

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility 65130 Service: DTV Call WQCW Channel: 15 (UHF)

ID: Sign:

ID: File

0000028733

Number:

FRN: **0018223693** Date **03/16**

Submitted: /2020

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
GRAY TELEVISION LICENSEE, LLC	WQCW 4370 PEACHTREE ROAD, NE ATLANTA, GA 30319 United States	+1 (202) 505-2401	Robert. Folliard@gray. tv	Limited Liability Company

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Contact Information

Preparer Contact Name and Information

Applicant	Address	Phone	Email	
Samuel Haw	ariton Samuel Hari 4031 Univer Suite 100 Fairfax, VA 2 United State	sity Dr 22030	-8107 sam.hariton@wid	delity.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	WQCW will moving approximately a half mile to WSAZ's transmitter site and combining with WSAZ into broadband operations for both main and interim.

Transmitters

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

Primary Transmitter

Existing Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter	Manufacturer	
Manufacturer and Type	Model	Visionary DT
	Year	2005
	Туре	Inductive Output Tube
	IOT Power Type	Two
	Power Capacity	60 kW

Primary Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Primary (Main)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Manufacturer	
	Model	ULXTED- 100
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	62.9 kW
	Justification for New Transmitter	Old transmitter is not retunable

Primary Transmitter

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	Yes
	Switchgear (industrial 800 amp)	Yes
	Transformer (480V)	No
	Power	N/A
	Rigid Conduit and Wiring	Yes
	Size	4 inches
	Length	1000.0 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 tons
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
	Size	N/A
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Primary Transmitter

Other Transmitter Cost Not Listed

Name	Description
Ice Bridge Building Interconnect	Ice bridge between the analog and the digital buildings
Move Gen Set	Move the generator set from the previous site
Ice Bridge Gen Set	Ice bridge for the previous site's generator set
Transmitter remote control	Burk Transmitter Remote
Gen Set Pad	Pad for the generator set
Pad for Heat Exchangers	Pad and ice shield for Heat Exchangers beside Existing PAD
Transfer Switch	Transfer Switch for the generator set

Interim Transmitter

New Transmitter Costs

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 continue broadcasting through transition period

Interim Transmitter

Other Transmitter Costs

Question	Response
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
	Service Entrance (3 phases 800A 208V) Switchgear (industrial 800 amp) Transformer (480V) Power Rigid Conduit and Wiring Size Length

	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?	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
Ice Bridge	Ice bridge from the analog building to the tower (shared cost)

Antennas

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

Existing Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Leased
	Owner	Nexstar Broadcasting
	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	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)	1000.0 kW

Manufacturer	
Model	TUE-05-12 /60 H-B
Year	2000

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	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 Manufacturer and Types	Class	Full Power
	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	This antenna will be shared between WQCW and WSAZ

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
	Туре	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 /switcher for dual feed lines?	No
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Broadband
	Feed Line Size	8 3/16 inches inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	No
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Other Antenna Cost Not Listed

Information not provided.

Interim Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	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 Type	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	2018

Justification for New Antenna	Interim
	antenna
	shared
	between
	WQCW and
	WSAZ to
	continue
	broadcasting
	through the
	transition
	period.

Interim Antenna

Other Antenna Costs

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

Interim Antenna

Other Antenna Cost Not Listed

Information not provided.

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

Primary Transmission Line

Existing Transmission Line

n Line Section	Question	Response
Existing Transmission Line Description	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Leased
	Owner	Nexstar Broadcasting
	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	7 3/16 inches
	Other Diameter	N/A
	Segment Length	Broadband
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	1125 feet per run

Primary Transmi

New Transmission Line

nsmissio	n Line Section	Question	Response
New Transmission Lin	New Transmission Line Costs	Use	Primary (Main)
		Description of Use	N/A
		Change Type	Purchase New
		Is this a request for upgraded equipment?	Yes
		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	Shared with WSAZ

Primary Other Transmission Line Expenses Not Listed

Transmission loine tion not provided.

Interim

New Transmission Line

Transmission Le	n Line Section	Question	Response
	New Transmission Line	Use	Interim
	Costs	Description of Use	N/A
		Change Type	Purchase New
		Туре	Rigid
		Diameter	6 1/8 inches
		Segment Length	Broadband
		Other Segment Length	
		Number of parallel runs	1
		Length	960 feet per run
		Justification for New Transmission Line	Shared with WSAZ

Interim

Other Transmission Line Expenses Not Listed

Transmission loine tion not provided.

