

2016-2017 Student Technology Fee Proposal

Ruby Diamond Concert Hall: Upgrade Lighting Systems

Ruby Diamond Concert Hall
College of Music
Florida State University

Heather Mayo

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Project Description

Due to the increasing production demands and scheduling of events in Ruby Diamond Concert Hall since it's reopening in 2010, the concert hall's halogen stage lighting fixtures are in need of being upgraded with Light Emitting Diodes (LED) fixtures. Within this proposal, we are requesting LED models of: ETC Color Source Pars, ETC Color Source Linear Strip Lights, ETC Color Source Spots with Fresnel adaptors, and the ETC Source 4 Lustr 2 Series. The funding request also includes the cost of associated cables, lens accessories, connectors and hanging equipment.

Through these upgrades, our goal is to provide our student music ensembles with an enhanced production experience and to enable our student workers with the skills necessary to work in the today's production industry. Further benefits include elimination of frequent lamp replacements, reduced labor costs, and most importantly reduced stress on the HVAC system. Overall, LED light fixtures will provide security and protection of University personnel, students and guest artists at Ruby Diamond Concert Hall.

Impact of the Project on Instruction

Ruby Diamond Concert Hall serves first and foremost as a classroom for the College of Music. The lighting system upgrades would directly impact **23 courses** (course listing attached) and **22** current OPS student workers for a total student reach of **1,255** students per academic year. These courses consist of music ensembles who perform in Ruby Diamond on an annual basis. The lighting fixture conversion to LED fixtures will directly affect the dynamic presentation of the College of Music student performances by enhancing the quality of the audience experience. It will dramatically impact the presentation of our Opera Productions and will reduce the cost of the stage energy expended by

88%. In turn, there will be a reduction in HVAC costs for cooling the stage for our student performers which will lead to large savings in University energy expenses per student performance.

In addition, the replacement of halogen lighting fixtures will also provide teaching opportunities for our student workers. In alignment with the University's campus wide entrepreneurial initiative, perhaps the greatest instructional benefit of a updating the lighting systems is the hands on experience it will provide for our student workers. Training on these systems will give students applicable industry experience by enhancing their education with the qualifications necessary for a career in the performing arts. With the new lighting systems, students will receive relevant instruction on an industry standard piece of equipment and will gain experience in working alongside marquee artist production teams from around the world.

LED fixtures can change color remotely by additive color mixing of seven different LED colors built into the fixture. Our current configuration requires consumable color 'gel' to alter the color of the light. With this upgrade, students will have an opportunity for practical experience utilizing LED lighting fixtures and will be able to experiment with a vastly improved color mixing technology. They will also learn advanced programming skills relevant to the field on our current lighting console and will gain a greater understanding of light programming protocols.

LED light fixtures will also provide security and protection of University personnel, students and guest artists at Ruby Diamond Concert Hall. Due to excessive heat from our current lighting configuration, our personnel and student workers must wear protection when working on a powered fixture. The fixture itself can produce up to 423 degrees to the touch. Halogen lamps produce more heat than standard incandescent lamps because the heat is concentrated on a smaller envelope surface. The high amount of heat can pose a fire hazard if the glass or metal housing of the fixture comes in direct contact with stage curtains or flammable objects. Although safety procedures are monitored by fully trained full time personnel, the potential of liability is more prevalent with halogen lighting.

Ruby Diamond Concert Hall also serves as a classroom every Monday, Wednesday and Friday of the Fall and Spring semester to the University's general biology class (BSC1005) with a registered student capacity of **2,200** students per academic year. The biology class utilizes the lighting system and a conversion to LED fixtures would decrease the energy expended during each class period.

Ruby Diamond Concert Hall provides the entire student body at Florida State University with the opportunity to experience cultural events at a level equal to offerings presented in premier performing arts centers across the world. The artistic programming not only enhances their education but also their cultural life. Although it is hard to determine the exact number of students impacted by this artistic programming, we know that these lighting upgrades will enhance their audience experience at Ruby Diamond Concert Hall.

