

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility ID:	73263	Service: DTV	Call Sign:	WMHT	Channel: 25 (UHF)
File Number:	000002	27901	Olgn.		
FRN: 00	06595441	Date Submitted:	02/06 /2018		

Applicant Name, Type, and Contact Information

Applicant Information

Applicant	Address	Phone	Email	Applicant Type
WMHT EDUCATIONAL TELECOMMUNICATIONS Doing Business As: WMHT	ROBERT ALTMAN 4 GLOBAL VIEW TROY, NY 12180 United States	+1 (518) 880-3400	raltman@wmht. org	Not-for- Profit

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Preparer Contact Name and Information

Contact Information	Applicant	Address	Phone	Email
	Robert Cummings Director of Technology WMHT Educational Telecommunications	Robert Cummings 4 Global View Troy, NY 12180 United States	+1 (518) 880- 3474	bcummings@wmht. org

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.	Yes
	Briefly describe transition plan	Replace IOT Transmitter and associated equipment. AUX antenna and transmission line, add combiner for WTEN. Replace main transmission line to combiner, combiner and shared transmission line to antenna. Add AC and electric to transmitter room.

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

Primary	Existing Transmitter Information				
Transmitter	Section	Question	Response		
	Existing Transmitter Description	Type of change	Purchase New		
		Use	Primary (Main)		
		Description of Use	N/A		
		Ownership	Owned		
		Owner	N/A		
		Site	N/A		
		Is this transmitter currently shared with another station?	No		
		Is this transmitter currently in operating condition?	Yes		
	Existing Transmitter Manufacturer and Type	Manufacturer			
		Model	Paragon		
		Year	2005		
		Туре	Inductive Output Tube		
		IOT Power Type	Тwo		
		Power Capacity	50 kW		

Existing Transmitter Information

Primary	New Transmitter Costs				
Transmitter	Section	Question	Response		
	New Transmitter	Use	Primary (Main)		
		Change Type	Purchase New		
		Is this a request for upgraded equipment?	Yes		
		Manufacturer			
		Model	THU9evo		
		Transmitter Type	Solid State		
		Solid State Cooling	Liquid Cooled		
		Solid State Power capacity	31 kW		
		Justification for New Transmitter	Cost of re- tuning and replacing exciters exceeds cost of new transmitter.		

Primary	Other Transmitter Costs				
Transmitter	Section	Question	Response		
	Electrical Service	Service Entrance (3 phases 800A 208V)	No		
		Switchgear (industrial 800 amp)	No		
		Transformer (480V)	No		
		Power	N/A		
		Rigid Conduit and Wiring	No		
		Size	N/A		
		Length	N/A		
		Other Electrical Service	Yes		
			1		

	Description	Unsure of new electrical requirements
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Туре	Heating and Cooling
	Size	30 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

Primary Other Transmitter Cost Not Listed

Transmitter	Name	Description	
	MASK Filter	Channel Change requires new mask filter (prior cut for Channel 34)	

Interim	New Transmitter Costs				
Transmitter	Section	Question	Response		
	New Transmitter	Use	Interim		
		Description of Use	N/A		
		Change Type	Purchase		
		Manufacturer			
		Model	THUevo		
		Transmitter Type	Solid State		
		Solid State Cooling	Liquid Cooled		
		Solid State Power capacity	15.5 kW		
		Justification for New Transmitter	need to have a transmitter to use while the existing transmitter room and transmission system /combiner is rebuilt for the new channel due to room constraints		

Interim	Other Transmitter Costs		
Transmitter	Section	Question	Response
	Electrical Service	Service Entrance (3 phases 800A 208V)	No
		Switchgear (industrial 800 amp)	Yes
		Transformer (480V)	Yes
		Power	300 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?	Yes
	Туре	Heating and Cooling
	Size	20 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
Inside RF System	Is an additional interior RF system required to support this interim transmitter?	Yes

Other Transmitter Cost Not Listed

Transmitter Information not provided.

