

Federal Communications Commission

### (REFERENCE COPY - Not for submission)

# FCC Form 399: Reimbursement Request

Facility ID:	53114	Service: DTV	Call Sign:	WDIV-TV	Channel: 32 (UHF)
File Number:	000002	7867			
FRN: <b>000</b> 2	2161123	Date Submitted:	05/29 /2019		

# Applicant Name, Type, and Contact Information

## Information

Applicant	Address	Phone	Email	Applicant Type
GRAHAM MEDIA GROUP, MICHIGAN, INC. Doing Business As: GRAHAM MEDIA GROUP, MICHIGAN, INC.	Marcus Williams 550 WEST LAFAYETTE BOULEVARD DETROIT, MI 48226 United States	+1 (313) 222- 0581	MARCUS@WDIV. COM	Corporation

### Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

# Preparer Contact Name and Information

Contact Information	Applicant	Address	Phone	Email
	William T Godfrey , Jr Consulting Engineers Kessler and Gehman Associates, Inc.	William T. Godfrey, Jr. Kessler and Gehman Associates, Inc. 507 NW 60 Street, Suite D Gainesville, FL 32607 United States	+1 (352) 332-3157	jeff@kesslerandgehman. com

Broadcaster	Question	Response
Information and Transition Plan	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	Install new main dual transmitter and main antenna while using licensed AUX facility during tower work and throughout the assigned phase. Map and analyze tower; design and modify tower. Install new AUX antenna and AUX transmitter post-transition.

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

Auxiliary	Existing Transmitter Information				
Transmitter	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	Diamond		
		Year	2005		
		Туре	Solid State		
		Solid State Cooling	Air Cooled		
		Solid State Power Capacity	7.5 kW		

### **Existing Transmitter Information**

Auxiliary	New Transmitter Costs				
Transmitter	Section	Question	Response		
	New Transmitter	Use	Auxiliary (Backup)		
		Change Type	Purchase New		
		Is this a request for upgraded equipment?	No		
		Manufacturer			
		Model	UAXTE- 12R44		
		Transmitter Type	Solid State		
		Solid State Cooling	Air Cooled		
		Solid State Power capacity	7.2 kW		
		Justification for New Transmitter	The manufacturer of the existing transmitter advises that the transmitter cannot be re- tuned to the assigned channel. See attachment.		

Response

No

No

No

N/A

No

Auxiliary Transmitter	Other Transmitter Costs				
	Section	Question			
	Electrical Service	Service Entrance (3 phases 800A 208V)			
		Switchgear (industrial 800 amp)			
		Transformer (480V)			
		Power			
		Rigid Conduit and Wiring			

#### **Other Transmitter Costs**

	Size	N/A
	Length	N/A
	Other Electrical Service	Yes
	Description	Disconnect existing transmitter for removal and connect new transmitter after installation.
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 Other Transmitter Cost Not Listed

Transmitter Information not provided.

Primary	Existing Transmitter Information				
Transmitter	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 and Type	Manufacturer			
		Model	SigmaCD		
		Year	2008		
		Туре	Inductive Output Tube		
		IOT Power Type	Three		
		Power Capacity	80 kW		

**Existing Transmitter Information** 

Primary	New Transmitter Costs					
Transmitter	Section	Question	Response			
	New Transmitter	Use	Primary (Main)			
		Change Type	Purchase New			
		Is this a request for upgraded equipment?	Yes			
		Manufacturer				
		Model	ULXTED-100			
		Transmitter Type	Solid State			
		Solid State Cooling	Liquid Cooled			
		Solid State Power capacity	63.4 kW			
		Justification for New Transmitter	The existing 80 kW IOT transmitter configuration is equivalent to a magic tee dual transmission system and not the single ULXTE. Therefore, WDIV is budgeting for the ULXTED model. The next step up is a ULXTED- 100 which WDIV is budgeting for (see attached)			

Primary	Other Transmitter Costs				
Transmitter	Section	Question	Response		
	Electrical Service	Service Entrance (3 phases 800A 208V)	Yes		
		Switchgear (industrial 800 amp)	Yes		
		Transformer (480V)	Yes		
		Power	300 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?	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?	Yes		
		Size	0.0 square feet		
	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	
	Additional Interior RF System	Interior RF System Existing Transmitter to	

