

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

69328 Service: DTV Call **WLED-TV** Channel: 23 (UHF) Facility Sign:

ID:

File 0000027752

Number:

FRN: **0021895115** Date 11/19

> Submitted: /2019

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
NEW HAMPSHIRE PUBLIC BROADCASTING Doing Business As: NEW HAMPSHIRE PUBLIC BROADCASTING	Dawn DeAngelis 268 MAST ROAD DURHAM, NH 03824 United States	+1 (603) 868- 4304	ddeangelis@nhpbs. org	Not-for- Profit

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Contact Information

Preparer Contact Name and Information

Applicant	Address	Phone	Email
Ryan C Wilhour ConsultingEngineer Kessler and Gehman Associates, Inc.	507 NW 60th ST STE D Gainesville, FL 32607 United States	+1 (352) 332-3157	ryan@kesslerandgehman. com

Broadcaster Information and Transition Plan

Question	Response
Will the station be sharing equipment with another broadcast television station or stations (e.g., a shared antenna, co-location on a tower, use of the same transmitter room, multiple transmitters feeding a combiner, etc.)? If yes, enter the facility ID's of the other stations and click 'prefill' to download those stations' licensing information.	No
Briefly describe transition plan	Replace transmitter and antenna using existing transmission line. Acquire interim antenna and line for continued operation during line replacement and duration of the assigned phase. Map and analyze tower; design and implement modifications if required.

Transmitters

s	Section	Question	Response
	Transmitter Related Expenses	Do you have transmitter related expenses?	Yes

Auxiliary Transmitter

Add Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Auxiliary
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter	Manufacturer	
Manufacturer and Type	Model	NV7250
	Year	2001
	Туре	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power Capacity	4 kW

Auxiliary Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Auxiliary (Backup)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	MPTV-PRLX- U3
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	5 kW
	Justification for New Transmitter	The manufacturer of the existing transmitter advises that the transmitter cannot be retuned to the assigned channel. See attachment.

Auxiliary Transmitter

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No
	Transformer (480V)	No
	Power	N/A
	Rigid Conduit and Wiring	No

	Size	N/A
	Length	N/A
	Other Electrical Service	No
	Description	N/A
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Туре	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
	Size	N/A
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Auxiliary Transmitter **Other Transmitter Cost Not Listed**

Transmitter Information not provided.

Primary Transmitter

Existing Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter	Manufacturer	
Manufacturer and Type	Model	AT7105K0
	Year	2011
	Туре	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	5 kW

Primary Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Primary (Main)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Manufacturer	
	Model	MPTV-PRLX- U3
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	5.2 kW
	Justification for New Transmitter	The manufacturer of the existing transmitter advises that the transmitter cannot be retuned to the assigned channel. See attachment.

Primary Transmitter

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	Yes
	Transformer (480V)	Yes
	Power	150 kVA
	Rigid Conduit and Wiring	Yes

	Size	3 inches
	Length	100.0 feet
	Other Electrical Service	No
	Description	N/A
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Туре	Heating and Cooling
	Size	5 tons
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
	Size	N/A
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Primary Transmitter

Other Transmitter Cost Not Listed

Name	Description
Standby Exciter and Switch	Standby Exciter with Automatic Change Over Switch
Additional Interior RF System	Interior RF System Existing Transmitter to Interim Transmission line

Antennas

Section	Question	Response
Antenna Related Expenses	Do you have antenna related expenses?	Yes

Existing Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing antenna shared with another station or stations?	No
	Is the existing antenna directional?	No
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	No
Existing Antenna	Class	Full Power
Manufacturer and Type	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Туре	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	108.0 kW

Manufacturer	
Model	TFU- 28GTH-R O4 DC
Year	2001

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	No
	Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna	Class	Full Power
Manufacturer and Types	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Туре	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels/Bays	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Design power capacity in use	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	77.3 kW
	Manufacturer	
	Model	ATW20H4- HTO10-23L

Year	2019
Justification for New Antenna	The existing primary antenna is a single channel slotted coaxial which cannot accommodate the assigned channel. ERP is based on 1% expansion.

