

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility	36912	Service: DTV	Call	WSAZ-TV	Channel: 22 (UHF)
ID:	1		Sign:	1	
File	000002	8915			
Number:					
FRN: 00 ′	18223693	Date	03/25		
		Submitted:	/2019		

Applicant Name, Type, and Contact Information

Information

Applicant	Address	Phone	Email	Applicant Type
GRAY TELEVISION LICENSEE, LLC Doing Business As: GRAY TELEVISION LICENSEE, LLC	Robert Folliard 4370 Peachtree Road Atlanta, GA 30319 United States	+1 (202) 750- 1585	Robert. Folliard@gray. tv	Limited Liability Company

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Ontact Name and Information

Contact Information	Applicant	Address	Phone	Email
	Samuel Hariton Widelity, inc.	4031 University Dr Suite 100 Fairfax, VA 22030 United States	+1 (339) 222-8107	sam.hariton@widelity.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.	Yes
	Briefly describe transition plan	WSAZ will be replacing its main transmission line, antenna, and transmitter, its aux antenna. The station will be installing a broadband main antenna and broadband interim antenna to be shared with WQCW. The station will also be installing an interim XMTR

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

Primary	Existing Transmitter Infor	nsmitter 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	DCX- Millenium		
		Year	2003		
		Туре	Inductive Output Tube		
		IOT Power Type	Three		
		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-72
		Transmitter Type	Solid State
		Solid State Cooling	Liquid Cooled
		Solid State Power capacity	47.2 kW
		Justification for New Transmitter	Existing transmitter cannot be retuned

Primary Other Transmitter Costs

Transmitter	Section	Question	Response
	Electrical Service Service Entrance (3 phases 800A 208V)	Service Entrance (3 phases 800A 208V)	No
		Switchgear (industrial 800 amp) Transformer (480V)	No
			Yes
	Power Rigid Conduit and Wiring Size Length	Power	500 kVA
		Rigid Conduit and Wiring	Yes
		Size	4 inches
		200.0 feet	
		Other Electrical Service	Yes

	Description	The new transmitter will require reconfiguration of the electrical service on site. The electrical work cost has been estimated based on verbal guidance from local electrical contractors.
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	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
Improvement	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	Other Transmitter Cost Not Listed		
Transmitter	Name	Description	
	Basic Site Survey	Basic site survey by GatesAir for planning transmitter(s) installation	
	Ice Bridge Building Interconnect	Ice Bridge for interconnection between buildings	

Other Transmitter Cost Not Listed

BGS	Burk Transmitter Remote WSAZ
Pad for Heat Exchangers	Pad for Heat Exchangers behind new Building

Interim	New Transmitter Costs		
Transmitter	Section	Question	Response
	New Transmitter	Use	Interim
		Description of Use	N/A
		Change Type	Purchase
		Manufacturer	
		Model	ULXTE-30
		Transmitter Type	Solid State
		Solid State Cooling	Liquid Cooled
		Solid State Power capacity	19.2 kW
		Justification for New Transmitter	Interim transmitter needed to broadcast during the transition

Interim 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	Yes

	Description	The new transmitter will require reconfiguration of the electrical service on site. The electrical work cost has been estimated based on verbal guidance from local electrical contractor.
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Туре	Cooling Only
	Size	20 tons
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
Improvement	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
Inside RF System	Is an additional interior RF system required to support this interim transmitter?	No

Interim Transmitter	Other Transmitter Cost Not Listed		
	Name	Description	
	Tower to interim building ice bridge	Tower to interim building ice bridge	
	Waveguide Switch for Interim	UHF Inside RF System including switching	

Building Renovation	Renovate OLD building to install Interim facility
Site Prep	Site prep for Construction

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

Auxiliary Antenna	Existing Antenna Information			
	Section	Question	Response	
	Existing Antenna Description	Type of change	Purchase New	
		Antenna Use	Auxiliary (Backup)	
		Description of Use	Backup Antenna	
		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 Manufacturer and Type	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)	724.0 kW	