Interim Transmission line

Standby Exciter and Switch	Standby Exciter with Automatic Change
	Over Switch

Antennas Section		Question	Response
Antenna Rela	ated Expenses	Do you have antenna related expenses?	Yes

Auxiliary	Existing Antenna Information			
Antenna	Section	Question	Response	
	Existing Antenna Description	Type of change	Purchase New	
		Antenna Use	Auxiliary (Backup)	
		Description of Use	Auxiliary	
		Ownership	Owned	
		Owner	N/A	
		Site	N/A	
		Is the existing antenna shared with another station or stations?	No	
		Is the existing antenna directional?	Yes	
		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	Side 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)	973.0 kW	

### **Existing Antenna Information**

	Manufacturer	
	Model	TFU-18DSC
	Year	2005

Antenna	Section	Question	Response
	New Antenna Description	Use	Auxiliary (Backup)
		Description of Use	Auxiliary
		Change Type	Purchase Nev
		Is this a request for upgraded equipment?	No
		Ownership	Owned
		Owner	N/A
		Is antenna shared?	No
		Is antenna directional?	Yes
		Will antenna be located on or in close proximity to an antenna farm?	No
	New Antenna Manufacturer and Types	Class	Full Power
		es Mounting	Side 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)	973.0 kW
		Manufacturer	
		Model	TFU-18DSC- R CT3

Year	2018
Justification for New Antenna	The existing and licensed AUX antenna is a single channel slotted coaxial which cannot accommodate the assigned channel.

### Other Antenna Costs

### Auxiliary Antenna

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	6 1/8 inches inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power 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
-------	------

### Auxiliant Other Antenna Cost Not Listed

AuxiliaryOther Antenna CostAntennaInformation not provided.

Primary	Existing Antenna Information			
Antenna	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?	Yes	
		Is antenna in operating condition?	Yes	
		Is antenna located on or in close proximity to an antenna farm?	No	
	Existing Antenna Manufacturer and Type	Class	Full Power	
		Mounting	Top Mount	
		Antenna position in stack	Not in Stack	
		Polarization	Elliptical	
		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)	872.0 kW	

Manufacturer	
Model	TFU-27ETT VP R4C130
Year	2008

Antenna	Section	Question	Response
	New Antenna	Use	Primary (Main
	Description	Description of Use	N/A
		Change Type	Purchase Nev
		Is this a request for upgraded equipment?	No
		Ownership	Owned
		Owner	N/A
		Is antenna shared?	No
		Is antenna directional?	Yes
		Will antenna be located on or in close proximity to an antenna farm?	No
	New Antenna Manufacturer and Types	Class	Full Power
		es Mounting	Top 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)	720.0 kW
		Manufacturer	
		Model	TFU-23ETT /VP-R 4C130

Year	2018
Justification for New Antenna	The existing primary antenna is a single channel slotted coaxial which cannot accommodate the assigned channel.

### Other Antenna Costs

### Primary Antenna

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	6 1/8 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
-------	------

# Primary Other Antenna Cost Not Listed

Antenna Information not provided.

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

# Existing Transmission Line Primary Existing Transmission

smissio	n Line 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
Existing Transmission Line Manufacturer and Type		Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes	
	-	Manufacturer	Dielectric
		Туре	Rigid
		Diameter	8 3/16 inches
		Other Diameter	N/A
		Segment Length	Broadband
		Other Segment Length	N/A
		Number of parallel runs	1
	Length	1232 feet per run	

# Primary Other Transmission Line Expenses Not Listed

Transmissio	n Line	Description	
	Sweep Tests	Sweep tests to confirm line is acceptable on assigned channel.	

