



(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility **13989** | Service: **DTV** | Call **WAVE** | Channel: **36 (UHF)** |
ID: | Sign:
File **0000025187**
Number:
FRN: **0018223693** | Date **08/24**
Submitted: **/2020**

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
GRAY TELEVISION LICENSEE, LLC Doing Business As: WAVE TV	4370 PEACHTREE ROAD, NE ATLANTA, GA 30319 United States	+1 (404) 504-9828	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
The Preparer is same as the reimbursement contact.			

Broadcaster Information and Transition Plan

Question	Response
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Will the station be sharing equipment with another broadcast television station or stations (e.g., a shared antenna, co-location on a tower, use of the same transmitter room, multiple transmitters feeding a combiner, etc.)? If yes, enter the facility ID's of the other stations and click 'prefill' to download those stations' licensing information.	Yes
Briefly describe transition plan	Install interim antenna/ Line Remove top mounted antenna and install new antenna. Connect to existing dual broadband lines Install new main and backup transmitters. Combiner, Line, Antenna and tower systems cost divided 50% with WLKY

Transmitters

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

**Auxiliary
Transmitter****Add Transmitter Information**

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Emergency 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	Ranger
	Year	2009
	Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	1.1 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?	No
	Manufacturer	
	Model	UAXTE-2R 37
	Transmitter Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power capacity	1.2 kW
	Justification for New Transmitter	Existing transmitter can not be retuned EOL letter attached

**Auxiliary
Transmitter****Other Transmitter Costs**

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	Yes
	Transformer (480V)	Yes
	Power	150 kVA
	Rigid Conduit and Wiring	No
	Size	N/A
	Length	N/A
	Other Electrical Service	No

	Description	N/A
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

Information not provided.

**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	Sigma
	Year	2003
	Type	Inductive Output Tube
	IOT Power Type	Single
	Power Capacity	30 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	ULXTE-50
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	30.05 kW
	Justification for New Transmitter	Existing transmitter can not be retuned Headroom analysis attached

**Primary
Transmitter**

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	Yes
	Transformer (480V)	Yes
	Power	150 kVA
	Rigid Conduit and Wiring	No
	Size	N/A
	Length	N/A
	Other Electrical Service	No

	Description	N/A
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
Transmitter Installation	Primary Transmitter Installation

Antennas

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

**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?	Yes
	Is the existing antenna directional?	Yes
	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	2
	Number of Panels	51
	Design power capacity in use	50.0 %
	Lower Limit	545.00 MHz
	Upper Limit	695.00 MHz
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	1000.0 kW

Manufacturer	
Model	ABBP14H4- HTOC5-26 /51
Year	2003

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

Facility ID	Call Sign
53939	WLKY

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?	Yes
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	Yes
	Is antenna directional?	Yes
	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	2
	Number of Panels/Bays	14
	Lower Limit	470.00 MHz
	Upper Limit	605.00 MHz
	Design power capacity in use	50.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	890.0 kW
	Manufacturer	

Model	TUM30-AP-S4-14/56H-R-2-T
Year	2019
Justification for New Antenna	Existing antenna can not be retuned Sweep data and ERI response attached

Primary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
	Type	New
	Number of channels supported	2
	Frequencies of channels supported	RF channel
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	Yes
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	No
	Broadband or Single Channel?	N/A
	Feed Line Size	N/A
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	
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

Enter a list of RF channel numbers.

RF Channel Number
14
36

**Primary
Antenna**

Other Antenna Cost Not Listed

Information not provided.

**Interim
Antenna**

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	Yes
	Is antenna directional?	Yes
	Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna Manufacturer and Type	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Broadband Slot
	Number of Stations Supported	2
	Number of Panels/Bays	24
	Lower Limit	470.00 MHz
	Upper Limit	680.00 MHz
	Design power capacity in use	100.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	680.0 kW
	Manufacturer	
	Model	TFU-WB24
	Year	2019

	Justification for New Antenna	Transition side mount antenna needed to enable removal of existing top mount antenna and installation of new repack channel capable antenna.
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Interim 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?	No
	Broadband or Single Channel?	N/A
	Feed Line Size	N/A
Side Mount Brackets	Do you require the separate purchase of side mount brackets for an 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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**Interim
Antenna**

Other Antenna Cost Not Listed

Information not provided.

