

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility	46728	Service: DTV	Call	WCAX-TV	Channel: 20 (UHF)
ID:	40120	Bernee. BIT	Sign:	MOAA II	
	000000	0404	Olghi.		
File	000002	8424			
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	WCAX PO Box 4508 ATLANTA, GA 30319 United States	+1 (404) 504- 9828	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 Harington Widelity	4031 University Dr Ste. 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	WCAX-TV will transition from Channel 22 to the newly assigned Channel 20. This will impact WPTZ which shares the tower and antenna

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	PWR60D2			
		Year	2006			
		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-60			
		Transmitter Type	Solid State			
		Solid State Cooling	Liquid Cooled			
		Solid State Power capacity	38.4 kW			
		Justification for New Transmitter	There is no room available to perform a retune of the existing IOT transmitter.			

Primary	Other Transmitter Costs					
Transmitter	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 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 Information not provided.

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	Needed to broadcast during transition period because the existing IOT must be removed to allow for the installation of the interim transmitter.			

Interim	Other Transmitter Costs					
Transmitter	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 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
Inside RF System	Is an additional interior RF system required to support this interim transmitter?	Yes

Interim	Other Transmitter Cost Not Listed		
Transmitter	Name	Description	
	UHF Inside RF System	UHF Inside RF System including switching	

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

Existing Antenna Information

Primary

Existing Antenna Type of change Description Antenna Use	Retune Existing Primary (Main)
Antenna Use	-
	(Ividiii)
Description of Use	N/A
Ownership	Owned
Owner	N/A
Site	N/A
Is the existing antenna shared with an station or stations?	nother Yes
Is the existing antenna directional?	Yes
Is antenna in operating condition?	Yes
Is antenna located on or in close proxition to an antenna farm?	imity Yes
Existing Antenna Class	Full Power
Manufacturer and Type Mounting	Top Mount
Antenna position in stack	Bottom
Polarization	Horizontal
Туре	Broadband Panel
Number of Stations Supported	2
Number of Panels	40
Design power capacity in use	100.0 %
Lower Limit	470.00 MHz

Upper Limit	710.00 MHz
Other Antenna Type	N/A
ERP: (Effective Radiated Power)	443.0 kW
Manufacturer	Dielectric
Model	TUP-04 /C4SP-10 /40H-2-R
Year	2006

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

Facility ID	Call Sign
57476	WPTZ

Primary Adjustment to Existing Antenna

Section	Question	Response
Sweep Test of Existing Antenna	Do you need a sweep test of existing antenna?	Yes

Primary Other Antenna Costs

Antenna

Antenna	Section	Question	Response
	Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
		Туре	New
		Number of channels supported	3
		Frequencies of channels supported	Upper and lower frequency
		Frequency	470.0 MHz - 698.0 MHz

Primary
Antenna Other Antenna Cost Not Listed Name Description Lower Power Elbow Complex 3 1/8" line feed, broadband Lower Power Line Antenna Sweep Antenna sweep for low power line

Auxiliary Add Antenna Information

Antenna	Section	Question	Response
	Existing Antenna Description	Type of change	Retune Existing
		Antenna Use	Auxiliary (Backup)
		Description of Use	Backup
		Ownership	Owned
		Owner	N/A
		Site	N/A
		Is this antenna currently shared with any other stations?	Yes
		Is this antenna directional?	No
		Is antenna in operating condition?	Yes
		Is antenna located on or in close proximity to an antenna farm?	Yes
	Existing Antenna Manufacturer and Type	Class	Full Power
		Mounting	Top Mount
		Antenna position in stack	Тор
		Polarization	Horizontal
		Туре	Broadband Panel
		Number of Stations Supported	2

	Number of Panels	8
	Design power capacity in use	100.0 %
	Lower Limit	470.00 MHz
	Upper Limit	710.00 MHz
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	76.6 kW
	Manufacturer	Dielectric
	Model	TUP-04-2 /8U-1-R
	Year	2006

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

Facility ID	Call Sign
57476	WPTZ

Adjustment to Existing Antenna

Antenna

Section	Question	Response
Sweep Test of Existing Antenna	Do you need a sweep test of existing antenna?	Yes

Auxiliary Other Antenna Costs

Antenna	Section	Question	Response
	Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
		Туре	New
		Number of channels supported	3
		Frequencies of channels supported	Upper and lower frequency

Other Antenna Cost Not Listed

Auxiliary Antenna

Information not provided.