### Existing Transmission Line

Auxiliary Transmission

n Line Section	Question	Response
Existing Transmission Line Description	Type of change	Utilize Existing
	Use	Auxiliary (Backup)
	Description of Use	Auxiliary
	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 Type	Manufacturer	Dielectric
	Туре	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	19 3/4 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	1110 feet per run

### Auxiliary Transmission Line Expenses Not Listed Description Sweep Tests Sweep tests to ver

	Description
eep Tests	Sweep tests to verify operation on assigned channel

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

marv	Existing	Tower
------	----------	-------

Primary Tower	Existing Tower			
	Section	Question	Response	
	Existing Tower Description	Type of change	Modify Existing	
		Tower Use	Primary (Main)	
		Description of Use	N/A	
		Ownership	Owned	
		Is this tower consider Complex?	No	
		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	No	
		Is tower documented for structural analysis?	Yes	
		Is tower compliant with Rev G?	Yes	
	Existing Tower Structure Registration	Do you have a tower registration number?	Yes	
		ASR Number	1000830	
	Coordinates (NAD83 ( North American Datum of 1983))	Latitude (NAD83)	42° 28' 58.0" N-	
		Longitude (NAD83)	083° 12' 19.0" W-	
		Overall Structure Height	1062.98 feet	
		Support Structure Height	980.96 feet	
		Ground Elevation Above Mean Sea Level (AMSL)	685.69 feet	

Structure Type	TOWER - Free Standing of Guyed Structure
Tower Owner	Graham Media Group, Michigan, Inc.
Date Constructed	01/01/1988

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

Facility IDCall SignService9618WXYT-FMFM

# Primary Tower Modification Costs

Tower

Tower

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	Study needed for documented tower
Tower Reinforcements	Please select whether tower reinforcements are needed:	Minor Reinforcements needed

# Primary Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	N/A
Helicopter Services Required	Are helicopter services required?	No

# Other Tower Expenses Not Listed Primary Tower

Information not provided.

Outside	Section	Question	Response
Professional	Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
		Number of Hours	600
		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	Yes
		For Main Facility	Yes
		Prepare engineering section of Form FCC License to Cover Application	Yes
		For Auxiliary Facility	Yes
		For Main Facility	Yes
		Prepare request for Special Temporary Authority	No

N/A ission N/A N/A N/A N/A N/A N/A Struction Yes Yes Nes to Yes Yes Yes Yes Yes
N/A N/A struction Yes Yes Nse to Yes Yes Yes Yes Yes
N/A Struction Yes Yes Yes Nase to Yes Yes Yes Yes
struction Yes Yes Yes Nese to Yes Yes Yes Yes
Yes Yes Yes Yes Yes Yes Yes Yes
Yes Nese to Yes Yes Yes Yes
nse to Yes Yes Yes
Yes Yes
Yes
porary Yes
1
al review No
No
Yes
paration of Yes
Natter for No
99 for Yes
ordination Yes less
ation via Yes
ation via Yes Yes
c

Number of Days	30
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 trained in such services.

# Outside Other Professional Services Expenses Not Listed Professional Services Costs

nal Services Costs	Description
Other Legal Services	Other Legal Services related to the DTV Repack
Other Engineering Services	Fewer Project Management "PM" tasks are required & Other Engineering Services "OES" are required, therefore the PM total has been reduced to 600 hrs (\$90,000 at \$150/hr), & a new OES category has been created & funded with the money removed from PM.

Other	Section	Question	Response
Expenses	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	Yes
		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?	Yes
		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.

### Transmitters

### Cost Information

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 ULXTED-100	\$2,376,433.03	\$2,371,733.03		\$1,350,593.66	
Standby Exciter and Switch	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Additional Interior RF System	\$75,000.00	\$75,000.00	N/A	N/A	N/A
Other Building Addition Size: 0.0	\$24,051.00	\$24,051.00	See uploaded PDF titled "WDIV Transmitter Building Preparation for Repack Cost v2.pdf" No building size increase is needed; only building modifications.	N/A	N/A
3" Rigid Conduit and Wiring (Cost per foot)	\$5,200.00	\$4,900.00	N/A	N/A	N/A
Transformer 3 phase /480v - 300 KVA	\$36,800.00	\$35,000.00	N/A	N/A	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A