Transmission Line

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

Primary Transmission Line**Existing Transmission Line**

Section	Question	Response
Existing Transmission Line Description	Type of change	Utilize Existing
	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?	Yes
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	Andrew
	Type	Rigid
	Diameter	7 3/16 inches
	Other Diameter	N/A
	Segment Length	Broadband
	Other Segment Length	N/A
	Number of parallel runs	2
	Length	1000 feet per run

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

Facility ID	Call Sign
53939	WLKY

Primary Transmission Line

Other Transmission Line Expenses Not Listed

Name	Description
Transmission Line - Other Expenses Not Listed - Nitrogen for Transmission Line	Nitrogen required to dry transmission line

Interim Transmission Line

New Transmission Line

Section	Question	Response
New Transmission Line Costs	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	Type	Rigid
	Diameter	6 1/8 inches
	Segment Length	Broadband
	Other Segment Length	
	Number of parallel runs	1
	Length	950 feet per run
	Justification for New Transmission Line	Interim during new antenna installation

Interim Transmission Line

Other Transmission Line Expenses Not Listed

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

**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	Leased
	Is this tower consider Complex?	No
	Is this tower currently shared with any other stations?	Yes
	One or more FM, AM or TV radio broadcaster(s)	Yes
	Others Types of Users	No
	Is tower documented for structural analysis?	Yes
	Is tower compliant with Rev G?	No
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1230057
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	38° 22' 08.4" N-
	Longitude (NAD83)	085° 49' 47.6" W-
	Overall Structure Height	960.95 feet
	Support Structure Height	899.92 feet
	Ground Elevation Above Mean Sea Level (AMSL)	982.93 feet

Structure Type	GTOWER - Guyed Structure Used for Communication Purposes
Tower Owner	P & B Towers LLC
Date Constructed	03/11/2015

**FM, AM or TV radio
broadcasters. Facility ID's,
Call Signs and Services of
other broadcast stations with
whom the tower is shared**

Facility ID	Call Sign	Service
53939	WLKY	DTV

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:	Minor Reinforcements needed

Primary Tower

Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	N/A
Helicopter Services Required	Are helicopter services required?	Yes

**Primary
Tower**

Other Tower Expenses Not Listed
Information not provided.

**Outside
Professional Services Costs**

Section	Question	Response
Outside Project Management Services	Do you require outside project management services?	Yes
	Number of Hours	595
	Explanation	Pattern analysis Antenna Spec Transmitter Spec Building drawings Installation Supervision Accounting Internal Legal
Outside RF consulting Engineering Services	Perform engineering study for new channel assignment and antenna development	Yes
	Prepare engineering section of Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare engineering section of Form FCC License to Cover Application	Yes
	For Auxiliary Facility	No
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	1
	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A

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

Outside Other Professional Services Expenses Not Listed
Professional Services Costs Services not provided.

Other Expenses

Section	Question	Response
AM Pattern Disturbance	Is an Impact Study needed?	No
	Is Remediation needed?	No
Facility Expenses	Name	N/A
	Other Distributed Transmission System Expenses Not listed	N/A
	Name	N/A
	Is Notification of a Medical Facility required as a result of DTV broadcasting?	Yes
Permit and Filing Costs	Local Zoning	No
	Non-zoning permits	No
	BLM or NFS Coordination	No
	FCC Construction Permit Minor Change	No
	FCC License to Cover Application	No
	FCC Special Temporary Authority Application	No
Other Miscellaneous Expenses	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	Yes
	Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
	Does this relocation require Equipment Storage?	Yes
	Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	Yes
	Does this relocation require MVPD Notification of a Channel Change?	Yes

**Other
Expenses**

Other Expenses Not Listed

Name	Description
Security	Armed security provided by vendor to the equipment shelter site

