

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility 41674 Service: DTX Call WNDU-TV Channel: 27 (UHF)

ID: File Sign: **0000028730**

Number:

FRN: **0018223693**

Date **01/02**

Submitted: /2019

Applicant Information

Applicant Name, Type, and Contact Information

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

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Contact Information

Preparer Contact Name and 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 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.	No
Briefly describe transition plan	The station is replacing both the main and aux antenna systems, transmission lines, and transmitters with new hardware.

Transmitters

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

Auxiliary Transmitter

Existing Transmitter Information

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

Auxiliary Transmitter

New Transmitter Costs

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 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
		'

	Rigid Conduit and Wiring	No
	Size	N/A
	Length	N/A
	Other Electrical Service	Yes
	Description	The new transmitter was 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 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

Auxiliary Transmitter

Other Transmitter Cost Not Listed

Name	Description
Internal RF System	A new internal RF System is necessary for this Auxiliary Transmitter.

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

	Rigid Conduit and Wiring	No
	Size	N/A
	Length	N/A
	Other Electrical Service	Yes
	Description	The new transmitter was 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
Site Survey	Basic site survey by GatesAir
Renovation	Necessary interior wall work for transmitter building
Transmitter Remote	Remote controls for transmitter
Ice shield	Fencing extension for Interim heat exchanger

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	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
Manufacturer and Type	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	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 MHz
	Upper Limit	644.00 MHz
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	631.0 kW

Manufacturer	
Model	TUP-04-8-1
Year	1995

New Antenna Costs

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	Class	Full Power
Manufacturer and Types	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Туре	Broadband Panel
	Number of Stations Supported	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

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

Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes
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Other Antenna Cost Not Listed

Name	Description
Top Plate Adapter	Adapter for top of tower to match the bolt pattern of the antenna

Existing Antenna Information

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	Class	Full Power
Manufacturer and Type	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

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?	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	Class	Full Power
Manufacturer and Types	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

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 transmission line and antenna?	Yes
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Other Antenna Cost Not Listed

Name	Description
Top Plate Adapter	Adapter for the top of the tower to match the bolt pattern of the new antenna

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

Auxiliary Transmission Line

Existing Transmission Line

on Line Settion	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 Transmis

New Transmission Line

ansmissio	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	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 Other Transmission
Transmission to inetion not provided.

Primary Transmission Line

Existing Transmission Line

n Line 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
	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 Transmi

New Transmission Line

smissioi	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	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 Primary
Transmission bination 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

Auxiliary Tower

Existing 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 1983))	Latitude (NAD83)	41° 36' 19.2" N-
	Longitude (NAD83)	086° 12' 45.0" W-
	Overall Structure Height	877.94 feet
	Support Structure Height	839.88 feet

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
41675	WNDV-FM	FM
70459	WSND-FM	FM

Other Types of Users

Users	
Amatuer Radio	

Auxiliary 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:	Serious Reinforcements needed

Auxiliary Tower

Tower Rigging Costs

Response

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 Tower

Existing 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	Do you have a tower registration number?	Yes
Registration	ASR Number	1027596
Coordinates (NAD83 (North American Datum of	Latitude (NAD83)	41° 36′ 20.0″ N-
1983))	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

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:	Serious Reinforcements needed

Primary Tower

Tower Rigging Costs

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

Primary Tower

Other Tower Expenses Not Listed

Name	Description
Name	Description

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

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

Outside
Professional Services Expenses Not Listed
Professional Services © Opstsided.

Other Expenses

Section	Question	Response
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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual C
Primary Transmitter HPTV-PARLX- U32	\$1,880,035.99	\$1,325,467.99		\$511,708.13	
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	\$25,813.75	N/A
Renovation	\$16,050.00	\$16,050.00	N/A	\$11,716.50	N/A
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	\$1,788,000.00	\$1,233,432.00	Comark quote P#4034WNDU- PARLX- 170530	\$466,197.88	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
Site Survey	\$7,980.00	\$7,980.00	See attached invoice	\$7,980.00	N/A

Auxiliary Transmitter HPTV-PARLX- U32	\$1,968,900.00	\$1,524,994.00		\$875.99	
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	\$875.99	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	\$512,584.12	N/A
Total for all systems	\$7,838,622.99	\$6,442,834.58	N/A	\$1,368,841.68	N/A

Actual Information Description	File Name	
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:	Add 1200A neutral per Quote #S21-1018 \$25,813.75
Renovation	Component Description: Amount:	Trane/American Standard Cooling Units \$11,716.50
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	Component Description: Amount:	System, WNDU U32 D27 PH2 \$466,197.88
Ice shield	Information not provided.	
Transmitter Remote	Component Description: Amount:	Remote control New 1st Primary Transmitter \$2,842.77
Site Survey	Component Description: Amount:	Site Survey \$7,980.00
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	Component Description: Amount:	306 Commercial Chain Link \$875.99
	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.
Internal RF System	Information not provided.