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
	Туре	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Single Channel
	Feed Line Size	4 1/16 inches inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	No

Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Other Antenna Cost Not Listed

Information not provided.

Interim Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	No
	Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna	Class	Full Power
Manufacturer and Type	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Туре	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels/Bays	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Design power capacity in use	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	108.0 kW
	Manufacturer	
	Model	i230ECW- 16-23/48
	Year	2019

Justification for New Antenna	An interim
	antenna is
	necessary
	to keep
	station on
	the air
	during
	primary
	antenna
	replacement
	and for the
	duration of
	the
	assigned
	phase.
	Station will
	attempt to
	rent if
	renting is
	available at
	time of
	acquisition.

Interim Antenna

Other Antenna Costs

Section	Question	Response
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	S
	Feed Line Size	4 1/16 inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for an antenna?	Yes
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	Yes
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Interim Antenna

Other Antenna Cost Not Listed

Name	Description
Freight	Freight

Transmission Seffien	Question	Response
Transmission Line Related Expenses	Do you have transmission line related expenses?	Yes

Primary Transmissio

Existing Transmission Line

Section Section	Question	Response
Existing Transmission Line Description	Type of change	Utilize Existing
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and	Manufacturer	ERI
Line Manufacturer and Type	Туре	Flexible A
	Diameter	4 inches
	Other Diameter	N/A
	Segment Length	N/A
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	430 feet

Primary

Other Transmission Line Expenses Not Listed

Transmission	Naine	Description
	Sweep Tests	Sweep tests to demonstrate performance on assigned channel

Interim Transmissi

New Transmission Line

sion <mark>Line</mark> n	Question	Response
New Transmission Line	Use	Interim
Costs	Description of Use	N/A
	Change Type	Purchase New
	Туре	Rigid
	Diameter	3 1/8 inches
	Segment Length	20'
	Other Segment Length	
	Number of parallel runs	1
	Length	460 feet per run

Justification for New Transmission Line An interim transmission line is necessary for the interim antenna to keep station on the air during primary antenna replacement and for the duration of the assigned phase. Station will attempt to rent if renting is available at

time of acquisition.

Other Transmission Line Expenses Not Listed Interim Transmission Line Expenses Not Listed Interim Interior Not provided.

Tower Equipment And Rigging Costs

Section	Question	Response
Tower Equipment or Rigging Costs Changes	Do you have tower equipment or rigging costs changes?	Yes

Primary Tower

Existing Tower

Section	Question	Response
Existing Tower	Type of change	Modify Existing
Description	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Is this tower consider Complex?	Terrain Constrained
	Is this tower currently shared with any other stations?	Yes
	One or more FM, AM or TV radio broadcaster(s)	Yes
	Others Types of Users	Yes
	Is tower documented for structural analysis?	No
	Is tower compliant with Rev G?	Yes
Existing Tower	Do you have a tower registration number?	Yes
Structure Registration	ASR Number	1034698
Coordinates (NAD83 (Latitude (NAD83)	44° 21' 10.9" N-
North American Datum of 1983))	Longitude (NAD83)	071° 44' 14.9" W-
	Overall Structure Height	446.84 feet
	Support Structure Height	399.93 feet
	Ground Elevation Above Mean Sea Level (AMSL)	1988.82 feet

Structure Type	GTOWER - Guyed Structure Used for Communication Purposes
Tower Owner	New Hampshire Public Broadcasting
Date Constructed	11/14/2016

FM, AM or TV radio broadcasters. Facility ID's, Call Signs and Services of other broadcast stations with whom the tower is shared

Facility ID	Call Sign	Service
72212	WMTK	FM
165997	WNYN-FM	FM
173546	WEVQ	FM

Other Types of Users

Users
WLED microwave
WENH microwave
WNYN microwave

Primary Tower

Tower Modification Costs

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	Study needed for undocumented /poorly documented tower

Tower Reinforcements Please select whether tower reinforcements Major are needed: Reinforcement needed
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Primary Tower

Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	Terrain constrained
Helicopter Services Required	Are helicopter services required?	No

Primary Tower

Other Tower Expenses Not Listed

Information not provided.

