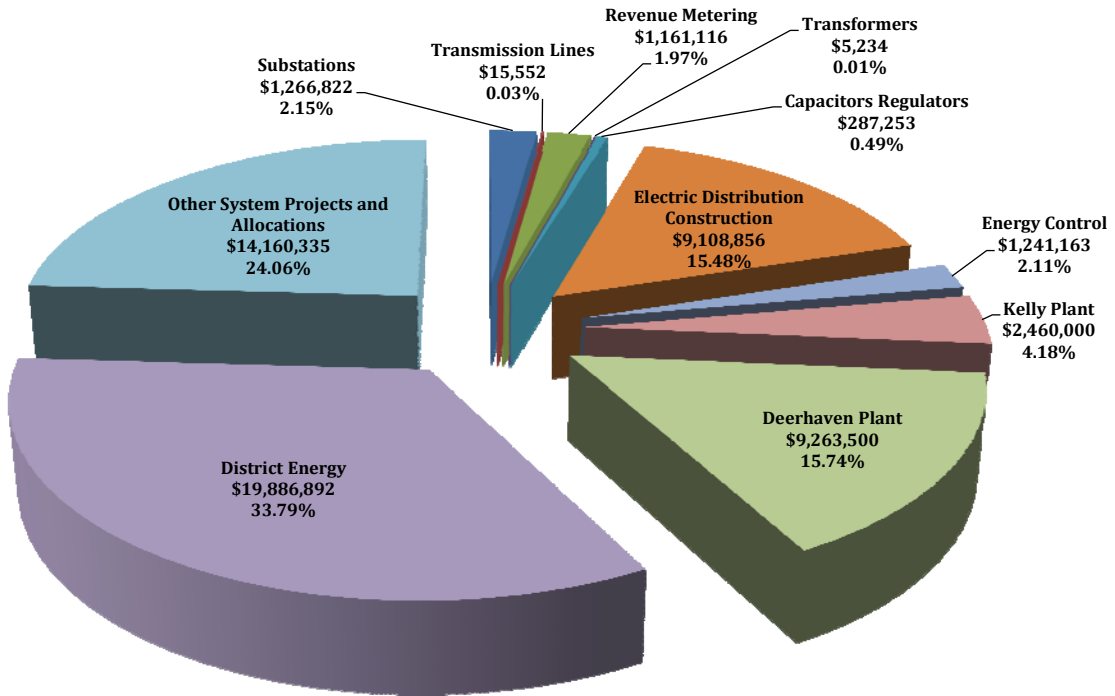


## **Section F – Capital Projects**

Electric System  
FY15 Budget



Electric Projects	Proposed Budget 2015
Substations	\$ 1,266,822
Transmission Lines	15,552
Revenue Metering	1,161,116
Transformers	5,234
Capacitors Regulators	287,253
Electric Distribution Construction	9,108,856
Energy Control	1,241,163
Kelly Plant	2,460,000
Deerhaven Plant	9,263,500
District Energy	19,886,892
Other System Projects and Allocations	14,160,335
<b>Total Projects</b>	<b>\$ 58,856,723</b>