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 ULXTE-50	\$1,048,738.00	\$1,091,850.25		\$980,993.99	
Transmitter Installation	<i>\$37,988.00</i>	\$37,988.00	Please see WAVE Primary Transmitter - Installation Budget Revision Justification Letter	\$37,228.24	N/A
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$6,368.46	Per Estimated Cost Justification WAVE-110-1st Primary Transmitter - 3 Phase, 480 V, 150 KVA Transformer v0 Per GatesAir Quote Q-73547 (estimates is the quoted amount minus the amount already reimbursed under the primary transmitter category)	\$6,368.46	N/A

Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 21 - 31 kW	\$947,000.00	\$1,011,193.79	see Estimated Cost Justification WAVE-110- 1st Primary Transmitter - UHF Liquid Cooled Solid State, 21-31 kW v0	\$937,397.29	N/A
Auxiliary Transmitter UAXTE-2R 37	\$189,750.00	\$120,866.80		\$55,884.20	
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
Transformer 3 phase /480v - 150 KVA	\$25,550.00	\$24,300.00	N/A	N/A	N/A
UHF - Air Cooled Solid State Transmitter 1 - 2.5 kW	\$126,000.00	\$60,266.80	Quote attached (GA- 00021721)	\$55,884.20	N/A
Sub-total	\$1,238,488.00	\$1,212,717.05	N/A	\$1,036,878.19	N/A
Total for all systems	\$3,367,258.77	\$3,638,242.09	N/A	\$2,015,119.30	N/A

Components

Actual Information Description	File Name
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Transmitter Installation	<div> <div>Component Description:</div> <div>Labor, Material and Equipment.</div> <div>Amount:</div> <div>\$37,228.24</div> </div>
Transformer 3 phase/480v - 150 KVA	<div> <div>Component Description:</div> <div>WAVE-110-1st Primary Transmitter - 3 Phase, 480 V, 300 KVA Transformer</div> <div>Amount:</div> <div>\$3,883.21</div> </div> <div> <div>Component Description:</div> <div>WAVE-110-1st Primary Transmitter - 3 Phase, 480 V, 150 KVA Transformer</div> <div>Amount:</div> <div>\$2,485.25</div> </div>
Switchgear - industrial 800 amp	Information not provided.

UHF - Liquid Cooled Solid State Transmitter 21 - 31 kW	Component Description: Amount:	ULXTE-40 per Quote Q-73547 \$87,716.71
	Component Description: Amount:	Transmitter \$434,479.84
	Component Description: Amount:	Transmitter, Mask Filter Saystem \$210,382.52
	Component Description: Amount:	WAVE-110-1st Primary Transmitter - UHF Liquid Cooled Solid State, 21-31 kW \$2,960.19
	Component Description: Amount:	Percent of contract amount \$37,228.24
	Component Description: Amount:	ULXTE-40 \$70,282.97
	Component Description: Amount:	ULXTE-40 Transmitter per Quote Q-73547 \$131,575.06
Switchgear - industrial 800 amp	Information not provided.	
Transformer 3 phase/480v - 150 KVA	Information not provided.	

UHF - Air Cooled Solid State Transmitter 1 - 2.5 kW		
	Component Description:	Transmitter, Mask Filter Saystem, Electrical, Installation & Proof
	Amount:	\$7,891.62
	Component Description:	UAXTE-2-E Transmitter
	Amount:	\$15,501.79
	Component Description:	Transmitter
	Amount:	\$27,229.71
	Component Description:	UAXTE-2-E
	Amount:	\$5,261.08

Cost Information

Antennas

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Antenna TFU-WB24	\$157,180.00	\$156,850.00		\$6,400.00	
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$6,400.00	N/A
UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 680 kW input, directional,, horizontally polarized	<i>\$150,450.00</i>	\$150,450.00	Dielectric quote attached	N/A	N/A
Primary Antenna TUM30-AP-S4-14/56H-R-2-T	\$984,930.00	\$1,161,200.47		\$378,126.78	
UHF - High Power Top Mount (200-1000 kW), Two Station broadband panel antenna, elliptically or circularly polarized	\$768,000.00	\$519,750.00	Please see WAVE Primary Antenna revised 700083CMZ-3.pdf	N/A	N/A