Outside Professional

Section	Question	Response
Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
	Number of Hours	40
	Explanation	It will be necessary to schedule and coordinate multiple vendors, complete progress reports, and update Schedule 399. Station does not have available personnel or personnel trained in project management for such complex projects.
Outside RF consulting Engineering Services	Perform engineering study for new channel assignment and antenna development	Yes
	Prepare engineering section of Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare engineering section of Form FCC License to Cover Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes

	Quantity	1
	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A
Attorney and Other Outside Consulting	Prepare and file Form FCC Construction Permit Application	Yes
Services	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare and file Form FCC License to Cover Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	1
	NEPA Section 106 environmental review	No
	Environmental Assessment	No
	ASR Modification	Yes
	FAA Consultation (including preparation of FAA Form 7460)	Yes
	Negotiation of Lease and other Matter for Shared Locations	No
	Prepare or Review FCC Form 399 for Reimbursement	Yes
	Address transition timing and coordination issues w/ other stations and wireless providers	Yes
RF Field Engineering Services	Comprehensive coverage verification via field study	Yes
	RF exposure measurements	No
	Additional Field Engineering Service	Yes

Number of Days	6
Justification	It will be necessary to survey the site, plan the equipment, develop specifications for purchasing, and oversee multiple vendor RF projects. Station does not have available personnel or personnel trained in such services.

Outside Professional

Other Professional Services Expenses Not Listed

I Services Costs	Description
Other Legal Services	Legal services not specifically listed under Outside Professional Services
Other Engineering Services	Engineering services not specifically listed under Outside Professional Services

Other Expenses

Section	Question	Response
AM Pattern Disturbance	Is an Impact Study needed?	No
	Is Remediation needed?	No
Facility Expenses	Name	N/A
	Other Distributed Transmission System Expenses Not listed	N/A
	Name	N/A
	Is Notification of a Medical Facility required as a result of DTV broadcasting?	Yes
Permit and Filing Costs	Local Zoning	No
	Non-zoning permits	No
	BLM or NFS Coordination	No
	FCC Construction Permit Minor Change	No
	FCC License to Cover Application	No
	FCC Special Temporary Authority Application	No
Other Miscellaneous Expenses	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	Yes
	Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
	Does this relocation require Equipment Storage?	No
	Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	Yes
	Does this relocation require MVPD Notification of a Channel Change?	Yes

Other Expenses Not Listed

Expenses Information not provided.

Cost Information

Transmitters

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Transmitter MPTV-PRLX- U3	\$519,259.00	\$468,459.00		\$216,479.69	
UHF - Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW	\$273,500.00	\$226,150.00	N/A	\$209,203.92	N/A
Additional Interior RF System	\$140,000.00	\$140,000.00	N/A	N/A	N/A
Standby Exciter and Switch	\$25,000.00	\$25,000.00	N/A	\$32.70	N/A
Other HVAC Service Type: H Size:5 (Other)	\$11,809.00	\$11,809.00	N/A	\$5,904.50	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$24,300.00	N/A	N/A	N/A
3" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$4,900.00	N/A	\$1,338.57	N/A

Auxiliary Transmitter MPTV-PRLX- U3	\$273,500.00	\$225,615.00		\$225,615.00	
UHF - Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW	\$273,500.00	\$225,615.00	N/A	\$225,615.00	N/A
Sub-total	\$792,759.00	\$694,074.00	N/A	\$442,094.69	N/A
Total for all systems	\$2,403,572.53	\$2,308,751.27	N/A	\$915,730.70	N/A

Components

Actual Information Description	File Name	
UHF - Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW	Component Description:	New primary transmitter Comark MPTV-PRLX-U3
	Amount:	Liquid Cooled \$104,550.00
	Component Description:	HD 8539 00002 61149 v191021jgv1
	Amount:	\$103.92
	Component Description: Amount:	Comark S10358-2 v191108jgv1 \$104,550.00
Additional Interior RF System	Information not provided.	

