

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

				-			
F	acility	41674	Service: DTX	Call	WNDU-TV	Channel: 27 (UHF)	
IE	D:			Sign:			
F	ile	000002	28730				
Ν	umber:						
F	RN: 00 ′	18223693	Date	09/15			
			Submitted:	/2018			

Applicant Name, Type, and Contact Information

GRAY TELEVISION LICENSEE, LLCRobert+1 (202) FolliardRobert.Limited Liability Company437050-1585Folliard@gray.Company43704370tvPeachtree RoadKalanta, GA 303195031950319United StatesLinited StatesLinited States	ormation	Applicant	Address	Phone	Email	Applicant Type
			Folliard 4370 Peachtree Road Atlanta, GA 30319	. ,	Folliard@gray.	•

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer	Preparer Contact Name and Information				
Contact Information	Applicant	Address	Phone	Email	
	Samuel Hariton Widelity	Samuel Hariton 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.	No
	Briefly describe transition plan	The station is replacing both the main and aux antenna systems, transmission lines, and transmitters with new hardware.

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

Auxiliary	Existing Transmitter Information					
Transmitter	Section	Question	Response			
	Existing Transmitter Description	Type of change	Purchase New			
		Use	Auxiliary (Backup)			
		Description of Use	Backup			
		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 Gen 1			
		Year	1998			
		Туре	Inductive Output Tube			
		IOT Power Type	Two			
		Power Capacity	44 kW			

Existing Transmitter Information

Auxiliary	New Transmitter Costs					
Transmitter	Section	Question	Response			
	New Transmitter	Use	Auxiliary (Backup)			
		Change Type	Purchase New			
		Is this a request for upgraded equipment?	Yes			
		Manufacturer				
		Model	HPTV- PARLX-U32			
		Transmitter Type	Solid State			
		Solid State Cooling	Liquid Cooled			
		Solid State Power capacity	55 kW			
		Justification for New Transmitter	Current Comark DCX Gen 1 from 1998 is not compatible with repack channel 27 and no available parts due to being discontinued			

Auxiliary 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?	Yes
	Туре	Cooling Only
	Size	10 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

Auxiliary	Other Transmitter Cost Not Listed			
Transmitter	Name	Description		
	Internal RF System	A new internal RF System is necessary for this Auxiliary Transmitter.		

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	DCX Generation 1			
		Year	1998			
		Туре	Inductive Output Tube			
		IOT Power Type	Two			
		Power Capacity	49 kW			

Existing Transmitter Information

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	HPTV- PARLX-U32
		Transmitter Type	Solid State
		Solid State Cooling	Liquid Cooled
		Solid State Power capacity	55 kW
		Justification for New Transmitter	Per manufacturer Current Comark DCX Gen 1 from 1998 is not compatible with repack channel 27 and no available parts due to being discontinued

Primary Transmitter	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	

Other Transmitter Costs

	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 Transmitter	Other Transmitter Cost Not Listed		
	Name	Description	
	Ice shield	Fencing extension for Interim heat exchanger	
	Transmitter Remote	Remote controls for transmitter	
	Renovation	Necessary interior wall work for transmitter building	
	Site Survey	Basic site survey by GatesAir	

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

Auxiliary Antenna	Section	Question	Response
	Existing Antenna Description	Type of change	Purchase
	2000.p.io.i	Antenna Use	Auxiliary (Backup)
		Description of Use	Backup
		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	Class	Full Power
Mar	Manufacturer and Type	Mounting	Top Mount
		Antenna position in stack	Not in Stat
		Polarization	Horizontal
		Туре	Broadband Panel
		Number of Stations Supported	1
		Number of Panels	32
		Design power capacity in use	100.0 %
		Lower Limit	638.00 MH
		Upper Limit	644.00 MH
		Other Antenna Type	N/A
		ERP: (Effective Radiated Power)	631.0 kW

Manufacturer	
Model	TUP-04-8-1
Year	1995

Auxiliary	New Antenna Costs			
Antenna	Section	Question	Response	
	New Antenna Description	Use	Auxiliary (Backup)	
		Description of Use	Backup	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	Yes	
		Ownership	Owned	
		Owner	N/A	
		Is antenna shared?	No	
		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	1	
		Number of Panels/Bays	32	
		Lower Limit	548.00 MHz	
		Upper Limit	644.00 MHz	
		Design power capacity in use	100.0 %	
		Other Antenna Type	N/A	
		ERP: (Effective Radiated Power)	573.0 kW	
		Manufacturer		