Antennas

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Antenna TFU-31ETT /VP-R 04	\$313,550.00	\$313,688.00		\$145,424.38	
UHF - High Power Top Mount One Station antenna elliptically or circularly polarized	\$275,000.00	\$275,000.00	Catalog Cost	\$124,145.98	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	\$12,300.00	\$12,768.00	JEHQ1248- 02	\$7,022.40	N/A
Top Plate Adapter	\$19,520.00	\$19,520.00	N/A	\$10,736.00	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$3,520.00	N/A
Auxiliary Antenna TUA-04-8 /32-H-K-1	\$329,450.00	\$194,513.44		\$127,338.01	
Top Plate Adapter	\$19,520.00	\$19,520.00	N/A	\$15,616.00	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
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$5,120.00	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	\$272,762.39	N/A
Total for all systems	\$7,838,622.99	\$6,442,834.58	N/A	\$1,368,841.68	N/A

Actual Information Description	File Name	
UHF - High Power Top Mount One Station antenna elliptically or circularly polarized	Component Description: Amount:	UHF-High Power Top Mount (200- 1000KW) \$67,715.99
	Component Description:	UHF- High Power Top Mount (200-
	Amount:	1000KW) \$56,429.99

Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	Component Description:	Elbow complex, New Primary
		Antenna
	Amount:	\$3,830.40
	Component Description:	Elbow Complex
		New Primary
	Amount:	Antenna \$3,192.00
	Allount.	ψΟ, Ι σΖ.ΟΟ
Top Plate Adapter		
	Component Description:	Top Plate
		Adapter New
	Amount:	Primary Antenna \$4,880.00
		¥ -,=====
	Component Description:	Top plate
		adapter, New
	Amount:	Primary Antenna \$5,856.00
	Amount.	φο,οσο.οσ
Sweep test of existing antenna		
	Component Description:	Sweep Test New Primary Antenna
	Amount:	\$1,600.00
		÷.,553.66
	Component Description:	Sweep test, New
		Primary Antenna
	Amount:	\$1,920.00

	Component Description:	Auxiliary/Interim
	Component Description.	Antenna Top
		Plate Adapter
	Amount:	\$4,880.00
	Component Description:	Auxiliary/Interim
		Antenna Top
		Plate Adapter
	Amount:	\$5,856.00
	Component Description:	Auxiliary/Interim
		Antenna Top
		Plate Adapter
	Amount:	\$4,880.00
Elbow complex, broadband,		
at antenna input, per 6 1/8.	Component Description:	Auxiliary/Interim
eedline (if needed)		Antenna - Elbow
		Complex
	Amount:	\$3,192.00
	Component Description:	Auxiliary/Interim
		Antenna - Elbow
		Complex
	Amount:	\$3,192.00
	Component Description	Auxiliary/Interim
	Component Description:	Auxiliary/interim Antenna Elbow
		Complex

Sweep test of existing antenna		
antenna	Component Description:	Auxiliary/Interim
		Antenna Sweep
	Amount:	Test \$1,600.00
	Amount.	Ψ1,000.00
	Component Description:	Sweep Test
		Auxiliary/Interim
		Antenna
	Amount:	\$1,920.00
	Component Description:	Auxiliary/Interim
		Antenna Sweep
		Test
	Amount:	\$1,600.00
UHF - High Power Top		
Mount (200-1000 kW), One station antenna, elliptically	Component Description:	UHF Broadband
or circularly polarized		Panel Top mount
, , , , , , , , , , , , , , , , , , , ,		Aux/Interim TV
	Amount:	Antenna
	Amount:	\$36,145.35
	Component Description:	New Auxiliary
		Antenna
	Amount:	\$30,121.13
	Component Description:	New Auxiliary
		Antenna
	Amount:	\$30,121.13

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
Primary Transmission Line	\$209,070.00	\$152,101.30		\$83,655.70	
Rigid Transmission Line - copper, 6 1/8"	\$209,070.00	\$152,101.30	N/A	\$83,655.70	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	\$235,419.20	N/A
Total for all systems	\$7,838,622.99	\$6,442,834.58	N/A	\$1,368,841.68	N/A