Service entrance 3 phase/800 amp/208 volt	\$14,400.00	\$13,700.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 63.4 kW	\$2,157,782.03	\$2,157,782.03	See attached GatesAir quote for ULXTED-100	\$1,350,593.66	zdfz
Auxiliary Transmitter UAXTE- 12R44	\$260,976.75	\$260,976.75		\$161,222.34	
Other Electrical Service: Disconnect existing transmitter for removal and connect new transmitter after installation.	\$5,000.00	\$5,000.00	N/A	N/A	N/A
UHF - Air Cooled Solid State Transmitter 7.2 kW	\$255,976.75	\$255,976.75	See attached quote	\$161,222.34	N/A
Sub-total	\$2,637,409.78	\$2,632,709.78	N/A	\$1,511,816.00	N/A
Total for all systems	\$4,131,644.78	\$4,291,407.28	N/A	\$1,909,475.44	N/A

### Components

Actual Information Description	File Name
Standby Exciter and Switch	Information not provided.

Additional Interior RF System	Information not provided.	
Other Building Addition Size: 0.0	Information not provided.	
3" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
Transformer 3 phase/480v - 300 KVA	Information not provided.	
Switchgear - industrial 800 amp	Information not provided.	
Service entrance 3 phase /800 amp/208 volt	Information not provided.	
UHF - Liquid Cooled Solid State Transmitter 63.4 kW	Component Description: Amount:	Gates JW30004541-2 v190523jgv2 \$678,034.23
	Component Description:	Gates inv #JW30004541-1
	Amount:	third dp Prim TX UL2018116jgv1 \$672,559.43
Other Electrical Service: Disconnect existing transmitter for removal and connect new transmitter after installation.	Information not provided.	

UHF - Air Cooled Solid State Transmitter 7.2 kW		
	Component Description:	Gates
		JW30004542-2
		v190529jgv1
	Amount:	\$80,383.67
	Component Description:	Gates inv
		#JW30004542-1 1
		third dp Aux TX
		UL2018119jgv1
	Amount:	\$80,838.67

### Antennas

### Cost Information

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 Antenna TFU-23ETT /VP-R 4C130	\$308,530.00	\$297,383.00		\$118,248.84	
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$15,983.00	The \$3,600.00 "Elbow 6- 75 DIGIT 90 DEG 9 X 18" line item is being applied to this component, in addition to the \$12,383.00 Elbow Complex line item.	\$7,192.35	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$2,880.00	N/A
UHF - High Power Top Mount (200- 1000 kW), One station antenna , elliptically or circularly polarized	\$289,500.00	\$275,000.00	N/A	\$108,176.49	N/A

Auxiliary Antenna TFU-18DSC- R CT3	\$282,440.00	\$285,167.00		\$85,545.00	
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
Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$22,000.00	N/A	\$7,884.00	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$16,767.00	The \$2,420.00 Trans Test and \$1,964.00 Fixed Flange line items are being applied to this component, in addition to the \$12,383.00 Elbow Complex line item.	\$7,545.15	N/A

Total for all	\$4,131,644.78	\$4,291,407.28	N/A	\$1,909,475.44	N/A
Sub-total	\$590,970.00	\$582,550.00	N/A	\$203,793.84	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$2,880.00	N/A
UHF - High Power, Side Mount, basic slot antenna, 973 kW input, directional,, horizontally polarized	\$235,000.00	\$235,000.00	N/A	\$67,235.85	N/A

Actual Information Description	File Name	
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	Component Description:	Die inv #MAN00799 Primary elbow complex pmt 1 UL20190313jgv1
	Amount:	\$5,572.35
	Component Description:	Die inv #MAN00799 Primary elbow pmt 1 UL20190313jgv1
	Amount:	\$1,620.00
Sweep test of existing		
antenna	Component Description:	Die inv #MAN00799 Primary sweep pmt 1 UL20190313jgv1
	Amount:	\$2,880.00

UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	Component Description:	Die inv #MAN00799 Primary fixed flange pmt 1
polarizou	Amount:	UL20190313jgv1 \$1,255.50
	Component Description:	Die inv #MAN00799 Primary fixed flange pmt 1 UL20190313jgv1
	Amount:	\$1,195.20
	Component Description:	Die inv #MAN00799 Primary reducer pmt 1 UL20190313jgv1
	Amount:	\$1,160.64
	Component Description: Amount:	Die inv #MAN00799 Primary ant pmt 1 UL20190313jgv1 \$102,095.55
	Component Description:	Die inv #MAN00799
	Amount:	Primary trans test pmt 1 UL20190313jgv1 \$2,469.60
Pattern scatter analysis for side mount high/med	Information not provided.	φ2,+00.00
power antennas (if not included in antenna base cost)		

Side mount brackets for high power antennas (if not included in antenna base cost)	Component Description:	Die inv #MAN00798 Aux ant side mt brackets pmt 1
	Amount:	UL20190314jgv1 \$7,884.00
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	Component Description:	Die inv #MAN00798 Aux ant elbow complex pmt 1
	Amount:	UL20190314jgv1 \$5,572.35
	Component Description:	Die inv #MAN00798 Aux ant fixed flange pmt 1 UL20190314jgv1
	Amount:	\$883.80
	Component Description:	Die inv #MAN00798 Aux ant trans test pmt 1
	Amount:	UL20190314jgv1 \$1,089.00
UHF - High Power, Side Mount, basic slot antenna,		
973 kW input, directional,, horizontally polarized	Component Description:	Die inv #MAN00798 Aux ant pmt 1
	Amount:	UL20190314jgv1 \$67,235.85
Sweep test of existing antenna		
	Component Description:	Die inv #MAN00798 Aux ant sweep pmt 1 UL20190314jgv1
	Amount:	\$2,880.00

### **Transmission Line**

### Cost Information

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 Transmission Line	\$6,400.00	\$6,400.00		\$3,660.35	
Sweep Tests	\$6,400.00	\$6,400.00	N/A	\$3,660.35	N/A
Auxiliary 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	\$12,800.00	\$12,800.00	N/A	\$3,660.35	N/A
Total for all systems	\$4,131,644.78	\$4,291,407.28	N/A	\$1,909,475.44	N/A

Actual Information Description	File Name	
Sweep Tests		
	Component Description:	Inv WDIV161202 WDIV Line sweep UL20180423 v2 \$3,660.35
	Amount.	<i>40,000.00</i>
Sweep Tests	Information not provided.	

# **Tower Equipment and Rigging Costs**

### Cost Information

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 TOWER	\$381,100.00	\$562,000.00		\$140,210.00	
Tall Tower (greater than 500')	\$210,500.00	\$400,000.00	Rigging must be done twice since WDIV has a licensed AUX facility. First rigging for post- auction AUX build- out while main operates as interim. Second rigging for post- auction Main build- out while AUX operates on post- auction Main build- out while AUX	\$134,210.00	N/A
Structural engineering tower load study for well documented tower	\$12,600.00	\$12,000.00	N/A	\$6,000.00	N/A

Minor tower reinforcement /modifications	\$158,000.00	\$150,000.00	N/A	N/A	N/A
Sub-total	\$381,100.00	\$562,000.00	N/A	\$140,210.00	N/A
Total for all systems	\$4,131,644.78	\$4,291,407.28	N/A	\$1,909,475.44	N/A

Actual Information Description	File Name	
Tall Tower (greater than 500')	Component Description: Amount:	CTC inv #2093 Aux and Prim ant install pmt 1 UL20190308jgv1 \$134,210.00
Structural engineering tower load study for well documented tower	Component Description: Amount:	Inv: WDIV Structural Analysis UL20180329 1 of 2 \$5,000.00
	Component Description: Amount:	Inv: WDIV Structural Analysis UL20180329 2 of 2 \$1,000.00
Minor tower reinforcement /modifications	Information not provided.	