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

ransmissio	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 this transmission currently shared with any other stations?	Yes
		Is Transmission Line in operating condition?	Yes
	Existing Transmission Line Manufacturer and Type	Manufacturer	
		Туре	Rigid
		Diameter	4 1/16 inches
		Other Diameter	N/A
		Segment Length	Broadband
		Other Segment Length	N/A
		Number of parallel runs	1
		Length	500 feet per run

Auxiliary Add Transmission Line

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

Facility ID	Call Sign
57476	WPTZ

Auxiliary Transmissio	New Transmission Line			
	n Line Section	Question	Response	
	New Transmission Line Costs	Use	Auxiliary (Backup)	
		Description of Use	Backup	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	No	
		Туре	Rigid	
		Diameter	4 1/16 inches	
		Other Diameter	N/A	
		Segment Length	Broadband	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	500 feet per run	
		Justification for New Transmission Line	Line sweep determined that flange summing occurs in band for repacked channel 20 eliminating chances to reuse any of the existing lines	

Other Transmission Line Expenses Not Listed Auxiliary Transmission to provided.

ransmissio	n Settion	Question	Response
	Existing Transmission Line Description	Type of change	Purchase New
		Use	Primary (Main)
		Description of Use	N/A
		Ownership	Owned
		Owner	N/A
Existing Transmission Line Manufacturer and Type		Site	N/A
		Is the existing transmission line shared with another station or stations?	Yes
		Is Transmission Line in operating condition?	Yes
	-	Manufacturer	
		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	450 feet per run

Primary Existing Transmission Line

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

Facility ID	Call Sign
57476	WPTZ

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	Broadband	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	450 feet per run	
		Justification for New Transmission Line	Line sweep determined that flange summing occurs in band for repacked channel 20 eliminating chances to reuse any of the existing lines	

Other Transmission Line Expenses Not Listed Transmission

Primary Transmission	Add 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	Owned	
		Owner	N/A	
		Site	N/A	
		Is this transmission currently shared with any other stations?	Yes	
		Is Transmission Line in operating condition?	Yes	
	Existing Transmission Line Manufacturer and Type	Manufacturer		
		Туре	Rigid	
		Diameter	3 1/8 inches	
		Other Diameter	N/A	
		Segment Length	Broadband	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	450 feet per run	

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

Add Transmission Line

Facility ID	Call Sign
57476	WPTZ

Primary	New Transmission Line			
Transmissio	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	3 1/8 inches	
		Other Diameter	N/A	
		Segment Length	Broadband	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	450 feet per run	
		Justification for New Transmission Line	Line sweep determined that flange summing occurs in band for repacked channel 20 eliminating chances to reuse any of the existing lines	

Primary	Other Transmission Line Expenses Not Listed	
Transmissio	n Line	Description
	Sweep Existing Transmission Line	Sweep test of existing transmission 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

mary	Existing	Tower

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?	Terrain Constrained		
		Is this tower currently shared with any other stations?	Yes		
		One or more FM, AM or TV radio broadcaster(s)	Yes		
		Others Types of Users	Yes		
		Is tower documented for structural analysis?	No		
		Is tower compliant with Rev G?	No		
	Existing Tower Structure Registration	Do you have a tower registration number?	No		
	Registration	ASR Number			
	Coordinates (NAD83 (North American Datum of	Latitude (NAD83)	44° 31' 32.19" N-		
	1983))	Longitude (NAD83)	072° 48' 56.4" W-		
		Overall Structure Height	185.00 feet		
		Support Structure Height	130.00 feet		

Ground Elevation Above Mean Sea Level (AMSL)	4166.67 feet
Structure Type	MTOWER - Monopole
Tower Owner	WCAX-TV
Date Constructed	01/01/2005

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
57476	WPTZ	DTV

Other Types of Users

Users

WVPS FM

WEZF FM

Tower Modification Costs Primary 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 Minor are needed: Reinforcements needed