## Electric System

### *Energy Supply Major Projects FY15*

- Energy Supply will be implementing some of the capital improvement countermeasure recommendations of a comprehensive cost of cycling studies on Deerhaven Unit 2 and J. R. Kelly Combined Cycle Unit 1 to reduce the cost of cycle, optimize high operating reliability, and maximize electrical dispatch generation mix with the addition of biomass.
- The Energy Supply capital budget includes funding for Deerhaven CT3 gas turbine replacement parts in preparation for CT3's major inspection in FY17. Purchasing portions of the capital spares over the next two years is required in order to fully prepare for this major work. The capital spares include a set of 1<sup>st</sup> stage shrouds, 3<sup>rd</sup> stage nozzles, 3<sup>rd</sup> stage buckets, and 3<sup>rd</sup> stage shrouds. GRU is able to obtain significant discounts in price as a result of its membership in a consortium of municipal utilities.
- Deerhaven crusher house and precipitator buildings require targeted electrical breaker replacements to ensure reliability and support life-cycle management.
- Refurbishment of the Deerhaven Unit 2 cooling tower is a multi-year life-cycle management project addressing safety and reliability. In FY15, two to eight remaining cells will have deteriorated wood supports replaced with fiberglass.
- Demolition of the decommissioned J.R. Kelly Unit 7 cooling tower and asbestos assessment of the boiler, turbine and balance of plant.
- Capital replacement of Deerhaven Unit 2 high temperature superheat tubes as part of the boiler life cycle management to ensure reliability.
- The Energy Supply capital budget includes funds for replacement of Deerhaven Unit 2 air quality control system components and equipment (i.e. capital spares, catalyst replacement, bag replacements, etc.) that are necessary to maintain efficiency and reliability, and to comply with environmental regulatory air emissions requirements. Funding is also included for control measures necessary to comply with the Mercury Air Toxins Standard (MATS) April 2015 implementation date.
- Deerhaven Unit 2 coal piping improvements to prevent future coal leaks and replace portions of the system that are at the end of useful life.
- Replacement of Deerhaven Unit 2 air heater cold end baskets which have reached the end of useful life.
- Perform inspection of portions of Deerhaven Unit 2 high energy steam piping to assess the remaining useful life and identify any high risk areas that need to be addressed in subsequent outages.
- Refurbishment of one of the two Deerhaven demineralizer trains to restore full capability of both quality and quantity of demineralized water needed for all Deerhaven generating assets.
- The J. R. Kelly Combined Cycle 1 Distributive Control System (DCS) has components approaching the end of life and obsolescence. As such, numerous failures directly affecting unit reliability have been experienced. Selected components will be replaced with newer versions that will enhance reliability and redundancy, and which are fully supported by the original equipment manufacturer.
- The J. R. Kelly Unit 8 steam turbine controls are over 40 years old and outdated. Finding both the material and technical resources to maintain this system is difficult. The J.R. Kelly Unit 8 Turbine Control System

will be converted from a mechanic hydraulic system to a modern Electro Hydraulic Control (EHC) system and will be more easily maintained while providing better process control.

- Refurbishment of the J. R. Kelly Unit 8 cooling tower is a multi-year life-cycle management project addressing safety and reliability. In FY15, 25 percent of the distribution fill and fill structure for all four cells will be replaced.

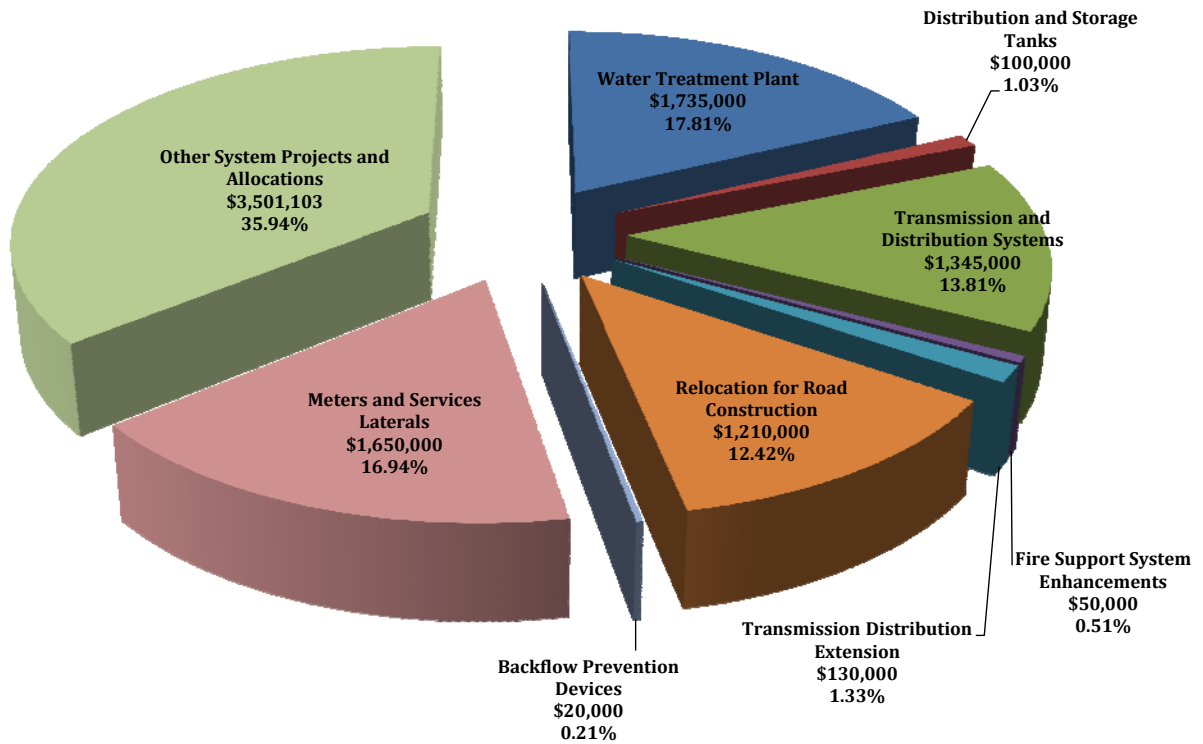
#### *District Energy Major Projects FY15*