Combiner output splitting /switching for dual feed lines, if applicable	\$126,000.00	\$139,350.00	Quote attached	N/A	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$495,700.47	Please see Estimated Cost Justification WAVE-210- Primary Antenna - New Combiner v0	\$378,126.78	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
Sub-total	\$1,142,110.00	\$1,318,050.47	N/A	\$384,526.78	N/A
Total for all systems	\$3,367,258.77	\$3,638,242.09	N/A	\$2,015,119.30	N/A

Components

Actual Information	
Description	File Name
Sweep test of existing antenna	Component Description: Amount:
	Repack Sweep \$6,400.00
UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 680 kW input, directional,, horizontally polarized	Information not provided.
UHF - High Power Top Mount (200-1000 kW), Two Station broadband panel antenna, elliptically or circularly polarized	Information not provided.

Combiner output splitting /switching for dual feed lines, if applicable	Information not provided.												
New combiner, cost per channel (without antenna)	<table> <tr> <td>Component Description:</td><td>Combiner RF Accessories Stage 2,3,5 Services</td></tr> <tr> <td>Amount:</td><td>\$162,690.74</td></tr> <tr> <td>Component Description:</td><td>Combiner</td></tr> <tr> <td>Amount:</td><td>\$52,745.30</td></tr> <tr> <td>Component Description:</td><td>Combiner</td></tr> <tr> <td>Amount:</td><td>\$162,690.74</td></tr> </table>	Component Description:	Combiner RF Accessories Stage 2,3,5 Services	Amount:	\$162,690.74	Component Description:	Combiner	Amount:	\$52,745.30	Component Description:	Combiner	Amount:	\$162,690.74
Component Description:	Combiner RF Accessories Stage 2,3,5 Services												
Amount:	\$162,690.74												
Component Description:	Combiner												
Amount:	\$52,745.30												
Component Description:	Combiner												
Amount:	\$162,690.74												
Sweep test of existing antenna	Information not provided.												

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
Interim Transmission Line	\$220,400.00	\$141,311.80		\$438.77	
Rigid Transmission Line - copper, 6 1 /8" broadband	\$220,400.00	\$141,311.80	Quote attached	\$438.77	N/A
Primary Transmission Line	\$285.38	\$285.38		\$285.38	
Transmission Line - Other Expenses Not Listed - Nitrogen for Transmission Line	\$285.38	\$285.38	see Estimated Cost Justification WAVE-310- Primary Transmission Line - Other Expenses Not Listed - Nitrogen for Transmission Line v1	\$285.38	Invoices
Sub-total	\$220,685.38	\$141,597.18	N/A	\$724.15	N/A
Total for all systems	\$3,367,258.77	\$3,638,242.09	N/A	\$2,015,119.30	N/A

Components

Actual Information Description	File Name
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Rigid Transmission Line -
copper, 6 1/8" broadband

Component Description: Rent Cyl Ind Large
Acetylene
Amount: \$31.02

Component Description: 9" dia x 8" thick
coredrill wall
Amount: \$250.00

Component Description: Rent Cyl Ind Large
Acetylene
Amount: \$33.54

Component Description: Acetylene IND
Amount: \$173.51

Component Description: Cylinder Rental
(acetylene,
nitrogen, oxygen,
other)
Amount: \$36.88

Component Description: Nitrogen Industrial
200 CGA 580
Amount: \$163.82

Transmission Line - Other Expenses Not Listed - Nitrogen for Transmission Line		
	Component Description:	"WAVE-310-Primary Transmission Line - Other Expenses Not Listed - Nitrogen for Transmission Line-"
	Amount:	\$63.09
	Component Description:	Rent Cyl Ind Large Nitrogen
	Amount:	\$70.91
	Component Description:	Nitrogen Industrial 200
	Amount:	\$84.43
	Component Description:	WAVE-310-Primary Transmission Line - Other Expenses Not Listed - Nitrogen for Transmission Line
	Amount:	\$40.46
	Component Description:	"WAVE-310-Primary Transmission Line - Other Expenses Not Listed - Nitrogen for Transmission Line"
	Amount:	\$26.49