Interim

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

Existing Antenna Information

Primary

Antenna	Section	Question	Response
	Existing Antenna Description	Type of change	Retune Existing
		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?	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	Bottom
		Polarization	Horizontal
		Туре	Broadband Panel
		Number of Stations Supported	4
		Number of Panels	60
		Design power capacity in use	100.0 %
		Lower Limit	470.00 MHz

Upper Limit	698.00 MHz
Other Antenna Type	N/A
ERP: (Effective Radiated Power)	105.0 kW
Manufacturer	Dielectric
Model	TUD-05-12 /60H-1-B
Year	2005

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

Facility ID	Call Sign
11970	WXXA-TV
73264	WCWN
73942	WRGB
74422	WTEN

Primary Adjustment to Existing Antenna

Antenna

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

Primary Other Antenna Costs

Antenna	Section	Question	Response
	Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
		Туре	New
		Number of channels supported	3
		Frequencies of channels supported	RF channel
		Frequency	N/A

Enter a list of RF channel numbers.

RF Channel Number		
24		
22		
25		

PrimaryOther Antenna Cost Not ListedAntennaInformation not provided.

Auxiliary Antenna	Add Antenna Information			
	Section	Question	Response	
	Existing Antenna Description	Type of change	Purchase New	
		Antenna Use	Auxiliary (Backup)	
		Description of Use	WMHT Aux Antenna	
		Ownership	Owned	
		Owner	N/A	
		Site	N/A	
		Is this antenna currently shared with any other stations?	No	
		Is this 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	Side Mount	
		Antenna position in stack	Not in Stack	
		Polarization	Horizontal	
		Туре	Slotted Coaxial	
		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	N/A	
		ERP: (Effective Radiated Power)	19.0 kW	

Add Antenna Information

Manufacturer	
Model	DCA
Year	2005

Auxiliary	New Antenna Costs			
Antenna	Section	Question	Response	
	New Antenna Description	Use	Auxiliary (Backup)	
		Description of Use	Aux antenna	
		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	Side Mount	
		Antenna position in stack	Not in Stack	
		Polarization	Horizontal	
		Туре	Broadband Panel	
		Number of Stations Supported	2	
		Number of Panels/Bays	24	
		Lower Limit	512.00 MHz	
		Upper Limit	600.00 MHz	
		Design power capacity in use	50.0 %	
		Other Antenna Type	N/A	
		ERP: (Effective Radiated Power)	20.0 kW	
		Manufacturer		

Model	TU Deltastar
Year	2017
Justification for New Antenna	WMHT aux is for channel 34 only, WTEN does not have an aux antenna or back up facility needed for repack transition

Auxiliary Antenna Section Question Response **Combiner for Shared** Do you need a Combiner for a Shared Yes Antenna Antenna? New Туре 2 Number of channels supported Frequencies of channels supported Upper and lower frequency Frequency 530.0 MHz - 542.0 MHz Do you need a combiner output splitter Yes /switcher for dual feed lines? **Elbow Complex** Do you require the separate purchase of Yes the Elbow Complex? Broadband or Single Channel? Broadband Feed Line Size 6 1/8 inches inches

Other Antenna Costs

Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	Yes
Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	Yes
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Other Antenna Cost Not Listed

Auxiliary Antenna Information not provided.

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

Auxiliary	Add Transmission Line			
Transmissio	n Line Section	Question	Response	
	Existing Transmission Line Description	Type of change	Purchase New	
		Use	Auxiliary (Backup)	
		Description of Use	Aux transmission line	
		Ownership	Owned	
		Owner	N/A	
		Site	N/A	
		Is this transmission currently shared with any other stations?	No	
		Is Transmission Line in operating condition?	Yes	
	Existing Transmission Line Manufacturer and Type	Manufacturer		
		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	0	
		Length	347 feet per run	

Auxiliary	New Transmission Line			
Transmissio	n Line Section	Question	Response	
	New Transmission Line Costs	Use	Auxiliary (Backup)	
		Description of Use	new channel tx line	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	Yes	
		Туре	Rigid	
		Diameter	6 1/8 inches	
		Other Diameter	N/A	
		Segment Length	Broadband	
		Other Segment Length	N/A	
		Number of parallel runs	0	
		Length	550 feet per run	
		Justification for New Transmission Line	existing tx line for channel 34 only. WTEN does not have an aux or back up needed for repack /transition	

Other Transmission Line Expenses Not Listed Auxiliary

Transmission to provided.

