inspection		\$ 10,000	FY19	Ongoing Compliance, Every Three Years.
	Total Estimate For Utility Maintenance Blanket		\$ 70,000		

Priority Projects - Utilities

Updated - Nov-2-2017

Proposed Projects -Asset Protection, New Construction, Repair

	Sewer/Wastewater				
1	Design replacement of sewer line from Upper College Road to Carlotti.	\$ 50,000		FY18	Blockages regularly occur due to poor flow, root and poor pipe conditions.
2	Replace sewer line from Upper College Road to Carlotti.	\$ 500,000		FY19	Blockages regularly occur due to poor flow and restrictions.
3	Design and construct lime treatment system at Steam Plant	\$ 100,000		FY20/21	Prevent build up of scale in sewer lines leaving plant.
4	Replace sewer lines across main quad		\$ 130,000	FY21	Clay lines near end of life
	Total Estimate Major Projects	\$ 650,000			
Work to be Accomplished with the Utility Maintenance Contract					
	Install Sewer Service Manhole at Peckham Farm		\$ 10,000	FY18	
	Replace Taft Hall Line and Update Hammerslag Mall MH		\$ 20,000	FY18	MH Replacement Complete
	Ballentine Service Line Repair		\$ 6,000	FY18	
	Survey and Camera Inspection of sewer System		\$ 50,000	FY19/20/21	Ongoing Process with Blanket
	Total Estimate For Utility Maintenance Blanket		\$ 86,000		