

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

ID:		1	Call Sign:	WKYC	Channel: 19 (UHF)
File	0000028	8022			
Number:					
FRN: 002	4376642	Date	04/18		
		Submitted:	/2019		

Applicant Name, Type, and Contact Information Applicant Information Applicant Address Phone Email **Applicant Type** WKYC-Denise Branson, Sr. dbranson@TEGNA. Limited +1(703)TV, LLC Paralegal 873-6606 com Liability **TEGNA** Inc. Company 8350 Broad Street, Suite 2000 Tysons, VA 22102 **United States**

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer	Preparer Contact Name and Information			
Contact Information	Applicant	Address	Phone	Email
	Jeffrey Johnson , Johnson . Vice President Projects TEGNA	Jeffrey Johnson 7950 Jones Branch Drive McLean, VA 22102 United States	+1 (703) 873- 6736	jsjohnson@tegna. 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.	Yes
	Briefly describe transition plan	WKYC operates on a shared tower with WVIZ. Each stations has separate transmitters antennas and transmission lines. WKYC Will be replacing the Primary and Aux antenna, transmission line and transmitter.

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

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			
	Manufacturer and Type	Model	PWR60 D2		
		Year	2008		
		Туре	Inductive Output Tube		
		IOT Power Type	Тwo		
		Power Capacity	60 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	ULXTE 90	
		Transmitter Type	Solid State	
		Solid State Cooling	Liquid Cooled	
		Solid State Power capacity	56.4 kW	
		Justification for New Transmitter	Station has in excess of 10% TPO headroom and is eligible for a 1-Step- Up Allowance. Reimbursable TPO is 49.6 kW based on initial 90-day filing CP. This would require a ULXTE-80. A 1-Step-Up is the ULXTE- 90 and is therefore reimbursable.	

Primary Transmitter	Other Transmitter Costs			
	Section	Question	Response	
	Electrical Service	Service Entrance (3 phases 800A 208V)	No	

	Switchgear (industrial 800 amp)	No
	Transformer (480V)	Yes
	Power	300 kVA
	Rigid Conduit and Wiring	Yes
	Size	3 inches
	Length	100.0 feet
	Other Electrical Service	Yes
	Description	Additional electrical services required for transmitter installation, including heat exchangers, transformers, cooling pumps, etc.
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	900.0 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

Other Transmitter Cost Not Listed

Primary Transmitter	Other Transmitter Cost Not Listed		
	Name	Description	
	RF Accessories	RF Accessories	
	Mask Filter	Mask Filter	
	Installation and Proof	Installation and Proof	

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	Use during maintenance or tower work	
		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 in operating condition? Is antenna located on or in close proximity to an antenna farm?	No	
	Existing Antenna Class Manufacturer and Type Mounting	Class	Full Power	
		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)	930.0 kW
	Manufacturer	
	Model	TFU24DSC- R 4C150
	Year	2008

Auxiliary	New Antenna Costs			
Antenna	Section	Question	Response	
	New Antenna Description	Use	Auxiliary (Backup)	
		Description of Use	used during line repair or other tower maintenance	
		Change Type	Purchase New	
		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	
		Mounting	Side Mount	
		Antenna position in stack	Not in Stack	
		Polarization	Horizontal	
		Туре	Broadband Slot	
		Number of Stations Supported	1	
		Number of Panels/Bays	24	
		Lower Limit	488.00 MHz	
		Upper Limit	494.00 MHz	
		Design power capacity in use	100.0 %	
		Other Antenna Type	N/A	
		ERP: (Effective Radiated Power)	930.0 kW	

Manufacturer	
Model	TFU-24WB- R C160
Year	2019
Justification for New Antenna	Station has a licensed AUX facility and must be replaced. It is necessary to keep station on air during primary antenna replacement & for duration of assigned phase. A TFU-24WB cost is equivalent to a single- channel slot AUX antenna.