Model	TUA-04-8 /32-H-K-1
Year	2017
Justification for New Antenna	Current
	Dielectric
	broadband
	antenna is
	discontinued
	and no
	longer
	supported
	starting in
	1997-1998

Auxiliary Other Antenna Costs

Section	Question	Response	
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No	
	Туре		
	Number of channels supported	N/A	
	Frequencies of channels supported	N/A	
	Frequency	N/A	
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A	
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes	
	Broadband or Single Channel?	Broadband	
	Feed Line Size	6 1/8 inches inches	
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	No	
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No	
	Combiner for Shared Antenna	Combiner for Shared AntennaDo you need a Combiner for a Shared Antenna?TypeNumber of channels supportedFrequencies of channels supportedFrequencies of channels supportedFrequencyDo you need a combiner output splitter /switcher for dual feed lines?Elbow ComplexDo you require the separate purchase of the Elbow Complex?Broadband or Single Channel?Feed Line SizeSide Mount BracketsDo you require the separate purchase of side mount brackets for a high power antenna?Pattern Scatter AnalysisDo you require separate purchase of pattern scatter analysis for a side mount	

Sweep Test	Do you require the sweep testing of	Yes
	transmission line and antenna?	

Auxiliary	Other Antenna Cost Not Listed		
Antenna	Name	Description	
	Top Plate Adapter	Adapter for top of tower to match the bolt pattern of the antenna	

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	Other	
		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	Travelling Wave Slot	
		ERP: (Effective Radiated Power)	800.0 kW	
			,	

Manufacturer	
Model	ATW33H3- ETO-42H
Year	2012

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?	No	
		Ownership	Owned	
		Owner	N/A	
		Is antenna shared?	No	
		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	Other	
		Number of Stations Supported	N/A	
		Number of Panels/Bays	N/A	
		Lower Limit	N/A	
		Upper Limit	N/A	
		Design power capacity in use	N/A	
		Other Antenna Type	Travelling Wave Slot	
		ERP: (Effective Radiated Power)	650.0 kW	
		Manufacturer		

Model	TFU-31ETT /VP-R 04
Year	2017
Justification for New Antenna	Current ERI antenna single channel on Ch 42, not compatible with repack Ch 27

Other Antenna Costs

Primary Antenna

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
	Туре	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Single Channel
	Feed Line Size	6 1/8 inches inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	No
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No

Sweep Test	Do you require the sweep testing of	Yes
	transmission line and antenna?	

Primary	Other Antenna Cost Not Listed		
Antenna	Name	Description	
	Top Plate Adapter	Adapter for the top of the tower to match the bolt pattern of the new antenna	

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

Auxiliary	Existing Transmission Line			
Transmissio	n 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?	No	
		Is Transmission Line in operating condition?	Yes	
	Existing Transmission	Manufacturer		
	Line Manufacturer and Type	Туре	Rigid	
		Diameter	6 1/8 inches	
		Other Diameter	N/A	
		Segment Length	19 1/2 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	1040 feet per run	

Auxiliary Transmissio	New Transmission Line			
	New Transmission Line Costs	Question	Response	
		Use	Auxiliary (Backup)	
		Description of Use	Backup	
		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	1040 feet per run	
		Justification for New Transmission Line	Current 19.5' sections are not compatible with Ch 27	

Other Transmission Line Expenses Not Listed Auxiliary Transmission home tion not provided.

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?	No	
		Is Transmission Line in operating condition?	Yes	
	Existing Transmission	Manufacturer		
	Line Manufacturer and Type	Туре	Rigid	
		Diameter	6 1/8 inches	
		Other Diameter	N/A	
		Segment Length	19 1/2 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	1035 feet per run	

Primary Transmissio	New Transmission Line			
	New Transmission Line Costs	Question	Response	
		Use	Primary (Main)	
		Description of Use	N/A	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	No	
		Туре	Rigid	
		Diameter	6 1/8 inches	
		Other Diameter	N/A	
		Segment Length	20 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	1035 feet per run	
		Justification for New Transmission Line	Current 19.5' sections are not compatible with Ch 27	

