



(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility **41674** | Service: **DTX** | Call **WNDU-TV** | Channel: **27 (UHF)** |
ID:
File **0000028730**
Number:
FRN: **0018223693** | Date **05/28**
Submitted: **/2018**

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 Information

Reimbursement Contact Name and Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Contact Information

Preparer Contact Name and Information

Applicant	Address	Phone	Email
Samuel Hariton <i>Widely</i>	Samuel Hariton 4031 University Dr Suite 100 Fairfax, VA 22030 United States	+1 (339) 222-8107	sam.hariton@widely.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

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 and Type	Manufacturer	
	Model	DCX Gen 1
	Year	1998
	Type	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 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
	Type	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leasehold 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 and Type	Manufacturer	
	Model	DCX Generation 1
	Year	1998
	Type	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 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
	Type	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leasehold improvement?	No
	Size	N/A
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Primary Transmitter

Other Transmitter Cost Not Listed

Name	Description
Site Survey	Basic site survey by GatesAir
Transmitter Remote	Remote controls for transmitter
Renovation	Necessary interior wall work for transmitter building
Ice shield	Fencing extension for Interim heat exchanger

Antennas

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

Auxiliary Antenna

Existing Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Auxiliary (Backup)
	Description of Use	Backup
	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	Horizontal
	Type	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

Auxiliary Antenna

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 Manufacturer and Types	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	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 Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
	Type	
	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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**Auxiliary
Antenna**

Other Antenna Cost Not Listed

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

**Primary
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 Manufacturer and Type	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	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
Antenna

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 Manufacturer and Types	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	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

Primary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
	Type	
	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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**Primary
Antenna**

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 Line

Section	Question	Response
Transmission Line Related Expenses	Do you have transmission line related expenses?	Yes

Auxiliary
Transmission Line

Existing Transmission Line

Section	Question	Response
Existing Transmission Line Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Backup
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	
	Type	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 **New Transmission Line**
Transmission Line **Section**

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
	Type	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

Auxiliary **Other Transmission Line Expenses Not Listed**
Transmission Line **Information not provided.**

Primary
Transmission Line

Existing Transmission 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 Line Manufacturer and Type	Manufacturer	
	Type	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 **New Transmission Line**
Transmission 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
	Type	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

Primary **Other Transmission Line Expenses Not Listed**
Transmission Line

Information 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 Registration	Do you have a tower registration number?	Yes
	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
70459	WSND-FM	FM
41675	WNDV-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

Section	Question	Response
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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 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.

	Date Constructed	01/01/1969
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**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
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Level II Corrosion Risk Assessment	Level II Corrosion Risk Assessment
Level I Corrosion Risk Assessment	Level I Corrosion Risk Assessment

**Outside
Professional Services Costs**

Section	Question	Response
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

Outside Professional Services Costs **Other Professional Services Expenses Not Listed**

If wireless is not provided.

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	Other Expenses Not Listed Information not provided.
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Cost Information

Transmitters

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Transmitter HPTV-PARLX-U32	\$1,880,035.99	\$1,325,467.99		\$7,980.00	
Ice shield	<i>\$2,634.34</i>	\$2,634.34	N/A	N/A	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	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.	<i>\$62,381.00</i>	\$62,381.00	N/A	N/A	N/A
Renovation	<i>\$16,050.00</i>	\$16,050.00	N/A	N/A	N/A
Site Survey	<i>\$7,980.00</i>	\$7,980.00	See attached invoice	\$7,980.00	N/A
Transmitter Remote	<i>\$2,990.65</i>	\$2,990.65	N/A	N/A	N/A

Auxiliary Transmitter HPTV-PARLX-U32	\$1,930,000.00	\$1,514,044.00		\$0.00	
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	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.	\$2,000.00	\$2,000.00	N/A	N/A	N/A
Internal RF System	\$140,000.00	\$140,000.00	N/A	N/A	N/A
Sub-total	\$3,810,035.99	\$2,839,511.99	N/A	\$7,980.00	N/A
Total for all systems	\$7,799,722.99	\$6,423,497.08	N/A	\$224,767.98	N/A

Components

Actual Information	
Description	File Name
Ice shield	Information not provided.