Auxiliary	Other Antenna Costs	
Antenna	Section	

าล	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?	Broadband
	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	Do you require the sweep testing of transmission line and antenna?	Yes

Auxiliary Other Antenna Cost Not Listed

Antenna

Name	Description
Shipping	\$5,400

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	Class	Full Power	
	Manufacturer and Type	Mounting	Top Mount	
		Antenna position in stack	Bottom	
		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)	868.0 kW	

Manufacturer	
Model	TFU- 20EBT-R 4C150
Year	2008

Primary	New Antenna Costs			
Antenna	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?	Yes	
		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	Class	Full Power	
	Manufacturer and Types	Mounting	Top Mount	
		Antenna position in stack	Bottom	
		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)	911.0 kW	
		Manufacturer		
			1	

Model	TFU-20EBT /VP -R 4C150
Year	2019
Justification for New Antenna	Licensed top-mount, bottom- stack antenna cannot be re-tuned for new post- transition frequency and must be replaced. The station is opting to Upgrade the antenna changing to Elliptical polarization

Primary Other Antenna Costs

Antenna			
Section Combiner for Shared Antenna Elbow Complex	Section	Question	Response
		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 inche inche
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

Primary Antenna	Other Antenna Cost Not Listed		
	Name	Description	
	New Top Plate	Existing top-plate and/or bolt pattern may not work for new top-mount antenna	
	Shipping	\$9,800	

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

Auxiliary	Existing Transmission Line			
Transmissio	on Line Section	Question	Response	
	Existing Transmission Line Description	Type of change	Purchase New	
		Use	Auxiliary (Backup)	
		Description of Use	backup for tower work and maintenance	
		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		
		Туре	Rigid	
		Diameter	6 1/8 inches	
		Other Diameter	N/A	
		Segment Length	19 1/2 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	1160 feet per run	

Auxiliary	New Transmission Line			
Transmissio	on Section New Transmission Line Costs	Question	Response	
		Use	Auxiliary (Backup)	
		Description of Use	Backup for maintenance and tower work	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	No	
		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	875 feet per run	
		Justification for New Transmission Line	Existing AUX TX line will not work on new channel assignment. Therefore, station must replace existing AUX TX line with new 19-3/4 ft section line for CH19.	

Auxiliary	Other Transmission Line Expenses No	ot Listed
Transmissio	n Line	Description
	TX Line Sweep	Sweep require

Line Sweep	Sweep required to verify post-transition channel measures well on new line.

ransmissio	Section	Question	Response
	Existing Transmission Line Description	Type of change	Purchase New
		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	Manufacturer	
	Line Manufacturer and Type	Туре	Rigid
		Diameter	6 1/8 inches
		Other Diameter	N/A
		Segment Length	20 inches
		Other Segment Length	N/A
		Number of parallel runs	1
		Length	1170 feet per run

Primary Existing Transmission Line

Primary	New Transmission Line			
Transmissio	section	Question	Response	
	New Transmission Line Costs	Use	Primary (Main)	
		Description of Use	N/A	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	No	
		Туре	Rigid	
		Diameter	6 1/8 inches	
		Other Diameter	N/A	
		Segment Length	20 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	1170 feet per run	
		Justification for New Transmission Line	Existing 6-1 /8" rigid transmission line uses section lengths that are prohibited for post- transition Channel 19. Therefore, station must replace existing line with new 6-1 /8" rigid transmission line made up of 20 ft sections.	

Other Transmission Line Expenses Not Listed Transmission Line Description

De	scription
•	veep required to verify post-transition annel measures well on new line.

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
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Primary	Existing Tower				
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?			
		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?	No		
		Is tower compliant with Rev G?	Yes		
	Existing Tower Structure	Do you have a tower registration number?	Yes		
	Registration	ASR Number	1265403		
	Coordinates (NAD83 (North American Datum of	Latitude (NAD83)	41° 23' 09.9" N-		
	1983))	Longitude (NAD83)	081° 41' 20.7" W-		
		Overall Structure Height	912.06 feet		
		Support Structure Height	912.06 feet		
		Ground Elevation Above Mean Sea Level (AMSL)	1040.01 feet		

	Structure Type	TOWER - Free Standing or Guyed Structure
	Tower Owner	6600 Broadview LLC
	Date Constructed	06/05/2009

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
18753	WVIZ	DTV

Primary Tower Modification Costs

Tower

Tower

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

Primary Tower Rigging Costs

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

Primary
TowerOther Tower Expenses Not ListedInformation not provided.