- The South Energy Center will add electrical generation and chilled water capacity to support the new UF Health Cardiovascular and Neurosurgery hospital. This project will provide GRU with an increase in revenues, benefiting all electric customers, while the hospital is expected to bring 800 jobs to Gainesville. The combined electrical load to the SEC and the new hospital is expected to increase by at least 4 MW, while the chilled water load will increase by approximately 2,000 tons. Construction will begin in early FY15 and will be completed by early FY18.
- Funds are budgeted to purchase the property that the Innovation Energy Center resides on. These funds were originally budgeted in FY12.
- The Innovation Energy Center will add chilled water capacity to serve new buildings built within and around Innovation Square. Chilled water service will provide additional, diversified revenue to GRU. The chilled water capacity will be added only as new buildings connect to GRU's chilled water system.

#### *Energy Delivery Major Projects FY15*

- Electric system construction is necessary to serve residential, commercial and industrial customer growth within new developments. The major component is building underground infrastructure. The proposed budget for these projects is \$1.5 million.
- Aging overhead and underground distribution system components, some elements of which are more than 50 years old, will be systematically and proactively renewed or replaced to maintain GRU's excellent system reliability, quality of service and customer satisfaction. Planned work extends throughout GRU's service area. The proposed budget for these projects is \$1.22 million.
- Defective distribution system components, including poles, overhead and underground conductors, and transformers, will be replaced. The proposed budget for these projects is \$2.76 million.
- Overhead and underground main line electric system extensions and improvements are necessary to serve new or existing developments. The proposed budget for these projects is \$766,000.
- The Energy Management System (EMS) is a mission critical system that will be replaced with a new system. The system is required to monitor and operate the electric generation, transmission and distribution systems, economically, safely and reliably. The replacement of the EMS is necessary since the contract with General Electric to provide this functionality will expire December 2015. The proposed budget for this project for FY14 is \$500,000 and FY15 is \$1.3 million.

Water System  
FY15 Budget



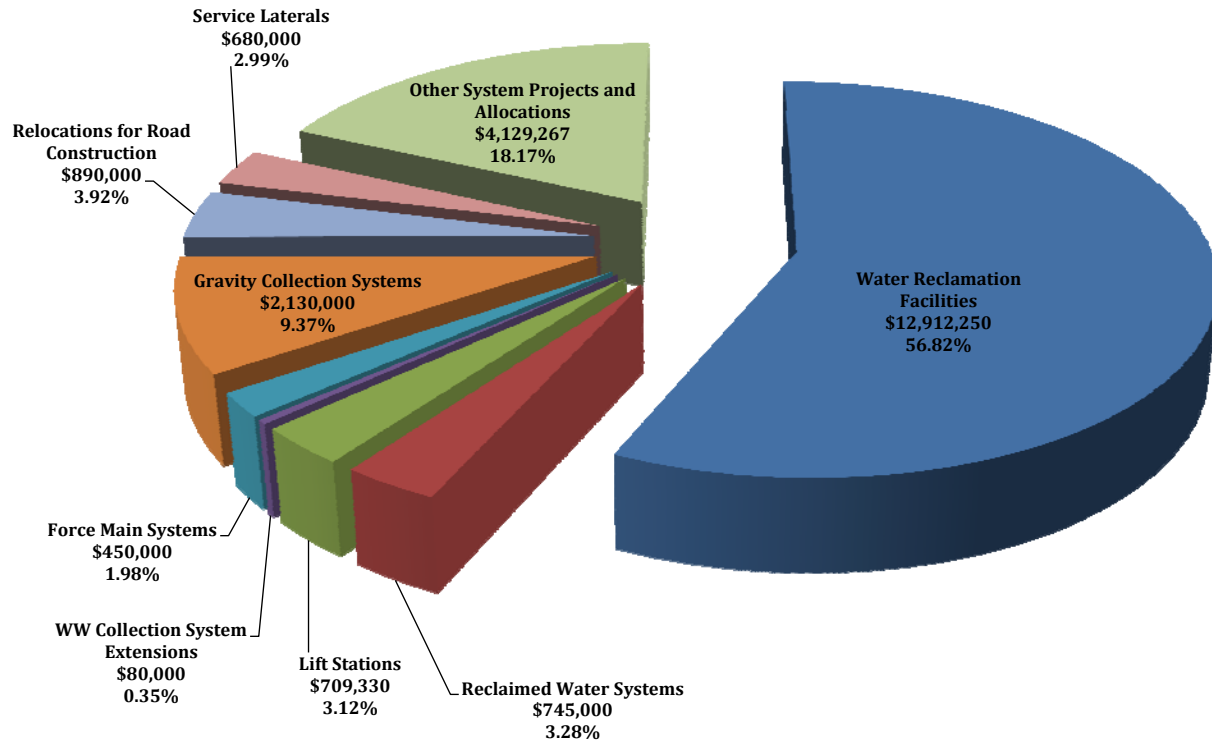
<b>Water Projects</b>	<b>Proposed Budget 2015</b>
Water Treatment Plant	\$ 1,735,000
Distribution and Storage Tanks	100,000
Transmission and Distribution Systems	1,345,000
Fire Support System Enhancements	50,000
Transmission Distribution Extension	130,000
Relocation for Road Construction	1,210,000
Backflow Prevention Devices	20,000
Meters and Services Laterals	1,650,000
Other System Projects and Allocations	3,501,103
<b>Total Projects</b>	<b>\$ 9,741,103</b>