Other Transmission Line Expenses Not Listed Transmission

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

ciliary	Existing	Tower

Auxiliary	Existing Tower				
Tower	Section	Question	Response		
	Existing Tower Description	Type of change	Modify Existing		
		Tower Use	Auxiliary (Backup)		
		Description of Use	Backup Tower		
		Ownership	Owned		
		Is this tower consider Complex?	No		
		Is this tower currently shared with any other stations?	Yes		
		One or more FM, AM or TV radio broadcaster(s)	Yes		
		Others Types of Users	Yes		
		Is tower documented for structural analysis?	Yes		
		Is tower compliant with Rev G?	Yes		
	Existing Tower Structure	Do you have a tower registration number?	Yes		
	Registration	ASR Number	1027597		
	Coordinates (NAD83 (North American Datum of	Latitude (NAD83)	41° 36' 19.2" N-		
	1983))	Longitude (NAD83)	086° 12' 45.0" W-		
		Overall Structure Height	877.94 feet		
		Support Structure Height	839.88 feet		
			1		

Ground Elevation Above Mean Sea Level (AMSL)	845.13 feet
Structure Type	NTOWER - Multiple Structures
Tower Owner	Gray Television Group, Inc.
Date Constructed	06/15/2006

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
70459	WSND-FM	FM
41675	WNDV-FM	FM

Other Types of Users

Users

Amatuer Radio

Auxiliary Tower Modification Costs

-						1
T	0	v	V	e	r	

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:	Serious Reinforcements needed

Auxiliary Tower Rigging Costs

Tower

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

Auxiliary
Tower Other Tower Expenses Not Listed Name Description Corrosion analysis and ultrasound
measurements Corrosion analysis and ultrasound
measurements of lower 480 feet of auxiliary
tower Level 1 Foundation study Level 1 Foundation study

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?	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?	Yes		
	Existing Tower Structure Registration	Do you have a tower registration number?	Yes		
		ASR Number	1027596		
	Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	41° 36' 20.0" N-		
		Longitude (NAD83)	086° 12' 46.0" W-		
		Overall Structure Height	1007.86 feet		
		Support Structure Height	946.84 feet		
		Ground Elevation Above Mean Sea Level (AMSL)	845.13 feet		
		Structure Type	NTOWER - Multiple Structures		
		Tower Owner	Gray Television Group, Inc.		

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
41675	WNDV-FM	FM

Other Types of Users

Users		
ATF		
FBI		

Primary Tower Modification Costs

Tower

Tower

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

Primary Tower Rigging Costs

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

Primary	Other Tower Expenses Not Listed	
Tower	Name	Description

Level II Corrosion Risk Assessment	Level II Corrosion Risk Assessment
Level I Corrosion Risk Assessment	Level I Corrosion Risk Assessment

Outside	Section	Question	Response
Professional	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	2
		Do you have Distributed Transmission System engineering services?	N/A
		Critical Facility	N/A
		Terrain-Shielded Facility	N/A
	Attorney and Other Outside Consulting Services	Prepare and file Form FCC Construction Permit Application	Yes
		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	No
	Quantity	N/A
	NEPA Section 106 environmental review	Yes
	Environmental Assessment	Yes
	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	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?	Yes
		Is Remediation needed?	Yes
	Facility Expenses	Name	N/A
		Other Distributed Transmission System Expenses Not listed	N/A
		Name	N/A
		Is Notification of a Medical Facility required as a result of DTV broadcasting?	Yes
	Permit and Filing Costs	Local Zoning	No
		Non-zoning permits	No
		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.

Transmitters

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cos Justificatio
Primary Transmitter HPTV-PARLX- U32	\$1,880,035.99	\$1,325,467.99		\$7,980.00	
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	\$1,788,000.00	\$1,233,432.00	Comark quote P#4034WNDU- PARLX- 170530	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.	\$62,381.00	\$62,381.00	N/A	N/A	N/A
Site Survey	\$7,980.00	\$7,980.00	See attached invoice	\$7,980.00	N/A
Ice shield	\$2,634.34	\$2,634.34	N/A	N/A	N/A
Transmitter Remote	\$2,990.65	\$2,990.65	N/A	\$0.00	N/A
Renovation	\$16,050.00	\$16,050.00	N/A	N/A	N/A