Standby Exciter and Switch		
	Component Description: Amount:	ESS 1000001082 v191031jgv1 \$32.70
Other HVAC Service		
Type: H Size:5 (Other)	Component Description:	Emcor 171-000047 v190806jgv1
	Amount:	\$5,904.50
Switchgear - industrial 800 amp	Information not provided.	
Transformer 3 phase/480v - 150 KVA	Information not provided.	
3" Rigid Conduit and Wiring (Cost per foot)	Component Description:	HD 8539 00002 76667
	Amount:	v190624pmv1 \$11.81
	Component Description:	HD 8539 00057 06940
	Amount:	v190624pmv1 \$32.15
	Component Description:	Amazon 114- 2755163-1500267 v190625pmv1
	Amount:	\$8.39
	Component Description:	HD 8539 00056 07692
	Amount:	v190624pmv1 \$16.29
	Component Description:	Needham S5081017.002
	Amount:	v190620jgv1 \$145.49

Component Description: HD 8539 00002

80040

v190624pmv1

Amount: \$6.23

Component Description: Needham

S5116592.002

v190620jgv1

Amount: \$28.30

Component Description: Needham

S5117024.002

v190620jgv1

Amount: \$81.36

Component Description: HD 8539 00002

59291

v190624pmv1

Amount: \$165.96

Component Description: HD 8539 00002

73490

v190624pmv1

Amount: \$79.96

Component Description: HD 8539 00057

98061

v190624pmv1

Amount: \$51.45

Component Description: Needham

S5070398.002 v190620jgv1

Amount: \$126.54

Component Description: HD 3403 00057

27367

v190624pmv1

Amount: \$47.97

Component Description: HD 8539 00002

90437

v190624pmv1

Amount: \$23.58

Component Description: HD 8539 00002

67435

v190624pmv1

Amount: \$72.70

Component Description: HD 8539 00002

26316

v190624pmv1

Amount: \$41.68

Component Description: HD 8539 00002

61636

v190624pmv1

Amount: \$28.25

Component Description: HD 8539 00002

12647

v190624pmv1

Amount: \$92.94

Component Description: Needham

S5115697.002 v190620jgv1

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Amount: \$72.85

Component Description: Needham

S5062957.002

v190620jgv1

Amount: \$77.92

Component Description: Needham

S5119902.002

v190620jgv1

Amount: \$91.80

Component Description: Candia 5

v190625pmv1

Amount: \$34.95

UHF - Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW

Component Description: Comark S10359-3

v191108jgv1 \$11,280.75

Component Description: WLED, AUX

Amount:

SYSTEM

(transmitter MPTV-PRLX-) U3 D23

Amount: \$112,807.50

Component Description: Comark S10359-2

v190624jgv1

Amount: \$101,526.75

Cost Information

Antennas

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Antenna i230ECW- 16-23/48	\$152,493.53	\$209,004.53		\$172,754.53	
UHF - Lower Power Side Mount, One Station antenna . medium power (50- 200 kW), elliptically or circularly polarized	\$103,100.00	\$161,821.00	See uploaded ERI Proposal 20190125- 436 Rev B	\$161,821.00	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$6,250.00	N/A
Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	\$9,570.00	\$9,100.00	N/A	N/A	N/A

Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$22,000.00	N/A	N/A	N/A
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	\$5,260.00	\$5,000.00	N/A	N/A	N/A
Freight	\$4,683.53	\$4,683.53	N/A	\$4,683.53	N/A
Primary Antenna ATW20H4- HTO10-23L	\$263,300.00	\$250,500.00		\$57,300.00	
Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	\$9,570.00	\$9,100.00	N/A	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A