Tower Rigging Costs Primary

Tower

Tower

Tower Rigging Costs	Complex Tower	Terrain constrained
Helicopter Services Required	Are helicopter services required?	Yes

Primary Tower

Other Tower Expenses Not Listed

Name	Description
Move Equipment	Replace transmission lines
Corrosion analysis	Corrosion analysis
Tower structural analysis	Structural analysis of existing tower

Outside Professional	Section	Question	Response
	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	No
		Quantity	N/A
		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	Yes
	ASR Modification	No
	FAA Consultation (including preparation of FAA Form 7460)	No
	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	Yes
	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	Yes
		FCC Construction Permit Minor Change	Yes
		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	Other Expenses Not Listed		
	Name	Description	
	Taxes	State and Local Taxes	

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
Interim Transmitter ULXTE-30	\$974,728.00	\$845,852.00		\$557,453.54	
UHF Inside RF System	\$70,000.00	\$70,000.00	N/A	N/A	N/A
UHF inside RF system including switching	\$147,500.00	\$140,000.00	N/A	N/A	N/A
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.	\$73,228.00	\$73,228.00	See quote, amended to be added to this document per FCC request dated 8/14 /17 (complete response narrative attached as well). The physical build for the interim /permanent transmitter solution drove the cost of quote.	\$30,555.00	N/A

UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	\$684,000.00	\$562,624.00	N/A	\$526,898.54	N/A
Primary Fransmitter JLXTE-60	\$1,498,000.00	\$1,190,665.00		\$984,944.19	
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.	\$25,000.00	\$25,000.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	\$1,473,000.00	\$1,165,665.00	N/A	\$984,944.19	N/A
Sub-total	\$2,472,728.00	\$2,036,517.00	N/A	\$1,542,397.73	N/A
Total for all systems	\$5,162,981.25	\$3,745,738.15	N/A	\$2,127,636.80	N/A

Components

Actual Information Description	File Name
UHF Inside RF System	Information not provided.
UHF inside RF system including switching	Information not provided.

Other Electrical Service: The new transmitter will require reconfiguration of the electrical service on site. The electrical work cost has been estimated based on	Component Description: Amount:	Labor and material \$16,055.00
verbal guidance from local electrical contractors.	Component Description: Amount:	materials & installation of the electrical service to the interim UHF transmitter \$14,500.00
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	Component Description: Amount:	ULXTE-30 Transmitter \$344,497.67
	Component Description: Amount:	ULXTE-30 Transmitter \$182,400.87
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.	Information not provided.	
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	Component Description: Amount:	ULXTED-60 Transmitter \$984,944.19

Antennas

Cost Information

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

	Predetermined	Estimated	Estimated Cost		Actual Cost
Description	Cost Estimate	Cost		Actual Cost	Justification
Primary Antenna TUP-04 /C4SP-10 /40H-2-R	\$676,536.25	\$401,373.50		\$273,170.40	
Lower Power Line Antenna Sweep	\$6,400.00	\$6,400.00	N/A	\$3,520.00	N/A
Lower Power Elbow Complex	\$18,506.25	\$18,506.25	DTV Pros Quote JEHQ1327- 03	\$10,178.43	N/A
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,700.00	\$20,634.00	DTV Pros Quote JEHQ1327- 03	\$11,348.70	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$349,433.25	Catalog cost listed as 80k per channel; GatesAir Quote Q- 70240	\$244,603.27	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$3,520.00	N/A

UHF - High Power Top Mount (200-1000 kW), Two Station broadband panel antenna, horizontally polarized	\$547,000.00	\$0.00	Ghost antenna inserted by form, cannot remove. This is a bug.	\$0.00	N/A
Auxiliary Antenna TUP-04-2 /8U-1-R	\$648,880.00	\$260,350.00		\$11,192.50	
Elbow complex, broadband, at antenna input, per 4 1/16. feedline (if needed)	\$10,950.00	\$13,950.00	DTV Pros Quote JEHQ1327- 03	\$7,672.50	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$240,000.00	Catalog cost listed as 80k per channel	N/A	N/A
UHF - High Power Top Mount (200-1000 kW), Two Station broadband panel antenna, horizontally polarized	\$547,000.00	\$0.00	Ghost antenna, cannot be removed. This is a bug.	N/A	N/A
Sweep test of existing	\$6,730.00	\$6,400.00	N/A	\$3,520.00	N/A
antenna					