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
Primary Tower GTOWER	\$495,100.00	\$661,776.00		\$465,438.50	
Tall Tower (greater than 500')	\$210,500.00	\$385,776.00	Please See Estimated Cost Justification WAVE-410- Existing Primary Tower - Tower Rigging, Tall Tower v0	\$345,776.00	N/A
Tower Helicopter Lift	<i>\$114,000.00</i>	\$114,000.00	Please see attached Tower King II, Inc. Proposal C-19-010-2	\$114,000.00	N/A
Minor tower reinforcement /modifications	\$158,000.00	\$150,000.00	N/A	N/A	N/A
Structural engineering tower load study for well documented tower	\$12,600.00	\$12,000.00	N/A	\$5,662.50	N/A
Sub-total	\$495,100.00	\$661,776.00	N/A	\$465,438.50	N/A
Total for all systems	\$3,367,258.77	\$3,638,242.09	N/A	\$2,015,119.30	N/A

Components

Actual Information		
Description	File Name	
Tall Tower (greater than 500')	Component Description:	Tower Service
	Amount:	\$71,550.00
	Component Description:	Interim Antenna Installation
	Amount:	\$29,851.00
	Component Description:	Customer deposit for Repack Interim Antenna Installation Services
	Amount:	\$34,925.00
	Component Description:	Tower service
	Amount:	\$106,500.00
	Component Description:	Tower Service
	Amount:	\$102,950.00

Tower Helicopter Lift	<div data-bbox="722 174 1378 367"> <p>Component Description: WAVE-410-Existing Primary Tower - Helicopter Lift-</p> <p>Amount: \$28,450.00</p> </div> <div data-bbox="722 474 1378 667"> <p>Component Description: WAVE-410-Existing Primary Tower - Helicopter Lift-</p> <p>Amount: \$43,500.00</p> </div> <div data-bbox="722 775 1378 967"> <p>Component Description: WAVE-410-Existing Primary Tower - Helicopter Lift</p> <p>Amount: \$42,050.00</p> </div>
Minor tower reinforcement /modifications	Information not provided.
Structural engineering tower load study for well documented tower	<div data-bbox="722 1218 1378 1370"> <p>Component Description: Tower Service - Mapping of WAVE Tower for Repack</p> <p>Amount: \$5,500.00</p> </div> <div data-bbox="722 1478 1378 1711"> <p>Component Description: WAVE-410-Existing Primary Tower - Structural Engineering Tower Load Study</p> <p>Amount: \$162.50</p> </div>

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	\$207,870.00	\$248,896.00		\$101,210.46	
Attorney Fees - Negotiation of lease and other matters for shared locations	\$4,210.00	\$471.00	Please see WAVE Attorney Other Matters Budget Revision Justification Cover Letter	N/A	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$3,108.34	N/A
Project management of the transition	\$94,010.00	\$144,675.00	Widelity Strategic Support Quote	\$93,981.29	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	\$2,950.00	N/A

Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	\$370.83	N/A
Prepare request for Special Temporary Authorization	\$2,050.00	\$1,500.00	N/A	\$800.00	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$0.00	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 request for Special Temporary Authorization	\$3,680.00	\$3,500.00	N/A	N/A	N/A
Comprehensive coverage verification via field study, if needed	\$84,200.00	\$80,000.00	N/A	N/A	N/A
Sub-total	\$207,870.00	\$248,896.00	N/A	\$101,210.46	N/A
Total for all systems	\$3,367,258.77	\$3,638,242.09	N/A	\$2,015,119.30	N/A