Manufacturer	
Model	TFU- 20DSC-R 04
Year	2002

Auxiliary	New Antenna Costs			
Antenna	Section	Question	Response	
	New Antenna Description	Use	Auxiliary (Backup)	
		Description of Use	Backup Antenna	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	Yes	
		Ownership	Owned	
		Owner	N/A	
		Is antenna shared?	Yes	
		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	Side Mount	
		Antenna position in stack	Not in Stack	
		Polarization	Horizontal	
		Туре	Broadband Panel	
		Number of Stations Supported	2	
		Number of Panels/Bays	2	
		Lower Limit	476.00 MHz	
		Upper Limit	530.00 MHz	
		Design power capacity in use	100.0 %	
		Other Antenna Type	N/A	
		ERP: (Effective Radiated Power)	546.0 kW	
		Manufacturer		

Model	SBB- 24C170
Year	2017
Justification for New Antenna	Needed for interim operations

Auxiliary Antenna Section Question Response Do you need a Combiner for a Shared Yes **Combiner for Shared** Antenna Antenna? Type New Number of channels supported 2 Frequencies of channels supported Upper and lower frequency Frequency 476.0 MHz - 530.0 MHz No Do you need a combiner output splitter /switcher for dual feed lines? Yes **Elbow Complex** Do you require the separate purchase of the Elbow Complex? Broadband or Single Channel? Broadband Feed Line Size 6 1/8 inches inches Side Mount Brackets Do you require the separate purchase of Yes side mount brackets for a high power antenna? **Pattern Scatter Analysis** Do you require separate purchase of No 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?

Other Antenna Costs

Auxiliary Antenna	Other Antenna Cost Not Listed		
	Name	Description	
	Ice Shield	Ice Shield over Coax into old Building for interim	

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?	No	
		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)	595.0 kW	
			-	

Manufacturer	
Model	ATW28H3- ETO-23H Trasar
Year	2010

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?	Yes	
		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	Elliptical	
		Туре	Broadband Panel	
		Number of Stations Supported	2	
		Number of Panels/Bays	64	
		Lower Limit	470.00 MHz	
		Upper Limit	698.00 MHz	
		Design power capacity in use	100.0 %	
		Other Antenna Type	N/A	
		ERP: (Effective Radiated Power)	640.0 kW	
		Manufacturer		
		Model	PEPSIL60D	

Year	2018
Justification for New Antenna	Main antenna cannot be retuned, combining with WQCW

Primary Antenna Section Question Response **Combiner for Shared** Do you need a Combiner for a Shared Yes Antenna? Antenna Type New Number of channels supported 2 Frequencies of channels supported Upper and lower frequency Frequency 470.0 MHz - 698.0 MHz Do you need a combiner output splitter No /switcher for dual feed lines? **Elbow Complex** Yes Do you require the separate purchase of the Elbow Complex? Broadband Broadband or Single Channel? Feed Line Size 8 3/16 inches inches **Side Mount Brackets** Do you require the separate purchase of No side mount brackets for a high power antenna? **Pattern Scatter Analysis** No Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna? Sweep Test Do you require the sweep testing of Yes transmission line and antenna?

Other Antenna Costs

PrimaryOther Antenna Cost Not ListedAntennaInformation not provided.

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

Auxiliary	Existing Transmission Line			
ransmissio	n Line Section	Question	Response	
	Existing Transmission Line Description	Type of change	Purchase New	
		Use	Auxiliary (Backup)	
		Description of Use	Backup	
		Ownership	Owned	
		Owner	N/A	
		Site	N/A	
		Is the existing transmission line shared with another station or stations?	Yes	
		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	970 feet per run	

Facility ID's and Call Signs of all stations with whom the transmission line is shared.