Auxiliary Transmitter HPTV-PARLX- U32	\$1,968,900.00	\$1,524,994.00		\$476,989.97	
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	\$1,788,000.00	\$1,372,044.00	Comark quote P#4034WNDU- DCXP2- 170530 Comark quote P#4034WNDU- PARLX- 170530	\$476,989.97	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.	\$2,000.00	\$2,000.00	N/A	N/A	N/A
10 Ton system	\$38,900.00	\$10,950.00	See quote from Ideal Consolidated Inc. for 10 ton system	N/A	N/A
Internal RF System	\$140,000.00	\$140,000.00	N/A	N/A	N/A
Sub-total	\$3,848,935.99	\$2,850,461.99	N/A	\$484,969.97	N/A
Total for all systems	\$7,838,622.99	\$6,442,834.58	N/A	\$1,082,768.23	N/A

Actual Information Description	File Name	
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	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 verbal guidance from local electrical contractors.	Information not provided.	
Site Survey	Component Description: Amount:	Site Survey \$7,980.00
Ice shield	Information not provided.	
Transmitter Remote	Component Description: Amount:	Remote control New 1st Primar Transmitter \$2,842.77
Renovation	Information not provided.	
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	Component Description: Amount:	New Auxiliary Transmitter \$476,989.97
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.	
10 Ton system	Information not provided.	

Antennas

Cost Information

	Predetermined	Estimated	Estimated Cost		Actual Cost
Description	Cost Estimate	Cost	Justification	Actual Cost	Justification
Primary Antenna TFU-31ETT /VP-R 04	\$313,550.00	\$313,688.00		\$0.00	
Top Plate Adapter	\$19,520.00	\$19,520.00	N/A	\$0.00	N/A
UHF - High Power Top Mount One Station antenna elliptically or circularly polarized	\$275,000.00	\$275,000.00	Catalog Cost	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$12,768.00	JEHQ1248- 02	N/A	N/A
Auxiliary Antenna TUA-04-8 /32-H-K-1	\$329,450.00	\$194,513.44		\$127,338.01	
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$5,120.00	N/A

Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,700.00	\$12,768.00	N/A	\$10,214.40	N/A
Top Plate Adapter	\$19,520.00	\$19,520.00	N/A	\$15,616.00	N/A
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	\$289,500.00	\$155,825.44	N/A	\$96,387.61	N/A
Sub-total	\$643,000.00	\$508,201.44	N/A	\$127,338.01	N/A
Total for all systems	\$7,838,622.99	\$6,442,834.58	N/A	\$1,082,768.23	N/A

Actual Information Description	File Name
Top Plate Adapter	Information not provided.
UHF - High Power Top Mount One Station antenna elliptically or circularly polarized	Information not provided.
Sweep test of existing antenna	Information not provided.
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	Information not provided.

antenna		
	Component Description:	Auxiliary/Interim Antenna Sweep
		Test
	Amount:	\$1,600.00
	Component Description:	Sweep Test Auxiliary/Interim Antenna
	Amount:	\$1,920.00
	Component Description:	Auxiliary/Interim Antenna Sweep
		Test
	Amount:	\$1,600.00
Elbow complex, broadband,		
at antenna input, per 6 1/8. feedline (if needed)	Component Description:	Auxiliary/Interim Antenna - Elbow
		Complex
	Amount:	\$3,192.00
	Amount: Component Description:	\$3,192.00 Auxiliary/Interim
		Auxiliary/Interim Antenna - Elbow
		Auxiliary/Interim
	Component Description: Amount:	Auxiliary/Interim Antenna - Elbow Complex \$3,192.00
	Component Description:	Auxiliary/Interim Antenna - Elbow Complex

Top Plate Adapter		A 11- /1 / ·
	Component Description:	Auxiliary/Interim Antenna Top
	Amount:	Plate Adapter \$4,880.00
		¢ 1,000.00
	Component Description:	Auxiliary/Interim
		Antenna Top
	Amount:	Plate Adapter \$4,880.00
	Component Description:	Auxiliary/Interim
		Antenna Top Plate Adapter
	Amount:	\$5,856.00
UHF - High Power Top		
Mount (200-1000 kW), One station antenna , elliptically	Component Description:	New Auxiliary
or circularly polarized	Amount:	Antenna \$30,121.13
	Anount.	φου, 121.10
	Component Description:	UHF Broadband
		Panel Top mount
		Aux/Interim TV Antenna
	Amount:	\$36,145.35
	Component Description:	New Auxiliary Antenna
	Amount:	\$30,121.13