Mount (200-1000					
kW), One station antenna, horizontally polarized					
Sub-total	\$415,793.53	\$459,504.53	N/A	\$230,054.53	N/A
Total for all systems	\$2,403,572.53	\$2,308,751.27	N/A	\$915,730.70	N/A

Actual Information Description	File Name	
UHF - Lower Power Side Mount, One Station antenna . medium power (50-200 kW), elliptically or circularly polarized	Component Description: Amount:	ERI WLED-5000 v190709jgv1 \$4,900.00
	Component Description: Amount:	ERI WLED-600 v190701jgv1 \$76,010.50
	Component Description: Amount:	ERI inv #WLED-500 Interim antenna pmt 1 UL20190425jgv1 \$80,910.50

Sweep test of existing antenna	Component Description: Amount:	ERI WLED-5000 v190709jgv1 \$3,125.00
	Component Description: Amount:	ERI inv #WLED-500 Interim antenna sweep pmt 1 UL20190425jgv1 \$3,125.00
Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	Information not provided.	
Side mount brackets for high power antennas (if not included in antenna base cost)	Information not provided.	
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	Information not provided.	
Freight		
	Component Description: Amount:	ERI WLED-5000 v190709jgv1 \$4,683.53
Elbow complex, single channel, at antenna input, per 4 1/16. feedline (if needed)	Information not provided.	
Sweep test of existing antenna	Information not provided.	

UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized

Component Description: ERI inv #WLED-

500A Primary Ant

pmt 1

UL20190425jgv1

Amount: \$28,650.00

Component Description: ERI WLED-500B

v190711jgv1

Amount: \$28,650.00

Transmission Line

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Transmission Line	\$47,840.00	\$44,372.74		\$44,372.74	
Rigid Transmission Line - copper, 3 1/8"	\$47,840.00	\$44,372.74	N/A	\$44,372.74	N/A
Primary Transmission Line	\$6,400.00	\$6,400.00		\$0.00	
Sweep Tests	\$6,400.00	\$6,400.00	N/A	N/A	N/A
Sub-total	\$54,240.00	\$50,772.74	N/A	\$44,372.74	N/A
Total for all systems	\$2,403,572.53	\$2,308,751.27	N/A	\$915,730.70	N/A

Actual Information Description	File Name	
Rigid Transmission Line - copper, 3 1/8"	Component Description: Amount:	ERI WLED-5000 v190709jgv1 \$22,186.37
	Component Description: Amount:	ERI inv #WLED-500 Interim line pmt 1 UL20190425jgv1 \$22,186.37
Sweep Tests	Information not provided.	

Tower Equipment and Rigging Costs

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Tower GTOWER	\$868,300.00	\$825,000.00		\$166,355.00	
Major tower reinforcement /modifications	\$421,000.00	\$400,000.00	N/A	\$162,355.00	N/A
Tower mapping for an undocumented /poorly documented tower and preparation of documentation necessary for tower load study	\$26,300.00	\$25,000.00	N/A	\$4,000.00	N/A
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$400,000.00	N/A	N/A	N/A
Sub-total	\$868,300.00	\$825,000.00	N/A	\$166,355.00	N/A
Total for all systems	\$2,403,572.53	\$2,308,751.27	N/A	\$915,730.70	N/A

Actual Information		
Description	File Name	

Major tower reinforcement /modifications	Component Description:	ERI WLED-54517
		v190711jgv1
	Amount:	\$60,808.40
	Component Description:	ERI WLED-54517-
		1 v191119jgv1
	Amount:	\$25,536.10
	Component Description:	ERI WLED-700
		v190812jgv1
	Amount:	\$76,010.50
Tower mapping for an		
undocumented/poorly documented tower and	Component Description:	All Pts 24845 v190930jgv1
preparation of documentation necessary for tower load study	Amount:	\$1,300.00
	Component Description:	Structural Analysis
	A	of existing tower
	Amount:	\$1,500.00
	Component Description:	Structural Re-
		analysis of
		existing tower
	Amount:	\$1,200.00
Complex Tower (includes, for example, those with candelabras and/or stacked	Information not provided.	