Existing Transmission Line

Facility ID	Call Sign
65130	WQCW

Auxiliary	New Transmission Line			
Transmissio	n Section	Question	Response	
	New Transmission Line Costs	Use	Auxiliary (Backup)	
		Description of Use	Backup and Interim	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	Yes	
		Туре	Rigid	
		Diameter	6 1/8 inches	
		Other Diameter	N/A	
		Segment Length	Broadband	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	960 feet per run	
		Justification for New Transmission Line	Needed for interim broadcasting	

Auxiliary Other Transmission Line Expenses Not Listed

Transmissio	Name	Description
	Sweep Existing Transmission Line	Sweep of existing transmission line to determine viability on new channel(s)

Primary	Existing Transmission Line		
Transmissio	n Line 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?	Yes
		Is Transmission Line in operating condition?	Yes
	Existing Transmission	Manufacturer	
Line Man Type	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	1022 feet per run

Facility ID's and Call Signs of all stations with whom the transmission line is shared.

Existing Transmission Line

Facility ID	Call Sign
65130	WQCW

Primary	New Transmission Line		
Transmission	n Line 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	8 3/16 inches
		Other Diameter	N/A
		Segment Length	Broadband
		Other Segment Length	N/A
		Number of parallel runs	1
		Length	1022 feet per run
		Justification for New Transmission Line	The current line will not support the combined RF power for two full power transmitters.

Primary Other Transmission Line Expenses Not Listed

Transmission to me tion not provided.

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

Existing Tower

Primary	Existing Tower					
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?	No			
		Is this tower currently shared with any other stations?	No			
		One or more FM, AM or TV radio broadcaster(s)	N/A			
		Others Types of Users	N/A			
		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	1035121			
	Coordinates (NAD83 (Latitude (NAD83)	38° 30' 36.3" N-			
	North American Datum of 1983))	Longitude (NAD83)	082° 13' 09.5" W-			
		Overall Structure Height	1029.84 feet			
		Support Structure Height	966.20 feet			
		Ground Elevation Above Mean Sea Level (AMSL)	1011.14 feet			

Structure Type	GTOWER - Guyed Structure Used for Communication Purposes
Tower Owner	Gray Television Group, Inc.
Date Constructed	10/27/2014

Primary Tower Section Out

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:	Major Reinforcements needed

Primary Tower Section

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

Primary	Other Tower Expenses Not Listed	er Expenses Not Listed Description	
Tower	Name	Description	
	Tower Mapping	Mapping of existing tower.	

Outside	Section	Question	Response
Professional	I Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
		Number of Hours	900
		Explanation	Strategic Support
	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	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	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	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	No
	RF exposure measurements	No
	Additional Field Engineering Service	No
	Number of Days	N/A
	Justification	N/A

Other Professional Services Expenses Not Listed Professional Services roopstsided.

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	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 Expenses

Name	Description	
Tree Removal	Removal of Trees for Tagline Rigging	
Security	Security for Site 60 Days	

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 Cos Justificatic
Interim Transmitter ULXTE-30	\$835,213.05	\$713,836.59		\$587,054.30	
Site Prep	\$10,600.00	\$10,600.00	N/A	N/A	N/A
Building Renovation	\$36,889.00	\$36,889.00	N/A	\$36,889.00	N/A
Tower to interim building ice bridge	\$6,917.55	\$6,917.55	See attached Steel Products and Manufacturing quote #003 for Ice Bridge between tower and analog transmitter building.	\$4,345.64	N/A
Other HVAC Service Type: C Size:20 (Other)	\$44,806.50	\$44,806.50	20 ton split system shared cost with WQCW. Please see Maynard C. Smith Construction Quote WSAZ- HVACRev1. This quote has been uploaded into LMS and is attached to the submitted invoice.	\$44,806.50	N/A

Othor	¢2 000 00	¢2 000 00	Ν1/Δ	Ν1/Δ	N1//
Other Electrical Service: The new transmitter will require reconfiguration of the electrical service on site. The electrical work cost has been estimated based on verbal guidance from local electrical	\$2,000.00	\$2,000.00	N/A	N/A	N/A
contractor.					
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	\$684,000.00	\$562,623.54	N/A	\$501,013.16	N/A
Waveguide Switch for Interim	\$50,000.00	\$50,000.00	N/A	N/A	N/A
Primary Transmitter ULXTE-72	\$1,719,944.50	\$1,396,694.88		\$938,622.47	
Pad for Heat Exchangers	\$74,256.50	\$74,256.50	See Maynard C. Smith Construction Co. Revised Quote WSAZ- SOG101rev3. This is half the cost, other half paid by WQCW	\$74,256.50	N/A
	\$2,838.00	\$2,838.00	See attached	N/A	N/A