Project Plan

Prior to and concurrent to installation, training documents will be generated for staff, students and employees. These documents will cover the tools, tasks and techniques necessary to implement the new lighting systems within the production workflow of the venue. The RDCH production staff will also conduct hands-on training workshops every semester for our student workers. These workshops will teach intermediate concepts in addition to advanced techniques.

Timeline and Key Milestones

- I. **Order placed with vendor.**
- II. **Materials expected to arrive 2-4 weeks after the order has been processed.**
- III. **After order arrival, expected installation is 2-5 days.**
- IV. **Once all lights are circuited, tested and installed in their positions the project will be considered complete.**

Relationship of This Project to Other University Activities

The proposed lighting upgrades will directly enhance the overall production quality and will reduce energy expenses for all University events held in RDCH. In addition to the academic courses taking place in the hall, annual University activities in RDCH include College of Medicine ceremonies, College of Motion Picture Arts screenings and ceremonies, College of Nursing graduation ceremonies, Student Government sponsored lectures and presentations, the President's Ring ceremony presented by Student Affairs, and the Student Veteran Film Festival. In addition, the Office of the President, Provost and VP of Finance and Administration periodically host special University-wide ceremonies in RDCH. Finally, the University's performing arts series, Opening Nights Performing Arts, also utilizes the space on multiple dates throughout the year to bring in world-class artists to work with our University students.

Cost of Ongoing Support

After implementation, the project will be sustained by the College of Music. These costs include personnel, any required maintenance of equipment.

At this time, the College charges a minimal amount of rental room fees and personnel expenses to University entities. With outside entities, rental fees are assessed per client type, but a majority of these funds go back into funding personnel costs of the Ruby Diamond operation. The Biology class is also hosted without any fees assessed (rental and personnel) to their department. Overall, any income generated inside or outside the University goes back into the personnel operation of the space and there is not enough left over to cover the large amounts of funds needed for technology improvements and enhancements such as this project.

For many years the College of Music has funded the personnel, maintenance, and support of RDCH without external backing. In consideration of the large number and type of events hosted on behalf of the University, we believe that this is a profitable and beneficial use of the technology fee funds at this time.

Description of the Project Team

Project Installation Team

Katie Redd - Assistant Director for Performance Operations, FSU College of Music

Project Role and Qualifications: Katie Redd will serve as the project coordinator and will oversee all elements of this project. Katie received her B.F.A in technical theatre and has been employed full time by the Florida State University for fourteen years. Katie originally started as the Lighting Supervisor for Ruby Diamond and in 2014 was promoted to Assistant Director of Performance Operations. She still serves as the main contact regarding any lighting aspects of the building and was involved in the design planning process for the Ruby Diamond Concert Hall renovation in 2008. Katie has built and maintains a strong network of professional colleagues in the performing arts community.

Jim Meade – Cultural Arts Specialist, FSU College of Music

Project Role and Qualifications: Jim Meade will assist in the installation of the lighting equipment. He has been employed by the University for over 40 years and has been involved in the design planning process for the Ruby Diamond renovation since it began in 2008. He currently directs our Opera Scene Shop and assists in facility projects within all FSU College of Music performance spaces.

Project Budget and Administration

William Fredrickson – Associate Dean for Operations, FSU College of Music

Project Role: Dr. Bill Fredrickson will approve all budgetary and purchasing items for this project.

Heather Mayo – Associate Director of Production and Outreach, FSU College of Music

Project Role: Heather Mayo will assist the project coordinator in production schedule coordination.

Michelle Pohto – Fiscal Director, FSU College of Music

Project Role: Michelle Pohto oversees the daily operating budget management for Ruby Diamond Concert Hall.