## Water System

### *Major Projects FY15*

- Design of a new electrical building with new Motor Control Centers (MCCs) will begin in FY15 and construction is anticipated to be completed in FY18. The existing MCCs have been in service since 1976. The project will also include replacing the 1,000 kW plant engine generator set.
- The Chlorine Scrubber R&R project replaces an obsolete “wet” scrubber with a new technology dry scrubber. The new unit is factory supported and significantly improves worker safety due to using a dry media technology instead of a liquid chemical being used in the current wet scrubber.
- GRU is implementing an “Infrastructure Improvement Area” (IIA) policy in the Innovation District and surrounding area. GRU is making water distribution, reclaimed water distribution, and wastewater collection system improvements within defined areas ahead of development in order to ensure that capacity is available to serve future redevelopment. In order to recover GRU’s expenditures, GRU is developing an infrastructure improvement area charge to be paid by development projects within the IIA. The policy will ensure that capacity is made available when it is needed, that the improvements are performed as efficiently and cost-effectively as possible, and that the cost of these improvements are allocated fairly between development projects. Water System improvements in the Innovation District Water IIA in the FY15 budget include construction of a new water line between the 1200 and 1300 block of SW 3<sup>rd</sup> Avenue, which will be done in conjunction with construction of the road segments themselves by CRA.
- The Depot Avenue Segment 2 roadway project consists of reconstructing Depot Avenue from PK Yonge School at S.W. 11<sup>th</sup> Street east to Main Street. GRU’s work will include removing and replacing water mains and services.
- The Depot Avenue Segment 4 roadway project consists of rebuilding Southeast 7<sup>th</sup> Avenue from Lewis Oil Company at S.E. 7<sup>th</sup> Street east to Williston Road. GRU’s work will include removing and replacing water mains and services.

Wastewater System  
FY15 Budget



Wastewater Projects	Proposed Budget 2015
Water Reclamation Facilities	\$ 12,912,250
Reclaimed Water Systems	745,000
Lift Stations	709,330
WW Collection System Extensions	80,000
Force Main Systems	450,000
Gravity Collection Systems	2,130,000
Relocations for Road Construction	890,000
Service Laterals	680,000
Other System Projects and Allocations	4,129,267
<b>Total Projects</b>	<b>\$ 22,725,847</b>