Total for	\$5,162,981.25	\$3,745,738.15	N/A	\$2,127,636.80	N/A
all					
systems					

Components

Actual Information Description	File Name	
Lower Power Line Antenna Sweep	Component Description:	WCAX Sweep Test Lower Power New Primary Antenna
	Amount:	\$1,600.00
	Component Description:	WCAX Sweep Test Lower Power New Primary
	Amount:	Antenna \$1,920.00
Lower Power Elbow Complex	Component Description:	Rigid Transmission Line - Copper T/L 3-50
	Amount:	234.00 MF EX CONN \$4,626.56
	Component Description:	Rigid Transmission Line Copper
	Amount:	\$5,551.87

Component Description:	WCAX Elbow
Amount:	Complex New Primary Antenna \$5,158.50
Component Description:	WCAX Elbow Complex New
Amount:	Primary Antenna \$6,190.20
Component Description:	Combiner
Amount:	\$244,603.27
Component Description:	WCAX Sweep Test New Primar
	Antenna System
Amount:	\$1,600.00
Component Description:	WCAX Sweep
	Test New Primar
	Antenna System
Amount:	\$1,920.00
Information not provided.	
	Amount: Component Description: Amount: Component Description: Amount: Component Description: Amount: Component Description: Amount:

Elbow complex, broadband, at antenna input, per 4 1/16. feedline (if needed)	Component Description:	WCAX Elbow Complex New
	Amount:	Auxiliary Antenna \$3,487.50
	Component Description:	WCAX Elbow Complex New
	Amount:	Auxiliary Antenna \$4,185.00
New combiner, cost per channel (without antenna)	Information not provided.	
UHF - High Power Top Mount (200-1000 kW), Two Station broadband panel antenna, horizontally polarized	Information not provided.	
Sweep test of existing antenna		
	Component Description:	WCAX Sweep Test New Auxiliar Antenna
	Amount:	\$1,600.00
	Component Description:	WCAX Sweep
		Test New Auxiliar
		Antenna

Transmission Line

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Transmission Line	\$104,400.00	\$148,315.20		\$81,573.35	
Rigid Transmission Line - copper, 6 1 /8" broadband	\$104,400.00	\$148,315.20	DTV Pros Quote JEHQ1327- 03	\$81,573.35	N/A
Primary Transmission Line	\$57,500.00	\$75,480.30		\$39,589.16	
Rigid Transmission Line - copper, 3 1 /8" broadband	\$54,000.00	\$71,980.30	DTV Pros Quote JEHQ1327- 03	\$39,589.16	N/A
Sweep Existing Transmission Line	\$3,500.00	\$3,500.00	See invoice	\$0.00	N/A
Auxiliary Transmission Line	\$81,500.00	\$94,255.15		\$51,840.32	
Rigid Transmission Line - copper, 4 1 /16" broadband	\$81,500.00	\$94,255.15	DTV Pros Quote JEHQ1327- 03	\$51,840.32	N/A
Sub-total	\$243,400.00	\$318,050.65	N/A	\$173,002.83	N/A
Total for all systems	\$5,162,981.25	\$3,745,738.15	N/A	\$2,127,636.80	N/A

Actual Information Description	File Name	
Rigid Transmission Line - copper, 6 1/8" broadband	Component Description:	WCAX New Primary Transmission Line
	Amount:	\$37,078.79
	Component Description:	WCAX New Primary Transmission Line
	Amount:	\$44,494.56
Rigid Transmission Line - copper, 3 1/8" broadband	Component Description:	WCAX Lower Power New Primary
	Amount:	Transmission Line \$17,995.07
	Component Description:	WCAX Lower Power New Primary
	Amount:	Transmission Line \$21,594.09
Sweep Existing Transmission Line		
	Component Description:	Sweep test of all transmission lines
	Amount:	\$3,490.25