Primary	Existing Transmission Line			
Transmissio	n Line Section	Question	Response	
	Existing Transmission Line Description	Type of change	Purchase New	
		Use	Primary (Main)	
		Description of Use	N/A	
		Ownership	Owned	
		Owner	N/A	
		Site	N/A	
Existing Transmission Line Manufacturer and Type		Is the existing transmission line shared with another station or stations?	Yes	
		Is Transmission Line in operating condition?	Yes	
	-	Manufacturer		
		Туре	Rigid	
		Diameter	8 3/16 inches	
		Other Diameter	N/A	
		Segment Length	19 1/2 inches	
		Other Segment Length	N/A	
		Number of parallel runs	0	
		Length	600 feet per run	

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

Existing Transmission Line

Facility ID	Call Sign
74422	WTEN
11970	WXXA-TV

73942 WRGB	73264	WCWN
	73942	WRGB

Primary Transmissio	New Transmission Line			
	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	8 3/16 inches	
		Other Diameter	N/A	
		Segment Length	Broadband	
		Other Segment Length	N/A	
		Number of parallel runs	0	
			Length	600 feet per run
		Justification for New Transmission Line	Existing transmission line does not support all the new channels assigned by the repack	

Primary Other Transmission Line Expenses Not Listed

Transmission to me tion not provided.

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

arv	Existing	Tower
-----	----------	-------

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	No	
		Is tower documented for structural analysis?	Unknown	
		Is tower compliant with Rev G?	Unknown	
	Existing Tower	Do you have a tower registration number?	No	
	Structure Registration	ASR Number		
	Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	42° 37' 31.3" N-	
		Longitude (NAD83)	074° 00' 36.7" W-	
		Overall Structure Height	499.01 feet	
		Support Structure Height	495.07 feet	
		Ground Elevation Above Mean Sea Level (AMSL)	1780.82 feet	

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	Capital Region Broadcasters LLC
Date Constructed	05/31/2002

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
11970	WXXA-TV	DTV
73266	WMHT-FM	FM
73942	WRGB	DTV
73363	WNYT	DTV
74422	WTEN	DTV
73264	WCWN	DTV

Primary Tower Modification Costs

Tower

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	Study needed for documented tower
Tower Reinforcements	Please select whether tower reinforcements are needed:	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?	No		

Other Tower Expenses Not Listed

PrimaryOther Tower ExpenseTowerInformation not provided.

Outside Professional	Section	Question	Response
	-	Do you require outside project management services?	Yes
		Number of Hours	500
		Explanation	We are a PBS station with only one engineer and may need assistance throughout the repack process. After reviewing the time spent last year, we need to increase the amount for project management (not using an outside engineer)
	Outside RF consulting Engineering Services	Perform engineering study for new channel assignment and antenna development	Yes
		Prepare engineering section of Form FCC Construction Permit Application	Yes
		For Auxiliary Facility	Yes
		For Main Facility	Yes
		Prepare engineering section of Form FCC License to Cover Application	Yes
		For Auxiliary Facility	Yes
		For Main Facility	Yes
		Prepare request for Special Temporary Authority	No

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

Justification N/A	

Outside Other Professional Services Expenses Not Listed

Professional	Services Costs	Description
	In house project management and time	Unable to hire a consultant for the repack so we are doing the project management and work in house

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

Other Expenses Not Listed

Other Expenses	Other Expenses Not Listed				
	Name	Description			
	Rigging	For new main combiner and transmission line			

Transmitters

Cost Information

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justificatior
Interim Transmitter THUevo	\$1,022,000.00	\$738,255.36		\$104,068.38	
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	N/A	N/A
Transformer 3 phase /480v - 300 KVA	\$36,800.00	\$35,000.00	N/A	N/A	N/A
20 Ton system	\$115,500.00	\$110,000.00	N/A	N/A	N/A
UHF inside RF system including switching	\$147,500.00	\$140,000.00	N/A	\$0.00	N/A
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	\$684,000.00	\$416,955.36	Interim transmitter needed to stay on the air while main transmitter replaced and transmission line /combiner replaced, tested, etc.	\$104,068.38	N/A
Primary Transmitter THU9evo	\$1,144,000.00	\$971,165.00		\$196,481.32	