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	\$209,070.00	\$152,101.30		\$0.00	
Rigid Transmission Line - copper, 6 1/8"	\$209,070.00	\$152,101.30	N/A	N/A	N/A
Auxiliary Transmission Line	\$241,280.00	\$190,905.35		\$151,763.50	
Rigid Transmission Line - copper, 6 1 /8" broadband	\$241,280.00	\$190,905.35	N/A	\$151,763.50	N/A
Sub-total	\$450,350.00	\$343,006.65	N/A	\$151,763.50	N/A
Total for all systems	\$7,838,622.99	\$6,442,834.58	N/A	\$1,082,768.23	N/A

Actual Information Description	File Name
Rigid Transmission Line - copper, 6 1/8"	Information not provided.

Rigid Transmission Line - copper, 6 1/8" broadband	Component Description:	Auxiliary/Interim Transmission Line
	Amount:	\$47,426.09
	Component Description:	Auxiliary/Interim Transmission Line
	Amount:	\$47,426.09
	Component Description:	Interim
	Amount:	Transmission Line \$56,911.32

Tower Equipment and Rigging Costs

Cost Information

			Estimated		
Description	Predetermined Cost Estimate	Estimated Cost	Cost Justification	Actual Cost	Actual Cost Justification
Primary Tower NTOWER	\$1,280,600.00	\$1,214,087.50		\$97,721.25	
Serious tower reinforcement /modifications	\$1,052,000.00	\$1,000,000.00	N/A	\$86,383.75	N/A
Level II Corrosion Risk Assessment	\$4,750.00	\$4,750.00	N/A	\$2,750.00	N/A
Level I Corrosion Risk Assessment	\$750.00	\$750.00	N/A	N/A	N/A
Tall Tower (greater than 500')	\$210,500.00	\$200,000.00	N/A	N/A	N/A
Structural engineering tower load study for well documented tower	\$12,600.00	\$8,587.50	N/A	\$8,587.50	N/A
Auxiliary Tower NTOWER	\$1,281,650.00	\$1,214,250.00		\$174,331.25	
Tall Tower (greater than 500')	\$210,500.00	\$200,000.00	N/A	\$47,500.00	N/A
Serious tower reinforcement /modifications	\$1,052,000.00	\$1,000,000.00	N/A	\$115,581.25	N/A

Level 1 Foundation study	\$750.00	\$750.00	N/A	\$0.00	N/A
Structural engineering tower load study for well documented tower	\$12,600.00	\$7,700.00	Additional official stamped tower analysis required because of the addition of radomes to aux antenna, radomes required to reduce wind loading and meet tower loading.	\$5,450.00	N/A
Corrosion analysis and ultrasound measurements	\$5,800.00	\$5,800.00	See attached invoice and purchase order 072617TD	\$5,800.00	N/A
Sub-total	\$2,562,250.00	\$2,428,337.50	N/A	\$272,052.50	N/A
Total for all systems	\$7,838,622.99	\$6,442,834.58	N/A	\$1,082,768.23	N/A

Actual Information	
Description	File Name

Serious tower reinforcement		
/modifications	Component Description:	Perform sub-
		surface soil
		evaluation on
		towers -
		Mobilization
	Amount:	\$5,696.50
	Component Description:	75% costs of
		Tower
		Reinforcement
		/Modification on
		945ft Tower
		(Primary)
	Amount:	\$56,283.94
	Component Description:	Tower
		reinforcement &
		design drawings
		Existing Primary
		Tower
	Amount:	\$2,750.00
	Component Description:	Perform sub-
	component Description.	surface soil
		evaluation on
		towers - Laboratory
		Services
	Amount:	\$2,892.00
	Component Description:	Tower
	• •	reinforcement.
		/Modifications-
		Primary Tower
	Amount:	\$18,761.31

Assessment		O a mar i
	Component Description:	Corrosion
		inspection and Ultrasound
	Amount:	measurements \$2,750.00
	Amount.	φ2,750.00
Level I Corrosion Risk	Information not provided.	
Assessment		
Tall Tower (greater than 500')	Information not provided.	
Structural engineering		
tower load study for well	Component Description:	Take
documented tower	· · ·	measurements for
		tower modification
		and record
		elevations
	Amount:	\$2,137.50
	Component Description:	Structural
		Engineering Towe
		Load study -
		Primary Tower
	Amount:	\$5,450.00
	Component Description:	Structural
		Engineering Towe
		Load study
	Amount:	\$1,000.00
Tall Tower (greater than		
500')	Component Description:	AUX TWR Rigging
		Antenna &
		Complete feedline
		removal