Ice Bridge Building Interconnect	\$12,250.00	\$12,250.00	This is half the cost, other half paid by WQCW. Revised quote uploaded.	\$12,250.00	N/ <i>F</i>
Basic Site Survey	\$9,000.00	\$9,000.00	See vendor invoice	\$8,538.60	N/A
4" Rigid Conduit and Wiring (Cost per foot)	\$20,200.00	\$19,200.00	N/A	N/A	N/A
Transformer 3 phase/480v - 500 KVA	\$48,400.00	\$46,000.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	\$1,473,000.00	\$1,153,150.38	Please see attached Gatesair Quote 76749, the estimated costs are \$1,153,150.38.	\$798,105.27	х
Other Electrical Service: The new transmitter will require reconfiguration of the electrical service on site. The electrical work cost has been estimated based on verbal guidance from local electrical contractors.	\$80,000.00	\$80,000.00	Whitt- Meadows quote	\$45,472.10	N/A
Sub-total	\$2,555,157.55	\$2,110,531.47	N/A	\$1,525,676.77	N//
	\$5,318,157.18	\$4,098,632.36	N/A	\$1,951,743.83	N/A

Components

Actual Information Description	File Name	
Site Prep	Information not provided.	
Building Renovation	Component Description: Amount:	Quote # 01. WSAZ Transmitter - Interior Demolition \$36,889.00
Tower to interim building ice bridge	Component Description: Amount:	Quote #08 WSAZ Ice Bridge Expansion \$4,345.64
Other HVAC Service Type: C Size:20 (Other)	Component Description: Amount:	Quote 04: WSAZ transmitter HVAC101Rev1 \$44,806.50
Other Electrical Service: The new transmitter will require reconfiguration of the electrical service on site. The electrical work cost has been estimated based on verbal guidance from local electrical contractor.	Information not provided.	

UHF - Liquid Cooled Solid State Transmitter 14.2 - 20	Component Description:	ULXTE-30
kW	component Description.	Transmitter
	Amount:	\$139,131.64
	Component Description:	Interim Transmitte
		UKLTE-30 Transmitter - 70%
	Amount:	\$361,881.52
Waveguide Switch for Interim	Information not provided.	
Pad for Heat Exchangers		
	Component Description:	Quote #2 WSAZ SOG101Rev5
	Amount:	\$74,256.50
BGS	Information not provided.	
Ice Bridge Building		
Interconnect	Component Description:	Quote #03 WSAZ Ice Bridge Rev 3
	Amount:	\$12,250.00
Basic Site Survey		
	Component Description:	Field Engineering Fees
	Amount:	\$8,538.60
4" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
Transformer 3 phase/480v - 500 KVA	Information not provided.	
UHF - Liquid Cooled Solid State Transmitter 35 - 50		
kW	Component Description:	ULXTE-72 Transmitter
	Amount:	\$798,105.27

Other Electrical Service: The new transmitter will require reconfiguration of the electrical service on site. The electrical work cost has been estimated based on verbal guidance from local electrical contractors.

Component Description: Amount:	Professional services \$3,644.00
Component Description: Amount:	Set tranfer switch- stored material, hours labor \$7,261.69
Component Description: Amount:	NEEPB-700 D 2 1 /2" Bushing \$19,625.76
Component Description: Amount:	Labor and materials \$9,876.01
Component Description: Amount:	Demo install new lights underground conduits \$5,064.64