STUDENT TECH FEE BUDGET TEMPLATE

2016-2017 Project Funding Proposal

Project Details

Project Title:	Ruby Diamond Concert Hall - Upgrade Lighting Systems
Organization or College:	FSU College of Music
Department or Unit:	
Project Period:	Summer 2017
Start Date:	
End Date:	

I. Senior/Key Personnel (list senior and/or key personnel whose compensation will be funded through project non-recurring funds)

First Name	Middle Name	Last Name	Project Role	Requested Salary	Fringe Benefits	Funds Requested

Total Funds Requested for Senior/Key Personnel \$ -

II. Student & Other Personnel (insert description)

Type	FTE	Requested Salary	Fringe Benefits	Funds Requested
Graduate Students				
Undergraduate Students				
Other Personnel				

Total Funds Requested for Students & Other Personnel \$ -

Total Salaries, Wages & Benefits \$ -

III. Equipment (list items and dollar amounts for each item or multiple items of the same type, including software, with a total cost of over \$2,000)

Item	Description	Number of Items	Unit Cost (List Price)	Funds Requested
CSLINEAR2DB	ColorSource Linear2 Deep Blue w/stagepin	12	\$2,204.50	\$26,454.00
CSPAR	ColorSource PAR, Black	42	\$621.00	\$26,082.00
CSSPOTSDB	ColorSource Spot DeepBlue Light Engine	28	\$1,128.00	\$31,584.00
S4LEDS2LS	Series 2 Lustr Light Engine w/Barrel Assembly	16	\$1,161.00	\$18,576.00
DMX Cable	5 pin DMX 15'	100	\$27.50	\$2,750.00
S4LEDFRES	Source 4 LED Fresnel Accessory	28	\$328.25	\$9,191.00

Total Funds Requested for Items Over \$2,000 **\$114,637.00**

LED50LT	50deg LED Specific Lens Tube	8	\$200.50	\$1,600.00
436EDLT	36deg LED Specific Lens Tube	8	\$179.25	\$1,434.00
490LT	90deg LED Specific Lens Tube	8	\$212.75	\$1,702.00
400CC	Heavy Duty C-Clamp	75	\$15.12	\$1,134.00

SELRM-7.5	D40 Medium Round Diffuser	14	\$18.50		\$259.00
SELRW-7.5	D40 Wide Round Diffuser	14	\$18.50		\$814.00
SELR0M-7.5	D40 Medium Oval Diffuser	14	\$18.50		\$129.00
CSLMLV.5	Medium Linear Vertical Lens .5	24	\$22.00		\$528.00
NAC3FCA	Powercon Female in Blue	100	\$6.86		\$686.00
NAC3FCB	Powercon Female out Gray	100	\$6.86		\$686.00
NAC3MM	Powercon Double Male	15	\$18.65		\$279.00
14AWG	Bulk Power Cable 250' Roll	2	\$276.25		\$552.50
DMX Cable	5 pin DMX 25'	15	\$31.75		\$476.25
DMX Cable	5 pin DMX 50'	5	\$44.25		\$221.25

Total Funds Requested for Items Under \$2,000 **\$10,501.00**

Total Funds Requested for Equipment Costs **\$ 125,138.00**

IV. Other Costs

Category	Funds Requested
Materials & Supplies	
Consultant Services	
Equipment or Facility Rental/Use Fees	
Additional Project Costs (describe in budget justification)	

Total Funds Requested for Other Costs \$ -

Vendor Discount for Lot Package *Quote Attached* **\$ (12,388.00)**

Total Project Cost **\$ 112,750.00**



STAGE EQUIPMENT AND LIGHTING, INC

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Ruby Diamond Concert Hall- FSU
222 S Copeland St
Tallahassee, FL 32304

Attn: Katie Redd
Email: katieredd@gmail.com

Re: Lighting Renovation

Thank you for providing us the opportunity to meet your lighting needs. Based on our conversation, included below is our quotation for the materials requested. Pricing is based on quantities provided and may not represent a complete Bill of Materials. Should you require any additional quantities or options, please do not hesitate to contact us.