Serious tower reinforcement		
/modifications	Component Description:	75% costs Tower
		Reinforcement
		/Modification on
		840ft Tower
		(Auxiliary)
	Amount:	\$79,771.50
	Component Description:	Tower Resocket on
		Level 6 B&C
		anchor points
		Auxiliary Tower
	Amount:	\$6,469.25
	Component Description:	Tower
	Component Description.	Reinforcement
		/Modification of
		Auxiliary Tower
	Amount:	\$26,590.50
		T
	Component Description:	Tower
		reinforcement &
		design drawings Existing Auxiliary
		Tower
	Amount:	\$2,750.00
Level 1 Foundation study	Information not provided.	
Structural engineering tower load study for well		
documented tower	Component Description:	Structural Analysis
		of Auxiliary Tower
	Amount:	\$5,450.00

Corrosion analysis and		
ultrasound measurements	Component Description:	Corrosion
		inspection and
		Ultrasound
		measurements of
		tower legs in
		preparation for
		design and
		application of
		reinforcing required
		for re-pack tower
		modifications.
	Amount:	\$2,900.00
	Component Description:	Corrosion
	component Description.	inspection and
		Ultrasound
		measurements -
		Primary Tower
	Amount:	\$2,900.00

Outside Professional Services

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Outside Professional Services	\$221,265.00	\$209,250.00		\$46,644.25	
RF Exposure Measurements	\$21,050.00	\$20,000.00	N/A	N/A	N/A
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	\$2,105.00	\$2,000.00	N/A	N/A	N/A
ASR modification (prepare FCC Form 854)	\$2,105.00	\$2,000.00	N/A	N/A	N/A
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	\$10,520.00	\$10,000.00	N/A	N/A	N/A
NEPA Section 106 environmental review, if needed	\$6,310.00	\$6,000.00	N/A	N/A	N/A

Attorney Fees - Prepare and	\$2,365.00	\$2,250.00	N/A	N/A	N/A
File FCC Form					
2100 (main), License to					
Cover					
Application					
Application					
Attorney Fees	\$4,210.00	\$4,000.00	N/A	N/A	N/A
- Aux Antenna,					
prepare and					
File Form					
2100					
Construction					
Permit or					
License					
Application					
Attorney Fees	\$5,260.00	\$5,000.00	N/A	\$196.50	N/A
- Prepare and					
File FCC Form					
2100 (main),					
Construction					
Permit					
Application					
Project	\$142,200.00	\$135,000.00	N/A	\$41,947.75	N/A
management					
of the transition					
Prepare and	\$2,630.00	\$2,500.00	N/A	N/A	N/A
or review					
reimbursement					
form					
Address	\$2,630.00	\$2,500.00	N/A	N/A	N/A
transition					
timing and					
coordination					
issues w/					
other stations					
other stations and wireless					
and wireless	\$7.000.00	M T 000 00	N1/A	#0.075.00	N 1/2
and wireless Perform	\$7,360.00	\$7,000.00	N/A	\$2,875.00	N/A
and wireless Perform engineering	\$7,360.00	\$7,000.00	N/A	\$2,875.00	N/A
and wireless Perform engineering study for new	\$7,360.00	\$7,000.00	N/A	\$2,875.00	N/A
and wireless Perform engineering study for new channel	\$7,360.00	\$7,000.00	N/A	\$2,875.00	N/A
and wireless Perform engineering study for new channel assignment	\$7,360.00	\$7,000.00	N/A	\$2,875.00	N/A
and wireless Perform engineering study for new channel	\$7,360.00	\$7,000.00	N/A	\$2,875.00	N/A

Prepare engineering section of FCC Form 2100 (main), Construction Permit Application\$3,155.00\$3,000.00N/A\$1,625.00RF Consulting Engineer Fees- Aux Antenna: Prepare engineering\$2,105.00\$2,000.00N/AN/A	N/A N/A
Engineer Fees- Aux Antenna: Prepare	N/A
section of FCC Form 2100, Construction Permit Application	
Prepare\$1,580.00\$1,500.00N/AN/Aengineeringsection of FCCForm 2100(main),License toCoverApplication	N/A
RF Consulting\$1,580.00\$1,500.00N/AN/AEngineerFees- AuxAntenna:Prepareengineeringsection of FCCForm 2100,License toCoverApplication	N/A
Prepare \$4,100.00 \$3,000.00 N/A N/A request for Special Temporary	N/A
Authorization	