Actual Information Description	File Name	
Rigid Transmission Line - copper, 6 1/8"	Component Description: Amount:	New Primary Transmission Line \$45,630.39
	Component Description: Amount:	New Primary Transmission Line \$38,025.31

Rigid Transmission Line - copper, 6 1/8" broadband

Component Description: Interim

Transmission Line

Amount: \$56,911.32

Component Description: Auxiliary/Interim

Transmission Line

Amount: \$47,426.09

Component Description: Auxiliary/Interim

Transmission Line

Amount: \$47,426.09

Tower Equipment and Rigging Costs

Description	Predetermined Cost Estimate	Estimated Cost	Estimated 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		\$176,581.25	

\$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.	\$7,700.00	N/A
\$210,500.00	\$200,000.00	N/A	\$47,500.00	N/A
\$1,052,000.00	\$1,000,000.00	N/A	\$115,581.25	N/A
\$750.00	\$750.00	N/A	\$0.00	N/A
\$5,800.00	\$5,800.00	See attached invoice and purchase order 072617TD	\$5,800.00	N/A
\$2,562,250.00	\$2,428,337.50	N/A	\$274,302.50	N/A
\$7,838,622.99	\$6,442,834.58	N/A	\$1,368,841.68	N/A
	\$210,500.00 \$1,052,000.00 \$750.00 \$2,562,250.00	\$210,500.00 \$200,000.00 \$1,052,000.00 \$1,000,000.00 \$750.00 \$750.00 \$5,800.00 \$5,800.00	Stamped Stam	### Stamped tower analysis required because of the addition of radomes to aux antenna, radomes required to reduce wind loading and meet tower loading. #### \$\$\frac{\$\text{\$5,800.00}}{\text{\$5,800.00}}\$

Actual Information	
Description	File Name

Serious tower reinforcement /modifications

Component Description: Tower

reinforcement.
/Modifications-

Primary Tower

Amount: \$18,761.31

Component Description: Perform sub-

surface soil evaluation on

towers -Mobilization

Amount: \$5,696.50

Component Description: Perform sub-

surface soil evaluation on

towers - Laboratory

Services

Amount: \$2,892.00

Component Description: 75% costs of

Tower

Reinforcement /Modification on 945ft Tower (Primary) \$56,283.94

Amount: \$56,283.94

Component Description: Tower

reinforcement & design drawings Existing Primary

Tower

Amount: \$2,750.00

Level II Corrosion Risk Assessment	Component Description:	Corrosion inspection and Ultrasound
	Amount:	measurements \$2,750.00
Level I Corrosion Risk Assessment	Information not provided.	
Tall Tower (greater than 500')	Information not provided.	
Structural engineering		
tower load study for well documented tower	Component Description:	Structural Engineering Tower Load study - Primary Tower
	Amount:	\$5,450.00
	Component Description:	Take
		measurements for tower modifications and record
	Amount:	elevations \$2,137.50
	Component Description:	Structural
	Component Bosonption:	Engineering Tower Load study
	Amount:	\$1,000.00
Structural engineering tower load study for well		
documented tower	Component Description: Amount:	Structural Analysis \$2,250.00
	Component Description:	Structural Analysis of Auxiliary Tower
	Amount:	\$5,450.00

500')	Component Description:	AUX TWR Rigging, Antenna & Complete feedline removal
	Amount:	\$47,500.00
Serious tower reinforcement		
/modifications	Component Description:	Tower
		reinforcement &
		design drawings
		Existing Auxiliary
		Tower
	Amount:	\$2,750.00
	Component Description:	Tower
	,	Reinforcement
		/Modification of
		Auxiliary Tower
	Amount:	\$26,590.50
	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
Level 1 Foundation study	Information not provided.	