Outside	Section	Question	Response
Professional	Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
		Number of Hours	1000
		Explanation	It will be necessary to schedule and coordinate multiple vendors, complete progress reports, and update Schedule 399s. 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	Yes

	Quantity	2
	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	Yes
	For Main Facility	Yes
	Prepare and file Form FCC License to Cover Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	2
	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	Yes
	Additional Field Engineering Service	Yes

Number of Days	20
Justification	\$2,500 per
	site visit
	including
	expenses x
	20 days. It is
	necessary to
	survey the
	site, plan the
	equipment,
	develop
	specifications
	for
	purchasing,
	& 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	Description
	Installation Services	This cost originally listed under installation services. Relocated per FCC staff instructions.
	Pre filing site review	outside engineering firm to review facilities before filling
	Other Legal Services	Other Legal Services related to the DTV Repack

Other	Section	Question	Response
Expenses	AM Pattern Disturbance	Is an Impact Study needed?	Yes
		Is Remediation needed?	Yes
	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	Yes
		Non-zoning permits	Yes
		BLM or NFS Coordination	No
		FCC Construction Permit Minor Change	No
		FCC License to Cover Application	Yes
		FCC Special Temporary Authority Application	Yes
	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

Other	Other Expenses Not Listed		
Expenses	Name	Description	
	Internal labor	Local and Corporate Labor	

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 ULXTE 90	\$2,870,377.21	\$2,468,685.20		\$1,442,800.85	
Installation and Proof	\$82,198.75	\$82,198.75	See Gates Air ULXTE- 90 quote	\$40,845.25	N/A
Mask Filter	\$70,609.60	\$70,609.60	Per instructions of FCC staff, station is breaking out cost of Mask Filter.	\$35,304.79	N/A
RF Accessories	\$52,893.86	\$52,893.86	Please see Gates Air ULXTE-90 quote	\$24,864.97	N/A
Other Building Addition Size: 900.0	\$809,675.00	\$809,675.00	900 square foot expansion for new transmitter, including professional fees. See attached WKYC Building justification.	\$617,647.72	N/A

Other Electrical Service: Additional electrical services required for transmitter installation, including heat exchangers, transformers, cooling pumps, etc.	\$25,000.00	\$25,000.00	Additional electrical services required for transmitter installation, including heat exchangers, transformers, cooling pumps, etc.	\$14,190.00	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	\$14,866.49	N/A	\$5,737.19	N/A
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	\$1,788,000.00	\$1,408,541.50	Replacement per Gates Air quote. Includes TAX	\$704,210.93	N/A
Sub-total	\$2,870,377.21	\$2,468,685.20	N/A	\$1,442,800.85	N/A
Total for all systems	\$5,375,156.76	\$4,786,655.05	N/A	\$2,161,546.37	N/A

Components

Actual Information	
Description	File Name

Installation and Proof		
	Component Description:	Gates inv #JW30004450-1A TX Install 1 6th dp
	Amount:	UL20190214jgv1 \$13,615.08
	Component Description:	Inv JW30004450-1 WKYC TX Install 1 3rd dp
	Amount:	UL20180713jg v1 \$27,230.17
Mask Filter		
	Component Description:	Inv JW30004450-1 WKYC TX Mask Filter 1 3rd dp UL20180713jg v1
	Amount:	\$23,536.53
	Component Description:	Gates inv #JW30004450-1A TX Mask Filter 1 6th
	Amount:	dp UL20190214jgv1 \$11,768.26
RF Accessories		
	Component Description:	Inv JW30004450-1 WKYC TX RF accessories 1 3rd dp UL20180713jg v1
	Amount:	\$16,576.65
	Component Description:	Gates inv #JW30004450-1A TX RF accessories
		1 6th dp UL20190214jgv1
	Amount:	\$8,288.32

Other Building Addition Size: 900.0	Component Description: Amount:	WKYC Osborn inv #29267 Civil Eng UL20180801jg v2 \$3,909.60
	Component Description: Amount:	Inv 265370 WKYC Design Devel UL20180705jg v1 \$2,884.87
	Component Description: Amount:	WKYC Osborn inv #29512 Civil Eng UL20180815jg v1 \$7,457.20
	Component Description: Amount:	Donleys inv #1105- 02 TX Bldg Addition pmt 2 UL20190130jgv1 \$241,164.27
	Component Description:	Donleys inv #1105- 03 TX Bldg Addition pmt 3
	Amount:	UL20190402jgv1 \$242,920.58
	Component Description:	Donleys inv #1105- 01 TX Bldg Addition UL20181106jgv1 \$119,311.20
	Component Description:	Vocon inv #265447
	Amount:	Design Devel UL20181026jg v1 \$5,476.41