Rigid Transmission Line -		
copper, 4 1/16" broadband	Component Description:	WCAX New
		Auxiliary
		Transmission Line
	Amount:	\$23,563.78
	Component Description:	WCAX New
	Component Description.	Auxiliary
		Transmission Line
	Amount:	
	Amount.	\$28,276.54

Tower Equipment and Rigging Costs

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Tower MTOWER	\$655,940.00	\$292,640.00		\$54,853.75	
Tower structural analysis	\$2,500.00	\$2,500.00	See invoice	\$2,500.00	N/A
Corrosion analysis	\$1,500.00	\$1,500.00	See invoice	\$1,500.00	N/A
Tower mapping for an undocumented /poorly documented tower and preparation of documentation necessary for tower load study	\$26,300.00	\$12,000.00	N/A	\$5,750.00	N/A
Move Equipment	\$0.00	\$0.00	N/A	N/A	N/A
Tower Helicopter Lift	\$46,640.00	\$46,640.00	May require helicopter to delivery equipment and transmission line to transmitter site.	N/A	N/A

Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$80,000.00	N/A	\$45,103.75	N/A
Minor tower reinforcement /modifications	\$158,000.00	\$150,000.00	N/A	N/A	N/A
Sub-total	\$655,940.00	\$292,640.00	N/A	\$54,853.75	N/A
Total for all systems	\$5,162,981.25	\$3,745,738.15	N/A	\$2,127,636.80	N/A

Actual Information Description	File Name	
Tower structural analysis		
	Component Description:	Engineering
		Evaluation
	Amount:	\$1,250.00
	Component Description:	Engineering
		Evaluation
	Amount:	\$1,250.00
Corrosion analysis		
	Component Description:	Level 1 Corrosion
		Risk Analysis
	Amount:	\$750.00
	Component Description:	Level 1 Corrosion
		Risk Analysis
	Amount:	\$750.00

Component Description: Amount:	Tower Mapping \$2,875.00
Component Description: Amount:	Tower Mapping \$2,875.00
Information not provided.	
Information not provided.	
Component Description: Amount:	Tower Equipment and Rigging \$45,103.75
Information not provided.	
	Amount: Component Description: Amount: Information not provided. Information not provided. Component Description: Amount:

Outside Professional Services

Cost Information

	Predetermined	Estimated	Estimated Cost		Actual Cost
Description	Cost Estimate	Cost	Justification	Actual Cost	Justification
Outside Professional Services	\$210,325.00	\$189,750.00		\$70,975.03	
RF Exposure Measurements	\$21,050.00	\$20,000.00	N/A	\$10,692.50	N/A
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	\$10,520.00	\$0.00	N/A	N/A	N/A
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$3,680.00	\$3,500.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	N/A	N/A
Attorney Fees - 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	\$1,250.00	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	\$0.00	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	\$0.00	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$187.50	N/A

Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$2,983.33	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
Project management of the transition	\$142,200.00	\$135,000.00	N/A	\$55,861.70	N/A
Sub-total	\$210,325.00	\$189,750.00	N/A	\$70,975.03	N/A
Total for all systems	\$5,162,981.25	\$3,745,738.15	N/A	\$2,127,636.80	N/A

Actual Information	
Description	File Name

	1	
RF Exposure Measurements	Component Description:	WCAX-580-Field
	component Description.	Eng RF
		measurements
	Amount:	\$3,237.50
	Component Description:	Consultation on regulatory compliance at base station.
	Amount:	\$2,100.00
	Component Description:	Provide 2 RF
		Specialists from GTI to attend the WCAX Mt. Mansfield tower
		site & Perform RF measurements to identify OET 65
	Amount:	issues. \$5,355.00
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	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	Component Description: Amount:	Email re: lifting c anti-collusion rul time of FCC lette emails re: FCC letter, next steps Email re: WPTZ \$600.00
	Component Description:	Emails, review draft 2100, send draft to Gray. File 2100.
	Amount:	\$650.00
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:	review engineeri portions and related exhibits c "90 day" FCC CF application
	Amount:	\$187.50