Tower Equipment And Rigging Costs

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

Primary Tower

Existing Tower

Section	Question	Response
Existing Tower	Type of change	Modify Existing
Description	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Leased
	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	Yes
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	No
Existing Tower	Do you have a tower registration number?	No
Structure Registration	ASR Number	
Coordinates (NAD83 (Latitude (NAD83)	38° 30' 21.1" N-
North American Datum of 1983))	Longitude (NAD83)	082° 12' 32.3" W-
	Overall Structure Height	1159.11 feet
	Support Structure Height	1154.84 feet
	Ground Elevation Above Mean Sea Level (AMSL)	971.77 feet

Structure Type	GTOWER - Guyed Structure Used for Communication Purposes
Tower Owner	Nexstar Broadcasting, Inc.
Date Constructed	07/07/2015

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
23342	WOWK-TV	DTV

Other Types of Users

Users

Amateur Radio

Primary Tower

Tower Modification Costs

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

Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	N/A

Helicopter Services	Are helicopter services required?	No
Required		

Primary Tower

Other Tower Expenses Not Listed

Information not provided.

Outside Professional

Section	Question	Response
Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
	Number of Hours	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	No
	For Main Facility	Yes
	Prepare engineering section of Form FCC License to Cover Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	1
	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A
Attorney and Other Outside Consulting	Prepare and file Form FCC Construction Permit Application	Yes
Services	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare and file Form FCC License to Cover Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes

	Prepare request for Special Temporary Authority	Yes
	Quantity	1
	NEPA Section 106 environmental review	No
	Environmental Assessment	No
	ASR Modification	Yes
	FAA Consultation (including preparation of FAA Form 7460)	Yes
	Negotiation of Lease and other Matter for Shared Locations	No
	Prepare or Review FCC Form 399 for Reimbursement	Yes
	Address transition timing and coordination issues w/ other stations and wireless providers	Yes
RF Field Engineering Services	Comprehensive coverage verification via field study	No
	RF exposure measurements	No
	Additional Field Engineering Service	No
	Number of Days	N/A
	Justification	N/A

Outside
Other Professional Services Expenses Not Listed
Professional Services ©qstsided.

Other Expenses

Section	Question	Response
AM Pattern Disturbance	Is an Impact Study needed?	No
	Is Remediation needed?	No
Facility Expenses	Name	N/A
	Other Distributed Transmission System Expenses Not listed	N/A
	Name	N/A
	Is Notification of a Medical Facility required as a result of DTV broadcasting?	Yes
Permit and Filing Costs	Local Zoning	No
	Non-zoning permits	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

Expenses Information not provided.

Cost Information

Transmitters

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actua Justifi
Interim Transmitter ULXTE-30	\$859,724.05	\$738,347.59		\$590,742.30	
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	\$684,000.00	\$562,623.54	N/A	\$545,935.80	N
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.	\$124,000.00	\$124,000.00	see Justifying Quote WQCW Whitt Meadows Electrical Quote # 264	\$0.00	N.
Other HVAC Service Type: C Size:20 (Other)	\$44,806.50	\$44,806.50	20 ton split system shared cost with WSAZ. Please see Maynard C. Smith Construction Quote WQCW-HVACRev1	\$44,806.50	N.
Ice Bridge	\$6,917.55	\$6,917.55	Steel Products Quote #003	N/A	N.
Primary Transmitter ULXTED-100	\$2,250,867.61	\$2,243,267.61		\$1,728,174.05	

UHF - Liquid Cooled Solid State Transmitter 62.9 kW	\$173,712.07	\$173,712.07	Please see attached GatesAir Quote Q-78319, less the previously reimbursed amount of \$1,619,160.65	\$0.00	N,
Transfer Switch	\$23,320.00	\$23,320.00	N/A	N/A	N.
Pad for Heat Exchangers	\$74,256.50	\$74,256.50	1/2 the cost paid by WQCW. See revised quote WQCW- SOG101rev3	\$74,256.50	N.
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	\$22,506.90	N.
4" Rigid Conduit and Wiring (Cost per foot)	\$101,000.00	\$96,000.00	N/A	N/A	N.
Ice Bridge Building Interconnect	\$12,250.00	\$12,250.00	Maynard C Smith Construction Quote #IceBridge Rev 2; Maynard C Smith Construction Invoice 19-14	\$12,250.00	N.
Move Gen Set	\$10,550.00	\$10,550.00	Cummins Quote 2260000000372075	N/A	N.
Ice Bridge Gen Set	\$15,900.00	\$15,900.00	N/A	N/A	N.
Transmitter remote control	\$2,838.00	\$2,838.00	BGS quote 509404	N/A	N.
Gen Set Pad	\$29,600.00	\$29,600.00	Justifying Quote - WQCW Generator Pad - Rev 2	\$0.00	N.