Outside Professional Services

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description Outside Professional	Predetermined Cost Estimate \$198,930.00	Estimated Cost \$206,400.00	Estimated Cost Justification	Actual Cost \$28,318.74	Actual Cost Justification
Other Engineering Services	\$46,490.00	\$46,490.00	N/A	\$3,502.00	N/A
Other Legal Services	\$15,000.00	\$15,000.00	N/A	\$1,878.00	N/A
Additional Field Engineering Service, 6 Days	\$12,000.00	\$12,000.00	N/A	N/A	N/A
Comprehensive coverage verification via field study, if needed	\$84,200.00	\$80,000.00	N/A	N/A	N/A
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	\$2,105.00	\$2,000.00	N/A	N/A	N/A
ASR modification (prepare FCC Form 854)	\$2,105.00	\$2,000.00	N/A	N/A	N/A

Attorney Fees - Prepare and File request for Special Temporary Authorization	\$3,680.00	\$3,500.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$119.25	N/A
Prepare request for Special Temporary Authorization	\$2,050.00	\$1,500.00	N/A	N/A	N/A
Prepare and or review reimbursement form	\$2,630.00	\$15,000.00	The Estimated Cost figure includes preparation and submission of Actual Cost invoices to date as well as an estimate of those anticipated over the remaining Repack.	\$12,129.50	Prep of original FCC Form 399. The station requested specific help from their attorneys prior to having their engineers prepare the Form 399.

Perform engineering study for new channel assignment and antenna development Prepare engineering section of FCC Form 2100 (main), Construction Permit Application Prepare engineering section of FCC Form 2100 (main), License to Cover Application	67,360.00 63,155.00 61,580.00 98,930.00	\$7,000.00 \$4,500.00 \$1,500.00	See attached KGA invoices 211-27 and 211-88.	\$3,250.00 \$4,500.00 \$725.00	reimbursement bank account FCC RF allocation study for new channel assignment and antenna
Perform engineering study for new channel assignment and antenna development Prepare engineering section of FCC Form 2100 (main), Construction Permit Application Prepare engineering section of FCC Form 2100 (main), License to Cover	3,155.00	\$4,500.00	See attached KGA invoices 211-27 and 211-88.	\$4,500.00	allocation study for new channel assignment and antenna development FCC CP application
Perform \$ engineering study for new channel assignment and antenna development Prepare \$ engineering section of FCC Form 2100 (main), Construction Permit			See attached KGA invoices 211-27 and		reimbursement bank account FCC RF allocation study for new channel assignment and antenna development FCC CP
Perform \$ engineering study for new channel assignment and antenna	57,360.00	\$7,000.00	N/A	\$3,250.00	reimbursement bank account FCC RF allocation study for new channel assignment and antenna
the transition					reimbursemen
Project \$ management of the transition	66,320.00	\$6,160.00	N/A	\$2,214.99	
Address \$ transition timing and coordination issues w/ other stations and wireless	52,630.00	\$2,500.00	N/A	N/A	

Actual Information	
Description	File Name

Other Engineering Services Primary Antenna **Component Description:** Analysis \$1,139.50 Amount: **Component Description:** KGA 211-100 v191030jgv1 Amount: \$325.00 **Component Description:** KGA 211-85 v190808jgv1 Amount: \$1,100.00 **Component Description:** Prep, amend and

submit actual cost

invoices

Amount: \$397.50

Component Description: Prep and submit

actual cost invoices

Amount: \$275.00

Component Description: Coverage

> comparisons for proposed antenna

selection

Amount: \$265.00

RF calculations for **Component Description:**

> new equipment purchases

\$265.00 Amount:

	Component Description:	GSB 727564
	Amount:	v191030jgv1 \$324.00
	Amount	ψ024.00
	Component Description:	GSB 726461
		v191008jgv1
	Amount:	\$504.00
	Component Description:	GSB 713173
		v190624jgv1
	Amount:	\$210.00
	Component Description:	GSB 716828
		v190826jgv1
	Amount:	\$90.00
	Component Description:	GSB 720616
		v190826jgv1
	Amount:	\$90.00
	Component Description:	GSB 720207
		v190826jgv1
	Amount:	\$150.00
	Component Description:	GSB 712794
		v190826jgv1
	Amount:	\$660.00
	Component Description:	GSB 712794
		v190613jgv3
	Amount:	\$510.00
dditional Field ngineering Service, 6	Information not provided.	