# **Outside Professional Services**

### Cost Information

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 Cos Justification
Outside Professional Services	\$370,815.00	\$363,347.50		\$49,995.25	
Other Engineering Services	\$60,000.00	\$60,000.00	Fewer Project Management "PM" tasks are required & Other Engineering Services "OES" are required, therefore the PM total has been reduced to 600 hrs (\$90,000 at \$150/hr), & a new OES category has been created & funded with the money removed from PM.	\$18,265.00	N/A
Other Legal Services	\$10,000.00	\$10,000.00	Need	\$1,212.75	N/A
Additional Field Engineering Service, 30 Days	\$60,000.00	\$60,000.00	N/A	\$6,800.00	N/A
RF Exposure Measurements	\$21,050.00	\$20,000.00	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/
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
ASR modification (prepare FCC Form 854)	\$2,105.00	\$2,000.00	N/A	N/A	N
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$3,680.00	\$3,500.00	N/A	N/A	N
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	N/A	N
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,210.00	\$4,000.00	N/A	N/A	N

Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	N/A	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	\$2,105.00	\$2,000.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$3,000.00	N/A

Total for all systems	\$4,131,644.78	\$4,291,407.28	N/A	\$1,909,475.44	N/A
Sub-total	\$370,815.00	\$363,347.50	N/A	\$49,995.25	N/A
			(181116jg)		
			component		
			Services		
			Engineering		
			the Other		
			from PM to		
			been moved		
			\$60,000 has		
			of this project.		
			complexity		
			well as the		
			rigging as		
			for tower		
			mobilization		
the transition			of dual		
management of			complexity		
Project	\$94,800.00	\$90,000.00	The added	\$6,620.00	N/A
			applicable).		
			(where		
form			quotes		
reimbursement			invoices and		
review			attached		
Prepare and or	\$2,630.00	\$7,097.50	See	\$7,097.50	N/A
wireless					
issues w/ other stations and					
coordination					
timing and					
transition					
Address	\$2,630.00	\$2,500.00	N/A	N/A	N/A
development					
and antenna development					
assignment					
channel					
study for new					
engineering					
Perform engineering	\$7,360.00	\$7,000.00	N/A	\$7,000.00	N/A

Actual Information Description	File Name	
Other Engineering Services	Component Description:	KGA inv #947-114 Other Eng Srvcs July - Oct 2018
	Amount:	UL20190206jgv2 \$6,950.00
	Component Description:	KGA 947-153 v190515pmv1
	Amount:	\$2,075.00
	Component Description:	KGA inv #947-62 Other Eng Srvcs Aug - Dec 2017 UL2018116jgv1
	Amount:	\$7,665.00
	Component Description:	KGA 947-155 v190515pmv1
	Amount:	\$675.00
	Component Description:	KGA 947-152 v190515pmv1
	Amount:	\$675.00
	Component Description:	KGA 947-154 v190515pmv1
	Amount:	\$225.00
	Component Description:	KGA inv #947-62 Other Eng Srvcs Aug - Dec 2017 UL20190226jgv2
	Amount:	\$7,665.00

Component Description: Amount:	WDIV Covington inv #60812717 Review and file 2018 Q2 Progress Report UL20181019jgv1 \$34.20
Component Description: Amount:	Covington inv #60776173 Various legal UL20190321jgv1 \$229.05
Component Description: Amount:	Covington inv #60836455 Legal services thru 190131 UL20190308jgv1 \$328.05
Component Description: Amount:	Covington inv #60827773 Legal services thru 181130 UL20190308jgv1 \$102.60
Component Description: Amount:	WDIV Covington inv #60790165 Review and file Progress Report UL20181019jgv1 \$62.10
Component Description:	Covington inv #60773112 Various legal UL20190321jgv1
Amount:	\$456.75

Other Legal Services

Additional Field		
Engineering Service, 30 Days	Component Description:	Inv: WDIV Antenna Repurposing Study, Transmission Line Repurposing Study, Transmitter Repurposing Study & Parameter Review UL20180403
	Amount:	\$2,800.00
	Component Description:	Inv: WDIV Outside Prof Svcs 1) CAS planning procuremnt & oversight, coord twr mapping & analyses 2) CAS planning procuremnt, oversight & develop an upgrade or replacement solution for twr 3) CAS planning procuremnt, oversight & coord twr mods UL20180403 \$2,750.00
	Component Description:	Inv: WDIV Addl Fld Eng Srv TX Mask Fltr Elec HVAC Solution UL20180403
	Amount:	\$1,250.00
RF Exposure Measurements	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 - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	Information not provided.
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Information not provided.
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	Information not provided.
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Information not provided.
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	Information not provided.

Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Component Description:	Inv: WDIV Outside Prof Svcs - Prepare eng section of Form FCC Const Permit App for Main Facility UL20180403 \$3,000.00
Perform engineering study for new channel assignment and antenna development	Component Description: Amount:	Inv: WDIV Outside Prof Svcs - Perform eng study for new ch assignment and antenna development UL20180403 \$7,000.00
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.	

Prepare and or review		
reimbursement form	Component Description:	KGA 947-159
		v190515pmv1
	Amount:	\$350.00
	Component Description:	KGA 947-164
		v190515pmv1
	Amount:	\$2,122.50
	Component Description:	KGA 947-131
		v190515pmv1
	Amount:	\$150.00
	Component Description:	KGA 947-130
	Component Description.	v190515pmv1
	Amount:	\$50.00
	Amount.	<b>\$30.00</b>
	Component Description:	KGA 947-139
		v190515pmv1
	Amount:	\$200.00
	<b>Component Description:</b>	KGA 947-133
		v190515pmv1
	Amount:	\$500.00
	Component Description:	Inv: WDIV Outside
		Prof Svcs - Prepare
		and or Review
		Reimbursement
		Form UL20180403
	Amount:	\$2,500.00
	Component Description:	KGA 947-132
		v190515pmv1
	Amount:	\$1,225.00
Project management of		
the state of the second st		

the transition

Component Description: Amount:	Inv 947-21 WDIV Project Management through Aug 2017 UL20180504jgv3 \$3,500.00
Component Description: Amount:	KGA 947-162 v190515jgv1 \$300.00
Component Description: Amount:	KGA inv #947-58 Actual Cost invs 180403 UL2018116jgv1 \$720.00
Component Description: Amount:	KGA inv #947-110 Form 387 2018 Q3 UL2018116jgv1 \$300.00
Component Description: Amount:	Inv: WDIV 2017Q3 387 UL20180403 \$300.00
Component Description:	KGA inv #947-59 Actual Cost invs 180329 UL2018116jgv1 \$300.00
Component Description:	Inv: WDIV 2017Q4 387 UL20180403 \$300.00

Component Description: Amount:	KGA inv #947-56 Form 387 2018 Q1 UL2018116jgv1 \$300.00
Component Description: Amount:	KGA 947-118 v190515jgv1 \$300.00
Component Description:	KGA inv #947-82 Form 387 2018 Q2
Amount:	UL2018116jgv1 \$300.00

## **Other Expenses**

### Cost Information

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	\$138,550.00	\$138,000.00		\$0.00	
MVPD Notification of Channel Change	\$2,000.00	\$2,000.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Equipment Storage	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Non-zoning permits	\$25,000.00	\$25,000.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$25,000.00	\$25,000.00	N/A	N/A	N/A
Sub-total	\$138,550.00	\$138,000.00	N/A	\$0.00	N/A
Total for all systems	\$4,131,644.78	\$4,291,407.28	N/A	\$1,909,475.44	N/A

Information not provided.

Cost Information	Grand Total					
		Predetermined Cost Estimate Estima		Actual Cost		
	Total for all systems	\$4,131,644.78	\$4,291,407.28	\$1,909,475.44		

Reimbursem	enrestanus	Response
	The facility has ceased operating on its pre- auction channel.	No
	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

Certification	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.	
		<ol> <li>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.</li> </ol>	
		2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.	
		<b>3.</b> 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.

I declare, under penalty of perjury, that I am an authorized representative of the above- named applicant for the Authorization(s)Jeffrey C Gehmanspecified above.Gehman Engineering Associate	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.	
05/29/2019	an authorized representative of the above- named applicant for the Authorization(s)	<b>Gehman</b> Engineering Associate

Certification	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).	
		<ol> <li>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.</li> </ol>	
		2. The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct.	
		3. 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).
- 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.

	<ul> <li>8. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.</li> <li>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.</li> </ul>	
an nar	eclare, under penalty of perjury, that I am authorized representative of the above- ned applicant for the Authorization(s) ecified above.	Jeffrey C Gehman Engineering Associate
		05/29/2019

## Attachments