UHF - Liquid Cooled Solid State Transmitter 21 - 31 kW	\$947,000.00	\$782,165.00	N/A	\$196,481.32	N/A
MASK Filter	\$31,000.00	\$31,000.00	N/A	N/A	N/A
Other Electrical Service: Unsure of new electrical requirements	\$0.00	\$0.00	N/A	N/A	N/A
30 Ton system	\$166,000.00	\$158,000.00	Existing 'custom' air conditioner will need to be removed to make room for the new equipment	N/A	N/A
Sub-total	\$2,166,000.00	\$1,709,420.36	N/A	\$300,549.70	N/A
Total for all systems	\$4,103,691.00	\$2,312,755.36	N/A	\$370,566.55	N/A

Components

Actual Information Description	File Name
Switchgear - industrial 800 amp	Information not provided.
Transformer 3 phase/480v - 300 KVA	Information not provided.
20 Ton system	Information not provided.
UHF inside RF system including switching	Information not provided.

UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	Component Description:	25% down payment 15.5 kV /14.5 kW of MD Transmitter System
	Amount:	\$104,068.38
UHF - Liquid Cooled Solid State Transmitter 21 - 31 kW	Component Description:	25% down of the main transmitter
	Amount:	\$196,481.32
MASK Filter	Information not provided.	
Other Electrical Service: Unsure of new electrical requirements	Information not provided.	
30 Ton system	Information not provided.	

Antennas

Cost Information

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Antenna TUD-05-12 /60H-1-B	\$1,019,140.00	\$61,470.00		\$2,880.00	
UHF - High Power Top Mount (200-1000 kW), Four Station broadband panel antenna, horizontally polarized	\$778,000.00	\$0.00	N/A	N/A	N/A
Sweep test of existing antenna	\$6,730.00	\$2,135.00	1/3 of the cost of \$6400	\$2,880.00	The estimate was for 30% down, this invoice is for 45% down
New combiner, cost per channel (without antenna)	\$84,200.00	\$53,335.00	1/3 of the cost	N/A	N/A
Combiner output splitting /switching for dual feed lines, if applicable	\$126,000.00	\$0.00	N/A	N/A	N/A

Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	\$18,950.00	\$6,000.00	1/3 of the cost of \$18,000	N/A	N/A
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	\$5,260.00	\$0.00	N/A	N/A	N/A
Auxiliary Antenna TU Deltastar	\$354,046.00	\$126,750.00		\$48,189.60	
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	\$5,260.00	\$5,000.00	N/A	N/A	N/A
Side mount brackets for high power antennas	\$23,150.00	\$13,320.00	required for new side mount aux antenna	\$5,994.00	N/A

UHF – Broadband Panel, Side Mount Auxiliary /Interim, 20 horizontally polarized	\$95,006.00	\$95,006.00	Our current aux antenna is cut for channel 34 only (reference RF sweep) and will need to be replaced	\$39,034.80	N/A
			for our new channel		
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	N/A	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$0.00	N/A	N/A	N/A
Combiner output splitting /switching for dual feed lines, if applicable	\$126,000.00	\$0.00	N/A	N/A	N/A
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	\$13,700.00	\$7,024.00	required as per RF sweep	\$3,160.80	N/A
Sub-total	\$1,373,186.00	\$188,220.00	N/A	\$51,069.60	N/A
Total for all systems	\$4,103,691.00	\$2,312,755.36	N/A	\$370,566.55	N/A

Components

Actual Information Description	File Name	
UHF - High Power Top Mount (200-1000 kW), Four Station broadband panel antenna, horizontally polarized	Information not provided.	
Sweep test of existing antenna	Component Description:	Repack Sweep includes 1 Field Engineer on site for 1 day, travel expenses and report 45% dow \$2,880.00
New combiner, cost per channel (without antenna)	Information not provided.	
Combiner output splitting /switching for dual feed lines, if applicable	Information not provided.	
Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	Information not provided.	
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	Information not provided.	
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	Information not provided.	
Side mount brackets for high power antennas (if not included in antenna base cost)	Component Description:	Product 400001435 45% down
	Amount:	\$5,994.00