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.
Renovation	Information not provided.
Site Survey	<div> <div> Component Description: Amount: </div> <div> Site Survey \$7,980.00 </div> </div>
Transmitter Remote	Information not provided.
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.
Internal RF System	Information not provided.

Cost Information

Antennas

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Antenna TFU-31ETT /VP-R 04	\$313,550.00	\$313,688.00		\$0.00	
Top Plate Adapter	<i>\$19,520.00</i>	\$19,520.00	N/A	\$0.00	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
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
UHF - High Power Top Mount One Station antenna elliptically or circularly polarized	<i>\$275,000.00</i>	\$275,000.00	Catalog Cost	N/A	N/A
Auxiliary Antenna TUA-04-8 /32-H-K-1	\$329,450.00	\$194,513.44		\$47,751.75	
Top Plate Adapter	<i>\$19,520.00</i>	\$19,520.00	N/A	\$5,856.00	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	\$36,145.35	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$1,920.00	N/A
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,700.00	\$12,768.00	N/A	\$3,830.40	N/A
Sub-total	\$643,000.00	\$508,201.44	N/A	\$47,751.75	N/A
Total for all systems	\$7,799,722.99	\$6,423,497.08	N/A	\$224,767.98	N/A

Components

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

Top Plate Adapter	Component Description: Auxiliary/Interim Antenna Top Plate Adapter Amount: \$5,856.00
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	Component Description: UHF Broadband Panel Top mount Aux/Interim TV Antenna Amount: \$36,145.35
Sweep test of existing antenna	Component Description: Sweep Test Auxiliary/Interim Antenna Amount: \$1,920.00
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	Component Description: Auxiliary/Interim Antenna Elbow Complex Amount: \$3,830.40

Cost
Information

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		\$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		\$56,911.32	
Rigid Transmission Line - copper, 6 1/8" broadband	\$241,280.00	\$190,905.35	N/A	\$56,911.32	N/A
Sub-total	\$450,350.00	\$343,006.65	N/A	\$56,911.32	N/A
Total for all systems	\$7,799,722.99	\$6,423,497.08	N/A	\$224,767.98	N/A

Components

Actual Information	
Description	File Name
Rigid Transmission Line - copper, 6 1/8"	Information not provided.
Rigid Transmission Line - copper, 6 1/8" broadband	<div>Component Description:Interim Transmission Line</div> <div>Amount:\$56,911.32</div>

Cost
Information

Tower Equipment and Rigging Costs

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Auxiliary Tower NTOWER	\$1,281,650.00	\$1,212,000.00		\$47,059.75	
Structural engineering tower load study for well documented tower	\$12,600.00	\$5,450.00	N/A	\$5,450.00	N/A
Level 1 Foundation study	<i>\$750.00</i>	\$750.00	N/A	\$0.00	N/A
Tall Tower (greater than 500')	\$210,500.00	\$200,000.00	N/A	\$0.00	N/A
Serious tower reinforcement /modifications	\$1,052,000.00	\$1,000,000.00	N/A	\$35,809.75	N/A
Corrosion analysis and ultrasound measurements	<i>\$5,800.00</i>	\$5,800.00	See attached invoice and purchase order 072617TD	\$5,800.00	N/A
Primary Tower NTOWER	\$1,280,600.00	\$1,211,450.00		\$35,987.31	
Structural engineering tower load study for well documented tower	\$12,600.00	\$5,950.00	N/A	\$3,137.50	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
Serious tower reinforcement /modifications	\$1,052,000.00	\$1,000,000.00	N/A	\$30,099.81	N/A
Sub-total	\$2,562,250.00	\$2,423,450.00	N/A	\$83,047.06	N/A
Total for all systems	\$7,799,722.99	\$6,423,497.08	N/A	\$224,767.98	N/A

Components

Actual Information	
Description	File Name
Structural engineering tower load study for well documented tower	Component Description: Structural Analysis of Auxiliary Tower Amount: \$5,450.00
Level 1 Foundation study	Information not provided.
Tall Tower (greater than 500')	Information not provided.