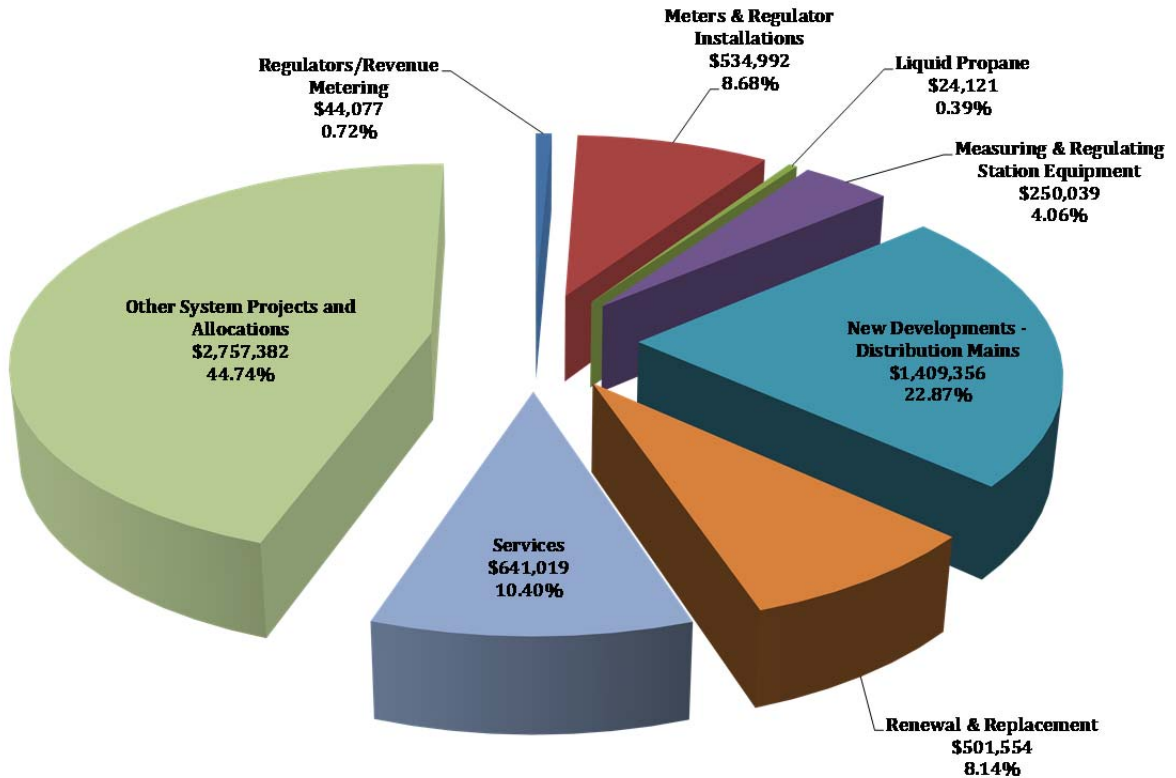
## Wastewater System

### *Major Projects FY15*

- The Paynes Prairie Sheetflow Restoration project is a cooperative project between GRU and Public Works to meet the total maximum daily load (TMDL) for nitrogen at Alachua Sink. The total project cost is estimated at \$26 million. Other funding sources include the City Stormwater Utility and grants. Also, the Main Street Water Reclamation Facility will be upgraded for phosphorous removal (separate line item). Construction for this project will be completed in FY15 and performance testing will begin.
- The Biosolids Dewatering project is a direct result of a settlement agreement and consent order with Alachua County to cease the utility's current operation of applying Class-B biosolids at the Whistling Pines Ranch. A study conducted to determine available alternatives to land application showed that the viable alternatives required dewatering to a significantly higher level than existing (minimum of 20 percent solids rather than 5 percent solids as is our current practice). The dewatering project includes the construction of a facility utilizing centrifuge technology to dewater waste activated sludge from Kanapaha Water Reclamation Facility and Main Street Water Reclamation Facility. The project will be completed in FY16 in order to meet the scheduled February 2016 compliance date.
- Kanapaha Water Reclamation Facility Bar Screens: The installation of new bar screens at the Kanapaha WRF will be the first step in preparing for a new biosolids dewatering facility. The new biosolids dewatering facility will utilize centrifuge equipment that operates at high speeds to dewater the biosolids. The new screens will remove more debris from the waste stream, in turn protecting the treatment process and allowing the new dewatering centrifuges to operate properly. This installation will be completed in FY16 in order to be in place before the dewatering facility is placed in operation.
- The SW 20<sup>th</sup> Avenue/SW 61<sup>st</sup> Street project is being completed in conjunction with a County Public Works project. GRU will relocate existing force main and gravity main wastewater facilities.