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 PEPSIL60D	\$877,880.00	\$427,200.00		\$67,477.20	
UHF - High Power Top Mount (200-1000 kW), Two Station broadband panel antenna, elliptically or circularly polarized	\$768,000.00	\$365,000.00	WSAZ's half of the cost	\$66,517.20	N/A
Sweep test of existing antenna	\$6,730.00	\$3,200.00	N/A	\$960.00	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$50,000.00	WSAZ's half of the cost	N/A	N/A
Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	\$18,950.00	\$9,000.00	WSAZ's half of the cost	N/A	N/A
Auxiliary Antenna SBB- 24C170	\$220,375.63	\$225,194.72		\$132,343.31	

ce Shield	\$16,960.00	\$16,960.00	WSAZ's half of the cost	\$10,654.35	N/A
Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$11,000.00	WSAZ's half of the cost	N/A	N/A
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,700.00	\$6,500.00	WSAZ's half of the cost	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$3,200.00	WSAZ's half of the cost	\$1,760.00	N/A
UHF – Broadband Panel, Side Mount Auxiliary /Interim, 546 horizontally polarized	\$75,635.63	\$75,635.63	Per DTVPros quote JEHQ1438. This cost is split 50/50 with WQCW	\$41,599.60	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$111,899.09	WSAZ's half of the cost per quote Q- 76353r1	\$78,329.36	Х
Sub-total	\$1,098,255.63	\$652,394.72	N/A	\$199,820.51	N/A
Total for all systems	\$5,318,157.18	\$4,098,632.36	N/A	\$1,951,743.83	N/A

Actual Information Description	File Name	
UHF - High Power Top Mount (200-1000 kW), Two Station broadband panel antenna, elliptically or circularly polarized	Component Description: Amount:	New primary antenna UHF High Power Top Mount (200-1000kW) \$66,517.20
Sweep test of existing antenna	Component Description: Amount:	Sweep Test \$960.00
New combiner, cost per channel (without antenna)	Information not provided.	
Elbow complex, broadband, at antenna input, per 8 3 /16. feedline (if needed)	Information not provided.	
Ice Shield	Component Description: Amount:	Ice shield New Auxillary Antenn \$10,654.35
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: Amount:	Sweep test New Auxiliary Antenna \$960.00
	Component Description:	WSAZ-Sweep Test New Auxiliary Antenna
	Amount:	\$800.00
UHF – Broadband Panel, Side Mount Auxiliary /Interim, 546 horizontally polarized	Component Description: Amount:	UHF - BROADBAND PANEL, SIDE MOUNT AUX /INTERIM \$22,690.69
	Component Description: Amount:	UHF - Broadband Panel, Side Mount Aux/Interim Antenna \$18,908.91
New combiner, cost per channel (without antenna)	Component Description: Amount:	Interim Channel Combiner \$78,329.36

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	\$407,778.00	\$193,669.00		\$44,950.93	
Rigid Transmission Line - copper, 8 3 /16" broadband	\$407,778.00	\$193,669.00	WSAZ's half of the cost	\$44,950.93	N/A
Auxiliary Transmission Line	\$225,720.00	\$153,921.02		\$44,146.87	
Rigid Transmission Line - copper, 6 1 /8" broadband	\$222,720.00	\$150,921.02	WSAZ's half of the cost, per quote	\$41,503.27	N/A
Sweep Existing Transmission Line	\$3,000.00	\$3,000.00	See vendor invoice	\$2,643.60	N/A
Sub-total	\$633,498.00	\$347,590.02	N/A	\$89,097.80	N/A
Total for all systems	\$5,318,157.18	\$4,098,632.36	N/A	\$1,951,743.83	N/A

Actual Information Description	File Name	
Rigid Transmission Line - copper, 8 3/16" broadband	Component Description:	New Primary Transmission Line
	Amount:	\$44,950.93

Rigid Transmission Line - copper, 6 1/8" broadband	Component Description: Amount:	Rigid Transmission Line - Copper \$18,865.12
	Component Description: Amount:	New Auxiliary Transmission Line \$22,638.15
Sweep Existing Transmission Line	Component Description: Amount:	Sweep test of transmission line and antenna \$2,643.60