UHF - Liquid Cooled Solid State Transmitter 63.4 kW	\$1,754,841.04	\$1,754,841.04	***System Notice: Estimate adjusted and locked because line has been superseded. ***GatesAir quote GA-00022572	\$1,619,160.65	N,
Service entrance 3 phase/800 amp/208 volt	\$14,400.00	\$13,700.00	N/A	N/A	N.
Sub-total	\$3,110,591.66	\$2,981,615.20	N/A	\$2,318,916.35	N.
Total for all systems	\$6,361,788.98	\$5,025,765.19	N/A	\$3,158,049.31	N.

Components

Actual Information Description	File Name	
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	Component Description: Amount:	ULXTE-30 Transmitter per Quote Q-76788 \$42,785.12
	Component Description: Amount:	Interim Transmitter \$398,324.96
	Component Description: Amount:	ULXTE-30 Transmitter \$104,825.72
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:	Hours labor \$21,646.78

Other HVAC Service Type: C Size:20 (Other)	Component Description: Amount:	Quote 04a: WQCW Transmitter HVAC101Rev1 \$44,806.50
Ice Bridge	Information not provided.	
UHF - Liquid Cooled Solid State Transmitter 62.9 kW	Component Description: Amount:	Transmitter \$135,680.39
Transfer Switch	Information not provided.	
Pad for Heat Exchangers	Component Description: Amount:	Quote #02a WQCW- SOG101Rev5 \$74,256.50
Switchgear - industrial 800 amp	Component Description: Amount:	HOURS LABOR- JOHN M2/1/19 \$22,506.90
4" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
Ice Bridge Building Interconnect	Component Description: Amount:	Quote #03a WQCW Ice Bridge Rev 3 \$12,250.00
Move Gen Set	Information not provided.	
Ice Bridge Gen Set	Information not provided.	
Transmitter remote control	Information not provided.	

Gen Set Pad		
	Component Description:	Quote #5
		Generator Pad -
		Rev 2
	Amount:	\$29,600.00
UHF - Liquid Cooled Solid		
State Transmitter 63.4 kW	Component Description:	Category
		superseded,
		invoice moved.
	Amount:	N/A
	Component Description:	ULXTE-100
	Component Description.	Primary Transmitter
	Amount:	\$1,231,600.80
	Component Description:	A. Transmitter
	Amount:	\$387,559.85
Service entrance 3 phase /800 amp/208 volt	Information not provided.	

Cost Information

Antennas

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Antenna SBB- 24C170	\$226,106.32	\$170,544.86		\$94,950.71	
UHF – Broadband Panel, Side Mount Auxiliary /Interim, 546 horizontally polarized	\$75,635.63	\$75,635.63	THIS IS THE CORRECTED INTERIM ANTENNA CATEGORY, ESTIMATED COST PER DTVPROS QUOTE JEHQ 1487 - 50% split with WSAZ	\$51,856.80	N/A
Sweep test of existing antenna	\$6,730.00	\$4,718.54	Estimated Cost Justification WQCW-280- Sweep test interim antenna V0	\$4,078.54	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$50,000.00	WQCW's half of the shared combiner	\$16,324.68	N/A
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,700.00	\$6,500.00	WQCW's half of the cost	N/A	N/A

Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$11,000.00	WQCW's half of the shared antenna brackets	N/A	N/A
UHF – Broadband Panel, Side Mount Auxiliary /Interim, 530 horizontally polarized	\$22,690.69	\$22,690.69	***System Notice: Estimate adjusted and locked because line has been superseded. ***WCQW's half of the cost	\$22,690.69	Please do not upload invoices here
Primary Antenna PEPSIL60D	\$877,880.00	\$371,685.09		\$223,210.85	
Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	\$18,950.00	\$9,000.00	WQCW's half of the cost	N/A	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$104,558.09	WQCW's half of the cost of Q-76838 minus cost of retuning (section 3 of Q-76838)	\$41,271.65	N/A
			Q 10000)		