Other Electrical Service: Additional electrical services required for transmitter installation, including heat exchangers, transformers, cooling pumps, etc.	Component Description: Amount:	Vocon inv #267251 Tech Eng Srvcs UL20190222jgv1 \$14,190.00
3" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
Transformer 3 phase/480v - 300 KVA	Component Description:	Inv JW30004450-1 WKYC TX Electrical 1 3rd dp
	Amount:	UL20180713jg v1 \$3,824.80
	Component Description: Amount:	Gates inv #JW30004450-1A TX Electrical 1 6th dp UL20190214jgv1 \$1,912.39
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	Component Description:	Gates inv #JW30004450-1A Transmitter 1 6th dp UL20190214jgv1
	Amount:	\$234,736.97
	Component Description:	Inv JW30004450-1 WKYC Transmitter 1 3rd dp UL20180713jg v1
	Amount:	\$469,473.96

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-20EBT /VP -R 4C150	\$340,330.00	\$313,570.00		\$252,330.74	
UHF - High Power Top Mount (200- 1000 kW), One station antenna , elliptically or circularly polarized	\$289,500.00	\$263,670.00	N/A	\$237,303.00	N/A
Shipping	\$6,800.00	\$6,800.00	N/A	N/A	N/A
New Top Plate	\$25,000.00	\$25,000.00	Existing top-plate and/or bolt pattern may not work for new top- mount antenna	N/A	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$11,700.00	N/A	\$9,267.74	N/A

Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$5,760.00	N/A
Auxiliary Antenna TFU-24WB- R C160	\$214,720.00	\$212,280.00		\$142,103.34	
Shipping	\$5,400.00	\$5,400.00	N/A	\$938.34	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
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
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,700.00	\$13,000.00	N/A	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$5,760.00	N/A

UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 930 kW input, directional,, horizontally polarized	\$160,480.00	\$160,480.00	N/A	\$135,405.00	N/A
Sub-total	\$555,050.00	\$525,850.00	N/A	\$394,434.08	N/A
Total for all systems	\$5,375,156.76	\$4,786,655.05	N/A	\$2,161,546.37	N/A

Actual Information Description	File Name	
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	Component Description: Amount:	Die inv #MAN00845 Primary ant 45 pct pmt 1 UL20190412jgv3 \$118,651.50
	Component Description:	Die inv #MAN01146 Primary ant 45 pct pmt 2 UL20190418jgv1
	Amount:	\$118,651.50
Shipping	Information not provided.	
New Top Plate	Information not provided.	

Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	Component Description:	Die inv #MAN01146 Elbow complex 45 pct pmt 2
	Amount:	UL20190418jgv1 \$4,633.87
	Component Description:	Die inv #MAN00845 Elbow complex 45 pct pmt 1
	Amount:	UL20190412jgv3 \$4,633.87
	Component Description:	Die inv #MAN00845 Elbow complex 45 pct pmt 1
	Amount:	UL20190123jgv1 \$4,633.87
Sweep test of existing antenna		
	Component Description:	Die inv #MAN01146 Sweep 45 pct pmt 2 UL20190418jgv1
	Amount:	\$2,880.00
	Component Description:	Die inv #MAN00845 Sweep 45 pct pmt 1
	Amount:	UL20190412jgv3 \$2,880.00
	Component Description:	Die inv #MAN00845 Sweep 45 pct pmt 1
	Amount:	UL20190123jgv1 \$2,880.00

Shipping		
	Component Description:	Die inv #464003 Freight for Sales Order 1696505
	Amount:	UL20190418jgv1 \$938.34
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	Information not provided.	
Side mount brackets for high power antennas (if not included in antenna base cost)	Information not provided.	
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	Information not provided.	
Sweep test of existing antenna	Component Description:	Die inv #MAN0088 Aux sweep 45 pct pmt 2
	Amount:	UL20180706jgv1 \$2,880.00
	Component Description:	Die inv #MAN0084 Aux sweep 45 pct pmt 1
	Amount:	UL20190124jgv1 \$2,880.00

UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 930 kW input, directional,, horizontally polarized	Component Description:	Die inv #MAN00841 Aux TX ant 45 pct pmt 1
	Amount:	UL20190124jgv1 \$67,702.50
	Component Description:	Die inv #MAN00880 Aux TX ant 45 pct
	Amount:	pmt 2 UL20180706jgv1 \$67,702.50