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 GTOWER	\$661,060.00	\$636,210.00		\$49,810.00	
Structural engineering tower load study for well documented tower	\$12,600.00	\$19,250.00	Includes state and local taxes; Hodge Proposal 2019-Gray- WSAZ- Geotech- 0102-N	\$19,250.00	N/A
Major tower reinforcement /modifications	\$421,000.00	\$400,000.00	N/A	\$5,950.00	N/A
Tower Mapping	\$16,960.00	\$16,960.00	N/A	\$12,110.00	N/A
Tall Tower (greater than 500')	\$210,500.00	\$200,000.00	N/A	\$12,500.00	N/A
Sub-total	\$661,060.00	\$636,210.00	N/A	\$49,810.00	N/A
Total for all systems	\$5,318,157.18	\$4,098,632.36	N/A	\$1,951,743.83	N/A

Actual Information	
Description	File Name

Structural engineering tower load study for well documented tower	Component Description:	Engineering
		Evaluation, Level 1 Corrosion Risk
		Analysis
	Amount:	\$4,000.00
	Component Description:	Engineering
		Evaluation, Level
		1 Corrosion Risk
	A	Analysis
	Amount:	\$4,000.00
	Component Description:	Rigorous Analysis
	Amount:	\$2,250.00
	Component Description:	GeoTech Survey
		Foundation
		Analysis
	Amount:	\$9,000.00
Major tower reinforcement		
mounications	Component Description:	Phase 1. Provide
		plan view of the
		antenna power divider installed
		withi the WSAZ
		tower.
	Amount:	\$3,450.00
		<i>•••</i> , •••••
	Component Description:	Install antennas
		and lines on
		Existing Primary
		Tower
	Amount:	\$2,500.00

Tower Mapping		
	Component Description:	Tower mapping Existing Primary Tower
	Amount:	\$4,500.00
	Component Description: Amount:	Tower Mapping \$7,610.00
Tall Tower (greater than		
500')	Component Description:	Professional
		Engineering
	•	Services
	Amount:	\$12,500.00
	Component Description:	Install antennas
		and lines on
		Existing Primary Tower
	Amount:	\$41,056.25
		÷,000.20

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 Cost Justification
Outside Professional Services	\$185,015.00	\$175,250.00		\$69,633.25	
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	\$196.50	N/A
Prepare request for Special Temporary Authorization	\$2,050.00	\$1,500.00	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	\$1,862.50	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$2,424.50	N/A

Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$2,500.00	N/A	N/A	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	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
Project management of the transition	\$142,200.00	\$135,000.00	N/A	\$65,149.75	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
Sub-total	\$185,015.00	\$175,250.00	N/A	\$69,633.25	N/A
Total for all systems	\$5,318,157.18	\$4,098,632.36	N/A	\$1,951,743.83	N/A

Actual Information	
Description	File Name

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	Component Description:Complete and f initial repack CI application.Amount:\$196.50
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	Component Description: Amount:	RF Consulting Fees \$1,487.50
	Component Description:	support response to review of reimbursement form 399 provide summaries of additional antenna
	Amount:	\$375.00
Perform engineering study for new channel		
assignment and antenna development	Component Description:	Review proposed antenna specifications from additional vendor,
		discuss vendor and prompt recalculation of
	Amount:	gain required TPO. \$125.00
	Component Description:	Consulting
	Amount:	Engineer \$425.00
	Component Description:	Engineering Study
	Amount:	for New Channel Assignment \$1,062.00
	Component Description:	Perform
		engineering study for new channel assignment
	Amount:	\$812.50
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.	