Components

Actual Information	
Description	File Name
Attorney Fees - Negotiation of lease and other matters for shared locations	Information not provided.
Perform engineering study for new channel assignment and antenna development	<div> <div> Component Description: </div> <div> Engineering study work for new channel assignment and antenna development </div> </div> <div> <div> Amount: </div> <div> \$125.00 </div> </div> <div> <div> Component Description: </div> <div> Review various materials </div> </div> <div> <div> Amount: </div> <div> \$1,200.00 </div> </div> <div> <div> Component Description: </div> <div> WAVE-530-RF Eng - Engineering Study for New Channel Assignment </div> </div> <div> <div> Amount: </div> <div> \$158.34 </div> </div> <div> <div> Component Description: </div> <div> WAVE-530-RF Eng - Engineering Study for New Channel Assignment </div> </div> <div> <div> Amount: </div> <div> \$116.67 </div> </div> <div> <div> Component Description: </div> <div> Engineering study work for new channel assignment and antenna development </div> </div> <div> <div> Amount: </div> <div> \$1,375.00 </div> </div>

	Component Description: Engineering study work for new channel assignment and antenna development; Amount: \$250.00
Project management of the transition	Component Description: Project Management Amount: \$48.76
	Component Description: Project Management Amount: \$2,713.15
	Component Description: Project management Amount: \$3,142.70
	Component Description: Project Management Amount: \$4,216.85
	Component Description: Project Management Amount: \$6,348.90
	Component Description: Project Management Amount: \$2,145.70
	Component Description: Project Management Amount: \$3,777.30

Component Description:	Project Management
Amount:	\$415.80

Component Description:	Project Management
Amount:	\$4,748.75

Component Description:	Project Management
Amount:	\$84.70

Component Description:	Project Management
Amount:	\$4,158.70

Component Description:	Project Management
Amount:	\$3,158.80

Component Description:	Project Management
Amount:	\$5,274.65

Component Description:	Project Management
Amount:	\$338.81

Component Description:	Project Management
Amount:	\$110.36

Component Description:	Project Management
Amount:	\$2,678.35

Component Description:	Project Management
Amount:	\$3,614.95

Component Description:	Project Management
Amount:	\$6,604.75

Component Description:	Project Management
Amount:	\$3,176.20

Component Description:	Project Management
Amount:	\$1,463.00

Component Description:	Project Management
Amount:	\$87.26

Component Description:	Project Management
Amount:	\$4,188.25

Component Description:	Project Management
Amount:	\$2,963.45

Component Description:	Project Management
Amount:	\$4,897.00

Component Description:	Project Management
Amount:	\$3,544.40

	Component Description: Amount:	Project Management \$4,384.10
	Component Description: Amount:	Repack Engineering \$795.15
	Component Description: Amount:	Project Management \$5,507.15
	Component Description: Amount:	Project Management \$1,965.45
	Component Description: Amount:	Project management \$8,223.05
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Component Description: Amount:	WAVE-530-RF Eng - Construction Permit Application \$700.00
	Component Description: Amount:	FCC Form 2100 Construction Permit Application \$2,250.00

Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Component Description:		WAVE-530-RF
	Amount:		Eng - License To Cover Application
	Component Description:		WAVE-530-RF
	Amount:		Eng - License To Cover Application (Main)
Prepare request for Special Temporary Authorization	Component Description:		Consulting Engineer
	Amount:		\$800.00
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Information not provided.		
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.		
Attorney Fees - Prepare and File request for Special Temporary Authorization	Information not provided.		
Comprehensive coverage verification via field study, if needed	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	\$63,005.39	\$55,205.39		\$26,341.22	
Security	<i>\$3,386.26</i>	\$3,386.26	Armed security provided by vendor to the equipment shelter site. Please see multiple invoices.	\$3,386.26	N/A
MVPD Notification of Channel Change	<i>\$0.00</i>	\$0.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	<i>\$2,850.00</i>	\$2,850.00	estimate for on air rescan announcement production. Quote attached	N/A	N/A
Equipment Storage	<i>\$30,500.00</i>	\$30,500.00	Estimate for Dielectric on site antenna storage Dielectric letter attached	\$5,842.20	N/A
Equipment Delivery and Handling Charges	<i>\$12,307.05</i>	\$12,307.05	see Estimated Cost Justification WAVE-610-Equipment Delivery and Handling v2	\$12,307.05	N/A