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	\$242,740.00	\$161,636.90		\$140,541.54	
Rigid Transmission Line - copper, 6 1/8"	\$236,340.00	\$155,236.90	Dielectric's transmission line prices increased.	\$140,541.54	N/A
TX Line Sweep	\$6,400.00	\$6,400.00	N/A	N/A	N/A
Auxiliary Transmission Line	\$183,150.00	\$168,493.40		\$145,884.06	
Rigid Transmission Line - copper, 6 1/8"	\$176,750.00	\$162,093.40	Dielectric's transmission line prices increased.	\$145,884.06	N/A
TX Line Sweep	\$6,400.00	\$6,400.00	N/A	N/A	N/A
Sub-total	\$425,890.00	\$330,130.30	N/A	\$286,425.60	N/A
Total for all systems	\$5,375,156.76	\$4,786,655.05	N/A	\$2,161,546.37	N/A

Actual Information	
Description	File Name

Rigid Transmission Line - copper, 6 1/8"		
	Component Description:	Die inv #444012 Cut TX line pc
		freight UL20190328jgv1
	Amount:	\$828.32
	Component Description:	Die inv #MAN00845
		Main line 45 pct pmt
	Amount:	1 UL20190412jgv3 \$69,856.61
	Component Description:	Die inv #MAN01146 Main line 45 pct pmt
		2 UL20190418jgv1
	Amount:	\$69,856.61
	Component Description:	Die inv #MAN00845
		Main line 45 pct pmt
	Amount:	1 UL20190123jgv1 \$69,856.61
TX Line Sweep	Information not provided.	
Rigid Transmission Line -		
copper, 6 1/8"	Component Description:	Die inv #MAN00841
		Aux line 45 pct pmt
	Amount:	1 UL20190124jgv1 \$72,942.03
		φ. <u>-</u> ,0 12.00
	Component Description:	Die inv #MAN00880
		Aux line 45 pct pmt
	Amount:	2 UL20180706jgv1 \$72,942.03
TX Line Sweep	Information not provided.	
	mormation 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	\$868,300.00	\$825,000.00		\$0.00	
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$400,000.00	N/A	N/A	N/A
Major tower reinforcement /modifications	\$421,000.00	\$400,000.00	N/A	N/A	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	N/A	N/A
Sub-total	\$868,300.00	\$825,000.00	N/A	\$0.00	N/A
Total for all systems	\$5,375,156.76	\$4,786,655.05	N/A	\$2,161,546.37	N/A

Components

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 Justificatic
Outside Professional Services	\$487,088.55	\$470,543.55		\$34,615.84	
Other Legal Services	\$10,000.00	\$10,000.00	Other Legal Services related to the DTV Repack	\$174.42	N/A
Pre filing site review	\$20,000.00	\$20,000.00	N/A	N/A	N/A
Installation Services	\$95,293.55	\$95,293.55	N/A	N/A	N/A
Additional Field Engineering Service, 20 Days	\$50,000.00	\$50,000.00	\$2,500 per site visit including expenses x 20 days. It is necessary to survey the site, plan the equipment, develop specifications for purchasing, & oversee multiple vendor RF projects. Station does not have available personnel trained in such services.	N/A	N/A

RF Exposure Measurements	\$21,050.00	\$20,000.00	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
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$7,360.00	\$7,000.00	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 - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,210.00	\$4,000.00	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	N/A	N/A
Prepare request for Special Temporary Authorization	\$4,100.00	\$3,000.00	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	N/A	N/A
Perform engineering study for new channel assignment	\$7,360.00	\$7,000.00	N/A	N/A	N/A

Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$2,500.00	N/A	N/A	N
Project management of the transition	\$158,000.00	\$150,000.00	It will be necessary to schedule and coordinate multiple vendors, complete progress reports, and update Schedule 399s. Station does not have available personnel or personnel trained in project management for such complex projects.	\$34,441.42	N
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	N/A	N
ASR	\$2,105.00	\$2,000.00	N/A	N/A	Ν
modification (prepare FCC Form 854)					
(prepare FCC	\$84,200.00	\$80,000.00	N/A	N/A	N

Total for all	\$5,375,156.76	\$4,786,655.05	N/A	\$2,161,546.37	N/A
systems					

Actual Information Description	File Name	
Other Legal Services	Component Description: Amount:	Covington inv #60796723 Various Legal UL20181024jgv1 \$174.42
Pre filing site review	Information not provided.	
Installation Services	Information not provided.	
Additional Field Engineering Service, 20 Days	Information not provided.	
RF Exposure Measurements	Information not provided.	
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	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.
Prepare request for Special Temporary Authorization	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	Information not provided.
Perform engineering study for new channel assignment and antenna development	Information not provided.
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.