Comprehensive coverage verification via field study, if needed	Information not provided.	
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	Information not provided.	
ASR modification (prepare FCC Form 854)	Information not provided.	
Attorney Fees - Prepare and File request for Special Temporary Authorization	Information not provided.	
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.	
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Component Description:	Legal services related to Quarterly report for WLED
	Amount:	\$30.00
	Component Description:	Various Legal services related to Repack for WLED
	Amount:	\$119.25
Prepare request for Special Temporary Authorization	Information not provided.	
Prepare and or review reimbursement form	O man and D and in the man	I/OA 044 75
	Component Description:	KGA 211-75 v190624jgv1
	Amount:	\$1,153.50
	Component Description:	KGA 211-80 v190711jgv1
	Amount:	\$175.00

Component Description: KGA 211-94

v191030jgv1

Amount: \$375.00

Component Description: KGA 211-87

v190826jgv1

Amount: \$2,375.00

Component Description: KGA 211-92

v190916jgv1

Amount: \$1,000.00

Component Description: Preparation of

original Form 399 for reimbursement

Amount: \$2,500.00

Component Description: KGA 211-82

v190711jgv1

Amount: \$2,675.00

Component Description: KGA 211-102

v191115jgv1

Amount: \$875.00

Component Description: KGA inv #211-73

Actual Cost invoices by RG March 2019 UL20190424jgv1

Amount: \$200.00

Component Description: Consultation

regarding

reimbursable items.

Amount: \$801.00

Address transition timing and coordination issues w/ other stations and wireless	Information not provided.	
Project management of the transition	Component Description	KGA 211-84
	Component Description:	v190711jgv1
	Amount:	\$150.00
	Component Description:	KGA inv #211-70 Form 387 2019 Q1 UL20190424jgv1
	Amount:	\$150.00
	Component Description:	Prepare and submit Sched 387
	Amount:	\$225.00
	Component Description:	Proj Mgmt 399 Actual Costs Invoice uploads for
	Amount:	WLED \$300.00
	Component Description:	Prep and submit Form 387 3Q18
	Amount:	\$150.00
	Component Description:	KGA inv #211-46 Form 387 2018 Q1 UL20190228jgv2
	Amount:	\$225.00
	Component Description:	KGA inv #211-39 Form 387 2017 Q4

Amount:

UL20190228jgv2

\$225.00

Component Description: One half the cost for

checks associated

with the

reimbursement bank account.

Amount: \$24.99

Component Description: Proj Mgmt 3Q2017

report for WLED

Amount: \$300.00

Component Description: KGA inv #211-41

Actual Cost UL20190228jgv2

Amount: \$375.00

Component Description: Prepare and submit

Sched 387

Amount: \$225.00

Component Description: Prepare and submit

Sched 399 actual

charges

Amount: \$375.00

Component Description: KGA inv #211-32

Form 387 2017 Q3

UL20190228jgv2

Amount: \$300.00

Component Description: KGA inv #211-42

Other Eng Srvcs UL20190228jgv2

Amount: \$315.00

	Component Description: Amount:	Preliminary design of RF transmission facilities for planning \$315.00
	Component Description: Amount:	KGA inv #211-34 Actual Cost UL20190228jgv2 \$300.00
Perform engineering study for new channel assignment and antenna development	Component Description: Amount:	engineering study for new channel assignment and antenna development \$3,250.00
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Component Description: Amount:	KGA 211-88 v190826jgv1 \$2,500.00
	Component Description: Amount:	FCC Construction Permit application for Main Facility - WLED \$2,000.00
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Component Description: Amount:	KGA 211-98 v191030jgv1 \$725.00

Other Expenses

Where no predetermined cost estimate is available, any estimate provided will also become the predetermined cost (displayed in italics).