Perform engineering study for new channel assignment and antenna development	Component Description: Amount:	Email duTreil re issues in repacking application \$200.00
	Component Description:	Perform engineering study for new channel
	Amount:	assignment \$1,500.00
	Component Description:	Engineering Study for New Channel Assignment
	Amount:	\$1,283.33
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.	
Prepare and or review reimbursement form	Information not provided.	
Project management of the		
transition	Component Description:	Project Monogoment
	Amount:	Management \$2,515.60
	Component Description:	Project Management
	Amount:	\$1,891.25
	Component Description:	Project Management
	Amount:	\$1,912.75
	Component Description:	Project
	Amount:	Management \$2,442.90

Component Description: Amount:	Project Management \$2,128.55
Component Description: Amount:	Project Management \$2,574.45
Component Description: Amount:	Project Management \$5,251.90
Component Description: Amount:	Project management \$1,328.55
Component Description: Amount:	Project Management \$2,498.65
Component Description: Amount:	Project Mgt \$718.30
Component Description: Amount:	Project Management \$3,913.15
Component Description: Amount:	Project Mgt \$28.20
Component Description: Amount:	Project management \$2,330.15

Component Description: Amount:	Project Mgt \$802.25
Component Description: Amount:	Project Management \$2,158.05
Component Description: Amount:	Project Mgt \$2,507.30
Component Description: Amount:	Project management \$2,951.90
Component Description: Amount:	Transition Related Project Management Costs \$3,300.00
Component Description: Amount:	Project Management \$1,869.35
Component Description: Amount:	Project Management \$2,111.25
Component Description: Amount:	Project Management \$2,624.35
Component Description: Amount:	Project Mgt \$2,381.30

Component Description: Amount:	Project Management \$1,857.60
Component Description: Amount:	Project Mgt \$3,763.95

Other Expenses

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	\$255,172.00	\$247,057.00		\$2,044.56	
Equipment Storage	\$12,000.00	\$12,000.00	N/A	\$1,200.00	N/A
DTV Medical Facility Notification	\$11,550.00	\$3,490.00	N/A	N/A	N/A
FCC Filing Fees - Form 2100 minor change CP application	\$1,110.00	\$1,070.00	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
FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$190.00	N/A	N/A	N/A
Non-zoning permits	\$2,500.00	\$2,500.00	N/A	N/A	N/A
BLM or NFS Coordination	\$10,000.00	\$10,000.00	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

Equipment Delivery and Handling Charges	\$10,000.00	\$10,000.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	\$10,000.00	\$10,000.00	N/A	\$844.56	N/A
MVPD Notification of Channel Change	\$1,000.00	\$1,000.00	N/A	N/A	N/A
Taxes	\$171,482.00	\$171,482.00	N/A	N/A	N/A
Sub-total	\$255,172.00	\$247,057.00	N/A	\$2,044.56	N/A
Total for all systems	\$5,162,981.25	\$3,745,738.15	N/A	\$2,127,636.80	N/A

/19-2/15/19 4 weeks \$400.00Amount:*400.00Component Description:Equipment in warehouse, storage \$400.00Amount:\$400.00	al Information ription	File Name	
warehouse, storage from 1/1 /19-2/15/19 4 weeks 	pment Storage		
Amount:\$400.00Component Description:Equipment in warehouse, storageAmount:\$400.00		Component Description:	warehouse, storage from 1/19
Component Description: Equipment in warehouse, storage Amount: \$400.00			
warehouse, storage Amount: \$400.00		Amount:	\$400.00
Amount: \$400.00		Component Description:	
			storage
		Amount:	\$400.00
		Component Description:	Equipment in
warehouse,			
Amount: \$400.00		Amount:	-

DTV Medical Facility Notification	Information not provided.	
FCC Filing Fees - Form 2100 minor change CP application	Information not provided.	
FCC Filing Fees - Form 2100 license to cover application	Information not provided.	
FCC Filing Fees - Special Temporary Authorization request	Information not provided.	
Non-zoning permits	Information not provided.	
BLM or NFS Coordination	Information not provided.	
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.	
Equipment Delivery and Handling Charges	Information not provided.	
Develop and air announcement of upcoming channel change	Component Description: Amount:	Moving Services Delivery \$844.56
MVPD Notification of Channel Change	Information not provided.	
Taxes	Information not provided.	

Cost Information	Grand Total			
		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$5,162,981.25	\$3,745,738.15	\$2,127,636.80

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

Attachments

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