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

inspection and Ultrasound measurements -Primary Tower

Amount: \$2,900.00

Outside Professional Services

Description Outside Professional Services	Predetermined Cost Estimate \$221,265.00	Estimated Cost \$209,250.00	Estimated Cost Justification	Actual Cost \$58,801.80	Actual Cost Justification
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,210.00	\$4,000.00	N/A	\$1,327.50	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	\$800.00	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$1,625.00	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 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 request for Special Temporary Authorization	\$4,100.00	\$3,000.00	N/A	N/A	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$2,875.00	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
Project management of the transition	\$142,200.00	\$135,000.00	N/A	\$51,977.80	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	N/A	N/A

RF Exposure Measurements	\$21,050.00	\$20,000.00	N/A	N/A	N/A
Sub-total	\$221,265.00	\$209,250.00	N/A	\$58,801.80	N/A
Total for all systems	\$7,838,622.99	\$6,442,834.58	N/A	\$1,368,841.68	N/A

Actual Information Description	File Name	
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	Component Description: Amount:	Professional Services \$1,327.50
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	Component Description: Amount:	Develop final technical parameters for auxiliary antenna \$800.00
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Component Description: Amount:	FCC CP application \$1,625.00
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 - Prepare and File FCC Form 2100 (main), Construction Permit Application	Component Description: Amount:	Complete and file repack CP application \$196.50
Prepare request for Special Temporary Authorization	Information not provided.	
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	Information not provided.	
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Information not provided.	

Perform engineering study for new channel assignment	Component Description	Review technical
and antenna development	Component Description:	details of alternate
		antenna proposal
		from RFS
		regarding top-
		mount on repack
		Ch-27.
	Amount:	\$125.00
	Component Description:	Engineering Study
		Assignment
	Amount:	\$800.00
	Component Description:	Perform
		engineering study
		for new channel
		assignment
	Amount:	\$1,950.00
Address transition timing and coordination issues w/other stations and wireless	Information not provided.	
Project management of the transition		
transition	Component Description:	Project
		Management
	Amount:	\$28.20
	Component Description:	Project
		Management
	Amount:	\$2,813.80
	Component Description:	Project
		management

Component Description:

Project Management

Amount:

\$3,593.55

Component Description:

Project

Amount:

Management \$2,876.70

Component Description:

Project

Amount:

Management \$3,495.95

Component Description:

Project

Amount:

Management \$3,657.40

Component Description:

Project

Amount:

Management

\$2,411.25

Component Description:

Project

Amount:

Management \$3,558.10

Component Description:

Project

Amount:

management

\$2,471.90

Component Description:

Project

Amount:

Management

\$2,471.50

Component Description:

Project

Amount:

Management

\$2,725.85

Component Description:

Project

Amount:

Management \$1,813.95

Component Description:

Project

Amount:

managment \$1,553.55

Component Description:

Project

Amount:

Management \$2,461.65

Component Description:

Project

Amount:

Management \$2,668.05

Component Description:

Project

Management \$755.80

Amount:

Component Description:

Transition Related

Project

Management

Costs

Amount:

Amount:

\$4,050.00

Component Description:

Project

Management

\$802.25

Component Description:

Project

Amount:

Amount:

Management

\$2,547.60

Component Description:

Project

Management

\$2,403.10

Prepare and or review reimbursement form	Information not provided.
RF Exposure Measurements	Information not provided.

Other Expenses

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Co
Other Expenses	\$112,822.00	\$103,577.00		\$14,971.67	
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
Equipment Storage	\$6,140.00	\$6,140.00	N/A	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$190.00	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.	\$1,846.32	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
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	\$10,000.20	N/A
Equipment Delivery and Handling Charges	\$8,929.00	\$8,929.00	N/A	\$3,125.15	N/A
Sub-total	\$112,822.00	\$103,577.00	N/A	\$14,971.67	N/A
Total for all systems	\$7,838,622.99	\$6,442,834.58	N/A	\$1,368,841.68	N/A

Actual Information Description	File Name
MVPD Notification of Channel Change	Information not provided.
Develop and air announcement of upcoming channel change	Information not provided.
Equipment Storage	Information not provided.
FCC Filing Fees - Special Temporary Authorization request	Information not provided.

AM Pattern Disturbance Impact study	Component Description:	As part of the construction Permit for WNDU
	Amount:	\$1,846.32
AM Pattern Disturbance Remedy	Information not provided.	
DTV Medical Facility Notification	Information not provided.	
FCC Filing Fees - Form 2100 license to cover application	Information not provided.	
Disposal Costs (for equipment and other waste, net of any salvage value)	Component Description:	Disposal Costs (for equipment and other waste, net of any salvage
	Amount:	value) \$10,000.20
Equipment Delivery and Handling Charges		
Tanaming Onargoo	Component Description:	Equipment Delivery and
	Amount:	Handling Charges \$3,125.15

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$7,838,622.99	\$6,442,834.58	\$1,368,841.68

Reimbursem	entestatus	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 Assistant Secretary

01/02/2019

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 Assistant Secretary

01/02/2019

Attachments