UHF - High	\$768,000.00	\$254,927.00	WQCW's half	\$179,379.20	N/A
Power Top			of the shared		
Mount			antenna with		
(200-1000			WSAZ per		
kW), Two			DTVPros		
Station			Quote JEHQ		
broadband			1484,		
panel			WQCW's half		
antenna,			of the shared		
elliptically			custom index		
or			plate with		
circularly			WSAZ per		
polarized			Electronics		
			Research,		
			INC proposal		
			20181106-779		
Sub-total	\$1,103,986.32	\$542,229.95	N/A	\$318,161.56	N/A
Total for all systems	\$6,361,788.98	\$5,025,765.19	N/A	\$3,158,049.31	N/A

Components

Actual Information Description	File Name	
UHF – Broadband Panel, Side Mount Auxiliary /Interim, 546 horizontally polarized	Component Description: Amount:	UHF - Broadband Panel \$14,038.99
	Component Description: Amount:	UHF - BROADBAND PANEL, SIDE MOUNT AUX /INTERIM \$18,908.91
	Component Description: Amount:	Interim Antenna \$18,908.90

Sweep test of existing		
antenna	Component Description:	WQCW-280-
		Sweep test Interim
		Antenna
	Amount:	\$800.00
	Common on the Post of the second	WOOW ooo
	Component Description:	WQCW-280-
		Sweep test Interim Antenna
	Amount:	\$1,518.54
	Amount.	ψ1,510.54
	Component Description:	Sweep Test
	Amount:	\$960.00
	Component Description:	WQCW-Sweep
		Test Interim
		Antenna
	Amount:	\$800.00
New combiner, cost per		
channel (without antenna)	Component Description:	Interim Channel
		Combiner
	Amount:	\$16,324.68
	Component Description:	Interim combiner
	Component Decemparem	(70% payment of
		Quote Q-77110
		sec. 1 and 4)
	Amount:	\$31,856.01
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	Information not provided.	
Side mount brackets for		
high power antennas (if not	Component Description:	ANTENNA
	Component Description:	ANTENNA MOUNT

UHF – Broadband Panel, Side Mount Auxiliary /Interim, 530 horizontally polarized	Component Description: Amount:	Interim Antenna \$22,690.69
Elbow complex, broadband, at antenna input, per 8 3 /16. feedline (if needed)	Information not provided.	
New combiner, cost per channel (without antenna)	Component Description: Amount:	Interim channel combiner \$41,271.65
Sweep test of existing antenna	Component Description: Amount:	WQCW-210- Sweep test New Primary Antenna \$800.00
	Component Description: Amount:	WQCW-210- Sweep test New Primary Antenna \$800.00
	Component Description: Amount:	Sweep test Primary Antenna \$960.00

UHF - High Power Top Mount (200-1000 kW), Two Station broadband panel antenna, elliptically or circularly polarized

Component Description: UHF-HIGH

POWER TOP MOUNT (200-

1000KW)

Amount: \$55,431.00

Component Description: Antenna Mount

Amount: \$2,000.00

Component Description: New Primary

Antenna

Amount: \$66,517.20

Component Description: UHF High Power

Top Mount

Amount: \$55,431.00

Transmission Line

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Transmission Line	\$222,720.00	\$150,921.02		\$60,368.39	
Rigid Transmission Line - copper, 6 1 /8" broadband	\$222,720.00	\$150,921.02	WQCW's half of the cost	\$60,368.39	N/A
Primary Transmission Line	\$407,778.00	\$193,669.00		\$119,869.19	
Rigid Transmission Line - copper, 8 3 /16" broadband	\$407,778.00	\$193,669.00	WQCW's half of the cost	\$119,869.19	N/A
Sub-total	\$630,498.00	\$344,590.02	N/A	\$180,237.58	N/A
Total for all systems	\$6,361,788.98	\$5,025,765.19	N/A	\$3,158,049.31	N/A

Actual Information	
Description	File Name

Rigid Transmission Line - copper, 6 1/8" broadband	Component Description	Interim
	Component Description:	Transmission Line
	Amount:	\$22,638.15
	Amount.	ΨΖΖ,030.13
	Component Description:	RIGID
		TRANSMISSION
		LINE - COPPER
	Amount:	\$18,865.12
	Component Description:	Rigid Transmission
		Line - Copper
	Amount:	\$18,865.12
Rigid Transmission Line -		
copper, 8 3/16" broadband	Component Description:	MACX875B-1
	Amount:	\$37,459.13
	Component Description	Now Primary
	Component Description:	New Primary Transmission Line
		Hallolliloololl Lifte
	Amount	¢44.0E0.02
	Amount:	\$44,950.93
	Amount: Component Description:	\$44,950.93 MACX8758-1