<p>Serious tower reinforcement /modifications</p>	<table> <tr> <td data-bbox="710 168 1013 212">Component Description:</td><td data-bbox="1149 168 1348 369">Tower reinforcement & design drawings Existing Auxiliary Tower</td></tr> <tr> <td data-bbox="710 369 821 414">Amount:</td><td data-bbox="1149 369 1268 414">\$2,750.00</td></tr> <tr> <td data-bbox="710 504 1013 548">Component Description:</td><td data-bbox="1149 504 1332 660">Tower Reinforcement /Modification of Auxiliary Tower</td></tr> <tr> <td data-bbox="710 660 821 705">Amount:</td><td data-bbox="1149 660 1284 705">\$26,590.50</td></tr> <tr> <td data-bbox="710 795 1013 840">Component Description:</td><td data-bbox="1149 795 1380 952">Tower Resocket on Level 6 B&C anchor points Auxiliary Tower</td></tr> <tr> <td data-bbox="710 952 821 996">Amount:</td><td data-bbox="1149 952 1268 996">\$6,469.25</td></tr> </table>	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:	Tower Resocket on Level 6 B&C anchor points Auxiliary Tower	Amount:	\$6,469.25
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:	Tower Resocket on Level 6 B&C anchor points Auxiliary Tower												
Amount:	\$6,469.25												
<p>Corrosion analysis and ultrasound measurements</p>	<table> <tr> <td data-bbox="710 1131 1013 1176">Component Description:</td><td data-bbox="1149 1131 1380 1579">Corrosion inspection and Ultrasound measurements of tower legs in preparation for design and application of reinforcing required for re-pack tower modifications.</td></tr> <tr> <td data-bbox="710 1579 821 1624">Amount:</td><td data-bbox="1149 1579 1268 1624">\$2,900.00</td></tr> <tr> <td data-bbox="710 1713 1013 1758">Component Description:</td><td data-bbox="1149 1713 1340 1915">Corrosion inspection and Ultrasound measurements - Primary Tower</td></tr> <tr> <td data-bbox="710 1915 821 1960">Amount:</td><td data-bbox="1149 1915 1268 1960">\$2,900.00</td></tr> </table>	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				
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												

Structural engineering tower load study for well documented tower	<table> <tr> <td data-bbox="708 174 1015 210">Component Description:</td><td data-bbox="1150 174 1374 286">Structural Engineering Tower Load study</td></tr> <tr> <td data-bbox="708 297 818 333">Amount:</td><td data-bbox="1150 297 1267 333">\$1,000.00</td></tr> <tr> <td data-bbox="708 434 1015 470">Component Description:</td><td data-bbox="1150 434 1374 627">Take measurements for tower modifications and record elevations</td></tr> <tr> <td data-bbox="708 638 818 674">Amount:</td><td data-bbox="1150 638 1267 674">\$2,137.50</td></tr> </table>	Component Description:	Structural Engineering Tower Load study	Amount:	\$1,000.00	Component Description:	Take measurements for tower modifications and record elevations	Amount:	\$2,137.50
Component Description:	Structural Engineering Tower Load study								
Amount:	\$1,000.00								
Component Description:	Take measurements for tower modifications and record elevations								
Amount:	\$2,137.50								
Level II Corrosion Risk Assessment	<table> <tr> <td data-bbox="708 801 1015 837">Component Description:</td><td data-bbox="1150 801 1326 958">Corrosion inspection and Ultrasound measurements</td></tr> <tr> <td data-bbox="708 969 818 1005">Amount:</td><td data-bbox="1150 969 1267 1005">\$2,750.00</td></tr> </table>	Component Description:	Corrosion inspection and Ultrasound measurements	Amount:	\$2,750.00				
Component Description:	Corrosion inspection and Ultrasound measurements								
Amount:	\$2,750.00								
Level I Corrosion Risk Assessment	Information not provided.								
Tall Tower (greater than 500')	Information not provided.								