**Gas System  
FY15 Budget**



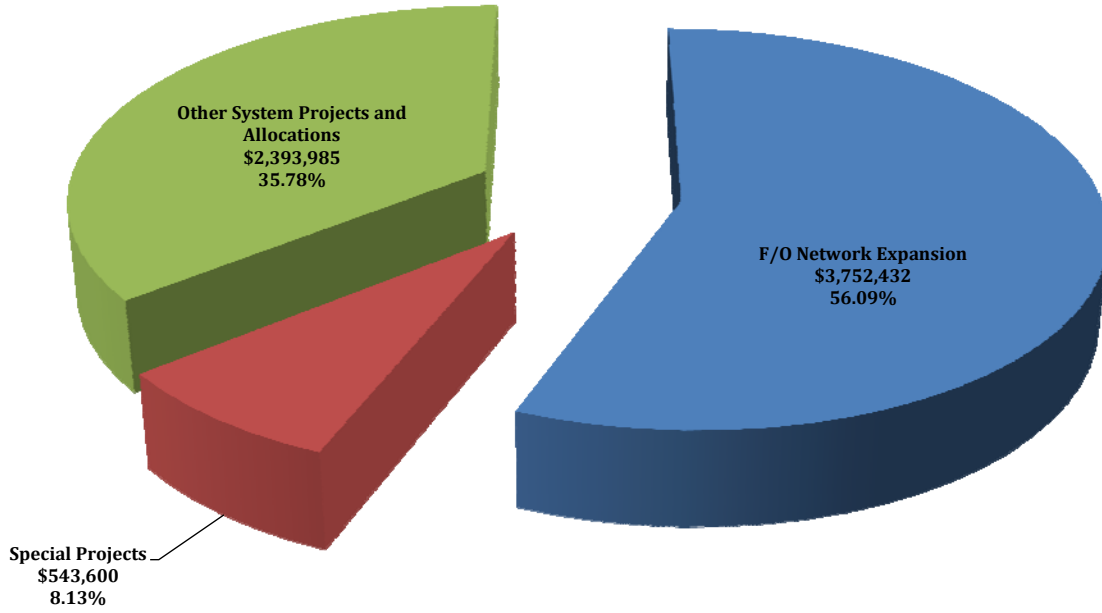
<b>Gas Projects</b>	<b>Proposed Budget 2015</b>
Regulators/Revenue Metering	\$ 44,077
Meters & Regulator Installations	534,992
Liquid Propane	24,121
Measuring & Regulating Station Equipment	250,039
New Developments - Distribution Mains	1,409,356
Renewal & Replacement	501,554
Services	641,019
Other System Projects and Allocations	2,757,382
<b>Total Projects</b>	<b>\$ 6,162,540</b>

## Gas System

### *Major Projects FY15*

- Gas main extensions and improvements are necessary to serve new or existing developments. The proposed budget for these projects is \$840,000.
- New service lines and associated equipment will be installed to serve new customers. Aging service pipes will be systematically and proactively renewed or replaced to improve system reliability, quality of service and customer satisfaction. The proposed budget for these projects is \$545,000.
- Gas system construction is necessary to serve new residential, commercial and industrial customers within new developments. The proposed budget for these projects is \$381,000.
- New meters and associated equipment will be installed to serve new customers. Aging installations will be systematically and proactively renewed or replaced to promote and ensure billing accuracy. The proposed budget for these projects is \$542,000.
- Aging gas distribution system pipes will be systematically and proactively renewed or replaced to improve system reliability, quality of service and customer satisfaction. The planned work to replace cast iron, black plastic and steel piping extends throughout the core of GRU's service area. The proposed budget for these projects is \$416,000.
- Measuring and regulating station equipment will be installed and in some instances renewed to enhance system reliability, quality of service and customer satisfaction. The proposed budget for these projects is \$220,000.

GRUCom  
FY15 Budget



<b>Telecommunications Projects</b>	<b>Proposed Budget 2015</b>
F/O Network Expansion	\$ 3,752,432
Special Projects	543,600
Other System Projects and Allocations	2,393,985
<b>Total Projects</b>	<b>\$ 6,690,017</b>

## GRUCom System

### *Major Projects FY15*

- During FY15, GRUCom will continue to build fiber to additional tower locations and install infrastructure to support cellular carrier data growth. Funds for this initiative are included in the Network Expansion capital budget.
- GRUCom will continue to expand the recently announced Gigabit Internet access options GATOR NET product line. Funds for this initiative are included in the Network Expansion capital budget.
- GRUCom will begin the initial phase of an upgrade to the Public Safety Trunked Radio System (TRS) to add P25 functionality. Funds for this initiative are included in the GRUCom TRS upgrade budget.
- GRUCom will continue to invest in infrastructure within the Innovation District and other related areas throughout the community. Timing of new facilities will depend on private industry construction plans. The installation of the facilities will prepare GRUCom to provide leading-edge technology services in a timely and cost-effective manner. Funds for this project are included in the FY15 Network Expansion capital budget.
- Through increased network efficiency GRUCom will reduce the projections for the FY15/FY16 capital budget by approximately \$140,000 in FY15 and an additional \$100,000 in FY16.