Project management of the		
transition	Component Description:	Osborn inv #28997 Proj Mgt March 31, 2018 - April 27, 2018
		UL20190212jgv1
	Amount:	\$6,725.00
		ψ0,, <u>2</u> 0.00
	Component Description:	Osborn inv #29833
		Prof srvcs 180526 -
		180629
		UL20190207jgv1
	Amount:	\$7,842.50
	Component Description:	Inv 29214 WKYC
	· ·	Proj Mgt 180428-
		180525
		UL20180706jg v1
	Amount:	\$4,350.00
	Component Description:	Osborn inv #26015
	Component Description.	Prof srvcs 170530 -
		170728
		UL20181107jg v1
	Amount:	\$14,548.92
	Component Description:	Osborn inv #28588
	Component Description.	Proj Mgt thru March 30, 2018
		30, 2018 UL20180815jgv1
	Amount:	\$975.00
Prepare and or review reimbursement form	Information not provided.	
ASR modification (prepare FCC Form 854)	Information not provided.	
Comprehensive coverage verification via field study, if needed	Information not provided.	

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	\$168,451.00	\$166,446.00		\$3,270.00	
Internal labor	\$24,231.00	\$24,231.00	N/A	N/A	N/A
MVPD Notification of Channel Change	\$6,000.00	\$6,000.00	to notify all MVPD's op up coming testing and transition plans for the market.	N/A	N/A
Develop and air announcement of upcoming channel change	\$6,000.00	\$6,000.00	To create informational spot to notify public of the upcoming change.	\$3,270.00	N/A
Equipment Storage	\$15,000.00	\$15,000.00	2 flat bed trailers for 6 Months to store equipment.	N/A	N/A
Equipment Delivery and Handling Charges	\$25,000.00	\$25,000.00	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
Non-zoning permits	\$25,000.00	\$25,000.00	N/A	N/A	N/A

Local Zoning	\$1,200.00	\$1,200.00	Local construction permit.	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$190.00	N/A	N/A	N/A
FCC Filing Fees - Form 2100 license to cover application	\$335.00	\$325.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	N/A	N/A
AM Pattern Disturbance Impact study	\$7,890.00	\$7,500.00	N/A	N/A	N/A
AM Pattern Disturbance Remedy	\$21,050.00	\$20,000.00	N/A	N/A	N/A
Sub-total	\$168,451.00	\$166,446.00	N/A	\$3,270.00	N/A
Total for all systems	\$5,375,156.76	\$4,786,655.05	N/A	\$2,161,546.37	N/A

Actual Information Description	File Name
Internal labor	Information not provided.
MVPD Notification of Channel Change	Information not provided.

Develop and air announcement of upcoming channel change	Component Description: Amount:	2C Media inv #203806 Creation of channel change announcement UL20181016jgv1 \$3,270.00
Equipment Storage	Information not provided.	
Equipment Delivery and Handling Charges	Information not provided.	
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.	
Non-zoning permits	Information not provided.	
Local Zoning	Information not provided.	
FCC Filing Fees - Special Temporary Authorization request	Information not provided.	
FCC Filing Fees - Form 2100 license to cover application	Information not provided.	
DTV Medical Facility Notification	Information not provided.	
AM Pattern Disturbance Impact study	Information not provided.	
AM Pattern Disturbance Remedy	Information not provided.	

Cost Information	Grand Total			
		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$5,375,156.76	\$4,786,655.05	\$2,161,546.37

Reimbursem	entestiatus	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.	
		 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.

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 above- named applicant for the Authorization(s) specified above.	Jeffrey C Gehman Engineering Associate 04/18/2019

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).	
		 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. 	
		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.

	The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission. 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.	
an au name	are, under penalty of perjury, that I am thorized representative of the above- d applicant for the Authorization(s) ied above.	Jeffrey C Gehman Engineering Associate
		04/18/2019

Attachments