Prepare and or review reimbursement form	Information not provided.	
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	Information not provided.	
Project management of the transition	Component Description:	Transition Related
		Project
		Management Cost
	Amount:	\$1,500.00
	Component Description:	Project
		Management
	Amount:	\$4,989.45
	Component Description:	Project
		Management
	Amount:	\$2,265.25
	Component Description:	Project
		Management
	Amount:	\$3,958.55
	Component Description:	Project
	Amount:	Management \$3,016.15
	Amount.	ψ0,010.10
	Component Description:	Project
	Amount:	Management \$4,831.90
		ψ τ ,ΟΟΙ.ΟU
	Component Description:	Project
	Amount	Management
	Amount:	\$5,979.40

Component Description:	Project Mgt
Amount:	\$28.20
Component Description: Amount:	Project Management \$2,270.10
Component Description:	Project Mgt
Amount:	\$2,942.30
Component Description: Amount:	Project Management \$2,270.60
Component Description: Amount:	Project Management \$2,006.25
Component Description:	Project Mgt
Amount:	\$733.30
Component Description:	Project Mgt
Amount:	\$839.75
Component Description: Amount:	Project management \$1,328.55
Component Description: Amount:	Project management \$2,231.90
Component Description:	Project Mgt
Amount:	\$1,326.45

	Component Description: Amount:	Project Management \$4,329.75
	Component Description: Amount:	Project management \$2,675.15
	Component Description: Amount:	Project Management \$1,930.60
	Component Description: Amount:	Cost Reconciliation \$3,501.45
	Component Description: Amount:	Project Management \$2,285.40
	Component Description: Amount:	Project Management \$2,452.40
	Component Description: Amount:	Project Management \$1,968.10
	Component Description: Amount:	Project Mgt \$3,488.80
ASR modification (prepare FCC Form 854)	Information not provided.	
Attorney Fees - Prepare and File request for Special Temporary Authorization	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	\$185,171.00	\$176,656.15		\$17,705.50	
Equipment Delivery and Handling Charges	\$21,200.00	\$21,200.00	N/A	\$5,356.50	N/A
Tree Removal	\$12,349.00	\$12,349.00	N/A	\$12,349.00	Sub-total equals Estimated Cost
MVPD Notification of Channel Change	\$1,272.00	\$1,272.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	\$10,000.00	\$10,000.00	N/A	N/A	N/A
Equipment Storage	\$21,400.00	\$21,400.00	Storage Rates Central Van and Storage quote	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$86,210.00	\$86,210.00	Maynard C. Smith Construction Co., Inc. quote WSAZ Demo Safety Klean Disposal Quote	N/A	N/A

Non-zoning permits	\$11,660.00	\$11,660.00	N/A	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$190.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$3,050.15	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
Security	\$9,000.00	\$9,000.00	Cost shared between stations	N/A	N/A
Sub-total	\$185,171.00	\$176,656.15	N/A	\$17,705.50	N/A
Total for all systems	\$5,318,157.18	\$4,098,632.36	N/A	\$1,951,743.83	N/A

Actual Information Description	File Name	
Equipment Delivery and Handling Charges	Component Description: Amount:	Rental Items \$2,594.00
	Component Description: Amount:	2073000 TH255 TELEHANDLER \$2,142.00
	Component Description: Amount:	Rental of a TL642D Telehandler \$620.50

Tree Removal		
	Component Description:	Trees cut X3 - pin oak - left side of tower
	Amount:	\$4,452.00
	Component Description:	Tree removal - SE
	Amount:	corner \$689.00
	Component Description:	Barker Ridge - clea cut back side of Tower site
	Amount:	\$5,300.00
	Component Description: Amount:	Clear cut NE corne \$1,908.00
MVPD Notification of Channel Change	Information not provided.	
Develop and air announcement of upcoming channel change	Information not provided.	
Equipment Storage	Information not provided.	
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.	
Non-zoning permits	Information not provided.	
FCC Filing Fees - Special Temporary Authorization request	Information not provided.	
DTV Medical Facility Notification	Information not provided.	
FCC Filing Fees - Form 2100 license to cover application	Information not provided.	

Security

Cost Information	Grand Total			
		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$5,318,157.18	\$4,098,632.36	\$1,951,743.83

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. 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).
- 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 above- named applicant for the Authorization(s) specified above.	Robert J. Folliard , III Assistant Secretary 03/25/2019

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.

	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.	
an auth named		are, under penalty of perjury, that I am thorized representative of the above- d applicant for the Authorization(s) ied above.	Robert J. Folliard , III Assistant Secretary 03/25/2019

Attachments

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