Serious tower reinforcement
/modifications

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:

Tower
reinforcement &
design drawings
Existing Primary
Tower

Amount:

\$2,750.00

Component Description:

Tower
reinforcement.
/Modifications-
Primary Tower

Amount:

\$18,761.31

Cost Information

Outside Professional Services

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Outside Professional Services	\$221,265.00	\$209,250.00		\$29,077.85	
NEPA Section 106 environmental review, if needed	\$6,310.00	\$6,000.00	N/A	N/A	N/A
Project management of the transition	\$142,200.00	\$135,000.00	N/A	\$26,806.35	N/A
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	\$2,105.00	\$2,000.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A

RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
Prepare request for Special Temporary Authorization	\$4,100.00	\$3,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$196.50	N/A
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), License to Cover Application	\$2,365.00	\$2,250.00	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
ASR modification (prepare FCC Form 854)	\$2,105.00	\$2,000.00	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
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$0.00	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$2,075.00	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

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	\$29,077.85	N/A
Total for all systems	\$7,799,722.99	\$6,423,497.08	N/A	\$224,767.98	N/A

Components

Actual Information	
Description	File Name
NEPA Section 106 environmental review, if needed	Information not provided.
Project management of the transition	<div> <div>Component Description:</div> <div>Amount:</div> <div>Project Management \$28.20</div> </div> <div> <div>Component Description:</div> <div>Amount:</div> <div>Project Management \$1,813.95</div> </div> <div> <div>Component Description:</div> <div>Amount:</div> <div>Project management \$2,817.65</div> </div> <div> <div>Component Description:</div> <div>Amount:</div> <div>Project Management \$3,593.55</div> </div> <div> <div>Component Description:</div> <div>Amount:</div> <div>Project management \$2,471.90</div> </div>

	Component Description:	Project Management
	Amount:	\$2,813.80
	Component Description:	Project Management
	Amount:	\$755.80
	Component Description:	Project Management
	Amount:	\$802.25
	Component Description:	Project Management
	Amount:	\$3,558.10
	Component Description:	Project Management
	Amount:	\$2,547.60
	Component Description:	Project managment
	Amount:	\$1,553.55
	Component Description:	Transition Related Project Management Costs
	Amount:	\$4,050.00
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.
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	<div> <div>Component Description:</div> <div>Complete and file repack CP application</div> <div>Amount:</div> <div>\$196.50</div> </div>
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), License to Cover Application	Information not provided.
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	Information not provided.
ASR modification (prepare FCC Form 854)	Information not provided.
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	Information not provided.
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	<div> <div>Component Description:</div> <div>FCC CP application</div> <div>Amount:</div> <div>\$1,625.00</div> </div>

Perform engineering study for new channel assignment and antenna development	<div> <div> Component Description: Amount: </div> <div> Perform engineering study for new channel assignment \$1,950.00 </div> </div> <div> <div> Component Description: Amount: </div> <div> Review technical details of alternate antenna proposal from RFS regarding top-mount on repack Ch-27. \$125.00 </div> </div>
Address transition timing and coordination issues w/ other stations and wireless	Information not provided.
Prepare and or review reimbursement form	Information not provided.
RF Exposure Measurements	Information not provided.

Cost
Information

Other Expenses

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	\$112,822.00	\$100,077.00		\$0.00	
MVPD Notification of Channel Change	<i>\$1,500.00</i>	\$1,500.00	N/A	N/A	N/A
AM Pattern Disturbance -- Impact study	\$7,890.00	\$3,500.00	N/A	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
Develop and air announcement of upcoming channel change	\$11,500.00	\$11,500.00	N/A	N/A	N/A
Sub-total	\$112,822.00	\$100,077.00	N/A	\$0.00	N/A
Total for all systems	\$7,799,722.99	\$6,423,497.08	N/A	\$224,767.98	N/A

Components

Information not provided.

Cost Information	Grand Total		
	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$7,799,722.99	\$6,423,497.08	\$224,767.98

Reimbursement Status	Question	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	<p>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.</p>	
		<ol style="list-style-type: none"> 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.

<p>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.</p>	
<p>I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.</p>	<p>Robert Folliard <i>Assistant Secretary</i></p> <p>05/28/2018</p>

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 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 AND/OR FRAUDULENT STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT (U.S. CODE, TITLE 31, SECTIONS 3729-3733).	
		<ol style="list-style-type: none"> 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. 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.

<p>8. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.</p> <p>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.</p>	
<p>I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.</p>	<p>Robert Folliard <i>Assistant Secretary</i></p> <p>05/28/2018</p>

Attachments