Tower Equipment and Rigging Costs

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

Description Primary Tower GTOWER	Predetermined Cost Estimate \$644,100.00	Estimated Cost \$582,190.87	Estimated Cost Justification	Actual Cost \$169,470.87	Actual Cost Justification
Tall Tower (greater than 500')	\$210,500.00	\$169,470.87	Estimated Cost Justification WQCW- 410-Tall Tower (greater than 500') v0	\$169,470.87	N/A
Structural engineering tower load study for well documented tower	\$12,600.00	\$12,720.00	Includes state and local taxes	N/A	N/A
Major tower reinforcement /modifications	\$421,000.00	\$400,000.00	N/A	N/A	N/A
Sub-total	\$644,100.00	\$582,190.87	N/A	\$169,470.87	N/A
Total for all systems	\$6,361,788.98	\$5,025,765.19	N/A	\$3,158,049.31	N/A

Actual Information		
Description	File Name	

Tall Tower (greater than		
500')	Component Description:	Tower Rigging
		Services Tall
		Tower (500')
	Amount:	\$123,168.75
	Component Description:	RF Technical
		work
	Amount:	\$5,245.87
	Component Description:	Tower rigging
	Amount:	services \$41,056.25
	Amount.	Ψ41,000.20
Structural engineering tower load study for well documented tower	Information not provided.	
Major tower reinforcement /modifications	Information not provided.	

Outside Professional Services

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost
Outside Professional Services	\$177,120.00	\$167,750.00		\$98,695.55	
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	\$250.00	N/A
Project management of the transition	\$142,200.00	\$135,000.00	N/A	\$91,964.05	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$2,412.50	N/A
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	\$2,105.00	\$2,000.00	N/A	N/A	N/A
ASR modification (prepare FCC Form 854)	\$2,105.00	\$2,000.00	N/A	N/A	N/A

Attorney Fees - Prepare and File request for Special Temporary Authorization	\$3,680.00	\$3,500.00	N/A	\$207.50	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$196.50	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	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	\$740.00	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$2,200.00	N/A
Prepare request for Special Temporary Authorization	\$2,050.00	\$1,500.00	N/A	\$725.00	N/A

Sub-total	\$177,120.00	\$167,750.00	N/A	\$98,695.55	N/A
Total for all systems	\$6,361,788.98	\$5,025,765.19	N/A	\$3,158,049.31	N/A

Components		
Actual Information Description	File Name	
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Component Description: Amount:	Consulting Engineer \$250.00
Project management of the transition	Component Description: Amount:	Project management \$2,509.40
	Component Description: Amount:	Project Management \$2,558.55
	Component Description: Amount:	Project Management \$5,551.95
	Component Description: Amount:	Project Management \$1,401.45
	Component Description: Amount:	Project Management \$2,005.70
	Component Description: Amount:	Project Management \$2,414.70

Component Description: Project

Management

Amount:

\$1,558.55

Component Description: Project

Management

Amount:

\$2,653.25

Component Description:

Project Management

Amount:

\$3,539.50

Component Description:

Project Management

Amount:

\$3,627.30

Component Description:

Project

Amount:

Management

\$2,649.40

Component Description:

Project

Amount:

Management

\$3,017.50

Component Description:

Project

Amount:

Management \$4,398.40

Component Description:

Project Management

Amount:

\$28.20

Component Description:

Project

Amount:

Management

\$2,874.40

Component Description: Project
Management
Amount: \$1,609.00

Component Description: Project

Management \$5.317.55

Amount: \$5,317.55

Component Description: Project

Management

Amount: \$2,221.55

Component Description: Project

Management

Amount: \$1,728.10

Component Description:

Project

Management

Amount: \$4,696.90

Component Description: Project

Management

Amount: \$1,543.30

Component Description: Cost Reconciliation

Amount: \$1,965.45

Component Description: Project

Management

Amount: \$3,057.40

Component Description: This invoice has

been moved to the correct category.