Total for all	\$7,838,622.99	\$6,442,834.58	N/A	\$1,082,768.23	N/A
systems					

Actual Information Description	File Name
RF Exposure Measurements	Information not provided.
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	Information not provided.
ASR modification (prepare FCC Form 854)	Information not provided.
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	Information not provided.
NEPA Section 106 environmental review, if needed	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:Complete and file repack CP applicationAmount:\$196.50
Project management of the transition	

Component Description: Amount:	Project Management \$28.20
Component Description: Amount:	Project Management \$755.80
Component Description: Amount:	Project Management \$2,813.80
Component Description: Amount:	Project management \$2,817.65
Component Description: Amount:	Project Management \$3,593.55
Component Description:	Transition Related Project Management Costs
Amount:	\$4,050.00
Component Description: Amount:	Project management \$2,471.90
Component Description: Amount:	Project Management \$3,558.10
Component Description: Amount:	Project Management \$2,403.10

Component Description: Amount:	Project managment \$1,553.55
Component Description: Amount:	Project Management \$2,725.85
Component Description: Amount:	Project Management \$2,547.60
Component Description: Amount:	Project Management \$1,813.95
Component Description: Amount:	Project Management \$802.25
Component Description: Amount:	Project Management \$2,411.25
Component Description: Amount:	Project Management \$2,471.50
Component Description: Amount:	Project Management \$2,461.65
Component Description: Amount:	Project Management \$2,668.05

	1	
Prepare and or review reimbursement form	Information not provided.	
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.	
Perform engineering study for new channel assignment and antenna development	Component Description: Amount:	Perform engineering study for new channel assignment \$1,950.00
	Component Description: Amount:	Review technical details of alternate antenna proposal from RFS regarding top- mount on repack Ch-27. \$125.00
	Component Description: Amount:	Engineering Study for New Channel Assignment \$800.00
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Component Description: Amount:	FCC CP application \$1,625.00
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), License to Cover Application	Information not provided.	

RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	Information not provided.
Prepare request for Special Temporary Authorization	Information not provided.

Other Expenses

Cost Information

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cos Justificatio
Other Expenses	\$112,822.00	\$103,577.00		\$0.00	
MVPD Notification of Channel Change	\$1,500.00	\$1,500.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	\$11,500.00	\$11,500.00	N/A	N/A	N/A
AM Pattern Disturbance Impact study	\$7,890.00	\$7,000.00	A study will be require for each tower, the auxiliary tower and the primary tower @ \$3,500 per study.	N/A	N/A
AM Pattern Disturbance Remedy	\$21,050.00	\$20,000.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$4,260.00	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
Disposal Costs (for equipment and other waste, net of any salvage value)	\$43,733.00	\$43,733.00	See attached Comark quote P#4034WNDU- PARLX- 170530 for disposal costs for existing main and auxiliary transmitters See attached TecServ quote for removal & disposal of transmitter coolant	N/A	N/A
Equipment Delivery and Handling Charges	\$8,929.00	\$8,929.00	N/A	N/A	N/A
Equipment Storage	\$6,140.00	\$6,140.00	N/A	N/A	N/A
Sub-total	\$112,822.00	\$103,577.00	N/A	\$0.00	N/A
Total for all systems	\$7,838,622.99	\$6,442,834.58	N/A	\$1,082,768.23	N/A

Information not provided.

Cost	Grand Total			
		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$7,838,622.99	\$6,442,834.58	\$1,082,768.23

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 Folliard Assistant Secretary 09/15/2018

Certification	Section	Question	Response
	Submission of Actual Cost Documentation Statements	WILLFUL FALSE, FRAUDULENT, OR FICTITIOUS STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISIONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE AND/OR FRAUDULENT STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT (U.S. CODE, TITLE 31, SECTIONS 3729-3733).	
		 The Authorized Person signing below certifies and represents that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity. 	
		2. The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct.	
		3. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.	

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

	The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a prerequisite for obtaining the payments herein requested.	
an au name	are, under penalty of perjury, that I am thorized representative of the above- d applicant for the Authorization(s) ied above.	Robert Folliard Assistant Secretary
		09/15/2018

Attachments