Disposal Costs (for equipment and other waste, net of any salvage value)	\$2,412.08	\$2,412.08	see Estimated Cost Justification WAVE-610-Disposal Costs v1	\$1,055.71	N/A
DTV Medical Facility Notification	\$11,550.00	\$3,750.00	Group quote attached	\$3,750.00	N/A
Sub-total	\$63,005.39	\$55,205.39	N/A	\$26,341.22	N/A
Total for all systems	\$3,367,258.77	\$3,638,242.09	N/A	\$2,015,119.30	N/A

Components

Actual Information	
Description	File Name
Security	<p>Component Description: Security Services</p> <p>Amount: \$1,625.40</p> <p>Component Description: Guard Services</p> <p>Amount: \$1,760.86</p>
MVPD Notification of Channel Change	Information not provided.
Develop and air announcement of upcoming channel change	Information not provided.
Equipment Storage	<p>Component Description: Sale 40 SC 1-Tripper</p> <p>Amount: \$5,842.20</p>

Equipment Delivery and
Handling Charges

Component Description: 10K 55' CAB
SHOOTING
BOOM FORKLIFT
Amount: \$3,380.07

Component Description: 15' Single Manlift
S/P
Amount: \$914.64

Component Description: 10K 55' shooting
boom forklift
Amount: \$3,638.06

Component Description: 1 Waste
Container 6 Cu
Yd
Amount: \$700.57

Component Description: 15' SINGLE
MANLIFT S/P
Amount: \$460.44

Component Description: Single Manlift
Amount: \$1,166.28

Component Description: 15' SINGLE
MANLIFT S/P
Amount: \$858.65

Component Description: 25-26' ELECT
SCISSOR
NARROW
Amount: \$1,188.34

<p>Disposal Costs (for equipment and other waste, net of any salvage value)</p>	<table> <tr> <td data-bbox="722 174 1027 208">Component Description:</td><td data-bbox="1163 174 1342 322">1 Waste Container 8 Cu Yd, 2 Lifts Per Week</td></tr> <tr> <td data-bbox="722 338 831 365">Amount:</td><td data-bbox="1163 338 1257 365">\$361.31</td></tr> <tr> <td data-bbox="722 477 1027 510">Component Description:</td><td data-bbox="1163 477 1380 544">VACUUM FEE WITH NO SOLIDS</td></tr> <tr> <td data-bbox="722 560 831 586">Amount:</td><td data-bbox="1163 560 1257 586">\$694.40</td></tr> <tr> <td data-bbox="722 698 1027 732">Component Description:</td><td data-bbox="1163 698 1278 766">1 Waste Container</td></tr> <tr> <td data-bbox="722 781 831 808">Amount:</td><td data-bbox="1163 781 1257 808">\$711.08</td></tr> </table>	Component Description:	1 Waste Container 8 Cu Yd, 2 Lifts Per Week	Amount:	\$361.31	Component Description:	VACUUM FEE WITH NO SOLIDS	Amount:	\$694.40	Component Description:	1 Waste Container	Amount:	\$711.08
Component Description:	1 Waste Container 8 Cu Yd, 2 Lifts Per Week												
Amount:	\$361.31												
Component Description:	VACUUM FEE WITH NO SOLIDS												
Amount:	\$694.40												
Component Description:	1 Waste Container												
Amount:	\$711.08												
<p>DTV Medical Facility Notification</p>	<table> <tr> <td data-bbox="722 947 1027 981">Component Description:</td><td data-bbox="1163 947 1380 1014">Medical Notification Mailing</td></tr> <tr> <td data-bbox="722 1030 831 1057">Amount:</td><td data-bbox="1163 1030 1278 1057">\$3,750.00</td></tr> </table>	Component Description:	Medical Notification Mailing	Amount:	\$3,750.00								
Component Description:	Medical Notification Mailing												
Amount:	\$3,750.00												

**Cost
Information**

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$3,367,258.77	\$3,638,242.09	\$2,015,119.30

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 , III . <i>Assistant Secretary</i></p> <p>08/24/2020</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 , III . <i>Assistant Secretary</i></p> <p>08/24/2020</p>

Attachments