correct categ

Amount: N/A

Component Description: Transition Related

Project

Management Costs

Amount: \$1,500.00

Component Description: Project

Management

Amount: \$2,035.25

Component Description: Project

Management

Amount: \$2,906.30

Component Description: Project

Management

Amount: \$3,291.45

Component Description: Project

Management

Amount: \$1,743.75

Component Description: Project

Management

Amount: \$1,829.35

Component Description: Project

Management

Amount: \$2,154.80

Component Description: Project

Management

Amount: \$2,813.35

Component Description: Project

Management

Amount: \$1,988.85

Component Description: Project Management \$2,755.65 Amount: **Project Component Description:** Management Amount: \$1,985.40 **Component Description: Project** Management **Amount:** \$1,477.25 **Component Description: Project** management **Amount:** \$2,555.15 Perform engineering study for new channel **Component Description:** Conduct channel assignment and antenna study to consider development possible transition of WQCW Amount: \$1,175.00 **Component Description:** Consulting Engineer Amount: \$425.00 **Component Description:** Perform engineering study for new channel assignment Amount: \$812.50 FAA consultant, including Information not provided. cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase

ASR modification (prepare FCC Form 854)	Information not provided.	
Attorney Fees - Prepare and File request for Special Temporary Authorization	Component Description: Amount:	Professional Services \$207.50
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.	
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Component Description: Amount:	Complete and file ititial repack CP application \$196.50
Prepare and or review reimbursement form	Information not provided.	
Address transition timing and coordination issues w/ other stations and wireless	Component Description: Amount:	Review linked set information for WQCW \$740.00

Prepare engineering section of FCC Form 2100 **Component Description:** RF Consulting Fee (main), Construction Permit \$1,425.00 Amount: Application **Component Description:** Provide FCC contour and Longley-Rice predicted coverage maps regarding pre-auction Ch-17 **Amount:** \$400.00 **Component Description:** support response to review of reimbursement form 399 provide summaries of additional antenna configurations **Amount:** \$375.00 Prepare request for Special **Temporary Authorization Component Description:** Develop technical parameters for interim antenna **Amount:** \$725.00

Other Expenses

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	\$129,477.00	\$121,172.15		\$70,567.40	
DTV Medical Facility Notification	\$11,550.00	\$3,050.15	N/A	\$2,877.50	N/A
FCC Filing Fees - Form 2100 license to cover application	\$335.00	\$325.00	N/A	N/A	N/A
Non-zoning permits	\$11,660.00	\$11,660.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$67,237.00	\$67,237.00	Maynard C. Smith Construction Co. quote for WQCW Demo Safety Klean Disposal Quote for WQCW	\$65,000.00	N/A
Equipment Delivery and Handling Charges	\$15,900.00	\$15,900.00	N/A	N/A	N/A
Equipment Storage	\$10,600.00	\$10,600.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	\$10,000.00	\$10,000.00	N/A	\$289.90	N/A

FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$400.00	Please see Estimated Cost Justification WQCW-610- STA FCC Filing Fees v0	\$400.00	N/A
MVPD Notification of Channel Change	\$2,000.00	\$2,000.00	Per Estimated Cost Justification WQCW-610- MVPD Notifications v0	\$2,000.00	N/A
Sub-total	\$129,477.00	\$121,172.15	N/A	\$70,567.40	N/A
Total for all systems	\$6,361,788.98	\$5,025,765.19	N/A	\$3,158,049.31	N/A

Actual Information Description	File Name	
DTV Medical Facility Notification	Component Description: Amount:	Mailing: Print and mail a two page, black and white generically addressed letter \$2,877.50
FCC Filing Fees - Form 2100 license to cover application	Information not provided.	
Non-zoning permits	Information not provided.	
Disposal Costs (for equipment and other waste, net of any salvage value)	Component Description: Amount:	Quote # WQCW Demo \$65,000.00

Equipment Delivery and Handling Charges	Information not provided.	
Equipment Storage	Information not provided.	
Develop and air announcement of upcoming channel change	Component Description: Amount:	Total Professional Services \$289.90
FCC Filing Fees - Special Temporary Authorization request	Component Description: Amount:	WQCW-610-STA FCC Filing Fees \$400.00
MVPD Notification of Channel Change	Component Description: Amount:	Total Professional Services \$2,000.00
	Component Description:	Total Professional Services \$2,000.00

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$6,361,788.98	\$5,025,765.19	\$3,158,049.31

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

Section Question Response

Submission of Estimated Expenses Statements

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

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

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

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

I declare, under penalty of perjury, that I am an authorized representative of the abovenamed applicant for the Authorization(s) specified above. Robert Folliard , III

Assistant Secretary

03/16/2020

Section Question Response

Submission of Actual Cost Documentation Statements

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

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

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

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

I declare, under penalty of perjury, that I am an authorized representative of the abovenamed applicant for the Authorization(s) specified above. Robert Folliard , III

Assistant Secretary

03/16/2020

Attachments