UHF – Broadband Panel, Side Mount Auxiliary/Interim, 20 horizontally polarized	Component Description:	Product 400001434 45% down
	Amount:	\$39,034.80
Sweep test of existing antenna	Information not provided.	
New combiner, cost per channel (without antenna)	Information not provided.	
Combiner output splitting /switching for dual feed lines, if applicable	Information not provided.	
Elbow complex, broadband, at antenna input, per 6 1/8. feedline (if needed)	Component Description:	Product #40001436 45%
	Amount:	down \$3,160.80

Transmission Line

Cost Information

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Transmission Line	\$0.00	\$63,170.00		\$0.00	
Rigid Transmission Line - copper, 8 3 /16" broadband	\$0.00	\$63,170.00	existing transmission line does not support the new channel assignments, this represents 1 /3 of the cost of 189,500	N/A	N/A
Auxiliary Transmission Line	\$0.00	\$42,105.00		\$18,947.25	
Rigid Transmission Line - copper, 6 1 /8" broadband	\$0.00	\$42,105.00	existing transmission line does not support the new channel assignment.	\$18,947.25	N/A
Sub-total	\$0.00	\$105,275.00	N/A	\$18,947.25	N/A
Total for all systems	\$4,103,691.00	\$2,312,755.36	N/A	\$370,566.55	N/A

Components

Actual Information Description	File Name
Rigid Transmission Line - copper, 8 3/16" broadband	Information not provided.

Rigid Transmission Line -		
copper, 6 1/8" broadband	Component Description:	RTLSCR3-20
		45% down
	Amount:	\$1,399.28
	Component Description:	Product 300006758 45%
		down; 1 penny rounding
	Amount:	\$17,547.97

Tower Equipment and Rigging Costs

Cost Information

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Tower TOWER	\$254,800.00	\$80,670.00		\$0.00	
Minor tower reinforcement /modifications	\$158,000.00	\$50,000.00	1/3 of the cost of \$150000	N/A	N/A
Short Tower (less than 500')	\$84,200.00	\$26,670.00	1/3 of the cost of \$80000	N/A	N/A
Structural engineering tower load study for well documented tower	\$12,600.00	\$4,000.00	1/3 of the cost of 12,000	N/A	N/A
Sub-total	\$254,800.00	\$80,670.00	N/A	\$0.00	N/A
Total for all systems	\$4,103,691.00	\$2,312,755.36	N/A	\$370,566.55	N/A

Components

Information not provided.

Outside Professional Services

Cost Information

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Outside Professional Services	\$264,230.00	\$183,750.00		\$0.00	
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	N/A	N/A
In house project management and time	\$45,000.00	\$45,000.00	Unable to get a local consultant, we are taking care of project management in house for main shared equipment as well as our interim /aux and main transmitters	N/A	N/A
RF Exposure Measurements	\$21,050.00	\$20,000.00	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

Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	N/A	N/A
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	\$4,210.00	\$4,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	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, Construction Permit Application	\$2,105.00	\$2,000.00	N/A	N/A	N/A