Quantity	Part #	Description
12	CSLINEAR2DB	ColorSource Linear 2 Deep Blue, Black
42	CSPARDB	ColorSource PAR Deep Blue, Black
28	CSSPOTSDB	ColorSource Spot Deep Blue Light Engine
16	S4LEDS2LS-0	Series 2 Lustr Light Engine w/ Barrel assy
8	LED50LT	50° LED specific EDLT
8	436EDLT	36° EDLT Lens tube with lens installed
8	490LT	90° Lens tube with lens installed
28	S4LEDFRES	Source Four LED Fresnel Accessory
14	SELRM-7.5	D40 Medium Round Diffuser
44	SELRW-7.5	D40 Wide Round Diffuser
7	SELOM-7.5	D40 Medium Oval Diffuser
24	CSLMLV.5	CS Linear M Linear V-Diffuser .5M
100	NAC3FCA	Powercon Blue Cable Mount
100	NAC3FCB	Powercon Grey Cable Mount
15	NAC3MM-1	Powercon Cable Couple A - B
2	CARO143SJOW	14/3 SJOW Carol Cable 250'
58	ZDP45NS15L	Dataplex DMX Cable: 15' 5 pin
22	AC5PDMX15PRO	Accucable 15' DMX 5 pin
15	ZDP45NS25L	Dataplex DMX Cable: 25' 5 pin
5	ZDP45NS50L	Dataplex DMX Cable: 50' 5 pin
75	400CC	ETC Cast Iron C- Clamp

Lot Price for Materials Requested is **\$112,750.00**

Applicable tax is NOT included. Terms on this order would be your standard N30 Terms. Please note that the CS Linear fixtures are not estimated to ship until January 2017, allow 2-4 weeks for delivery for the balance of the items. Freight is not included in pricing listed. Any typographical or clerical errors are subject to correction. Prices are good for 30 days.

Andrew Rudolph
Technical Consultant

December 8, 2016

Quote# 10036-29



Ruby Diamond Concert Hall Course Enrollment

	Course Numbers	Current Student Enrollment
1	Wind Orchestra	
	MUN2140	7
	MUN4143	19
	MUN5145	23
2	Symphony Orchestra	
	MUN4213 section 2	50
	MUN5215 section 1	54
3	Symphonic Band	
	MUN2130	33
	MUN4133	50
4	Concert Band	
	MUN2120	57
	MUN4123	25
	MUN5125	1
5	Philharmonia Orchestra	
	MUN2210 section 1	52
	MUN4213 section 1	26
	MUN5215 section 3	1
6	University Singers	
	MUN2310	19
	MUN4313	38
	MUN5315	1
7	University Chorale	
	MUN2390	16
	MUN4393	13
	MUN5395	20
8	Chamber Choir	
	MUN4343	10
	MUN5345	17
	MUN 2800:	
9	Section 2- Gamelan	6
10	Section 3- Steelband	7
11	Section 4- Gospel Choir	16
12	Section 5- African	1
13	Section 6- Blues	9
14	Section 7- Irish Fiddling	
15	Section 8- Old Time	4
16	Section 9- Chinese	4
17	Section 10- Rock	5
18	Section 11 -Andean	
	MUN4803	
	Section 2- Gamelan	3
	Section 3- Steelband	3
	Section 4- Gospel Choir	21
	Section 5- African	4
	Section 6- Blues	0
	Section 7- Irish Fiddling	3
	Section 8- Old Time	3
	Section 9- Chinese	5

	Section 10- Omnimusica		1
	Section 11 - Rock		3
	Section 12 – Andean		2
	MUN5806		
	Section 2- Gamelan		4
	Section 3- Steelband		2
	Section 4- Gospel Choir		0
	Section 5- African		1
	Section 6- Blues		1
	Section 7- Irish Fiddling		4
	Section 8- Old Time		6
	Section 9- Chinese		2
	Section 10- Omnimusica		5
	Section 11 - Rock		3
	Section 12 – Andean		3
	19 Men's Glee		
	MUN2330		25
	MUN4333		15
	MUN5335 - 3		3
	20 Women's Glee		
	MUN2320		43
	MUN4323		19
	MUN5325		2
	21 Opera		
	MUN2350		12
	MUN4353		5
	MUN5355		4
	22 Jazz Ensemble I		
	MUN2710		8
	MUN4713		7
	MUN5715		5
	23 Marching Chiefs - PRISM		
	MUN2110		284
	MUN4113		137
	MUN5115		1
		Total College of Music Students per Academic Year	1233
	24 BSC1001	Total Biology Students per Academic Year	2200
	OPS Students Workers	Total Students for Currently Appointed	22
		Total Students Impacted	3455