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	\$73,550.00	\$73,000.00		\$4,535.00	
MVPD Notification of Channel Change	\$2,000.00	\$2,000.00	N/A	\$1,640.00	N/A
Develop and air announcement of upcoming channel change	\$0.00	\$0.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	\$2,895.00	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$10,000.00	\$10,000.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	\$50,000.00	\$50,000.00	N/A	N/A	N/A
Sub-total	\$73,550.00	\$73,000.00	N/A	\$4,535.00	N/A
Total for all systems	\$2,403,572.53	\$2,308,751.27	N/A	\$915,730.70	N/A

Actual Information		
Description	File Name	

MVPD Notification of Channel Change	Component Description: Amount:	KGA 211-89 v190826jgv \$1,640.00
Develop and air announcement of upcoming channel change	Information not provided.	
DTV Medical Facility Notification	Component Description: Amount:	KGA 211-90 v190826jgv \$2,895.00
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.	
Equipment Delivery and Handling Charges	Information not provided.	

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$2,403,572.53	\$2,308,751.27	\$915,730.70

Reimbursem	enrestiatus	Response
	The facility has ceased operating on its pre- auction channel.	Yes
	Construction of final facilities or all necessary modifications are complete.	No
	All receipts for reimbursement have been submitted no further costs are expected to be incurred. Note this will lock the Form 399 from further editing and begin close-out procedures with the Fund Administrator.	No

Section Question Response

Submission of Estimated Expenses Statements

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.

- 1. The Authorized
 Person signing
 below certifies that he
 /she is authorized to
 submit this TV
 Broadcaster
 Relocation Fund
 Reimbursement
 Form on behalf of
 the above-named
 entity.
- 2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.
- 3. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.

- 4. The above-named entity certifies that the equipment and services paid for with money from the TV Broadcaster Relocation Fund are necessary to change channels (broadcasters) or to continue to carry the signal of a broadcaster that changes channels (MVPD).
- 5. The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
- 6. The above-named entity certifies that it will maintain and provide to the Commission detailed records, including receipts, of all costs eligible for reimbursement actually incurred.
- 7. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.

8. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.

I declare, under penalty of perjury, that I am an authorized representative of the abovenamed applicant for the Authorization(s) specified above. Jeffrey C Gehman Engineering Associate

11/19/2019

Section Question Response

Submission of Actual Cost Documentation Statements

WILLFUL FALSE, FRAUDULENT, OR FICTITIOUS STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISIONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE AND/OR FRAUDULENT STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT (U.S. CODE, TITLE 31, SECTIONS 3729-3733).

- 1. The Authorized
 Person signing
 below certifies and
 represents that he
 /she is authorized to
 submit this TV
 Broadcaster
 Relocation Fund
 Reimbursement
 Form on behalf of
 the above-named
 entity.
- The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct.
- The above-named entity acknowledges that all certifications and attached documentation are considered material representations.

- 4. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.
- 5. The above-named entity certifies that the equipment and services paid for with money from the TV Broadcaster Relocation Fund are necessary to change channels (full power and Class A stations) and/or otherwise modify a television station's facility as a result of the spectrum repack (LPTV/TV Translator stations); or to minimize service disruption resulting from a repacked television station (FM stations); or to continue to carry the signal of a broadcaster that changes channels (MVPD).
- 6. The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
- 7. The above-named entity certifies that the cost information /documents submitted reflect costs actually incurred.

- 8. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.
- 9. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a prerequisite for obtaining the payments herein requested.

I declare, under penalty of perjury, that I am an authorized representative of the abovenamed applicant for the Authorization(s) specified above. Jeffrey C Gehman Engineering Associate

11/19/2019

Attachments