section of FCC Form 2100 (main), Construction Permit Application\$2,630.00\$2,500.00N/AN/AAddress transition timing and coordination issues w/ other stations and wireless\$2,630.00\$2,500.00N/AN/APrepare and or review reimbursement form\$2,630.00\$2,500.00N/AN/AASR modification (prepare FCC Form 854)\$2,105.00\$0.00N/AN/ARF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application\$1,580.00\$1,500.00N/AN/AProject management of the transition\$79,000.00\$7,500.00N/AN/A	Total for all systems	\$4,103,691.00	\$2,312,755.36	N/A	\$370,566.55	N/A
section of FCC Form 2100 (main), Construction Permit Application Address \$2,630.00 \$2,500.00 N/A N/A transition timing and coordination issues w/ other stations and wireless Prepare and or review reimbursement form ASR \$2,630.00 \$2,500.00 N/A N/A Prepare and or review reimbursement form ASR \$2,105.00 \$0.00 N/A N/A Modification (prepare FCC Form 854) RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application Project \$79,000.00 \$7,500.00 N/A N/A	Sub-total	\$264,230.00	\$183,750.00	N/A	\$0.00	N/A
section of FCC Form 2100 (main), Construction Permit Application Address \$2,630.00 \$2,500.00 N/A N/A transition timing and coordination issues w/ other stations and wireless Prepare and or review reimbursement form ASR \$2,105.00 \$2,500.00 N/A N/A ASR \$2,105.00 \$0.00 N/A N/A ASR \$2,105.00 \$0.00 N/A N/A RF Consulting \$1,580.00 \$1,500.00 N/A N/A Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 254)	management of	\$79,000.00	\$7,500.00	N/A	N/A	N/A
section of FCC Form 2100 (main), Construction Permit Application Address \$2,630.00 \$2,500.00 N/A N/A transition timing and coordination issues w/ other stations and wireless Prepare and or review reimbursement form (prepare FCC	Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover	\$1,580.00	\$1,500.00	N/A	N/A	N/A
section of FCC Form 2100 (main), Construction Permit Application Address \$2,630.00 \$2,500.00 N/A N/A transition timing and coordination issues w/ other stations and wireless Prepare and or \$2,630.00 \$2,500.00 N/A N/A	modification (prepare FCC	\$2,105.00	\$0.00	N/A	N/A	N/A
section of FCC Form 2100 (main), Construction Permit Application Address \$2,630.00 \$2,500.00 N/A N/A transition timing and coordination issues w/ other stations and	review reimbursement	\$2,630.00	\$2,500.00	N/A	N/A	N/A
section of FCC Form 2100 (main), Construction Permit	transition timing and coordination issues w/ other stations and	\$2,630.00	\$2,500.00	N/A	N/A	N/A
	engineering section of FCC Form 2100 (main), Construction Permit	\$3,155.00	\$3,000.00	N/A	N/A	N/A

Components

Information not provided.

Other Expenses

Cost Information

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	\$45,475.00	\$45,420.00		\$0.00	
Rigging	\$13,335.00	\$13,335.00	1/3 of the total cost of \$40000	N/A	N/A
MVPD Notification of Channel Change	\$2,000.00	\$2,000.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	\$2,000.00	\$2,000.00	need to let our viewers know of the channel change	N/A	N/A
Equipment Storage	\$9,000.00	\$9,000.00	We do not have any place to store the equipment as it received	N/A	N/A
Equipment Delivery and Handling Charges	\$10,000.00	\$10,000.00	Unknown cost at this time	N/A	N/A
FCC Filing Fees - Form 2100 minor change CP application	\$1,110.00	\$1,070.00	N/A	N/A	N/A

FCC Filing Fees - Form 2100 license to cover application	\$335.00	\$325.00	N/A	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	\$195.00	\$190.00	N/A	N/A	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$7,500.00	\$7,500.00	Unknown cost at this time	N/A	N/A
Sub-total	\$45,475.00	\$45,420.00	N/A	\$0.00	N/A
Total for all systems	\$4,103,691.00	\$2,312,755.36	N/A	\$370,566.55	N/A

Components

Information not provided.

Cost	Grand Total			
Information		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$4,103,691.00	\$2,312,755.36	\$370,566.55

Reimbursem	enrestanus	Response
	The facility has ceased operating on its pre- auction channel.	No
	Construction of final facilities or all necessary modifications are complete.	No
	All receipts for reimbursement have been submitted no further costs are expected to be incurred. Note this will lock the Form 399 from further editing and begin close-out procedures with the Fund Administrator.	No

Certification	Section	Question	Response
	Submission of Estimated Expenses Statements	WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.	
		 The Authorized Person signing below certifies that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity. The above-named 	
		entity acknowledges that all certifications and attached documentation are considered material representations.	
		3. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.	

- 4. The above-named entity certifies that the equipment and services paid for with money from the TV Broadcaster Relocation Fund are necessary to change channels (broadcasters) or to continue to carry the signal of a broadcaster that changes channels (MVPD).
- The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
- 6. The above-named entity certifies that it will maintain and provide to the Commission detailed records, including receipts, of all costs eligible for reimbursement actually incurred.
- 7. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.

8. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.	
I declare, under penalty of perjury, th an authorized representative of the a named applicant for the Authorizatio specified above.	above- Raskin

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

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

5	3. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.	
5	D. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a prerequisite for obtaining the payments herein requested.	
an a nam	clare, under penalty of perjury, that I am uthorized representative of the above- ed applicant for the Authorization(s) ified above.	Julie Raskin VP Finance and Accounting 02/06/2018

Attachments

.....